

GETTING THE
DEAL THROUGH 

Gas Regulation 2017

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Preface

Gas Regulation 2017

Fifteenth edition

Getting the Deal Through is delighted to publish the fifteenth edition of *Gas Regulation*, which is available in print, as an e-book and online at www.gettingthedealthrough.com.

Getting the Deal Through provides international expert analysis in key areas of law, practice and regulation for corporate counsel, cross-border legal practitioners, and company directors and officers.

Throughout this edition, and following the unique **Getting the Deal Through** format, the same key questions are answered by leading practitioners in each of the jurisdictions featured. Our coverage this year includes new chapters on Bulgaria, Japan, Pakistan and Spain.

Getting the Deal Through titles are published annually in print. Please ensure you are referring to the latest edition or to the online version at www.gettingthedealthrough.com.

Every effort has been made to cover all matters of concern to readers. However, specific legal advice should always be sought from experienced local advisers.

Getting the Deal Through gratefully acknowledges the efforts of all the contributors to this volume, who were chosen for their recognised expertise. We also extend special thanks to the contributing editors, David Tennant and Torquil Law of Dentons UKMEA LLP, for their continued assistance with this volume.

GETTING THE
DEAL THROUGH 

London
March 2017

Global overview

David Tennant and Torquil Law

Dentons UKMEA LLP

Consumption

In 2015, global natural gas consumption grew by 1.7 per cent. Consumption growth was higher outside the OECD (+1.9 per cent, accounting for 53.5 per cent of global consumption) than in the OECD countries (+1.5 per cent). Iran (+6.2 per cent) and China (+4.7 per cent) recorded the largest increases in consumption, although growth in China was sluggish compared with a 10-year average annual growth rate of 15.1 per cent. Meanwhile, Russia (-5 per cent) recorded the largest volumetric decline. Among OECD countries, the US (+3 per cent) accounted for the largest growth, while EU consumption (+4.6 per cent) rebounded after a large decline in 2014.

Production of natural gas globally grew by 2.2 per cent. The US (+5.4 per cent), Iran (+5.7 per cent) and Norway (+7.7 per cent) recorded significant increases in production. Growth was above average in North America, Africa, and Asia-Pacific. EU production once again fell sharply (-8 per cent), with the Netherlands (-22.8 per cent) recording the largest decline. Large volumetric declines were also seen in Russia (-1.5 per cent) and Yemen (-71.5 per cent).

In 2015, global natural gas trade rose by 3.3 per cent compared with trade in 2014. Pipeline shipments increased by 4 per cent, driven by growth in net pipeline exports from Russia (+7.7 per cent) and Norway (+7 per cent). The largest volumetric increases in net pipeline imports were in Mexico (+44.9 per cent) and France (+28.8 per cent).

Global LNG trade continued to grow in 2015, with an increase of 1.8 per cent. Export growth was led by Australia (+25.3 per cent) and Papua New Guinea (+104.8 per cent), offsetting declines in shipments from Yemen (-77.2 per cent). Higher net LNG imports for Europe (+15.9 per cent) and rising Middle Eastern imports (+93.8 per cent) were partly offset by declines in net imports in South Korea (-10.4 per cent) and Japan (-4 per cent).

The above figures were taken from the *BP Statistical Review of World Energy 2016*.

OPEC

On 30 November 2016, OPEC members agreed a deal to reduce output of oil production by 1.2 million barrels a day. Eleven non-OPEC countries (Azerbaijan, Bahrain, Brunei, Equatorial Guinea, Kazakhstan, Malaysia, Mexico, Oman, Russia, Sudan, and South Sudan) have also agreed to cut oil production by 558,000 barrels per day, including a reduction by Russia of 300,000 barrels per day. The agreement lasts for six months, with the next OPEC meeting due to take place in June 2017.

Gas prices increased rapidly after the deal was agreed: the US Henry Hub Natural Gas Spot Price increased from an average of US\$2.55 per mmBtu in November to US\$3.59 per mmBtu in December, while WGI Northeast Asia Spot LNG rose from US\$7.4 per mmBtu to US\$8.1 per mmBtu in the weeks following the cut.

Against some expectations, both OPEC and non-OPEC countries have so far maintained their commitment to cut production, leading to the gas price increase becoming sustained and a rally in gas price futures.

This gas price swing is, however, relatively modest compared with those following previous OPEC shifts in policy. This is partly a result of the US becoming a net exporter of natural gas in November 2016. Production by the US now has a much greater impact on the gas markets.

The *Financial Times* has noted that, owing to the tension between OPEC gas production and US shale gas production, this is the first time there has been no swing producer since the 1920s. A surge of oil production from other non-OPEC countries (including Brazil and Canada) is also expected, and this too will limit the effects of reduced output by OPEC members. States and markets will need to find ways to adapt to this structural shift in power in gas supply, although it remains to be seen whether they will adapt by following a more protectionist agenda – price controls, tariffs and strategic stocks – or a market-orientated agenda of promoting resilience and reducing subsidies.

Saudi Aramco IPO

The state-owned oil company of the Kingdom of Saudi Arabia (Saudi Aramco), with, according to its website, the world's fourth-largest natural gas reserves of 288.4 trillion standard cubic feet, is planning an initial public offering (IPO) in 2018. The IPO will reportedly sell 5 per cent of the entire company, not just the downstream, with the aim of raising US\$100 billion. According to the *Financial Times*, the Saudi government will remain as the controlling shareholder, having control over production levels and the management of the kingdom's oil reserves. The IPO is expected to be the biggest IPO in history (four times bigger than Alibaba's IPO in 2014) valuing Saudi Aramco at US\$2 trillion and at about three or four times the size of Apple or Google (the world's two most valuable companies by market capitalisation) and over five times the size of ExxonMobil.

The IPO is part of the country's Vision 2030 programme, an attempt to diversify Saudi Arabia's economy away from natural resources, with the funds from the IPO being diverted to a public investment fund. According to Dr Carole Nakhle, non-resident scholar at the Carnegie Middle East Centre, 'one can argue that the Saudis are taking a long-term perspective, understanding that over time, their oil in the ground will be worth less than today as global demand decreases, primarily because of climate change concerns', and therefore by selling part of Saudi Aramco the Saudis are safeguarding some of that value.

Saudi Aramco CEO Amin Nasser also stated recently that 'Saudi Aramco... is utilising this down cycle to grow its business, especially in the downstream sector and in gas' with the aim of doubling its total production capacity for natural gas, including shale gas, from 12 billion cubic feet per day over the next 10 years.

However, there are various issues in relation to the IPO that still need to be resolved, including the location of the listing, with New York, London, Hong Kong and Riyadh all being touted, the transparency of Saudi Aramco's finances (which have, to date, never been made publicly available), and its tax rate and dividend policy. Sources close to Saudi Aramco say its profits have been taxed by the government at 85 per cent, and it pays a 20 per cent royalty on its oil production to the state. According to the *Financial Times*, the payment of taxes and royalties to the government will need to be clarified as this will heavily affect its IPO valuation. Yet, with oil prices recovering at US\$50 per barrel as opposed to US\$30 per barrel when the announcement of the would-be listing was made, the IPO may now be seen as less urgent by the Saudi kingdom.

United States of America

The incoming Trump administration has pledged to scrap the Climate Action Plan and Clean Power Plan introduced by the Obama

administration. The plans to be scrapped included the replacement of coal production and its use in the US with gas; however, the Trump administration appears to be committed to increasing coal production irrespective of its effects on other fossil fuel markets. President Trump has also issued memoranda intended to speed up construction of the Keystone XL and Dakota Access oil pipelines, which is likely to lead to an increase in oil production.

Increased production of coal and oil in preference to gas could lead to a reduction in the global supply of gas, therefore increasing global gas prices. However, increased use of coal and oil in preference to gas could also increase the availability of surplus gas for export, potentially decreasing global gas prices. What is clear is that the Trump administration has made expansion of all fossil fuel production, including gas, a cornerstone of its economic programme. The likeliest net result of this policy will be continued downward pressure on the global gas price.

Significantly, the Trump administration has also the stated aim of opening more federal-owned land to oil and gas exploration and production. However, according to Wood Mackenzie, the willingness of the American government to increase petroleum exploration and production may not prove to be matched by the willingness of American companies to invest in such activities.

The Trump administration also plans to increase the number of LNG export terminals, following the successful commencement of operations at Sabine Pass in Louisiana in February 2016. LNG export terminal projects currently under construction include Cove Point in Maryland (due to come online in late 2017), Cameron in Louisiana (early 2018), Freeport in Texas (late 2018) and Corpus Christi, also in Texas (early 2019).

Any action by the new administration to expand LNG exports will, however, not be a radical departure from US policy in 2016. The Energy Policy Modernization Act, passed in April 2016, requires the US Department of Energy to speed up the approval of permits to build LNG export terminals. The expansion of the Panama Canal, which became operational in June 2016, is also likely to increase LNG exports from the east coast of the US to Asia.

In November 2016, as highlighted above, the US became a net exporter of natural gas. According to the US Energy Information Administration, while this is partly the result of LNG exports, it is also the result of increased pipeline exports to Mexico in 2016. However, while LNG exports are likely to grow, it is possible that restrictions on trade with Mexico suggested by the Trump administration may limit growth in pipeline exports south of the border in the coming years.

Major projects

In 2016, Russia continued with its work to develop the Nord Stream 2 project, which will create a second pipeline from Russia to Germany via the Baltic Sea, following the successful first Nord Stream project in 2011. Nord Stream 2 faced various obstacles in 2016, including a rejection by Sweden of the use of its harbours for pipe storage and a

letter by nine European countries opposing the project to the European Commission, which has to approve its compliance with the EU's Third Energy Package. In October 2016, the European Commission did, however, approve (subject to approval from the European Court of Justice) an increase in capacity of the OPAL pipeline.

Russia has seen more success with the Turkish Stream pipeline, which will transport gas from Russia to Turkey via two pipelines stretching 900km along the Black Sea floor. The two countries reached agreement in October 2016 to begin the project and the construction contract has been signed, with the first pipeline being laid in the second half of 2017. Once completed, it will supply 31.5 billion cubic metres of natural gas per year to Turkey and the EU.

The Leviathan Gas Field off the Israeli coast moved closer to development in 2016 with antitrust issues being resolved with the Israeli government and the first major supply deal, a US\$10 billion agreement with Natural Electric Power Company of Jordan, being signed. In November the CEO of Delek Drilling, one of the Leviathan project partners, said that the partnership was close to securing the US\$4 billion of financing necessary to develop the field, with production on course to begin in 2019.

The expansion of the Shah Deniz field off Azerbaijan by BP continues on track to begin production in 2018; the expansion will add a further 16 billion cubic metres of production to the current 9 billion produced currently. In July 2016, Saudi Aramco approved the US\$13 billion development of the Fadhili gas processing facility. This will increase Saudi gas processing capacity by 5 billion cubic feet of gas following completion in 2019.

The development of the Coral South floating LNG project in Mozambique continued in 2016: investment for the first phase of development was approved by Eni, Galp, ENH and KOGAS. In October 2016, the joint venture parties to the Coral South floating LNG project signed an LNG SPA with BP for the sale of 100 per cent of the LNG produced from the Coral South reservoir. Meanwhile in Cameroon, Golar's first floating LNG conversion is due to begin production in late 2017, with Gazprom contracted as sole offtaker for the first eight years of production. Construction continues on Shell's Prelude floating LNG project in Western Australia, which will be the largest floating offshore facility in the world (production is expected to start in late 2017). These developments follow the first successful production of LNG from a floating facility by Petronas in December 2016.

Australia remains on target to overtake Qatar as the top LNG exporting country by 2021. However, Australian projects, totalling A\$200 billion in the past decade, suffered from cost overruns in 2016, including a A\$20bn overrun on the Gorgon LNG project. In addition, Woodside Petroleum cancelled the Browse LNG project in March 2016.

LNG import terminals continue to be built in China with two extra terminals to be constructed in Shenzhen over the next three years. However, China National Offshore Oil Corporation (CNOOC) has postponed the start-up of four other LNG terminals (which have already been built) until 2020.

Austria

Peter Polak

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Description of domestic sector

1 Describe the domestic natural gas sector, including the natural gas production, liquefied natural gas (LNG) storage, pipeline transportation, distribution, commodity sales and trading segments and retail sales and usage.

Compared with the previous year, in 2015, the natural gas supply to end users increased by 7.0 per cent to a total amount of 84.394GWh. Domestic production went down by 4.4 per cent to 13.406GWh. Domestic production was covered by two companies: OMV Exploration & Production Austria GmbH and Rohöl-Aufsuchungs AG. The transportation system in Austria is divided into three market areas: East, Tyrol and Vorarlberg. The market areas of Tyrol and Vorarlberg are only connected to the German transportation system, having no connection within Austria, and do not include any domestic production or storage sites. Within the Market Area East, in addition to the domestic distribution system, major transit pipelines exist, connecting the import station Baumgarten at the Austrian-Slovakian border near Vienna with Italy (Trans-Austria Gasline (TAG)), Germany (West Austria Gasline (WAG)), Hungary (Hungary-Austria Gasline) and Slovenia (Croatia) via the Trans-Austria Gasline and the South East Gasline, which have the capacity to transport about 100 billion cubic metres a year of mainly Russian gas dedicated to other western European states. There are two transmission system operators (TSOs) in Austria: TAG is operated by Trans Austria Gasleitung GmbH, WAG and the remaining transmission pipelines by Gas Connect Austria GmbH. Both Trans Austria Gasleitung GmbH and Gas Connect Austria GmbH have been certified as independent transmission system operators (ITOs) in accordance with Directive 2009/73/EC.

The domestic natural gas sector was fully opened to competition from 1 October 2002, even before Directive 2003/55/EC was passed. In November 2011, major changes to the Austrian Gas Act were enacted, implementing Directive 2009/73/EC and introducing the legal basis for a new market model in Austria, as from 1 January 2013, replacing the division between transit and domestic supply within the respective control areas by integrated market areas. Within the new entry/exit model, Market Area East forms a single entry/exit zone, and a virtual trading point (VTP) was established within this market area. The VTP is the central hub for all gas flows in Market Area East. Settlement at the VTP is carried out by Central European Gas Hub GmbH (CEGH).

Since 2014, the main focus in the gas sector was the second incentive regulation for gas and a new market model for gas. The second incentive regulation started on 1 January 2013. Only the scope of the regulation was slightly changed, so that the fees for 2014 could be determined according to the adapted systematics. The new market model was successfully introduced in East Austria and led to a significant stimulation of competition in Austria. The market area manager is responsible for coordinating the smooth functioning of the transmission system, including the organisation of the online platform for capacity allocation. The distribution area manager (AGGM Austrian Gas Grid Management AG) administers capacity of the level one distribution pipelines and steers the gas flow therein for domestic consumption, giving instructions to the respective distribution system operators (DSOs). The balance group coordinator (AGCS Clearing and Settlement AG) provides a settlement of balancing energy for domestic consumption.

On the market for supply of end consumers, the price differentiation due to alternative suppliers by way of discount campaigns is maintained. However the rate of discount campaigns has significantly increased. In 2015, 46,059 households changed their supplier. This amounts to a change of 3.4 per cent compared with 2014.

Since 2015, storage companies have had to be unbundled and independent organisationally. The most important suppliers for storage are OMV Gas Storage (100 per cent OMV Gas & Power GmbH, a 100 per cent subsidiary of OMV AG), RAG Energy Storage (a 100 per cent subsidiary of RAG AG), Astora (a 100 per cent subsidiary of WINGAS GmbH), GSA LLC (100 per cent Gazprom Export, a 100 per cent subsidiary of OAO Gazprom) and Uniper Energy Storage Austria (100 per cent Uniper Energy Storage GmbH a 100 per cent subsidiary of Uniper SE). In 2015, approximately 90 per cent of all storage capacity was governed by long-term contracts. Available storage capacities are either sold on the principle of first come, first served or, if not enough capacity is available to cover the demand, via auctions.

E-Control, the Austrian energy regulator, is quite active in the fields of public information and consumer protection, as well as with respect to tariff regulation. As of 1 January 2013, the tariff setting at the transmission level was changed to comply with article 13 Regulation (EC) 715/2009, changing from tariffs according to contract paths to an entry/exit model (see question 10).

Regarding network access, capacity management and balancing detailed rules have been set by way of the Gas Market Model Ordinance 2012 (GMMO-VO 2012).

LNG is not directly available in Austria.

2 What percentage of the country's energy needs is met directly or indirectly with natural gas and LNG? What percentage of the country's natural gas needs is met through domestic production and imported production?

Natural gas met about 20 per cent of Austria's total energy needs in 2015. The domestic production of natural gas covered around 17 per cent of the total natural gas consumption in 2015. The rest of the natural gas needs (83 per cent) were covered with imports from CIS countries and other countries such as Norway. The main production areas were in the ownership of OMV AG and RAG AG, situated in the Vienna Basin area, which covered 72.4 per cent of domestic production, and the Upper Austrian Molasse Zone, which covered the remaining 27.6 per cent of domestic production.

Government policy

3 What is the government's policy for the domestic natural gas sector and which bodies set it?

Government policy is set by the Minister of Science, Research and Economy (BMWFV), laws are passed by Parliament and E-Control is very active in pursuing the goals of the regulator and monitoring the gas market.

With regard to the Third Energy Package, which was enacted by the European Union in August 2009, the Austrian government successfully joined forces with seven other EU member states, including France and Germany, to propose a third option with regard to the issue of effective unbundling, protecting the economic interests of vertically integrated energy undertakings. On 22 November 2011, the Austrian

Gas Act 2011 came into force, implementing the Third Energy Package into Austrian gas law. With regard to unbundling, all options possible under Directive 2009/73/EC are included. The Austrian market model was changed substantially due to the introduction of an obligatory entry/exit model in accordance with article 13 Regulation (EC) 715/2009 for the transmission system. This has been realised by the setting up of market areas, including the transmission and distribution grid, as per 1 January 2013.

Tariffs for the use of the pipeline system are set by E-Control. In addition, the general terms and conditions for shippers must be approved by E-Control. E-Control constantly monitors the entire gas market and has far-reaching enforcement powers. E-Control also handles the certification procedure of the TSOs.

No special legal framework for unconventional exploration has been introduced in Austria.

Regulation of natural gas production

4 What is the ownership and organisational structure for production of natural gas (other than LNG)? How does the government derive value from natural gas production?

There are two companies exploring and producing natural gas in Austria. The first is OMV Austria Exploration & Production GmbH, which is indirectly owned by OMV AG. The shares of OMV AG itself are quoted on the Austrian stock exchange with two major shareholders (31.5 per cent are held by ÖIAG, the Austrian state-owned holding company, and about 24.9 per cent by IPIC, the state-owned holding company of Abu Dhabi). The second company is Rohöl Aufsuchungs AG, an independent company indirectly owned by EVN, E.ON, ESTAG and Salzburg AG. Both companies are also operators of underground storage sites in depleted gas fields.

Entities producing natural gas have to pay royalties to the federal government, and earnings are subject to income or corporate tax.

5 Describe the statutory and regulatory framework and any relevant authorisations applicable to natural gas exploration and production.

Under the Mineral Resources Act, ownership of hydrocarbons not yet produced lies with the federal government. The federal government, represented by the BMWWF, may conclude exploration, production and storage agreements with entities having the technical and financial expertise for that kind of mining business, thereby transferring the right to the hydrocarbons produced in a given area to such entity. In exchange for such right, the entity must commit itself to a certain amount of agreed exploration activity, and to the payment of lease rentals and royalties in the case of production. In addition to this contract under civil law, the entity undertaking such activities must obtain certain permits in advance for operation, construction, etc, from the mining authority (the BMWWF).

The BMWWF determines the regulatory policies governing the production of natural gas in accordance with and within the framework of the Mineral Resources Act. There is no separate regulatory agency established for the activities governed by the Mineral Resources Act, including the mining aspects of exploration for, and production and underground storage of, natural gas.

Administrative decisions of the BMWWF may only be challenged before the administrative courts or the Constitutional Court of Austria. There is no difference between the unconventional and conventional sectors of natural gas exploration in Austria.

6 Are participants required to provide security or any guarantees to be issued with a licence to explore for or to store gas?

Under the exploration, production and storage agreement that is to be concluded, the BMWWF may require the provision of securities or guarantees, depending on the financial standing of the contract partner.

Regulation of natural gas pipeline transportation and storage

7 Describe in general the ownership of natural gas pipeline transportation, and storage infrastructure.

In Market Area East, Gas Connect Austria GmbH (formerly OMV Gas GmbH) and Trans Austria Gasleitung GmbH are the owners and

operators of the transmission lines used mainly for the transit of natural gas to other European states. In 2014, Gas Connect Austria GmbH became a 100 per cent shareholder of the former project company Baumgarten-Oberkappel Gasleitungen GmbH for the operation of the WAG running from Baumgarten at the Slovakian–Austrian border to the German–Austrian border near Oberkappel, which afterwards was merged into Gas Connect Austria GmbH. Again in 2014, the ownership and operations of Trans-Austria Gasleitung, the transmission line running from Baumgarten to the Austrian–Italian border near Arnoldstein, was transferred from Gas Connect Austria GmbH to Trans Austria Gasleitung GmbH. Three other companies (EVN Netz GmbH, Oberösterreichische Ferngas Netz GmbH and Gasnetz Steiermark GmbH) own and operate level one distribution lines, used mainly for domestic consumption. In addition to these companies, there are about 20 distribution network operators. All TSOs and the major DSOs (with a threshold of 50,000 end-user connections) are legally unbundled. The transmission system operators have to be certified as effective and efficient unbundled TSOs in accordance with the respective unbundling provisions (sections 108 et seq of the Austrian Gas Act 2011). Both Gas Connect Austria GmbH and Trans Austria Gasleitung GmbH have been certified as ITOs.

The level-one distribution lines used for domestic consumption, and for transportation to and from storage and production sites, are administered by the distribution area manager, AGGM Austrian Gas Grid Management AG (third-party access and gas flow management, as well as physical balancing).

The entire storage infrastructure in Austria is owned by OMV AG and RAG, as well as by joint ventures between RAG and astora, Gazprom Export LLC and E.ON Gas Storage GmbH. Due to the geological conditions, most of the storage facilities are pore storages, since depleted natural gas fields are used for gas storage.

As of May 2015, the capacity of the storage infrastructure amounts to 8.25 billion normal cubic metres in working gas; therefore, Austria is able to store more than its entire current natural gas consumption for one year.

The physical operation of gas storages in depleted gas fields is regulated in the Austrian Mineral Resources Act. Third-party access and legal unbundling of storage undertakings are regulated in the Austrian Gas Act 2011 in accordance with the requirements of the Third Energy Package. Austria chose to apply negotiated access to gas storages.

8 Describe the statutory and regulatory framework and any relevant authorisations applicable to the construction, ownership, operation and interconnection of natural gas transportation pipelines, and storage.

With the Austrian Gas Act 2011, Austria implemented all of the strict unbundling options of the Third Energy Package applicable to natural gas transmission lines, including the ITO option. The major goal of such legislation is to separate the supply from the transportation interests in the natural gas sector. By implementing the ITO option, member states can allow undertakings to ensure the independence of their transmission operators instead of selling the transmission lines.

For the construction and operation of natural gas transportation pipelines, permits primarily in accordance with the Austrian Gas Act 2011 are required. The permits under the Austrian Gas Act are issued by the BMWWF as long as the respective pipeline does not require a permit under the Environmental Protection Act, under which the local province is the competent authority. The construction and operation of storage facilities require permits under the Mineral Resources Act. In addition, other permits under different administrative laws, such as the Water Rights Act, the Environmental Protection Acts of the provinces and the Environmental Assessment Act, may be necessary.

A licence issued by E-Control is required to act as a network operator. On 3 March 2011, E-Control was transformed into an institution under public law in accordance with the E-Control Act.

The three bodies of E-Control are the executive board, supervisory board and regulatory commission. The regulatory commission is established as a judicial body comprising five members, including a judge, who are appointed by the government for five-year terms. The main competence of the regulatory commission is tariff setting and making decisions in connection with the refusal of third-party access. Some decisions must be issued in the form of individual official decisions, some in the form of general regulations (ordinaries).

The main decision-making body within E-Control is the executive board, which must take most of the decisions of the regulatory authority. The executive board consists of two members appointed by the BMFWF for five-year terms. Normally, the decisions of the executive board are final and can only be challenged before the Administrative or the Constitutional Courts, while certain decisions may be challenged in front of the Regulatory Commission and some others in front of the BMFWF. Decisions of the Regulatory Commission in the form of individual official decrees may only be challenged before the administrative courts or the Constitutional Court of Austria. General regulations of the Regulatory Commission may only be challenged before the Constitutional Court on very limited grounds. Since tariffs are set by general regulation, such decisions by the Regulatory Commission are, in effect, not examined in a material way, but only on formal grounds. The costs of the network operators that form the basis of such tariff regulations are now separately determined with decrees by the executive board of E-Control.

9 How does a company obtain the land rights to construct a natural gas transportation or storage facility?

Generally, civil law contracts entailing the right of way or easement with the landowner are concluded. Subject to certain requirements, the Austrian Gas Act 2011, as well as the Mineral Resources Act, allow for expropriation if the project is in the public interest.

10 How is access to the natural gas transportation system and storage facilities arranged? How are tolls and tariffs established?

Transit pipelines and storage facilities are only established within Market Area East. Within the market areas of Tyrol and Vorarlberg, only distribution pipeline systems exist. See question 16 regarding the distribution systems in the market areas of Tyrol and Vorarlberg.

In accordance with the Austrian Gas Act 2011, storage entities must provide third-party access to gas storage on the basis of non-discriminatory published general terms and conditions. Storage entities are obliged to agree with third parties on storage charges that comply with the general terms and conditions and the principles of equal treatment. If necessary, the BMFWF would be entitled to implement regulated access by way of ordinance. If the storage charges published by storage entities exceed the storage charges of comparable services in EU member states by more than 20 per cent, E-Control is entitled to determine the cost basis that underlines the charges.

With the introduction of the new model for third-party access in Austria, since 1 January 2013, only independent requests for entry and exit capacities in and out of Market Area East are needed. After entry, all gas volumes have access to the VTP established on the transmission level. For distribution of gas to end consumers within the market area, no additional separate booking of capacity into the distribution area with the distribution area manager is required. All shippers must register themselves as balancing groups with the market area manager in different categories for transit or supply, or both, to end consumers.

Under the GMMO-VO 2012, the rules of the ordinance on system charges (GWG) empower E-Control to set the market rules applicable to the gas sector. Regarding Market Area East, the GMMO-VO 2012 includes regulations for access to the distribution network and to the transit network, and rules for balance within Market Area East. Since the market areas of Tyrol and Vorarlberg have no direct interconnection to Market Area East, and also have no transit pipelines, but only connect to the German gas pipeline system, different rules were set for these market areas in view of their easy access to the NetConnect (NCG) market area in Germany.

In accordance with section 6 of the GMMO-VO 2012, since 1 April 2013 the allocation of entry/exit capacities has been conducted by auction. At the auctions, the TSOs have to provide capacity products in accordance with the CAM Network Code. Gas Connect Austria GmbH and Trans Austria Gasleitung GmbH are involved in the newly founded European capacity platform, PRISMA, which opened on 1 April 2013, and offer their capacities over PRISMA.

The use-it-or-lose-it mechanism for day-ahead capacities came into force on 1 October 2013, while such mechanism came into force for long-term capacities on 1 January 2013. According to the respective provisions of the GMMO-VO 2012, network users shall offer unused capacities on the online platform as secondary capacity. If a network

user does not provide its unused capacities on the online platform, such operator must revoke the unused capacities from the network user and provide this capacity as primary capacity. System users are entitled to sell their entry/exit capacity to other system users only over CEGH, the operator of the VTP in Market Area East.

Entry capacities must be booked by suppliers and traders, and entitle them to feed natural gas into the pipeline system of a market area and to transfer this natural gas to the VTP. Capacities at the exit point entitle the owner to transport from the VTP to the respective exit point, and to feed out the respective amount of natural gas. The VTP itself is no physical entry/exit point, but enables market participants to trade natural gas without booking transport capacity.

The GWG 2011 also obliges every market participant either to form its own balance group or to join an existing one. Therefore, the old system of balance groups, which previously had only applied to the distribution area, now applies to the whole market area, including the transit network. Registration of balance groups and the management of these balance groups are the responsibility of the market area manager. The balance group coordinator handles the management of energy balancing. Balance group representatives must nominate the gas volumes to be transported within the scope of booked capacities.

While the market area manager is responsible for ex ante balancing of the nominated gas volumes and informing balance group representatives about imbalances, balancing on distribution level (ex post balancing) lies with the clearing and settlement agent. Balancing energy shall be primarily purchased at the VTP. If the balance group representatives fail to re-nominate, gas will be purchased at the VTP on behalf and for the account of the balance group representatives. Extra charges have to be paid for balancing energy purchased.

There is no longer a difference between cross-border transports and domestic transports on the transmission level. Costs of distribution network operators are determined by the regulatory authority by way of a formal decision, which might be separately appealed. The same applies to the approval of calculation methods for transmission operators. Tariffs for transportation customers and end consumers are set by the regulatory authority on the basis of the approved costs and methods by separate ordinance. In the Gas System Charges Ordinance 2013, tariffs on transmission and distribution levels effective as of 1 January 2013 have been set.

In Austria, natural gas from domestic production and from import is high calorific gas within a certain quality range set out by the provisions of the GMMO-VO 2012. An adjustment to different gas qualities is generally not necessary.

11 Can customers, other natural gas suppliers or an authority require a pipeline or storage facilities owner or operator to expand its facilities to accommodate new customers? If so, who bears the costs of interconnection or expansion?

Under the Austrian Gas Act 2011 or the Mineral Resources Act, storage entities are not required to enlarge their facilities. Under the Austrian Gas Act 2011, network operators have the responsibility to expand their system, if needed, as specified in any approved long-term plan (distribution level) or network development plan (transmission level).

In addition, DSOs have the duty to expand the distribution network to physically connect a customer to the pipeline network, if economically feasible. The costs are to be paid by the customer. For domestic transportation, one of the tasks of the distribution area manager is to undertake long-term planning and propose a suitable adaptation to level-one distribution pipelines to ensure that enough transportation capacity is available. Suppliers and customers can file an application for the expansion of transportation capacity if their respective initial application for third-party access has been denied due to capacity constraints. If no network operator makes the necessary expansions, the regulatory authority can initiate a tender procedure for the proposed measures. The cost of the expansion has to be included by the regulatory authority in the calculation of the transportation tariff. This means that the investor is entitled to reimbursement of the necessary costs plus a reasonable margin as determined by the regulatory authority.

For the transmission level, a similar system was established with the Austrian Gas Act 2011, tasking the market area manager with coordinating a network development plan with the TSOs and the distribution area manager.

In the event that network operators do not comply with the investment requirements set out in such plan, the regulatory authority will have several possibilities to ensure that the investments are realised.

12 Describe any statutory and regulatory requirements applicable to the processing of natural gas to extract liquids and to prepare it for pipeline transportation.

Any user of a transportation system in Austria must ensure that the gas delivered to the system operator for transportation complies with certain quality specifications. The general terms and conditions for pipeline access either refer to the relevant provisions for gas quality in the GMMO-VO 2012 and the respective ÖVGW Directive, or contain their own provisions regarding gas quality that the user of the transportation system must comply with. This applies to domestic production, stored gas and imported gas. Therefore, the processing of gas lies outside of the transportation service of the network operator. Nevertheless, network operators have facilities, namely dehydration plants, for cases where off-specification gas is delivered. If off-specification gas is delivered, network operators have the right to refuse acceptance of this gas.

13 Describe the contractual regime for transportation and storage.

See question 10.

Regulation of natural gas distribution

14 Describe in general the ownership of natural gas distribution networks.

Gas distribution networks are operated by the utilities of municipalities and of regional distribution operators covering a part of or a whole province. These DSOs have to be legally and functionally unbundled if they supply more than 50,000 customers. Most of the DSOs are directly or indirectly under the control of the respective province or municipality. Some have, directly or indirectly, minority shareholdings of international gas companies (ie, GdFSuez, RWE and EnBW).

15 Describe the statutory and regulatory structure and authorisations required to operate a distribution network. To what extent are gas distribution utilities subject to public service obligations?

DSOs require a licence under the Austrian Gas Act 2011, which to date has always been granted for an indefinite period. This licence is granted by E-Control. DSOs are obliged to connect any customer to their system, if economically feasible. Other than that, the Austrian Gas Act 2011 does not stipulate any further specific public service obligations for DSOs.

Regarding questions concerning the regulator, see question 8.

16 How is access to the natural gas distribution grid organised? Describe any regulation of the prices for distribution services. In which circumstances can a rate or term of service be changed?

DSOs are obliged to grant system users access to the distribution system on the basis of the general terms and conditions and the GWG.

The provisions of the GWG oblige all users of the distribution system to either join a balance group or build their own balance group to gain access to the distribution system.

Since the market areas of Tyrol and Vorarlberg are not connected to Market Area East, but only to the NCG market area in Germany, there are different market rules for these two areas. The new Cross-Border Operating Strongly Integrated Market Area (COSIMA) became effective from 1 November 2013. This regulatory framework was integrated into the GMMO-VO to ensure the security of supply of the market areas of Tyrol and Vorarlberg through the German pipeline system. COSIMA provides a barrier-free interconnection between the market areas of Tyrol and Vorarlberg and the NCG. The delivery of natural gas for these market areas is conducted by nomination at the VTP in the market area of the NCG. Capacities booked at the VTP NCG are taken over by the distribution area manager, ensuring the transfer of the natural gas into the market areas of Tyrol and Vorarlberg. Therefore, natural gas handed over at the VTP NCG is deemed to be delivered in the respective market area.

Besides the network connection agreement for the physical connection, the customer must also apply to the DSO for third-party access. The DSO checks if transportation is possible within its distribution network. If possible, network access is granted for the applied hourly transportation capacity and the applied period of time. A similar procedure applies in the case of a change of supplier by the customer. The customer only has to conclude a contract with the DSO in accordance with the general terms and conditions of the DSO, which are subject to the approval of E-Control.

Prices for network distribution services are set by the Regulatory Commission in the Gas System Charges Ordinance (GSNE). The general terms and conditions of the DSO are also subject to the approval of E-Control. There is very little room for individual agreements between the DSO and its customers. The GSNE is regularly renewed by E-Control. To date, this has been done nearly every year. If the income deriving from the regulated tariff no longer covers the costs of a DSO, the DSO can apply for a change to the GSNE (this also applies to any TSO). Requests for network access must be processed within 14 days. Changes of supplier are to be processed by the network operators within three weeks.

The costs of the DSOs are determined separately by individual decree by the executive board of E-Control, and the ordinance setting the tariffs is to be based on these decrees.

17 May the regulator require a distributor to expand its system to accommodate new customers? May the regulator require the distributor to limit service to existing customers so that new customers can be served?

See question 11 regarding distributors expanding their systems to accommodate new customers.

In accordance with the Austrian Gas Act 2011, third-party access must be granted primarily on a first-come, first-served basis. Therefore, the regulator does not have the possibility of limiting service to existing customers in favour of new customers.

18 Describe the contractual regime in relation to natural gas distribution.

See question 16.

Regulation of natural gas sales and trading

19 What is the ownership and organisational structure for the supply and trading of natural gas?

In the Austrian domestic market, all former integrated gas companies are active as suppliers to customers. Most former local utilities still have a substantial market share in their home market (province or municipality). There are also some new suppliers active in the Austrian market, which are mostly subsidiaries of other European gas companies. The local suppliers active in the provinces of Tyrol and Vorarlberg receive natural gas from German wholesalers at the German-Austrian border. The suppliers active in Market Area East receive gas mainly from domestic production, Russia, Norway and Germany.

Since 2007, trading at CEGH increased substantially. As of 1 January 2013, trading activities in Market Area East are concentrated at the VTP, replacing the physical trading points at cross-border flanges.

20 To what extent are natural gas supply and trading activities subject to government oversight?

Gas traders and suppliers have to give notice to E-Control before starting business in Austria. E-Control has the power and duty to gather statistical data from traders and suppliers. Suppliers must notify E-Control of the conclusion of gas supply contracts with a term of more than one year and a volume of more than 250 million cubic metres a year. Gas traders and suppliers have to notify E-Control of their general terms and conditions for the supply of customers whose consumption is allocated using load profiles. The Austrian Gas Act 2011 specifies the mandatory content of these general terms and conditions. E-Control can prohibit the use of the notified general terms and conditions if they are in contradiction with the law, especially consumer protection law.

In addition, E-Control may exercise market oversight and may itself instigate proceedings in accordance with competition law in front of the Cartel Court.

According to the energy data wholesale regulation, the relevant organised market places for electricity and gas have to provide E-Control with information concerning standard contracts as of 1 May 2015. Concerning non-standard contracts, this obligation entered into force on 1 October 2015. In the meantime, E-Control receives this information from ACER. Therefore, the information on contracts is no longer provided by the relevant organised market places.

21 How are physical and financial trades of natural gas typically completed?

Physical and financial trades of natural gas are typically concluded as OTC contracts. Standard forms are used at CEGH, which are available on its website.

22 Must wholesale and retail buyers of natural gas purchase a bundled product from a single provider? If not, describe the range of services and products that customers can procure from competing providers.

There is no institutional single provider of gas and transportation. As of 1 January 2013, capacities are offered as decoupled entry/exit capacities at regulated tariffs.

Transportation from and to storage, and production as well as transit, can be booked separately. The entry and exit fees are paid by the storage undertakings and production undertakings.

Regulation of LNG

23 What is the ownership and organisational structure for LNG, including liquefaction and export facilities, and receiving and regasification facilities?

LNG is not directly available in Austria. Since Austria has no direct connection to the sea, Austria has not enacted any rules in this regard.

24 Describe the regulatory framework and any relevant authorisations required to build and operate LNG facilities.

Not applicable.

25 Describe any regulation of the prices and terms of service in the LNG sector.

Not applicable.

Mergers and competition

26 Which government body may prevent or punish anticompetitive or manipulative practices in the natural gas sector?

The governmental body in charge of the general supervision of competition in the natural gas sector, in particular with regard to the principle of non-discriminatory treatment of market participants, is E-Control. E-Control also cooperates with the Federal Competition Authority in prosecuting anticompetitive practices under the Cartel Act, such as abuse of market dominance and price-fixing. Since 2010, E-Control also has the right to monitor the market. Fines under the Cartel Act are imposed by the Cartel Court upon the request of E-Control or the Federal Competition Authority. Finally, the district administrative authorities are competent to prosecute violations of administrative law as set out in the Austrian Gas Act 2011 on the request of E-Control.

27 What substantive standards does that government body apply to determine whether conduct is anticompetitive or manipulative?

See question 26.

28 What authority does the government body have to preclude or remedy anticompetitive or manipulative practices?

E-Control can order market participants to comply with the regulatory framework. Further, fines of up to €150,000 can be imposed by the district administrative authority upon violation of the obligations under the Austrian Gas Act 2011. Moreover, the Cartel Court may order the market participants involved to refrain from anticompetitive conduct, and may also impose fines of up to 10 per cent of the sales revenues

pursuant to the Cartel Act in the case of discrimination by a system operator, storage undertaking or operator of the VTP.

29 Does any government body have authority to approve or disapprove mergers or other changes in control over businesses in the sector or acquisition of production, transportation or distribution assets?

Under the exploration, production and storage agreement, the federal government regularly reserves the right to cancel an agreement if mergers or other changes of control of the contracting party take place without the prior approval of the federal government. There is no formal approval procedure in place, since this right derives from a contract under civil law. However, depending on the issue, the BMWFV has proven in the past that decisions can be obtained in a timely manner.

Besides this special contractual requirement, any merger (or other form of concentration within the scope of the Austrian Cartel Act) is subject to the general pre-merger notification requirement; such notification must be made to the Federal Competition Authority if the turnover thresholds under the Cartel Act (turnover in the year before the merger or concentration of undertakings involved exceeded €300 million on the worldwide market, €30 million on the Austrian market and, for at least two undertakings, €5 million on the worldwide market) are reached. The merger must not be implemented before the Federal Competition Authority and the Federal Cartel Prosecutor have abstained from initiating an in-depth investigation (within four weeks after notification) or – in the case of an in-depth investigation – the Cartel Court has approved the merger or concentration (the merger or concentration can only be disapproved within five months from the beginning of the in-depth investigation procedure). A merger or concentration will not be approved if its implementation creates or intensifies a dominant market position.

30 In the purchase of a regulated gas utility, are there any restrictions on the inclusion of the purchase cost in the price of services?

Since the network tariff has to be set by the regulator on a cost-plus principle, there is no room for including the purchase price of the company operating as network operator in the tariff. With respect to the purchase of a supplier, there are no restrictions by law, since the prices of commodity gas are not regulated.

31 Are there any restrictions on the acquisition of shares in gas utilities? Do any corporate governance regulations or rules regarding the transfer of assets apply to gas utilities?

Apart from the applicable merger control rules, there are no special restrictions on the acquisition of shares in gas utilities, other than the special certification requirement implemented in accordance with the Third Energy Package in the case of acquisition of shares by a third party with its seat outside of the EU and EEA of transmission system operators. However, some gas businesses are part of companies of which, under federal or provincial law, at least the majority of the shares have to remain in public ownership.

There are no corporate governance regulations or rules regarding the transfer of the assets of gas utilities. In the case of a transfer of the assets of a network operator, however, the new owner will have to apply for a new licence to operate and will have to fulfil all the requirements to obtain such licence under the Gas Act, including the requirement of a seat in Austria or in another EU or EEA member state.

International

32 Are there any special requirements or limitations on foreign companies acquiring interests in any part of the natural gas sector?

At present, there are no such requirements, with the exception of that mentioned in question 31. However, with the implementation of the Third Energy Package in Austria, a third-country clause was introduced, stipulating that whenever a transmission system operator controlled by persons from a non-EU or EEA country requests a licence as described in question 31, such operator will have to fulfil more requirements than an operator controlled by persons from an EU or EEA member state. The operator will have to demonstrate to the regulatory authority and the European Commission that granting certification

to it as a transmission system operator will not put at risk the security of supply of the EU. How such certification procedure will be implemented and carried out in practice remains to be seen.

33 To what extent is regulatory policy affected by treaties or other multinational agreements?

Regulatory policy is mainly affected by EU law, namely by directives and regulations.

34 What rules apply to cross-border sales or deliveries of natural gas?

Under the Austrian Gas Act 2011, access to the grid may be refused to a customer who would not be entitled to access in the country in which the gas supplier or a company controlling such supplier is domiciled, and where E-Control obtains knowledge of such fact (reciprocity rule). There are no other special rules in place for cross-border sales or deliveries of natural gas.

Transactions between affiliates

35 What restrictions exist on transactions between a natural gas utility and its affiliates?

Network operators (TSOs, DSOs and all system administrators such as the market area manager, operator of the VTP and the distribution area manager) must comply with the general non-discrimination and confidentiality rules. The annual accounts of natural gas undertakings shall indicate any transaction with affiliated undertakings exceeding a value of €1 million.

Chartered accountants have to monitor if the consideration is appropriate. Depending on the unbundling model chosen by any transmission system operator, additional stricter rules apply, in particular in the case of implementation of the ITO and ISO models.

36 Who enforces the affiliate restrictions and what are the sanctions for non-compliance?

Since the obligations mentioned in question 35 are part of the legal unbundling rules, it is E-Control that supervises the adherence to these rules.

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Description of domestic sector

1 Describe the domestic natural gas sector, including the natural gas production, liquefied natural gas (LNG) storage, pipeline transportation, distribution, commodity sales and trading segments and retail sales and usage.

The consumption of natural gas as one of Brazil's main fuels represents a recent chapter in the country's energy history. The opening of the natural gas sector to private investors started with the enactment of Constitutional Amendment No. 05/1995, which allowed the states to privatise natural gas distribution companies by means of concessions to state-owned or private companies.

Until 1997, Brazil did not produce significant quantities of natural gas, since exploration and production (E&P) activities were under the federal government's monopoly, being carried out exclusively by *Petróleo Brasileiro SA (Petrobras)*. The enactment of Constitutional Amendment No. 09/1995 loosened the federal government's monopoly over E&P activities, and the enactment of Federal Law No. 9,478/1997 (Petroleum Law) set forth a new regulatory framework for these activities, allowing the federal government to contract them by means of concession contracts.

The construction of the Brazil-Bolivia Natural Gas Pipeline in 1998 represented a milestone in the expansion of the natural gas supply in Brazil, ultimately resulting in the integration of regional markets and national and international production areas.

Additionally, other measures have resulted in the increase of the share of natural gas in the national energy matrix, including:

- the privatisation of natural gas distribution companies and, consequently, the expansion of the natural gas distribution network;
- the thermoelectric priority programme, established by Decree No. 3,371/2000 and implemented by Ministry of Mines and Energy (MME) Rule No. 43/2000, which resulted in the construction of 10 thermal power plants that added 6,720MW in power capacity to the country;
- the increase of consumption of vehicle natural gas, which started in 1998; and
- investments to expand the pipeline network, which in 2010 reached 9,258km, with the construction of approximately 1,600km of natural gas pipelines in that year.

In addition, there has been an increase in participation of LNG in the Brazilian natural gas market since 2008, when two terminals for the import of LNG were constructed: the regasification terminals of Pecém in the state of Ceará, and Baía de Guanabara in the state of Rio de Janeiro. At the beginning of 2014, a third regasification terminal for the import of LNG also commenced operations in the state of Bahia.

Nowadays, Brazil's largest hub of natural gas production is found in offshore fields in the Campos Basin, located in the state of Rio de Janeiro. Additionally, most onshore production occurs in the states of Amazonas and Bahia and is destined mainly for local consumption due to the lack of infrastructure for transportation.

However, recent major natural gas discoveries in the pre-salt and northeast region may also foster the development of the natural gas industry. Additionally, in 2009, Brazil adopted Federal Law No. 11,909/2009 (Gas Law), implemented by Decree No. 7,382/2010, which regulates natural gas activities in Brazil and clarifies the legal

background for private investors, particularly for projects related to gas pipelines, gas storage and LNG facilities.

At the end of 2010, Congress approved Federal Law No. 12,351/2010 and other laws (Pre-Salt Laws) that introduced the production sharing contract regime (PSC regime) to be applied in future licensing of E&P activities in the pre-salt area and certain other areas deemed to be strategic by the government, which may have effects on the natural gas industry. The Pre-Salt Laws had originally established that Petrobras would be the sole operator (with a minimum 30 per cent stake) of the fields granted under the PCS regime, which was the case with the Libra field auctioned in 2013. However, Federal Law No. 13,365, passed in November 2016, revoked Petrobras's sole operatorship, but afforded it a preferential right to choose to be the operator of future production sharing contracts.

On 19 February 2014, ANP made available a summary with information on the first natural gas transportation bid round. This was the first time that a gas pipeline was subject to a bid round after the enactment of the Gas Law. The transportation facility was envisaged to be located between the cities of Itaboraí and Guapimirim, linking Petrobras' Comperj petrochemical complex to the gas pipeline network in Rio de Janeiro. The project, estimated to cost US\$8.5 billion, was part of a 10-year plan regarding the expansion of the transportation pipeline network (PEMAT), released by the MME on 26 March 2014. Initially planned to be operational in 2016, the construction Comperj was interrupted owing to corruption scandals involving Petrobras and remains suspended as at the date of publication, hence the transportation facility has not been auctioned yet.

After almost five years with no new licensing rounds for E&P areas, on 14 May 2013, the Brazilian national petroleum, natural gas and bio-fuels agency (ANP) promoted the 11th bid round. In the same year, the ANP promoted the 12th concession regime bidding round, along with the first production-sharing bid round, where the Libra field was granted. The last bidding round held in Brazil was the 13th concession regime bidding round, which occurred on 7 October 2015. The government is expected to promote in 2017 the 14th concession regime bidding round, the 2nd production-sharing bidding round, concerning areas that are to be unitised with licence areas, as well as the 4th bidding round for marginal areas.

2 What percentage of the country's energy needs is met directly or indirectly with natural gas and LNG? What percentage of the country's natural gas needs is met through domestic production and imported production?

As a result of the international economic crisis and the consequent reduction in the need for natural gas, there has been a decrease in the share of natural gas in the national energy matrix, from 10.3 per cent in 2008 to 8.7 per cent in 2009. However, due to an increase in electricity demand in the country, together with the unfavourable hydrological conditions, in 2010 there was a 180 per cent increase in natural gas thermal generation (including self-producers and thermo-utility plants) and, due to the recovery of various economic sectors, the industrial demand for natural gas increased 29 per cent over 2009. Thus, in 2010 there was an increase in the share of natural gas in the national energy matrix to 10.3 per cent, which was maintained in 2011. Since 2012, the share of natural gas in the national energy matrix has been increasing, reaching a share of 13 per cent in 2015.

According to the MME, the average daily production of natural gas in Brazil in 2014 was 87.4 million cubic metres, and imports were averaging 52.9 million cubic metres per day, with the local production representing 71 per cent of the total consumption. In 2015, the production rose 10.19 per cent in comparison with 2014, hitting 96.2 million cubic metres per day. In the past 10 years, natural gas production in the country showed an average growth of 7.9 per cent per year, resulting in an accumulated growth of 98.5 per cent and Brazilian imports of natural gas increased 9.8 per cent compared with 2014, totalling 19.1 billion cubic metres.

The LNG participation in the Brazilian natural gas market has increased since 2008, when the regasification terminals of Pecém and Baía de Guanabara were concluded. In 2014, another regasification terminal located in Bahia was initiated with a regasification capacity of 14 million cubic metres, which increased Petrobras's natural gas regasification capacity to 41 million cubic metres a day. According to the ANP, the imports of LNG increased from 35 million cubic metres in 2008 to 2,827 million cubic metres in 2010, coming especially from Trinidad and Tobago (880 million cubic metres), Nigeria (869 million cubic metres) and Qatar (635 million cubic metres). However, in 2011, imports decreased to 686 million cubic metres, representing a variation of almost 75 per cent if compared with 2010. Nonetheless, since 2012, imports of LNG have been increasing in Brazil, reaching 7,258 million cubic metres in 2015, which represents a variation of over 20 per cent from the past year.

Government policy

3 What is the government's policy for the domestic natural gas sector and which bodies set it?

According to the 2024 10-Year Energy Plan prepared by the Empresa de Pesquisa Energética, the federal government expects that by 2024, the demand for natural gas will have grown from 79.3 million cubic metres per day in 2015 to between 104.2 million cubic metres and 170.6 million cubic metres per day, depending upon the volatility of thermoelectric consumption, although these forecasts include demand from transportation, industry, thermoelectric generation, cogeneration, residential, commercial and energy industry consumption.

The federal government in recent years has taken seriously the aim of increasing the share of natural gas in the national energy matrix, which rose from 3.8 per cent in 2000 to 10.3 per cent in 2008, reduced to 8.7 per cent in 2009, as a result of the economic crisis, but returned to 10.3 per cent in 2010. From 2012 onwards, the share of natural gas in the national energy matrix increased, reaching 13 per cent in 2015.

The governmental bodies in charge of the natural gas policy are the following:

- the National Energy Policy Council (CNPE), whose main purposes are fostering the rational use of the nation's energy resources, ensuring proper functioning of the national fuels inventories system, reviewing energy matrices for different regions of Brazil and establishing general guidelines;
- the ANP, which is in charge of regulating, contracting and supervising economic activities related to the natural gas industry, and establishing technical standards for various connected activities. In addition, the ANP has the statutory competence to declare, as the case may be, the public use of areas to be used for the construction of gas pipelines as well as ancillary facilities for purposes of expropriation and institution of utility easements; and
- the MME, which is in charge of proposing which gas pipelines should be built or expanded, establishing guidelines for the contracting of transport capacity and defining the applicable regime for natural gas transportation pipelines (either concession or authorisation).

Intending to encourage the exploration of unconventional resources, the ANP regulated gas activity by means of Resolution 21, published in 2014 (see question 5 for further details).

In addition, it is important to note that a major government plan named '*Gás para Crescer*' (see 'Update and trends' for further details) is expected to be implemented in the coming years, which might bring considerable changes to the natural gas framework, aiming at developing the natural gas industry.

Regulation of natural gas production

4 What is the ownership and organisational structure for production of natural gas (other than LNG)? How does the government derive value from natural gas production?

Pursuant to article 20, IX of the Brazilian Federal Constitution, Brazil's oil and gas reserves are owned by the federal union.

With the enactment of Constitutional Amendment No. 09/1995, which loosened the federal government's monopoly over E&P activities, the Petroleum Law in 1997 established the concession regime in Brazil, which allows private companies to acquire the right to explore, develop and produce oil and natural gas on predetermined blocks, offered by the ANP in a public tender.

For this reason, article 26 of the Petroleum Law and article 22 of Decree No. 2,705/1998 establish the government fees that must be paid by concessionaires to compensate the government for oil or natural gas production, which are as follows:

- signature bonus: a lump-sum amount payable in one single instalment upon execution of the concession agreement;
- royalties: financial compensation to be paid monthly by the concessionaires for each field;
- special participation: extraordinary financial compensation payable in the event that high volumes of oil or natural gas are produced, or otherwise a certain field enjoys high profitability; and
- payment for area occupation or retention: a yearly sum to be paid for the occupation or retention of oil prospecting areas.

The ANP sets the amounts to be paid in the bidding documents and concession agreements; nonetheless, article 28 of Decree No. 2,705/1998 provides minimum and maximum standards for charging such amounts.

At the end of 2010, Law No. 12,351/2010 was approved and sanctioned by the government, establishing the PSC regime applicable to the exploration and production of oil and natural gas in the pre-salt area defined in Law No. 12,351/2010 and other strategic areas to be defined by the government as deemed convenient. Unlike the concession regime, the special participation and payment for area occupation or retention, both part of the government take in the concession regime, are not applicable under the PSC regime in which the company, instead, produces oil for the government in exchange for a proportion of the oil produced (profit oil).

The signature bonus, already present in the concession contract regime as a criterion for the judgment of the bidding rounds, under the PSC regime is a fixed amount established in the final tender protocol, which the contractor must pay to the government upon signature of the PSC.

The percentage of royalties under the PSC regime generated great discussion. The authorities considered raising the amount to 15 per cent as opposed to the 10 per cent imposed on grantees already in effect. After much deliberation, however, the preceding 10 per cent prevailed and will continue to be used under the PSC regime.

In both cases (concession regime and PSC regime), federal, state and municipal taxes apply, as to any other activity performed in Brazil. However, some goods that are to be used in E&P activities may be imported under special custom regimes, such as Repetro.

Finally, it is important to note that there is no restriction on foreign participation in concessions or PSCs, provided that the foreign investor incorporates a company under Brazilian law and complies with all the technical, legal and financial requirements established by the ANP.

5 Describe the statutory and regulatory framework and any relevant authorisations applicable to natural gas exploration and production.

Pursuant to article 177 of the Constitution, the government may grant licences over the following activities related to the gas sector:

- prospecting and development of deposits of natural gas and other hydrocarbons;
- import and export of products or basic by-products resulting from the activities of prospecting and development of natural gas and other hydrocarbons; and
- pipeline transportation of crude natural gas from any source whatsoever.

The hiring of a state-owned or private company for the execution of E&P activities under the concession regime is regulated by the Petroleum Law; regarding E&P activities under the PSC regime, which applies to the pre-salt and other strategic areas, it is regulated by the Pre-Salt Laws.

Under the concession regime, to participate in the bid a company must comply with all technical, legal and financial requirements established by the ANP. Afterwards, the company may be granted the concession for a certain block (or blocks) if it offers the highest signature bonus, minimum exploration programme and local content percentage, according to the rules set by the relevant tender protocol.

Under the PSC regime, the only criterion to win is the highest percentage of interest in the profit oil to the government. Therefore, the winner of the bid will bear 100 per cent of the exploration and production costs, but will receive as payment a share of the profit oil, and will have the right of cost oil reimbursement (oil and natural gas equivalent to exploration and production costs), subject to payment of the government take.

Note that, after receiving the award of a concession contract or PSC, the concessionaire or contractor is required to obtain the applicable permits from the competent environmental agency (which can be the Brazilian Environmental Protection Agency for offshore licences, or state environmental agencies for onshore licences), and to comply with several ANP regulatory ordinances that govern and supervise E&P activities.

Exploration of unconventional resources was not regulated until recently. In 2014, the ANP enacted a resolution regarding the hydraulic fracturing (fracking) technique. The resolution focuses mainly on environmental and operational safety matters. Among these, operators must disclose on their websites a list of all chemical products used in the fracking process, or those that are transported and stored, indicating the amount and composition. Additionally, details regarding the water used for this process will also have to be disclosed, including its source, treatment given and final destination.

6 Are participants required to provide security or any guarantees to be issued with a licence to explore for or to store gas?

To participate in a bid round (to acquire the rights to explore and produce gas), participants may be required to provide three guarantees, which are:

- bid guarantee: bidders are required to present a guarantee of 1 per cent of the estimated value of the contract. This guarantee is intended to demonstrate the economic and financial condition of the bidder;
- minimum exploration programme (PEM) guarantee: this guarantee covers the PEM, which is an exploration work proposal that companies present to the ANP, and which shall be submitted in the bidding documents. It is provided in work units and their equivalence to services to be performed in the field. If the concessionaire does not comply with the PEM, it will have the guarantee executed; and
- performance guarantee: depending on the technical qualification requested by a bidder, the parent company may be required to present a guarantee for the performance of the contract by the concessionaire.

It should be noted that, although provided for in the Gas Law, Brazil still does not have specific regulations regarding concessions for storage of natural gas.

Regulation of natural gas pipeline transportation and storage

7 Describe in general the ownership of natural gas pipeline transportation, and storage infrastructure.

Any company incorporated under Brazilian law with head offices and management in Brazil, whether state or privately owned, irrespective of its ultimate control, may be granted authorisations or concessions to perform natural gas transportation through pipelines or storage of natural gas. The facilities used in connection with the transportation activities shall be transferred to the public domain at the end of the term of the concession or authorisation upon the payment of an indemnification under the terms set by the regulations.

8 Describe the statutory and regulatory framework and any relevant authorisations applicable to the construction, ownership, operation and interconnection of natural gas transportation pipelines, and storage.

The Gas Law identifies three types of natural gas pipelines: transfer pipelines, transportation pipelines and production flow pipelines:

- natural gas transfer pipelines are used to move natural gas within its owner's production, collection, transfer, storage or processing facilities. They are for the exclusive interest of their owners;
- natural gas transportation pipelines, on the other hand, are used to transport natural gas from processing and storage facilities, or other natural gas transportation pipelines, to third-party storage facilities, other transportation pipelines or delivery points that belong to the local natural gas distribution concessionaires; and
- natural gas production flow pipelines are used to move natural gas from the producing wells to the processing and treatment facilities or liquefaction units. Natural gas production flow pipelines that are not part of an oil and gas E&P concession (upstream) are subject to an authorisation system without a bidding process. Natural gas production flow pipelines which are part of the assets of an upstream project do not require any specific authorisation from the ANP, as the pipeline would already be described in the relevant development plan for the field, which must be approved by the ANP.

According to the Gas Law, two legal regimes are applicable to natural gas transportation pipelines and natural gas storage in Brazil: concession and authorisation. However, two types of authorisation may apply for natural gas transportation pipelines: monopoly authorisation or regular authorisation.

Transportation

The concession regime applies to new transportation pipelines. The granting of this concession is subject to a public tender. The winner of the public tender to receive the concession is the company that proposes the lower yearly revenue (value to be received by the transportation company during a year in accordance with the relevant tender protocol and concession agreement).

The monopoly authorisation regime applies to international pipelines, and transportation pipelines that were already in operation, were authorised or were in the environmental licensing process when the Gas Law was enacted. Regular authorisation applies to transfer pipelines and production flow pipelines. The granting of both authorisations is subject to the fulfilment of the technical, economic and legal requirements, according to the ANP rules, but not to public tender.

The term of the delegation from the government for the concession and monopoly authorisation for transportation is 30 years. The facilities used in connection with the transportation shall be transferred to the public domain after the end of the term and upon the payment of an indemnification. Open access applies to both cases.

The term of delegation for regular authorisation is defined by the regulator, and open access does not apply.

Regarding balancing, gas quality and liability assumed by transportation companies and shippers, each transportation company must submit to the ANP the general rules for transportation services and its transportation agreements models addressing such issues. Gas quality is regulated through the ANP rules, and only natural gas in conformity with certain ANP specifications can be transported.

In any event, in December 2013, the ANP enacted ANP Resolution 51/2013, regulating gas shipping activities. Such Resolution, however, imposes a restriction on cross-ownership: companies or consortia that are concessionaires of natural gas transportation pipelines (transporters), or that have a participating interest in those companies, are prevented from requesting authorisation for performing natural gas shipping activities. In addition to such Resolution, Bill of Law 6407/2013, currently under discussion at the Mines and Energy Committee of the House of Commons, also provides for such restriction. To be approved, the Bill of Law must still be passed by the Congress (House of Commons and Senate) and the President.

Please note that an authorisation for construction or operation may be required for the natural gas transportation pipelines subject to the authorisation regime, as established by ANP Resolution No. 52/2015.

Storage

The concession regime applies to gas storage in reservoirs, which is subject to public tender. Open access applies in this case.

Regular authorisation applies to machine-made gas storage facilities. The granting of this authorisation is subject to the fulfilment of the technical, economic and legal requirements under the ANP rules, but not to public tender. Open access does not apply in this case.

Specific regulation for natural gas storage is currently under public consultation by the ANP and a new resolution regarding those matters is expected to be enacted in 2017.

9 How does a company obtain the land rights to construct a natural gas transportation or storage facility?

Companies that are licensed to transport natural gas may negotiate the relevant rights with landowners and other competent authorities, such as the State Land Institute and environmental authorities.

If necessary, as per article 3, section 4 of the Gas Law, the ANP has the statutory competence to declare, as the case may be, the public use of the areas to be used for the construction of the pipelines and other facilities, through the request of an interested party, for purposes of expropriation and institution of utility easements in such areas.

Further, article 1,286 of the Brazilian Civil Code provides for right of way, by which the owner of the land is bound to tolerate the passage through his or her property of pipes and other underground conduits for services of public utility.

It is important to note that in late 2012, the ANP enacted general rules governing the sharing of infrastructure between agents, especially in areas containing utilities easements.

10 How is access to the natural gas transportation system and storage facilities arranged? How are tolls and tariffs established?

Access

The ANP has recently enacted Resolution No. 11/2016, which regulates the open access to natural gas transportation pipelines. As a general rule, open access to transportation facilities must be allowed on a non-discriminatory basis to third parties, which compensation will be calculated according to the criteria established by the ANP. Exclusivity (no open access) is guaranteed for 10 years from the enactment of the Gas Law to international pipelines, and to pipelines that were already in operation, were authorised or were in the environmental licensing process when the Gas Law was enacted.

For new pipelines, exclusivity is determined by the MME, subject to a limitation of 10 years, and is inserted in the concession agreement. The period of exclusivity ends automatically when all the capacity of the new pipeline is contracted or, in the event of an assignment of the transportation capacity (full or portion), regardless of the term of the exclusivity.

Subject to the period of exclusivity, third-party access is guaranteed to transportation pipelines (but not to transfer or outflow pipelines) in the case of idle or available capacity.

In the case of gas storage, third-party access is guaranteed only to storage in reservoirs, subject to the period of exclusivity established by the MME, but not to machine-made storage facilities.

Tolls and tariffs

ANP Resolution No. 35/2012 establishes that 'remuneration' is the amount paid by the shipper to the transporter for the use of the transportation of natural gas and other complementary services. The ANP has the authority to set the amount of remuneration proposed by the transporter, even if it has been agreed with the shipper, should a complaint be presented with sufficient proof of the transporter's pricing in not compatible with market practices.

In relation to future natural gas transportation pipelines granted under the concession regime, article 13, paragraph 2 of the Gas Law sets out that the tariffs to be paid by shippers will be established by the ANP. The agency will apply to the maximum tariff established for the public invitation process a coefficient that corresponds to the ratio between annual revenue established in the bidding process (since the winning offer is the one with the lowest annual revenue) and the maximum annual revenue established in the tender protocol.

The criteria for calculating the transportation tariffs of pipelines that were already in operation (or undergoing licensing) when the Gas

Law was enacted is set forth by ANP Resolution No. 15/2014. ANP Resolution No. 15/2014 also establishes procedures for approval of transportation tariffs proposed by the transporters.

According to ANP Resolution No. 15/2014, transportation tariffs must reflect the costs of efficient, safe and trustworthy operation of the gas transportation pipeline, allow the transporter to generate enough revenue for meeting its costs, expenses and tax obligations and be fair and accordingly compensated for its investment and not create discriminatory or preferential treatment between shippers.

ANP Resolution No. 15/2014 determines that the tariff for firm transportation should be structured around at least the following charges:

- an entry capacity charge, to cover the fixed costs of the reception capacity, general and administrative expenses, and any fixed operation and maintenance costs;
- a transportation capacity charge, to cover any investment costs related to the transportation capacity;
- an output capacity charge, to cover investments related to the delivery capacity; and
- a movement charge, to cover any variable costs incurred in the actual transportation of the gas.

For natural gas storage, no specific regulation has yet been enacted by the ANP.

11 Can customers, other natural gas suppliers or an authority require a pipeline or storage facilities owner or operator to expand its facilities to accommodate new customers? If so, who bears the costs of interconnection or expansion?

The MME is responsible for proposing the expansion of transportation pipelines, which may happen as a result of its own initiative or of the initiative of third parties.

In the case of expansion of transportation pipelines under the concession regime, the concession regime applies to the expanded capacity. The ANP will carry out a public call to define the necessity of expansion, and a public tender to define the transportation company and the tariffs. The transportation company whose pipeline will be expanded has pre-emptive rights to the expansion capacity under the same terms and conditions as the winner of the public tender.

In the case of expansion of transportation pipelines under the authorisation regime, such regime applies to the expanded capacity. The ANP will carry out a public consultation to define the necessity of expansion, and the transportation company whose pipeline will be expanded has pre-emptive rights to expand its pipeline and propose a tariff to the ANP.

In both cases (concession and authorisation), the exclusivity applicable to the pipeline applies to its expansion.

At present, there are no rules applicable to the expansion of storage facilities.

12 Describe any statutory and regulatory requirements applicable to the processing of natural gas to extract liquids and to prepare it for pipeline transportation.

Pursuant to articles 43 and 44 of the Gas Law, any company or a consortium of Brazilian-formed companies governed by Brazilian law with head offices in Brazil may be authorised by the ANP to operate gas processing plants. ANP Resolution No. 17 of 10 June 2010 sets forth the requirements for authorisation of the activity of natural gas processing, including construction, modification, increase of capacity and operation of natural gas processing units.

The authorisation is granted in two stages: the first is for the construction, modification and increase of capacity (authorisation for construction), and the second is for operation of the unit (authorisation for operation).

The company must fulfil technical, economic and legal requirements, according to the ANP rules. Processing facilities are not subject to open access. As for technical aspects, there are rules enacted by the ANP on specifications for the quality of the natural gas to be transported.

13 Describe the contractual regime for transportation and storage.

There are three types of terms and conditions for gas transportation services, as per ANP Resolution No. 11/2016:

- firm transport service, with ship-or pay-clauses;
- interruptible transport service, in which the transportation can be interrupted according to transportation priorities of a pipeline; and
- extraordinary transport service, in which the available capacity of a pipeline is purchased for a sole event.

Some of the terms and conditions of the transportation services agreement are established by the ANP rules (tariffs, open access, etc), and this agreement must be submitted to the ANP for approval.

The ANP has not yet enacted specific regulations regarding storage of natural gas. These agreements are executed in accordance with private law.

Regulation of natural gas distribution

14 Describe in general the ownership of natural gas distribution networks.

The opening of the oil and gas sector to private investors started with the enactment of Constitutional Amendment No. 05/1995, which granted to the states the right to exploit directly, or through concession to private parties, the local natural gas distribution services, as per article 25, section 2 of the Constitution.

The states of Rio de Janeiro and São Paulo privatised CEG and Comgás, their respective companies for natural gas distribution, to optimise investments in the natural gas distribution industry. CEG and Comgás were then transformed into five private companies: CEG, CEG RIO, Comgás, Gás Natural Sul and Gás Brasileiro. Following privatisation, investment into these states increased, allowing the development of the distribution network. At present, there are 27 distribution companies in Brazil, most with mixed capital (ie, with private and public capital).

Finally, each state may enact its own set of rules applicable to local natural gas distribution and can sign its own concession agreement, as well as establish its own regulatory agency.

15 Describe the statutory and regulatory structure and authorisations required to operate a distribution network. To what extent are gas distribution utilities subject to public service obligations?

According to article 25(2) of the Constitution, each state shall develop its local natural gas distribution, either directly or through its state regulatory agencies by means of concession to private parties. Therefore, the state regulatory agencies are in charge of regulating, contracting and supervising natural gas distribution.

Natural gas distribution is considered an essential public utility and may be delegated through concession to private parties in accordance with the relevant state's regulations. In any event, under Brazilian law, the administrative decisions of the state regulatory agencies regarding public utilities may be challenged at a judicial level.

16 How is access to the natural gas distribution grid organised? Describe any regulation of the prices for distribution services. In which circumstances can a rate or term of service be changed?

The state regulatory agencies are responsible for regulating local natural gas distribution, and each state may have its own set of rules applicable to natural gas distribution. Additionally, the state regulatory agencies are responsible for the establishment of tariffs for the distribution of natural gas, pursuant the article 46, section 1 of the Gas Law.

Further, as per article 46 of the Gas Law, companies that produce or import natural gas to be used in their own facilities are allowed to construct their own pipelines, subject to pre-emptive rights of the local natural gas distribution company and as long as an operation and maintenance agreement for this pipeline is executed with such local natural gas distribution company. Customers that are qualified as free consumers, in accordance with the rules established by each state, are also allowed to construct their own pipelines, subject to these conditions.

17 May the regulator require a distributor to expand its system to accommodate new customers? May the regulator require the distributor to limit service to existing customers so that new customers can be served?

Even when the natural gas distribution activity is granted to private companies, according to the rules set by each state this activity is qualified as public utility and, therefore, in addition to the obligations assumed in the respective legislation and concession agreement, the regulator may require expansion of the network to accommodate new customers. Financial resources from the government or interested third parties may be invested in the expansion, depending on the rules of the respective state.

18 Describe the contractual regime in relation to natural gas distribution.

Each state or state regulatory agency may enact its own set of rules applicable to local natural gas distribution regulating the general terms and conditions of agreements in relation to local natural gas distribution.

Concession agreements can be divided into three groups:

- concession agreements entered into with public companies;
- Rio de Janeiro concession agreements entered into with private companies; and
- São Paulo concession agreements entered into with private companies.

All distribution companies in Brazil, except those from the states of Rio de Janeiro and São Paulo, are included under (i). These are long-term agreements, ranging from 30 to 50 years, and are renewable. They contain exclusivity clauses granting monopoly to the distribution companies over the activities of natural gas distribution in these states.

On the other hand, concession agreements entered into by the states of Rio de Janeiro and São Paulo have their own peculiarities; these agreements allow the possibility of bypass, and have a limited term of exclusivity. In addition, these agreements are entered into with private distribution companies.

Regulation of natural gas sales and trading

19 What is the ownership and organisational structure for the supply and trading of natural gas?

The local supply and trading of natural gas is carried out by a local natural gas distribution company, which must be a company or a consortium of Brazilian-formed companies governed by Brazilian law and with its head office in Brazil, through the concession regime established by the relevant states.

The commercialisation of natural gas may be divided into two territorial scopes: commercialisation at the national level and commercialisation at the regional level.

Commercialisation at the national level occurs when the seller agent solely uses the transportation gas pipelines, not accessing the concession areas granted to the distribution companies, which may happen in the following cases:

- commercialisation between the producer (upstream) and distributor (downstream), in which the delivery point of the property of the gas is between the production and the city gate;
- commercialisation between the importer (midstream) and distributor (downstream), in which the delivery point of the property of the gas is the city gate of the pipeline; and
- commercialisation between the producer (upstream) and the seller agent, in which the delivery point of the property of the gas may be located between the production and the city gate, even in facilities of storage of natural gas.

Commercialisation at the regional level occurs when the seller agent negotiates with free consumers connected to the distribution network of the distribution companies (commercial bypass).

Depending of the type of commercialisation, the seller agent must obtain authorisation to sell the gas either from the state where the sale is performed or from the ANP.

Exceptions to this rule are self-producers, self-importers, and free customers who are allowed to produce their own gas, import their own gas or buy it from other sources.

Free consumers, self-producers and self-importers have the right to construct and implement facilities and pipes for their specific use only if the state distribution company is not able to supply their demand for transportation of natural gas. In such cases, authorisation will only be possible in the case of fulfilment of three requirements:

- lack of natural gas distribution system;
- signature of a contract pursuant to which the operating and maintenance services are granted to the distribution company; and
- the facilities and pipelines shall be considered as public heritage.

20 To what extent are natural gas supply and trading activities subject to government oversight?

Local natural gas distribution companies must follow the regulatory framework set by their respective states and state regulatory agencies, as mentioned above.

All natural gas trading agreements not within the competence of the states shall be registered before the ANP, so that it can inform the origin and characteristics of the gas reserves that will supply the amount purchased. Confidentiality obligations are applied to the commercial terms of the agreements.

21 How are physical and financial trades of natural gas typically completed?

The only exception to physical delivery is the swap of natural gas, which is allowed by the Decree that regulates the Gas Law. Shippers that are interested in swapping must specify this to transportation companies. The right to perform the swap is subject to exclusivity rights, in accordance with the respective concession or authorisation, and will result in a reduction of the applicable tariffs. ANP Resolution No. 11/2016, provides specific details and guidelines for the operational swap, which are subject to the tariffs approved by ANP.

22 Must wholesale and retail buyers of natural gas purchase a bundled product from a single provider? If not, describe the range of services and products that customers can procure from competing providers.

The only alternatives to local natural gas distribution companies are applicable to self-producers, self-importers and free consumers.

As per article 46 of the Gas Law, companies that produce or import natural gas to be used in their own facilities are allowed to construct their own pipelines, subject to pre-emptive rights of the local natural gas distribution company and as long as an operation and maintenance agreement for this pipeline is executed with such local natural gas distribution company.

Moreover, consumers that are qualified as free consumers, in accordance with the rules established by each state, are also allowed to construct their own pipelines, subject to pre-emptive rights of the local natural gas distribution company and as long as an operation and maintenance agreement for this pipeline is executed with such local natural gas distribution company.

Regulation of LNG

23 What is the ownership and organisational structure for LNG, including liquefaction and export facilities, and receiving and regasification facilities?

At present, there are three LNG regasification terminals in Brazil: the Pecém Terminal in the state of Ceará; the Baía de Guanabara Terminal in the state of Rio de Janeiro; and the Bahia Terminal in the state of Bahia. All the terminals belong to Transportadora Associada de Gás SA, a wholly owned subsidiary of Petrobras Gás SA, and the shipper is Petrobras, which is responsible for the acquisition of LNG in the international market and for the freighting of the tank ships. Nonetheless, there are currently some LNG-to-power regasification green field projects under development in Brazil, most of them aiming to supply gas-fired power plants.

There is also a floating LNG liquefaction project under development between Petrobras, BG, Repsol and Galp, which is considered to be an option for the pre-salt gas flow, and the Gemini project, created in 2005 by Petrobras and White Martins, which is an LNG liquefaction project in the interior of São Paulo that supplies natural gas to cities where the local natural gas distribution network is not yet implemented.

24 Describe the regulatory framework and any relevant authorisations required to build and operate LNG facilities.

As per article 44 of the Gas Law, any company or consortium of Brazilian-formed companies governed by Brazilian law and with its head office in Brazil can build and operate LNG facilities through an authorisation granted by the ANP and in accordance with the requirements set by this agency's regulations.

ANP Resolution No. 52/2015 sets the general rules for authorisation of the construction and operation of LNG facilities. Pursuant to this Resolution, the company must obtain construction and operation authorisations. In addition, ANP Ordinance No. 11/2016 regulates the use of the natural gas pipelines carriage facilities.

Another major regulatory aspect to be noted is that the LNG terminals are not subject to open access, pursuant to article 58 of the Petroleum Law and to article 58 of the Gas Law. Therefore, access permission through proper remuneration to the facilities' owner shall not be applicable to LNG facilities. In any event, Bill of Law 6407/2013, currently under discussion at the Mines and Energy Committee of the House of Commons, provides for such open access. The Bill of Law must still be passed by Congress (House of Commons and Senate) and the President.

Further, local environmental agencies must issue the applicable environmental licences.

25 Describe any regulation of the prices and terms of service in the LNG sector.

There is no specific regulation on the prices and terms of services in the LNG sector; prices are freely negotiated by the parties involved.

Although prices can be freely negotiated between the parties, the seller must obtain an authorisation from the ANP to perform activities of commercialisation, and the respective contracts must be registered therewith.

Mergers and competition

26 Which government body may prevent or punish anticompetitive or manipulative practices in the natural gas sector?

On 29 May 2012, a new antitrust law came into force in Brazil (Law No. 12,529/2011), providing a new set of antitrust rules applicable to businesses going forward.

Under this new regime, the Administrative Council for Economic Defence (CADE) became the sole administrative agency in charge of both merger control and antitrust investigations in Brazil. CADE is composed of three divisions: the General Superintendency (Superintendency); the Administrative Tribunal; and the Department of Economic Studies, which provides the authority with economic analysis support.

The Superintendency is responsible for launching and leading investigations into alleged antitrust infringements. Upon concluding an investigation, the Superintendency presents the case to the Administrative Tribunal, which is composed of seven commissioners and ultimately takes the final decision on the case. The final decision of the Administrative Tribunal will be final and binding, but subject to judicial review.

According to article 10 of the Petroleum Law, the ANP shall give notice to the Brazilian antitrust authorities of any potential anticompetitive conduct of which it may become aware.

27 What substantive standards does that government body apply to determine whether conduct is anticompetitive or manipulative?

Pursuant to article 36 of Law No. 12,529/2011, conduct that aims or has the ability to limit or in any way harm competition, control a given relevant market of goods or services, increase profits arbitrarily or abuse a dominant position, shall constitute a violation of the economic order, irrespective of its actual results.

28 What authority does the government body have to preclude or remedy anticompetitive or manipulative practices?

Companies involved in antitrust infringements under Brazilian law are subject to fines ranging from 0.1 to 20 per cent of their annual

Update and trends

As mentioned above, the ANP has enacted an important regulation – Resolution No. 11/2016 – governing open access to natural gas transportation pipelines, swap of natural gas, rules for the assignment of rights and obligations under gas transportation agreements, procedures for registration of such transportation contracts with ANP and new public call procedure for contracting natural gas transportation capacity with transporters. Moreover, this new resolution comes in light of ANP Resolution No. 51/2013, which promoted the unbundling of the gas transportation sector. According to ANP Resolution 51/2013, companies or consortia that engage in natural gas transportation activities are not allowed to also engage in any natural gas shipping. Another important restriction is that a natural gas transportation concessionaire cannot transport natural gas of shippers that are part of its own corporate group. Therefore, ANP Resolution 51/2013 set forth rules to guarantee competition and unbundling between natural gas transport and shipping activities.

The ANP has also published a draft resolution for the storage of natural gas, which regulatory impact is under analysis along with a public consultation. According to the ANP, new rules for storage of natural gas will be gradual, giving industry players the opportunity to accommodate their current operation at market prices and to plan future investments.

On a related matter, Petrobras was historically the owner of all infrastructure related to the transportation of natural gas and the entire supply chain in the natural gas industry. Brazil has one of the most expensive prices for natural gas, which affects the entire national productive sector and prevents national industry from developing. However, Petrobras's current difficulties, mainly due to corruption scandals and financial problems caused by falling oil prices, high indebtedness and cut in its ratings, have led the state-owned company to heavily promote its multibillion dollar divestment programme. Petrobras is aiming for the selling of assets related to the midstream and downstream sector in order to focus on its core activities – the E&P industry. In this sense, major divestment operations occurred in 2016, such as the sale of a 49 per cent take in Gaspetro to Japanese commercial conglomerate Mitsui for 1.9 billion reais and the sale of a 90 per cent stake in Nova Transportadora do Sudeste (NTS), which is the company that manages the network of gas transportation pipelines servicing Brazil's south-east. Those transactions will certainly have an impact over the dynamics of the natural gas industry.

In addition, Petrobras's divestment programme led the federal government to study a new regulatory framework to regulate a

competitive and multi-player industry, replacing the role of Petrobras as manager of the pipeline network. In response to that, the MME has disclosed a new plan that may be freely translated as 'Gas to Grow Up' (*Gás Para Crescer*), which aims to increase the share of the natural gas in the Brazilian energy mix and develop the natural gas industry. The MME defined 10 work topics which will comprise the plan:

- (i) commercialisation of natural gas;
- (ii) tariffs' methodology for input and output of gas;
- (iii) sharing of essential facilities;
- (iv) equalisation between state and federal regulations;
- (v) development of natural gas demand;
- (vi) equalisation between the electricity and natural gas sectors;
- (vii) study of an integrated independent management of the transportation network;
- (viii) marketing policy for the sale of the federal government's share in product sharing agreements;
- (ix) tax issues; and
- (x) support for negotiations regarding Bolivian gas and/or other alternatives.

This plan includes the participation of private agents and associations in the discussion related to topic (vii) on how to improve the market conditions for the natural gas, including the possible creation of a central authority to control the movement of gas through the network (similar to other authorities in Europe). One of the proposals already presented by agents of the sector and that will be evaluated by the MME is the creation of an entity responsible for the coordination of the operation of the transportation of natural gas, as is done in the electric energy area by the National Electric System Operator (ONS). In addition, the industry is discussing alternatives to settle bottlenecks current existing between the natural gas and power regulation, thereby suggesting flexibility in the demands for proof of supply contract for participation in energy auctions.

Finally, the federal government is expected to held at least three more bidding rounds up to the end of 2017. These bidding rounds will include opportunities to all players in the market, as there will be onshore, offshore, and even pre-salt areas being offered. Given the current composition of the government and its positioning in relation to the agents of the sector, it is possible to perceive an assertive tendency toward a regulatory exercise more in line with the private sector.

gross revenues generated in the line of business where the infringement occurred. The concept of 'line of business' for the purposes of calculating fines is still subject to discussion. On 29 May 2012, CADE issued Resolution No. 3 setting out a broad list of activities intended to guide the authority when imposing fines for antitrust infringements. The definitions proposed by this Resolution can sometimes be broader than the traditional concept of market definition used for the purposes of antitrust analysis (eg, a definition applicable to the gas industry could be as broad as 'transport and distribution of gas'), and therefore requires careful assessment on a case-by-case basis. Fines applicable to officers or employees range from 1 to 20 per cent of the fine imposed on the company.

CADE also has broad powers 'to take whatever measures may be necessary' to remedy harm to competition. The Superintendency can undertake on-site inspections without giving prior notice to the parties, and CADE's attorney-general, at the request of the Superintendency, can seek before the courts the necessary search and seizure warrants and orders to conduct investigations, which can even include phone tapping. Further, the federal police are entitled to enforce court orders and conduct dawn raids with the Superintendency on companies under investigation for antitrust violations.

29 Does any government body have authority to approve or disapprove mergers or other changes in control over businesses in the sector or acquisition of production, transportation or distribution assets?

The most relevant change brought about by Law No. 12,529/2011 is that, as of 29 May 2012, Brazil became a suspensory jurisdiction, under which transactions cannot be closed and the parties must remain independent from each other until final antitrust clearance is obtained in

Brazil. Filing with the Brazilian antitrust authority shall be mandatory if at least one of the groups involved in the transaction had gross revenues in Brazil of at least 750 million reais in the preceding fiscal year; and at least one of the other groups involved in the transaction had gross revenues in Brazil of at least 75 million reais in the preceding fiscal year.

As explained above, CADE is divided into three divisions. The Superintendency is responsible for the first review of merger cases and can issue a final clearance decision on those cases that do not raise competition concerns. In the event the Superintendency concludes that a given transaction should be either blocked or approved subject to restrictions, it must oppose the case before the Administrative Tribunal.

The Brazilian premerger control regime is different from other suspensory regimes, in that it does not allow the parties to close or implement the notified transaction right after the publication of the clearance decision: under Brazilian law, within 15 days counted as from the publication of the clearance decision issued by the Superintendency, third parties and regulatory agencies are allowed to challenge the Superintendency's decision before the Administrative Tribunal, and any of the members of the Tribunal can also request that the case be subject to a complementary review by the Tribunal. For this reason, the parties are only allowed to close or implement the notified transaction once the 15-day period following the publication of the clearance decision issued by the Superintendency elapses.

There are two review procedures under the new regime: the fast-track procedure and the regular procedure. The fast-track procedure applies to non-complex cases, including transactions resulting in only minor horizontal or vertical overlaps and involving market shares below 20 per cent. The formal review period may take up to 240 days, and can be extended only once, either by an additional 60 or 90 days. During the first year of the new regime, in practice, cases filed under the fast-track procedure have been generally cleared by CADE

within 30 calendar days. Cases filed under the ordinary review process take longer.

30 In the purchase of a regulated gas utility, are there any restrictions on the inclusion of the purchase cost in the price of services?

As per article 46, section 1 of the Gas Law, tariffs will be established and regulated by each state regulatory agency. Further, article 46, section 2 of the Gas Law establishes that if facilities are built by the state-owned distribution companies, such tariffs will include the amount spent by these companies.

31 Are there any restrictions on the acquisition of shares in gas utilities? Do any corporate governance regulations or rules regarding the transfer of assets apply to gas utilities?

The acquisition of shares in gas utilities can only be done upon the approval of the regulatory agency, and the controlling shareholders must comply with some requirements, such as the technical capacity to carry out this activity, which are imposed on the original bidders by the regulatory agencies, and even the ANP or state agencies.

Further, changes in the company's control must always be notified to the regulator and subject to its approval.

International

32 Are there any special requirements or limitations on foreign companies acquiring interests in any part of the natural gas sector?

There is no restriction on foreign participation in concessions, provided that the foreign investor incorporates a company under Brazilian law and complies with all the technical, legal and financial requirements established by the ANP or the competent state regulatory agency. Such concessions or authorisations will be granted to the Brazilian company that is established.

These requirements aim to facilitate the government's access to information about companies' operations in the Brazilian oil and gas sector, as they are national strategic sectors. Further, all foreign or Brazilian companies are required to hire local personnel as employees, observing the proportion of two-thirds Brazilian employees and one-third foreign employees in each branch, main branch or agency. Thus, the proportion shall be also observed regarding the payroll, meaning that the remuneration received by foreign employees shall observe the same proportionality related to the quantity of employees.

33 To what extent is regulatory policy affected by treaties or other multinational agreements?

No treaties or multinational agreements affect the regulatory policy for natural gas in Brazil. The activities of the natural gas sector in Brazil have their core directives established in the Constitution. Therefore, multinational agreements or treaties signed by Brazil must comply with the constitutional provisions.

34 What rules apply to cross-border sales or deliveries of natural gas?

The import and export rules, as established by the Gas Law, apply to cross-border sales or deliveries of natural gas. Pursuant to Chapter III of the Gas Law, a company governed by Brazilian law may be granted an authorisation by the MME to import and export gas. However, this authorisation must be granted according to the CNPE directives regarding such activities, according to Brazilian energy policy.

Transactions between affiliates

35 What restrictions exist on transactions between a natural gas utility and its affiliates?

In general, there are no limitations on transactions between a natural gas utility and its affiliates in the gas industry; however, the natural gas sector is subject to Brazilian competition rules.

In this sense, the Brazilian Competition Law is applied to the Brazilian territory, and CADE is competent to judge administrative proceedings on competition law, market prices and antitrust matters. According to Law No. 8,884/1994, decisions taken by CADE are not subject to further appeal.

If an entity or the ANP itself understands that the natural gas utility is acting more favourably towards its affiliates, CADE must determine some changes in the natural gas market.

36 Who enforces the affiliate restrictions and what are the sanctions for non-compliance?

The ANP and the state regulatory agency are in charge of enforcing any restrictions on the relationship between the natural gas utility and its affiliates and other sanctions regarding non-compliance related to the obligation agreed on in the concession contracts.

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Bulgaria

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Description of domestic sector

1 Describe the domestic natural gas sector, including the natural gas production, liquefied natural gas (LNG) storage, pipeline transportation, distribution, commodity sales and trading segments and retail sales and usage.

Bulgaria's energy sector is still dominated by electricity, produced mainly from nuclear, coal, hydro-power and renewables. However, the country's gas market has huge potential for development and investments due to its key position in the EU's gas market's Projects of Common Interest (PCI).

Gas consumption in Bulgaria is secured mainly by imported gas from the Russian Federation via the territories of Russia, Moldova, Ukraine and Romania. Domestic production is not sufficient to secure consumption and covers only 2.6 per cent of the annual consumption in the country.

Bulgaria's largest gas exploration project was launched in 2012, when an exploration permit for the deep offshore Han Asparuh Block in the Black Sea was initially granted to a group comprising Total, OMV and Repsol. At the beginning of 2016 two offshore blocks – Han Asparuh and Silistar – were awarded to Shell for an initial five-year exploration term.

The gas market participants in Bulgaria include:

- Bulgartransgaz EAD, a state-owned company, which is the only natural gas transmission grid operator in Bulgaria and also holds a licence for gas storage (transmission operator). The total length of its main gas pipelines (national transmission grid and transmission grid for transit export) is 2,765km;
- Bulgargaz EAD, a state-owned company, which is the public supplier of natural gas (public supplier). It is responsible for the local supply under prices and conditions regulated by the national regulatory authority, the Electricity and Water Regulatory Commission (EWRC);
- local distribution and supply operators (distribution operators), including the big companies Overgas Mreji EAD, with a market share of 59 per cent, Citigas Bulgaria EAD, with a market share of 16 per cent and Chernomorska tehnologichna kompania AD, with a market share of 10 per cent. They ensure the supply of gas to consumers, as well as the development of gas distribution grids. Currently, the distribution grids are still underdeveloped;
- traders of natural gas – these are private companies which transact with the public supplier, the transmission operator, distribution operators, other traders and end consumers;
- end consumers; and
- business consumers.

Within Bulgaria there is only one gas storage facility – the underground station, Chiren, with approximately 0.55bcm capacity. The intention of the state is to expand the capacity of this storage facility to 1bcm by 2021, as the expansion project is a PCI and is co-funded by the EU.

The significant infrastructural gas projects for Bulgaria that have been declared as PCI for the EU are:

- an interconnector between Komotini, Greece and Stara Zagora, Bulgaria (IGB, PCI 6.8.1), with the length of the gas pipelines totalling 182km and project transmission capacity of up to 3bcm per year;

- an interconnector between Bulgaria and Serbia (IBS, PCI 6.10), with the length of the gas pipelines totalling 150km and project transmission capacity of up to 3.2bcm per year;
- a further interconnector between Bulgaria and Romania (IBR), with the gas pipeline totalling 25km in length, and maximum capacity of the interconnector of up to 1.5bcm per year from Bulgaria to Romania. The IBR came into effect in November 2016;
- a project for a permanent reverse flow at the Greek-Bulgarian border between Kula (Bulgaria) and Sidirokastro (Greece);
- a project to increase the transmission capacity of the existing pipeline from Bulgaria to Greece;
- projects to increase storage capacity in south-east Europe, including one or more of the following projects:
 - construction of a new storage facility in the territory of Bulgaria; and
 - expansion of the Chiren station;
- an interconnector between Turkey and Bulgaria (ITB, PCI 7.4.2.), with the length of the pipeline totalling about 200km and approximate transmission capacity about 3bcm per year; and
- projects related to the development of new Balkan Gas Hub within Bulgaria. The Balkan Gas Hub is located at the crossroads of south-east Europe's current and future pipeline systems. The hub will enable trading of natural gas from a wide range of alternative sources:
 - Russia;
 - Southern Gas Corridor;
 - LNG terminals in Greece and Turkey; and
 - local production.

2 What percentage of the country's energy needs is met directly or indirectly with natural gas and LNG? What percentage of the country's natural gas needs is met through domestic production and imported production?

The latest data from the Ministry of Energy shows that natural gas consumption in 2015 was 10.4 per cent higher than in 2014. The annual gas consumption of Bulgaria is about 2.9bcm. The energy and chemistry sectors form together about 66 per cent of the gross consumption of natural gas in Bulgaria. Household gas consumption is still negligible. However, some major cities' combined thermal power plants are gas-fuelled, for example in Sofia and Burgas.

The structure of the total energy consumption for 2014 is as follows:

- oil products – 34.6 per cent;
- electricity – 26.9 per cent;
- natural gas – 11.6 per cent;
- heat (thermal) energy – 10.2 per cent;
- coal – 3.3 per cent;
- fuels from coal – 0.5 per cent;
- renewable fuels – 12.4 per cent; and
- heat (thermal) energy from renewables – 0.6 per cent.

According to data from Bulgartransgaz, for 2015 domestic and imported production are divided as follows:

- imported natural gas – 2.9bcm, which represents 97.4 per cent of the total consumption; and
- domestic production – 0.78bcm, which represents 2.6 per cent of the total consumption.

Government policy

3 What is the government's policy for the domestic natural gas sector and which bodies set it?

The government's policy for the domestic gas sector is adopted by the National Assembly in the form of proposals made by the Council of Ministers. The Minister of Energy is responsible for implementation of national energy policy, including the domestic natural gas sector. The EWRC has regulatory functions and determines the prices for end consumers.

The government's policy for the domestic natural gas sector is mutually connected with the EU's policies for development of the internal gas market in Europe. Bulgaria's aim is to develop the current gas infrastructure and to implement several key PCI – the interconnectors with Greece, Serbia and Turkey – in order to ensure its gas supply independence.

Regulation of natural gas production

4 What is the ownership and organisational structure for production of natural gas (other than LNG)? How does the government derive value from natural gas production?

According to the Bulgarian Constitution, underground resources within the territory of Bulgaria are exclusive public state property and their development may be granted to investors only through a state concession, under the Concessions Act.

There are currently 14 oil and gas exploration blocks, onshore and offshore, the most interesting ones currently being the two just tendered: the offshore Teres and Silistar blocks. There have been 18 oil and/or gas production concessions granted in Bulgaria.

The first major offshore gas reserve was discovered by UK-based Melrose Resources plc (Melrose Resources) in the Galata block, and the first ever offshore production concession was signed in 2001 with most of the reserves produced by 2010. In the second half of 2010, two gas production concessions – the Kaliakra and Kavarna fields located in the Bulgarian continental shelf – were signed again with Melrose Resources. In the middle of 2012, a third concession was granted to the company in the Kavarna East Block, and the respective concession agreement was signed in 2013. It is expected that these concessions will provide about 15 per cent of the gas consumed in Bulgaria. In 2013, Melrose Resources merged with Petroceltic.

For 2015, Petroceltic produced 0.75bcm natural gas and the other main producer, Prouchavne I Dobiv na Neft I Gaz AD, produced 0.9bcm natural gas.

Generally, the government derives value from natural gas production by providing tendering procedures – all exploration activities are subject to an annual fee based on the size of the exploration area.

In consideration of the right to produce natural gas, the concessionaire pays royalties to the state, calculated on the basis of the produced quantities of gas and specific conditions for production (size of the concession area, term of the concession), for which the value may vary.

5 Describe the statutory and regulatory framework and any relevant authorisations applicable to natural gas exploration and production.

The main legislation regulating the development of natural gas includes the following acts: the Underground Resources Act; the Energy Act, and the secondary legislation for its implementation, including the Ordinance for licensing in the energy sector, etc; the Concessions Act and the Regulation for its implementation; the Property Act; the State Property Act; the Protection of the Environment Act; the Waters Act; and others.

The Ministry of Energy is the centralised body implementing state policy, determined by the Council of Ministers, in the fields of exploration and production of underground resources. Important controlling functions are, however, transferred to the environmental protection state authorities who are responsible for environmental impact assessment procedures and the protection of sensitive zones and territories.

Permission for the exploration of natural gas is granted by the Council of Ministers to private companies or investors under an exploration agreement, following a competitive procedure.

Permission for the extraction or production of natural gas is granted by the Council of Ministers under a concession agreement

signed between the investor and the state (under the Concessions Act and the Underground Resources Act).

Upon proving and duly declaring a commercial discovery of natural gas resources under an exploration agreement, the investor is exclusively entitled to be granted a production concession without a tender. The concession agreement grants to the investor the right (and obligation) to develop production infrastructure and extract natural gas. The ownership rights over the produced natural gas are transferred to the investor upon extraction of the natural gas from the ground.

The decisions of the Council of Ministers granting permission for exploration and/or extraction of natural gas may be challenged or appealed before the State Supreme Administrative Court. The legal grounds for appeal are limited and may include lack of competence, lack of written form, breaches of the applicable procedural rules or material provisions and non-compliance with the purpose of the respective applicable legislation.

6 Are participants required to provide security or any guarantees to be issued with a licence to explore for or to store gas?

The development of upstream oil and natural gas projects is subject to certain requirements on the guarantees to be provided by the participant. Such could be one or more of the following:

- bank guarantee;
- escrow account payment;
- insurance; and
- others permitted by law.

Usually, the developer is requested to provide a bank guarantee ensuring the payment of the royalties or the exploration fee and the fulfilment of its other monetary obligations towards the state under the concession agreement.

In the development and production phases, the concessionaire might be contractually obliged to insure the facilities.

A separate guarantee, of any of the above-mentioned types, should be provided in relation to covering the expenses for environmental protection, including liquidation, conservation and recovery of the exploited terrains. The government usually prefers a bank guarantee or provision of funds in an escrow account.

Regulation of natural gas pipeline transportation and storage

7 Describe in general the ownership of natural gas pipeline transportation, and storage infrastructure.

The sites and facilities of transmission, storage and distribution of natural gas in Bulgaria function as a single integrated system.

Bulgaria's gas transmission system is connected to the Romanian Transgas SA's transmission network at the interconnection point (IP) Negru Voda1/Kardam. The transit gas network, owned and operated by Bulgartransgaz, is connected to the Romanian Transgas SA's transmission grid at the entry IP Negru Voda 2, 3/Kardam, and also has IPs with Greece, Turkey and Macedonia.

The infrastructure of the gas production companies is operated by the production concession holders as part of their concessions. Third parties do not have legally guaranteed access to such infrastructure.

The transportation infrastructure of the Chiren gas storage facility is operated by state-owned company Bulgartransgaz under its gas storage licence. The licence holder is obliged by law to provide equal access to the infrastructure to users of the gas storage facility.

8 Describe the statutory and regulatory framework and any relevant authorisations applicable to the construction, ownership, operation and interconnection of natural gas transportation pipelines, and storage.

The construction of gas transportation pipelines from the production point to the domestic transmission network is subject to the rights and obligations incorporated in the gas concession agreement and to the general regulations related to construction works in Bulgaria.

The gas storage transportation infrastructure is constructed and operated under the relevant licence issued by the EWRC.

Regarding import and export, note that currently there is no third-party infrastructure between the national transmission pipeline and the points of import and export. Bulgartransgaz's transmission system

is directly connected at the country's borders to the transmission systems of neighbouring countries.

Construction of transportation infrastructure is subject to the general construction authorisations and building permits.

Approval of investment designs is first subject to Environmental Impact Assessment clearance.

9 How does a company obtain the land rights to construct a natural gas transportation or storage facility?

The right to construct on land is to be secured either by acquisition of the land or by a right to construct, together with necessary easement zones. Since the transportation operator is an energy company, by law, it receives certain easement rights over the surrounding plots of land necessary for the extension of existing, and/or the construction of new, gas transportation facilities.

The acquisition of ownership or construction rights is usually done at normal market prices and conditions. The state does not regulate the prices or contracts between the investor and the owner of the land.

There are specific rules and certain restrictions regarding the acquisition of land and other real estate rights in Bulgaria by foreigners. EU-based companies and citizens are more privileged than other foreigners in this regard.

10 How is access to the natural gas transportation system and storage facilities arranged? How are tolls and tariffs established?

Access to the natural gas transportation system and gas storage facilities is regulated by the newly adopted rules for access to the gas transmission and/or distribution grids and to gas storage facilities.

As the transportation/transmission of natural gas is a public service according to Bulgarian law, the operator of the transmission grid is obliged to connect:

- the public supplier of natural gas;
- extraction companies;
- natural gas storage and LNG facilities operators;
- other operators of transmission grids;
- combined operators;
- distribution operators;
- traders of natural gas;
- end clients; and
- end suppliers.

As a general rule, access to both the transmission and distribution grids should be done in compliance with the principles of equal treatment, transparency and non-discrimination.

The prices for natural gas distribution and storage are regulated by the EWRC and are subject to amendment on an annual basis. The operators of natural gas transmission and distribution grids are obliged to publish detailed information for the fixing of prices, tariffs, methodologies and price elements.

The balancing prices are formed on the basis of the methodology for calculating the daily imbalance fee, which is approved by the EWRC. The purpose of the methodology is to determine the amount of the daily imbalances and fees, as well as to create a stimulus for all grid users to more effectively balance their facilities.

11 Can customers, other natural gas suppliers or an authority require a pipeline or storage facilities owner or operator to expand its facilities to accommodate new customers? If so, who bears the costs of interconnection or expansion?

The national gas transmission and distribution grids are subject to 10-year development plans. These plans are reviewed and approved by the EWRC – the state watchdog on all energy issues. The 10-year expansion plans must take into account all potential new clients and ensure capacity and connection. If any investment in the plan is not conducted within the planned timelines, the EWRC can take action and force the operator to implement the investment. The cost is borne by the operator and included in the transmission fees. All consumers provide their required capacity upon connection to the grid. Connecting of new consumers can be refused if it is technically or economically unfeasible. Consumers file an application with the distribution operator and the latter sets the point of connection. The operator constructs the connection facilities, but the cost is included in the grid connection price

and borne by the new consumer. The same procedure applies to any increase in supplied capacity to already connected consumers.

12 Describe any statutory and regulatory requirements applicable to the processing of natural gas to extract liquids and to prepare it for pipeline transportation.

The gas production companies' infrastructure is operated by the production concession holders as part of their concessions. Third parties do not have legally guaranteed access to such infrastructure. The concession for extraction is granted for one specified concession field and entitles the concessionaire to:

- acquire title over the underground resources; and
- perform all activities that are related to the exploration, including additional research, storage, processing, transport and sale of the explored resources.

13 Describe the contractual regime for transportation and storage.

The agreements for transportation of natural gas through the transmission and distribution grids are regulated by the Natural Gas Trading Rules. As regards content, they should include at least the following information:

- time period and terms for the transmission; the agreed transmission capacities at the points for delivery;
- terms and conditions for notification in case of interruption of transmission; liabilities; measures for maintenance and safety working conditions of the facilities, as well as measures for avoidance of losses;
- terms and conditions for termination or curtailment of the transmission in case of non-performance of the obligations under the transmission agreements;
- terms and conditions for notification for planned repairs of the grid and its facilities;
- terms and conditions for notification in cases of failure;
- terms and conditions for inspection of metering devices and providing information for their reading;
- penalties in case of non-performance of the parties under the agreements;
- quality standards;
- price and manner of payment;
- procedure for replacement of the transmission/distribution operator;
- procedure for notification of requests to correct the quantities of natural gas to be transmitted; and
- procedure for determination of the transmitted quantities of natural gas in case of non-functioning metering devices.

The agreements for storage do not have statutory minimum content. Their subject matter is the storage of natural gas in storage facilities/LNG facilities. The agreements are concluded between the operator of the storage facility, on one side, and the public supplier, traders, end suppliers and clients, on the other.

Regulation of natural gas distribution

14 Describe in general the ownership of natural gas distribution networks.

The distribution grids are constructed and operated by private companies holding licences for natural gas distribution and supply for the respective distribution territories. Each distribution and supply licence is issued only for one specified territory.

The main distribution operators in Bulgaria are:

- Overgas Mreji EAD, with a market share of 59 per cent;
- Citigas Bulgaria EAD, with a market share of 16 per cent; and
- Chernomorska tehnologichna kompania AD, with a market share of 10 per cent.

The distribution operators ensure the supply of gas to consumers, as well as the development of the gas distribution grids.

Update and trends

Currently, Bulgaria is mainly focused on offshore exploration and extraction, but there are also several onshore blocks that could be opened for concession in the near future.

Along with the local exploration incentives, the government plans to develop the regional PCI – the interconnectors with Greece, Serbia and Turkey.

15 Describe the statutory and regulatory structure and authorisations required to operate a distribution network. To what extent are gas distribution utilities subject to public service obligations?

The distribution grids are operated by distribution operators, which are licensed by the EWRC. Licences are issued to companies that have sufficient technical and financial capabilities and organisational structure to perform the licence activities. The distribution operator should possess the easement rights for the operated facilities, and should be able to present evidence that the operated facilities are in compliance with the requirements for safety operation. Licences are not granted to companies that are undergoing insolvency or liquidation procedures, or where there is the possibility of harm to people's life and health, as well as to the proper gas supply.

16 How is access to the natural gas distribution grid organised? Describe any regulation of the prices for distribution services. In which circumstances can a rate or term of service be changed?

By law, distribution operators are obliged to connect all clients and producers of gas from renewable energy, as well as production, storage and LNG facilities, which are located on the licence territory of the distribution operator.

The clients are connected to the distribution grid through deviations and connection facilities, which are the property of the operator and shall be constructed and operated by it.

Access to the distribution grid may be rejected in the following cases:

- lack of network capacity;
- lack of connection to the grid where the construction of a new connection is technically and economically unfeasible; or
- the facilities do not comply with the safety standards and conditions.

In the above cases the applicant may agree with the distribution operator to construct, at its own expense, the facilities which are necessary for connection. The terms and conditions for the individual connection are agreed in connection contracts between the clients and the operator.

By law, the connection contract should include:

- identification of the facilities to be connected;
- type and technical parameters of the connection facilities;
- installed capacity and minimum and maximum hourly consumption;
- limit of the connection facilities;
- supply schedules;
- terms and conditions for the operation of the connection facilities;
- easement rights, if any, including their establishment;
- connection price;
- obligations of the parties and penalties/compensations; and
- terms and conditions for amendment of the contract and its term.

The fees for connection to the distribution grids are regulated by the EWRC and may vary depending on the location and type of client to be connected.

17 May the regulator require a distributor to expand its system to accommodate new customers? May the regulator require the distributor to limit service to existing customers so that new customers can be served?

See question 16.

Distribution operators are obliged to construct the necessary connection facilities and installations at the point of connection, determined by the operator, at their expense. In addition, distribution

operators are obliged to expand and reconstruct their infrastructure in order to connect new consumers, as this is classified as a public service.

18 Describe the contractual regime in relation to natural gas distribution.

Distribution operators conclude contracts for the transmission of natural gas over the distribution grid, as well as contracts for the supply of natural gas for technical needs.

If the distribution operator is granted a licence for the supply of natural gas as an end supplier, it may conclude supply contracts with the end clients as well. In this case the prices are regulated by the EWRC.

Regulation of natural gas sales and trading

19 What is the ownership and organisational structure for the supply and trading of natural gas?

The legal framework of the supply and trading of natural gas is regulated by the Energy Act and the Natural Gas Trading Rules adopted by the EWRC.

The participants in the natural gas market are:

- public suppliers;
- production companies;
- gas storage operators;
- LNG installation operators;
- transmission companies;
- combined operators;
- distribution operators;
- natural gas traders;
- clients; and
- end suppliers.

Trading in natural gas is conducted under regulated or freely negotiated prices. The end clients are entitled to conclude contracts for the supply of natural with the public supplier, the production companies, natural gas traders and with the end supplier.

These contracts should include at least the following information:

- the subject matter of the contract, the rights and obligations of the parties;
- a table containing information on the agreed quantities of natural gas for delivery, including the maximum and minimum daily quantity;
- time period and conditions for delivery, with quality parameters;
- terms and conditions for payment of the delivered quantities;
- penalties for non-performance of the obligations of the parties under the contract;
- conditions for unilateral termination of the contract by the client;
- securities to be provided by the client for its performance under the contract; and
- terms and conditions for termination and curtailment of the deliveries.

Although the natural gas market is opened in accordance with the EU's Third Energy Package, the gas consumption of households in Bulgaria is still underdeveloped. The government's plan is to further develop the transmission and distribution grids in order to increase the overall consumption. The main initiatives include completion of the interconnection projects and increase of the domestic sources for production of natural gas.

20 To what extent are natural gas supply and trading activities subject to government oversight?

See question 19.

21 How are physical and financial trades of natural gas typically completed?

See question 19.

22 Must wholesale and retail buyers of natural gas purchase a bundled product from a single provider? If not, describe the range of services and products that customers can procure from competing providers.

No. Each buyer may conclude separate transactions for:

- gas transmission and distribution over the transmission/distribution grids;
- gas supply;
- gas storage and LNG storage; and
- natural gas for balancing.

Regulation of LNG

23 What is the ownership and organisational structure for LNG, including liquefaction and export facilities, and receiving and regasification facilities?

Bulgaria has no LNG facility yet.

24 Describe the regulatory framework and any relevant authorisations required to build and operate LNG facilities.

There is no specific legal framework for LNG facilities yet.

25 Describe any regulation of the prices and terms of service in the LNG sector.

There is no specific legal framework for the LNG sector yet.

Mergers and competition

26 Which government body may prevent or punish anticompetitive or manipulative practices in the natural gas sector?

The competent Bulgarian state authority in the field of competition issues is the Commission for Protection of Competition (CPC).

The EWRC is the state energy authority, which has regulatory functions, including ensuring market transparency and fair competition.

27 What substantive standards does that government body apply to determine whether conduct is anticompetitive or manipulative?

Anticompetitive or manipulative behaviour is determined with regard to general competition principles, such as:

- restrictive vertical and horizontal agreements and coordinated practices;
- abuse of dominant position/monopoly (except the natural monopolies for transmission and distribution);
- merger control;
- sector analysis and protection of competition; and
- prohibition of unfair competition.

28 What authority does the government body have to preclude or remedy anticompetitive or manipulative practices?

The CPC is entitled to perform full-scope investigations, including the following measures:

- demands for all kinds of evidence and information;
- interrogation of witnesses;
- on-site check-ups;

- assignment of experts and valuations; and
- requests for information from the competition regulatory authorities of the other EU member states and the European Commission.

The possible sanctions that the CPC is entitled to impose include sanctions of up to 10 per cent of the company's annual income for the past year.

The CPC may further impose certain restrictive or compulsory measures on the respective companies.

29 Does any government body have authority to approve or disapprove mergers or other changes in control over businesses in the sector or acquisition of production, transportation or distribution assets?

The CPC has the authority to approve mergers or acquisitions between companies, if EU competition law does not apply with direct effect.

Mergers and concentrations as a whole, are subject to preliminary approval by the CPC, if the total income from the previous year of the participating companies in Bulgaria is more than 25 million leva and:

- the income in Bulgaria for the last year of each one of at least two of the participating companies is more than 3 million leva; or
- the income of the target company for the last year is more than 3 million leva.

The concentration is allowed if:

- it does not lead to the establishment or increase of a dominant position that would seriously hinder the effective competition of the market; or
- even if (i) is not complied with, the concentration contributes to the positive development of the market.

30 In the purchase of a regulated gas utility, are there any restrictions on the inclusion of the purchase cost in the price of services?

All companies operating in the regulated sector must set their prices in full compliance with the relevant decisions and methodology issued by the EWRC. For example, the natural gas prices of sales by the public supplier to end suppliers and clients is formed on the basis of the last forecasted quantities and the expenses for imported quantities, including the component 'public supply'.

31 Are there any restrictions on the acquisition of shares in gas utilities? Do any corporate governance regulations or rules regarding the transfer of assets apply to gas utilities?

No. However, it should be noted that the transmission operator and the public supplier are state-owned companies.



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International

32 Are there any special requirements or limitations on foreign companies acquiring interests in any part of the natural gas sector?

Foreign companies that are not registered as companies in other member states cannot be granted a licence for any gas activity.

Since 2014, all companies that are registered in jurisdictions with preferential tax treatment are prohibited from obtaining a gas licence or exploration/concession permit and agreement, except for companies whose ultimate owner is publicly traded, or registered in a jurisdiction which has a double taxation treaty with Bulgaria.

33 To what extent is regulatory policy affected by treaties or other multinational agreements?

Regulatory policy is mainly affected by EU law.

34 What rules apply to cross-border sales or deliveries of natural gas?

There is no special legislation in relation to cross-border natural gas transactions. In general, the cross-border market for natural gas is regulated by the Regulation No. 715/2009 of the European Parliament on conditions for access to the gas transmission networks. Cross-border transactions of natural gas are subject to bilateral agreements between the parties and the availability of cross-border capacity.

Transactions between affiliates

35 What restrictions exist on transactions between a natural gas utility and its affiliates?

There is no legal framework directly addressing these issues in the gas sector. Depending on the nature of the transaction, such issues would be governed by existing applicable legislation.

36 Who enforces the affiliate restrictions and what are the sanctions for non-compliance?

See question 35.

Croatia

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Description of domestic sector

1 Describe the domestic natural gas sector, including the natural gas production, liquefied natural gas (LNG) storage, pipeline transportation, distribution, commodity sales and trading segments and retail sales and usage.

On 14 March 2013, the new Gas Market Act (Official Gazette No. 28/13, 14/14) (GMA) entered into force, gradually implementing the EU Third Energy Package in Croatia, while the full implementation occurred on 1 April 2014. Amendments to the GMA passed on 5 February 2014 allowed the government to postpone full implementation by decision, and to nominate one entity for an additional three years as the only wholesale market supplier to buy gas at regulated prices from the national producer and sell it at regulated prices to the public service suppliers. According to that government decision (Official Gazette No. 29/14), the selected wholesale market supplier is HEP dd, which is entitled to buy gas at regulated prices from the national producer and sell it at regulated prices to the public service suppliers. The three-year transition period ends on 31 March 2017; however, amendments to the Gas Market Act have not been passed on yet, although they have been announced for the first quarter of 2017. In January 2017 the Ministry of Environmental Protection and Energy issued its Proposal on the Amendments of the Gas Market Act. The Croatian Energy Regulatory Agency (HERA) has not yet issued its opinion on the proposal.

The Regulation on the criteria for obtaining the status of a vulnerable customer (Official Gazette No. 65/15) entered into force on 20 June 2015. According to the Regulation, the competent social authorities will grant vulnerable customer status under an administrative proceeding. The Regulation is fully compliant with EU Regulation No. 994/2010 concerning measures to safeguard security of gas supply.

According to the GMA, market activities are the production of gas and natural gas, supply of gas to eligible customers and trading on the gas market (the price and quantity of delivered gas is freely negotiated). On the other hand, transport, distribution, storage, supply of tariff customers and gas market organisation are regulated activities and are performed as public service obligations. The non-discriminatory third-party access regime has applied since 2008.

Croatia's gas sales market has been fully open since 1 August 2008; as a result, all customers have acquired eligible customer status. This means that all customers have the legal right to choose their gas supplier and freely contract the quantity and price of the supplied gas. Some non-household customers, due to their fixed and predictable demand, have switched suppliers and are buying gas on the free market. On the other hand, not one tariff consumer (household) has switched suppliers. The household market is still underdeveloped due to high logistics and investment requirements. Industry gas prices for 2015 amounted to €0.038 per kWh, while household prices amounted to €0.04 per kWh.

More than 50 per cent of Croatia's natural gas needs are met from domestic production. The only Croatian natural gas producer is the Croatian Oil and Gas Company, INA dd (INA), a partially state-owned and privatised company. INA exploits gas fields in northern Croatia and, in a joint venture with Italian company ENI, in the Adriatic Sea. The remaining natural gas has been exclusively imported from Russia for the past 30 years, and more recently imports have begun from ENI. However, after the three-year contract expired with ENI in 2013, INA

decided not to enter any long-term contracts and turned to domestic gas sources and short-term contracts. Croatia has only one natural gas storage facility, owned and operated by Podzemno skladište plina d.o.o., a company in the ownership of Plinacro d.o.o. (Plinacro), a state-owned company. In June 2016 Podzemno skladište plina d.o.o. announced that work on modernisation of the storage facility Okoli had begun. The plan is to modernise the compressor facility with new machinery by the winter heating season of 2017/2018. The project was declared of strategic importance for the only storage facility in Croatia as it should ensure the stability of the gas supply in Croatia.

The transportation network is owned and operated by the transportation system operator (TSO), Plinacro. There are 35 different companies registered for the distribution of gas, mostly operating at the local level. Due to market liberalisation, there are 55 registered gas suppliers and traders.

Owing to the lack of an LNG terminal, Croatia currently has no LNG market. However, the government was planning to build an LNG terminal on the island of Krk with a capacity of 4 billion to 6 billion cubic metres per year. However, the plan has changed to a 2 billion cubic-metre per year floating option – a floating terminal. The national electricity company, HEP dd, and Plinacro incorporated LNG Croatia Ltd, whose sole purpose is to build and manage the LNG terminal.

2 What percentage of the country's energy needs is met directly or indirectly with natural gas and LNG? What percentage of the country's natural gas needs is met through domestic production and imported production?

Natural gas meets 23 per cent of Croatia's energy needs. It is expected that the demand for natural gas will continue to increase by approximately 4.2 per cent annually. Domestic production amounts to 50 per cent of total natural gas consumption. The remainder is imported.

Government policy

3 What is the government's policy for the domestic natural gas sector and which bodies set it?

The general guidelines of Croatia's government policy regarding the natural gas sector are set out in the Strategy of Energy Development (Official Gazette No. 130/09) (Strategy). In the Strategy, Croatia acknowledges the importance of natural gas in energy consumption and encourages its use. Croatia's aim is to achieve a higher level of security of natural gas supply by diversifying supply sources, especially bearing in mind that, in the future, domestic production will decrease due to depleted reservoirs. However, owing to turmoil in the energy market in recent years, the Strategy is now obsolete. Therefore the government has announced the preparation of a new energy strategy.

In 2015, PLINACRO proposed and HERA approved the 10-Year Development Plan of the Croatian Gas Transmission System for the period 2015-2024. The main projects are construction of the LNG terminal on the Island of Krk in the North Adriatic and the Ionian-Adriatic Pipeline (IAP). Therefore, the construction of LNG storage capacities on the island of Krk, the finalisation of construction of the Croatian transportation network, connection to international pipelines and the construction of natural gas storages are recognised as strategic national projects.

The bodies responsible for implementing the relevant legislation and government policy are the Ministry of Environmental Protection and Energy (since October 2016 Ministry of Economy is no longer the competent body), the HERA and the Croatian Energy Market Operator.

On 30 July 2014, the Hydrocarbons Exploration and Exploitation Act (Official Gazette 94/13, 14/14) (HEEA) entered into force. It introduces a possibility of production-sharing or royalty contracts after a unified unique tendering procedure licence regime for exploration with an automatic concession regime for the exploitation of oil and gas in Croatia (subject to commercial discovery). On 2 April 2014, the government announced the first offshore licensing round for licences for the exploration and production of hydrocarbons in the Adriatic, which was concluded on 3 November 2014. Ten licences for the exploration and exploitation of hydrocarbons in the Adriatic were granted in that licensing round. The first licensing round for licences for the exploration and production of hydrocarbons onshore, announced on 18 July 2014, was concluded on 3 June 2015. Six licences for the exploration and production of hydrocarbons onshore were granted to three licensees. The signing of the production sharing agreements (PSAs) was scheduled for the end of 2015, but has been postponed because the government has just been formed following a general election. Croatia is also intensifying its efforts to realise the Ionian-Adriatic Pipeline as a connection to the Trans-Adriatic Pipeline, which is receiving more support from the EU as an alternative gas supply route from Azerbaijan.

The LNG terminal on the island of Krk was declared a project of strategic importance for Croatia at a government session on 16 July 2015. Twelve EU member states in the Adriatic, Baltic and Black Sea area – including Croatia – signed the Three Seas Initiative, which indirectly supports the LNG terminal as one of the key projects in connecting the region, at a summit in Dubrovnik in August 2016.

The HEEA does not make a distinction between conventional and unconventional oil and gas exploration or exploitation.

Regulation of natural gas production

4 What is the ownership and organisational structure for production of natural gas (other than LNG)? How does the government derive value from natural gas production?

According to article 5/1 of the HEEA, all hydrocarbons, including natural gas, are in the state's ownership. The HEEA prescribes a unique tendering procedure ensuring that the successful bidder will be awarded an exploration licence that, subject to commercial discovery, automatically awards concession rights.

The licensee concludes a contract with the government. According to the HEEA (article 21/1), there are three types of agreement exploration and division of the exploitation of the hydrocarbons (a production sharing agreement); exploration and exploitation with fees and tax payment (a royalty payment agreement); and a combination of the two.

The type of agreement that the government opted for, which is an integral part of the tender guidance documentation for both offshore and onshore licence rounds (see question 3), is a PSA, although the licensee is also required to pay taxes and fees (ie, royalties). As these draft agreements are part of the tendering documentation, there is a limitation on negotiation. The negotiation needs to be completed and the contract signed within a period of three months. All provisions that licensees want to alter in negotiations need to be enclosed with their bids.

The agreement must be signed within three months from the announcement of the tender winner, and not later than six months after the issue of the licence. Five PSAs with the selected licensees and investors for the onshore exploration and production of hydrocarbons were signed in June 2016, and one PSA still remains unsigned.

5 Describe the statutory and regulatory framework and any relevant authorisations applicable to natural gas exploration and production.

Natural gas exploration and exploitation is regulated by the HEEA. The implementing regulations are the Regulation on fees for the exploration and exploitation of hydrocarbons (Official Gazette No. 37/14, 72/14) and the Ordinance on the essential technical requirements, safety and protection of exploration and exploitation of hydrocarbons offshore (Official Gazette No. 52/10). The Mining Act (Official Gazette 56/13, 14/14) prescribes all rights and obligations pertaining to the

mining aspect of the exploration and exploitation of oil and gas. On 7 July 2015, the Act on the safety of the offshore exploration and exploitation of oil and gas (Official Gazette No. 78/15) was passed. The law prescribes responsibilities regarding the prevention of major accidents in the exploration and exploitation of hydrocarbons and is fully compliant with EU Directive 2013/30/EC. According to article 5 of the Act, the licensee is financially liable for preventing and repairing environmental damage caused by gas activities offshore.

The new framework extracts hydrocarbons from other mineral rights. Neither mineral rights nor exploration and exploitation of hydrocarbons can be leased.

According to article 5/1 of the HEEA, all hydrocarbons, including natural gas, are in the state's ownership. An exploration licence is issued for a maximum period of five years. On request of the investor, the exploration period may be extended for two further terms of six months, if good reasons exist.

Exploitation of natural gas may be performed based on the automatic right of concession arising from the licence. The maximum exploitation and exploration period is 30 years (five years for exploration and 25 years for exploitation; if the exploration period is extended, the exploitation period is shortened). The natural gas may be exploited only within the extraction field specified in the licence or concession. The parties to the contract will negotiate the exploitation rate and programme. Preceded by the first licence round for the exploration and exploitation of hydrocarbons in the Adriatic, 10 licences were granted by the government.

All activities in connection with the exploration and exploitation of oil and gas are monitored by the Mining Inspectorate of the Ministry of Environmental Protection and Energy, Department of Mining. Regulatory policies governing the production, transmission, distribution and supply of natural gas are governed by the Ministry of Environmental Protection and Energy and, to certain extent, by HERA. The Ministry prepares the strategy and legislation with respect to the natural gas sector, and implements laws enacted by parliament. The Ministry also enacts different by-laws and regulations. HERA is partially a regulatory and partially a supervisory body. As a regulatory body, HERA, inter alia, grants different licences for the performance of energy activities, participates in natural gas policy design, organises and carries out tender procedures, and settles disputes related to the carrying out of regulated energy activities.

Foreign companies must have a corporate presence with a registration for mining activities before the Ministry of Environmental Protection and Energy, Department of Mining or, in the case of companies with an EU seat, registration with the respective domicile authority.

The Ministry, as a government body, is independent of the natural gas business and industry. However, in the process of the preparation of natural gas legislation, it follows and accepts proposals from natural gas specialists. HERA is a non-profit institution, and independent from the natural gas industry, since members of the HERA management board (and members of their family) cannot be owners of any company in the energy business or perform any other activity in that sector that may lead to a conflict of interest. They are also independent of government officials, since they cannot be members of parliament, of local representative bodies or of the political parties' main bodies.

HERA's decisions are either final or appealable to the Ministry, depending on the matter in question. If HERA's decision is final, it can only be challenged before the Croatian Administrative Court. The Ministry's appellate decision can also be challenged before the Croatian Administrative Court.

The Ministry's decisions are usually final. If a decision is final, it can only be challenged before the Croatian Administrative Court. Exceptionally, if it is provided by law, the Ministry's decisions may be appealed back to the same Ministry, but also to the Appeal Senate as the second-instance authority.

6 Are participants required to provide security or any guarantees to be issued with a licence to explore for or to store gas?

HEEA (article 14/2) prescribes that participants must provide a bid bond (in the form of a bank guarantee) to successfully participate in a tendering procedure (see question 4).

According to the Tender Guidance for applying for licences for exploration and production of hydrocarbons in the Adriatic Sea of 2

April 2014 and the Tender Guidance for applying for licences for exploration and production of hydrocarbons onshore of 18 July 2014, issued by the government (through the Ministry of Environmental Protection and Energy), participants are obligated to provide a bid bond in support of their bids in Croatian kuna of an amount equivalent to €500,000. The bid bond will be returned to the selected participant upon delivery of the agreement's performance guarantee and to all other participants following application validity period expiry (page 4.1 of the Tender Guidance for applying for licences for exploration and production of hydrocarbons in the Adriatic sea of 2 April 2014 and the Tender Guidance for applying for licences for exploration and production of hydrocarbons onshore of 18 July 2014).

Draft agreements that are to be concluded between the selected participant and the government, and that are an integral part of the above-mentioned Tender Guidance, contain a condition precedent to the effectiveness of that agreement, namely, that the selected participant or contractor must provide an irrevocable, unconditional, on-demand bank guarantee regarding the execution of the minimum work and expenditure obligations in accordance with the agreement. After the completion and due performance of those obligations, the guarantee will be released upon presentation to the bank of the certificate issued by the government stating that the obligations of the contractor have been fulfilled.

According to article 40/2 of the Mining Act, the guarantee for the costs of decommissioning must be provided for the issuance of a licence for the exploration of gas.

To be issued with a licence to store gas, the participants must, inter alia, provide a solvency certificate and a bank statement or equivalent proof regarding their financial ability to obtain required funds (appendix 1 page 9 of the Regulation on licences for the performance of energy services (Official Gazette 118/07, 107/09, 114/15)).

Regulation of natural gas pipeline transportation and storage

7 Describe in general the ownership of natural gas pipeline transportation, and storage infrastructure.

The natural gas pipeline, which is approximately 2,694km long, is owned and operated by Plinacro, which is the TSO licensed with HERA for a 15-year period starting from 10 November 2009.

Croatia's single natural gas storage facility, Okoli, with a capacity of 550 million cubic metres, is owned and operated by the storage system operator (SSO) Podzemno skladište plina d.o.o. (licensed with HERA for gas storage until 20 January 2019), a company owned by Plinacro.

Therefore, both transportation and storage infrastructure are directly or indirectly owned and operated by the state.

8 Describe the statutory and regulatory framework and any relevant authorisations applicable to the construction, ownership, operation and interconnection of natural gas transportation pipelines, and storage.

The construction of transportation pipelines and storage facilities requires building, environmental, safety, administrative and other licences in accordance with general planning and building regulations.

The operation of and interconnection to transportation pipelines and storage are regulated by the GMA, the Gas Market Regulation (Official Gazette No. 126/10, 128/11, 88/12, 29/13), the General Conditions for Supply of Natural Gas (Official Gazette No. 158/13) (General Conditions), and other regulations and ordinances.

The national transmission networks are owned and operated by Plinacro (see question 6). Since natural gas transportation is a regulated, non-market activity, Plinacro has the sole power to construct and operate transportation networks. In accordance with the old GMA, Plinacro passed a five-year transportation system development plan, approved by the Ministry of Economy. Plinacro was granted a licence for natural gas transportation activities, issued by HERA.

Croatia's single natural gas storage facility Okoli is owned and operated by the national SSO, Podzemno skladište plina d.o.o. (Plinacro is the sole shareholder of Podzemno skladište plina d.o.o.), which holds HERA's licence for the operation of storage facilities (see question 6). The storage of natural gas is also a regulated, non-market activity and, therefore Podzemno skladište plina d.o.o. has the sole power to construct and operate storage facilities. The SSO's rights and duties correspond with that of the TSOs (see above).

Regulatory policies governing the transportation, distribution and supply of natural gas are governed by the Ministry of Environmental Protection and Energy and, to a certain extent, by HERA (see question 5).

9 How does a company obtain the land rights to construct a natural gas transportation or storage facility?

Only Plinacro, as TSO, can obtain land rights to construct a natural gas transportation facility (see question 8). For construction of a pipeline over privately owned land, the land should be expropriated in an administrative proceeding and expropriation compensation paid to the owner, all in accordance with the Croatian Expropriation Act (Official Gazette 74/14). The expropriation can be made through transfer of ownership, or through servitude rights or temporary lease on the land in favour of Plinacro.

The same procedure is applied for construction of a storage facility.

10 How is access to the natural gas transportation system and storage facilities arranged? How are tolls and tariffs established?

Croatia has a regulated third-party access regime for its transportation and storage system based on non-discriminatory, objective conditions and published tariff methodology. The GMA provides that the TSO and SSO should reserve system capacities based on received requests for connection to the transportation system, and provide access of the free capacities to the natural gas producer, the system operator and consumers (to the extent of their own consumption).

The TSO and respective third party enter into a contract on connection to the transportation system, while the SSO concludes a contract on storage of natural gas.

Access may be refused only in cases explicitly provided by the GMA (eg, in cases of lack of capacity). The refusal should be explained in writing, and the third party has the right of appeal against the transportation or SSO's decision to HERA.

Transportation service rates are based on the methodology for determining tariff items for gas transmission (Official Gazette No. 85/13, 158/13, 118/15). The transportation tariff methodology was made by HERA, and outlines the principles and methods for calculating rates for natural gas transportation. It adopts an entry-exit tariff system.

Storage services rates are also based on HERA's methodology for determining tariffs for the storage of gas (Official Gazette No. 22/14), which outlines the principles and methods for calculating the rates for the storage of gas. Pursuant to the government decision (Official Gazette No. 14/2014) on giving priority to storage capacity, HEP holds 70 per cent of the storage capacity system until 31 March 2017.

In both cases, the tariff rates are set by HERA.

11 Can customers, other natural gas suppliers or an authority require a pipeline or storage facilities owner or operator to expand its facilities to accommodate new customers? If so, who bears the costs of interconnection or expansion?

Customers can demand the pipeline or storage facility operator to expand its facilities only if they have previously been rejected from accessing the system due to lack of capacity. The pipeline or storage operator must, within a reasonable time frame, make necessary alterations to its facilities to accommodate new customers, but only if such alterations are economically feasible or if the customer bears the total cost of interconnection or expansion (article 75/6 of the GMA).

The Ministry of Environmental Protection and Energy and the local administration are responsible for planning the expansion of transportation and storage facilities. The TSO and SSO are due to pass a 10-year development plan, which should be approved by the Ministry (see question 8). By approving or disapproving an operator's development plans, the government obliges the TSO or SSO to expand its facilities if it finds this to be necessary.

12 Describe any statutory and regulatory requirements applicable to the processing of natural gas to extract liquids and to prepare it for pipeline transportation.

No such specific statutory or regulatory requirements exist. The processing of natural gas purely to extract liquids is not considered a separate energy activity and does not require an energy licence or consent.

The General Conditions specify the standard quality of gas that should be supplied to consumers. Therefore, the processing of gas should result in a standard quality gas, which should be then transported through pipelines to consumers.

13 Describe the contractual regime for transportation and storage.

The types of contracts that may be concluded on the gas market and their terms and conditions are outlined in the General Conditions and the Grid Code for the gas transportation system (PLINACRO 10/15). As for the provisions of the Grid Code, there are two types of contracts: contracts on connection to the transportation system and contracts on transport of gas.

The contract on connection to the transportation system is entered into between the TSO and distribution system operator (DSO) or SSO, natural gas producer or final customer. The TSO is obliged to connect the respective user to the system and the user is obliged to pay the connection fee. This contract must contain, inter alia, information on the technical specifications for connection, the connection fee, the payment terms, the deadline for connection to the system, and the connection place and time.

Under the contract on transport of gas, the TSO is obliged to provide transport services to the system user within its reserved capacities, while the system user is obliged to pay a regulated fee. Under the contract on gas transportation, the transportation system user is obliged to pay a regulated fee for use of the transportation system, while under the contract on gas transportation to interconnection, the transportation system user is obliged to pay a fee on the basis of allocation of interconnection capacity through an auction process via the platform. Integral parts of the contract are the general conditions on transportation system use and the notification on transportation system disposition capacitance. The contract on transport of gas may be concluded for a year (until 1 August of the current year for the following year), a month (until the 25th day of the current month) or for a single day. The contract on storage of natural gas is concluded between the SSO and the gas supplier, trader or transport system operator for the storage of gas. The contract should contain clauses regarding, inter alia, the storage conditions, the tariff, the payment terms, the time of delivery of gas into the transportation system, the working volume and the reserved capacity. The periods for which the contract may be concluded are the same as for the contract on transport of gas.

All the above-mentioned contracts are standard contracts published on the respective operators' websites.

Regulation of natural gas distribution

14 Describe in general the ownership of natural gas distribution networks.

Natural gas distribution networks are operated by DSOs, which hold respective distribution energy licences from HERA and concessions for natural gas distribution granted by local municipalities. There are 35 registered DSOs in Croatia, most of which are completely or partially owned by local municipalities. DSOs operate more than 14,500km of Croatia's distribution network. The distribution network is mainly owned by the municipalities and operated by DSOs on the basis of concessions. A part of the distribution network is privately owned by DSOs.

15 Describe the statutory and regulatory structure and authorisations required to operate a distribution network. To what extent are gas distribution utilities subject to public service obligations?

Natural gas distribution is regulated by the GMA, the Gas Market Regulation, the methodology for determining tariff items for the gas transmission (Official Gazette No. 104/13), and other regulations and ordinances.

According to the GMA, distribution of natural gas is a regulated, non-market activity performed as a public service obligation. DSOs must provide equal, non-discriminatory access to the distribution network to all potential customers.

A DSO must hold a distribution energy licence from HERA and a concession for natural gas distribution granted by the local municipality. The concession is granted for at least 20 years and up to a maximum of 30 years in a public tender process.

16 How is access to the natural gas distribution grid organised? Describe any regulation of the prices for distribution services. In which circumstances can a rate or term of service be changed?

Access to the natural gas distribution grid is organised in the same manner as access to the transportation and storage network (see question 10).

The distribution services rates are set in the Tariff System for Natural Gas Distribution (Official Gazette No. 104/13) rendered by HERA. The rates are set by HERA and for each energy subject (DSO). The tariff system in the distribution is based on the postage stamp principle.

General terms of service are provided by relevant legislation – the GMA, the Gas Market Regulation, the General Conditions and the Grid Distribution Code – and may be changed only by amendments to the above-mentioned legislation. Distribution contracts should be standard contracts, and therefore not subject to negotiations between the DSO and the consumer.

17 May the regulator require a distributor to expand its system to accommodate new customers? May the regulator require the distributor to limit service to existing customers so that new customers can be served?

See question 11 in respect of distributors expanding their systems to accommodate new customers.

There is no provision that would allow the regulator to require the DSO to limit service to existing customers so that new customers can be served.

18 Describe the contractual regime in relation to natural gas distribution.

For connection to the distribution system, a contract on connection to the distribution system (article 53 of the Grid Code for the gas distribution system (Official Gazette 155/14)) is concluded between the DSO and the investor in the connection (investor or owner of the building to be connected to the distribution system, including the organisers of the closed distribution system). Under this contract, the DSO undertakes the obligation to connect the respective user to the system, and the user must pay the connection fee. This contract contains data on contracting parties, the technical requirements on connecting equipment and other technical data for connection, the connection fee, the payment terms, the terms of construction of the connection, the time and place of the connection, and other provisions.

The parties to the contract on gas distribution are the DSO and the final customer. This contract regulates distribution services and financial obligations, all in accordance with the Grid Code. The contract on gas distribution contains data on contracting parties, the conditions of gas distribution, the provisions on the quality of gas supply, the restrictions of gas supplies, the provisions concerning the calculation and payment of fees for use of the distribution system, and other provisions.

The above-mentioned contracts should be standard and are published on the DSOs' websites.

Regulation of natural gas sales and trading

19 What is the ownership and organisational structure for the supply and trading of natural gas?

Supply of gas to eligible customers and natural gas trading are market activities, while supply of gas to tariff customers is a regulated, non-market activity. Since 1 August 2008, all consumers became eligible customers, meaning that each customer may freely choose its natural gas supplier and change it free of charge (see question 1).

Croatia has 55 registered natural gas suppliers, most of which are universal service providers. The GMA should have allowed free choice by the suppliers; however, final amendments to the GMA will leave the possibility for the government to regulate this activity, making the elected entity the only wholesale market supplier until 31 March 2017 (see question 1).

The majority of suppliers perform their activity in a certain region, while there are only a few larger utilities that supply customers in several regions (eg, HEP-Plin d.o.o., Prvo plinarsko društvo d.o.o.). The suppliers are usually completely or partially owned by local municipalities.

Only a few foreign-owned companies are registered as natural gas traders in Croatia.

20 To what extent are natural gas supply and trading activities subject to government oversight?

Supply and natural gas trading are also energy activities subject to licensing by HERA. HERA, inter alia:

- ensures that all licensing requirements are fulfilled;
- ensures the quality of suppliers' service;
- ensures the application of regulated tariffs;
- initiates misdemeanour proceedings in cases of non-compliance with the legal provisions; and
- issues opinions to the Ministry of Environmental Protection and Energy on general terms and conditions for the supply of customers.

HERA has the power to withdraw suppliers' or traders' licences in cases prescribed by the law.

Local municipalities and the Ministry of Economy are responsible for monitoring the security of supply. Therefore, the supplier and trader are obligated to provide the Ministry with a yearly report on the security of supply and provide other relevant statistical data.

General terms and conditions on supply of natural gas set by the respective supplier must be in accordance with the General Conditions.

21 How are physical and financial trades of natural gas typically completed?

Physical trades of natural gas are typically completed by individual delivery agreements concluded between the natural gas supplier, gas trader or gas producer, and the other gas supplier or gas trader. According to the GMA and General Conditions, such contract must contain, inter alia, conditions regarding supply, the price of delivered gas, the amount and quality of delivered gas, the payment terms, the deadline for delivery, and the delivery place and time.

Prvo plinarsko drustvo d.o.o., as Croatia's largest natural gas supplier (see question 19), publishes its standard contractual terms for the supply of natural gas on its website.

Financial trades of natural gas are not yet common in Croatia.

22 Must wholesale and retail buyers of natural gas purchase a bundled product from a single provider? If not, describe the range of services and products that customers can procure from competing providers.

No, there is no single provider of natural gas commodity and transmission or distribution services. Wholesale and retail buyers can freely purchase gas from different suppliers. Transportation services are provided by the TSO, Plinacro, which has a legal obligation to provide non-discriminatory access to potential consumers (see question 10). Distribution capacities can be booked from different DSOs (see questions 15 and 16).

Trading with natural gas on the Croatian market is still in its infancy; therefore, the range of services and number of providers are limited.

Regulation of LNG

23 What is the ownership and organisational structure for LNG, including liquefaction and export facilities, and receiving and regasification facilities?

At present, LNG is not used in Croatia, and Croatia does not have liquefaction and export facilities or receiving and regasification facilities. Construction of an LNG terminal is recognised by the government as a strategic energy project. The national electricity company, HEP dd, and Plinacro have founded LNG Croatia d.o.o. with the purpose of building an LNG terminal on the island of Krk. The capacity of the terminal should have been 6 billion cubic metres per year, but it would appear that a floating terminal with a 2 billion cubic-metre per year capacity is more likely to happen.

24 Describe the regulatory framework and any relevant authorisations required to build and operate LNG facilities.

The building of LNG facilities requires construction, environmental, safety, administrative and other licences in accordance with the general planning and building regulations.

According to the GMA and Energy Licence Regulation, an operator must hold an energy licence issued by HERA for the operation of the LNG terminal.

25 Describe any regulation of the prices and terms of service in the LNG sector.

According to article 6 of the GMA, operation of an LNG terminal is a regulated activity performed as a public service obligation. The prices of service should therefore also be regulated by the relevant tariff methodology rendered by HERA; however, no such methodology has been passed as yet.

Regarding the terms of service, the GMA and General Conditions apply, meaning that the principles of the non-discriminatory third-party access regime are also relevant to the LNG sector.

Mergers and competition

26 Which government body may prevent or punish anticompetitive or manipulative practices in the natural gas sector?

The Croatian Competition Agency (CCA) and Croatian Financial Services Supervisory Agency (HANFA) are responsible for acquisition and merger control in general, including in the natural gas sector. HERA controls the eligibility of parties participating in acquisitions, and applies a system of measures for protection of energy market competition.

HERA, in establishing and implementing the system of regulation of activities that are performed as public services, is obliged to apply measures for the protection of basic rights of consumers in accordance with special laws. HERA is also obliged to apply the rules and a system of measures for the protection of market competition with regard to natural gas matters. It is authorised to supervise, inter alia, the degree of transparency and market competition and, where necessary, demand the implementation of specific measures.

27 What substantive standards does that government body apply to determine whether conduct is anticompetitive or manipulative?

There are no specific criteria that apply to the energy sector that define anticompetitive or manipulative conduct. Regulated energy activities are regulated on the principles of transparency, objectivity and non-discrimination, while market energy activities are regulated according to the principles of market competition. Therefore, the Competition Act (Official Gazette No. 79/09, 80/13) applies to energy market activities. The Competition Act prohibits entry into agreements that, inter alia, directly or indirectly fix purchase or selling prices, or any other trading conditions; that limit or control the market; or that share markets or sources of supply. Further, abuse of a dominant market position is also prohibited, as well as concentration of undertakings.

28 What authority does the government body have to preclude or remedy anticompetitive or manipulative practices?

HERA has the power to withdraw licences for the performance of energy activities (for instance, if the supplier does not apply the prices set by the methodology). HERA also issues other legally binding orders in accordance with the law.

The GMA prescribes fines for any misconduct, including anticompetitive or manipulative practices (for instance, if the TSO or DSO unlawfully deny access to the grid). The fines are imposed by the Ministry of Environmental Protection and Energy Inspectorate Department. In the case of recidivism, energy undertakings may be suspended from carrying out licensed activities for up to a year.

According to competition law, the CCA issues legally binding orders through which it prohibits anticompetitive conduct. Finally, the CCA is authorised to instigate misdemeanour court proceedings in cases of violation of the Competition Act.

Update and trends

In June 2016 the government made a decision on the speeding-up of activities for the construction of a LNG terminal on the island of Krk, an EU Project of Common Interest, ie, it decided to provide support for construction of the first project phase, a floating terminal (floating storage and regasification unit). Thus the original plan to build a land-based 6 billion cubic-metre per year capacity terminal has now changed to a 2 billion cubic-metre per year capacity floating option. In order to speed up the realisation of the terminal, the company LNG Croatia d.o.o. was given the status of project developer. The LNG terminal is planned to be completed by 2018.

Twelve Adriatic, Baltic and Black Sea countries, including Croatia, gathered in August 2016 for the Dubrovnik forum – ‘Strengthening Europe: Connecting North and South’ – where the Three Seas Initiative was signed. The Three Seas Initiative’s key projects are the LNG terminal on Krk Island in Croatia, which will be the backbone of the new gas corridor to the Baltic and the IAP, which will contribute to the diversification of energy supply in central and south-eastern Europe and enhance Croatia’s geopolitical position in Europe. Croatia, Albania, Montenegro and Bosnia – and Azerbaijan’s state-owned oil and gas company SOCOR – signed a memorandum of understanding on a project for the IAP’s construction, confirming the countries’ intention to complete the project.

In June 2015 exploration licences were awarded to INA (one block), Nigerian company Oando plc (one block) and Canadian company Vermilion (four blocks) for the onshore exploration and exploitation of hydrocarbons in six blocks across the Drava, Sava and East Slavonia regions (the onshore licensing round was opened on 18 July 2014). On 10 June 2016 five onshore production sharing agreements – four with

Vermilion and one with INA – were signed, while the representatives of Oando plc are expected to sign the production-sharing agreement in the following period.

In the first offshore licensing round for exploration and production in the Adriatic Sea a consortium of Marathon Oil and OMV has been awarded seven offshore oil and gas exploration licences; INA obtained two licences and a consortium of ENI and MEDOILGAS was awarded one licence. As the Marathon Oil/OMV consortium withdrew from the licensing round in July 2015, the Croatian government revoked their licences. The deadlines for the signing of the offshore production sharing agreement have passed without the agreements being signed.

In the annual plan of legislative activity for 2017 it was announced that amendments to the Gas Market Act (Official Gazette No. 28/13, 14/14) (GMA) should be passed in the first quarter of the 2017. The amendments should regulate the rights and obligations of all participants in the gas market, as well as the regulatory agency, in order to secure the stability and functioning of the gas market. Specifically, the transition period of three years from the government decision (Official Gazette No. 29/14) that postponed the implementation of the EU Third Energy Package in Croatia by nominating one entity for an additional three years as the only wholesale market supplier to buy gas at regulated prices from the national producer and sell it at regulated prices to the public service suppliers ends on 31 March 2017.

In January 2017 the Ministry of Environmental Protection and Energy issued a Proposal on the Amendments of the Gas Market Act. The agency HERA has not yet issued its opinion on the proposal. The gas market should be regulated in line with the EU Third Energy Package.

HANFA is also authorised to instigate misdemeanour court proceedings in cases of takeover irregularities.

29 Does any government body have authority to approve or disapprove mergers or other changes in control over businesses in the sector or acquisition of production, transportation or distribution assets?

The CCA and HANFA are the respective authorities in the acquisition and merger control sector (see question 26).

Procedures, criteria and time limits for review of transfers of control are set out in the Competition Act and the Act on the Takeover of Joint Stock Companies (Official Gazette No. 109/07, 36/09, 108/12, 148/13).

Pursuant to the Competition Act, the review procedure is performed by the CCA. The procedure is initiated ex officio or upon the request of any party having a legal or economic interest.

Upon carrying out the procedure provided for by the Competition Act, the CCA issues a decision through which it either approves or refuses a transaction. The CCA will block a transaction in the case of a prohibited concentration, referring to those undertakings that can significantly influence the prevention, restriction or distortion of competition. The CCA should issue a decree within three to eight months from the day that the proceeding was initiated, depending on the type and complexity of the case in hand.

HANFA supervises the takeover of joint stock companies and the application of the Act on the Takeover of Joint Stock Companies. If takeover irregularities are identified, HANFA may impose measures provided for by law, such as declaring the takeover bid invalid, or instructing revision, supplementation or withdrawal of the takeover bid.

30 In the purchase of a regulated gas utility, are there any restrictions on the inclusion of the purchase cost in the price of services?

Prices for regulated gas activities are set by the methodology rendered by HERA (see questions 10 and 16). The purchase cost of a regulated gas utility is not included in the formula for calculation of a regulated service price as per the tariff methodology currently in force.

31 Are there any restrictions on the acquisition of shares in gas utilities? Do any corporate governance regulations or rules regarding the transfer of assets apply to gas utilities?

There are no special legislative restrictions on the acquisition of shares in gas utilities, but general merger control principles apply (see questions 26 and 28). However, the TSO, Plinacro, and the SSO, Podzemno skladište plina d.o.o., are directly or indirectly state-owned companies, and the acquisition of shares would be possible only in a privatisation process approved by the government under the relevant privatisation legislation. No such legislation has been adopted so far.

No specific corporate governance regulations or rules regarding the transfer of assets of gas utilities apply. However, in the case of a transfer of assets essential for performing the licensed activity, the gas utility may lose its energy licence from HERA. The new owner of assets may obtain the same licence from HERA if it fulfils other requirements (personnel, financial, technical, etc) set by the Energy Licence Regulation.

International

32 Are there any special requirements or limitations on foreign companies acquiring interests in any part of the natural gas sector?

There are no special requirements or limitations in the natural gas sector regarding acquisitions by foreign companies, but general merger and acquisition laws apply (see questions 26 to 31).

33 To what extent is regulatory policy affected by treaties or other multinational agreements?

According to the Croatian Constitution, international agreements take priority over domestic laws and form an integral part of Croatian legislation. Since 2006, Croatia has been a party to the Energy Community Treaty (Official Gazette International Treaties No. 6/06), and Croatia ratified the Kyoto Protocol in 2007. Due to its accession into the EU, Croatia has adopted *acquis communautaire* in the energy sector, including the natural gas sector, and implemented the relevant EU directives into its legislation.

34 What rules apply to cross-border sales or deliveries of natural gas?

There are no specific rules that apply to cross-border sales and deliveries of natural gas. Undertakings having a natural gas supply and trade energy licence are also eligible for cross-border supply.

Transactions between affiliates**35 What restrictions exist on transactions between a natural gas utility and its affiliates?**

The GMA has adopted a legal unbundling concept, meaning that transportation, distribution and the SSO must be independent from one another and from other gas market activities. Cross-subsidisation of companies engaged in regulated activities and those engaged in market activities, and cross-subsidisation of activities within the same

company, is prohibited by the GMA. However, this does not affect the parent company's ability to approve the annual financial plans of its affiliates and to set the limits of their possible indebtedness, but it cannot give instructions relating to their everyday operation. General non-discrimination principles and a prohibition of abuse of dominant position set out by relevant competition law provisions also refer to transactions between parent companies and their affiliates in natural gas sector.

36 Who enforces the affiliate restrictions and what are the sanctions for non-compliance?

HERA supervises whether the principles of legal unbundling have been followed and may demand their implementation.

The CCA oversees enforcement of competition law provisions (see questions 26 to 28).



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Description of domestic sector

1 Describe the domestic natural gas sector, including the natural gas production, liquefied natural gas (LNG) storage, pipeline transportation, distribution, commodity sales and trading segments and retail sales and usage.

Since the mid-1980s, domestic natural gas production and exploration activity in Denmark and in the other parts of the Danish Kingdom (Greenland and the Faroe Islands) has increased dramatically. In December 2013, four new licences for exploration and exploitation were granted by the Greenland government in the Greenland Sea licensing round covering offshore areas of 50,000 square km in east Greenland. In 2014–2016 three new licences for exploration and exploitation were granted and nine licences were relinquished in Greenland. As at January 2017, the total number of exploration and exploitation licences in force in Greenland is thus 16. In June 2013, the Faroese government granted two licences under the fourth Faroese licensing round. Two licences remain in force as of February 2016 in the Faroe Islands. In Greenland and the Faroe Islands, exploration activities have been carried out since 2010, and exploration is expected to continue in future years. This chapter, however, concentrates solely on the gas regulation of the Danish mainland and the continental shelf belonging to it. See the chapters on the Faroe Islands and Greenland for details on the other countries of the Danish Kingdom.

In August 2016, the total reserves of natural gas were calculated at 80 billion cubic metres (bcm), corresponding to 16 years' natural gas production if activity continues at the 2016 level.

Domestic natural gas production is currently located solely offshore in the North Sea and comprises a total of 19 fields, of which the top three fields represent 66.6 per cent of the total domestic production (figures for 2016). A total of 4.5bcm was produced from the fields in 2016. The main part was supplied to the largely state-owned company, Dansk Olie og Naturgas A/S (DONG; any company belonging to its group is also referred to in this chapter as DONG).

In 2015, three offshore exploration drillings were carried out with new hydrocarbon discoveries. In 2014, the seventh Danish licensing round was held, and the Danish Energy Agency (DEA) has announced that the licensing rounds following the seventh round will be held with one-year intervals (ie, one year after completion of the latest licensing round). In April 2016, the Minister of Energy, Utilities and Climate (the Minister) issued 16 new licences to 12 different companies as a result of the seventh licensing round, covering a total area of 4,064 square km. All licences were for offshore areas. As at January 2017, no new licensing round has been announced. One new open-door onshore licence was granted in 2014, and in 2016 the DEA received one application under the open-door procedure, which is still being processed. Further, in 2016, two onshore licences were relinquished. So far, no commercial oil or gas discoveries have been made in the open-door area.

Between 2008 and 2010, five licences were granted to explore the potential of natural gas onshore in Danish territory where the target is natural gas in shale layers (shale gas). In June 2012, the Ministry of Energy, Climate and Building (now the Ministry of Energy, Utilities and Climate) suspended the issuance of new licences for exploration and production of hydrocarbon in onshore areas, where the target is shale gas. In 2015, a 3.6km deep exploration well (Vendsyssel-1) for shale gas was drilled in northern Jutland under a licence granted in

2010. The exploration well showed presence of shale gas, however, not in commercially exploitable amounts. The licensees therefore chose to relinquish the licence in June 2016. The Ministry of Energy, Utilities and Climate is – inter alia based on the results of the Vendsyssel-1 exploration well – currently carrying out an evaluation of shale gas in Denmark (see 'Update and trends').

A large part of all domestic gas production is carried out by a joint venture, Dansk Underground Consortium (DUC). DUC consists of AP Moeller–Maersk (31.2 per cent ownership interest), Shell (36.8 per cent ownership interest) and Chevron (12 per cent ownership interest) pursuant to the sole concession granted to AP Moeller in 1962. Since July 2012, the state has had a 20 per cent ownership in DUC, which is owned through the Danish North Sea Fund.

There are two gas pipelines from the North Sea to the onshore processing facilities on the Danish peninsula of Jutland. These pipelines are owned and operated by DONG. A natural gas pipeline owned by DONG and DUC from the North Sea to the Netherlands was completed in 2004. Furthermore, the Danish pipeline networks connect to the German and Swedish natural gas pipeline networks. A project for construction of a pipeline connection between the Norwegian, Swedish and Danish pipeline networks, called the Skanled gas pipeline, has been put on hold for the time being.

In late 2014, DONG sold their gas storage facility, Stenlille Gaslager, to the state-owned company Energinet.dk, making Energinet.dk the only provider of natural gas storage facilities in Denmark. There are two underground storage facilities: one in Jutland (Lille Torup) and one on Zealand (Stenlille). Energinet.dk is responsible for transmission of natural gas in Denmark.

Distribution of natural gas in Denmark is carried out by NGF Nature Energy Distribution A/S, HMN Naturgas I/S, Naturgas Net (which are owned by different regional municipalities) and a company owned by Energinet.dk (see also question 14).

There is currently no production of LNG in Denmark (however, see question 23). There are 18 natural gas commodity sales suppliers in the country. Since 2004, all Danish natural gas customers have been unrestricted as regards their choice of natural gas supplier.

Denmark has been energy self-sufficient since 1997. In 2015, Denmark's export of natural gas was 47.5 per cent of the total domestic production.

2 What percentage of the country's energy needs is met directly or indirectly with natural gas and LNG? What percentage of the country's natural gas needs is met through domestic production and imported production?

17 per cent of Denmark's total energy needs is met directly or indirectly by natural gas (figures for 2015). The majority of consumed natural gas was produced in Denmark.

In June 2015, a Norwegian shipping company built the first commercial LNG refuelling facility in Denmark. The facility is used in ferry operations and has a capacity of 200 tonnes or 500 cubic metres of LNG.

Government policy

3 What is the government's policy for the domestic natural gas sector and which bodies set it?

The responsibility for the overall strategy and policy for the development and regulation of the energy sector is vested in the Ministry of Energy, Utilities and Climate. The Minister is authorised to provide the detailed regulation within the statutory framework and to grant necessary dispensations.

In numerous respects, the Minister's authority to regulate is delegated to the DEA, which generally assists the Minister in respect of administering the law.

Governmental policy for the natural gas sector is thus exercised by the DEA, and focuses on environmental, security of supply, consumer protection, competition and public finance issues.

The regulation regarding exploration and production of natural gas, contained in the Subsoil Act (1981), does not distinguish between unconventional and conventional sectors. In January 2014, the European Commission issued a recommendation on minimum principles for the exploration and production of hydrocarbons (such as shale gas) using high-volume hydraulic fracturing.

Regulation of natural gas production

4 What is the ownership and organisational structure for production of natural gas (other than LNG)? How does the government derive value from natural gas production?

In 1962, the AP Moeller-Maersk Group was granted a sole concession for oil and natural gas exploration and production in Denmark for a 50-year period, which expired in 2012. Exploration and production activities are undertaken by DUC. The area covered by the sole concession was subsequently reduced to the area in the North Sea where DUC had focused its exploration activities.

In 2003, the sole concession period of the AP Moeller-Maersk Group was extended from 2012 through 2042, and the terms were adjusted to include, inter alia, a 20 per cent state participation. The negotiations were carried out within the scope of a specific derogation granted in favour of the state under the EC Licensing Directive (1994/22).

The area west of 6°15' eastern longitude is generally offered for licensing in licensing rounds. Between 1986 and 2014, seven licensing rounds concerning the North Sea areas outside the area of the reduced sole concession were carried out.

In these rounds, all licences granted were subject to a 20 per cent ownership interest for the state through DONG (as regards the first five licensing rounds) and subsequently through the Danish North Sea Fund (as of the sixth licence round). Production from areas subject to licences granted pursuant to the said rounds commenced in 1999. The DEA received 25 applications under the seventh licensing round. In April 2016, the Minister issued 16 new licences under the seventh licensing round to 12 different companies. The areas comprised by the licences are all offshore in the North Sea to the west of Denmark.

In respect of the remainder of the Danish subsoil (primarily other than the North Sea areas), an open-door policy has been in force since 1997. Under the open-door policy, a number of onshore licences have been issued in Jutland and Zealand.

The government benefits from natural gas production via its hydrocarbon tax and corporation tax receipts, and via state participation. The taxation rules applicable to the upstream sector were changed as of 1 January 2004, and apply to DUC's new sole concession and to licences granted after the effective date. Other concessionaires may, if they so wish, submit to the new taxation regime.

Under the taxation regime, the hydrocarbon and corporation taxes, both of which are calculated on the basis of income, are 52 per cent (subject to certain mandatory calculation principles as regards the applicable income) and 22 per cent respectively. State participation is 20 per cent through the Danish North Sea Fund.

5 Describe the statutory and regulatory framework and any relevant authorisations applicable to natural gas exploration and production.

The Subsoil Act provides the framework, whereas adaptations and more detailed regulation are issued by the Minister through the DEA.

The model licences and guidelines developed by the DEA are of significant practical importance.

The Minister grants licences that confer an exclusive right on the holder to explore and to produce or extract natural gas within a defined area and subject to specific terms and conditions. Separate licences may be granted for exploration and production or extraction, respectively. An exploration licence may grant the licensee a preferential right to a production or extraction licence.

The Minister may grant licences for up to three years for performing specific types of preliminary investigations to explore and produce or extract natural gas or to exploit the subsoil for storage or purposes other than the production of natural gas.

It is not possible to lease mineral rights from the state. The leasing or farming of mineral rights from a concessionary is allowed, but is subject to case-by-case approval by the Minister.

There are no rules or regulations governing when, where or how much natural gas may be produced. The Subsoil Act does not distinguish between unconventional and conventional sectors.

In the onshore upstream sector the local authorities have, along with the DEA, governmental powers with respect to the supervision of, for example, the environment. As of 1 January 2015, the Danish Working Environment Authority has taken over the governmental powers from the DEA regarding the supervision of the health and safety aspects of the offshore installations on the Danish Continental Shelf in the North Sea.

In 2015 an act amending inter alia the Subsoil Act came into force. The amending act, inter alia, implements the EU Offshore Safety Directive and regulates technical and financial capacity requirements and liability for decommissioning costs. However, the act has a broader scope than the EU Offshore Safety Directive in that it also applies to onshore oil and gas activities.

6 Are participants required to provide security or any guarantees to be issued with a licence to explore for or to store gas?

The Model Licence for hydrocarbon exploration and exploitation states that the licensee must provide security for its obligations under the licence in an amount and of a nature that is acceptable to the DEA. The security must be provided within 30 days from the granting of the licence. Upon 30 days' notice, the DEA may subsequently require that the security be changed or supplemented.

Where the licensee is a subsidiary or a branch of a subsidiary, a guarantee is generally required from the ultimate parent company. The DEA has issued a Model Parent Company Guarantee, which is available on its website.

Regulation of natural gas pipeline transportation and storage

7 Describe in general the ownership of natural gas pipeline transportation, and storage infrastructure.

Energinet.dk is responsible for Danish natural gas transmission, and is under an obligation to run the transmission system and ensure safe delivery to distribution networks at non-discriminatory prices.

Natural gas storage facilities are owned by Energinet.dk. DONG owns the upstream natural gas transportation pipeline network, mainly located in the North Sea. Third-party access to the pipeline network is regulated by Executive Order No. 1090 of 6 December 2000 on access to the upstream pipeline network.

Transmission, distribution and storage companies are prohibited from carrying out activities outside the scope of their respective licences (see question 3). Effectively, subject to limited exceptions, other activities must be vested in separate legal entities (except for certain other pipeline and storage-related activities subject to individual permission by the Minister).

8 Describe the statutory and regulatory framework and any relevant authorisations applicable to the construction, ownership, operation and interconnection of natural gas transportation pipelines, and storage.

The statutory legal framework for the domestic downstream natural gas sector is the Act on Natural Gas Supply (2000), with later amendments, which implements the EC Gas Directive (2009/73/EC). The Act contains a requirement of ownership unbundling of transmission

system operators from undertakings performing production or supply of natural gas. This requirement is fulfilled, as Energinet.dk is the sole owner and operator of gas transmission systems in Denmark.

Transmission, distribution and storage activities may only be carried out subject to a licence granted by the Minister. The licence runs for a term of at least 20 years. Essential conditions are the applicant's ability to demonstrate sufficient relevant skill and financial capacity.

The licence holder must carry out the necessary maintenance, changes and expansion of the relevant transportation pipelines or storage facilities. Significant changes, as well as the construction of new pipelines or facilities, remain subject to prior approval by the Minister. Licences are not required for natural gas activities carried out by Energinet.dk and companies within this group. The rules regarding Energinet.dk's organisation, activities, etc, are found in the Act on Natural Gas Supply as well as in a separate Act on Energinet.dk (2004).

The Danish Energy Regulation Authority (DERA) and the Energy Board of Appeal (EBA) generally oversee compliance with respect to the applicable energy laws, including supervising prices and licence requirements. Decisions by the Minister, the DEA and the DERA may be appealed to the EBA.

9 How does a company obtain the land rights to construct a natural gas transportation or storage facility?

In the absence of an agreement with the landowner, and provided that regard for public interest dictates it, the DEA and the relevant municipality can order a compulsory sale of the necessary rights over land.

10 How is access to the natural gas transportation system and storage facilities arranged? How are tolls and tariffs established?

All paying customers must be granted access to the transmission system, the distribution systems as well as to LNG facilities (if any). Where it is technically and economically necessary to enable efficient access to the systems, companies must grant all customers access to storage and line-pack facilities and other help functions. Access must be granted on objective and non-discriminatory conditions. Consequently, transmission, distribution and storage facility providers may only deny access to their respective systems in a number of specifically defined situations, such as a lack of capacity, and such denial must be reasoned and can be appealed to the DERA.

The transmission system operator must ensure sufficient and efficient transportation through the transmission network and that the correct quality level of the natural gas is delivered from the transmission network. Ensuring constant balance, capacity, security of supply, and the necessary measuring and connecting of distribution networks and consumers to the transmissions system, are related requirements with which the said operator must comply.

The prices and terms for transmission services are regulated, while the prices and terms for storage facility services, as well as line-pack and other help functions, are negotiated (see question 13). Prices must take into due consideration the costs of the system operators and a reasonable return on investments. Prices and terms for upstream pipeline network services are negotiated. In determining prices and terms in respect of transmission and storage facility upstream pipeline network services, there must be no discrimination between customers (see question 7).

Energinet.dk's transmission prices consist of a capacity element reflecting the level of occupation of the transmission system that the transport in question represents, and a variable price element depending on the amount of natural gas transported. Furthermore, the prices consist of a payment for security of supply. Prices are based on the entry-exit principle. There is currently only one exit zone in Denmark where Danish consumers are provided with natural gas, and the transport element of the payment is thus not dependent on the geographical location of the destination in Denmark of the natural gas in question (the postage-stamp principle). The price for storage facilities also consists of a combination of a capacity element and a variable volume-related price element. Prices, conditions and the applicable basis must be notified to the DERA and will be published. The DERA may impose changes, if necessary, because of, for example, discriminatory or otherwise unreasonable pricing.

11 Can customers, other natural gas suppliers or an authority require a pipeline or storage facilities owner or operator to expand its facilities to accommodate new customers? If so, who bears the costs of interconnection or expansion?

If transmission, distribution or storage capacity is insufficient to service demand, transmission, distribution and storage system operators must expand their facilities, if it is economically feasible, and subject to prior approval by the Minister (see question 8), for example, by covering the related costs through pricing or by financing offered in connection with the request for access to the facilities.

12 Describe any statutory and regulatory requirements applicable to the processing of natural gas to extract liquids and to prepare it for pipeline transportation.

Activities pertaining to the extraction of liquids and other processing necessary in the preparation for pipeline transport are subject to the general requirements of the Natural Gas Supply Act concerning, for example, environmental and quality issues, as well as the Environmental Protection Act. More specifically, the requirements of the Rules for Gas Transport (RfG) (see question 13) and the rules specified therein must be complied with.

13 Describe the contractual regime for transportation and storage.

The rules applicable to the use of the transmission network are set out in the latest version of the RfG (previously called the Danish Network Code). The RfG constitutes the framework of terms agreed among Energinet.dk and the distribution system operators. Energinet.dk will enter into individual contracts with shippers on the basis of the regulated terms.

In late 2014, DONG sold their gas storage facility to Energinet.dk, making Energinet.dk the only provider of natural gas storage facilities in Denmark from 1 January 2015. The rules applicable for the use of the two storage facilities in Denmark are set out in the latest version of the Rules for Energinet.dk Gas Storage.

Both the RfG and the Rules for Energinet.dk Gas Storage must be notified to the DERA and will be published.

Regulation of natural gas distribution

14 Describe in general the ownership of natural gas distribution networks.

Local distribution of natural gas is effected through local networks owned by the state or the local municipalities. Accordingly, the state, through Energinet.dk, owns the distribution network in the southern part of Jutland and in part of Zealand. Three other companies, NGF Nature Energy Distribution A/S, HMN Naturgas I/S and Naturgas Net (owned by the municipalities in their respective regions), own the distribution networks in the middle and northern parts of Jutland, in Funen and in the remaining part of Zealand.

15 Describe the statutory and regulatory structure and authorisations required to operate a distribution network. To what extent are gas distribution utilities subject to public service obligations?

A distribution network operator must have a licence, and distribution activities are governed by the Act on Natural Gas Supply (see question 8). The distribution network operator must:

- connect consumers;
- advise consumers on reduction of energy consumption;
- maintain, change and expand the network;
- ensure sufficient transport capacity, physical balance, necessary measuring and relevant information to consumers; and
- contribute to research and development in the area of energy efficiency, and to the improvement of safety in the use of natural gas.

The distribution network operator must ensure in its communications to consumers that distribution services are distinctly separated from communications and services from affiliated companies performing production and supply of natural gas.

16 How is access to the natural gas distribution grid organised? Describe any regulation of the prices for distribution services. In which circumstances can a rate or term of service be changed?

Apart from what is stated in question 10, terms and conditions pertaining to the use of distribution networks are regulated. Access to the distribution network requires the shipper to have reserved transportation capacity in the transmission system (in a connected transportation agreement).

A request for permission to access any particular part of the distribution network should be addressed to the relevant regional operator (see question 14). The individual distribution network operator has an obligation to contact other distribution network operators if transport via other distribution networks is, in its view, necessary or sensible.

The price for transportation of natural gas in distribution networks is regulated and is defined by reference to the applicable cost of energy, salaries, services, administration, maintenance, other process costs, depreciation and interest on investment. All income of the distribution network operator must be allocated to cover said costs.

Prices are subject to objective and non-discriminatory criteria, and are mainly based on the amount of natural gas distributed. Individual customer requirements pertaining to, for example, pressure, may trigger separate additional charges. The physical distance will not affect the price.

The DEA can set a maximum for income generated by distribution network operators. Extraordinary earnings may be allocated to future investments, reduction of prices or extraordinary yield on the invested capital. The DERA may grant dispensations from the maximum income.

When natural gas will pass more than one distribution network on its way to the consumer, the relevant distribution network operators will negotiate the price for such transport. The consumer will, however, only pay the price charged in the network to which he or she is connected.

Prices, conditions and the applicable basis must be notified to the DERA and will be published. The DERA may impose changes to prices and terms with reference to the applicable principal purposes expressed in the Natural Gas Supply Act.

17 May the regulator require a distributor to expand its system to accommodate new customers? May the regulator require the distributor to limit service to existing customers so that new customers can be served?

Apart from what is stated in question 11 regarding expansion, it should be noted that anyone situated in geographical areas designated as natural gas supply areas or anyone being connected to the distribution network now or in the future has a right to be supplied with natural gas. An ensuing right for suppliers and consumers to gain access to the relevant networks applies. The facilities must be provided on objective and non-discriminatory terms. Accordingly, requiring a distributor to limit services to existing customers would not be relevant.

18 Describe the contractual regime in relation to natural gas distribution.

Apart from what is stated in question 16, contracts between natural gas distribution companies and natural gas suppliers are subject to each distribution company's consumer handling agreement. These contain the terms and conditions, namely allocation of activities, between the natural gas supplier and the distribution company in relation to the supply of natural gas to consumers. Natural gas distribution companies enter into contracts for distribution of natural gas with end users based on the companies' terms and conditions for distribution of natural gas.

A distribution company's consumer handling agreement and terms and conditions for distribution of natural gas must be notified to the DERA and will be published.

Regulation of natural gas sales and trading

19 What is the ownership and organisational structure for the supply and trading of natural gas?

There are two natural gas suppliers with and 18 without specific natural gas supply obligations. Obligations to supply natural gas apply to suppliers with a licence to supply certain categories of customers. As of

January 2013, licences to supply gas with specific supply obligations are subject to public procurement, namely, a licensing round. A licence is awarded to the supplier that bids the lowest price for gas supply, and is granted for a period of five years.

Since 2004, all customers have had a free choice of natural gas supplier. The supply of natural gas to customers exercising their right to choose their supplier is not subject to any licence.

Trading in natural gas must be organised in a separate legal entity that does not carry out any other natural gas-related activities (see question 7).

20 To what extent are natural gas supply and trading activities subject to government oversight?

The price for natural gas supplied by companies with supply obligations under existing licences is determined by taking into consideration the relevant costs and prices, and the terms and the applicable basis must be notified to the DERA (see question 16).

The price of natural gas supplied by companies with supply obligations, whose licences are granted by a licensing round, is based on the offered price with an addition of the transmission price as well as a fixed addition covering other costs (eg, storage costs). The price is subject to supervision by the DERA.

The prices and terms of natural gas supply from companies without specific supply obligations are negotiated, and are not subject to supervision by the DERA but by the competition authorities. However, the DERA monitors the level of transparency in wholesale pricing and restrictive practices in the market, and must inform the competition authorities of cases of non-compliance with competition law. To ensure an effective and competitive market, natural gas suppliers are obligated to keep records of data relating to all transactions regarding gas supply, which must be available to DERA for at least five years.

21 How are physical and financial trades of natural gas typically completed?

Natural gas is mainly traded by long-term contracts between producers of natural gas and wholesale customers. Only a small percentage of the total gas consumption in Denmark is based on free trade through Energinet.dk's Gas Transfer Facility (a virtual gas trading point), where natural gas can be traded bilaterally. To increase and facilitate free trade of natural gas, a gas exchange, Nord Pool Gas, was established in 2008.

Wholesalers must enter into shipper contracts with Energinet.dk to access the transmission network based on the terms and conditions in the RfG (see question 13). Furthermore, the shipper must enter into contracts for access to the storage facilities with the relevant storage facility operator (see question 13). Retail customers purchase natural gas from the shippers for resale to end users and enter into customer handling agreements with the distribution companies (see question 18). End users purchase natural gas from the retailers based on these companies' terms and conditions, and enter into contracts with the distribution companies subject to their terms and conditions.

22 Must wholesale and retail buyers of natural gas purchase a bundled product from a single provider? If not, describe the range of services and products that customers can procure from competing providers.

Wholesale customers purchase natural gas transmission services from Energinet.dk. Distribution services are purchased from the operator of the natural gas distribution network to which the customer is connected.

Natural gas as a commodity is purchased by end users from natural gas suppliers as a bundled product, namely, natural gas together with the necessary transmission and distribution services, but the end users must enter into two separate contracts for supply and distribution respectively with the relevant company.

Regulation of LNG

23 What is the ownership and organisational structure for LNG, including liquefaction and export facilities, and receiving and regasification facilities?

At present, there is only one LNG facility in Denmark, located in the northern part of Jutland (see question 2).

Update and trends

In February 2016 a governmental working group published a report, 'An Efficient Gas Sector', concerning the potential for efficiency improvements in the Danish natural gas sector. The report is based on an analysis of the future challenges of the gas sector, the economic regulation and the ownership and organisational structure for supply of natural gas. Pursuant to the analysis, the Danish offshore production of natural gas will decrease significantly in the future, and the drop will only partly be evened out by other gas sources, such as biogas. The political recommendations of the report are therefore aimed at adjusting the regulatory framework as well as the infrastructure to the coming changes. The overall purpose of the report and its recommendations is further to enhance competition in the sector, realise the potential for efficiency improvements and in turn ensure lower prices for the end-consumers of natural gas.

An exploration well for shale gas was drilled onshore in 2015 in northern Jutland. The exploration well confirmed the presence of shale gas, but also revealed that the shale layers were more narrow than expected. Based on the exploration well, the licensees concluded that the shale gas was not commercially exploitable at this time, and the licence was therefore relinquished in June 2016. Since 2012, the

Danish government has temporarily suspended granting any licences for activities concerning exploration for or production of shale gas. The reason for the suspension was to make investigation of the possibilities of safe and environmentally sound production of shale gas. The results and experiences from the exploration well in northern Jutland will now be used in the investigations, after which it will be decided whether new licences for exploration of shale gas may be granted.

In the spring of 2016 Maersk Oil announced that its infrastructure at the Tyra field was worn out, and in need of large investments if production was to continue. Maersk Oil stated that the investments would not be profitable under the current fiscal and taxation scheme for production of hydrocarbons in the Danish part of the North Sea. Thus Maersk Oil would shut down production at the Tyra field at the end of 2018, unless Maersk Oil and the Danish government could reach an agreement by the end of 2015 on more favourable terms for Maersk Oil's production. As at January 2017, no agreement has been reached between Maersk Oil and the government. The Tyra field is by far the largest producer of natural gas in the Danish North Sea. In the years 1972 to 2015, 40 per cent of Denmark's total offshore production of natural gas has come from the Tyra field.

In addition, a LNG production facility is planned for the port of Frederikshavn, also in the northern part of Jutland. The facility is to transform natural gas and biogas from the distribution network to LNG to be used as bunker fuel in the maritime sector. The facility is scheduled to go into operation in 2018.

24 Describe the regulatory framework and any relevant authorisations required to build and operate LNG facilities.

The establishment of LNG facilities may only be carried out subject to permission granted by the Minister. Permission may only be obtained if the applicant is able to establish that there is a relevant need for an LNG facility. The permission may be conditional on compliance with terms concerning the particulars of the establishment and operation of the LNG facility, including safety and environmental provisions.

25 Describe any regulation of the prices and terms of service in the LNG sector.

There are no special rules or regulations concerning LNG prices and terms of services. Prices, conditions, and the applicable basis must be made publicly available and notified to the DERA (see question 16).

Mergers and competition

26 Which government body may prevent or punish anticompetitive or manipulative practices in the natural gas sector?

The DERA enforces the sector-specific competition regulation of the Danish natural gas sector.

The DERA's main task is to react if companies holding a dominant position in their respective relevant markets take unfair advantage of their market position. The underlying principle is that consumers should enjoy fair, uniform and transparent prices and conditions of supply.

Non-sector-specific competition regulation falls under the authority of the Competition Council.

27 What substantive standards does that government body apply to determine whether conduct is anticompetitive or manipulative?

With regard to consumer protection under the Natural Gas Supply Act, licence-committed undertakings must provide their services on objective, transparent and non-discriminatory terms.

Transmission undertakings must provide rules for utilisation of the transportation system in cooperation with distribution, storage and LNG undertakings. These rules must be objective and non-discriminatory, and accessible to users and potential users of the system.

Prices and terms for services from transmission, storage and LNG undertakings must not discriminate between the system users.

28 What authority does the government body have to preclude or remedy anticompetitive or manipulative practices?

If prices and delivery terms are held by the DERA not to comply with the provisions of the Natural Gas Supply Act, the DERA can order the amendment of prices and conditions. Non-compliance with any such order may result in daily or weekly fines being imposed on such party.

If prices, terms or agreements result in an environmentally or economically inappropriate utilisation of energy, the DERA can dictate amendments following negotiations with the parties involved.

The DERA is authorised to conduct onsite searches in relation to the Natural Gas Supply Act without a court order, and may take copies of any type of information including accounts, accounting materials, books, other business papers and electronically stored data. If necessary, the police will assist in the exercise of these powers.

A licence can be revoked by the Minister and the courts if provisions, terms or orders pursuant to the Natural Gas Supply Act are repeatedly breached.

29 Does any government body have authority to approve or disapprove mergers or other changes in control over businesses in the sector or acquisition of production, transportation or distribution assets?

Licences granted pursuant to the Natural Gas Supply Act or the Subsoil Act cannot be either directly or indirectly transferred to others without the prior approval of the Minister.

A distribution network or a direct or indirect ownership interest in a distribution network can only be divested to the state, either on the discretion of the owner or based on a decision of the Minister regarding the obligation of the owner to sell. The state has an obligation to buy, which is vested in Energinet.dk. Mergers and acquisitions in the natural gas sector are otherwise subject to EC or Danish merger regulation.

30 In the purchase of a regulated gas utility, are there any restrictions on the inclusion of the purchase cost in the price of services?

Since the gas prices are fixed in accordance with the costs specified in the Natural Gas Supply Act, the purchase costs may not be included in the gas price.

Distribution companies and natural gas traders with existing supply obligations may include depreciation and interest on investments in the calculation of their prices. The DEA may impose methods for calculation of the said items. Transmission and storage companies may ensure themselves a reasonable return on their investments.

31 Are there any restrictions on the acquisition of shares in gas utilities? Do any corporate governance regulations or rules regarding the transfer of assets apply to gas utilities?

As stated in question 29, the state has a right and obligation to buy in respect of distribution networks.

Holders of licences (see question 8) must own the respective facilities. A natural gas utility company could not, therefore, transfer the essential assets and continue activities on the basis of a lease. The transfer of any licence is subject to prior approval by the Minister.

No director, manager or key personnel holding positions in any natural gas distribution or transmission company is allowed to participate in the operation or management of any natural gas producing enterprise.

Besides these rules on functional separation, no special corporate governance standards apply. Transfers of shares or assets otherwise remain subject to EU or national merger control rules where applicable.

International

32 Are there any special requirements or limitations on foreign companies acquiring interests in any part of the natural gas sector?

No.

33 To what extent is regulatory policy affected by treaties or other multinational agreements?

Danish natural gas policy is first and foremost influenced by EU legislation. In addition, Denmark is involved in international activities

in a number of different fora, including the European Energy Charter, the OECD, the International Energy Agency, the UN and the Nordic Council of Ministers.

34 What rules apply to cross-border sales or deliveries of natural gas?

No rules specifically concerning cross-border natural gas supply apply.

Transactions between affiliates

35 What restrictions exist on transactions between a natural gas utility and its affiliates?

Apart from what is stated in questions 7 and 8, contracts entered into by transmission, distribution and storage companies with other companies, including companies within the same group, must be at arm's length.

36 Who enforces the affiliate restrictions and what are the sanctions for non-compliance?

For enforcement of ownership transfer restrictions, including competition rules, see question 26.

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Description of domestic sector

1 Describe the domestic natural gas sector, including the natural gas production, liquefied natural gas (LNG) storage, pipeline transportation, distribution, commodity sales and trading segments and retail sales and usage.

The majority of the gas supplied in the EU is imported from outside the EU (67 per cent of total net supplies in 2014). The remaining gas volumes (33 per cent in 2014) stem from domestic EU gas production. The largest gas-producing countries within the EU are the Netherlands, the UK, Romania, Germany, Italy, Denmark and Poland. The main external sources of gas supply in 2014 were Russia (27 per cent of total supplies), Norway (approximately 24 per cent), Algeria (8 per cent) and Qatar (5 per cent). While 85 per cent of the EU's net imports were transported by pipeline in 2014, 15 per cent were delivered as LNG from across the world. The EU's largest LNG providers are Qatar (47 per cent of total LNG supplies), Algeria (26 per cent) and Nigeria (10 per cent), followed by Trinidad and Tobago (7 per cent), Norway (5 per cent), Peru (3 per cent), and other countries including Oman and Egypt (2 per cent in total). The member states with the largest LNG imports are the UK, Spain, France, Italy, Portugal and Belgium. There are currently 25 LNG terminals located in the EU: seven in Spain, four in France, three in the UK, three in Italy, two in Sweden and one in each of Belgium, Lithuania, Greece, the Netherlands, Poland and Portugal. Seven additional LNG terminals (four in Finland, two in Spain, and one in Malta) are currently under construction and are scheduled to start their operations between 2017 and 2021. Additional LNG terminals are currently in the study and planning phase in Croatia, Estonia, Finland, Germany, Greece, Ireland, Italy, Latvia, Malta, the Netherlands, Poland, Romania, Sweden and the UK. By 2014, the EU territory encompassed 2,214,471km-worth of gas pipelines and 153 natural gas storage facilities for peak shaving, seasonal variations and strategic security of gas supply.

2 What percentage of the country's energy needs is met directly or indirectly with natural gas and LNG? What percentage of the country's natural gas needs is met through domestic production and imported production?

Natural gas consumption in the EU accounted for approximately 21 per cent (ie, 344 million tons of oil equivalent (net calorific value) (mtoe)) of the EU's total primary energy consumption (1,615mtoe) in 2014. The majority of EU-wide gas supplies stem from gas imports from non-EU countries, with the remaining volumes being produced within the EU (see question 1). The EU continues to be gas import-dependent, with some countries less dependent than others. The member states least dependent on gas imports are Romania and Croatia. The Netherlands and Denmark are both net exporters.

Government policy

3 What is the government's policy for the domestic natural gas sector and which bodies set it?

EU energy policy aims to establish well-functioning energy markets that ensure secure energy supplies at competitive prices. To achieve this, EU legislation has sought to open up the European gas markets to competition and to create a single European gas market. Key to realising this aim is the breaking up of national monopolies, removal of barriers

to cross-border gas supply, ensuring third-party access to transport infrastructure and the establishment of uniform conditions throughout the EU. In February 2015, the European Commission (Commission) announced the new Energy Union strategy – the Framework Strategy for a Resilient Energy Union with a Forward-Looking Climate Change Policy – that emphasises the importance of these policy goals (ie, security of gas supply and a fully integrated European gas market), and puts their effective implementation and enforcement as a top priority for the coming years.

The gas sector is principally subject to sector-specific EU legislation (regulations, directives and guidelines) and the enforcement of generally applicable EU competition rules. However, other areas of EU law may also have an impact on the natural gas sector (eg, rules on state aid, public procurement, free movement of goods, services and capital, and EU environmental legislation).

Sector-specific legislation

The key elements of EU sector-specific legislation for natural gas are as follows:

- Directive 94/22/EC of 30 May 1994 on the conditions for granting and using authorisations for the prospecting, exploration and production of hydrocarbons (Hydrocarbon Licensing Directive);
- Directive 2008/92/EC of 22 October 2008 concerning the transparency of gas prices charged to industrial end users; and
- Directive 2009/73/EC of 13 July 2009 concerning common rules for the internal market in gas (Third Gas Directive), on which the Commission has issued a number of explanatory notes dealing with:
 - the unbundling regime in general;
 - ownership unbundling in particular (including with regard to financial investors);
 - third-party access to storage facilities;
 - retail markets;
 - the role of regulatory authorities;
 - exemptions from certain provisions of the unbundling and third-party access regime; and
 - public service obligations.

The last two were formally issued before the Third Gas Directive, but still provide useful guidance today.

In addition, the Commission has (as at January 2017) issued 61 opinions on draft certification decisions by national regulators in relation to the certification of gas transmission system operators (TSOs) and 30 opinions on draft exemption decisions by national regulators in relation to new gas infrastructure (pipelines, LNG terminals and storage facilities), which provide supplementary guidance on the Commission's interpretation of the Third Gas Directive.

Further key elements of EU sector-specific legislation for natural gas are as follows:

- Regulation 715/2009/EC of 13 July 2009 on conditions for access to the natural gas transmission networks (Gas Regulation). The Gas Regulation is supplemented by Regulation 312/2014 of 26 March 2014 establishing a Network Code on Gas Balancing of Transmission Networks (Network Code on Gas Balancing); Regulation 984/2013 of 14 October 2013 establishing a Network Code on Capacity Allocation Mechanisms in Gas Transmission

Systems (Network Code on CAM); Commission Decision of 30 April 2015 and Commission Decision of 24 August 2012 on conditions and procedures to reduce congestion in European gas transmission pipelines; and Regulation 2015/703 of 30 April 2015 establishing a Network Code on Interoperability and Data Exchange Rules (Network Code on Interoperability) (a Network Code on Rules regarding Harmonised Transmission Tariff Structures for Gas is currently being drafted). In addition, non-binding Commission guidance on congestion management procedures in natural gas transmission networks was published in July 2014. The EU Agency for the Cooperation of Energy Regulators (ACER) has also issued non-binding framework guidelines on capacity allocation mechanisms, balancing rules, interoperability and data exchange, and harmonised gas transmission tariff structures, and a number of opinions and recommendations on draft network codes;

- Regulation 713/2009 of 13 July 2009 establishing an Agency for the Cooperation of Energy Regulators (ACER Regulation), regarding which the Commission has issued an explanatory note on the possibility of non-EU neighbouring countries and their TSOs to participate in the ACER and the European Network of Transmission System Operators for Gas (ENTSOG) (a recast ACER Regulation was proposed by the Commission in November 2016 reflecting the changed and enhanced tasks that have been conferred to ACER since its establishment);
- Regulation 994/2010 of 20 October 2010 concerning measures to safeguard security of natural gas supply (Security of Supply Regulation) (a new Security of Supply Regulation was proposed by the Commission in February 2016); and
- Regulation 1227/2011 of 25 October 2011 on wholesale energy market integrity and transparency (REMIT) prohibiting the use of inside information or other market manipulation in energy wholesale markets. Commission Implementing Regulation 1348/2014 of 17 December 2014 (REMIT Implementing Regulation) further sets out the details of wholesale energy products and fundamental data that must be reported to ACER and establishes appropriate channels for data reporting.

The single most important piece of sector-specific legislation has been the Third Gas Directive and its predecessors, the Second Gas Directive (Directive 2003/55/EC of 26 June 2003) and the First Gas Directive (Directive 98/30/EC of 22 June 1998). The Third Gas Directive, complemented by the Gas Regulation and the ACER Regulation, was adopted as part of the EU's Third Energy Package with the original aim of completing the single European gas market by 2014. More specifically, it provides for the following:

- effective separation of production and supply activities from transmission networks (unbundling) through one of three unbundling models: the ownership unbundling (OU), the independent system operator (ISO) and the independent transmission operator (ITO) models. All TSOs established after 3 September 2009 must comply with the OU model;
- measures to strengthen the powers and to guarantee the independence of national energy regulators to improve regulatory supervision;
- increased transparency of retail markets and strengthened consumer protection rules;
- establishment of ACER to ensure effective cooperation between national regulatory authorities and to take decisions on cross-border issues;
- better cross-border collaboration and investments through the ENTSOG, which brings together EU gas network operators to cooperate and develop common commercial and technical codes and security standards, as well as to plan and coordinate the necessary infrastructure investments needed at EU level; and
- new tools to harmonise market and network operation rules at the pan-European level, including rules relating to tariff setting (or methodologies for their calculation) for access to the network, the establishment of third-party access services and harmonised principles for capacity allocation, congestion management, determination of transparency requirements, balancing rules and imbalance charges, and the facilitation of capacity trading.

Competition law rules

The natural gas sector has been one of the priority areas for the Commission in the enforcement of the EU competition rules (articles 101, 102, 106 of the Treaty on the Functioning of the European Union (TFEU)). The Commission's 2007 Report on the Energy Sector Inquiry and several competition cases since then highlight the importance of competition law enforcement as a complement to sector-specific legislation (see question 28).

Enforcement bodies

EU policy is set by the Commission, the Council of the European Union (composed of the heads of the 28 member states) and the European Parliament. The Commission has the power to initiate EU legislation, which must be approved and adopted by the Council and the Parliament. In addition, the Commission is responsible for the enforcement of EU law. It can take EU member states to court for not complying with EU law and adopt binding decisions against companies that violate EU competition law rules. Competition law enforcement is an important tool for the Commission in shaping its gas policy. Within the Commission, the Commissioner for Climate Action and Energy (Miguel Arias Cañete), supported by the Vice President for the Energy Union (Maroš Šefčovič), and the Commissioner for Competition (Margrethe Vestager) have the primary responsibility of achieving the objectives set by the EU policies for the gas sector and the energy markets in general. The term of the current Commission will end in 2019.

The Commission acts in close cooperation with national regulatory authorities. This cooperation takes place through ACER, the Citizens' Energy Forum, the European Gas Regulatory Forum (the Madrid Forum) and the Gas Coordination Group. ACER was established in 2011, and complements and coordinates the work of the national regulatory bodies at EU level. ACER is responsible for developing EU-wide network and market rules (framework guidelines, network codes), coordinating regional and cross-regional market integration initiatives, monitoring the work of the ENTSOG (in particular, the TSOs' EU-wide network development plans), and the monitoring of the functioning of gas markets in general and of wholesale gas trading in particular. The Citizens' Energy Forum is a platform for national consumer organisations, industry representatives and government authorities that convenes once a year in London to foster competitive, energy-efficient and fair retail markets for consumers. The Madrid Forum is an informal forum in which national regulatory authorities, member states, the Commission, TSOs, gas suppliers and traders, consumers, network users and gas exchanges convene once or twice a year in Madrid to address issues related to the cross-border trade of gas, in particular the tariffication of cross-border gas exchanges, the allocation and management of scarce interconnection capacity, and other technical and commercial barriers to the creation of a well-functioning single European gas market. The Gas Coordination Group coordinates security of supply measures amongst EU countries and exchanges information on security of supply with supplier, consumer and transit countries. Members of the Gas Coordination Group include national authorities, ACER, ENTSOG, the Energy Community and representatives of industry and consumer associations.

Regulation of natural gas production

4 What is the ownership and organisational structure for production of natural gas (other than LNG)? How does the government derive value from natural gas production?

The ownership and organisational structure for the production of natural gas is largely regulated at national level and varies significantly between member states. At EU level, the Hydrocarbon Licensing Directive prevents member states from maintaining hydrocarbon production monopolies through the grant of perpetual and exclusive rights for the exploration and production of hydrocarbon. In addition, EU court jurisprudence has clarified that national import and export monopolies for natural gas would violate the EU rules on the free movement of goods (*C-159/94, Commission v French Republic*).

The extent to which member states derive value from natural gas production is not a matter specifically regulated at EU level. The Hydrocarbon Licensing Directive expressly recognises that member states may subject natural gas production to conditions and requirements to ensure 'secure tax revenues'.

5 Describe the statutory and regulatory framework and any relevant authorisations applicable to natural gas exploration and production.

Authorisations for natural gas exploration and production (both conventional and unconventional) are granted at national level subject to the transparency and non-discrimination requirements of the Hydrocarbon Licensing Directive. Rules relating to the lease of mineral rights and the permitted timing, location and quantities of natural gas production are also set at national level.

6 Are participants required to provide security or any guarantees to be issued with a licence to explore for or to store gas?

Authorisations for natural gas exploration and storage are granted at national level, subject to the transparency and non-discrimination requirements of the Hydrocarbon Licensing Directive (for exploration, see question 5) and the minimum requirements of the Third Gas Directive (for storage, see question 8).

Regulation of natural gas pipeline transportation and storage

7 Describe in general the ownership of natural gas pipeline transportation, and storage infrastructure.

The ownership and organisational structure of pipeline transportation and storage of natural gas is largely laid down at national level subject to the minimum requirements of the Third Gas Directive.

The Third Gas Directive requires the structural separation of gas transmission systems (except upstream pipeline networks or high-pressure pipelines primarily used for local distribution) from production or supply activities. For TSOs that were part of a vertically integrated corporate group (a group holding interests in both transmission and production and supply), as at 3 September 2009, member states can choose one of three unbundling models (all TSOs established after that date must comply with the OU model):

- under the OU model, the ownership of the transmission system must be fully separated from any production and supply operation. The rules further include limitations for companies that directly or indirectly control or have any other rights (eg, majority shareholding, power to appoint board members or voting rights) over a production or supply company to appoint board members in the TSO. In addition, a board member may not be a member of the boards of both a TSO and a production or supply company at the same time. Ownership unbundling generally applies across gas and electricity markets (ie, not only within the gas or electricity markets);
- under the ISO model, a production or supply company may remain the owner of the transmission system provided it appoints an independent system operator company to operate the transmission system; and
- under the ITO model, a production or supply company may remain the owner of a transmission system, and may even own or otherwise control the system operator company, provided that it complies with detailed rules to ensure the autonomy of the ITO – essentially, through legal, accounting and functional separation.

Exceptionally, member states may deviate from these unbundling requirements where – as at 3 September 2009 – TSOs belonged to a vertically integrated undertaking, and the structure of the TSO and the regulatory framework guarantee a more effective independence than under the ITO model.

The Third Gas Directive obliges undertakings to be certified by the competent regulatory authorities of the member states before they are approved and designated as a TSO. Member states notify their draft certification decisions to the Commission, which issues an opinion on their compliance with the unbundling rules that national regulators are required to take into account in their final certification decisions. In the exceptional case of a deviation from one of the three unbundling models, the national regulator must comply with the Commission decision.

If certification is requested by a TSO that is controlled by a company from a non-EU country, or a non-EU entity acquires control over an EU TSO (third-country clause), certification shall be refused not only in cases of non-compliance with the unbundling rules, but also if a certification would put at risk the security of energy supply of the EU or the member state concerned.

The Third Gas Directive further requires gas companies that own storage facilities to establish at least a separate business unit responsible for storage (storage system operator) and to keep separate accounts for it. In addition, storage operators that are part of vertically integrated undertakings with transmission activities must be legally and organisationally unbundled from supply activities.

Exemptions from the unbundling rules can be granted for a defined period of time in the case of major new gas infrastructure (ie, interconnectors, LNG and storage facilities), or significant increases of capacity in or modifications to existing infrastructure. Such exemptions are subject to review by the Commission.

Cyprus, Luxembourg and Malta are exempted from the above unbundling rules. Exceptions also apply to Estonia, Finland and Latvia until any of their systems are interconnected to the systems of any member state other than Estonia, Finland, Latvia and Lithuania. However, in principle, each of these member states is entitled to derogate from the exemption by stricter national legislation. In 2012, for instance, Estonian legislation was amended to derogate from the exemption and to select the ownership unbundling model for the future. In addition, new Latvian legislation was passed in 2016 that will open up the market for foreign gas suppliers as of 3 April 2017 and introduce ownership unbundling as of 31 December 2017.

8 Describe the statutory and regulatory framework and any relevant authorisations applicable to the construction, ownership, operation and interconnection of natural gas transportation pipelines, and storage.

Authorisations for the construction, ownership, operation and interconnection of natural gas transportation pipelines and storage are granted at national level subject to the minimum requirements of the Third Gas Directive. Further to the unbundling requirements (see question 7), the Third Gas Directive requires transmission system and storage operators to operate in a secure and reliable, transparent and non-discriminatory manner. This includes the obligation to build sufficient cross-border capacity to integrate European transmission infrastructure. Under the Security of Supply Regulation (with limited exceptions for Luxembourg, Slovenia and Sweden), member states are obliged to implement minimum standards to ensure that transportation pipelines and storage facilities (and other gas infrastructure) are able to satisfy total gas demand during periods of exceptional gas demand in the event of a disruption of the single largest infrastructure.

The Third Gas Directive also requires that refusals to grant an authorisation must be reasoned and subject to appeal before an independent judicial body. In addition, undertakings must be certified before they are approved and designated as TSOs.

9 How does a company obtain the land rights to construct a natural gas transportation or storage facility?

EU law does not regulate national systems of land ownership. The transfer of land rights is subject to national law only.

10 How is access to the natural gas transportation system and storage facilities arranged? How are tolls and tariffs established?

The Third Gas Directive separately regulates third-party access to transmission (and distribution) systems, and third-party access to storage facilities.

Third-party access to transmission (and distribution) systems must be granted to all eligible customers on the basis of objective, non-discriminatory criteria and approved published tariffs (regulated access). The Gas Regulation stipulates additional detailed requirements governing third-party access to transmission networks. To facilitate the shippers' effective access to multiple transmission networks, the Gas Regulation sets out minimum requirements for:

- access tariffs, which must be subject to approval by national regulators, transparent and reflect actual costs (but may provide for an appropriate return on investment);
- services to be provided by TSOs, including long-term and short-term contracts, and interruptible transmission;
- relocation of unused capacity and physical congestion;
- transparent, non-discriminatory and effective balancing systems (as set out in the Commission's EU-wide Network Code on Gas Balancing);

- secondary trading markets for capacity in transmission systems; and
- auctions for the allocation of capacity at relevant interconnection points and cross-border (bundled) products to be offered (as set out in the Commission's EU-wide Network Code on CAM).

Additional requirements are set out in the four non-binding framework guidelines that ACER has adopted to date. They provide a minimum set of rules regarding:

- capacity allocation at interconnection points;
- gas balancing (including network-related rules on nomination procedures, rules for imbalance charges and rules for operational balancing between TSOs' systems);
- interoperability and data exchange for European gas networks (including minimum requirements for interconnection agreements between adjacent TSOs, the use of units such as energy, volume, pressure and gross calorific value), gas quality and odourisation; and
- harmonised transmission tariff structures.

Third-party access to storage facilities (including linepack) must be granted either on the basis of regulated or negotiated access. Regulated access allows eligible customers to storage or linepack on the basis of published tariffs. Negotiated access involves free negotiations on access terms with the storage system operator (however, storage operators must annually publish their main commercial conditions for the use of storage).

The Third Gas Directive permits the refusal of third-party access to gas transmission and storage services where there is lack of capacity, where access would prevent the undertaking from carrying out public service obligations, and where serious economic and financial difficulties with take-or-pay contracts would arise.

In the case of upstream transportation systems, third-party access may be refused on grounds of:

- technical incompatibility;
- difficulties that cannot reasonably be overcome, and that could prejudice current and planned production of hydrocarbons;
- the need to respect reasonable needs of the network owner or operator; and
- the interests of other users.

Exemptions from the third-party access rules can be granted for a defined period of time in the case of major new gas infrastructure or significant increases of capacity in or modification to existing infrastructure (subject to review by the Commission). Exceptions can also be granted to member states (except for storage) as long as they are considered emergent markets (subject to review by the Commission).

11 Can customers, other natural gas suppliers or an authority require a pipeline or storage facilities owner or operator to expand its facilities to accommodate new customers? If so, who bears the costs of interconnection or expansion?

The Third Gas Directive provides that, in the event that third-party access is refused based on lack of capacity or a lack of connection, the relevant member state may require that the system operator makes the necessary investments in capacity if it is economic to do so or if a customer is willing to pay for them. It further provides that, in circumstances where no further authorisations to build and operate distribution pipelines are granted, member states must require the system operators to invest in incremental capacity if requested. The terms under which such expansions may be required are set out in national legislation.

There have also been attempts both at EU and national level to characterise refusal to expand transmission infrastructure (strategic underinvestment) as abusive behaviour violating article 102 TFEU. In the *ENI* case (2010), the Commission took the view that ENI's decision to limit investments in its international transmission pipelines, TAG, TENP and Transigas, potentially constituted an abuse. Similarly, the Commission looked into GDF's refusal to invest in additional import capacity at the Montoir de Bretagne LNG terminal in France (2009). The Commission did not formally conclude that these practices constituted an infringement, as the cases were settled by way of commitment decisions; ENI, for instance, was required to divest its shares

in the international transport pipelines to Italy. At national level, the Italian competition authority went further in 2006 and found that ENI had abused its market position by discontinuing works on the expansion of a main import pipeline into Italy. In this case, ENI was fined and ordered to provide third-party access to expanded capacity in the pipeline.

12 Describe any statutory and regulatory requirements applicable to the processing of natural gas to extract liquids and to prepare it for pipeline transportation.

The extraction and processing of natural gas liquids is not regulated at EU level.

13 Describe the contractual regime for transportation and storage.

The content of transportation and storage agreements is not specifically regulated at EU level, subject to the constraints of the Third Gas Directive (see question 10) and generally applicable EU competition rules.

Regulation of natural gas distribution

14 Describe in general the ownership of natural gas distribution networks.

The ownership and organisational structure of the natural gas distribution networks is largely regulated at national level, subject to the minimum requirements of the Third Gas Directive.

Pursuant to the Third Gas Directive, vertically integrated distribution system operators (DSOs) must be established as legally separate companies from their production and supply activities (legal unbundling); be independent in terms of their organisation and decision-making (functional unbundling); and keep separate accounts for their distribution activities (accounting unbundling).

Small DSOs serving less than 100,000 customers are exempted from legal and functional unbundling. In contrast to TSOs (see question 7), the Third Gas Directive does not require ownership unbundling for DSOs.

15 Describe the statutory and regulatory structure and authorisations required to operate a distribution network. To what extent are gas distribution utilities subject to public service obligations?

Authorisations for the operation of a distribution network are granted at national level subject to the minimum transparency and non-discrimination requirements of the Third Gas Directive. The Third Gas Directive also requires refusals to grant an authorisation to be reasoned and subject to appeal before an independent judicial body.

The Third Gas Directive provides a set of public service obligations that member states may implement at national level. Public service obligations can be imposed in relation to security of supply, regularity, quality and price of supply and environmental protection (including energy efficiency, energy from renewable sources and climate protection). Additional guidance is provided in the explanatory note on public service obligations. Member states must also impose supply obligations in favour of certain categories of customers, customers located in a particular area and a broad set of other customer protection minimum obligations. The latter will allow consumers to switch suppliers more easily (within three weeks), to obtain detailed consumer information from the supplier (eg, consumption data, billing information) and to benefit from complaint handling procedures.

In addition, the Security of Supply Regulation requires member states to implement minimum standards to ensure security of supply for certain protected customers (in particular, household customers) in the event of a seven-day temperature peak and for at least 30 days of high demand, as well as in the case of an infrastructure disruption under normal winter conditions.

16 How is access to the natural gas distribution grid organised? Describe any regulation of the prices for distribution services. In which circumstances can a rate or term of service be changed?

The Third Gas Directive regulates access to distribution networks in the same way as access to transmission networks (see question 10). However, member states may exempt closed distribution systems from the requirement that network tariffs (or the methodologies underlying their calculation) be approved by the national regulator before entering into force. The Third Gas Directive further provides a framework for the national regulation of third-party access terms to distribution, including balancing, mainly to ensure that they are proportionate and non-discriminatory (see question 10).

17 May the regulator require a distributor to expand its system to accommodate new customers? May the regulator require the distributor to limit service to existing customers so that new customers can be served?

Similar considerations apply as outlined in question 11. There is no requirement under EU law for distributors to limit services to existing customers so that new customers can be served.

18 Describe the contractual regime in relation to natural gas distribution.

The content of natural gas distribution agreements is not specifically regulated at EU level, subject to the constraints of the Third Gas Directive (see questions 15 and 16) and generally applicable EU competition rules.

Regulation of natural gas sales and trading

19 What is the ownership and organisational structure for the supply and trading of natural gas?

The ownership and organisational structure for the supply and trading of natural gas is largely regulated at national level, subject to the unbundling requirements of the Third Gas Directive (see questions 7 and 14).

20 To what extent are natural gas supply and trading activities subject to government oversight?

Supply and trading of gas are not regulated at EU level, other than through the Gas Regulation, which requires transmission, storage and LNG system operators to provide for the trading of capacity rights, REMIT and the constraints of generally applicable competition rules.

In contrast to the obligations under the Gas Regulation, which primarily concern network operators, REMIT applies to all players on the wholesale gas market, and prohibits insider trading and market manipulation in relation to wholesale energy products. To make the detection of potential abusive conduct easier, REMIT requires market participants to provide ACER with detailed information on trade orders, capacity, use and availability of their facilities. Persons who professionally arrange transactions must further report suspected infringements and operate compliance programmes. The prohibitions under REMIT are enforced by the national regulators, which have the power to impose fines for violations. ACER is responsible for publishing the information collected from market participants (unless it is commercially sensitive) and non-binding guidance on the application of REMIT. The REMIT Implementing Regulation further sets out the details of wholesale energy products and fundamental data that must be reported to ACER and establishes appropriate channels for data reporting.

21 How are physical and financial trades of natural gas typically completed?

Physical and financial trades have not been harmonised by EU law and may vary across member states. The European Federation of Energy Traders publishes standardised general agreements for delivery and acceptance of gas and LNG.

22 Must wholesale and retail buyers of natural gas purchase a bundled product from a single provider? If not, describe the range of services and products that customers can procure from competing providers.

The unbundling rules of the Third Gas Directive provide for the separation of the operation of gas transmission and distribution systems from production and supply activities. However, apart from these restrictions laid down in the unbundling rules, it does not prohibit a company from acting as a single provider (eg, reseller) of transmission and distribution or supply and trading services. On the other hand, there is no legal obligation under the Third Gas Directive to purchase bundled products.

Regulation of LNG

23 What is the ownership and organisational structure for LNG, including liquefaction and export facilities, and receiving and regasification facilities?

The ownership and organisational structure for companies engaged in LNG activities is largely regulated at national level, subject to constraints under the Third Gas Directive. In particular, the Third Gas Directive requires gas companies owning LNG facilities to establish at least a separate business unit responsible for their LNG activities (LNG system operator) and to keep separate accounts.

24 Describe the regulatory framework and any relevant authorisations required to build and operate LNG facilities.

Authorisations for the construction and operation of LNG facilities are granted at national level, subject to the minimum transparency, non-discrimination and judicial review requirements of the Third Gas Directive.

25 Describe any regulation of the prices and terms of service in the LNG sector.

Third-party access to LNG facilities must be available to all eligible customers on the basis of objective, non-discriminatory criteria and approved published tariffs (regulated access, similar to the requirements for third-party access to pipelines – see question 10). Exemptions from the third-party access requirements can be granted for a defined period of time in the case of major new LNG infrastructure, or significant increases of capacity in or modifications to existing LNG infrastructure. Such exemption is subject to review by the Commission.

Mergers and competition

26 Which government body may prevent or punish anticompetitive or manipulative practices in the natural gas sector?

The Commission is responsible for the application and enforcement of EU competition law, including in the national gas sector. In addition, national competition authorities of all 28 EU member states are competent to apply both EU and national competition law rules. The Commission plays a central role in the enforcement of competition law rules in the EU, since it must be consulted about and has the power to intervene in all national competition proceedings with cross-border effects. The Commission and the national competition authorities cooperate closely with each other through the European Competition Network to ensure the coherent application of EU competition rules across the EU.

27 What substantive standards does that government body apply to determine whether conduct is anticompetitive or manipulative?

The key EU competition law provisions are articles 101, 102 and 106 TFEU:

- article 101 TFEU prohibits all agreements and concerted practices between undertakings that appreciably restrict competition and trade within the EU, subject to an exemption possibility. This covers both horizontal agreements between competitors (such as price-fixing, customer or market sharing, bid rigging and collective boycotts) and vertical restrictions between companies active at different levels of trade (such as export and import restrictions, tying and other exclusionary arrangements). The Commission has

adopted a number of block exemptions and guidelines that clarify the scope of the EU competition law rules and the Commission's enforcement policy;

- article 102 TFEU prohibits the abuse of a dominant position within the EU. This may, for instance, cover refusals to grant access to essential facilities without objective justification, applying excessive or discriminatory prices or other trading conditions, tying and other exclusionary arrangements. The Commission has issued specific guidance setting out its enforcement policy in relation to exclusionary conduct within the field of article 102; and
- article 106 TFEU obliges member states and public undertakings to also be in line with EU competition rules. Companies entrusted with services of a general economic interest may be exempt from competition law to the extent necessary for the proper performance of the tasks assigned to them.

28 What authority does the government body have to preclude or remedy anticompetitive or manipulative practices?

Where the Commission finds a violation of EU competition rules, it can order companies to terminate the infringement and take measures necessary to restore competition. Contractual provisions that do not comply with article 101 TFEU are automatically void and unenforceable. The Commission can fine companies up to 10 per cent of their annual worldwide group turnover for infringements of competition law.

Competition law enforcement has historically been intense in the gas sector, resulting mostly in informal settlements, and in one case (*E.ON/GDF*) in high fines. Since its final report on the Energy Sector Inquiry in January 2007, the Commission brought the following cases against gas incumbents under article 102 TFEU for allegedly abusing their market power by:

- refusing to grant access to capacity available in the network (capacity hoarding) by granting access in a less attractive manner (capacity degradation) and by strategically limiting investment in international transmission pipelines (strategic underinvestment) in Italy (*ENI*, 2010);
- refusing access to the gas network by way of long-term bookings of a large proportion of the network entry capacities in Germany (*E.ON*, 2010);
- preventing access to the network through long-term reservations for most of France's gas import capacity, exclusionary capacity management practices and strategic limitation of investments in additional import capacity (*GDF Suez*, 2010);
- limiting network access by exclusionary capacity management practices and setting network tariffs at an artificially high level to squeeze the margins of downstream competitors (margin squeeze) (*RWE*, 2009); and
- foreclosing the Belgian gas market by way of entering into a long-term gas supply agreement covering large volumes of gas (*Distrigas*, 2007).

All these cases were settled by way of commitment decisions involving significant reductions of capacity bookings by the companies, unbundling of pipeline infrastructure, or limiting duration of and gas volumes covered by gas supply agreements. They highlight the power of the Commission to use EU competition rules to pursue broader regulatory policy goals. Interestingly, in one case (*E.ON*), the Commission recently (July 2016) released German utility *E.ON* from its 2010 commitments to reduce long-term bookings on the German gas grid almost five years ahead of schedule after it had reassessed the market situation and concluded that, owing to the material change in the structure of the German gas market (eg, evidence of significant market entries; general market preference of short-term over long-term bookings), the original commitments were no longer necessary.

In one case, the Commission imposed fines (€1.1 billion in total) against *E.ON* and *GDF Suez*. Both gas companies had agreed on a market sharing agreement in 1975 on the occasion of the construction of the MEGAL pipeline, which transports gas from Russia to Germany and France, and continued to apply this agreement even after market liberalisation. The General Court later upheld the Commission's findings of an infringement, but reduced the fines to €640 million.

Prior to 2007, the Commission investigated a number of cases against gas companies in relation to:

- joint gas sales agreements in Denmark, Ireland and Norway;
- the refusal to grant access to Dutch, French and German pipelines networks;
- export bans;
- destination clauses;
- profit-sharing mechanisms, and other LNG and natural gas resale restrictions; and
- long-term supply agreements in Spain.

At present, there are three Commission investigations open against the Bulgarian gas incumbent *BEH*, the Russian producer *Gazprom* and companies active in the supply and transport of natural gas in Romania for alleged violations of article 101 and/or article 102 TFEU. In the case against *BEH*, the Commission alleges that *BEH* may have refused access to the Bulgarian transmission network to competitors by either refusal and delay of capacity reservations or by its own excessive capacity reservations on Bulgaria's main gas import pipeline (similar allegations were raised in the *ENI*, *E.ON* and *GDF Suez* cases; see above). The proceedings against *Gazprom* are based on allegations that *Gazprom* divided gas markets by hindering the free flow of gas between member states, hindered third parties from supplying gas to markets in central and Eastern Europe, and imposed unfair prices by way of linking the price of gas to oil prices. In the case concerning the Romanian gas sector, the Commission recently conducted unannounced inspections for suspected anticompetitive practices hindering gas exports from Romania to other EU member states and allegedly violating article 101 and/or 102 TFEU (the cases against *BEH* and *Gazprom* are based on article 102 TFEU only).

29 Does any government body have authority to approve or disapprove mergers or other changes in control over businesses in the sector or acquisition of production, transportation or distribution assets?

All mergers, acquisitions of control and 'full-function' joint ventures (ie, joint ventures that 'perform on a lasting basis all the functions of an autonomous entity') must be approved by the Commission before completion if the parties meet certain turnover thresholds. Transactions that do not meet the EU turnover thresholds may be subject to notification under national merger control laws. There is also a system of referrals of all or part of the transaction between the Commission and national authorities. Formal merger review proceedings before the Commission typically range from 25 working days in easy cases up to eight months for a full in-depth investigation (although pre-notification discussions can considerably lengthen this period). The Commission has the power to block transactions or to approve them only subject to the implementation of remedies (typically, the divestiture of part of the business).

The substantive test under EU merger control rules is whether the transaction creates a 'significant impediment to effective competition' within the EU. This standard is largely similar to that applied at national level in the EU, and focuses on unilateral effects (ie, will the merged entity have the ability and incentive unilaterally to increase prices) and coordinated effects (ie, will the merged entity have the ability and incentive to increase prices through tacit coordination with its principal competitors).

30 In the purchase of a regulated gas utility, are there any restrictions on the inclusion of the purchase cost in the price of services?

There is no express restriction on the inclusion of the purchase cost of a utility in the price of services, and the Gas Regulation expressly recognises that access charges may include 'an appropriate return on investment'. The extent to which a proportion of the purchase cost could be recovered in this way is unclear, although excessive pricing could constitute an abuse of dominance violating article 102 TFEU (see question 27).

31 Are there any restrictions on the acquisition of shares in gas utilities? Do any corporate governance regulations or rules regarding the transfer of assets apply to gas utilities?

The main restrictions are those imposed by the ownership unbundling and certification requirements under the Third Gas Directive (see question 7). In addition, EU merger control provides member states

Update and trends

On 1 February 2017, the Commission published its *Second Report on the State of the Energy Union*, which highlights recent key achievements and remaining challenges in meeting its key policy objectives for the European gas market:

- Although the EU still imports more than half of its energy needs (mainly from Russia), the EU is making progress in diversifying sources, routes and suppliers of energy. However, some member states are still fully or predominantly dependent on gas supply from a single third country (Bulgaria, Estonia, Finland, Hungary, Lithuania and Slovakia).
- New interconnections and LNG terminals have improved the security of gas supply over the past few years. This development has not only been beneficial for the internal gas market, but also increased the possibility for member states to substitute main or traditional routes in case of disruptions. Today there are only two member states (Bulgaria and Portugal) that could not fully substitute for the disruption of their most important gas source. Nevertheless, gas interconnections between member states require further improvements (eg, Croatia, Hungary, Romania, Bulgaria and Greece; Portugal and Spain with France) to ensure that consumers and suppliers have access to liquid hubs and can benefit from LNG and interconnection capacities that have been developed or have the potential to develop.
- Wholesale gas markets in the EU have increasingly opened up to competition over recent years. However, large differences between member states remain and many of them have not yet fully implemented the necessary rules that allow for competitive and liquid markets. In particular, in member states where undertakings still have significant market power, competition enforcement remains key to ensure open and competitive markets.
- Wholesale gas prices decreased in all member states between 2013 and 2015 owing to weaker demand, oversupply in the main regional markets, low oil prices and increasing supply of LNG. Unlike wholesale prices, however, retail prices for gas generally increased in the past five years. As retail markets are still national (or even smaller), advanced regional market integration and competition enforcement are required to ensure open and competitive retail gas markets.

Ensuring security of gas supply and a fully integrated European gas market therefore are, and will remain, the key objectives of the Commission's Energy Union strategy for the gas market in the years to come.

The Commission's Energy Security Package (February 2016) proposes a wide range of measures to strengthen the EU's resilience to gas supply disruptions and promote the diversification of gas supplies.

The proposal for a new Security of Supply Regulation (currently in the legislative process in the European Parliament) introduces new measures to prevent and mitigate possible security of gas supply crises in the future. It introduces a solidarity principle according to which, as a last resort, neighbouring member states will help ensure gas supplies to households and essential social services in case of a severe crisis. It improves the coordination between member states at regional level to better assess common risks, possible simultaneous risks and available resources, reinforces the cooperation with Energy Community countries to address security risks at EU borders and increases transparency by requiring gas companies to notify certain security of supply relevant contracts to the Commission and member states. The Commission's proposal for a new Decision on Intergovernmental Agreements allows the Commission to review IGAs between member states and non-EU countries before they are actually negotiated and signed to ensure that they do not negatively affect security of gas supplies in another member state or hamper the functioning of the internal market, and involve the EU in such negotiations. The European Parliament and the European Council recently agreed with the Commission on the principal scope of a revised mechanism, and it is expected that the final text of the revised Decision on IGAs will be approved in due course (see also question 33). Finally, the Commission's Energy Security Package outlines the EU plans to improve the access of all member states – either directly or via other member states – to LNG and storage by building the necessary infrastructure, using storage facilities more efficiently and cooperating with international partners to ensure LNG is traded freely on global markets. To further diversify supply sources, the Commission is also closely cooperating with member states to develop access to alternative gas suppliers (including from the Southern Gas Corridor route, the Mediterranean and Algeria).

Additional steps are being taken to further improve cross-border flow and trade of gas to fully integrate the European gas market. To this extent, the Commission uses all available policy instruments to ensure that member states fully respect the Third Energy Package and strictly enforce the EU competition rules. This is reflected in its enforcement practice in recent years. In the *SOCAR/DESFA* case concerning the Greek gas transmission system, for instance, the Commission insisted on far-reaching commitments of the Azeri gas supplier SOCAR for obtaining TSO certification in Greece to ensure the effective application of the Third Energy Package and hence security of gas supply. In addition, Gazprom withdrew its South Stream pipeline project plans after the Commission had expressed its concerns that the pipeline plans were in violation of the Third Energy Package and the unbundling rules in particular.

continued

with the possibility to prevent takeovers of domestic companies in exceptional circumstances. Other than this, there are no restrictions on the acquisition of shares in gas utilities under EU law. Any member state seeking to introduce such a restriction would have to comply with EU rules relating to the free movement of capital. See question 32 for more details regarding acquisitions by foreign companies.

International

32 Are there any special requirements or limitations on foreign companies acquiring interests in any part of the natural gas sector?

EU law guarantees the free movement of capital and the freedom of establishment within the EU. Restrictions on the ability of EU companies to acquire interests in the EU gas sector are generally not permitted. In a number of cases, for example, the Court of Justice of the EU has held that golden share arrangements, through which member states seek to protect domestic companies from takeover, are in breach of EU free movement rules. Unlawful golden share arrangements can take many forms, including a cap on the shareholdings that can be kept by nationals of other member states, restrictions on the sale or use of strategic assets or special voting, or veto rights attached to the state's (minority) shareholding.

Article 21(4) of the EU Merger Regulation further circumscribes the ability of member states to prevent takeovers of domestic companies. In 2006, the Commission acted against Spain for imposing a number of regulatory conditions on E.ON's failed bid for Endesa that, in the

Commission's view, were designed to discourage a takeover of Endesa and were incompatible with EU merger control law. One year later, the Commission took the same position on regulatory conditions in Spain in the context of the acquisition of Endesa by Enel and Acciona.

Acquisitions of interests by foreign companies in the gas sector are subject to the ownership unbundling and certification requirements under the Third Gas Directive. The Third Gas Directive expressly provides that a supply company from the EU may not control or exercise any right over ownership unbundled TSOs in other EU member states. The Third Gas Directive further allows member states to adopt measures to ensure a level playing field, provided that these are transparent, non-discriminatory, proportionate and comply with general EU law (subject to notification to and approval by the Commission) (level playing field clause). In addition, for non-EU companies acquiring control over a TSO in the EU, the third-country clause of the Third Gas Directive provides that certification shall not only be refused by the national regulator in cases of non-compliance with unbundling rules, but also if a certification would put at risk the security of supply of the EU or the member state concerned.

33 To what extent is regulatory policy affected by treaties or other multinational agreements?

The EU is party to trade agreements with non-EU countries that also include gas. These agreements usually contain a prohibition against customs duties or restrictions having an equivalent effect, and member states are bound by such agreements. In addition, the EU is party to the Energy Charter Treaty, a multilateral treaty exclusively applicable to

Update and trends *continued*

All this shows that the Commission considers compliance with the Third Energy Package a condition sine qua non for any future investments in the European gas market. In its *First Report on the State of the Energy Union* (November 2015), for instance, the Commission emphasised that the plans for expansion of the existing connections between Russia and Germany through the Baltic Sea (North Stream 2) would have to meet these (strict) requirements in the future (although it could be contested whether the Third Energy Package is applicable at all to North Stream 2, being an (offshore) import pipeline only).

Interestingly in this context, the Commission recently decided to amend its original exemption from the Third Energy Package rules for the OPAL pipeline, which connects North Stream 1 in Northern Germany with gas infrastructure in the Czech Republic. While OPAL has been fully exempted from EU energy market rules since 2009 (except for dominant undertakings including Gazprom), the Commission has now decided to exempt the use of only 50 per cent of OPAL's capacity from third-party access rules and to make the other 50 per cent subject to stringent EU market rules. The decision, which was largely endorsed by the German energy regulator, raised significant criticism for allegedly expanding North Stream's capacity and allowing Russian gas to bypass transit countries Ukraine and Poland and thereby threatening gas supplies to central and eastern Europe. The state-owned Polish gas company PGNiG contested the decision before the General Court and achieved its suspension by way of interim relief (parallel court proceedings were launched in Germany leading to the (interim) suspension of the related decision by the German energy regulator).

Furthermore, the Commission is closely monitoring the effective and correct implementation of the Third Energy Package rules at national level. Currently, there are six infringement proceedings pending against six member states (Austria, Belgium, Croatia, Germany, Hungary and Spain) to ensure correct implementation of the Gas Directive. Parallel enforcement of the competition law rules in the gas sector remains an integral part of the Commission's Energy Union strategy. Only recently, the Commission inspected Romanian gas companies for suspected anticompetitive practices hindering gas exports from Romania to other EU member states. Parallel investigations against BEH and Gazprom focus on dissolving bottlenecks in central and eastern European gas markets allegedly caused by abusive capacity reservations (BEH), as well as territorial restrictions, exclusionary behaviour and gas pricing practices (Gazprom). The recent in-depth merger review of the SOCAR/DESFA transaction (the review was closed on 2 February 2017 after withdrawal of the filing) also shows that the Commission keeps an eye on gas infrastructure in particular to ensure open and non-discriminatory access to gas infrastructure and the diversification and security of gas supply in the future. Interestingly in this context, the Polish Office of Competition and Consumer Protection (UOKiK) recently raised

serious competition concerns under Polish merger control rules in relation to a Gazprom-led consortium for the North Stream 2 pipeline project that had filed for merger control approval in December 2015. In particular, the UOKiK was concerned that the consortium would strengthen Gazprom's dominant position and increase its negotiating position in relation to end users in Poland. The consortium partners subsequently withdrew the Polish merger filing in August 2016.

Having the right infrastructure remains a precondition for security of supply and fully integrating the internal gas market. The Energy Union strategy seeks to support the implementation of major infrastructure projects, particularly the Projects of Common Interest, through all available financial means (including the Connecting Europe Facility, the European Structural and Investment Funds and the new European Fund for Strategic Investment), to leverage the necessary private and public funding. Significant infrastructure improvements have already been achieved in 2016:

- work on new interconnectors was launched, such as for the Trans-Adriatic Pipeline, part of the Southern Gas Corridor;
- finance agreements were signed, such as a grant agreement for an investment of €187 million from the Connecting Europe Facility to a gas interconnector between Finland and Estonia (Balticconnector) and a €179 million grant agreement for the BRUA gas pipeline through Bulgaria, Romania, Hungary and Austria; and
- new LNG terminals in Świnoujście (Poland), Dunkerque (France) and Pori (Finland) entered into operation in 2016.

However, continuous investments are required to improve interconnections between member states (eg, Croatia, Hungary, Romania and Bulgaria and Greece; Portugal and Spain with France) and to further improve member states' access to LNG. As far as national state funding is concerned, the Commission's new state aid guidelines for environmental and energy aid ensure the compatibility of state support for energy infrastructure with state aid rules.

Finally, the Energy Union strategy also seeks to significantly reinforce the powers and independence of ACER to effectively oversee the development of the internal energy market and the related rules, enhance regional cooperation between member states to avoid single member states acting in isolation and provide for greater transparency on energy costs and prices, as well as on the level of public support, by producing new biennial reports on energy prices and analysing in depth the roles of taxes and subsidies. As part of its Winter Package (30 November 2016), the Commission presented its proposal for a recast ACER Regulation adapting the existing rules to take into account the changed and enhanced role that ACER will play in the future and the tasks that have been conferred to it since its establishment, and its second report on energy (including gas) prices and costs in Europe.

the energy sector. It includes provisions regarding investment protection, trade, transit of energy, energy efficiency, environmental protection and dispute resolution.

International discussions and bilateral agreements between the EU and third countries may be influenced by EU energy policies, such as those regarding the importance of security of supply. This particularly concerns relations with current and future gas-producing countries (eg, Algeria, Azerbaijan, Norway and Russia), gas transit countries (Turkey and Ukraine) and neighbouring countries in the context of the Energy Community.

In order to coordinate and optimise energy-related trading relations between member states and third countries and to ensure compatibility with EU law, the European Parliament and the Council established an information exchange mechanism with regard to inter-governmental agreements (IGAs) between member states and third countries in the field of energy in 2012 (Decision on IGAs). In February 2016, the Commission proposed a revised Decision on IGAs that seeks to improve the existing exchange mechanism to ensure that IGAs are checked for compliance with EU law before they are negotiated and concluded (the current rules only require notification after conclusion of the IGAs). In December 2016, negotiators of the European Parliament and the European Council agreed with the Commission on the scope of a revised mechanism, and formal approval of the final text of the revised Decision on IGAs is expected shortly.

34 What rules apply to cross-border sales or deliveries of natural gas?

The Third Gas Directive allows member state A to prevent gas imports from member state B in circumstances where the relevant customers in member state A cannot be freely supplied in member state B (reciprocity rule). This is an exception to articles 34 and 35 TFEU, which prohibit quantitative restrictions on cross-border trade between member states. As a general rule, national measures restricting imports and exports are prohibited unless they can be justified on the basis of article 36 TFEU or imperative requirements.

With the exception of the reciprocity rule, the Third Gas Directive does not set out a particular legal framework for the cross-border supply of gas. That said, the Gas Regulation and the Network Codes on Gas Balancing, CAM and Interoperability, which supplement it, address many aspects of cross-border supplies of gas. The Network Code on CAM, for instance, provides for minimum requirements for auctions for the allocation of capacity at relevant interconnection points and cross-border (bundled) products to be offered. Additional non-binding guidance is contained in the framework guidelines adopted by ACER addressing a variety of issues (see question 10).

Transactions between affiliates

35 What restrictions exist on transactions between a natural gas utility and its affiliates?

The Third Gas Directive provides for unbundling, non-discrimination and transparency requirements to ensure that transactions between gas utilities and their affiliates are on arm's-length terms. Depending on the unbundling model chosen for TSOs, stricter rules may apply. For instance, under the ITO model, TSOs may not contract services from other parts of the vertically integrated undertaking other than in exceptional circumstances. In addition, discrimination in favour of affiliates may also infringe EU competition rules.

36 Who enforces the affiliate restrictions and what are the sanctions for non-compliance?

The enforcement of affiliate restrictions is primarily up to member states, and, in particular, the national energy regulators. However, the Commission, national competition authorities and courts can all act against discrimination in favour of affiliates where this behaviour violates competition rules.



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Description of domestic sector

- 1 Describe the domestic natural gas sector, including the natural gas production, liquefied natural gas (LNG) storage, pipeline transportation, distribution, commodity sales and trading segments and retail sales and usage.

The Faroe Islands are an autonomous province of the Kingdom of Denmark. They are an archipelago of 18 mountainous islands, with a total land area of some 1,400 square km and a sea area of 274,000 square km. The legislative and administrative competence concerning mineral resources in the Faroese subsoil has been transferred from Denmark to the Faroese home-rule authorities. To date, there is no natural gas production in the Faroe Islands.

In 2000, the first Faroese licensing round was launched within a contiguous area covering approximately 14,000 square km located to the east and southeast of the Islands. The level of interest was high, and the first round resulted in the award of seven licences and included the drilling of a total of eight exploration wells.

In 2004, the second Faroese licensing round was launched. The 19,000 square km area offered for licensing was primarily basalt-covered areas to the east and the south of the Islands. In January 2005, the government granted seven licences to eight companies organised in five joint ventures or as individual companies. A firm work programme was agreed for the first phase, with seismic and other surveys as well as processing and interpretation with the purpose of maturing the licensed areas for future exploration drillings. Two of the licences contained stipulations on exploration wells and appraisal wells in the late phases of the licences.

In July 2008, the government launched the third Faroese licensing round. The total area offered for licensing under this round covered some 38,000 square km. The areas offered for licensing included areas that had been offered for licensing before, areas that had been relinquished and new acreage. The blocks offered for licensing were technically challenging, because knowledge of the strata under the basalt is limited. In December 2008, the Minister of Trade and Industry awarded three licences to five companies, all of which already participated in licences on Faroese territory.

As of February 2017, no licences are at present in force as the remaining two licences were relinquished in 2016.

The fourth licensing round will be held in 2017, and the Faroese Minister of Trade and Industry will officially open the fourth licensing round in May 2017 at the fifth Faroe Islands Exploration Conference. It has been announced that the open-door application procedure will be closed until the fourth licensing round has been held.

The Faroese continental shelf remains a relatively unexplored part of the north-west Atlantic Margin. Only relatively few exploration wells have been drilled, and the wells are not widely distributed and have only penetrated a limited part of the stratigraphy. The Faroe Islands have no consumption of natural gas and no natural gas infrastructure, including storage, transport or distribution facilities.

- 2 What percentage of the country's energy needs is met directly or indirectly with natural gas and LNG? What percentage of the country's natural gas needs is met through domestic production and imported production?

There is no consumption of natural gas or LNG in the Faroe Islands.

Government policy

- 3 What is the government's policy for the domestic natural gas sector and which bodies set it?

Government policy is to provide for prudent and appropriate exploration and exploitation of hydrocarbon resources for the benefit of the Faroese economy and employment opportunities, and to plan the activities with due consideration given to fishing, navigation, the environment, nature and other interests of the Faroese society.

Government policy for the natural gas sector is exercised by the Minister of Trade and Industry through the Faroese Earth and Energy Directorate.

As yet there is no production of natural gas in the Faroe Islands. As such, there is no specific regulation regarding different production methods. Further, unconventional production methods are not relevant in the Faroe Islands.

Regulation of natural gas production

- 4 What is the ownership and organisational structure for production of natural gas (other than LNG)? How does the government derive value from natural gas production?

At present, there is no natural gas production in the Faroe Islands. No state-owned companies participate with a carried interest.

When natural gas production commences, the government will benefit from the production via corporation tax and hydrocarbon tax via area rental and royalties. Further, the Faroese society will benefit through obligations in the licences on the licensees' use of Faroese workers, the supply of goods and services by Faroese undertakings, and the obligation to use Faroese ports and airports for transportation to and from the Faroese region.

The fiscal regime is divided into a corporate tax on production income, and a special tax on particularly high production income.

The corporate tax rate is 27 per cent for oil companies, whereas the corporate tax rate for other companies is 18 per cent. In addition, if oil companies generate a particularly high income, they are subject to a special tax, which consists of three levels. If the rate of return on investment and development cost is below 20 per cent, no special tax is payable. If the rate of return is between 20 and 25 per cent, the special tax rate is levied at 10 per cent, etc. If the rate of return exceeds 30 per cent, the special tax rate is levied at 40 per cent, which is the highest rate payable.

The area and environmental impact fee for each licence year is calculated on the basis of the size of the area comprised by the licence, normally at a fixed price per square km. In the model licence for the third licensing round, the impact fee was fixed at a progressive annual rate from 750 Danish kroner per square km (years one to six) to 39,250 kroner per square km (year 16 onwards).

Royalty is a tax amounting to a certain proportion of the value of the hydrocarbons produced. In the third licensing round, the royalty was a fixed production royalty of 2 per cent. The royalty is calculated on the basis of the value of hydrocarbons produced.

Under the term 'Faroese participation', licensees are obligated, inter alia, to provide Faroese companies with genuine opportunities to provide goods and services, and to promote the conclusion of contracts to develop competence and technological know-how within Faroese companies.

In the third licensing round, the licensees were to conduct and pay the expenses involved in the development of Faroese industrial competence. The funding obligations are specified in an agreement with the government. Further, under the model licence for the third licensing round, licensees are obligated to set aside and distribute a negotiated amount at the beginning of each licence year toward meaningful projects related to future hydrocarbon exploration in the territory of the Faroe Islands.

The government established the Sindri Group as part of the stipulated work programmes for licensees within the Faroese area. The objective of the Sindri Group is to carry out joint projects of relevance to the future investigation of the Faroese continental shelf. Currently there are no activities in the Sindri Group.

With regard to the use of Faroese workers, a provision may be included in the licence or in the general regulations requiring the licensee to recruit Faroese workers to the extent possible. Such a provision is included in the model licence for the third licensing round. Further, the licensee may be required to report to the public authorities on the number of employees, including the number of Faroese employees, and on the measures taken by the licensee to train and increase the qualifications of his or her workers.

To ensure that Faroese companies can participate in hydrocarbon exploration activities, the Hydrocarbon Activities Act stipulates that all transport to and from the Faroese region shall take place via Faroese ports or the Faroese international airport.

Under the Faroese licences, no state company has so far been carried in the exploration phase.

5 Describe the statutory and regulatory framework and any relevant authorisations applicable to natural gas exploration and production.

The statutory legal framework for the Faroese natural gas sector is the Hydrocarbon Activities Act (1998) (upstream).

As a part of the Danish Common Community – consisting of Denmark, Greenland and the Faroe Islands – the Faroe Islands are an integral part of the Danish Constitution and the Danish legal system. However, in 1948 the Danish parliament passed the Faroese Home Rule Act and the Faroe Islands were given a special, self-governed status within the Danish Common Community. The Home Rule Act constitutes the legal framework for the mandate and the conduct of the Faroese home-rule authorities, including the Faroese parliament and the Faroese government, and lays down detailed rules for the gradual assumption by the Faroese of responsibility for a number of policy areas.

In December 1992, an agreement was made between the Danish government and the Faroese government for the Faroese home-rule authorities to take over the rights to natural resources in the subsoil and bedrock in and around the Faroe Islands. From then on it has been the Faroe Islands that, independent of Denmark, have had the legislative and administrative authority over the exploration and production of hydrocarbons. In 1993, a Hydrocarbon Planning Commission was appointed by the Faroese government. The work of the Commission resulted in the passing of the Act of 21 October 1993 on Preliminary Surveys. Another four years passed before the draft bill on the Hydrocarbon Activities Act was submitted to the Faroese parliament. On 16 March 1998, the Faroese parliament passed the Hydrocarbon Activities Act.

The Hydrocarbon Activities Act provides the framework, whereas adaptations and more detailed regulation are issued by the Minister of Trade and Industry. Pursuant to the Hydrocarbon Activities Act, the government has established:

- the Executive Order of 8 March 2001 on reimbursement of expenses in connection with hydrocarbon activities;
- the Executive Order of 8 March 2001 on health, safety and the environment during the exploration phase of hydrocarbon activities; and
- the Executive Order of 20 November 2003 on geological and geophysical matters in connection with approval of deep drilling.

Pursuant to the Hydrocarbon Activities Act, prior to inviting applications, the areas to be offered for licensing and the general terms and conditions of the offered licences must be fixed in a parliamentary act. The explanatory notes to the parliamentary act must include an

assessment of the possible impact of the hydrocarbon activities in respect of, inter alia, the fishing industry, the environment and the economy. The parliamentary acts on the first, second and third rounds were passed by the Faroese parliament on 8 February 2000, 17 May 2004 and 28 May 2008, respectively.

In 2010, an amendment to the Hydrocarbon Activities Act was passed by the parliament establishing the possibility to apply for a licence for exploration and production of hydrocarbons through an open-door procedure. In accordance with the open-door procedure, companies may apply for a licence within the areas composed of the first, second and third licensing rounds without prior invitation for applications. The Faroese authorities make such applications public, and other companies are invited to apply for the licence within 90 days. In May 2015, it was announced that the open-door procedure will be stopped until the fourth licensing round has been held in 2017. Taxation of petroleum activities is governed by the Act of 21 April 1999 on the Taxation of Revenue relating to Hydrocarbon Activities with later amendments (Act of 7 March 2000) and Parliamentary Act of 14 February 2000 on assessment, collection, audit, etc, in connection with taxation of income derived from hydrocarbon activities. The area of taxation has been taken over by the Faroese authorities.

The government grants licences with the exclusive right for exploration and production of hydrocarbons within a defined area and subject to specific terms and conditions. Separate licences may not be granted for exploration and production, respectively. Prior to the granting of such licences, the government invites applications in a publicly announced licensing round.

The granted licence comprises the right to produce hydrocarbons in the defined area if discoveries are made in the exploration period. A licence may be issued with a view to exploration for a term of up to 12 years, which term may be prolonged for up to two years at a time. The total term of exploration may not exceed 16 years. Thereafter, the licensee may be entitled to an extension of the licence with a view to production for a period to be fixed in the licence, which may not exceed 30 years.

It is not possible to lease mineral rights from the state. Leasing or farming of mineral rights from a concessionaire is subject to a case-by-case approval by the Minister.

There is no regulation governing when, where or how much natural gas may be produced.

The Hydrocarbon Activities Act stipulates that the licensee must obtain a specific environmental permit or approval before undertaking any particular operation. Moreover, it can be required that the licensee, prior to the granting of the licence, has to submit an environmental impact assessment of the contemplated activities. Rules as to the approval are specified in executive orders established pursuant to the Marine Environmental Act (2005). The Marine Environmental Act is administered by the Minister of the Interior through the Faroese Environmental Agency. The affected public authorities and organisations must be given an opportunity to express their opinion on the environmental impact assessment prior to the approval of activities.

Further, the Hydrocarbon Activities Act stipulates that production activities and drilling activities may only take place following a prior approval by the government (the Faroese Earth and Energy Directorate) of the equipment, programme and mode of operation. Executive Order of 8 March 2001 on Health, Safety and the Environment contains further regulation of drilling activities during the exploration phase of hydrocarbon activities. The Faroese Earth and Energy Directorate monitors production and drilling activities.

As yet there is no production of natural gas in the Faroe Islands. As such, there is no specific regulation regarding different production methods. Further, unconventional production methods are not relevant in the Faroe Islands.

6 Are participants required to provide security or any guarantees to be issued with a licence to explore for or to store gas?

Under the model licence for the third licensing round, the licensee has to provide evidence of sufficient security within 30 days from the issuance. The security has to be acceptable to the Minister of Trade and Industry and include a comfort letter guarantee from the parent company, unless the Minister exempts the licensee of this requirement.

The Minister may subsequently require, upon a 30-day notice, that the security is amended or supplemented.

The terms and conditions for licences awarded under the open-door regime are the same as for the third round licences.

Regulation of natural gas pipeline transportation and storage

7 Describe in general the ownership of natural gas pipeline transportation, and storage infrastructure.

At present, there are no natural gas pipeline or transportation facilities in the Faroe Islands.

8 Describe the statutory and regulatory framework and any relevant authorisations applicable to the construction, ownership, operation and interconnection of natural gas transportation pipelines, and storage.

Pursuant to the Hydrocarbon Activities Act, any establishment or operation of pipeline facilities in the land territory or the territorial sea may only take place pursuant to a licence granted in accordance with the Act. The government must make sure that the pipelines do not cause inconvenience, especially to oil, gas and fishing operations in the shelf area.

Since there is no natural gas supply sector, nor any current plans to establish any natural gas supply infrastructure in the Faroe Islands, the Faroese home-rule authorities have not provided any regulation on natural gas supply (downstream) comparable to, for instance, the Danish Natural Gas Supply Act. Regulation on natural gas supply will presumably be provided before any steps are taken towards commencing any natural gas supply or establishing any natural gas infrastructure.

The government may, based on the nature of the facility, decide that the establishment or operation of natural gas storage facilities is subject to permission in pursuance of the Environmental Protection Act (1988). Further, offshore installations are subject to rules and permit requirements in executive orders established pursuant to the Marine Environmental Act. See question 5.

9 How does a company obtain the land rights to construct a natural gas transportation or storage facility?

In the absence of an agreement with the landowner, and provided that regard for public interest dictates it and to the extent necessary, the government or the relevant municipality may subject to a statutory authority order a compulsory sale of the necessary rights over land. Any compulsory sale of real estate with a view to activities comprised by the Hydrocarbon Activities Act can be made in accordance with the Expropriations Act (1881).

10 How is access to the natural gas transportation system and storage facilities arranged? How are tolls and tariffs established?

There are no natural gas transportation systems or storage facilities in the Faroe Islands. There is also no regulation regarding the establishment of tolls and tariffs on access to natural gas transportation systems and storage facilities.

The Faroese Competition Council may, in pursuance of the Faroese Competition Act (2007), take action against abuse of a dominant position, including on parties imposing unfair purchase or selling prices or other unfair trading conditions. See question 26.

11 Can customers, other natural gas suppliers or an authority require a pipeline or storage facilities owner or operator to expand its facilities to accommodate new customers? If so, who bears the costs of interconnection or expansion?

There is no current regulation regarding this matter (see question 8).

12 Describe any statutory and regulatory requirements applicable to the processing of natural gas to extract liquids and to prepare it for pipeline transportation.

There is no current regulation regarding this matter.

13 Describe the contractual regime for transportation and storage.

There is no transportation or storage of natural gas in the Faroe Islands.

Update and trends

In October 2016, the Faroese Minister of Trade and Industry announced that the fourth licensing round for hydrocarbon exploration will be held in 2017. It was later announced that the fourth licensing round will officially open on 17 May 2017 at the Faroe Islands Exploration Conference (FIEC) in Torshavn, Faroe Islands.

The Faroese authorities are in the process of re-interpreting data to get a more extensive understanding of the geological progress of the Faroese area. The result of this work will be presented at the FIEC Conference, at the same time as the fourth licensing round opens.

The open-door application procedure is closed until after the round has been held in 2017.

As of 1 February 2017, no further information has been provided regarding the fourth licensing round.

Regulation of natural gas distribution

14 Describe in general the ownership of natural gas distribution networks.

At present, there is no distribution of natural gas in the Faroe Islands.

15 Describe the statutory and regulatory structure and authorisations required to operate a distribution network. To what extent are gas distribution utilities subject to public service obligations?

The government has not yet provided any regulation on natural gas supply (see question 8).

16 How is access to the natural gas distribution grid organised? Describe any regulation of the prices for distribution services. In which circumstances can a rate or term of service be changed?

There is no distribution of natural gas in the Faroe Islands.

The government has not yet provided any regulation on natural gas supply, including any regulation of natural gas prices or terms of service. See question 8.

The Faroese Competition Council may, in pursuance of the Faroese Competition Act (2007), take action against abuse of a dominant position, including on parties imposing unfair purchase or selling prices or other unfair trading conditions. See question 26.

17 May the regulator require a distributor to expand its system to accommodate new customers? May the regulator require the distributor to limit service to existing customers so that new customers can be served?

There is no current regulation regarding this matter.

18 Describe the contractual regime in relation to natural gas distribution.

There is no distribution of natural gas in the Faroe Islands.

Regulation of natural gas sales and trading

19 What is the ownership and organisational structure for the supply and trading of natural gas?

There is no supply or trading of natural gas in the Faroe Islands.

20 To what extent are natural gas supply and trading activities subject to government oversight?

The government has not yet provided any regulation on natural gas supply, and no governmental sector-specific supervisory authority has yet been established (see question 8).

The Faroese Competition Council may take action in pursuance of the Faroese Competition Act (2007). See question 26.

21 How are physical and financial trades of natural gas typically completed?

There is no supply or trading of natural gas in the Faroe Islands.

22 Must wholesale and retail buyers of natural gas purchase a bundled product from a single provider? If not, describe the range of services and products that customers can procure from competing providers.

There is no current regulation regarding this matter.

Regulation of LNG

23 What is the ownership and organisational structure for LNG, including liquefaction and export facilities, and receiving and regasification facilities?

There are no LNG facilities in the Faroe Islands.

24 Describe the regulatory framework and any relevant authorisations required to build and operate LNG facilities.

Liquid natural gas storage facilities may only be established or commenced subject to permission in pursuance of the Environmental Protection Act (1988). Further, LNG facilities may be subject to permissions according to other legislation, including the planning regulation.

25 Describe any regulation of the prices and terms of service in the LNG sector.

The government has not yet provided any regulation on natural gas supply, including any regulation of LNG prices or terms of service.

The Faroese Competition Council may, in pursuance of the Faroese Competition Act (2007), take action against abuse of a dominant position, including on parties imposing unfair purchase or selling prices or other unfair trading conditions (see question 26).

Mergers and competition

26 Which government body may prevent or punish anticompetitive or manipulative practices in the natural gas sector?

The Faroese Competition Council enforces the competition regulation in the Faroe Islands. The Competition Authority serves as secretariat to the Council, and handles the day-to-day administration of the Act on behalf of the Competition Council. There is no sector-specific supervisory authority for the natural gas sector.

The Competition Council’s main task is to react if companies holding a dominant position in their respective relevant markets take unfair advantage of their market position. The underlying principle is that consumers should enjoy fair, uniform and transparent prices and conditions of supply.

Decisions made by the Faroese Competition Council may be appealed to the Competition Appeals Tribunal. Decisions by the Competition Council cannot be brought before the courts until the Competition Appeals Tribunal has made its decision.

27 What substantive standards does that government body apply to determine whether conduct is anticompetitive or manipulative?

Since there is no supply of natural gas in the Faroe Islands, the authorities have not yet set any standards to determine anticompetitive or manipulative behaviour in the natural gas sector. As a general rule, undertakings must provide their services on objective, transparent and non-discriminatory terms.

28 What authority does the government body have to preclude or remedy anticompetitive or manipulative practices?

The Competition Council may issue orders to bring any misuse of a dominant position to an end, inter alia, by an order to sell to specified buyers on the conditions usually applied by the undertaking to corresponding sales, or an order to grant access to an infrastructure facility that is necessary for the marketing of a product or service. Non-compliance with any such orders may result in daily or weekly fines being imposed on such a party.

29 Does any government body have authority to approve or disapprove mergers or other changes in control over businesses in the sector or acquisition of production, transportation or distribution assets?

Licences granted pursuant to the Hydrocarbon Act cannot be directly or indirectly transferred to others without the prior approval of the government.

Accordingly, in the case of an assignment taking place through the transfer of shareholdings of a size that will give the transferee a controlling interest, or through the conclusion of agreements having the same effect, said approval will be needed. This also applies in respect of assignments made between co-licensees.

Mergers and acquisitions in the natural gas sector are otherwise subject to Faroese merger regulation governed by the Faroese Competition Council by virtue of the Competition Act.

30 In the purchase of a regulated gas utility, are there any restrictions on the inclusion of the purchase cost in the price of services?

There is no regulation on this matter.

31 Are there any restrictions on the acquisition of shares in gas utilities? Do any corporate governance regulations or rules regarding the transfer of assets apply to gas utilities?

There is no regulation on this matter.

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International

32 Are there any special requirements or limitations on foreign companies acquiring interests in any part of the natural gas sector?

Licencees that do not have a subsidiary company or a branch registered in the Faroe Islands must establish such subsidiary company or branch no later than three months after the licence has been granted.

33 To what extent is regulatory policy affected by treaties or other multinational agreements?

The Faroe Islands are not a member of the EU and are not subject to EU legislation. The Faroe Islands are a member – in some cases through the Kingdom of Denmark – of a number of international organisations.

The international shelf boundary between the Faroe Islands and the United Kingdom was finally defined in an agreement signed in May 1999.

In 2010, the governments of Denmark and the Faroe Islands, in accordance with the United Nations Convention on the Law of the Sea, submitted information on the establishment of the outer limits of the continental shelf beyond 200 nautical miles regarding the southern

continental shelf of the Faroe Islands to the Commission on the limits of the continental shelf. The final establishment of the outer limits will be agreed with the adjacent coastal states.

34 What rules apply to cross-border sales or deliveries of natural gas?

No specific rules apply to cross-border natural gas supply.

Transactions between affiliates

35 What restrictions exist on transactions between a natural gas utility and its affiliates?

Contracts entered into by transmission, distribution and storage companies with other companies, including companies within the same group, must be at arm's length.

36 Who enforces the affiliate restrictions and what are the sanctions for non-compliance?

For enforcement of ownership transfer restrictions, including competition rules, see question 26.

France

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Description of domestic sector

1 Describe the domestic natural gas sector, including the natural gas production, liquefied natural gas (LNG) storage, pipeline transportation, distribution, commodity sales and trading segments and retail sales and usage.

Since the closure of the Lacq field in 2013, there is almost no national production of natural gas, and 98 per cent of France's consumption comes from importations from Norway, Russia, Netherlands, Algeria, Nigeria and Qatar (70 per cent through pipelines and 30 per cent as LNG). After a few years of silence from the Administration, some applicants have been granted exploration licences on the metropolitan territory, but this does not affect the national production of natural gas.

According to official figures for 2015, natural gas accounts for approximately 26 per cent of the final national energy consumption and around 14 per cent of the national primary consumption (after nuclear (44 per cent) and petrol (30 per cent)). Consumption-wise, France is the fourth-largest natural gas market in the EU, representing 10 per cent of its total demand.

With nearly 198,000km and around 11 million connected consumers, GRDF, held by Engie (formerly GDF-Suez), manages 96 per cent of the national distribution grid. The rest of the market is shared by 22 other distribution grid operators.

France has the longest gas transmission grid in Europe, with GRTgaz managing more than 32,000km of pipelines and TIGF more than 5,000km.

Four LNG terminals (import terminals for regasification) are currently functional (Montoir-de-Bretagne, Fos-Tonkin, Fos-Cavaou and Dunkerque). Two projects were abandoned at the end of 2014 because of the significant drop in gas demand: the Antifer project (Le Havre), and the Fos Faster project (Fos-sur-Mer), led by Vopak (90 per cent) and Shell (10 per cent).

France has the second-largest natural gas storage capacity in the EU, with 16 Gm³ (ie, 135TWh, representing three months' worth of consumption). The two main storage operators are Storengy (Engie, formerly GDF-Suez) and TIGF (SNAM, GIC, EDF).

2 What percentage of the country's energy needs is met directly or indirectly with natural gas and LNG? What percentage of the country's natural gas needs is met through domestic production and imported production?

Of France's final consumption, 26 per cent is provided by natural gas, 41 per cent by oil and 26 per cent by electricity. Regarding electricity, 4 per cent is produced by gas. There has been almost no domestic production of natural gas in France since 2013, and only the coalfield in Nord-Pas-de-Calais furnishes a small amount of gas; 98 per cent of the gas consumed come from imports (see question 1).

Government policy

3 What is the government's policy for the domestic natural gas sector and which bodies set it?

The strategy and policy for the development and regulation of the energy sector are fixed by the Minister of Ecology, Sustainable Development and Energy, and the Minister of Economy, Finances and Industry.

Since a moratorium on exploration applications in 2010, France does not explore shale gas. However, 2015 marked a moderate increase in this industry with the granting of exploration licences. With Law No. 2011-835 dated 13 July 2011, the government has prevented any exploration works concerning shale gas in as far as this involves hydraulic fracturing. A bill is currently being examined by the French parliament that aims to modify the Mining Code, with discussions regarding the extension of prohibition of hydraulic fracturing to scientific research. However, parliament is probably not going to have time to adopt this law before the national elections of June 2017.

According to the Minister of Ecology, Sustainable Development and Energy, the French policy regarding supply security in natural gas includes:

- diversification of supply sources;
- long-term contracts for financing infrastructure;
- the development of storage reserves; and
- an indicative multiannual plan for investment (2009-2020).

As a member of the EU, France is also opening its gas (and electricity) market to competition. Progressively, regulated tariffs from the historical operators are being removed. In this field, the Energy Regulatory Commission (CRE), an independent administrative authority, is the competent body.

Finally, it should be noted that, following its desire to both harmonise the mining rules with the Environmental Law and to simplify them, the government has made some steps to reform the Mining Code since 2009. A draft bill was published in 2015. As at January 2017, it is currently being examined by parliament.

Regulation of natural gas production

4 What is the ownership and organisational structure for production of natural gas (other than LNG)? How does the government derive value from natural gas production?

In France, the state owns all the mines. Further, exploration for or operation of hydrocarbons may only be undertaken via a licence or concession granted free of charge by the state. Article 2 of Law No. 68-1181 clearly states that any activity undertaken by a public or private person on the continental shelf aimed at exploring or operating its natural resources requires the preliminary delivery of an authorisation.

Under articles L.132-16 and L.132-17 of the Mining Code, royalties are due by the licensee of a production title to the state every year depending on the amount of production. Royalties on new productions are significantly lower than older productions (older productions are defined as amounts extracted, via classical techniques, from wells commissioned before 1 January 1980; other extracted amounts are new productions). According to article L.132-16 of the Mining Code, a 30 per cent royalty applies to old onshore production if it reaches 300 million cubic metres, and a 5 per cent royalty applies to new onshore productions. The royalty shall be payable with retroactive effect to the date of the first sale of gas extracted within the perimeter of the mining title. No royalty applies under this level of production.

Moreover, under article L.132-15 of the Mining Code, the mining exploitation title should provide for the subsurface royalty due to the owner of the soil, which in some cases may be the state.

5 Describe the statutory and regulatory framework and any relevant authorisations applicable to natural gas exploration and production.

According to EU law, member states have sovereignty over hydrocarbon resources that are on their territories. Therefore, they have 'the right to determine the areas within their territory to be made available for the exercise of the activities of prospecting, exploring for and producing hydrocarbons' (Directive 94/22/EC of the European Parliament and of the Council of 30 May 1994 on the conditions for granting and using authorisations for the prospecting, exploration and production of hydrocarbons), while having to ensure a non-discriminatory delivery of authorisations.

There is no difference between the regulation of the unconventional and conventional sectors in the French jurisdiction, with the exception of Law No. 2011-835 dated 13 July 2011, which prohibits any exploration works in as far as they involve hydraulic fracking.

The Mining Code and its implementing decree on mining and storage titles (Decree No. 2006-648 dated 2 June 2006 on mining and storage titles (Decree No. 2006-648)) provide that mining titles are issued by the Minister in charge of Mines after a competitive procedure, and exploration titles after a public survey. However, and in compliance with article L.143-1 of the Mining Code, the mutation (eg, the assignment) of a mining title is issued by the relevant administrative authority (under a ministerial order or a Council of State decree) without any competitive procedure or public survey. The new holder of the mining title should fulfil the conditions required to obtain the mining title (article L.143-2 of the Mining Code).

Any mining title (exploration or exploitation title) may be withdrawn, after formal notice, in the following limited cases:

- lack of payment of the required fees for more than two years;
- non-compliant mutation;
- grave breach of the policy rules; or
- lack of or prolonged insufficient operation (article L.173-5 of the Mining Code).

Mining titles (and, from a general point of view, administrative decisions related to mining titles) may be challenged on legal grounds before the relevant administrative court within two months from the official notification of a decision. The requirement of an official information measure includes derogations in the case of an implicit decision (implicit rejection, for instance). A decision may be interrupted and delayed by the existence of an administrative appeal for consideration or a hierarchical administrative appeal, and such delay may be longer for an appellant living in an overseas French state or territory or abroad. In addition, Chapter II of Book V of the Mining Code provides the offences and penalties in mining matters. In view of the mixed character of mining legislation, certain questions fall within the jurisdiction of either the administrative courts or civil courts.

Exploration

According to article L.121-1 of the Mining Code, exploration works may only be undertaken subject to a prior administrative authorisation by:

- the owner of the soil;
- someone authorised by the owner;
- a person authorised by the administration without the consent of the owner; or
- the exploration licence owner.

Under articles L.122-3 and L.142-1 of the Mining Code, the licence (also called 'the exclusive licence to prospect for oil and gas') is granted, after competitive procedures and without public survey, by the Minister in charge of Mines for up to five years initially after an assessment of the technical and financial capabilities of the applicant. The exploration title may be extended twice for five years without new competitive procedures. The process is regulated by Decree No. 2006-648, and by a ministerial order dated 28 July 1995 laying down the procedures under which applications for mining titles are established. The application for the mining title is transferred to the relevant regional authorities. When the application is considered complete, the opening of the competitive procedure is published in the Official Journal of the French Republic (JORF) and the Official Journal of the European Union (JOUE). The competition phase lasts for 90 days from the date of its publication in the JOUE. The licence is finally granted by a ministerial order from the

Minister in charge of Mines, and published in the JORF. If the Minister is silent for two years, this equals denial of the licence.

Even after the delivery of the exploration licence, articles L.162-41 and L.411-1 of the Mining Code, and Decree No. 2006-649 of 2 June 2006 on mining and storage works and on mining policy, require the licensee to provide for a declaration of the opening of these mining works or, if the impact of the works so requires, to ask for an authorisation that involves a public survey and that is granted by the administrative local authority.

Articles L.121-3 and L.122-1 of the Mining Code provide that the explorer is free to use the products from its exploration works.

To facilitate the return on investment of the exploration phase, French law provides for the principle of 'inventor privilege', according to which the licensee has a right to obtain an exploitation title, also called a 'mining concession'. Under article L.132-7 of the Mining Code, where the inventor is not granted the mining concession, the decree granting the mining concession determines the compensation due to the inventor by the operator.

A holder of two contiguous exploration permits can apply for a merger of his or her permits (article L.141-1 of the Mining Code), which should be authorised by a ministerial order from the Minister for Mines. The order will determine the expiry date of the new mining title, which will be between the expiry dates of the merged permits (article L.141-2 of the Mining Code).

Operation

Under article L.131-1 of the Mining Code, production of gas relies on a concessionary regime. Production without authorisation is subject to sanctions of up to two years' imprisonment and a €30,000 fine (more in cases of environmental impact).

The applicant shall provide for technical and financial capacity to ensure the optimisation of the mine, and to be able to uphold its legal and regulatory obligations as laid down by article L.132-1 and L.132-2 of the Mining Code.

The application, to be addressed to the Minister in charge of Mines and instructed by the local authorities, shall contain, in compliance with article 24 of Decree No. 2006-648, several documents, including a technical report, an environmental impact notice and the commitment to comply with the rules of the concession.

The application involves a public survey (article L.132-3 of the Mining Code and article 26 of Decree No. 2006-648), as well as competitive procedures if the applicant is not already the holder of the exclusive licence to prospect for oil and gas within the area of his or her application for the prospecting title.

The concession is granted through a Council of State decree or rejected by a ministerial order from the Minister in charge of Mines, according to article L.132-2 of the Mining Code and article 31 of Decree No. 2006-648. A three-year silence on the application implies the rejection of the application. The concession is granted for a maximum of 50 years, and can be extended several times for 25 years at most by a Council of State decree (articles L.132-11, L.142-7 and L.142-8 of the Mining Code).

Under article L.132-12 of the Mining Code, the issuance of the concession means the cancellation of the exploration licence on the perimeter instituted by the concession and for the concerned substances. The holder of the concession retains the right to explore for the substances concerned by the concession and within the perimeter of the concession. In addition, the holder retains his or her exclusive licence to prospect outside the concession perimeter, and also inside the concession perimeter for substances not concerned by the concession.

The extension of the area of the concession requires an authorisation granted after a public survey and following the same procedures as those applicable to the issuance of the concession (articles L.142-12 et seq of the Mining Code).

The farming out of the mining concession may be authorised without any competitive procedure or public survey or consultation with the Council of State (article L.143-9 of the Mining Code). The lessee should fulfil the conditions required to obtain the mining concession (article L.143-11 of the Mining Code).

The exploitation mining title may be terminated at the end of its term, by administrative withdrawal (sanction) or by waiving. At the end of a concession, the mine returns to the state for free, after realisation of the required works. If the operator has disappeared or is insolvent,

all rights and obligations are transferred to the state (article L.132-13 of the Mining Code). Proceedings for stopping the operation aim to make the operator responsible for the prevention and termination of damages that mining activities may cause after their definitive end. The operator is responsible for ensuring the 'after-mine' condition through the provision of equipment necessary to monitor and prevent any risk (article L.174-1 of the Mining Code).

Regulatory policies

The main regulatory authority outside of the government for the determination of regulatory policies governing the production, transmission, distribution and supply of natural gas is, since its creation in 2000 by Law No. 2000-108 of 10 February 2000, the Electricity Regulatory Commission, which was renamed the Energy Regulatory Commission by Law No. 2003-8 on 3 January 2003, and which is an independent administrative authority. Such authority is a state institution, but with no hierarchical authority from any minister, in charge of the regulation of strategic sectors. It is composed of six commissioners, assisted by administrative and technical services. It has some prerogatives (recommendations, decisions, sanctions), acts in the name of the state, and is independent from both public authorities and the regulated sector. Public authorities cannot give orders to independent authorities, and their members are not removable. The CRE proposes appropriate funds for its purposes to the Minister for Energy and the Minister of Finances, which funds are then included in the general state budget.

The CRE regulates both the electricity and gas markets, in view of their liberalisation. Its missions include:

- ensuring equal access of operators to the public grid (transmission and distribution);
- monitoring the functioning and development of this grid;
- ensuring the independence of the grid operators;
- promoting the European market;
- monitoring transactions;
- ensuring the functioning of the retail market (the government fixes the regulated tariffs after (non-binding) advice of the CRE);
- ensuring sufficient production (eg, through the implementation of public tenders); and
- informing consumers.

Depending on its mission, the CRE has a power of decision (eg, to provide for technical regulations), approval (eg, of the investment programme of the grid's operators) or authorisation. Its decisions, as well as supposed breaches of rules by an operator, may be challenged before its Committee for Disputes Settlement and Sanctions (CoRDs). Furthermore, the CoRDs may impose sanctions on an operator that disrespects any laws, regulations or CRE decisions.

6 Are participants required to provide security or any guarantees to be issued with a licence to explore for or to store gas?

Applicants for any mining title are required to demonstrate that they have the technical and financial capacity necessary to conduct exploration (or production) works in an appropriate manner (considering health, safety and environment-related issues).

More precisely, Decree No. 2006-648 (articles 4 and 5) requires applicants to justify:

- their technical capacity with:
 - the titles, degrees and professional references of the company managers;
 - a list of works the company has participated in during the past three years; and
 - a description of the projected human and technical means that will be resorted to for the project; and
- their financial capacity with:
 - balance sheets and statements for the three past years;
 - commitments, guarantees and cautions granted by or to the company;
 - a presentation of any current litigation and the resulting risks; and
 - any other appropriate document.

Furthermore, articles 43 to 45 of the decree provide for similar obligations to ensure the maintenance of these capacities regarding

potential modifications of the company's statutes, movements of shares, modifications of the control of the company or transfers of rights on the project.

Regulation of natural gas pipeline transportation and storage

7 Describe in general the ownership of natural gas pipeline transportation, and storage infrastructure.

Under the EU dynamics of the liberalisation of the gas market, the vertically integrated companies Engie (formerly GDF-Suez) and Total had to legally separate their monopolistic activities (transmission, distribution, storage and LNG businesses) under article 12 of Law No. 2004-803 of 9 August 2004 on electricity and gas public service.

In 2002, an authorisation regime replaced France's concession framework. Such authorisations were therefore granted to GRTgaz and TIGF, which have become the owners of the gas transmission pipelines sold by the state. These authorisations are subject to specifications and constraints, particularly in terms of public service obligations and environmental and safety rules.

The gas transmission infrastructure is currently owned and managed by the grid operators: GRTgaz (for around 32,000km) and TIGF (for around 5,000km). GRTgaz, as a 75 per cent subsidiary of Engie, is a private company. However, it should be noted that 33 per cent of Engie (which is supposed to decrease to 28 per cent, and 32,6 per cent of voting rights) and the remaining 25 per cent of GRTgaz is owned respectively by the state and a public consortium, and that the state owns a golden share in Engie's capital, according to Decree No. 2007-1790 dated 20 December 2007; this golden share gives the right to oppose to every decision of Engie, any successor to Engie, or Engie's relevant French subsidiaries, entailing, directly or indirectly, the transfer of the strategic assets located in French territory or of the right to operate these assets; the assets are defined as the pipelines of GRTgaz's transportation grid, the assets belonging to GRDF and linked to the distribution grids, the underground storage sites operated by Storengy, and the LNG facilities owned by Elengy or its subsidiaries.

TIGF is also a private company, formerly held by Total and now by several companies or funds (including EDF).

As an essential facility, the infrastructure is considered as being owned as a monopoly, and involves public service obligations on the part of the owner. Transmission grid operators therefore have the obligation to ensure non-discriminatory access to their infrastructure, and are prohibited from carrying out activities in the non-regulated sector (production and supply).

Gas storage (in aquifers, salt caverns or depleted reservoirs) is assimilated to mines under French law, and may be operated only through a concession from the state. The associated infrastructure is owned and managed by the operators - currently Storengy (14 sites, 103 TWh), a 100 per cent subsidiary of Engie, and TIGF (two sites, 32TWh) - but the gas storage site as such is the property of the state.

8 Describe the statutory and regulatory framework and any relevant authorisations applicable to the construction, ownership, operation and interconnection of natural gas transportation pipelines, and storage.

The operation of natural gas transmission pipelines is subject to various laws:

- Real estate law: underground natural gas transmission pipelines are exempted from obtaining building permits (articles R.421-1 and R.421-4 of the Planning Code).
- Environmental law: according to article L.431-1 of the Energy Code, 'provisions on the authorisation procedure for the construction and operation of natural gas transmission pipelines are listed in Chapter V of Title V of Book V of the Environmental Code'. The regulatory framework applicable to authorisations for the construction and operation of natural gas transmission pipelines is provided by articles L.555-1 et seq of the Environmental Code. The applicant should provide the Administration with a safety report (article L.555-7 of the code). The authorisation may be preceded by an impact study and a public inquiry in compliance with Chapter II or Chapter III of Title II of Book I of the code. Under article R.555-4 of the code, the authorisation is given by way of a ministerial order, by a prefectural order or, pursuant to a simplified procedure, by an authorisation granted via a prefect, according to the type of

pipeline. Articles R.555-37 to R.555-47 of the Environmental Code lay down prescriptions applicable to the construction, commission, operation and control of pipelines. In addition, it should be noted that pipelines fall under the scope of the French regulations on classified facilities (articles L.511-1 et seq of the code). In addition, the location of natural gas transportation pipelines must take into account laws and regulations related to:

- registered and classified sites (article L.341-1 of the Environmental Code);
- national parks (article L.331-1 of the Environmental Code);
- national and regional nature reserves and areas protected by a biotope ministerial order (article L.332-1 of the Environmental Code);
- territories covered by guidelines for the protection and the enhancement of landscapes (article L.642-1 of the Heritage Code);
- biological heritage (article L.411-1 of the Environmental Code);
- archaeological heritage (article L.521-1 of the Heritage Code);
- historical monuments, sites and protected areas (article L.621-1 et seq of the Heritage Code); and
- coastal and mountain laws (Environmental Code).

Administrative decisions may be challenged, for reasons of legality, before the relevant administrative court within two months from the official notification or publication of the decision. The requirement of official information includes derogations in the case of an implied decision (implied rejection, for instance). Decisions may be interrupted by an administrative appeal for consideration or a hierarchical administrative appeal, and the delay caused by such interruption may be extended for claimants living in overseas territories or abroad.

9 How does a company obtain the land rights to construct a natural gas transportation or storage facility?

According to article L.555-25 of the Environmental Code, when the construction and operation of natural gas transportation pipelines is of general interest because they contribute to the national or regional energy supply, to the expansion of the national or regional economy, or to the national defence, the corresponding work may be declared of public utility if the applicant so requests.

The declaration of public utility gives the character of public works to construction works, operation works and maintenance works. This may form the basis of expropriations. It also follows, *inter alia*, that damages suffered by third parties must be fully compensated, without any fault of the constructor, by the administrative courts.

This declaration provides the holder with the right to occupy the public domain and privately owned properties (*ie*, easements), limited however to what is necessary for construction, maintenance and operation of the natural gas transmission pipeline. Article L.555-27 of the Environmental Code provides that private owners shall be indemnified for easements running on their property by mutual agreement between the holder of the authorisation and the owners of the soil or, failing that, in accordance with the provisions relating to expropriations for public interest. Any disputes related to this compensation fall under the jurisdiction of the courts competent for expropriation for public interests.

10 How is access to the natural gas transportation system and storage facilities arranged? How are tolls and tariffs established?

Transmission and distribution

Third-party access is regulated.

Article L.111-97 of the Energy Code guarantees customers, suppliers and their agents a right of access to natural gas transmission and distribution networks (as well as to LNG facilities), including facilities delivering ancillary services under conditions defined by contracts. When the operator and the user are not separate legal entities (*ie*, they are within vertically integrated undertakings), 'protocols' controlled by the regulator organise their relations. More generally, all these contracts and protocols are forwarded to and controlled by the CRE.

The tariff is set by the Energy Regulatory Authority for each transmission system operator (TSO) and distribution system operator (DSO) for four-year periods on the basis of an analysis of their

expenses (including costs of public service obligations), including a regulated benefit.

According to article L.441-3 of the Energy Code, TSOs and DSOs (as well as operators of LNG facilities) freely negotiate with one or several suppliers of their choice the natural gas supply contracts necessary for the operation of their own facilities on a competitive, non-discriminatory and transparent basis, including through public consultations and using organised markets.

Each TSO is in charge of balancing on its grid.

Underground storage

Third-party access is currently negotiated: the legal framework is laid down by the Energy Code, which ensures, *inter alia*, that the methods for accessing storage capacity, and especially its price, are 'negotiated under transparent and non-discriminatory conditions' (article L.421-8). Articles R.421-1 to R.421-11 of the Energy Code define access as follows:

- allocation of storage capacity to suppliers with an existing portfolio of end customers (article 5 article R.421-6): the associated profiles and unit rights to storage ('storage rights') are set annually by a ministerial order. In cases of scarcity, the code sets a priority order (article R.421-3);
- the possibility for any supplier, with or without a portfolio of end-customers, to reserve available capacity in excess of its storage rights (if any) (article R.421-9). This surplus storage capacity is released on the market under transparent, non-discriminatory conditions (article R.421-4);
- an obligation on any supplier to reserve annually storage capacity up to a certain percentage (80 per cent) of its storage rights, in volume and draw-off flow rate, to ensure that it will be able to supply customers in the event of cold winter (article R.421-3); and
- the annual control by the Ministry for Energy of sufficient reservation of storage capacity by all suppliers that supply sensitive end customers (article R.421-3).

In compliance with Directive 2009/73/EC of 13 July 2009 and articles L.421-3 and L.431-3 of the Energy Code, the transmission network operator is given priority to use storage sites to ensure the sound operation and balance of their networks, and they may freely negotiate with the natural gas storage operators the contracts required to fulfil this mission.

To promote greater liberalisation of the gas market, the Ministry for Energy launched a public consultation regarding how to improve third-party access to gas storage. The Ministry proposed two alternative schemes:

- (i) on one side, strengthening the obligation to store, and letting the CRE regulate storage prices, as it does for third-party access to the transmission and distribution grids; and
- (ii) on the other, organising auctions for storage capacity, and setting a regulated income to the storage operators. The reconciliation would be organised by a compensation mechanism involving the transmission grid operators.

The Energy Regulatory Authority released its opinion at the end of April 2015 in favour of option (ii), which would increase the transparency of allocation and ensure that security of supply is obtained at the right cost to the final consumer.

On 8 February 2016, the Minister submitted a draft law-decree to the CRE, modifying third-party access to underground storage capacity. According to this project, the access to storage capacity would be regulated. Notably, the draft law-decree proposed that the multi-annual energy plan (PPE) would define the list of storage infrastructure necessary for security of supply. The draft law-decree provided that the methodology for calculating the authored revenue of storage operators would be defined by decree. In addition, the document provided that regulated storage capacity was marketed through an auction mechanism.

The regulator adopted its deliberation on 10 March 2016, stating that, even if it was favourable to the reform, the respective roles of the government and the regulator should be clarified. In particular, the regulator considered that the law-decree should only refer to general principles for calculating the authorised revenue of storage operators, and that the regulator should be allowed to determine the methodology

for calculating the authorised revenue and to implement an incentive regulation of this revenue. In addition, the regulator considered that the mechanism to set the reserve prices for auction should be included in the commercialisation of capacity proposed by the operators and approved by the regulator. This law-decree was not adopted in September 2016.

Since then, progress on third-party access to underground storage has stalled, even though storage stakeholders push for the implementation of reform.

11 Can customers, other natural gas suppliers or an authority require a pipeline or storage facilities owner or operator to expand its facilities to accommodate new customers? If so, who bears the costs of interconnection or expansion?

The development of transmission facilities is controlled by the CRE.

Pursuant to articles L.134-3 and L.431-6 of the Energy Code, gas TSOs are obliged to submit their annual investment programmes to the CRE for approval.

The CRE bases its decisions approving the investment programmes of gas TSOs (as amended, if necessary) taking into account the presence in the investment programme of:

- network development projects or studies necessary for the proper functioning of the market;
- evidence of the transparent and non-discriminatory treatment of market participants, in particular with regard to connecting LNG terminals and the gas-fired combined cycle; and
- evidence of control of the cost of the projects included in the investment programme, in particular as regards the impact of the investment on the using rates of gas transmission networks by their users.

The extension of a transmission grid is decided by the grid operator, and must be consistent with the Ten Year Development Plan, which is compulsory under Directive 2009/73/EC; this consistency is controlled annually by the CRE. The European Commission also annually approves investment programmes for the next year, and may oblige operators to make any investment that is necessary in light of the Plan (article L.431-6 of the Energy Code).

New interconnections, as well as reverse flows on existing ones, are usually decided on the basis of the positive outcome of an open season.

Distribution business is carried out under the concession regime. The geographic extension of an existing concession is decided by the parties to the concession agreement (ie, the operator and a local corporation, or a grouping of such corporations).

Storage is subject to mining law, and investments in new storage require new concessions. As regards investments in existing storage, this is currently not under the control of the CRE.

12 Describe any statutory and regulatory requirements applicable to the processing of natural gas to extract liquids and to prepare it for pipeline transportation.

Underground storage facilities are subject to:

- the Mining Code (the legislative section already exists, whereas the regulatory section is currently in preparation);
- Decree No. 2006-648 of 2 June 2006 on mining rights and underground storage rights;
- Decree No. 2006-649 of 2 June 2006 on mining works, underground storage works and the policy on mining and underground storage; and
- Ministerial Order of 17 January 2003 on the prevention of major accidents at underground storage facilities for gas, liquid hydrocarbons or liquefied hydrocarbons.

Mining concessions are awarded by a Council of State decree, whereas the technical provisions specific to underground storage facilities are established by a prefectural order, as the case may be.

The construction and operation of gas pipelines and their related structures are specifically governed by the Environmental Code since the entry into force of Decree No. 2012-615 of 2 May 2012 relating to the hydrocarbon pipeline transmission regime.

A Ministerial Order of 5 March 2014 regulates the safety of the pipelines used for the transportation of natural gas or similar substances, hydrocarbon and chemical products. It specifies the construction

and operational safety rules applicable to pipelines throughout their lifespan. This Ministerial Order is based on a benchmark standard and approved professional guidelines.

13 Describe the contractual regime for transportation and storage.

Article L.111-97 of the Energy Code guarantees customers, suppliers and their agents right of access to transmission facilities and natural gas distribution as well as LNG facilities, including facilities supplying ancillary services, under conditions defined by contracts. When the operator and the user are not separate legal entities, protocols govern their relations. These contracts and protocols are forwarded, upon request, to the CRE.

However, such access may be limited or prevented if and when the relevant infrastructure lacks adequate available capacity. Any refusal to conclude a contract must set out the reasons for the refusal, and be notified to the applicant and the CRE (articles L.111-102 and L.111-103 of the Energy Code).

Transmission

Since 1 January 2012, GRTgaz has been implementing a modular transmission contract for access to its network by shippers. The transmission contract is made up of sections applicable to all shippers as well as optional sections. The transmission contract documents are the following: general terms and conditions, upstream network, downstream network, access to virtual exchange points and annexes.

Storage

The allocation procedure organises priority access to underground natural gas storage capacity to the suppliers that supply domestic customers and customers of general interest in France. Each year, the storage rights envelope and unit storage rights (by type of end customer) are defined by a ministerial decision. All market stakeholders can request storage capacity under the allocation procedure, whether or not they have a portfolio of end customers in France. The sale of storage capacity takes place in January and February for capacity available from 1 April (April allocation turn). Any capacity still available at the end of the April allocation round is accessible on a first-come, first-served basis using the 'available capacity' form. Transfers of gas in storage may be required to meet the capacity acquired in the July and November allocation rounds. These transfers are governed by appendices 2 and 3 to the Storage Access Contract. The allocation rules define the storage capacity allocation for the storage rights envelope. The regulation of gas storage is, however, about to change, probably with regard to regulated third-party access, yearly auctions and a regulated income for storage operators decided by the energy regulator.

Regulation of natural gas distribution

14 Describe in general the ownership of natural gas distribution networks.

Natural gas distribution networks are publicly owned, and natural gas distribution is a communal public service. Unless they have themselves been continuously operating the grid since 1946, the owners are obliged to execute concession contracts with the incumbent operator: either GRDF (an Engie subsidiary) on circa 95 per cent of the European continental territory, or a local public undertaking (there are 22).

Within the concession perimeter, the distribution assets belong to the municipalities as soon as they are commissioned (article L.432-4 of the Energy Code).

15 Describe the statutory and regulatory structure and authorisations required to operate a distribution network. To what extent are gas distribution utilities subject to public service obligations?

Gas transmission is performed under authorisations, but only two operators own networks in France (mainland) and are certified by the CRE as required by Directive 2009/73/EC.

The distribution of gas is performed under the public service concession regime or, more rarely, under direct management by local authorities. Distribution networks are managed by DSOs either under concession contracts agreed with a municipality or a group of municipalities, or via direct management by the municipalities.

In accordance with article L.111-57 of the Energy Code, the management of a network for the distribution of natural gas that supplies more than 100,000 clients on the mainland is provided by entities that are separate from those that carry out activities of production or supply of natural gas, or both.

DSOs carry out their activities in accordance with laws and regulations (articles L.432-1 et seq and articles R.432-1 et seq of the Energy Code); and conditions set out by the specifications of the concessions, or the service regulations of local public bodies referred to in article L.2224-31 of the General Local Authorities Code. Municipalities negotiate and conclude concession contracts, and monitor the due fulfilment of the public service mission set out by the specifications of these concessions.

New concessions

According to article L.432-6 of the Energy Code, 'The local authorities [...] which do not possess a natural gas distribution network may grant the public distribution of gas to any company duly accredited for these purposes by the Minister responsible for energy', and this is subject to a competitive procedure. The conditions and methods for the issuance, maintenance, withdrawal and publicity of the approval of these new concessionaires are specified by Decree No. 2007-684 dated 4 May 2007 (now, article R.432-1 et seq of the Energy Code).

Pursuant to Directive 2009/73/EC, the CRE, which is independent from the government, the Parliament and all the operators, is in charge of monitoring the access to gas distribution networks. Generally speaking, the CRE ensures that the gas networks are operated and developed in a non-discriminatory manner. Its decisions may be challenged before the administrative courts.

The CRE monitors TSOs and DSOs, and controls especially their non-discriminatory behaviour. It also organises market tests or working groups, or both, each time the rules may or shall change, before taking decisions or making recommendations to the government.

The CoRDIS, a special body within the CRE that is independent from the commissioners, is empowered to settle disputes related to access to distribution gas systems, and to impose sanctions for breaches of the rules governing the gas sectors. Its decisions are subject to an appeal before the Paris Court of Appeal.

Finally, the government is responsible for the security of supply, but does not organise exploration and production (only 1 per cent of the gas consumed in France is produced in France, where the number of wells is very low). Its role is rather to force, by law or specific public service obligations, or both, suppliers and operators of essential facilities to be able to provide their clients with gas 365 days a year.

16 How is access to the natural gas distribution grid organised? Describe any regulation of the prices for distribution services. In which circumstances can a rate or term of service be changed?

To guarantee the transparency and neutrality of access to the networks, the transmission and distribution businesses are regulated, mainly by the Energy Regulation Commission.

Article L.452-2 of the Energy Code provides that the CRE sets the methods used to establish the tariffs for use of natural gas networks. This means that the tariffs are proposed to the government by the Commission, upon the basis of an analysis of the accounts of the regulated entities and a discussion with the latter. The Commission:

[...] considers tariff changes [...] with, as appropriate, amendments to the level and structure of tariffs that it believes justified in light particularly of an analysis of operators' accounts and foreseeable changes in operating and investment costs. The Energy Regulatory Commission submits to the Ministers with responsibility for energy and for the economy its decisions and the reasoning behind them regarding changes to the level and structure of tariffs for use of natural gas [...] distribution networks [...], together with the tariff rules and their date of entry into force. Such deliberations are published in the Official Journal of the French Republic.

Should the ministers not oppose it, or ask for amendments to ensure compliance with the energy policy, the tariff comes into force (article L.452-3 of the Energy Code).

In practice, tariffs remain in force for four-year periods. To mitigate the risks of discrepancy with the initial assumptions, some minor changes may be accepted by the regulator after years one, two or three, upon conditions set out in the decision on the tariff.

Access to the grid is further regulated by contracts based upon templates approved by the CRE.

17 May the regulator require a distributor to expand its system to accommodate new customers? May the regulator require the distributor to limit service to existing customers so that new customers can be served?

TSOs and DSOs have the obligation to provide non-discriminatory access to customers already connected to their grids. Even the regulator cannot require a discriminatory attitude in favour of certain clients or categories of clients.

As regards the expansion of distribution networks, concession contracts allow the operator not to expand if the economic outcome is below a reasonable rate, with a minimum set by a Ministerial Order dated 28 July 2008. For the transmission networks (expansion and interconnections), the decisions of the operator are approved by the CRE every year, along with the investment programme and an update of the Ten Year Development Plan.

18 Describe the contractual regime in relation to natural gas distribution.

Under a concession agreement, a local corporation grants exclusivity to a distributor for building and operating the grid and related infrastructure. The concessionaire is responsible for building, maintaining and operating the grid, and for providing the service at its own expense and risk. Such expense is paid by the consumers on the basis of the tariff set by the CRE. Failure to meet these obligations would expose the concessionaire to contractual penalties.

In practice, the representatives of local corporations and the main DSOs (ERDF for electricity and GRDF for gas) negotiate a concession model, which forms the basis of all negotiations even when the DSO is not ERDF or GRDF. The government and the CRE have no influence in this regard, except that the law, decrees and various regulations set forth the framework of the concessions.

Regulation of natural gas sales and trading

19 What is the ownership and organisational structure for the supply and trading of natural gas?

Supply and trading of natural gas are open to competition.

Retail market

There are two main types of contracts: contracts with regulated tariffs, provided solely by historical suppliers, and contracts at market price proposed by all suppliers.

For contracts with regulated tariffs, the tariffs are set jointly by the Ministers for Economy and Energy upon the proposal of the CRE. Since 19 June 2014, there have been no regulated tariffs for large professional customers connected to the transmission network. Since 31 December 2014, regulated tariffs for non-domestic customers consuming more than 200MWh per year have been abolished, and since 31 December 2015 there are no regulated tariffs for professional customers consuming more than 30MWh per year. Sites that have not subscribed to market offers switched automatically to a default (transitional) offer, provided by the suppliers selected following a call for tender organised by the regulator, at a fixed increased price for short-term periods.

Hence, only consumers consuming less than 30,000kWh on one specific site per year may still benefit from regulated tariffs for this site. However, the legality of the regulated tariffs has been challenged before the Conseil d'Etat, by the ANODE (Association nationale des opérateurs détaillant en énergie, ie, National Association of Energy Retailers) which contests the French authorities' intervention in the price of supply of natural gas. ANODE considers that the regulation of natural gas tariffs in France disregards the objectives of the Directive on the Internal Market in Natural Gas as interpreted by the Court of Justice of the European Union in a judgment of 20 April 2010 (CJEU, 20 April 2010, aff C-265/08, *Federutility*). The Conseil d'Etat asked the Court of Justice whether the regulation of natural gas tariffs in France is an obstacle to the achievement of a competitive market in natural gas.

The Court of Justice concluded that such regulation is by its nature an obstacle to the achievement of a competitive natural gas market and that obstacle exists even though competing offers can be made by all suppliers at prices lower than the regulated tariffs: however, security of supply and territorial cohesion are objectives of general interest which may justify state intervention in fixing the price of supply of natural gas; the answer to the question of whether this is the case in France will be settled by the Conseil d'Etat (CJEU, 7 September 2016, aff C-121/15, *ANODE*).

Contracts at market price that are proposed by all suppliers (historical suppliers and alternative suppliers) are not regulated.

On 30 June 2016, 54 per cent of sites bought gas at regulated tariffs, representing 15 per cent of gas consumption. 22 per cent of the sites bought gas to alternative suppliers, for a total of 54 per cent of gas consumption (being mainly industrial clients).

Wholesale market

Most gas trading in France relies on over-the-counter or off-exchange trading (together, OTC business), which is conducted directly and freely between two parties without any supervision of an exchange. These parties may also involve traders or brokers. The remaining volumes are traded on the marketplace organised by Powernext SA, a private company.

20 To what extent are natural gas supply and trading activities subject to government oversight?

Pursuant to article L.443-1 of the Energy Code, carrying out a gas trading business requires a licence to supply natural gas. The terms of such authorisation are defined by Decree No. 2004-250 of 19 March 2004 on the authorisation to supply gas, which has recently been codified in articles R.443-1 et seq of the Energy Code.

Under such authorisation, a natural gas supplier may be authorised to carry out a natural gas supply business on the French territory that is dedicated to one or several categories of customers (natural gas suppliers, domestic customers, non-domestic customers, non-domestic customers providing public services, industrial customers).

Under article L.443-3 of the Energy Code, an authorisation to supply gas is nominative and non-transferable. However, the authorisation to supply gas may be transferred to a new operator, if previously authorised by a decision of the administrative authority; this authority shall check that the new operator has the requested technical, financial and economic capacities to comply with the relevant obligations, and nothing more (ie, no refusal may be made if the transferee possesses such capacities). A change of control of the operator itself is not qualified as a change of operator under French law. Nevertheless, a change of control should be notified to the Minister for Energy under article R.443-7 of the Energy Code (formerly article 5 of Decree No. 2004-250); that said, the Minister is not allowed to do anything more than check the continuance of the required capacities.

The authorisation is not limited in time. However, providing updated information to the Administration on a regular basis is required under article R.443-7 of the Energy Code. Operators provide reports to the Minister for Energy every year before 1 March; or, at the request of the Minister, they provide the information mentioned in article L.142-1 of the Energy Code, and, when appropriate, update the information requested by paragraphs 2 and 3 of article R.443-2 of the code. Article L.142-1 refers to economic data that are necessary for the Administration to carry out the energy policy, establish statistics and report to specialised agencies in compliance with the international undertakings of France.

The authorisation to supply (or trade) natural gas may be suspended or withdrawn by the Minister for Energy in cases of a breach of its obligations by the trader or supplier, as defined in article R.443-11 of the Energy Code (formerly article 6 of Decree No. 2004-250). This article provides that the Minister may order the suspension or the withdrawal of the authorisation if the conditions laid down in article L.443-1 are no longer complied with, the obligation to provide the data referred to in article L.142-1 is no longer satisfied, or the public service obligations laid down in articles R.121-44 to R.121-63 are no longer complied with. The withdrawal or suspension may be limited to certain categories of customers. The withdrawal or suspension is not decided before the supplier has been ordered to bring the infringement to an end within a reasonable period; in such case, the notice must detail the reasons

for the possible sanction, and the supplier must have the possibility to consult the file, and submit written or oral observations, with the assistance of a person of his or her choice. However, in serious cases entailing risks for the integrity or security of the networks, the Minister may order the immediate suspension of the supply authorisation.

Furthermore, the licensee may choose to freely cease his or her activity. According to article R.443-8 of the Energy Code (formerly article 7 of Decree No. 2004-250), at least three months prior to ceasing such activity, he or she shall inform the Minister for Energy of such intention, and indicate the conditions for his or her stoppage of the activity.

21 How are physical and financial trades of natural gas typically completed?

Most wholesale gas trading in France relies on OTC trading (ie, transactions that are closed directly and freely between two parties without any supervision of an exchange). The parties may also decide to involve traders or brokers. The remaining volumes are traded on the market organised by Powernext.

Powernext, incorporated in 2001, is dedicated to the operation of regulated energy markets operating under the supervision of the AMF (the French market authority that regulates participants and products on French financial markets). Powernext manages the natural gas activities of the EEX Group.

The Market Rules, defined by Powernext, establish the conditions under which Powernext ensures the operation of the market, and members are admitted to operate on the market. The Rules are divided into general requirements, which apply to all market segments, and specific requirements. Powernext provides its members with the Market Rules and any amendments to them, appendices that detail the provisions of the Rules, Market Notices that clarify the technical provisions of the Market Rules, and all other applicable decisions and programming parameters. The Market Rules and Market Notices are public documents that are available on Powernext's website. Each member and Powernext enter into a trading agreement that governs access to Powernext Commodities and Powernext Derivatives.

22 Must wholesale and retail buyers of natural gas purchase a bundled product from a single provider? If not, describe the range of services and products that customers can procure from competing providers.

Generally speaking, the sale and purchase of gas are open to competition. Transmission and distribution are regulated businesses, and end consumers have no choice about either their TSO or DSO and the terms and conditions of transmission and distribution contracts. Gas is usually purchased (from abroad) through long-term supply contracts or through short-term contracts on the wholesale market (usually for no more than three years). The gas supplier may propose services linked to the sale of energy (eg, maintenance and advice regarding the control of consumption).

However, small consumers may negotiate one single contract with their supplier, a distribution agreement with the relevant DSO being attached; they are then linked directly with both the supplier and the DSO (this is called a 'unique contract'). The supplier is obliged to propose such unique contracts.

Regulation of LNG

23 What is the ownership and organisational structure for LNG, including liquefaction and export facilities, and receiving and regasification facilities?

There are currently four LNG terminals (import terminals, for regasification) in France:

- Fos Cavaou belongs to the former STMFC company, renamed Fosmax LNG in 2012. Fosmax LNG is a subsidiary of Elengy, in which the latter has more than a 70 per cent stake alongside Total through its subsidiary (Total Gaz Electricité Holding France). Fosmax LNG commercially exploits the regasification capacity of the terminal. The operation and maintenance of the site is entrusted to Elengy;
- Fos Tonkin, which belongs to Elengy (a subsidiary of Engie), and which also operates the terminal;

- Montoir-de-Bretagne, which belongs to Elengy (a subsidiary of Engie), and which also operates the terminal; and
- Dunkerque belongs to Dunkerque LNG, 65 per cent of which is owned by the EDF group, 25 per cent by the Fluxys group and 10 per cent by the Total group. Work on the construction site has been awarded to specialised companies in the form of engineering, procurement and construction contracts (unloading and regasification facilities: TS LNG; tanks: Entrepose Contracting and Bouygues; and tunnel: Bessac, Razel, Soletanche). Dunkerque LNG runs the terminal via an operating company called Gaz-Opale, 51 per cent of which is owned by Dunkerque LNG and 49 per cent by the Fluxys group.

There are rumours that Elengy, which is a wholly owned subsidiary of Engie and a sister company of GRTgaz, may become, in the next few months, a wholly owned subsidiary of GRTgaz.

24 Describe the regulatory framework and any relevant authorisations required to build and operate LNG facilities.

To operate a LNG terminal, the procedure provided for by various policies must be followed.

Under real estate law, it is necessary to obtain a building permit in accordance with the Planning Code. A building permit is a compulsory authorisation for new constructions or extensions where the surface area in question is over 20 square metres.

Under environmental and heritage law, the location of an LNG terminal must take into account laws and regulations related to:

- registered and classified sites (article L.341-1 of the Environmental Code);
- national parks (article L.331-1 of the Environmental Code);
- national and regional nature reserves and areas protected by a biotope ministerial order (article L.332-1 of the Environmental Code);
- territories covered by guidelines for the protection and the enhancement of landscapes (article L.642-1 of the Heritage Code);
- biological heritage (article L.411-1 of the Environmental Code);
- archaeological heritage (article L.521-1 of the Heritage Code);
- historical monuments, sites and protected areas (article L.621-1 et seq of the Heritage Code);
- coastal and mountain laws (Environmental Code); and
- protection of the aquatic environment, with a water-act authorisation (article L.214-1 of the same code).

Because of the location of LNG facilities within port areas, agreements with the major seaports are also necessary (articles L.5312-1 et seq of the Transport Code).

Administrative decisions regarding LNG terminals may be challenged on legal grounds before the relevant administrative court within two months of the official notification of a decision. The requirement of an official information measure includes derogations, in cases of an implicit decision (implicit rejection, for instance). Such decision may be interrupted by the existence of an administrative appeal for consideration or a hierarchical administrative appeal, and such interruption may be longer for appellants living in an overseas French territory or abroad.

25 Describe any regulation of the prices and terms of service in the LNG sector.

Prices and terms of service in the LNG sector are drawn up jointly by the Ministers for Energy and the Economy upon the recommendation of the CRE.

According to article L.452-1 of the Energy Code, the tariffs for using LNG facilities, commercial terms of use of these facilities and prices of additional services performed by the managers of facilities are established in a transparent and non-discriminatory manner to cover all costs incurred, insofar as they correspond to those of an efficient installations manager. These costs reflect the characteristics of the service and costs related to this service, including obligations set by law and regulations, as well as costs arising from the performance of the public service. Operators of LNG facilities are required to publish and make available to users, and to inform the CRE of, the general trading conditions for the use of their facilities.

Article L.452-2 of the Energy Code provides that the methodologies to determine these tariffs are set by the CRE. Operators of LNG

facilities send, at the CRE's request, elements including accounting and financial information to allow the CRE to deliberate on changes in tariffs for the use of LNG facilities. The CRE also sets the methodologies used to establish the tariffs for additional services performed by the managers of these facilities.

Further, the CRE deliberates on any changes to tariffs and, where appropriate, on modifications to the level and structure of the tariffs it considers justified in light of an analysis of the accounts of the operators and in light of foreseeable developments in operating and investment costs (article L.452-3 of the Energy Code). These deliberations, which may take place at the request of managers of LNG facilities, may provide a multiannual framework for the evolution of tariffs and appropriate incentives to encourage operators to improve their performance regarding, in particular, the quality of the service, the integration of the internal market for gas, the security of supply and the search for productivity. The CRE takes into account the energy policy guidelines set by the Ministers of Economy and Energy, and shall consult, on self-determined terms, energy market players. The CRE shall send to the Ministers of Economy and Energy its deliberations on any changes in the level and structure of tariffs for the use of LNG facilities, and any changes in the tariff rules, along with their effective date. These deliberations are published in the JORF. Within two months of receipt of such deliberation, each of the ministers, if he or she considers that the deliberation of the CRE is not appropriate, can request a new deliberation through a reasoned decision published in the JORF.

Mergers and competition

26 Which government body may prevent or punish anticompetitive or manipulative practices in the natural gas sector?

The Competition Authority, created by Law No. 2008-776 on the modernisation of the economy, prevents or punishes anticompetitive and manipulative practices in the natural gas sector.

The Competition Authority's investigation services handle both preliminary inquiries and full investigations, which functions had been previously split between two organisations (the General Directorate of Competition, Consumption and Fraud and the former Competition Council). Moreover, the Authority is in charge of merger control: it assesses the competition implications of mergers, taking into account any possible efficiency gains.

27 What substantive standards does that government body apply to determine whether conduct is anticompetitive or manipulative?

The Competition Authority carries out repressive actions against anticompetitive practices, and acts on its own initiative or at the request of complainants once competition is distorted on a market. However, the Authority is not designed to fight unfair business practices, which fall under the jurisdiction of the ordinary commercial courts.

Anticompetitive practices are regulated by Articles L.420-1 (cartels) and L.420-2 (abuse of dominant position) of the Commercial Code.

Article L.420-1 of the Commercial Code provides that:

[...] joint actions, agreements, express or tacit agreements or coalitions are prohibited, even through the direct or indirect agency of a company belonging to a group established out of France, if they have the purpose or may have the effect of barring, restricting or distorting the play of competition in a market, particularly when they aim at 1 limiting other companies' access to the market or free exercise of competition by other companies ; 2 hindering the free setting of prices by artificially controlling their increase or decrease; 3 limiting or controlling output, outlets, investments or technological progress; 4 sharing out the markets or sources of supply.

Article L.420-2 of the Commercial Code provides that:

[...] prohibited, in the conditions set forth in article L.420-1, is the abusive exploitation of a dominant position by a company or group of companies in the domestic market or a substantial segment thereof. These abuses may consist of, in particular, a refusal of sale, tied sales or discriminatory selling conditions as well as of a breach

of established commercial relations on the sole ground that the partner refuses to be subjected to unjustified marketing conditions.

Article L.420-2 also provides that:

[...] prohibited, whenever it is susceptible to affect the functioning or structure of the competition, is the abusive exploitation, by a company or group of companies, of the condition of economic dependence in which a customer company or supplier finds itself vis à vis such company. These abuses may consist of the refusal of sale, tied sale or the discriminatory practices mentioned in Article L.442-6 I or product range agreements.

28 What authority does the government body have to preclude or remedy anticompetitive or manipulative practices?

Judicial role

A competition matter may be brought before the Competition Authority by a third party or on the Authority's own initiative.

At the end of the proceedings, the Competition Authority may render one of the following decisions:

- an interim decision with the pronouncement of conservatory measures (article L.464-1 of the Commercial Code) in cases of an emergency. The request for interim measures should be made incidentally to a main action. Measures may include the suspension or removal of anticompetitive clauses in contracts, the sending of certain documents or the ending of a company's denigration of competing products;
- a sanction decision with heavy financial penalties. Since Law No. 2001-420 dated 15 May 2001 on new economic regulations, the maximum amount of the penalty for a company is 10 per cent of the global turnover, excluding taxes, and €3 million if the offender is not a company (article L.464-2 of the Commercial Code). The Authority may also issue injunctions forcing stakeholders to change their behaviour, and order the publication of the entire or a part of the decision (article L.464-2 of the Commercial Code). Finally, the Authority can impose penalties for non-compliance with its injunctions and possibly impose penalty payments;
- a decision accepting undertakings, if the Authority considers that the proposed commitments are likely to meet the competition concerns raised. In cases of non-compliance with these commitments, the Authority may impose sanctions (article L.464-2 of the Commercial Code);
- a decision to dismiss for lack of interest or qualification to act if the alleged facts are prescribed within the meaning of article L.462-7 of the Commercial Code (that is, facts dating back more than five years may not be referred to the Authority if no attempt has been made to investigate, establish or punish them) (article L.462-8 of the Commercial Code);
- a decision of non-suit if the facts do not reveal, after investigation, the existence of prohibited practices (article L.464-6 of the Commercial Code);
- a rejection, in cases of inadequate supporting documents (article L.462-8 of the Commercial Code); and
- a stay order, due to investigation or an upcoming event.

Consulting role

The Competition Authority may be consulted on an optional basis on any matter related to competition, and the purpose of such consultation is to enrich public discussion (article L.462-1 of the Commercial Code). The Authority may also be consulted by the courts on anticompetitive practices (article L.462-3 of the Commercial Code) or, at the government's request, on joint ministerial orders from the Ministers of Justice and of the Economy setting the rates of seven regulated legal professions (articles L.444-1, L.444-3 and L.462-2-1 of the Commercial Code).

The Authority must be consulted on draft decrees regulating prices or restricting competition (article L.410-2 of the Commercial Code); and on any draft laws and regulations establishing a new regime subjecting the exercise of a profession or the access to a market to quantitative restrictions, establishing exclusive rights in certain zones, or imposing uniform practices in prices or sales conditions (article L.462-2 of the code). In addition, the Competition Authority should render its opinion on the draft decree setting the tariff methodology for

calculating the price of legal services provided by seven regulated legal professions (article L.444-7 of the code).

Leniency

The Competition Authority's leniency policy offers companies involved in a cartel either total immunity from fines or a reduction of fines that the Authority would have otherwise imposed on them. This policy has proved to be very successful in fighting cartels (articles L.464-2 and R.464-5 of the Commercial Code).

29 Does any government body have authority to approve or disapprove mergers or other changes in control over businesses in the sector or acquisition of production, transportation or distribution assets?

Competition Authority

The Competition Authority has the authority to approve or disapprove mergers or other changes in control over businesses in the sector, and over the acquisition, production, transportation or distribution of assets. Merger control falls within the legal framework defined by articles L.430-1 to L.430-10 of the Commercial Code, and its implementation is stipulated by articles R.430-1 to R.430-10 of the regulatory part of the Commercial Code.

Mergers are subject to the control of the Competition Authority if:

- the total worldwide net of the tax turnover of all of the firms or groups of the natural or legal persons taking part in the merger is more than €150 million;
- the total pre-tax turnover generated in France by at least two of the firms or groups of individuals or legal persons involved is more than €50 million; and
- the operation does not fall within the European Commission's jurisdiction (article L.430-2 of the Commercial Code).

As soon as a merger is subject to merger control pursuant to articles L.430-1 and L.430-2 of the Commercial Code, it must be notified to the Competition Authority prior to its completion. Otherwise, the involved firms can face penalties (article L.430-8-I of the same code).

The speed of the procedure will depend on the nature of the operation and the difficulties it raises. If it does not pose any particular difficulties or if the commitments offered by the parties solve any identified problems, the operation may gain authorisation with or without commitments after a quick examination phase, called Phase 1. The decision is rendered within 25 days of the date of receipt of a complete notification dossier. If any doubt of serious harm to competition remains at the end of the Phase 1, the Authority opens a Phase 2 examination in order to conduct a thorough analysis of the transaction. It examines in particular whether the operation is likely to affect competition. Following this examination (normally completed within 65 working days after the opening of Phase 2), the Competition Authority shall make a decision to either allow the operation without special conditions, authorise it subject to commitments or prohibit it.

Minister in charge of Mines

Under article 43 of Decree No. 2006-648 dated 2 June 2006 on mining and storage titles, the holder of a mining concession must advise the Minister in charge of Mines of any project that would, through an allocation of shares or by any other means, change the control of a company holding a mining title, or transfer to a third party all or part of the rights arising from the mining title. The holder of the mining concession is not authorised to implement his or her project (ie, an allocation of shares with a change of control) before the expiry of a two-month period from the Minister's receipt of the complete application, during which time the Minister may, after consulting the General Council of Economy, Industry, Energy and Technology, serve on the holder a decision that such operations would be incompatible with the preservation of his or her title. If deemed necessary, the Minister may extend this two-month period.

Minister of Economy

Decree No. 2014-479 dated 14 May 2014, which modified article R.153-2 of the Monetary and Financial Code, expanded the list of strategic sectors in which foreign investments in France require the prior authorisation of the Minister of the Economy pursuant to article L.151-3 of the Monetary and Financial Code. The decree, which affects both

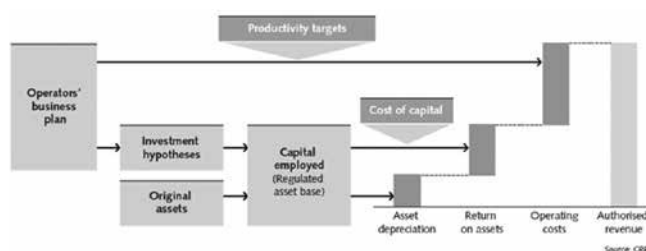
EU and non-EU investors, subjects investments to the prior approval of the Minister of Economy for certain types of investments (ie, the acquisition of a controlling interest in a French company whose main activity is subject to Decree No. 2014-479, acquisition of all or part of a branch of activity of such French company, or acquisition of more than 33.33 per cent of the shares of such French company).

The above applies where an activity is essential to guarantee the interests of the state with regard to public policy and security or national defence, including the supply of electricity, gas, hydrocarbons or other sources of energy.

30 In the purchase of a regulated gas utility, are there any restrictions on the inclusion of the purchase cost in the price of services?

Tariffs are set on the basis of the actual costs of an efficient operator by the CRE. It is unlikely that the regulator would accept including such cost in the tariff.

Indeed, the tariff design for gas regulated utilities is described as below by the regulator:



As indicated, the tariff is made up of three categories of costs: asset depreciation, return on assets, and operating costs. Therefore, even though the cost of capital is taken into account, the regulator will not pay attention to the purchase cost of a regulated utility when setting the tariff.

Note that the French state holds a golden share in the capital of Engie, the aim of which is to control ownership of major gas infrastructure assets (see question 7).

31 Are there any restrictions on the acquisition of shares in gas utilities? Do any corporate governance regulations or rules regarding the transfer of assets apply to gas utilities?

In addition to article 11 of Directive 2009/73/EC, Decree No. 2014-479 dated 14 May 2014 modified article R.153-2 of the Monetary and Financial Code to expand the list of strategic sectors in which foreign investments in France require a prior authorisation of the Minister for Economy, pursuant to article L.151-3 of the code. The decree, which applies to both EU and non-EU investors, subjects investments to a prior approval by the Minister for certain types of investments (acquisition of a controlling interest in a French company whose main activity

Update and trends

The opening of the domestic natural gas sector is increasing quickly, at least compared with the retail electricity market. Indeed, on 30 June 2016, 44 per cent of household users had concluded a competing offer contract. The proportion was 17.6 per cent on 31 March 2015.

The Court of Justice of the European Union stated in a recent decision (CJEU, 7 September 2016, aff C-121/15, ANODE) that a regulated tariff for the retail market could be temporary admitted, for strict reasons, but should not preclude indefinitely the achievement of a competitive market. The reasons accepted by the court were security of supply and territorial cohesion, which must be analysed by national jurisdictions. The dispute is now back before the Conseil d'Etat (the highest administrative court), which should rule in 2017 whether domestic regulated tariffs are consistent with EU law.

is subject to Decree No. 2014-479, acquisition of all or part of a branch of activity of the French company, or acquisition of more than 33.33 per cent of the shares of such French company).

This applies where an activity is essential to guarantee the interests of the state with regard to public policy and security or national defence, including the supply of electricity, gas, hydrocarbons or other sources of energy.

International

32 Are there any special requirements or limitations on foreign companies acquiring interests in any part of the natural gas sector?

See question 31.

33 To what extent is regulatory policy affected by treaties or other multinational agreements?

France's regulatory policy is widely affected by treaties and multinational agreements, EU legislation (both past and ongoing) and the Energy Charter Treaty (1994).

34 What rules apply to cross-border sales or deliveries of natural gas?

The same rules apply to cross-border sales and deliveries of natural gas as those applicable to national sales and deliveries of natural gas.

Transactions between affiliates

35 What restrictions exist on transactions between a natural gas utility and its affiliates?

Natural gas TSOs and DSOs are regulated operators that provide public services for the benefit of network users and the consumers they serve. European law (Directive 2003/55/EC of 26 June 2003) and

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French law (Law No. 2004-803 of 9 August 2004, and articles L.111-57 to L.111-60 of the Energy Code) prescribe obligations of independence and non-discrimination. The non-discrimination principle is based on the independence of the system operators from their parent companies, and on the implementation of the codes of conduct they must adopt. These codes contain very specific measures to ensure that discriminatory conduct regarding network access is excluded, and their application is subject to appropriate follow-up. The independence of the system operators helps to prevent discriminatory practices against competitors regarding other activities (production, supply, etc) carried out within the group they belong to, thereby limiting the potential for conflicts of interest.

36 Who enforces the affiliate restrictions and what are the sanctions for non-compliance?

The Competition Authority and the CRE; regarding sanctions imposed by the Competition Authority, see question 28.

According to article L.134-25, paragraph 2 of the Energy Code, the CoRDIS enforces the affiliate restrictions through financial sanctions. Under article L.134-27, if the person concerned does not comply within the time specified in the formal notice, the committee may impose a temporary ban on such person's access to the networks, structures and facilities mentioned in article L.134-19 for a period not exceeding one year and, if the breach did not constitute a criminal offence, a fine whose amount is proportionate to the seriousness of the breach, the situation of the person concerned, and the extent of the damage and benefits derived therefrom. This amount may not exceed 8 per cent of turnover before tax in the last financial year, increased to 10 per cent in the case of another violation of the same obligation. If the default has already been the subject of a financial penalty under other legislation, the penalty that may be imposed by the committee is limited so that the overall amount of fines does not exceed the highest amount that one of the penalties incurred.

Greenland

Per Hemmer, Johan Weihe and Rania Kassis

Bech-Bruun

Description of domestic sector

- 1 Describe the domestic natural gas sector, including the natural gas production, liquefied natural gas (LNG) storage, pipeline transportation, distribution, commodity sales and trading segments and retail sales and usage.

Greenland, the world's largest island, is an autonomous part of the Kingdom of Denmark (the Community of the Realm), which comprises Denmark proper, Greenland and the Faroe Islands.

Greenland had home rule from 1979 until 21 June 2009, when it obtained self government. Greenland's self government arrangement was established by Danish Act No. 473 of 12 June 2009 on Greenland self government, which entered into force on 21 June 2009. Greenland has extensive self government under the Act, which for most areas of government either transferred or provided for the transfer of the legislative power from the Danish parliament to the Greenland parliament and the executive power from the Danish government to the Greenland government (government).

As part of the self government arrangement, Greenland owns and has the right of disposal of all mineral resources in Greenland, including oil and natural gas.

Under the Greenland Self Government Act, the Greenland parliament may decide that all legislative and administrative powers in the area of mineral resources shall be transferred from the Danish state to Greenland's self-government authorities. The transfer was decided by the Greenland parliament on 23 October 2009 and became effective on 1 January 2010. Consequently, the legislative and executive powers over the mineral resources area are now held by Greenland's self-government authorities.

In connection with the transfer of powers, the former Danish Act on Mineral Resources in Greenland – which regulated prospecting, exploration and exploitation of oil, natural gas and minerals – was repealed and replaced by the present Greenland Parliament Act No. 7 of 7 December 2009 on mineral resources and activities of importance thereto (Mineral Resources Act). The main provisions on oil and gas licences in the present Mineral Resources Act are based on and correspond to the provisions on such licences in the former Danish Mineral Resources Act. All prospecting, exploration and exploitation licences granted under the former Danish Act are still effective, but are now governed by the present Greenland Act.

Exploration for oil and gas in Greenland began in the early 1970s in offshore areas in west Greenland. Comprehensive seismic surveys were carried out, and almost 21,000 line kilometres of reflection seismic data were acquired. In 1976 and 1977, five exploratory wells were drilled. Exploration was discontinued in late 1978. All wells were declared dry by their operators. However, in 1997, the Geological Survey of Denmark and Greenland began to carry out reinvestigations of the well data, and found that they suggested a hydrocarbon discovery in the Kangâmiut-1 well.

A licensing round for offshore areas in west Greenland was held in 1992 to 1993. As no applications were submitted, an open-door licensing policy was introduced in 1994. It covered both onshore and offshore areas south of 70°30'N in west Greenland and Jameson Land in east Greenland.

Subsequent investigations were carried out by Nunaoil A/S – a company then owned jointly by the Greenland home-rule authorities

and the Danish state, and now owned by Greenland's self-government authorities. The investigations confirmed the existence of cross-cutting reflectors. Based on these discoveries, a licence was awarded in 1996 to a consortium consisting of Statoil, Phillips Petroleum, DONG and Nunaoil. In 1998, a new licence was awarded to the same participants.

Licensing rounds were held in 2001, 2002, 2004, 2006 and 2007. In April 2008, an open-door licensing procedure was launched. It covered offshore areas in west Greenland and around Cape Farewell, the southernmost extent of Greenland. On 1 January 2010, it was succeeded by an open-door licensing procedure under the present Mineral Resources Act. The 2010 open-door licensing procedure covers offshore areas in the southern part of west Greenland and around Cape Farewell, and onshore areas in Jameson Land in east Greenland.

In October 2009, the government issued an invitation to apply for licences for exploration and exploitation of hydrocarbons (oil and natural gas) in two licensing rounds: the Baffin Bay Licensing Round 2010 and the Greenland Sea Licensing Round 2012–2013. The Baffin Bay Licensing Round, covering offshore areas of 151,358 square km in west Greenland, ended in December 2010, when the government issued seven new hydrocarbon exploration and exploitation licences. The Greenland Sea Licensing Round covers offshore areas of 50,000 square km in east Greenland. Companies that are members of the Kanumas Group could submit applications for licences in a special pre-round, which ended on 15 December 2012. The pre-round covered areas of 30,000 square km designated by the government in the ordinary round area of 50,000 square km. Subsequently, any company could submit applications for licences in the remaining parts of the ordinary round areas in a subsequent ordinary licence round. The deadline for submission was 15 October 2013. In December 2013, the government announced that it had decided to grant exclusive exploration and exploitation licences to three consortiums in four blocks in the Greenland Sea, based on the applications in the 2012–2013 Licensing Round. In 2014, open-door procedures were opened for licences for exploration for and exploitation of hydrocarbons in offshore areas in south-west Greenland and onshore areas in Jameson Land, east Greenland. In 2016, a licensing round was further held for the onshore areas of Disko Island and Nuussuaq Peninsula, with deadline for applications 15 December 2016. Licensing rounds for offshore areas in Baffin Bay and Davis Strait have finally been announced and are planned for 2017 and 2018 respectively. Two licences were relinquished in 2016. As at February 2017, 16 exploration and exploitation licences for hydrocarbons are in force.

So far, exploration activities have not led licensees to initiate any exploitation (production) activities. Many parts of the Greenland continental shelf area are still relatively unexplored. However, exploration for oil and gas has increased considerably in recent years, and a large number of licences for exploration and exploitation of oil and gas have been granted.

As of 16 February 2017, an offshore area of around 90,000 square km, approximately two times the size of Denmark, apart from Greenland, was covered by hydrocarbon exploration and exploitation licences. On the same date, 16 hydrocarbon exploration and exploitation licences and 13 hydrocarbon prospecting licences were in force.

Participants in the exploration and exploitation licences are Capricorn Greenland Exploration (four licences); PA Resources (one licence); ConocoPhillips (one licence); Shell (four licences); Maersk

Oil (one licence); ENI Denmark (two licences); Statoil (one licence); Chevron (two licences); Greenland Gas and Oil (two licences); DONG (one licence); BP Exploration Operating Company Ltd (two licences); Tullow Greenland Exploration Limited (one licence); and Nunaoil A/S (16 licences).

Participants in the prospecting licences are TGS-NOPEC Geophysical Company (three licences); Statoil Greenland (one licence); GX Technology (three licences); Capricorn Greenland Exploration (two licences); EMGS ASA (two licences); Greenland Gas and Oil Plc (one licence); Norwegian University of Science and Technology (one licence); GDF Suez (one licence); Shell (one licence); and Nunaoil A/S (one licence).

International oil companies from Canada, Europe and the US have thus been granted offshore oil and gas licences in Greenland. These companies are interested in oil and gas exploration and exploitation in Greenland for a number of reasons, one of them probably being the assessments of the petroleum potential in both west and east Greenland made by the US Geological Survey (USGS). For example, one assessment was issued in 2007 (Fact Sheet 2007-3077, August 2007) when the USGS completed an assessment of the potential for undiscovered, technically recoverable oil and gas resources in the East Greenland Rift Basins Province. The USGS estimated the mean undiscovered, conventional petroleum resources in that province to be approximately 31,400 MMBOE of oil, gas and natural gas liquids.

Natural gas and LNG are not consumed in Greenland. Greenland has no natural gas or LNG infrastructure or installations, including storage facilities and pipelines.

2 What percentage of the country's energy needs is met directly or indirectly with natural gas and LNG? What percentage of the country's natural gas needs is met through domestic production and imported production?

Natural gas and LNG are not consumed in Greenland.

In 2015, Greenland consumed 8,626 terajoules (TJ) of energy. Approximately 18.3 per cent of the consumed energy was domestically produced sustainable energy, mainly from hydropower and waste incineration plants.

From 2014 to 2015, the consumption of petroleum-based fuels, such as petrol (gasoline), diesel and other fuel oils, increased by approximately 0.9 per cent from 7,005TJ to 7,048TJ – equivalent to an increase from 198 million litres to 199 million litres. This means that approximately 90 per cent of Greenland's energy requirements were covered by petroleum-based fuels.

All petroleum-based fuels used in Greenland are at present supplied by foreign sources.

Government policy

3 What is the government's policy for the domestic natural gas sector and which bodies set it?

The Mineral Licence and Safety Authority (MLSA) (formerly the Bureau of Minerals and Petroleum) and the government apply some general policy principles for activities concerning hydrocarbon and mineral resources. The main objectives of the policy are to establish and maintain an attractive environment for prospecting, exploration and exploitation activities concerning hydrocarbons and other mineral resources in Greenland. Interests of oil and mineral companies are catered for in various ways and respects.

The government has decided to restructure the governmental authorities responsible for the administration of mineral resources. Subsequently, there are now four governmental authorities responsible for the mineral administration, with the Ministry of Mineral Resources and the underlying MLSA being responsible for the licence administration. The Ministry of Industry, Labour and Trade is responsible for issues relating to social impact assessments and impact benefit agreements. The Environment Agency for Mineral Resources is still the appropriate authority for all mineral resources environmental issues. Despite the new structure, applicants must still submit their licence applications to the MLSA.

A proper, effective and stable system of hydrocarbon regulation – to some extent similar to the Danish regulation – is established by the Mineral Resources Act and the model terms for hydrocarbon licences.

The Mineral Resources Act does not distinguish between unconventional and conventional sector regulation.

The general policy principles governing prospecting, exploration and exploitation of mineral resources, including natural gas, are stated in section 1 of the Mineral Resources Act: the purpose of the Act is to ensure appropriate exploitation of mineral resources and use of the subsoil for storage or purposes relating to mineral resource activities. The Act shall also ensure the appropriate regulation of matters of importance to mineral resource activities and subsoil activities. The Act further aims to ensure that activities under the Act are performed properly as regards safety, health, the environment, resource exploitation and social sustainability, as well as appropriately and in accordance with acknowledged best international practices under similar conditions.

The government and the MLSA are responsible for the main legal and administrative matters concerning prospecting, exploration and exploitation of mineral resources, including natural gas. This one-stop shop administration is user-friendly for oil, gas and mineral companies, and supports an administration based on overall and integrated assessments, decisions and actions.

In 2014, the government published its oil and mineral strategy for 2014–2018. The strategy stated that licensing rounds would be held in 2014 regarding Jameson Land and south-west Greenland. Both areas were subject to open-door licensing. Further, the strategy states that no licensing rounds would be held in 2015, but that licensing rounds will be held in 2016, 2017 and 2018. The 2016 licensing round comprised the granting of exclusive licences for exploration and exploitation of hydrocarbons in onshore areas on Disko Island and Nuussuaq Peninsula, west Greenland, while the licensing rounds planned for 2017 and 2018 concern offshore areas in Baffin Bay and Davis Strait respectively. The objective towards 2018 is to grant three to five mineral exploitation licences on an environmental and socially sustainable basis.

Regulation of natural gas production

4 What is the ownership and organisational structure for production of natural gas (other than LNG)? How does the government derive value from natural gas production?

Under the Greenland Self Government Act, the Greenland self-government authorities own and have the right of disposal of all mineral resources in Greenland, including natural gas.

Prospecting, exploration and exploitation of all mineral resources (including oil and natural gas) in Greenland may generally only be carried out under licences granted by the government.

An exploitation licence only allows the licensee to exploit and sell or use the covered mineral resources, for example oil or natural gas. The licence does not grant any kind of ownership or other similar legal title over the covered mineral resources (until exploited) or the covered licence area.

There is no specific hydrocarbon production taxation regulation in Greenland. However, fees and taxes are payable to the authorities in accordance with other legislation.

The Greenland Tax Act governs both personal and corporate taxation. The general corporate income tax rate is 30 per cent. The Greenland Tax Authority is responsible for collecting taxes and fees, except those governed by the Mineral Resources Act.

Pursuant to the Mineral Resources Act and the terms of licences for exploitation of hydrocarbon, licensees must pay certain fees and a royalties to the government. Two types of royalty concerning production of petroleum apply: a sales royalty and a surplus royalty. The sales royalty is based on the petroleum that is exploited and sold. The royalty is set out in the individual licences and is currently 2.5 per cent. The royalty is calculated and paid annually. The surplus royalty is basically a payment of an amount equal to a specific share of the licensee's profit from the activities under the licence. Comprehensive provisions on the calculation and payment of the surplus royalty are set out in the licences and their appendices containing accounting principles. The specific rate is set according to the calculated profit in three tiers. In the current model licence the rates are 7.5, 17.5 and 30 per cent, when the accumulated revenues exceed accumulated expenses by 35, 45 and 55 per cent, respectively.

Nunaoil A/S, the government-owned public limited company, is a mandatory participant in any hydrocarbon exploration and exploitation licence. Nunaoil's share of a licence is set out in the individual

licence and is 6.25 per cent in the current model licence. The participating interest of Nunaoil in an exploration licence is carried. This means that Nunaoil's share of costs, expenses, obligations and liabilities under the licence is borne solely by the other participants in the licence. If an exploration licence is extended as an exploitation licence, Nunaoil's participating interest is no longer carried.

The government and other government authorities, including the MLSA, do not carry out exploitation of oil or natural gas.

5 Describe the statutory and regulatory framework and any relevant authorisations applicable to natural gas exploration and production.

The Greenland regulatory regime for natural gas activities, including in particular the Mineral Resources Act, covers the Greenland land areas, territorial sea and continental shelf areas. The Mineral Resources Act does not distinguish between unconventional and conventional sector regulation.

Natural gas exploration and exploitation activities may be conducted both onshore and offshore. Currently there are only gas exploration activities offshore.

Onshore exploration and exploitation of natural gas will naturally be more difficult in those large parts of Greenland that are covered by the Greenland ice sheet, which covers 1.8 million square km of the total land area of 2.2 million square km.

Some minor areas in Greenland are off-limits for natural gas activities due to environmental or military considerations.

The main statutory rules regarding prospecting, exploration and exploitation of natural gas are laid down in the Mineral Resources Act. Part 4 (section 15) contains general rules on prospecting and Part 5 (sections 16 to 21) contains general rules on exploration and exploitation (production). Part 6 contains special rules on exploration and exploitation of hydrocarbons.

In 2012, Parliament passed an act on building and construction works relating to large-scale projects (Large-scale Act). The Large-scale Act applies, inter alia, to projects concerning licences granted pursuant to the Mineral Resources Act with a cost of construction above 5 billion Danish kroner. The Act stipulates a requirement for an environmental impact assessment and lays down minimum requirements with respect to foreign labour in large-scale projects.

Other main parts of the regulation concerning prospecting, exploration and exploitation of natural gas are set out in the government's licence terms:

- standard terms for prospecting licences – hydrocarbons (March 2009);
- model licence for exploration and exploitation of hydrocarbons – open-door areas onshore Jameson Land 2014 and Offshore South West Greenland 2014 (September 2014);
- model licence for exploration and exploitation of hydrocarbons in onshore areas in Disko Island and Nuussuaq Peninsula 2016 (September 2014, licensing round was held in 2016); and
- model licences for exploration and exploitation of hydrocarbons in offshore areas in Baffin Bay (2017) and Davis Strait (2018), respectively (September 2014).

Companies that are co-licensees – members of a licence group – must make and use a joint operating agreement, which is subject to the approval of the MLSA. The government has issued a model joint operation agreement in connection with each area, which generally must be used with only minor amendments.

The standard terms for prospecting licences, the model exploration and exploitation licences and the model joint operating agreement are all available on the MLSA website: www.govmin.gl.

Prospecting, exploration and exploitation of hydrocarbons in Greenland may only be carried out under licences granted by the government.

Any Greenland or foreign person or company may perform natural gas prospecting or exploration activities under a prospecting licence or an exploration licence, respectively, if the requirements for licensees and operators under such licences are met.

Under section 16(3) of the Mineral Resources Act, an exploitation licence may only be granted to a public limited company that only carries out activities under licences granted pursuant to the Act. The company must, as a general rule, be domiciled in Greenland. The

company must have the necessary technical capability and experience and financial capability.

Prospecting, exploration and exploitation licences are generally granted as hydrocarbon licences that cover both oil and natural gas. Prospecting licences are non-exclusive. Exploration and exploitation licences are exclusive.

The general selection criteria for granting exploration and exploitation licences are the company's technical capability and experience, financial capability and intended exploration and exploitation activities, including its environmental protection practices and procedures.

Prospecting licences are granted for up to five years at a time.

Licence periods for exploration licences are generally 10 years, but may be up to 16 years if justified by special circumstances. An exploration licence period may be extended by periods of up to three years at a time with the purpose of further exploration.

An exploration licence will be extended as an exploitation licence with the purpose of exploitation if the licensee has complied with the terms of the exploration licence, including the requirement to demonstrate a commercially exploitable deposit that the licensee intends to exploit. The licence periods for exploitation licences are generally 30 years, but may be extended up to 50 years if justified by special circumstances. Rights according to a licence cannot be transferred directly or indirectly without approval of the government. This follows from section 88 of the Mineral Resources Act.

Pursuant to the Mineral Resources Act and the various licence terms, licensees must pay certain fees. As mentioned in question 4, licensees under exploitation licences must also pay certain royalties to the government. In addition, Nunaoil A/S is a mandatory participant in any hydrocarbon exploration and exploitation licence, with a participating interest of 6.25 per cent and a carried interest during the exploration period.

The government is generally responsible for all legal and administrative matters concerning prospecting, exploration and exploitation of gas, subsoil storage of gas and establishment, and the operation of gas pipelines for transportation of gas in connection with said other activities governed by the Mineral Resources Act. All these activities are governed by the Mineral Resources Act.

Prospecting, exploration and exploitation licences may only be granted, amended and revoked by the government, which also must approve any direct or indirect transfer of a licence or a share of (participating interest in) a licence.

Administration of the Mineral Resources Act and all activities under it are generally carried out by the MLSA under the government.

The MLSA approves activities under prospecting, exploration and exploitation licences (to the extent approval is required), licensees' provision of security for the performance of their obligations, and plans for exploitation and decommissioning. In cooperation with the Greenland Minister of Mineral Resources, the MLSA also approves appointments of operators. Further, the MLSA supervises and inspects activities under licences and other activities covered by the Mineral Resources Act.

The Mineral Resources Act was changed on 1 January 2013 with immediate effect. The administration of environmental protection in hydrocarbon projects was separated from the MLSA, and placed with the Environment Agency for Mineral Resources.

The MLSA is a one-stop shop, however, and obtains the necessary approvals of, for instance, environmental impact assessment reports from the Environment Agency for Mineral Resources.

Administrative and regulatory decisions of the MLSA may be appealed to the Minister of Mineral Resources.

Administrative and regulatory decisions of the Minister of Mineral Resources cannot be appealed to any other public authority.

Decisions of the MLSA and the Minister may be brought before the Greenland courts, which may revoke or amend such decisions.

6 Are participants required to provide security or any guarantees to be issued with a licence to explore for or to store gas?

It follows from the Mineral Resources Act that a licence can stipulate that the licensee must provide security for certain obligations. Further, the model licence for exploration and exploitation of hydrocarbons states that the MLSA may request that the licensee provide security

for the fulfilment of its obligations. In practice, security must always be provided.

The MLSA has issued a model guarantee, which is a parent company guarantee covering, inter alia, all obligations and liabilities towards the Greenland self government, the Danish state and Nunaoil A/S.

Regulation of natural gas pipeline transportation and storage

7 Describe in general the ownership of natural gas pipeline transportation, and storage infrastructure.

At present, there are no natural gas pipelines or storage infrastructures in Greenland.

The main reasons for this are that Greenland has a huge land area, with most parts permanently covered by the ice sheet, with mostly small towns and settlements situated far apart and no production of natural gas. Another contributing factor is Greenland's geographical location – far away from neighbouring states and any other natural gas pipeline infrastructure.

For these and other reasons, it is unlikely that natural gas pipelines and storage infrastructures will be established in Greenland unless commercially exploitable deposits of natural gas are found and exploited. However, if that happens, natural gas pipelines and storage infrastructures may be established and operated by any company that has been granted a licence to do so by the government (see question 8).

8 Describe the statutory and regulatory framework and any relevant authorisations applicable to the construction, ownership, operation and interconnection of natural gas transportation pipelines, and storage.

Pipelines for transportation of natural gas in connection with its exploitation (production) and any subsequent storage in Greenland may only be established and operated under a licence to do so granted by the government under the Mineral Resources Act (see sections 2(2) and 21).

According to section 21 of the Act, such a pipeline licence may only be granted to a licensee under an exploitation licence and in connection with the government's approval of an exploitation plan pursuant to section 19 of the Act. The government may lay down licence terms on the pipeline and its use, etc, including terms on reversion (escheat) of the pipeline to the government (after termination of exploitation activities), coordination of several licensees' use of the same pipeline and the pipeline operator's obligation to provide transport services to others. The government may also lay down licence terms on payment of consideration to Greenland's self-government authorities. A pipeline licence may include terms on payment of an annual fee, calculated on the basis of the volume of gas that is or can be transported through the pipeline (volume fee) or terms on payment to Greenland's self-government authorities of a share of the profits from the activities covered by the licence (profits fee).

Natural gas may only be stored in the subsoil under a licence to do so granted by the government pursuant to the Mineral Resources Act (sections 2(2) and 39). A licence for subsoil storage of natural gas may be granted on specific terms. The licence period will generally be up to 50 years, but may be for a specified longer period or extended subsequently for a specified period if justified by exceptional circumstances.

Section 40 of the Mineral Resources Act provides that the government must set out in the licence terms the extent to which the licensee shall pay consideration to Greenland's self-government authorities. A licence may include terms on the payment of an annual fee, calculated on the basis of the size of the area covered by the licence (area fee) or on the basis of the volume of gas stored in the subsoil (volume fee). The licence terms may also provide for payment of a fee calculated on the basis of the use of the subsoil (usage fee) or payment to Greenland's self-government authorities of a share of the profits from the activities under the licence (profits fee).

The government is generally responsible for all legal and administrative matters concerning underground storage of natural gas and the establishment and operation of pipelines for transportation of natural gas in connection with its exploitation in Greenland. All these activities and their administration are governed by the Mineral Resources Act.

The government is also responsible for most legal and administrative matters concerning the establishment and operation of pipelines for transportation of natural gas not related to activities governed by

the Mineral Resources Act, that is, particularly transit transportation of natural gas.

In the continental shelf area, such transit transportation activities are primarily governed by the Danish Act on the Continental Shelf, but the government exercises its powers under that Act in accordance with the rules of the Greenland Mineral Resources Act. Matters concerning the protection of the marine environment are mainly governed by the Danish Marine Environment Protection Act as put into force in Greenland by the Danish executive order on entry into force in Greenland of the Marine Environment Protection Act.

In land areas and the territorial sea, such transit pipeline activities are governed by Greenland law, primarily general rules and principles concerning pipelines and related activities. There are no specific rules on such natural gas pipelines.

Under the Mineral Resources Act, pipeline licences and subsoil storage licences may only be granted, amended and revoked by the government, which also must approve any direct or indirect transfer of licence or a share of (participating interest in) a licence.

Administration relating to pipeline licences and subsoil storage licences is generally carried out by the MLSA. It approves activities under such licences (to the extent approval is required), licensees' provision of security for performance of their obligations, and plans for establishment, operation and decommissioning of any installations and facilities. In cooperation with the Minister of Mineral Resources, the MLSA also approves appointments of operators. The MLSA supervises and inspects activities under the licences.

The MLSA obtains the necessary approvals of, for instance, environmental impact assessment reports from the Environment Agency for Mineral Resources (see question 5).

9 How does a company obtain the land rights to construct a natural gas transportation or storage facility?

A licence to establish a natural gas transportation or storage facility is also a general permission to use the land and underground areas that are necessary for establishing the facility and performing other activities under the licence. In addition, according to section 93 of the Mineral Resources Act, the government may allow a licensee to initiate proceedings for the compulsory acquisition of real estate, with the purpose of enabling activities under the licence, to the extent compulsory acquisition is necessary to meet this purpose. Any compulsory acquisition must be effected in accordance with the rules of the Greenland Parliament Act on Compulsory Acquisition.

10 How is access to the natural gas transportation system and storage facilities arranged? How are tolls and tariffs established?

As mentioned in question 7, there are no natural gas transportation systems or storage facilities in Greenland. Currently, there is no specific regulation on access to the natural gas transportation system and storage facilities.

11 Can customers, other natural gas suppliers or an authority require a pipeline or storage facilities owner or operator to expand its facilities to accommodate new customers? If so, who bears the costs of interconnection or expansion?

There is no specific regulation on these matters. There are no natural gas pipelines or storage facilities in Greenland (see question 7).

12 Describe any statutory and regulatory requirements applicable to the processing of natural gas to extract liquids and to prepare it for pipeline transportation.

There is no specific regulation on these matters. There are no natural gas pipelines or storage facilities and no natural gas production (exploitation) in Greenland (see question 7).

13 Describe the contractual regime for transportation and storage.

There are no natural gas pipelines or storage facilities in Greenland (see question 7). Consequently, there are no contractual regimes for the transportation or storage of natural gas.

Regulation of natural gas distribution

14 Describe in general the ownership of natural gas distribution networks.

There is no regulation on these matters. There are no natural gas distribution networks in Greenland (see question 7).

15 Describe the statutory and regulatory structure and authorisations required to operate a distribution network. To what extent are gas distribution utilities subject to public service obligations?

See question 14.

16 How is access to the natural gas distribution grid organised? Describe any regulation of the prices for distribution services. In which circumstances can a rate or term of service be changed?

See question 14.

17 May the regulator require a distributor to expand its system to accommodate new customers? May the regulator require the distributor to limit service to existing customers so that new customers can be served?

See question 14.

18 Describe the contractual regime in relation to natural gas distribution.

See question 14.

Regulation of natural gas sales and trading

19 What is the ownership and organisational structure for the supply and trading of natural gas?

There is no regulation on these matters. There is no sale, trading or supply of natural gas in Greenland.

20 To what extent are natural gas supply and trading activities subject to government oversight?

See question 19.

21 How are physical and financial trades of natural gas typically completed?

See question 19.

22 Must wholesale and retail buyers of natural gas purchase a bundled product from a single provider? If not, describe the range of services and products that customers can procure from competing providers.

See question 19.

Regulation of LNG

23 What is the ownership and organisational structure for LNG, including liquefaction and export facilities, and receiving and regasification facilities?

There is no regulation on these matters. There are no LNG activities or facilities, including liquefaction or export facilities or receiving and regasification facilities, in Greenland.

24 Describe the regulatory framework and any relevant authorisations required to build and operate LNG facilities.

See question 23.

25 Describe any regulation of the prices and terms of service in the LNG sector.

See question 23.

Update and trends

The deadline for the 2016 licensing round (covering onshore areas in Disko Island and Nuussuaq Peninsula) was 15 December 2016. At the time of writing the Ministry of Mineral Resources had not published any information on the applicants or number of applications received.

In 2016 the MLSA has processed and approved one application for carrying out exploration activities. The approval concerns a licensee's collection of seismic data off the coast of north-east Greenland under a prospecting licence granted in 2014. The seismic surveys involve the use of three vessels and covers up to 10,000 line kilometres. Prior to the approval of the exploration activities planned, an environmental impact assessment was also submitted and approved by the Mineral Licence and Safety Authority, following a public consultation phase.

Mergers and competition

26 Which government body may prevent or punish anticompetitive or manipulative practices in the natural gas sector?

Competition, market practice and merger control are generally governed by the Greenland Parliament Act No. 1 of 15 May 2014 on competition and executive orders issued under the Act.

Pursuant to the Act, the Greenland Competition Council administers the Competition Act and rules. The Competition Authority takes care of the daily administration and also acts as a secretariat to the Competition Council.

The Competition Council reviews and prosecutes anticompetitive and abusive practices on all markets. This includes cases concerning agreements that restrict competition, abuse of dominant position, state aid and equal treatment of state and public undertakings.

In practice, the Competition Authority assumes many of these responsibilities on behalf of the Competition Council, which only handles cases concerning principal matters or matters of particular importance.

The Competition Act contains regulations on merger clearance. The merging parties must inform the Competition Authority when a merger has taken place. The notification will be used by the Competition Council to render a decision in relation to approval of the merger.

Decisions made by the Competition Council or the Competition Authority may be brought before the Greenland courts.

27 What substantive standards does that government body apply to determine whether conduct is anticompetitive or manipulative?

Section 6 of the Competition Act provides that undertakings must not make agreements that restrict competition and that such agreements, for example, may be agreements that:

- set buying or selling prices or other business terms;
- limit or control production, sale, technical development or investment;
- divide markets or sources of supply;
- use different terms for goods or services of the same value in relation to business partners that thereby are put in an inferior competitive position;
- set as a condition for making an agreement the acceptance of delivery of additional goods or services that, based on their nature or commercial practice, have no connection with the object of the agreement;
- coordinate the competitive activities of several parties by making a joint venture; or
- set binding resale prices or in any other manner seek to prevent business partners deviating from guide prices.

Sections 7 to 10 contain various exceptions to the main rules in section 6.

The Competition Council may exempt agreements that otherwise would be considered anticompetitive. If parties to such an agreement wish to procure the Competition Council's approval of the agreement,

they must notify the Competition Council. Notification is made by submitting an application to the Competition Authority.

For an agreement to be exempted, it must contribute to strengthening efficiency in the production or distribution of goods or services or promoting technical or economic development. In addition, consumers must be allowed a fair share of the resulting benefit. An agreement must not contain indispensable restrictions. Finally, the agreement must not afford the parties the possibility of substantially eliminating competition.

A notification has effect from the time when the Competition Authority receives a complete application. Any anticompetitive activities that take place after the Competition Authority has been notified and that is governed by the notified agreement will be exempted while the Competition Council is considering the notification.

Section 11 of the Competition Act states that one or several undertakings must not abuse a dominant position in a market and provides some examples of such abuse.

Currently, there is no natural gas production, transportation, storage or consumption in Greenland (see questions 1 and 7). Therefore, the competition authorities have not yet set any standards to determine anticompetitive or manipulative behaviour in the natural gas sector. However, undertakings must generally provide their goods and services on objective, transparent and non-discriminatory terms.

28 What authority does the government body have to preclude or remedy anticompetitive or manipulative practices?

The Competition Council may preclude or remedy any anticompetitive or manipulative practices by ordering undertakings to discontinue such practices and by taking various other appropriate actions. These include terminating or abolishing agreements or business terms, setting mandatory prices or business terms, or ordering delivery of goods or services to specific parties.

29 Does any government body have authority to approve or disapprove mergers or other changes in control over businesses in the sector or acquisition of production, transportation or distribution assets?

The Competition Act was revised as of 1 July 2014 to include a regulation on clearance of mergers. The merging parties must inform the Competition Authority when a merger has taken place. After the notification has been made the Competition Authority will decide if the merger can be approved.

30 In the purchase of a regulated gas utility, are there any restrictions on the inclusion of the purchase cost in the price of services?

There is no regulation on these matters. There are no gas utilities in Greenland.

31 Are there any restrictions on the acquisition of shares in gas utilities? Do any corporate governance regulations or rules regarding the transfer of assets apply to gas utilities?

See question 30.

International

32 Are there any special requirements or limitations on foreign companies acquiring interests in any part of the natural gas sector?

There are generally no special requirements or limitations on foreign companies acquiring interests in the natural gas sector. However, a licensee under an exploitation licence must, as a general rule, be a public limited company domiciled in Greenland (see question 5).

33 To what extent is regulatory policy affected by treaties or other multinational agreements?

Regulatory policy and activity are generally not affected significantly by international treaties or other multinational agreements.

Greenland is not a member of the European Union, and EU rules generally do not apply to Greenland.

Denmark is a member of the World Trade Organization, and its rules apply to Greenland.

34 What rules apply to cross-border sales or deliveries of natural gas?

There are no specific rules that apply to cross-border sales or deliveries of natural gas. The terms and conditions for such sales and deliveries are generally subject to the terms of the agreement between the parties and Greenland's general contract law.

Transactions between affiliates

35 What restrictions exist on transactions between a natural gas utility and its affiliates?

There is no regulation on this matter. There are no natural gas utilities in Greenland (see questions 1 and 7).

36 Who enforces the affiliate restrictions and what are the sanctions for non-compliance?

See question 35.

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Description of domestic sector

- 1 Describe the domestic natural gas sector, including the natural gas production, liquefied natural gas (LNG) storage, pipeline transportation, distribution, commodity sales and trading segments and retail sales and usage.

The Hungarian domestic natural gas sector comprises:

- exploration and production operations primarily in eastern Hungary, with a production of 57.3PJ in 2015. The preponderant share of the domestic natural gas exploration and production is covered by MOL Nyrt (MOL), a public company listed on the Budapest stock exchange, 25.2 per cent of whose shares are owned by the state;
- the high-pressure natural gas transmission system is owned and operated by FGSZ Földgázszállító Zrt (FGSZ), an affiliate of MOL, with the exception of the Slovak-Hungarian interconnector, which is owned and operated by Magyar Gáz Tranzit Zrt (MGT), a state-owned company controlled by the Ministry of Interior. FGSZ is a subsidiary of the vertically integrated MOL and operates within the independent transmission system operator (ITO). Domestic production is being fed into the national grid through 14 domestic production entry points. The high-pressure pipeline system is connected with five out of Hungary's seven neighbouring countries, namely, Austria, Croatia, Romania, Ukraine and Slovakia;
- natural gas storage facilities in five locations with four of the storage facilities operated by Magyar Földgáztároló Zrt (MFGT), controlled by the state-owned MVM Zrt (MVM) with a total capacity of 4.43 billion cubic metres and one storage facility operated by MMBF Zrt (MMBF), a subsidiary of the state-owned Magyar Fejlesztési Bank Zrt (MFB), with a capacity of 1.9 billion cubic metres;
- natural gas distribution networks, mainly owned and operated by vertically integrated natural gas company groups;
- a natural gas trading platform, the Central Eastern European Gas Exchange (CEEGEX); and
- natural gas trading operations, including trading and supply on the liberalised market and supply of end users eligible for universal service.

- 2 What percentage of the country's energy needs is met directly or indirectly with natural gas and LNG? What percentage of the country's natural gas needs is met through domestic production and imported production?

Approximately 30 per cent of Hungary's energy needs have been met by natural gas in the past few years, with a constant trend of gradually decreasing volumes.

In recent years, the great majority, around 80 to 85 per cent, of natural gas consumption has been covered by imports. In 2016, imports entered Hungary from three directions: 56.1 per cent from Austria through the HAG pipeline, 43.4 per cent from Ukraine through the Brotherhood pipeline and 0.5 per cent from Slovakia. The majority of imported natural gas comes from Russia in accordance with the long-term natural gas contract between Magyar Földgázkereskedő Zrt (MFGK), a subsidiary of the state-owned MVM, and Gazprom, which was renewed in 2015.

Government policy

- 3 What is the government's policy for the domestic natural gas sector and which bodies set it?

Hungary's energy policy is outlined in the National Energy Strategy 2030, prepared by the Ministry of National Development and approved by the Parliament on 3 October 2011, according to which the main pillars of Hungary's energy strategy are the security of supply, competitiveness and sustainability. It is primarily the task of the Ministry of National Development to implement the national energy strategy.

One of the main objectives of the National Energy Strategy was to strengthen the role of the state in the energy sector. Accordingly, the state (primarily through state-owned entities) has been actively acquiring interests in the natural gas sector during the past few years (eg, MVM bought the Hungarian wholesale natural gas trading and storage businesses from E.ON, MFB acquired MMBF, a natural gas storage company, from MOL) and created one single state-owned enterprise, ENKSZ Zrt to provide natural gas universal service throughout the entire country. For the most recent developments, see 'Update and trends'.

Regulation of natural gas production

- 4 What is the ownership and organisational structure for production of natural gas (other than LNG)? How does the government derive value from natural gas production?

Natural gas below the ground is the property of the state, and producers acquire ownership over natural gas upon exploitation.

MOL is the dominant natural gas producer. In 2015 and 2016, in addition to MOL, winners of concession tenders for hydrocarbon exploration included O&GD (affiliated with Sandhill Petroleum), HHE Group (affiliated with Aspect Holdings), and Panbridge Hungary (affiliated with Bankers Petroleum).

The government derives value from natural gas production through mining royalties and concession fees paid by the producers, as well as various taxes. Under the Mining Act, mining royalties are paid based on the quantity of natural gas measured at the wellhead and a ratio that varies based on several factors such as annual produced quantity and the commencement date of production. In the case of production based on concessions, the minimum concession fee is determined in the concession tender by the Ministry of National Development. However, tenderers may propose a higher concession fee in their tender proposals, a factor that is then taken into account when evaluating the tender proposals.

- 5 Describe the statutory and regulatory framework and any relevant authorisations applicable to natural gas exploration and production.

At present, the whole territory of Hungary is a closed area for mining hydrocarbons, pursuant to the declaration of the Hungarian Mining and Geological Authority (MBFH), effective as of 1 December 2016. In closed areas, exploration, development and production may only be conducted based on concession contracts concluded between the state and the winner of the concession tender issued for the respective territory. Concessions can be granted for a maximum of 35 years, which may be extended by a maximum of additional 17.5 years. In the case

of a concession, the exploration period may not last longer than four years, which may be extended by one half of the original duration of the exploration period.

One producer can obtain an exploration right on a maximum of 15,000 square km of the exploration territory. Once the exploration phase has been completed, the producer may apply to the competent mining authority for the establishment of a mining field. The establishment of a mining field is conditional upon the granting of an IPPC licence (in the case of prospective natural gas production of 500,000 cubic metres or more per day) or an environmental protection licence (in the case of prospective natural gas production of below 500,000 cubic metres per day) by the environmental authority. The producer must commence production no later than five years after the mining field was established. Such term may be extended once by an additional five years upon the request of the producer. The regional mining authority authorises the production on the mining field by approval of the technical operation plan submitted by the mining company after the exploration phase has been completed.

The same rules apply to unconventional natural gas exploration and production, with the exception being that the mining authority authorises the use of hydraulic fracturing when approving the technical operation plan, which is a precondition to the commencement of production.

In Hungary, mining activities are authorised and monitored by the MBFH, being the central authority, and five regional governmental authorities acting as regional mining authorities (jointly, Mining Authority). In general, the regional mining authorities act on first instance and the MBFH acts on second instance in the administrative procedures falling within the competence of the Mining Authority. The MBFH acts on first instance in specific cases prescribed by law such as, inter alia, the administration of mining royalties and supervisory fees, the preparation of the decisions of the Ministry of National Development on mineral reserve management and concession contracts, and the preparation of the mining and gas industry safety regulations.

The resolutions of the regional mining authorities may be appealed before the MBFH. The MBFH's first and second instance resolutions may be challenged before the court within 30 days of the date of delivery of the resolution on the grounds of infringement of law.

6 Are participants required to provide security or any guarantees to be issued with a licence to explore for or to store gas?

Because the whole territory of Hungary is a closed area for mining hydrocarbons (see question 5), the collateral to be provided by a producer of natural gas is specified in the relevant concession tender and agreement.

Regulation of natural gas pipeline transportation and storage

7 Describe in general the ownership of natural gas pipeline transportation, and storage infrastructure.

Transmission system

Nearly the entire Hungarian natural gas transportation infrastructure is owned by FGSZ, a wholly owned subsidiary of the vertically integrated MOL Group that holds a transmission system operator (TSO) licence and operates as an ITO. The only exception is the Slovak-Hungarian interconnector, which was completed in 2015 and is owned and operated by MGT. MGT is an ownership unbundled TSO owned by the state through MFB, while the ownership rights over MGT is exercised by the Ministry of Interior.

FGSZ is currently designated to control and coordinate the national transmission grid.

Storage

There are two natural gas storage facility operators in Hungary, both operating underground storage sites (depleted reserves).

MFGT runs four gas storage facilities in Zsana, Hajdúszoboszló, Pusztaderics and Kardoskút, with a total annual working gas storage capacity of 4.43 billion cubic metres. MFGT has been a member of the state-owned MVM Group since 2013, when MVM acquired it from E.ON.

MMBF operates a storage facility in Szőreg with a technical capacity of 1.2 billion cubic metres for strategic storage. The technical capacity available for commercial purposes is 7.4 billion kWh. In MMBF, the majority shareholder is the state through MFB, while its minority shareholder is the Hungarian Hydrocarbon Stockpiling Association (MSZKSZ).

8 Describe the statutory and regulatory framework and any relevant authorisations applicable to the construction, ownership, operation and interconnection of natural gas transportation pipelines, and storage.

Transmission system

The TSO may construct transmission pipelines based on its TSO licence, whereas the developer of a transmission pipeline – a licensee that is engaged in the construction of pipelines but is not entitled to operate them – may construct transmission pipelines based on a transmission pipeline development licence. The transmission pipeline development licence was introduced in 2014 in order to enable the construction of a new transmission pipeline without a TSO licence. In addition to the above licences issued by the Hungarian Energy and Public Utility Regulatory Authority (Energy Office), an environmental licence issued by the Environmental Authority and a construction licence issued by the Mining Authority are required.

For the transmission of natural gas, the TSO must hold a TSO licence. As the main conditions to obtaining a TSO licence, the TSO must fully own the transmission pipeline it operates, must have a registered capital of at least 2 billion forints, and must fulfil several other criteria, including economic, technical and personnel requirements. Prior to issuing the TSO licence, the Energy Office conducts a certification procedure to review compliance with the unbundling requirements. Any new TSO licence may only be issued to a company not belonging to a vertically integrated undertaking unless the Commission grants an exemption for well-founded reasons. FGSZ could maintain its former ownership structure and remain the wholly-owned subsidiary of the vertically integrated MOL, as its transmission system was constructed before 3 September 2009 and it implemented the ITO model. The Energy Office adopts a resolution regarding the compliance with the unbundling requirements and conveys its resolution to the European Commission as described in Regulation (EC) No. 715/2009. The Commission then delivers its opinion to the Energy Office, which then adopts its final decision regarding the certification of the TSO.

Storage

A company wishing to engage in natural gas storage needs to obtain a mining licence from the Mining Authority and must have a mining field. Within five years of the establishment of the mining field, the storage company is obliged to commence its storage activity. The five-year deadline can be extended once by additional five years.

In addition, a gas storage operator has to obtain a natural gas storage licence from the Energy Office. As a precondition to the issuance of a storage licence, the operator must be the majority owner of the storage facilities it operates or have asset management rights relating to such facilities. The natural gas storage operator's registered capital must be at least 500 million forints. Certain unbundling requirements also apply to gas storage operators.

The construction of storage facilities is subject to an environmental licence issued by the Environmental Authority and a construction licence issued by the Mining Authority.

The Energy Office

The general licensing and supervisory body of the natural gas sector is the Energy Office, which is also responsible for the electricity, district heating, waterworks and waste management sectors. The Energy Office is an independent regulatory authority vested with independent competences and responsibilities.

The Energy Office's competences include, inter alia, licensing, approval of licensees' business codes and general terms and conditions, supervision of compliance by licensees and approval of the 10-year network development plan prepared by TSOs and distribution system operators (DSOs). The Energy Office also monitors competition in the natural gas market, conducts market analyses and identifies licensees with significant market power. In the framework of its

consumer protection powers, it also investigates certain network users' complaints against licensees.

The Energy Office's resolutions may not be appealed, but may be challenged before the court within 30 days of the date of delivery of the resolution on the grounds of infringement of law. The submission of a request for judicial review does not automatically suspend the execution of the Energy Office's decision. However, such suspension may be requested from and ordered by the competent court with certain statutory exceptions. The competent court may amend or annul the Energy Office's resolution if it finds it unlawful and, in the latter case, the court will order the Energy Office to reopen the case.

The Energy Office may also issue legislation in the form of decrees within the scope of the specific authorisations granted under certain Hungarian acts, primarily in the field of regulated prices. Such Energy Office decrees may not be appealed or challenged before the courts.

9 How does a company obtain the land rights to construct a natural gas transportation or storage facility?

There is no need for an easement for the placement of distribution and transportation pipelines or the natural gas storage facilities on public lands (ie, land owned by the state or municipalities). The owner of the public land is obliged to tolerate the placement and construction of the relevant pipelines and facilities, while the licensee is obliged to pay compensation for damages caused by using the public land.

If the transportation or distribution pipeline or the storage facility is to be constructed on private property, the licensee must first seek to conclude an agreement with the owner, trustee or other user of the property to establish an easement right. The easement right is designed to ensure that the licensee has access to the land so that it can perform maintenance works, repairs and take the steps necessary to prevent and overcome breakdowns for the period of the construction and operation of the relevant facility.

In the event that such an agreement cannot be concluded, the easement and the amount of compensation will be established by the metropolitan and county government authority upon the request of the licensee, in accordance with the provisions regarding expropriation proceedings.

Further, DSOs may establish rights to perform preparatory work, cable rights as well as utilisation rights based on the agreement between the licensee and the owner of the property. In the absence of an agreement, the rights to perform preparatory work, cable rights and utilisation rights are granted by the Mining Authority. If necessary, the DSOs may request the expropriation of private property for the above purposes. The licensee must compensate the owner or the user of the property for any damages caused.

10 How is access to the natural gas transportation system and storage facilities arranged? How are tolls and tariffs established?

All network users have the right to access the natural gas transportation and distribution pipelines and storage facilities. TSOs and DSOs are obliged to grant access to the infrastructures for those requesting to connect. The conditions of access must be non-discriminatory, must not provide grounds for abuse, must not contain unjustified restrictions or jeopardise the security of supply and the quality of services. However, in emergency supply situations, TSOs may limit or refuse access to the network.

TSOs and storage facility operators receive fees for system operation and for ancillary services. Such tariffs are regulated and defined by the Energy Office in decrees (legislative instruments). Currently, Energy Office Decree No. 8/2016 regulates the framework and Energy Office Decree No. 13/2016 defines the amount of the transmission and storage fees. The transmission and storage fees must be transparent, publicly available and proportionate, and applied objectively in a non-discriminatory manner. The transmission and storage fees cover the justified operating expenses of the system operators, as well as their capital investments and a certain rate of return thereon. To determine the justified cost base of the transmission and storage fees, the Energy Office conducts a supervision of the system operators' justified costs once every four years (the latest cost supervision ended at the end of 2016). Transmission and storage fees are uniform throughout the country.

MSZKSZ is responsible for Hungary's strategic gas reserves. In the case of a gas emergency situation, only members of the MSZKSZ will have access to the strategic reserve. Membership in MSZKSZ is mandatory for all natural gas universal service providers, traders and producers selling natural gas directly to network users as well as network users transporting gas cross-border or purchasing gas on the regulated natural gas market. The quantity of the strategic reserve is determined by the Ministry of National Development in a decree. The minimum quantity of the strategic reserve is 915 million cubic metres. As of 30 November, 2016, the actual quantity of the strategic reserve was 920 million cubic metres.

In addition to emergency situations, in the event the trading licence of any natural gas trader is suspended, the TSO will be granted access to the strategic reserves to secure the uninterrupted supply of the affected customers until the last resort service provider is designated by the Energy Office.

11 Can customers, other natural gas suppliers or an authority require a pipeline or storage facilities owner or operator to expand its facilities to accommodate new customers? If so, who bears the costs of interconnection or expansion?

In the case of individual connection requests, the TSO and DSO (as applicable) must fulfil with all requests for access, except when:

- connection is not possible for technical reasons;
- there is any legal impediment;
- the applicant refuses to pay the initial connection fees;
- any necessary licence as prescribed in other specific legislation is not available; or
- other licensees of the network do not have the necessary capacities and the applicant refuses to commit to fulfilling the conditions for ensuring such capacities.

In the event the relevant network development is necessary for ensuring connection to the network, the network user is obligated to pay the cost of the investment to the system operator as set out in the Energy Office's relevant decree. Connection fees differ based on whether the applicant is eligible for universal services, and other factors such as the amount of requested capacity.

The TSO designated to control and coordinate the national transmission grid (currently FGSZ) is responsible for coordinating the systematic review of the capacity of the interconnected natural gas system and the planning of future developments. Each operator must assess capacities available on its own transmission, distribution pipelines or storage facilities on an annual basis. Based on the capacity assessment, the system operators propose a 10-year development plan for the TSO designated to control and coordinate the national transmission grid. Such TSO presents the harmonised proposal of the development plan to the Energy Office for approval, following consultation with the representative organisations of licensees and customers. The Energy Office examines the 10-year network development plan and investigates whether it is in compliance with EU-wide development plans, and defines in its approving resolution the investments that have to be executed in the next three years, as well as any changes in the investments already approved in the previous development plan. The costs of the implementation of the 10-year network development plan are included in the system tariffs.

12 Describe any statutory and regulatory requirements applicable to the processing of natural gas to extract liquids and to prepare it for pipeline transportation.

Only natural gas that complies with the quality requirements set forth in Government Decree No. 19/2009 regarding the execution of Act XL of 2008 on natural gas supply (Gas Act), including especially heat value and the maximum permissible contaminant content, may be fed into the national grid.

13 Describe the contractual regime for transportation and storage.

The business codes of the licensees contain detailed terms regarding their contractual arrangements. Their business codes and any changes thereto are subject to the approval of the Energy Office.

Transmission system

The business code of FGSZ lists the different types of agreements the company enters into with network users and contains the general rules applicable to such agreements. Its business code contains, among its annexes, the different sets of general terms and conditions applicable to the various types of agreements and the standard contract forms. The standard contract forms include, inter alia, contracts regarding connection to the grid, natural gas transportation, network development, the odourisation of natural gas and system operation.

Storage

The business codes of the storage facility operators contain standard contract forms for the different services they provide. For example, MFGT offers seasonal services, meaning that during the feed-in and the withdrawal periods the customer cannot interrupt the storage. MMBF offers the Storage Plus service, which provides high flexibility for customers since it allows feed-in and withdrawal at any given time during the season. Flat capacity service enables the customer to feed in or withdraw full capacity irrespective of the storage level. The Peak Plus service allows customers an additional peak capacity on top of the seasonal storage product and guarantees a feed-in within a shorter time than the regular 175 days and a withdrawal within a shorter period than the standard 175 days. Interruptible service allows the interruption of storage within the day.

Regulation of natural gas distribution

14 Describe in general the ownership of natural gas distribution networks.

At present, 10 companies hold natural gas distribution licences in Hungary, five of which are considered major DSOs: FŐGÁZ, owned indirectly by the state; E.ON DDGÁZ and E.ON KÖGÁZ, belonging to the German E.ON Group; ÉGÁZ-DÉGÁZ, belonging to the French GDF Suez Group; and TIGÁZ-DSO, belonging to the Italian ENI Group.

15 Describe the statutory and regulatory structure and authorisations required to operate a distribution network. To what extent are gas distribution utilities subject to public service obligations?

The distribution of natural gas is subject to authorisation under the Gas Act and, as such, can only be performed when the DSO is in possession of an operating licence issued by the Energy Office. For the distribution of natural gas, the DSO must own the majority of the distribution pipelines it operates. In addition, a DSO's registered capital may not be less than 300 million forints or, in the case of a distribution network supplying less than 100,000 network users, 20 million forints. The applicants must meet certain other criteria when applying for a licence (eg, the financial, business, technical and personnel requirements needed for the continuous and long-term execution of the activity and unbundling requirements).

Distribution licences are issued for an indefinite term. The authorisation for distribution also means an obligation to fulfil all access requests to the distribution system to the extent the prospective network user meets the connection criteria prescribed by law.

16 How is access to the natural gas distribution grid organised? Describe any regulation of the prices for distribution services. In which circumstances can a rate or term of service be changed?

DSOs are obliged to grant access to all customers, network users and system-operators wishing to connect to their system. The conditions of access and restrictions described in questions 10 and 11 apply. However, under Government Decree No. 265/2009, certain consumers' access cannot be restricted, such as household customers, network users responsible for public supply and institutions responsible for patient care.

The provisions relating to system usage fees described in question 10 apply also to the fees payable to DSOs. However, system usage fees applicable to distribution networks are not uniform throughout the country, but vary for each DSO, due primarily to the different cost structure of the DSOs (eg, because of geographic differences between the DSO service areas).

17 May the regulator require a distributor to expand its system to accommodate new customers? May the regulator require the distributor to limit service to existing customers so that new customers can be served?

DSOs are obligated by law to connect customers to their respective systems if they meet the statutory conditions of connection, as discussed in question 11. The provisions relating to the 10-year development plan is also applicable to DSOs.

18 Describe the contractual regime in relation to natural gas distribution.

The business codes of the DSOs list the different types of agreements the companies enter into with network users and contain general rules applicable to such agreements. The business codes also contain the different general terms and conditions applicable to the different types of agreements and the standard contract forms. The standard contract forms include, inter alia, connection contracts, distribution system usage agreements and capacity booking agreements.

The business codes of DSOs and any changes thereto are subject to the approval of the Energy Office.

Regulation of natural gas sales and trading

19 What is the ownership and organisational structure for the supply and trading of natural gas?

Natural gas traders either trade natural gas with other licensees (the wholesale market) or supply end customers (the retail market). In line with EU legislation, the natural gas trading market is fully liberalised, with the exception of the universal service.

Wholesale trading of natural gas typically occurs through bilateral transactions, while the use of international standard agreements such as the ones developed and maintained by the European Federation of Energy Traders or International Swaps and Derivatives Association are not as frequent in Hungary. Moreover, in 2013, the Hungarian natural gas trading platform, CEEGEX, was established and trades at spot and in physical delivery products. Nevertheless, the role of CEEGEX remains secondary compared with the Vienna-based CEGH and other more liquid European gas hubs.

On the wholesale natural gas trading market, MFGK itself controls the majority of the sources of natural gas in Hungary primarily through the long-term gas supply agreement with Gazprom and its contractual arrangements with MOL for purchasing a large part of its domestic natural gas production.

Other major players on the Hungarian wholesale natural gas trading market are MET Magyarország Zrt (MET) and FŐGÁZ (owned by the state through MFB).

Around 40 companies hold a natural gas trading licence, but not all are active in the retail segment. The largest stakeholders on the retail market are MFGK, E.ON Energiaszolgáltató Kft (E.ON Group), FŐGÁZ and MET. Recently, the liberalised natural gas retail market segment has been going through a consolidation marked by MET's acquisition of the Hungarian retail business of GdF Suez Energia Magyarország Zrt and by MÁSZ's (Magyar Áramszolgáltató Kft, an electricity supplier majority owned by the RWE Group) acquisition of the open market business of Tígáz Zrt, while Magyar Telekom Nyrt outsourced its natural gas (and electricity) retail activities to E2 Hungary Zrt, a joint venture it established with MET.

Residential customers and users with a purchased capacity of 20 cubic metres or less are eligible for universal service, which entitles them to purchase natural gas at regulated prices and with a higher level of consumer protection. On 1 October 2016, the state-owned ENKSZ Zrt (through FŐGÁZ) completed the project of gradually taking over the supply of all natural gas universal service customers following the surrender of the licences by all former universal service providers.

20 To what extent are natural gas supply and trading activities subject to government oversight?

Natural gas trading is subject to licensing by the Energy Office. The Energy Office may issue two types of natural gas trading licence: regular and restricted. A regular natural gas trading licence allows a trader to supply customers and to engage in trading with other traders. Such traders may also obtain a universal service provider licence.

A restricted natural gas trading licence authorises its holder for wholesale trading only and does not allow its holder to supply customers. A restricted natural gas trading licence may be granted to a company incorporated in any member state of the European Economic Area.

21 How are physical and financial trades of natural gas typically completed?

Physical and financial trades of natural gas are typically concluded as over-the-counter contracts.

22 Must wholesale and retail buyers of natural gas purchase a bundled product from a single provider? If not, describe the range of services and products that customers can procure from competing providers.

In principle, there is no institutional single provider: both wholesale and retail markets operate on an unbundled basis, and all network users have the right to book capacities up to the amount of their purchased capacities.

In the wholesale segment, capacities may be booked by either the seller or the buyer and may be done on the entry or exit point depending on the agreement of the parties. There is no need for capacity booking on the virtual trading point, because the capacities there are unlimited.

In the liberalised retail segment, typically, end users assign their right to book capacities to their supplier; therefore, the supplier (being a natural gas trading licensee) books the capacities on the transmission and distribution system. Usually, only end users with large natural gas consumption, such as power plants and industrial users, book the capacities themselves.

In the universal services segment, the universal service provider typically receives a mandate from their customers to handle their distribution system usage agreement and to represent them towards the DSO. Therefore, in practice, universal service providers book the capacities for their customers, unless customers opt out.

During 2015, both TSOs launched their respective electronic capacity booking platforms in line with the European Union Commission Regulation 984/2013/EU establishing a Network Code on Capacity Allocation Mechanisms in Gas Transmission Systems (CAM NC).

Regulation of LNG

23 What is the ownership and organisational structure for LNG, including liquefaction and export facilities, and receiving and regasification facilities?

There is no LNG operation in Hungary, because Hungary does not have a direct connection to the sea.

24 Describe the regulatory framework and any relevant authorisations required to build and operate LNG facilities.

Not applicable.

25 Describe any regulation of the prices and terms of service in the LNG sector.

Not applicable.

Mergers and competition

26 Which government body may prevent or punish anticompetitive or manipulative practices in the natural gas sector?

The Hungarian Competition Authority (Competition Authority) and the European Commission are entitled to punish anticompetitive practices in the natural gas sector under the general rules of competition law. Further, the Energy Office has the power to impose ex ante as well as ex post obligations on natural gas licensees in the case of anticompetitive or manipulative practices.

27 What substantive standards does that government body apply to determine whether conduct is anticompetitive or manipulative?

The general prohibitions on agreements restricting competition and abuse of a dominant position apply in Hungary.

An agreement typically restricts competition if, inter alia, it fixes prices, restricts production or distribution, divides the sources of supply on the market, prevents new market entry, applies discriminatory sale or purchase conditions, or unreasonably bundles services, unless exempted by law.

A natural gas licensee is in a dominant position if it may conduct its economic activities in a given market in a manner largely independent from others without having to take into consideration the market practices of its competitors, suppliers or business partners. The abuse of such a dominant position may be subject to scrutiny under competition law.

Further, the provisions of Regulation 1227/2011/EU of the European Parliament and of the Council of 25 October 2011 on wholesale energy market integrity and transparency (REMIT) along with its implementation rules enacted by the European Commission in December 2014, as well as related Hungarian implementing legislation, are applicable in Hungary and aim to detect and deter market manipulation and insider trading.

28 What authority does the government body have to preclude or remedy anticompetitive or manipulative practices?

Upon finding certain conduct anticompetitive, the Competition Authority may, inter alia, impose any number of the following:

- declare such conduct unlawful;
- order its termination;
- prohibit its continuation;
- prescribe certain obligations in connection with it; or
- impose a fine.

The Energy Office periodically conducts market analyses of the natural gas markets (both wholesale and retail). If, as a result of such analyses, the Energy Office finds that a natural gas company has significant market power in the relevant market, it may impose ex ante obligations relating to transparency, non-discrimination, price caps and cost-based pricing. Further, in certain cases, the Energy Office may, inter alia, impose the obligation of holding periodic public auctions and publishing a reference offer, impose price constraints and prohibit unreasonable bundling.

If the Energy Office finds that a natural gas licensee pursues anticompetitive conduct, it may levy a fine and modify or withdraw the licence of such gas company.

It is the competence of the Energy Office to detect and deter market manipulation and insider trading in line with the REMIT regulation and its implementing legislation.

29 Does any government body have authority to approve or disapprove mergers or other changes in control over businesses in the sector or acquisition of production, transportation or distribution assets?

Competition Authority procedure

Provided that the statutory annual domestic net sales revenue thresholds are met, a notification must be filed with the Competition Authority. Based on such initial notification, the Competition Authority will decide, within eight days, whether to:

- reject the notification in case the transaction does not qualify as a merger, the revenue thresholds are not met, the notification is premature or does not originate with an entitled party;
- close the case in the apparent absence of any significant competition issues and issue an official certificate thereof; or
- initiate an investigation in the presence of potential competition concerns.

When investigating a merger, the Competition Authority assesses whether the transaction significantly decreases the level of competition in the relevant market or markets. The Competition Authority issues its decision within 30 days of receipt of the notification (or its supplements, if needed) if it finds that the level of competition will not decrease significantly as a result of the transaction (Phase I review). In any other case, the Competition Authority will issue its decision within four months of receipt of the notification (or its supplements, if needed) (Phase II review). The Competition Authority may extend the deadline of a Phase I review by 20 days and that of a Phase II review by two months. Further, the clock is stopped during any outstanding data

Update and trends

A major reform of the Act on Administrative Procedures and the Judicial Review of Administrative Acts is expected to enter into effect at the beginning of 2018. The Act on the Common Rules of Administrative Procedures (Act No. CL of 2016) has already been enacted and published and will enter into force on 1 January 2018. This act will replace and repeal the legislation currently providing the framework of the procedures of the Mining Authorities and the Energy Office (Act No. CXL of 2004 on Administrative Procedures). In January 2017, the bill on the judicial review of administrative acts was referred back to the Hungarian parliament for reconsideration by the Constitutional Court, but is also expected to be modified, adopted and enacted in early 2017. The reform of administrative procedures necessitates the modification of the Mining Act, the Natural Gas Act and related lower-level legislation.

During 2016, FŐGÁZ took over the natural gas universal service obligations throughout the whole of Hungary. FŐGÁZ is a subsidiary of MFB, the state-owned Hungarian Development Bank, but is controlled by ENK SZ, a state-owned entity, based on a special agreement on the exercise of shareholders' votes. The former universal service providers other than FŐGÁZ (E.ON, GdF Suez and ENI) surrendered their respective licences and the Energy Office designated FŐGÁZ to provide a natural gas universal service in the respective areas and finally in the whole of Hungary. ENK SZ is envisaged to expand its

portfolio and take over the electricity universal service obligations from the current suppliers as well as to provide district heating supply services in the future. According to news reports, the state is also interested in the acquisition of the natural gas distribution networks in Hungary to create a non-profit integrated natural gas utility service.

Recently, the competitive natural gas retail market has been going through a consolidation marked by MET's acquisition of the Hungarian competitive market business of GdF Suez Energia Magyarország Zrt and by MÁSZ's (Magyar Áramszolgáltató Kft, an electricity supplier controlled by the RWE Group) acquisition of the competitive market business of Tígáz Zrt, while Magyar Telekom Nyrt outsourced its natural gas (and electricity) retail activities to E2 Hungary Zrt, a joint venture it established with MET.

In 2016, six hydrocarbon exploration and exploitation concessions were successfully tendered in Hungary, all of which were won by MOL.

CEEGEX, the Hungarian natural gas exchange, is undergoing developments to catch up with more liquid regional natural gas exchanges. A significant step for CEEGEX was to expand its portfolio and launch its intraday products on 3 October 2016, whereby next hour and within-day (rest-of-the-day) products can be traded on the CEEGEX Spot Market for the Hungarian Virtual Point as well as local points of key importance.

requests issued by the Competition Authority. As a result of its investigation, the Competition Authority may find that the merger does not substantially lessen competition in the given market or markets, prescribe prior or subsequent obligations (eg, voluntary undertakings, divesting certain assets) or prohibit the merger.

As a general rule, control may not be exercised before the Competition Authority closes the case in the apparent absence of any significant competition issues or finds the absence of any significant competition issues as a result of its investigation. However, in the case when an investigation is necessary, upon a well-substantiated request of the merging companies, the Competition Authority may authorise the exercise of control by the acquiring company before the investigation is concluded. Notification of the Competition Authority is not needed if the merger falls within the competence of the European Commission or if the government issues a decree that qualifies the transaction as a merger of strategic importance at the national level.

Energy Office approval

The Energy Office's prior approval is required for a merger or demerger, a winding-up without a legal successor and a decrease of the registered capital by at least one-quarter of a natural gas licensee. Further, the transfer or other disposal of fundamental assets of a natural gas licensee or the outsourcing of a substantial part of its licensed activity are also subject to the Energy Office's prior approval.

The Energy Office's prior approval is also required for an acquisition of voting rights or influence to control the voting rights in excess of 25, 50 or 75 per cent of a natural gas licensee (with certain exceptions). Notification to the Energy Office is sufficient (and prior approval is not required) in the event of an acquisition (whether direct or indirect) of each of 5 per cent of the voting rights of, or control over, a natural gas company if the share of voting rights or control is between 5 and 50 per cent or 75 and 90 per cent, and of the acquisition of each of a 1 per cent increase in the share of voting rights or control of between 91 and 99 per cent. The Energy Office issues an acknowledgement of such notification.

The Energy Office issues its approval of the above-mentioned transactions within 60 days and its acknowledgement of notification of the acquisition of influence within 40 days of receiving the application (or its supplements, if needed).

The Energy Office may refuse to approve the above-mentioned transactions or set certain conditions to approving transactions if they may pose a potential threat to:

- the security of supply or public safety;
- the enforcement of compliance with energy policy objectives;
- discharge of activities subject to licensing; or
- the regulations determining the fees and quality of transmission, distribution, storage and universal services.

In the event of non-compliance with the requirement of notification of acquisition of influence, or in the absence of the prior approval or the confirmation of acknowledgement of the Energy Office (as the case may be), the acquiring party will not be able to exercise voting rights stemming from the shares in relation to the company – except for dividend rights – and may not be entered into the shareholders' register or the members' register.

30 In the purchase of a regulated gas utility, are there any restrictions on the inclusion of the purchase cost in the price of services?

Regulated prices are, in principle, based on the least-cost principle, and follow a specific methodology and calculation of defining the cost structure and the recognised costs of the licensees that do not specifically include such an element.

31 Are there any restrictions on the acquisition of shares in gas utilities? Do any corporate governance regulations or rules regarding the transfer of assets apply to gas utilities?

Certain statutory restrictions apply to the acquisition of specific facilities and licensees in addition to the approvals and notifications mentioned in question 29, as follows:

- The establishment, modification or termination of the pre-emption rights with respect to the shares of MFGK (as the legal successor of the former public utility wholesaler) must be notified to the Energy Office. The Energy Office does not approve transactions that would result in the breach of such a pre-emption right.
- The state has a statutory pre-emption right with respect to natural gas storage facilities, including emergency storage facilities, the real property related to natural gas storage facilities and the shares of the natural gas storage licensees. The state must be the majority owner of emergency storage facilities.
- To ensure the implementation of the ownership unbundling rules, a company engaging in natural gas or electricity generation or trading, or its controlling shareholder, may not acquire control over the TSO, whether directly or indirectly. Shareholdings may not be acquired in any natural gas licensee by the TSO, the DSOs and the natural gas storage operators, whereas each of the three latter entities may acquire shareholdings in another like entity respectively.

International

32 Are there any special requirements or limitations on foreign companies acquiring interests in any part of the natural gas sector?

Further to the requirements described in questions 29 and 31, the Energy Office's prior approval is required for the execution of any

transaction that would allow a person or persons from a third country outside the EU to acquire control over the TSO or its controlling shareholder. The Energy Office may refuse to approve such a transaction in the same instances as detailed in question 29.

33 To what extent is regulatory policy affected by treaties or other multinational agreements?

EU regulations are directly applicable in Hungary and the Hungarian regulatory framework of the natural gas sector is aligned with EU directives.

34 What rules apply to cross-border sales or deliveries of natural gas?

The same rules apply to cross-border capacities as described in question 22. Further, the importer or exporter must notify the TSO regarding its shipper partner on the other side of the border five business days prior to shipping, which can only be accepted if the shipper partner is confirmed by the cooperating TSO.

Transactions between affiliates

35 What restrictions exist on transactions between a natural gas utility and its affiliates?

The unbundling rules of the Third Energy Package aim to ensure that the TSOs, DSOs and storage operators operate independently from other market players (particularly from producers and suppliers) belonging to the same group of vertically integrated undertakings. These unbundling rules set certain restrictions on transactions between the TSO and the vertically integrated undertaking.

In Hungary, FGSZ implemented the ITO model.

Under the ITO model, transactions between the TSO and the vertically integrated undertaking are strictly regulated. For example, the TSO may not receive any services from the vertically integrated undertaking and may only provide services to the vertically integrated

undertaking in a non-discriminatory manner under terms and conditions formerly approved by the Energy Office. Any commercial and financial relation between the TSO and the vertically integrated undertaking must also comply with market conditions, and the Energy Office's approval is required for any commercial and financial agreements entered into between the TSO and the vertically integrated undertaking. Further, the TSO may not contract the same consultants or external contractors as the vertically integrated undertaking for auditor services, IT systems and equipment or security access systems.

MGT operates under the ownership unbundling model; thus, the above-mentioned restrictions do not apply to MGT.

Further to the above, the horizontally and vertically integrated natural gas licensees must separate the accounts of the different licensed activities, thereby ensuring transparency and non-discrimination, and excluding cross-subsidisation and distortion of competition.

36 Who enforces the affiliate restrictions and what are the sanctions for non-compliance?

The Energy Office certifies that TSOs comply with the unbundling requirements and supervises continuous compliance. In addition, an independent compliance officer supervises whether TSOs comply with the unbundling rules. The compliance officer prepares and submits a compliance report annually to the Energy Office for approval.

The auditor of each licensee must include a note in its independent audit report stating that the internal rules of the respective licensee on accounting separation and the transfer prices applied between affiliates ensure that no cross-subsidisation occurs.

If a licensee breaches the rules on accounting separation or unbundling, the Energy Office may, inter alia, impose a fine. Eventually, if the breach continues, the Energy Office may modify or withdraw the relevant licence of the licensee and, in the case of TSOs, the Energy Office may appoint another entity duly certified as being unbundled, which would operate the transmission grid.

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Description of domestic sector

1 Describe the domestic natural gas sector, including the natural gas production, liquefied natural gas (LNG) storage, pipeline transportation, distribution, commodity sales and trading segments and retail sales and usage.

Directive 2003/55/EC provided for the definitive opening of EU member states' gas markets to competition, and therefore helped Italy to create a true internal gas market. Regarding access to the market, a gradual approach has been adopted in opening the sector to competing companies. Measures have been put in place to protect users' interests and allow them to exercise the right to choose their gas supplier. The principles stated in Directive 2003/55 have been further developed by Directive 2009/73/EC, which repealed Directive 2003/55 and introduced new rules aimed at accomplishing a more effective unbundling of companies active in the transmission, storage and distribution of gas. The unbundling of companies involved in the energy sector is a key part of the Third Energy Package, a new set of regulations issued by EC bodies. It mainly means the effective legal and functional separation of network activities from supply and production activities to ensure competitiveness among companies in an open and free European market. Directive 2009/73 has finally been implemented in Italy by means of Legislative Decree No. 93/2011, which sets out the general unbundling principles for undertakings operating in the Italian gas sector. In January 2012, following the implementation of the Third Energy Package, Snam SpA (the Italian natural gas infrastructure company operating the grid) was functionally separated from its parent company Eni (the Italian company that, prior to liberalisation, exercised a monopoly on gas production and distribution). Further, on 25 May 2012, the Italian Presidency of the Council of Ministers approved a Decree defining the unbundling of Snam's ownership from Eni. According to the Decree, Eni had to sell a relevant participation in Snam's corporate capital to Cassa Depositi e Prestiti, a company limited by shares under public control, with the government holding 70 per cent. The acquisition was completed on 15 October 2012. With specific regard to natural gas production, it should be noted that production in 2016 was equal to 4,781,945,800 standard cubic metres, significantly lower than in past years (for instance, in 2012 the production was 8,510,656,176 standard cubic metres).

Currently, about 119 oil and gas fields are being exploited in Italy, 69 of which are offshore. The gas produced is conveyed to specific central processing units, where it is made compliant with quality specifications for transportation and distribution. The most significant units for gas reprocessing are located in Casalborsetti, Ravenna Mare, Rubicone, Fano, Falconara, Pineto and Crotona. The Italian national gas system mainly relies on imports from abroad (approximately 78 per cent is imported, and about 75 per cent of its gas comes from countries such as Algeria, Libya and Russia), conveyed to Italy using major international pipelines or shipped by gas tankers. Eni, through a number of subsidiaries operating along the chain of the gas industry, still plays a major role in gas import, transportation through Italian pipelines, gas storage and the management of gas terminals. Gas distribution and transportation are carried out through local pipeline grids usually connected to consumers' houses. This is a regulated activity performed under concession granted by the relevant local authority.

Conversely, the sale of gas is completely liberalised. Sales are currently carried out by a considerable number of firms (more than 500), among which the most relevant are Eni Gas&Power (Eni group) and Enel Gas (Enel group).

Finally, there are 13 gas storage fields in Italy. All fields are located in exhausted gas fields. According to the National Mining Office For Hydrocarbons and Georesources, as of 31 March 2015, Italy was confirmed as the second largest European country in terms of storage capacity; indeed the national storage capacity was equal to 16,562 billion standard cubic metres.

2 What percentage of the country's energy needs is met directly or indirectly with natural gas and LNG? What percentage of the country's natural gas needs is met through domestic production and imported production?

According to the Italian Oil and Gas Producers Union, after a decade of constant growth, the upward trend for renewable sources held back in 2015 (19 per cent of domestic energy demand, after touching 21 per cent in 2014), and compared with the average of the 27 EU member states, Italy still relies heavily on oil and gas sources owing to the reduced production of coal and the country's lack of nuclear energy production. According to data provided by the Ministry of Economic Development, natural gas represents the second energy source in Italy (oil being the first at 36.1 per cent), covering around 35 per cent of the national energy requirements. The trend of the past decade shows that Italy is very dependent on importing, especially natural gas, because of the fast decline in domestic production of hydrocarbons.

Government policy

3 What is the government's policy for the domestic natural gas sector and which bodies set it?

The activities that an operator may carry out in Italy with reference to hydrocarbons are defined by Italian law as prospecting, exploration and exploitation. All these activities may be carried out, provided that the Ministry of Economic Development has previously authorised the relevant operator. Prospecting and exploration permits may be granted to persons or entities having the necessary technical and financial capabilities. To be awarded a permit, another condition is that the applicant must commit to set up a suitable technical and administrative structure in Italy. To this end, the Ministry recently issued a new Directorial Decree, dated 15 July 2015, and implemented a regulation clarifying the meaning of 'technical and economic capability' of oil and gas operators, establishing that such operators must have net assets of €10 million or, alternatively, corporate capital of €120,000 plus a guarantee from a controlling company, which, however, shall have net assets of at least €10 million, or from a bank. In addition, and for the purpose of assessing their technical requisites, operators wishing to obtain a permit must submit further documentation proving their technical capabilities (eg, details of the company and of its internal bodies and staff; or a report on the main works carried out in the past three years either directly or, in the case of a newco, through a controlling company).

In general, exploitation may be carried out by means of concessions, which are granted by the Ministry to those operators that have found mineral resources during the exploration phase.

Recently, in order to favour the exploitation of natural resources within the Italian national territory, foster investment in hydrocarbons and achieve the supply targets outlined in the National Energy Strategy Plan, the Italian legislator introduced a significant reform in the gas regulatory framework. Under article 38 of the '*Sblocca Italia*' (Unlock Italy) Decree No. 133/2014, converted into Law No. 164/2014 of 11 November 2014 the government introduced 'single mining title' for onshore oil and gas exploration and production, in lieu of exploration and concession titles. This decree specifies that all operators holding an exploration permit or with an application pending at the date of publication of the reform (11 November 2014) had 90 days to choose whether to turn to the new 'single mining title' procedure by filing the relevant application with the competent Ministry of Economic Development, or to stick to the currently standard procedural regime (ie, exploration permit and subsequent production concession). It is worth pointing out that, according to the *Sblocca Italia* Decree, the new authorisation procedure shall be completed within 180 days from the date when the relevant operator submitted its application. By a Ministerial Decree of 25 March 2015, the Ministry of Economic Development implemented the *Sblocca Italia* Decree, and clarified that the 'single mining title' gives successful applicants title to carry out exploration activities in a given area for a period of six years (which could be extended for two additional three-year periods) and, in the case of hydrocarbon discovery, title to obtain a production concession for a period of 30 years (which can be extended for an additional 10-year period).

The main interests of the Ministry, as well as of the Italian Authority for Energy and Gas (AEEG), are to foster competition and guarantee the stock of hydrocarbons necessary to meet national energy requirements.

Regarding the regulation of unconventional gas, unfortunately, notwithstanding several years of research and prospecting of subterranean Italy, surveys have so far evidenced the complete absence of shale gas or tight gas in the Italian territory.

Regulation of natural gas production

4 What is the ownership and organisational structure for production of natural gas (other than LNG)? How does the government derive value from natural gas production?

The state is the owner of gas reserves located in the Italian territory. Natural gas resources may be exploited by private operators on the basis of a specific concession issued by the Ministry of Economic Development (see question 3). Any operator awarded a concession must pay a land use rent each year for the whole duration of the concession, to be calculated on the acreage of the relevant concession field. Additionally, a royalty equal to 10 per cent is due to the state for an onshore and offshore production concession. As some Italian regions have a special status, additional royalties may be applicable according to the region in which the reserve is located.

5 Describe the statutory and regulatory framework and any relevant authorisations applicable to natural gas exploration and production.

In principle, mining titles are granted on the basis of an administrative proceeding whose main steps are the following:

- prospecting and exploration permits may be granted to persons or entities having the necessary technical and financial capabilities – additionally, applicants must commit to set up a suitable technical and administrative structure in Italy;
- the application for a prospecting or exploration permit must be submitted to the Ministry of Economic Development along with the relevant work programme and other possible documents as the case may be – the Ministry, once the application is duly submitted, publishes it in the Italian Gazette for Hydrocarbons (this step being necessary to open up competition among other possible applicants, who will have three months starting from the date of the publication to submit their applications for the same geographic area);
- after the said three months from the publication of the application in the Italian Gazette for Hydrocarbons, the Ministry must request its technical committee to release an approval – the committee shall issue its approval, if any, within 60 days from the date of the Ministry's request;

- in most cases, an environmental impact assessment must be requested from the Ministry of Environment, which must issue its assessment within 90 days starting from the date it was notified. Approvals from other public bodies may be requested from time to time and depending on the area of the relevant application (namely, in cases where an application is made for the obtainment of a permit in Sicily, local authorities must release their approval; in cases where a request is submitted for an offshore permit, the Ministry of the Navy must release its approval); and
- once the approval of the Ministry of Environment has been released (as well as other relevant approvals), the Ministry of Economic Development may grant the permit to the applicant.

In 2010, following the oil spill in the Gulf of Mexico, the government implemented measures (Legislative Decree No. 128/2010) aimed at protecting the environment and ecosystem. Such measures prohibit gas offshore research and exploration within 12 miles from the boundaries of coastal and marine-protected areas. The Decree also bans offshore research and exploration within 12 nautical miles from the outer perimeter of the above-mentioned protected areas. However, on 22 June 2012, the government adopted a decree introducing new opportunities relating to the exploration, prospecting and production of hydrocarbons. In Decree No. 83/2012, it is provided that all the restrictive measures set out in Legislative Decree No. 128/2010 are inapplicable to those authorising procedures 'pending on the date of entry into force of D. Lgs. 128/2010'.

As a consequence, many companies are now entitled to resubmit applications that had been previously rejected or that had been subject to a significant reduction of their original layout. The new limit of '12 miles from the coastlines', beyond which it will be possible to carry out exploration, prospecting and production activities relating to oil and gas, will be applicable only to new authorising procedures. Such new limit has also been extended to gas hydrocarbons. Recently, the Italian Financial Act (No. 208/2015), with the aim of fostering further investments in the hydrocarbons sector, qualified hydrocarbons prospecting, exploration and production as activities of 'national interest'. Such new qualification is expected to make the relevant authorising processes faster.

The maximum duration for this process should be 330 days from the date when the application is filed with the Ministry of Economic Development. However, such term is in most cases extended, mainly due to delays in public bodies issuing their approvals.

Furthermore, in order to increase safety at sea in the hydrocarbons sector, Legislative Decree 145/2015, implementing EU Directive 2013/30/EU, lays down the requirements that every company must comply with in order to operate in the field of oil and gas. Among other things, in the event of serious accidents, operators shall take all suitable measures to limit their consequences for human health and the environment. To verify the correct execution of the law, an ad hoc committee composed of several experts from the hydrocarbon sector has been set up.

While the Ministry of Economic Development is competent on the issuance of authorisations and concessions, the AEEG is the independent body that regulates, controls and monitors the gas sector and market in Italy. The AEEG's role and purpose is to protect the interests of users and consumers, promote competition and ensure efficient, cost-effective and profitable nationwide services with satisfactory quality levels. Its remit includes the definition of a reliable and transparent tariff system combining the economic aims of gas operators with the public interest as well as protecting the environment and promoting an efficient use of energy resources. The authority also provides an advisory and reporting service to the government and parliament, and issues opinions and recommendations on matters concerning the gas and electricity markets. Additionally, the AEEG plays an active role in creating a standardised system in the energy sector in compliance with the EU legislation, and in implementing the integration of the Italian electricity and gas markets with the European market.

All AEEG decisions and regulations may be appealed, either to the ordinary administrative jurisdiction or by filing a complaint directly to the authority.

With respect to the regulation of unconventional gas, considering the fact that so far no shale gas or tight gas has been found in the Italian territory, no relevant regulation is in place in this regard.

6 Are participants required to provide security or any guarantees to be issued with a licence to explore for or to store gas?

As outlined in question 3, companies that apply for the award of a licence must provide financial guarantees in the form of corporate capital equal to or above €10 million, or corporate capital of €120,000 plus a guarantee from a controlling company or from a bank.

The *Sblocca Italia* Decree sets out a general principle whereby any operator requesting the new 'single mining title' is required to provide adequate bank guarantees or suitable insurance policies in line with their work programme. In addition, the operator shall provide evidence that it has the financial capabilities to cover any costs deriving from potential environmental accidents.

Regulation of natural gas pipeline transportation and storage

7 Describe in general the ownership of natural gas pipeline transportation, and storage infrastructure.

Legislative Decree No. 164/2000 introduced a right for operators to have access to gas transport, storage and processing facilities located in the Italian territory. The Decree also granted the AEEG the power to set out the relevant tariffs and non-discriminatory criteria to allow new operators to use the national grid (grid codes). The gas transport grid, divided into the national and regional grids, is operated by a small number of companies. The main transport company, Snam SpA, is the major operator in the sector and manages the national grid. Second is Società Gasdotti Italia SpA, which operates a number of regional networks.

8 Describe the statutory and regulatory framework and any relevant authorisations applicable to the construction, ownership, operation and interconnection of natural gas transportation pipelines, and storage.

By means of Law 24 March 2012 No. 27 new facilities for transportation and dispatching of natural gas that are intended to implement the national grid system are considered to be of public interest; for this reason, they are subject to prior Ministry of Economic Development authorisation. Usually, enterprises interested in this kind of business enter into specific agreements with national and local bodies. The activity of gas storage is operated on the basis of concessions granted to operators following public tender procedures.

9 How does a company obtain the land rights to construct a natural gas transportation or storage facility?

The Ministry of Economic Development, in accordance with the relevant local authorities and provided that the public interest is met, may grant private investors an authorisation to build up facilities for the purpose of implementing the national grid as well as for the purpose of covering national energy requirements.

Once the Ministry has declared that the public interest has been met and has issued the above authorisation, the relevant local authorities (municipalities and other local authorities, as the case may be) are entitled to expropriate the lands to allow private investors to build up the authorised facilities. In such case, an indemnity is to be paid to the expropriated owners.

Recently, to develop Italy's gas storage capacities and increase competitiveness among companies, the government issued Legislative Decree No. 130/2010, also known as the Storage Decree, with the purpose of increasing the number of storage facilities throughout the country. In accordance with such Decree, a new storage capacity of 4 billion cubic metres has been targeted for those operators who have the intention to implement new storage infrastructures or to increase the capacity of those already existing.

10 How is access to the natural gas transportation system and storage facilities arranged? How are tolls and tariffs established?

The AEEG, through Resolution No. 137/02 and subsequent amendments, set out the rules for free access to the transportation system, as well as guidelines for the implementation of the grid codes. On the basis of the principles contained in such Resolution, Snam SpA (the entity managing the national grid) has drafted its own grid code, which

sets out transparent and non-discriminatory rules regulating access to and use of the transport service on its gas pipeline grid. With respect to gas storage, the government has recently extended the natural duration storage concession to 30 years. Further, storage concessions can be renewed once for a 10-year period.

The AEEG established tariffs for gas system users and for storage in such a way as to achieve a fair balance between the benefits to users and operators of gas terminals. In so doing, the AEEG aimed at guaranteeing a fair remuneration of the invested capital. Since 2001, the AEEG has been regulating the natural gas transport tariff system through Resolution No. 120/2001, as subsequently amended and implemented, which lays down the criteria for determining such tariffs. Companies that manage gas facilities set out tariffs according to the above-mentioned AEEG rules and subject to the supervision of the AEEG.

With specific reference to tariffs applicable to gas transport, the final resolution of the AEEG is ARG/gas No. 514/2013 (last revised with Resolution 587/2015). This resolution contains provisions concerning general charges, and is aimed at making their application transparent as well as integrating charges within the scope of the regulation of tariffs for gas transport and dispatching services for the regulatory period from 2014 to 2017.

As regards tariffs applicable to gas storage, for the period from 2015 to 2018, the AEEG issued a resolution (531/2014/R/gas) approving common fees due to storage companies for storage and metering services.

11 Can customers, other natural gas suppliers or an authority require a pipeline or storage facilities owner or operator to expand its facilities to accommodate new customers? If so, who bears the costs of interconnection or expansion?

Pursuant to article 8 of Legislative Decree 164/2000, companies carrying out activities relating to gas transportation have the obligation to allow customers (as well as to any other entity such as hospitals or schools) to connect to their grid upon request. Such companies, however, may refuse to provide a connection in the event that this is unfeasible either for technical or economic reasons. The AEEG is the competent authority for both regulating and supervising this phase of the gas industry (except for competition issues, which are supervised by the Italian antitrust authority (IAA)). Capacity and access are regulated in grid codes that must be drafted in compliance with AEEG guidelines and that are subject to the approval of the AEEG. Snam SpA drafted its own grid code, which contains provisions regulating the right of access. The AEEG may require operators to accommodate new customers.

12 Describe any statutory and regulatory requirements applicable to the processing of natural gas to extract liquids and to prepare it for pipeline transportation.

There is no specific regulation covering the processing of natural gas to extract liquids. However, the AEEG has a general power of supervision over the quantity and quality standard requirements that are set forth in the grid codes elaborated by the relevant transportation companies in accordance with the guidelines provided for by the AEEG.

13 Describe the contractual regime for transportation and storage.

Transportation agreements may provide either for continuous daily supplies of gas or for intermittent supplies based on actual requirements. Transport agreements are usually covered by bank guarantees whereby the purchaser secures the payment of transport tariffs.

Gas transport agreements often have a preliminary nature, and the transfer of property occurs at the moment of delivery of the gas. In addition, they include standard clauses, such as the take-or-pay clause, whereby the purchaser commits either to take the whole quantity of gas set forth in the agreement, or to take a minor quantity and pay an additional predetermined forfeit amount.

The AEEG influences the drafting of agreements of this nature by issuing guidelines to be implemented in the relevant grid codes.

Storage is an activity that can be carried out only on the basis of a concession issued by the Ministry of Economic Development. This concession may be awarded exclusively to entities having specific technical and economic capabilities that provide the Ministry with a storage programme that meets the public interest.

Regulation of natural gas distribution

14 Describe in general the ownership of natural gas distribution networks.

In the past, the ownership structure of distribution grids was made up of a large variety of companies (private or controlled by municipalities). Notwithstanding the fact that the number of local gas distributors has recently decreased, the final distribution phase – from pipeline to consumers – is still characterised by strong fragmentation. There are about 236 gas distribution operators, the most important being Snam, which controls a market quota equal to 23 per cent, and 2i Rete Gas (formerly Enel Rete Gas).

15 Describe the statutory and regulatory structure and authorisations required to operate a distribution network. To what extent are gas distribution utilities subject to public service obligations?

The distribution of natural gas is expressly defined as a public service pursuant to article 14 of Legislative Decree No. 164/2000. The service is entrusted exclusively through public tenders and for a maximum period of 12 years. The relationships between local authorities (the awarding entities) and distributors are regulated by specific service agreements, which are drafted in accordance with the guidelines provided for by the AEEG and approved by the Ministry of Economic Development.

According to the above legislative decree companies operating as gas distributors have an obligation to provide new customers with a connection to the grid unless it is not technically or economically feasible. In the event that a distributor does not allow a new customer to connect to the grid, the AEEG may procure and force the distributor to comply with its obligation.

All the AEEG's decisions and regulations may be appealed, either to the ordinary administrative jurisdiction or by filing a complaint directly to the authority.

16 How is access to the natural gas distribution grid organised? Describe any regulation of the prices for distribution services. In which circumstances can a rate or term of service be changed?

Since 1 January 2003, Italy, as well as all other EU member states, must ensure the implementation of a system of third-party access. After a transitional period, the law stipulated that, starting from 1 July 2007, all customers are granted the right to have access to the transmission and distribution system and to LNG facilities on the basis of published tariffs.

The AEEG recently updated the set of tariff rules concerning the activity of gas distribution that are to be applied until 31 December 2019.

Such new rules provide for a significant reduction in the number of tariffs within the national territory and for a more cost-efficient management of the transmission distribution system.

17 May the regulator require a distributor to expand its system to accommodate new customers? May the regulator require the distributor to limit service to existing customers so that new customers can be served?

Pursuant to Italian law and EU regulations, distributors are obliged to connect customers to their grid upon request. Distributors may refuse to connect new customers only in specific cases that are mainly related to technical or economic matters. The AEEG supervises this issue, and on 6 June 2006 promoted the adoption of a distribution code that contains specific guidelines for the realisation of an effective right of access to local grids. The adoption of the distribution code is an action of fundamental importance for the development of the gas market in Italy as it is the main contractual tool that regulates and clarifies relations between the installation management companies, the sales companies and the wholesalers who use these installations.

The AEEG is, however, competent for the purpose of supervising non-discrimination and transparency issues, and in this regard it may exercise its regulatory powers as well as impose sanctions.

18 Describe the contractual regime in relation to natural gas distribution.

Since gas is considered to be a commodity, gas distribution agreements (gas supply agreements) usually provide for the delivery of a given gas quantity at a specific point and for the restitution of a gas quantity (for calorific-equivalent content) to another specific point. As the distribution of natural gas is considered to be a public service, distributors are subject to an obligation to contract with customers upon request.

As already mentioned with respect to gas transportation agreements, gas distribution agreements may be deeply affected by the relevant code drafted in compliance with the AEEG guidelines. The general trend over the Italian gas market is to standardise contractual forms (not only with respect to the distribution phase).

Regulation of natural gas sales and trading

19 What is the ownership and organisational structure for the supply and trading of natural gas?

The ownership of natural gas remains with the distributor as far as the point of delivery or sale is reached. The structure for supply and trading of natural gas is governed by direct negotiation between distributors and customers. Since 2007, sale prices have been liberalised, and customers are free to choose distributors as well as to opt for the most cost-efficient solution, although it must be stressed that the AEEG sets out and periodically updates reference prices.

20 To what extent are natural gas supply and trading activities subject to government oversight?

All entities that intend to carry out gas sales to final customers must be previously authorised by the Ministry of Economic Development. The authorisation is issued provided that the applicant meets specific conditions (such as suitable technical and financial capabilities as well as a reliable gas traceability system). The authorised companies are registered in a special Ministry of Economic Development registry.

Additionally, gas distributors must be equipped with an efficient system for modulating their supplies in accordance with customers' requirements (which depend on the season, the weather, the time of day, etc). The AEEG has a general task of supervision similar to that outlined with reference to transportation and distribution.

21 How are physical and financial trades of natural gas typically completed?

The way trades of natural gas are completed, from a contractual perspective, strongly depends on the fact that natural gas is a fungible good, and transactions having fungible goods as their object usually give more relevance to delivery (than consent) and to bank guarantees (than to warranties provided for by the law). Agreements relating to the gas sector are using more and more standard forms, mainly because of the influence of the guidelines that the AEEG issues with reference to any phase of the gas industrial chain.

Financial trades may also be completed through the Natural Gas Market, introduced by the Ministry of Economic Development with Ministerial Decree of 18 March 2010. This is a platform upon which parties are authorised to carry out transactions and buy and sell 'spot' (namely, with a short deadline at the time of delivery). The gas exchange has been entrusted to the Manager of the Energy Markets, which plays the role of central counterparty by implementing transactions involving physical delivery of gas at the Virtual Trading Point.

22 Must wholesale and retail buyers of natural gas purchase a bundled product from a single provider? If not, describe the range of services and products that customers can procure from competing providers.

In principle, customers are free to choose the most cost-efficient solution on the basis of EU legislation as implemented in Italy, which provides for unbundling of gas companies. On the one hand, the existence of groups of companies offering the entire range of gas-related services affects the actual unbundling process; on the other, it simplifies customer-distributor relationships.

Update and trends

Recent developments in the Italian gas market have resulted in the strong interest of foreign investors in offshore projects. Requests for permits for hydrocarbon exploration have increased during the past year following the government's efforts to foster research and exploration. That said, with respect to long-term strategy, the Ministry of Economic Development's plan to make Italy the main southern European hub for gas remains. The potential development of the Trans-Adriatic Pipeline Project, which is due to connect with the Trans-Anatolian Pipeline, could foster this process and make Italy a strategic gas hub in the EU.

Finally, by means of Legislative Decree No. 145/2015 the government implemented Directive 2013/30/EU on the safety of offshore oil and gas operations with the aim of reducing the possibility of major accidents. In 2015 there were two main results of the implementation of the directive: zero injuries in drilling activities and no oil spill event was registered throughout 2015.

Regulation of LNG

23 What is the ownership and organisational structure for LNG, including liquefaction and export facilities, and receiving and regasification facilities?

At present, there are three active LNG terminals in Italy: the first, set up in July 2001, is located in Panigaglia (La Spezia) and owned by GNL Italia SpA; the second, Terminale GNL Adriatico, which is located in Porto Levante (Rovigo), has been operative since May 2009 and is owned by a joint venture controlled by ExxonMobil (70.7 per cent), Qatar Petroleum (22 per cent) and Edison (7.3 per cent). The third is the only offshore terminal and is located around 20km off the coast of Livorno (Tuscany), owned by E.ON (46.79 per cent), Iren (46.79 per cent), OLT Energy Toscana (3.73 per cent) and Golar Offshore Toscana Ltd (2.69 per cent). Currently other three projects have been approved (Gioia Tauro, Zaulo, Capo Bianco), but all of them are awaiting private financing.

24 Describe the regulatory framework and any relevant authorisations required to build and operate LNG facilities.

An administrative authorisation (issued by the state through the Ministry of Economic Development) is required to build up LNG facilities. Since 2004, when this authorisation was approved with reference to infrastructures of national interest, a simplified procedure was set up that requires the joint participation of all interested authorities (from governmental bodies to local entities) in the procedure for the awarding of an authorisation to any applicant company.

25 Describe any regulation of the prices and terms of service in the LNG sector.

Tariffs for the regasification of LNG in the terminals located in Panigaglia, Porto Levante and Livorno are issued by the AEEG on the basis of proposals formulated by the relevant operators. The tariff consists of a fixed amount plus a variable amount. The variable amount (calculated on the basis of the requested gas cubic metre quantity) is to be paid by the terminal's users for a service rendered on a continuous basis, and a different (and lower) variable amount is to be paid for spot services. Under certain circumstances, new investments may justify a discount on tariffs.

Mergers and competition

26 Which government body may prevent or punish anticompetitive or manipulative practices in the natural gas sector?

Pursuant to Legislative Decree 164/2000, companies operating in the gas sector are subject to the national and European antitrust legislation applicable to any other company. The IAA is competent for the prevention and punishment of this kind of conduct.

27 What substantive standards does that government body apply to determine whether conduct is anticompetitive or manipulative?

Anticompetitive conduct is identified on the basis of ordinary antitrust standards (namely, business combination, prices pools, market dominance, etc). The IAA periodically carries out a market survey to assess the degree of liberalisation in the gas sector. Major importance is given to unbundling and to measures to be taken to discover cartels, as well as other kinds of anticompetitive agreements.

28 What authority does the government body have to preclude or remedy anticompetitive or manipulative practices?

The IAA may impose fines on companies in breach of antitrust law and prevent transactions that may affect the gas free market.

29 Does any government body have authority to approve or disapprove mergers or other changes in control over businesses in the sector or acquisition of production, transportation or distribution assets?

The IAA must be notified of envisaged agreements and mergers that may have anticompetitive effects.

Italian competition law requires prior notification of all mergers and acquisitions involving undertakings whose aggregate turnover in Italy exceeds €495 million and, in addition, when the aggregate turnover in Italy of the undertaking to be acquired exceeds €50 million.

Voluntary notification of agreements and requests for exemption from the prohibition on agreements restricting competition must contain the information and annexes that make it possible to appraise the contents of the agreement. In reaching a decision, the IAA assesses the following aspects:

- buying or selling prices;
- discounts or other trading conditions;
- the quantities of products to be manufactured or distributed or services to be offered;
- market access or outlets;
- investment;
- technical development or technological progress;
- the choice of markets or sources of supply; and
- the application of different terms for the supply of equivalent products and services.

Usually, IAA decisions are released within 30 days from the date of the relevant notification. This term may be extended, however, should further documentation be requested by the IAA.

30 In the purchase of a regulated gas utility, are there any restrictions on the inclusion of the purchase cost in the price of services?

Prices of services have to be determined by competition and, where competition is not effectively possible, they have to be set out on a non-discriminatory basis. As this issue affects the tariffs for the distribution of natural gas and also has an impact on the right of access of third parties to the market, the AEEG and the IAA are competent to impose sanctions and restrictions to ensure competition and transparency.

31 Are there any restrictions on the acquisition of shares in gas utilities? Do any corporate governance regulations or rules regarding the transfer of assets apply to gas utilities?

In principle, there are no restrictions on the acquisition of shares in gas utilities; however, as the services rendered in the gas sector chain qualify as public services, the acquiring company must guarantee that such public service is not discontinued.

International

32 Are there any special requirements or limitations on foreign companies acquiring interests in any part of the natural gas sector?

Foreign companies are entitled to acquire interests in the natural gas sector provided that their country of origin complies with the reciprocity condition and that Italian national security is guaranteed.

33 To what extent is regulatory policy affected by treaties or other multinational agreements?

The regulatory framework is strongly affected by EU policies and regulation. With reference to imported gas, Italy has entered into several agreements, either of a political or contractual nature, with other countries (including Algeria, Libya and Russia) to ensure its energy requirements are met. However, it must be pointed out that because of the Ukraine–Russia crisis, the EU imposed specific sanctions on Russia, and some of them, even though only marginally, affect the Italian gas market (ie, export prohibition to Russia of the required technology facilities in order to prospect, explore and produce hydrocarbons).

34 What rules apply to cross-border sales or deliveries of natural gas?

The importation of natural gas is subject to an authorisation released by the Ministry of Economic Development on the basis of non-discriminatory and objective criteria. Except for the tax regulation, the export is not subject to any specific permit or licence.

Transactions between affiliates**35 What restrictions exist on transactions between a natural gas utility and its affiliates?**

In addition to the common restrictions provided for by the IAA, a supervisory faculty and the power of imposing sanctions have been granted to the AEEG, which is responsible for being vigilant regarding the non-discriminatory principle (namely, groups of companies cannot operate more favourable price conditions in intra-group relations).

36 Who enforces the affiliate restrictions and what are the sanctions for non-compliance?

The competent authority (except for pure competition law controversies) is the AEEG.

C/M/S'

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TMI Associates

Description of domestic sector

- 1 Describe the domestic natural gas sector, including the natural gas production, liquefied natural gas (LNG) storage, pipeline transportation, distribution, commodity sales and trading segments and retail sales and usage.**

In Japan, domestic natural gas is produced from gas fields in Hokkaido, Nigata and a few other regions. There are approximately 30 LNG storage facilities in Japan. The gas pipeline grid covers only 5.7 per cent of national land. 63 per cent of natural gas is accounted for to generate electricity, 29 per cent for general energy consumption and 8 per cent for industrial use in Japan.

- 2 What percentage of the country's energy needs is met directly or indirectly with natural gas and LNG? What percentage of the country's natural gas needs is met through domestic production and imported production?**

Natural gas and LNG cover 25.2 per cent of total primary energy needs in Japan. Domestic natural gas production covers 2.2 per cent of entire natural gas needs and the remaining 97.8 per cent of primary energy needs are covered by imported LNG.

Government policy

- 3 What is the government's policy for the domestic natural gas sector and which bodies set it?**

After the Great East Japan Earthquake on 11 March 2011 and the following devastating accident at Tokyo Electric Power Company's Fukushima Daiichi Nuclear Power Plants, a plan called the Strategic Energy Plan (Plan) was formulated by the cabinet in April 2014. Pursuant to the Plan, reform of the electricity system was initiated first, and subsequently reform of the gas system was initiated. More specifically, the Report on Gas System Reform was initially issued by a subcommittee of Ministry of Economy Trade and Industry of Japan (METI) in January 2015. The gas market reform aims to:

- secure the stable supply of natural gas by stabilising the natural gas supply, including the reinforcement of supply during disasters, through increasing gas pipeline networks, maintenance and interconnection;
- reduce gas prices to the maximum extent possible by promoting market competition among natural gas procurement and retail services to suppress gas rates to the fullest extent possible and improve the lifestyle of citizens;
- provide a wide range of gas usage choices to consumers and business organisations by bringing innovation through the participation of new market entry players and business expansion of existing gas companies to other areas that would bring greater diversity of retail choice and pricing plans for gas consumers; and
- expand the usage of natural gas by promoting the participation of businesses that can build new gas pipelines, offer services that uncover potential needs for gas and propose new methods to utilise natural gas such as for fuel cells and cogeneration.

In order to achieve these objectives, a bill to amend the Gas Business Act was enacted in June 2015. The amendment act will gradually come into effect, such as retail liberalisation in gas market in April 2017 and legal unbundling of pipeline grid in 2022 (planned).

Regulation of natural gas production

- 4 What is the ownership and organisational structure for production of natural gas (other than LNG)? How does the government derive value from natural gas production?**

It is noteworthy that natural gas produced in Japan is considerably less than imported LNG (see question 2). Production is conducted mainly by INPEX Corporation and Japan Petroleum Exploration Co Ltd. The ownership of natural gas produced in Japan belongs to the company that produced the natural gas.

- 5 Describe the statutory and regulatory framework and any relevant authorisations applicable to natural gas exploration and production.**

As stated in questions 1 and 2, it is noteworthy that there is very little production of natural gas in Japan. The relevant authority for natural gas production is METI and the mineral rights that are treated as right in rem in Japan are established by the Mining Act. Moreover, the Mine Safety Act covers the safety of mine workers and the pursuit of reasonable development of mineral resources.

- 6 Are participants required to provide security or any guarantees to be issued with a licence to explore for or to store gas?**

See question 5. In order to produce natural gas in Japan, a prospective producer is required to obtain mineral rights under the Mining Act and to submit its safety regulations, construction projects, etc. Although there is no specific regulation that covers natural gas storage, permission under the High Pressure Gas Safety Act is required if the gas is stored as a certain high pressure gas.

Regulation of natural gas pipeline transportation and storage

- 7 Describe in general the ownership of natural gas pipeline transportation, and storage infrastructure.**

In Japan the natural gas pipeline and storage infrastructure is owned by private companies.

- 8 Describe the statutory and regulatory framework and any relevant authorisations applicable to the construction, ownership, operation and interconnection of natural gas transportation pipelines, and storage.**

With regard to gas pipelines, whoever conducts the business of supplying gas via pipes by independently maintaining and operating in a service area or specified service point is regulated as a gas pipeline service provider. A general gas pipeline service provider who intends to supply gas to a certain service area is required to obtain prior permission from the authorities. On the other hand, a specific gas pipeline provider who intends to supply gas to a specified service point is required to make prior notification. In either case, the gas pipeline service provider shall follow the technical standards established by the Ordinance of METI in relation to Gas Facilities (gas generating facilities, gasholders, gas purification plants, exhausters, feeding compressors, governors, pipelines, electric power receiving facilities and other facilities installed for the purpose of supplying gas as well as auxiliary facilities thereof, which are used for gas business).

9 How does a company obtain the land rights to construct a natural gas transportation or storage facility?

In order to construct a natural gas transportation or storage facility on land, right to use the land will be required. Right to use the land can be obtained through acquisitions of proprietary right, surface rights or leasehold rights of particular land. These rights may be obtained from the landowner through negotiation.

10 How is access to the natural gas transportation system and storage facilities arranged? How are tolls and tariffs established?

The natural gas transportation system is maintained and operated by general gas pipeline service providers and the provider cannot refuse a third party's request for transportation service without justifiable grounds. Prices and other terms (including calorific value of the gas, etc) for transportation service are established by the provider's transportation service provisions, which are approved and published by the Minister of METI. The prices for transportation services must be fair costs incurred as a result of efficient management and fair profits.

11 Can customers, other natural gas suppliers or an authority require a pipeline or storage facilities owner or operator to expand its facilities to accommodate new customers? If so, who bears the costs of interconnection or expansion?

Gas pipeline service providers have an obligation to make efforts to connect their each pipeline under the Gas Business Act. The Minister of METI can order gas pipeline service providers to commence or recommence the providers' consultation in order to encourage their pipelines interconnection.

The provider's costs of expansion and preceding demand survey are expected to be covered by adding into the transportation costs in future.

12 Describe any statutory and regulatory requirements applicable to the processing of natural gas to extract liquids and to prepare it for pipeline transportation.

To use the transportation service of a gas pipeline service provider, a user must comply with the provider's transportation service provisions, including the quality of the gas.

13 Describe the contractual regime for transportation and storage.

A person may use the transportation service of a gas pipeline service provider may be used by agreeing to the provider's transportation service provisions. The provisions must be approved by the Minister of METI and be publicised. The Minister can order a service provider to change its provisions.

There is no specific regulation which covers the use of gasholders for storage. However, with regard to the use of LNG storage facilities by a third party, gas commission and production provisions will apply, which are published by METI.

Regulation of natural gas distribution**14 Describe in general the ownership of natural gas distribution networks.**

See question 7.

15 Describe the statutory and regulatory structure and authorisations required to operate a distribution network. To what extent are gas distribution utilities subject to public service obligations?

See questions 8 and 10.

16 How is access to the natural gas distribution grid organised? Describe any regulation of the prices for distribution services. In which circumstances can a rate or term of service be changed?

See questions 8 and 10. Further, a gas pipeline service provider who intends to revise the transportation service provisions (the revisions will be in effect upon approval of the Minister of METI) or the Minister of METI orders to change the provisions due to change in the business circumstances or from the perspective of fairness, equitability, etc.

17 May the regulator require a distributor to expand its system to accommodate new customers? May the regulator require the distributor to limit service to existing customers so that new customers can be served?

See question 11.

18 Describe the contractual regime in relation to natural gas distribution.

See questions 8, 10 and 16.

Regulation of natural gas sales and trading**19 What is the ownership and organisational structure for the supply and trading of natural gas?**

There is no specific regulation on gas wholesale as long as it complies with the relevant transportation service provisions. With regard to gas retail, a retail supplier must be registered as a gas retail supplier under the Gas Business Act.

20 To what extent are natural gas supply and trading activities subject to government oversight?

Under the Gas Business Act, a gas retail supplier is mandated to secure its capacity to meet the gas needs of its intended customers, to explain its supply conditions such as price, term, cost to customer, etc to its customers along with documents. Further, a gas retail supplier is obliged to inspect gas components and secure their safety.

The Electricity and Gas Market Surveillance Commission oversees gas transactions.

21 How are physical and financial trades of natural gas typically completed?

In general, there is no specific regulation on physical gas trading other than the regulations under the Gas Business Act under which a party is regulated either as a gas producer, general or specific gas pipeline service provider or gas retail supplier. A wholesale contract is usually entered into with a certain terms and conditions specific to the transaction. On the other hand, a retail contract is usually prepared by a gas retail supplier as a set of contractual terms because the supplier generally enters into same contract with its customers.

The financial transaction of natural gas is regulated by the Commodity Derivatives Act of Japan.

22 Must wholesale and retail buyers of natural gas purchase a bundled product from a single provider? If not, describe the range of services and products that customers can procure from competing providers.

Yes.

Regulation of LNG**23 What is the ownership and organisational structure for LNG, including liquefaction and export facilities, and receiving and regasification facilities?**

Domestic natural gas production covers 2.2 per cent of entire natural gas needs and the remaining 97.8 per cent is covered by imported LNG. A person who maintains and operates gas production facilities including storage facilities of LNG and produce gas must make a filing with the Minister of METI as gas producer under the Gas Business Act.

Gas facilities are owned by private companies in Japan.

24 Describe the regulatory framework and any relevant authorisations required to build and operate LNG facilities.

See question 23. Gas facilities used for the business of gas producer are required to follow the technical standards established by the Ordinance of METI.

25 Describe any regulation of the prices and terms of service in the LNG sector.

A gas producer who maintains and operates LNG storage facilities must establish gas commission and production provisions, file them with the Minister of METI and publicise them. A gas producer cannot

refuse a third party's request for commissioned gas manufacturing without justifiable grounds.

Mergers and competition

26 Which government body may prevent or punish anticompetitive or manipulative practices in the natural gas sector?

In relation to the Prohibition of Private Monopolisation and Maintenance of Fair Trade (Anti-Monopoly Act), the Japanese Fair Trade Commission (JFTC) is the relevant authority. In relation to the terms of the Gas Business Act, the Minister of METI is the relevant authority.

27 What substantive standards does that government body apply to determine whether conduct is anticompetitive or manipulative?

In relation to the Anti-Monopoly Act, the substantive standards are:

- 'unreasonable restraint of trade' (which means such business activities, by which any enterprise, by contract, agreement or any other means irrespective of its name, in concert with other enterprises, mutually restrict or conduct their business activities in such a manner as to fix, maintain or increase prices, or to limit production, technology, products, facilities or counterparties, thereby causing, contrary to the public interest, a substantial restraint of competition in any particular field of trade); and
- 'unfair trade practices' (such as concerted refusal to trade, discriminatory consideration, discriminatory treatment on trade terms, etc, unjust low price sales, unjust high price purchasing, customer inducement by unjust benefits, tie-in sales, etc, trading on exclusive terms, resale price restriction, abuse of dominant bargaining position, etc).

In relation to the Gas Business Act, the substantive standards are:

- to hinder the sound development of gas business; and
- to apply unreasonable preferential treatment or give benefit or apply unreasonable disadvantageous treatment or cause disadvantages to any particular gas business player, etc.

These standards are abstractive in some areas. Therefore a detailed analysis on specific case is required to determine whether specific conduct would be an anticompetitive or manipulative in a real transaction.

28 What authority does the government body have to preclude or remedy anticompetitive or manipulative practices?

In the case of a breach of the Anti-Monopoly Act, cease and desist orders, payment orders for a surcharge and criminal punishment can be imposed depending on the kind of breach.

In the case of a breach of the Gas Business Act, orders for business improvement or change of provisions, etc, can be issued depending on the kind of breach.

29 Does any government body have authority to approve or disapprove mergers or other changes in control over businesses in the sector or acquisition of production, transportation or distribution assets?

The relevant authority is the JFTC. In general, a waiting period of 30 days is imposed if a merger, acquisition of control or asset transfer exceeds certain criteria.

30 In the purchase of a regulated gas utility, are there any restrictions on the inclusion of the purchase cost in the price of services?

In relation to a gas producer, it is basically possible if the counterparty agrees. However, such price-setting shall not be based on abuse of dominant bargaining position of the gas producer and is subject to the Anti-Monopoly Act.

31 Are there any restrictions on the acquisition of shares in gas utilities? Do any corporate governance regulations or rules regarding the transfer of assets apply to gas utilities?

There is no specific regulation other than the regulations of the Anti-Monopoly Act. The transfer of assets is regulated by the general corporate regulations.

International

32 Are there any special requirements or limitations on foreign companies acquiring interests in any part of the natural gas sector?

Mineral rights cannot be obtained in Japan unless the applicant is a Japanese individual or Japanese company. Other fields such as natural gas sector are not covered by further special regulation. In some cases, filings under the Foreign Exchange and Foreign Trade Control Act may be required prior to the direct inward investment. In addition, the Foreign Exchange and Foreign Trade Control Act regulates investment in a nuclear company from the perspective of the national security of Japan.

33 To what extent is regulatory policy affected by treaties or other multinational agreements?

There are no treaties or multinational agreements that directly or indirectly affect regulatory policy in Japan.

34 What rules apply to cross-border sales or deliveries of natural gas?

In relation to physical trading, there is no specific regulation. However, in relation to financial trading, the Commodity Derivatives Act will apply if one party is a Japanese resident.



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Transactions between affiliates

35 What restrictions exist on transactions between a natural gas utility and its affiliates?

In order to increase the neutrality of the gas pipeline service, a company that has numerous customers and comparatively lengthy gas pipeline is prohibited from obtaining gas retail supplier or gas pipeline service provider and vice versa. Such company's personnel system, subcontracting and finance transactions are also regulated. Please note that the target of this regulation is highly limited and the timing of enforcement is currently scheduled until 2022.

36 Who enforces the affiliate restrictions and what are the sanctions for non-compliance?

The Minister of METI will issue an order for business improvement or suspension in the case of non-compliance.

Mexico

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Description of domestic sector

1 Describe the domestic natural gas sector, including the natural gas production, liquefied natural gas (LNG) storage, pipeline transportation, distribution, commodity sales and trading segments and retail sales and usage.

For decades, Mexico was one of the few countries that had liberalised its natural gas midstream and downstream industry without liberalising and allowing competition in the production of such fuel. Natural gas production was exclusively reserved to the state through *Petróleos Mexicanos* and its operating subsidiaries (collectively, Pemex), and except for the natural gas midstream and downstream industry, all of the Mexican petroleum industry (oil, gas, refined products and basic petrochemicals) was subject to a vertically integrated monopoly established in favour of Pemex.

In 1995, Congress passed a bill amending the 1958 Petroleum Law, allowing private participation (national and foreign) in the transportation, storage (including LNG liquefaction or regasification terminals), distribution and marketing of natural gas in Mexico. Originally, such activities were exclusively reserved to Pemex-Gas y Petroquímica Básica (PGPB), one of the four operating subsidiaries of Pemex. In that same year, the Natural Gas Regulations were published by the government, implementing liberalisation. In 1998, new environmental norms calling for the use of low-sulphur fossil fuels became effective, making natural gas the best choice for end users, particularly for industrial customers. A new federal agency was created to enforce the natural gas and electricity laws and regulations: the Energy Regulatory Commission (CRE).

The exploration and production (E&P) of natural gas remained exclusively entrusted to Pemex, and the supply of domestic natural gas within Mexican territory was still entrusted to PGPB, which, in turn, used to compete with private entities in the natural gas transportation and marketing segments. Pemex does not participate in the natural gas distribution business. In 1995, when the government finally decided to use and consider natural gas as an efficient, safe, environmentally friendly fuel, the federal government decided to encourage the use of natural gas not only through the publication of clean air laws and norms, but also through the establishment of local distribution companies (LDCs) legally compelled to gasify a specific geographic zone in Mexico.

In 2008, Congress passed a series of amendments intended to modernise the Mexican oil and gas industry, including the creation of a new federal agency, the National Hydrocarbons Commission (CNH), in charge of regulating and supervising the upstream sector. However, these amendments proved to be insufficient to effectively modernise the Mexican energy sector; thus, in December 2013, Congress made a historical decision by amending the Mexican Constitution to break the government's vertically integrated monopoly over oil, gas and electricity established for decades in favour of Pemex and *Comisión Federal de Electricidad* (CFE) (the state-owned national power utility), and open the door for competition in most of the value chains of the Mexican energy industry. This reform has resulted in a large number of statutes and administrative regulations that have substantially changed the structure of the Mexican natural gas sector, as further described in this chapter.

The use of natural gas in Mexico, on the other hand, has been primarily prompted by the power sector over the last 20 years, which has forced an increase in natural gas production, and to that extent has been one of the elements that prompted the recent constitutional changes to open Mexico's upstream market in light of Pemex's inability to increase natural gas production. Over the past five years, Mexico met its demand with indigenous gas and imports through pipelines interconnected with the US market and three LNG regasification terminals that were anchored by the CFE. Efforts to increase the production of domestic natural gas have included the commencement of drilling programmes in shallow waters to compensate for the expected decrease of production in the Cantarell field, the initiation of exploration activities in deep waters and the allocation of E&P blocks to private operators under the new legal regime; however, gas imports are expected to continue in the long-term, particularly as a result of the low prices that are now available in south Texas, Pemex's inability to increase production, and the time that will still be needed to materialise production by private parties.

The CFE, on the other hand, is still the most important promoter of natural gas transportation infrastructure in Mexico, anchoring many of the most important gas transportation pipelines being developed by private companies, including trunk lines and border-crossing pipelines connected at the US-Mexico border, including a huge submarine pipeline from Texas to Tuxpan. For these projects, CFE has awarded, through competitive bidding processes, long-term firm transportation contracts to anchor the projects and make them feasible. Other important pipelines are now being completed by private developers, including the much-awaited Los Ramones project, an 853km, 42-inch pipeline, which is expected to alleviate the lack of transportation capacity in the National Integrated Pipeline and Storage System that resulted in several critical alerts over the last years.

2 What percentage of the country's energy needs is met directly or indirectly with natural gas and LNG? What percentage of the country's natural gas needs is met through domestic production and imported production?

In 2016, domestic natural gas production was in the order of 5.7 million cubic feet per day (mmcf/d). During the year, natural gas imports represented close to 25 per cent of the total amount of natural gas offered in Mexico. The Ministry of Energy (SENER) anticipates that by 2029, the expected natural gas production will be 6,451.9mmcf/d (3,112.2mmcf/d produced in oil fields associated with Pemex's Round Zero, migrations and alliances, and 3,339.7mmcf/d associated with bidding rounds), and imports will reach 4,052.2mmcf/d, all from the US through pipelines owing to upcoming cross-border infrastructure projects.

The import of natural gas does not require an import permit from SENER (only exports require a permit); anybody may import gas into Mexico. The largest importer-shipper of natural gas in Mexico is Pemex and the CFE. Currently, there are 19 pipeline interconnections across the US-Mexico border, and another interconnection will be implemented over the next year. No import duties are payable for the importation of natural gas into Mexico.

Government policy

3 What is the government's policy for the domestic natural gas sector and which bodies set it?

The federal government is seeking to foster the participation of the private sector in the natural gas industry and increase the production of natural gas.

Until now, government policy has been set by the President in compliance with the applicable laws and regulations, through SENER, the CRE and the Ministry of Finance. National energy policy is required to be set within the first six months of the beginning of each presidential term (namely, a six-year term). As a result of the 2013 energy reform, a new Energy Coordinating Council has been created whereby the energy policy established by SENER is communicated to the Chair of the CNH and the CRE, as well as the Director General of the National Centre for Gas Control (CENAGAS) and CENACE (Mexico's power dispatch and control centre); additionally, policy recommendations are required to be made by these regulatory agencies and public instrumentalities. The CRE, through the publication of directives, norms and resolutions, and its regulation of prices, rates and services, is the most important policymaker in the natural gas midstream and downstream arena. The CRE's directives and norms are administrative regulations that do not require congressional action to be issued (not even presidential action is required); CRE norms include technical standards applicable to the gas industry, and the CRE itself may amend the directives and norms it issues. Such directives currently regulate specific activities such as transportation expansions, gas quality and pricing, rates, insurance, reporting obligations, accounting, determination of geographic zones and first-hand sales of gas.

As a result of the legal changes introduced in 2014, SENER and the CRE were given broader authority to establish and conduct national energy policy, giving priority to energy safety and diversification, energy savings and protection of the environment. The CNH, on the other hand, provides the technical elements for the design and definition of the national policy on hydrocarbons, participates with SENER in the determination of policies for the restitution of hydrocarbons reservoirs, and establishes technical and safety guidelines and standards for the E&P of domestic hydrocarbons (along with the new National Agency for Industrial Safety and Environmental Protection for the Hydrocarbons Sector (ASEA), as further discussed below). As a result of the constitutional reform passed in December 2013, the CNH has been strengthened and vested with broad powers and authority to regulate the upstream oil and gas sector, and is expected to take a more active leadership role in future years, including the launching of international bids for the award of licences and production sharing agreements (PSAs) to Pemex and private parties.

In July 2016, SENER issued a document containing its public policy guidelines for the implementation of a new natural gas market in Mexico (the Natural Gas Market Policy), which is centred on three main objectives:

- access to reliable and timely market information;
- reservation of transportation capacity and effective open access; and
- effective competition conditions for natural gas marketers.

As further explained in this chapter, important actions are being implemented in line with SENER's public policy guidelines.

Regulation of natural gas production

4 What is the ownership and organisational structure for production of natural gas (other than LNG)? How does the government derive value from natural gas production?

Since the state was the only entity allowed to pursue E&P activities in Mexico until very recently, the organisational structure remains controlled by Pemex, and the value of natural gas is directly related to the income obtained from its sale. Nonetheless, Pemex was assisted in the development of the petroleum industry by numerous contractors under various contractual schemes, including incentive-based contracts, under which the compensation for the contractor is set on the basis of performance criteria such as production, productivity and efficiency.

The 2013 constitutional reform and subsequent statutes are aimed at allowing the participation of numerous operators in the E&P

business, which represents a historical change in Mexico. For the first time in more than 50 years, Mexican law allows risk contracts for E&P of oil and gas, both onshore and offshore, including PSAs, licence agreements, and other type of contracts between the state and Pemex or private operators, as deemed convenient by the federal government in order to maximise the value of the exploitation of domestic hydrocarbons. Moreover, the reform recognises that, provided the agreements are clear that the hydrocarbons remain owned by the state while in situ (in the reservoir), the operators should be able to report in their books their rights to the revenues or to a percentage of the production once it is realised.

Pursuant to the 2013 constitutional reform, Pemex was given the right to a Round Zero, where it was bestowed with certain blocks and areas where it will continue to operate under 'allocations' (a sort of E&P concession that may only be granted to state-productive enterprises such as Pemex). Risk contracts for new blocks are being awarded through international tenders by the CNH, primarily on the basis of the consideration offered to the state. Likewise, the CNH shall award, through international tenders, contracts to develop jointly with Pemex some of the blocks originally awarded to Pemex in Round Zero. As of January 2017, 35 blocks have been awarded to private operators under E&P licence agreements or production-sharing agreements, and BHP Billiton has been awarded with the first farm-out with Pemex to develop the deep-water Trion field near the US border, in what constitutes a historic move towards the full reorganisation of Mexico's oil and gas industry.

5 Describe the statutory and regulatory framework and any relevant authorisations applicable to natural gas exploration and production.

By virtue of the legal monopoly established by the Constitution until 2013, Pemex was the only entity authorised to carry out the E&P of natural gas in Mexico. Nonetheless, as a result of the 2013 energy reform, this monopoly has been abolished, and the upstream industry has now been completely opened to private participation through E&P contracts to be signed with the federal government through a public bid process in which Pemex and private operators are welcome to compete.

E&P activities, on the other hand, are subject to the technical regulation and supervision of the CNH. Drilling and superficial exploration activities not undertaken under an E&P contract are subject to the CNH notification or authorisation.

Moreover, ASEA is in charge of regulating and overseeing the industrial safety and environmental protection aspects of E&P activities, as well as midstream and downstream activities, including the issuance of guidelines applicable to such activities and their enforcement, and the approval and supervision of all sorts of environmental authorisations for the oil and gas industry. ASEA began operations on 2 March 2015.

In addition, Pemex and private operators intending to undertake E&P activities must prepare and file a social impact assessment (SIA) before SENER. The SIA must contain the identification, characterisation, prediction and assessment of social impacts that might arise from the activities to be developed, as well as the relevant mitigation measures and a social management plan. Obtaining SENER's resolution concerning the SIA is a condition to obtain the necessary environmental impact authorisation from ASEA, and compliance with the recommendations established therein will be required in order to initiate the provision of services in the system. If an indigenous consultation procedure is required, SENER must carry out such consultation in coordination with the Ministry of the Interior.

6 Are participants required to provide security or any guarantees to be issued with a licence to explore for or to store gas?

No security or guarantees are required except for those established in the relevant E&P contract.

Regulation of natural gas pipeline transportation and storage

7 Describe in general the ownership of natural gas pipeline transportation, and storage infrastructure.

For decades, most of the gas transportation pipelines in Mexico were owned and controlled by Pemex, which used to own and operate two

pipeline systems: one comprising 8,704km of fully interconnected trunklines (the National Pipeline System) and another isolated system in the north-western part of Mexico, known as the Naco-Hermosillo system, whose 339km trunkline is interconnected to Kinder Morgan's pipeline system in Arizona, US. Nonetheless, and since the opening of the midstream industry in late 1995, many other transportation systems have been and are being developed by private players such as Carso Energy, Energy Transfer, Fermaca, Kinder Morgan, Mitsui, Semptra, Engie and Transcanada, including private equity funds associated with local developers. Currently, there are approximately 4,300km of private pipelines, and more than 1,800km of private pipelines are under development. Moreover, to promote the expansion of the country's gas transportation infrastructure, over the past five years the CRE has developed guidelines through which new gas transportation pipelines representing a benefit to the whole pipeline system are allowed to operate in coordination with the National Pipeline System based on roll-in rates, forming the National Integrated Transportation System.

As a result of the 2013 constitutional reform for the energy sector and subsequent statutes, important changes for the natural gas transportation industry have occurred. The most important of those changes is the creation of CENAGAS, a new public instrumentality that is not a subsidiary of Pemex and that has assumed Pemex's gas transportation assets and operations (including the National Pipeline System) with the requirement of managing the National Integrated Transportation and Storage System (which is the successor of the National Integrated Transportation System originally designed by the CRE). This move is intended to finally afford open access to the National Pipeline System, and the private pipelines that operate in coordination with it, on a non-discriminatory basis and without favouring Pemex's volumes.

No storage projects (either through salt caverns or exhausted fields) have been implemented yet in Mexico, other than the LNG regasification terminals in Altamira, Ensenada and Manzanillo, which are already in operation; however, 'guaranty of supply' (inventory) requirements applicable to gas marketers, which are now being drafted by SENER, are expected to serve as an important incentive for the development of storage projects.

8 Describe the statutory and regulatory framework and any relevant authorisations applicable to the construction, ownership, operation and interconnection of natural gas transportation pipelines, and storage.

To build and operate a natural gas transportation system or a storage facility (eg, liquefaction or regasification terminals), different types of governmental permits and authorisations are required from federal and local authorities, the most important being the permit granted by the CRE, authorisations required under the environmental laws, social impact authorisations and real estate rights required by the project.

Natural gas transportation and storage permits

Pursuant to the Hydrocarbons Law, natural gas transportation services are subject to a federal permit granted by the CRE, upon demonstrating to the agency the experience and capabilities of the relevant transportation company (both technical and financial) the feasibility of the pipeline project to be implemented, and the approval of the proposed rates and terms of service.

Transportation permits operate as 30-year renewable quasi-concessions, and impose a series of regulatory obligations on the relevant transporter. As a general rule, transportation pipelines operate under open-access permits granted to those transmission systems that will serve very much like a utility: they are compelled to grant open access on a not-unduly discriminatory basis to any shipper that requests the service, provided there is available capacity in the system and the parties reach an agreement on the subject matter, as provided under the general terms of service (GTS) approved by the CRE. Open-access transportation permit holders are mainly regulated and supervised by the CRE and by ASEA (from a safety and environmental point of view). Self-use transportation permits, on the other hand, are exclusively granted to end users whose transmission systems will not be providing open-access services.

There are no restrictions in terms of the length and width of the pipeline or the capacity of the system. Since there are no local utility agencies or commissions in Mexico, the CRE is in charge of granting both interstate and intrastate gas transportation permits.

Unlike gas distribution permits, transportation companies are not obligated to gasify any predetermined geographic zone or to connect any given number of users. Thus, gas transportation permits are granted by the CRE on a non-exclusive basis.

The regulations for natural gas storage are similar to those applicable to transportation.

The granting of an open access transportation or storage permit (namely, the approval of the technical and safety aspects of the project, rate schedule and the GTS), takes from five to 10 months, depending on the complexity of the project.

Finally, if the new pipeline is intended to operate as part of the National Integrated Transportation and Storage System, the CRE shall approve the terms and conditions in which the new pipeline shall be integrated into the national integrated transportation system, including the resulting roll-in rates and applicable GTS (which shall be consistent with the GTS of CENAGAS's national pipeline system).

Environmental and social impact authorisations

The developer shall obtain the authorisation of an environmental impact assessment report and risk study from ASEA, which is responsible for industrial safety and environmental authorisations for the oil and gas industry. Moreover, before filing a permit application with the CRE, applicants are required to prepare and file a SIA with SENER. Likewise, if indigenous communities may be affected by the project, a public consultation procedure shall be carried out by SENER; in coordination with the Ministry of the Interior.

Real estate rights

The developer shall negotiate and obtain all rights of way (ROW), pipeline-crossing authorisations and real estate rights necessary for the construction and operation of the pipeline or the storage facility.

9 How does a company obtain the land rights to construct a natural gas transportation or storage facility?

Through the negotiation and execution of ROW contracts or easement agreements with the respective servient tenements, or through the filing of a ROW permit application if the land is owned by the government. The same applies to securing a site for a storage facility or metering station (namely, option, purchase or lease agreements need to be negotiated, signed, notarised and registered), provided that possession of public land normally requires the granting of a concession, which in some instances is subject to public tender.

ROW contracts and easement agreements depend on the type of land to be affected: private, public or agrarian. Private property in Mexico is subject to state law. Accordingly, the civil codes of the relevant states where the facilities are to be built are the statutes that will govern the terms under which the developer will negotiate the corresponding ROW and real estate rights for the construction of the pipeline or the storage facility (eg, an LNG terminal). Public property is governed by different statutes depending on the type of owner (namely, federal, state or municipal owner or public instrument). In this type of situation, and instead of executing an easement agreement, the developer will file and obtain a ROW permit. The ROW permit may be a pipeline-crossing permit, a right-of-way permit, or both.

Agrarian property is subject to federal law under the Agrarian Law. ROWs granted over agrarian property are documented through easement agreements or usufruct agreements; agrarian easement agreements and usufruct agreements are cumulatively subject to the Agrarian Law and the Federal Civil Code.

Under the new legal framework, the process to negotiate and execute the agreements necessary to obtain ROWs has become regulated, requiring, inter alia:

- the involvement of SENER and the Ministry of Agrarian, Territorial and Urban Development (who shall issue model contracts for the use, encumbrance or acquisition of land and real estate rights);
- the participation of social witnesses, if requested by any of the parties or if the social impact assessment shows that there are risk and vulnerability conditions in the relevant area, or if this is otherwise required under the guidelines to be issued by SENER (individuals, entities and NGOs may act as social witnesses, to the extent that they do not have a conflict of interests);

- the obtainment of appraisals; and
- the submission of the relevant agreement for the final validation of a district judge or agrarian tribunal.

Moreover, the Hydrocarbons Law contemplates mediation procedures that the parties may use to resolve their differences where they are unable to reach an agreement. As a general rule, ROWs and any other land rights shall be obtained using the model agreements that SENER has issued for the hydrocarbons industry.

10 How is access to the natural gas transportation system and storage facilities arranged? How are tolls and tariffs established?

All transportation and storage companies (other than self-use transportation or storage companies) are obligated to provide open access to their systems on a non-discriminatory basis (provided there is available capacity in the system) to any person that requests their services, as required under the relevant GTS.

The GTS is an all-encompassing document, which includes the type of services offered by the transportation or storage company, the terms and conditions regarding the provision of such services (including imbalance procedures and gas quality provisions) and the rates approved by the CRE. Each GTS is available at the CRE, and can only be amended upon the prior approval of the CRE. Issues omitted or not adequately covered under the relevant GTS may be addressed in the gas transportation agreement or the gas storage, regasification or liquefaction agreement (in the case of LNG regasification terminals) entered by the permittee and the user. A template of such agreement is attached to the relevant GTS and incorporates by reference the provisions stipulated under the GTS.

All gas to be injected into a Mexican pipeline (transportation and distribution) is subject to a Gas Quality Norm published by the CRE. This Norm is subject to review every five years.

The rates of transportation and distribution systems are regulated very similarly (see question 16); however, the pipelines that are part of Sintragas (or some other future integrated system) operate under roll-in rates that are determined based on specific methodologies issued by the CRE.

As previously mentioned, as a result of the 2013 constitutional reform, Pemex's gas transportation assets and operations have been transferred to CENAGAS, which operates Sintragas as an integrated open access system. CENAGAS is currently undergoing an open season procedure, whereby all existing and new shippers will be required to reserve capacity in Sintragas.

11 Can customers, other natural gas suppliers or an authority require a pipeline or storage facilities owner or operator to expand its facilities to accommodate new customers? If so, who bears the costs of interconnection or expansion?

Transporters and storage companies are required to expand or extend their systems upon request by any potential shipper whenever the service being requested is technically and economically feasible (whether through pipeline expansion, through looping or by adding compression); and the shipper has guaranteed that the services will be contracted. Moreover, the transporter or storage company shall carry out an open season to obtain other requests for service to optimise the use of the expansion capacity. If the transporter decides that it is interested in implementing the requested expansion and covering its cost, the transporter may request an adjustment (increase) of its regulated service rates. If the transporter decides that the requested expansion is not sufficiently attractive, then the shipper that requested the expansion may choose to cover the cost of the expansion or carry out the expansion by itself, in order to be able to obtain the requested services.

12 Describe any statutory and regulatory requirements applicable to the processing of natural gas to extract liquids and to prepare it for pipeline transportation.

Gas processing activities are subject to a permit by SENER; it is one of the activities that was liberalised and opened to private investment as a result of the 2013 constitutional reform, which eliminated the state monopoly over the oil and gas industry.

13 Describe the contractual regime for transportation and storage.

In principle, gas transportation, distribution and storage service providers shall abide by the terms of service and model contracts established in their respective GTS, as approved by the CRE; however, service providers and shippers may include in their contracts special conditions that detour from the terms of service embodied in their GTS, to the extent those special conditions do not constitute unduly discriminatory practices or violations to public policy. Negotiated rates are also permitted to the extent they are not unduly discriminatory, but as a general rule, negotiated rates shall not exceed the maximum regulated rates approved by the CRE for each system. Moreover, additional flexibility is afforded for gas transportation and storage companies to enter into special conditions with anchor shippers, to the extent they are willing to accommodate the service requirements of other potential shippers interested in receiving services.

In addition, local distribution companies are required to register their model contracts with the Federal Consumer Protection Agency (Profeco), which also verifies the adequacy of the proposed contractual terms.

Regulation of natural gas distribution

14 Describe in general the ownership of natural gas distribution networks.

Gas distribution is subject to the issuance of a permit by, and supervision of, the CRE.

Both open-access natural gas distribution and transportation companies are regulated by the CRE.

Transporters and distributors (as well as storage companies, retail sellers, marketers, shippers and consumers) are required to abide by the general administrative provisions to be issued by the CRE concerning legal, operational and accounting separation of their activities, codes of conduct, limitations in equity participation, the maximum participation that gas marketers may hold and the maximum capacity they may reserve in transportation pipelines or storage facilities, on the understanding that the direct or indirect shareholders of any gas consumers, producers or marketers that use the transportation or storage services of another company may only participate, directly or indirectly, in such transporters or storage companies when such participation does not affect competition, market efficiencies or effective open access, and only once they have obtained the approval of the CRE and the favourable opinion of the COFECE (Mexico's antitrust agency).

A distribution permit for a geographic zone designated by the CRE may be awarded by the CRE through an international tender upon request of the federal government, any state or municipal government, the government of the federal district or its subdivisions, or any private party. The CRE has been successful in granting LDC permits since 1996; to date, the CRE has awarded more than 28 LDC permits covering the most important cities in Mexico. The determination, expansion and modification of a geographic zone are established by the CRE in accordance with the CRE's Directive on Geographic Zones. In all cases, LDCs are private companies, as Pemex does not participate in the gas distribution sector.

15 Describe the statutory and regulatory structure and authorisations required to operate a distribution network. To what extent are gas distribution utilities subject to public service obligations?

See questions 8 and 14.

16 How is access to the natural gas distribution grid organised? Describe any regulation of the prices for distribution services. In which circumstances can a rate or term of service be changed?

Access to the distribution grid is regulated substantially in the same way as access to open-access transportation pipelines (see question 10).

All users accessing a distribution system shall pay the respective LDC the corresponding interconnection fee, which is previously approved by the CRE and included in the relevant GTS, as part of the LDC's rate schedule. Such rate schedule is published in Mexico's federal register, and is subject to the adjustment mechanisms provided

under the Directive on Pass-through Prices and Rates. According to these mechanisms, regulated rates are subject to annual adjustments based on Mexico-US inflation and currency exchange variations and, after every five years of operation, the rate schedule shall be reviewed by the CRE and the LDC based on the methodology established under the CRE's Directive on Pass-through Prices and Rates (which includes efficiency factors), considering the business plan, investment commitments, efficiency factors and other considerations included in the distribution or transportation permit. Propane and fuel oil are still, and will continue to be, widely used in Mexico (Mexico is the largest residential consumer of LPG of the world); therefore, the CRE is keen to maintain natural gas transportation and distribution rates at a very competitive level with respect to other competing fossil fuels.

The rate schedule cannot be modified by the LDC unless it has been approved by the CRE. Evidently, the CRE is normally reluctant to accept the modification of a rate schedule unless it is in order to lower such rates; however, the regulation embodied in the Directive on Pass-through Prices and Rates does contemplate a number of cases in which LDCs and transporters are allowed to request an increase of their maximum regulated rates, mainly as a result of regulatory and standardisation changes and unforeseen investments required to protect the integrity of their ROW or the safety of their systems. Changes in the applicable tax regime, on the other hand, are treated as pass-through costs.

17 May the regulator require a distributor to expand its system to accommodate new customers? May the regulator require the distributor to limit service to existing customers so that new customers can be served?

Yes. LDCs have the obligation to expand or extend their grids whenever the requested expansion or extension is technically and economically feasible.

Under the applicable laws, the CRE has broad powers and authority to regulate the efficient development of the midstream and downstream natural gas industry; under such premise, and pursuant to other statutory provisions, the CRE may require an LDC to limit service to existing customers in order to serve new customers. This situation, however, has not occurred yet in Mexico.

18 Describe the contractual regime in relation to natural gas distribution.

See question 13.

Regulation of natural gas sales and trading

19 What is the ownership and organisational structure for the supply and trading of natural gas?

Gas trading is subject to a permit by the CRE. Gas marketers are only allowed to participate in the equity of a gas distribution and transportation company that such marketer is using to the extent such participation complies with the vertical integration rules to be issued by the CRE (requiring, inter alia, separation of activities, adoption of codes of conduct and restrictions on interlocked directors) and the proposed vertical integration is approved by the CRE, with the favourable opinion of the COFECE. The price for Pemex's gas production (which is still the only one actually producing gas at this time, except for some minor volumes that private operators have began producing) is regulated by the CRE, which has established pricing methodologies to set Pemex's maximum prices for domestic and imported gas, which are pegged to a liquid market price index (Henry Hub, HSC and the differential between such reference prices and quotations in south Texas), subject to a netback procedure. The marketing of imported or domestic gas by private parties is not subject to pricing regulation under Mexican law. Pemex continues to be the largest gas marketer in Mexico, mainly because Pemex is currently the only producer of natural gas. However, the CFE is also undertaking an important role as a gas marketer supplying natural gas to IPP companies throughout the country. The gas sales of any other state productive enterprise (like the CFE), as well as gas sales of any marketer selling gas on behalf of the state, may also be regulated by the CRE.

The CRE's pricing regulation shall remain applicable until effective competition conditions exist in the market. At that time, all gas prices shall gradually move to a more market-driven scheme. According to

SENER's Natural Gas Market Policy, the actions that are being undertaken to develop adequate information systems, reallocate the transportation capacity available in Sintragas and decrease Pemex's market share are expected to create sufficient competition as to allow the release of Pemex's gas prices in the northern part of the region at some point during 2017 or 2018.

20 To what extent are natural gas supply and trading activities subject to government oversight?

Until recently, the oversight of governmental authorities has been negligible, except in the case of Pemex due to its evident market power and the fact that it has, for decades, been the only producer and supplier of domestic natural gas in Mexico, and is the largest importer, trader and transporter. Pemex gas trading activities are currently regulated by and subject to the scrutiny of the CRE through a number of administrative provisions and resolutions intended to limit Pemex's market power and promote the participation of new marketers. The success of such efforts also depends on a number of other aspects, including CENAGAS' ability to reorganise the operation of Sintragas and effectively provide open access to the system.

Gas marketing activities by private parties, on the other hand, are now subject to permit and oversight by the CRE. Both Pemex and private marketers are required to report detailed information about their gas trading transactions on a daily basis, through the electronic platform that the CRE has implemented for that purpose. These reporting obligations and electronic platform are part of the actions undertaken pursuant to the Natural Gas Market Policy, in an effort to provide adequate and timely information to the market and begin gathering the elements to eventually create a Mexican price index.

Finally, as a result of the abolition of the Pemex monopoly over the oil and gas industry and the Pemex obligation to supply the national market, SENER is required to issue the national energy security rules with which gas and liquids marketers will be required to comply in order to participate in the Mexican market.

21 How are physical and financial trades of natural gas typically completed?

Domestic gas sales by Pemex are conducted pursuant to the model agreements that have been authorised by the CRE under Pemex's General Terms and Conditions for First-Hand Sales, which contemplate a series of service methods with different levels of flexibility in terms of gas supply scheduling and nominations. Gas supply contracts among the CFE or other gas marketers and the relevant purchasers are not subject to regulation yet, and therefore the parties are free to establish the applicable terms and conditions. Private marketers, on the other hand, are now reviewing their strategies and are often inclined to use North American Energy Standards Board-based contracts.

22 Must wholesale and retail buyers of natural gas purchase a bundled product from a single provider? If not, describe the range of services and products that customers can procure from competing providers.

No; under Mexican law, all users (wholesale or retail) are free to purchase gas on an unbundled or bundled basis; in other words, users and end users in Mexico are free to purchase from any supplier or marketer, and become shippers in, and retain the service from, any open-access transportation or distribution company, or purchase the natural gas from the distribution company. However, to date, open access to the national pipeline system and related integrated systems has not been fully implemented. Access to the national integrated transportation and storage system is expected to improve once CENAGAS completes the reorganisation of the services provided through Sintragas.

Regulation of LNG

23 What is the ownership and organisational structure for LNG, including liquefaction and export facilities, and receiving and regasification facilities?

Although Mexico is rich in natural gas reserves, there are no liquefaction export facilities and, because of the increasing demand for natural gas, three major LNG regasification terminals are being operated or developed in Mexico (see questions 1 and 2). As discussed above, liquefaction and regasification facilities have so far been subject to a storage

permit by the CRE; however, new LNG terminals shall operate under the new permit modalities for liquefaction and regasification contemplated by the Hydrocarbons Law, which shall also be granted by the CRE. The design, construction, safety, operation and maintenance of LNG facilities are subject to a Mexican Official Norm issued by the CRE and ASEA. These three LNG regasification terminals may eventually become liquefaction facilities inasmuch as indigenous production begins to flow and the two large cross-border trunklines are finally commissioned, allowing the import of continental gas from Texas and displacing expensive LNG imports from the Pacific coast.

24 Describe the regulatory framework and any relevant authorisations required to build and operate LNG facilities.

See question 8. Moreover, LNG regasification and liquefaction may require concessions granted by Semarnat and the Ministry of Transportation and Communications if they are not located within a pre-established industrial port.

25 Describe any regulation of the prices and terms of service in the LNG sector.

The applicant for an open-access gas storage permit is allowed to propose the methodology to be used for purposes of determining the rates that will be charged for the relevant storage services, but such methodology shall be consistent with the general principles followed by the rate methodology prescribed for open-access transportation permits, *mutatis mutandis* (eg, maximum rates, appropriate allocation of costs among the different services being offered, reasonableness of the proposed rate of return (which is not a guaranteed rate of return), periodic reviews and application of efficiency factors).

Mergers and competition

26 Which government body may prevent or punish anticompetitive or manipulative practices in the natural gas sector?

Unlike in some jurisdictions, antitrust matters in Mexico's natural gas midstream and downstream sectors are not exclusively regulated and enforced by the CRE; the COFECE has concurrent jurisdiction in most of the natural gas activities that may be punishable from the antitrust point of view.

The COFECE has concurrent jurisdiction with the CRE in five areas:

- operation of the system;
- regulated rates, merger control and refusal to deal;
- predatory and discriminatory pricing;
- cross-subsidies, tied sales and exclusive dealings, among other punishable monopolistic practices; and
- cross-participation of gas marketers, producers or consumers in transportation or storage companies (ie, vertical integration rules).

The transfer of an open-access pipeline or storage permit, or the transfer of their assets, is subject to the prior approval of the CRE. Authorisation from the COFECE may also be required if the relevant transaction exceeds one of the monetary thresholds established under Mexico's merger control rules. Both agencies may object to the transaction or impose conditions or performance requirements on the transfer. Finally, the COFECE may impose sanctions on open-access permit holders and other related parties (eg, an affiliated marketing company) upon determining the existence of a punishable conduct (such as a refusal to deal when the permittee unduly denies open access, or undertakes predatory pricing, imposes tie-in requirements or other kinds of monopolistic practice) causing harm to other economic agents vertically or horizontally located. Since its creation in 1993, the COFECE has gained expertise in the energy sector, and plays an important role in enforcing antitrust laws and regulations in a market that, by its very nature and condition, is *per se* monopsonistic. More importantly, it also plays a significant role because of the unparalleled monopolistic situation that the Mexican energy industry had with two vertically integrated monopolies controlled by the government (Pemex (oil, gas and basic petrochemicals) and the CFE (power)), and the decision to eliminate these monopolies and open the industry up to competition. As a result of a recent Constitutional

amendment COFECE has become constitutionally independent and one of the most powerful agencies in Mexico.

27 What substantive standards does that government body apply to determine whether conduct is anticompetitive or manipulative?

Two main sets of rules regulate whether a conduct is anticompetitive in the midstream and downstream natural gas arena: the Hydrocarbons Law and its regulations for the midstream industry (including all of the CRE directives, resolutions, norms and the applicable GTS and rate schedule), and the Competition Law, its implementing regulations and the COFECE's resolutions. For further discussion, see question 26.

28 What authority does the government body have to preclude or remedy anticompetitive or manipulative practices?

Both the COFECE and the CRE may preclude or remedy anticompetitive practices in the natural gas sector within the scope of their competence. The main tool is the imposition of hefty fines and, in some cases, even the revocation of the permit on the part of the CRE. In addition, the COFECE or the CRE may require the relevant economic agent or permittee to cease the anticompetitive practice, and the COFECE may even order the divestment of assets. Once such sanctions have been conclusively established by the COFECE, the relevant injured party may use such resolution for a *prima facie* case for the payment of actual damages and loss of profits before a Mexican court.

End users, on the other hand, are entitled to cumulatively pursue a claim before Profeco if the pipeline or storage service provider violates the Federal Law of Consumer Protection.

29 Does any government body have authority to approve or disapprove mergers or other changes in control over businesses in the sector or acquisition of production, transportation or distribution assets?

Mexico's Competition Law requires that certain mergers or transfers (known in Mexico as concentrations) be notified to the COFECE prior to closing. The transaction cannot occur until clearance is obtained from the COFECE. For the purposes of the Competition Law, a concentration includes any transaction or series of transactions that result in the accumulation or concentration of capital from two or more economic agents, and includes mergers, asset and stock acquisitions, as well as the formation of new companies, where the economic thresholds established by the Competition Law are met. The COFECE reviews the power over the relevant market of the parties involved, and the probable anticompetitive effects of the change in control or merger. Typically, the resolution of the COFECE takes two to three months.

The CRE, on the other hand, has in some instances introduced provisions in certain gas transportation permits whereby the CRE's prior authorisation is required to modify the upstream capital structure of the permit holder. Moreover, any changes in the cross-participation among participants in the natural gas market previously approved by the CRE also require CRE approval and the favourable opinion of the COFECE, as previously discussed.

30 In the purchase of a regulated gas utility, are there any restrictions on the inclusion of the purchase cost in the price of services?

The purchase cost of a regulated gas utility cannot be included in the price of the services, as the regulated gas utility can only modify its rate schedule under the conditions described above. If an entity acquires a regulated gas utility, said entity must live with its rate schedule and be subject to CRE reviews and adjustment mechanisms.

31 Are there any restrictions on the acquisition of shares in gas utilities? Do any corporate governance regulations or rules regarding the transfer of assets apply to gas utilities?

Subject to the aforesaid merger control approvals, there is no statutory restriction to acquire the controlling interest in a regulated gas utility, except if the transfer changes or results in the participation of a gas marketer, producer or consumer in the gas utility, in which case, CRE approval and a favourable COFECE opinion are required. Nevertheless, the CRE has in some instances introduced within open-access permits a requirement to obtain the prior approval of the CRE

Update and trends

The Natural Gas Market Policy, issued by SENER after a two-month public consultation process, sets forth the policy guidelines of the Mexican federal government to promote the creation of a competitive natural gas market in the country, as part of the continued process to implement and materialise the expected benefits of the 2013 Energy Reform. The Natural Gas Market Policy is focused on three main objectives:

- allowing market participants to access adequate and timely market information;
- implementing the reservation of capacity and effective open access to Sintragas; and
- fostering competition in natural gas trading activities.

In this context, the Mexican government has taken a number of actions expected to result in an important reorganisation of the natural gas midstream and downstream sector. These actions include the implementation of an electronic platform where all natural gas marketers are required to submit, on a daily basis, detailed information about their transactions, but the two most important actions towards an effective opening of the Mexican natural market are the open season of Sintragas, and Pemex's Gas Release Programme.

During the last quarter of 2016 and the first quarter of 2017, CENAGAS held the first-ever open season for Sintragas (10,068km of pipelines in 20 states divided in six zones for pricing purposes, with an estimated transportation capacity of 6.3 BCFPD). Until now, except for limited exceptions, transportation services in Sintragas were provided and charged on a volumetric basis, without shippers actually reserving or paying for capacity in the system; this resulted in capacity restrictions and bottlenecks, along with undesired market practices, that became important barriers to competing private gas traders entering the market. Therefore, in order to create the necessary conditions to effectively implement open access to Sintragas pursuant to the guidelines and requirements contemplated in the Hydrocarbons Law, its regulations and the administrative regulation issued by the CRE, in October 2016 CENAGAS published the call for its first open season.

The open season is a three-stage process, where Pemex and CFE were the first ones entitled to reserve capacity (exclusively to satisfy their own gas transportation needs, and excluding capacity intended to transport gas sold to third parties), followed by gas consumers with 'vested rights' (ie, gas consumers already receiving gas through Sintragas, entitled to reserve capacity up to certain volumes), and then any other gas consumer or trader interested in reserving capacity.

Capacity shall be allocated among shippers with vested rights and other participating shippers through a bidding process, where shippers with vested rights are given the opportunity to bid for capacity first.

The process is scheduled to conclude in June 2017, with the execution of gas transportation agreements between CENAGAS and the shippers awarded capacity. The resulting gas transportation agreements will be effective for one year, with the possibility of renewing them thereafter for the capacity effectively utilised the first year.

The second action that the CRE has undertaken to foster competition in the natural gas market is the resolution whereby Pemex is being required to make available to other gas traders, within a term of four years, 70 per cent of its gas marketing volumes. The Gas Release Programme is part of the asymmetric regulations that the CRE was mandated to issue in order to restrict Pemex's market power.

The Gas Release Programme will be implemented in three phases (phase 1: 20 per cent of Pemex's volumes, phase 2: 20 per cent and phase 3: 30 per cent). For stage 1, the gas supply contracts that Pemex had to make available for assignment to private gas marketers were randomly drawn on 1 February 2017, at a public session, from a pool that included large consumers as well as a package of smaller consumers. Pemex was then required to submit a binding offer to those customers for the supply of gas, which terms were published by the CRE, giving private gas marketers the opportunity to submit competing offers to those customers. The customers are then able to select among the offers received. Likewise, in February 2017, CENAGAS launched the first of a series of auctions whereby private parties are given the opportunity to acquire capacity previously held by Pemex or CFE in US pipelines used to import gas into Mexico.

The open season of Sintragas, the Gas Release Programme and the auction for import pipeline capacity are key actions to level the playing field for new traders, who will now be able to access and reserve capacity in Mexico's most important pipeline system, and are being given the opportunity to approach Pemex's current customers and submit offers, while Pemex is required to let those customers switch to another gas supplier, without liability or cost, if they decide to accept one of those offers.

In parallel, the SENER and the CRE are working on designing data basis and parameters that will allow market participants to access reliable and current market information; among the objectives in sight is the creating of a Mexico price index and the possibility of releasing Pemex's gas prices in the northern part of the country, in the near future, to let gas prices start to be determined exclusively based on offer and demand.

in the event of a change in control of the permittee. Likewise, amendments to a natural gas-related permit requested as result of a change in control of the permit holder require the CRE's prior assessment and approval, which is another way that the CRE has to review a proposed transfer. Moreover, if the participation of a gas marketer is involved, CRE and COFECE approval may be required owing to the regulation applicable to cross-participation situations.

The CRE is keen to make sure that new owners of the utility meet the same technical, financial and legal requirements that the previous shareholders were required to prove to the CRE as part of the approval of its permit. On the other hand, the transfer of an open-access permit, or the assets used to provide the permitted services, requires the prior approval of the CRE and, depending on the characteristics of the transaction, the approval of the COFECE would also be required, and the transfer would then be subject to the requirements established under the Competition Law.

International

32 Are there any special requirements or limitations on foreign companies acquiring interests in any part of the natural gas sector?

There are no special requirements or limitations on acquisitions of interest in the natural gas sector by foreign companies, except where the foreign company intends to acquire more than 49 per cent of the capital of a Mexican company and such company has more than 16,816,200,000 pesos in assets, in which case the prior approval of the National Commission on Foreign Investments may be required.

33 To what extent is regulatory policy affected by treaties or other multinational agreements?

The North American Free Trade Agreement provides very general provisions regarding the liberalisation of the energy sector, the use of performance contracts for the exploration and exploitation of oil and natural gas, and government procurement rules that may become relevant if providing services or selling goods to Pemex or the CFE.

Mexico is a member of the OECD, and is involved in the International Energy Agency through the Committee of Non-Member Countries; as a result, Mexico must follow the policies established by such organisations to the extent permitted by Mexican law. Mexico has signed or ratified more than 32 bilateral investment treaties, 12 free trade agreements (involving 46 countries) with investment protection chapters, and 57 double taxation treaties, and is a signatory to the most important regional and multinational treaties on private international law.

34 What rules apply to cross-border sales or deliveries of natural gas?

Unlike other jurisdictions, so far, no special permits (eg, a presidential permit) have been required in Mexico for the construction of a border-crossing pipeline, or the import of natural gas. However, if the border crossing is with the US (as is normally the case), the developers must obtain the authorisation of the Mexico-US International Boundaries and Waters Commission. Moreover, an authorisation by the Ministry of Finance is required in connection with the metering devices that will be used to determine the gas volumes being imported or exported. Gas exports, on the other hand, are subject to a permit from SENER.

Transactions between affiliates**35 What restrictions exist on transactions between a natural gas utility and its affiliates?**

No specific affiliate marketing rules have been implemented yet with respect to gas utilities other than the cross-participation authorisation requirements described above. In that context, the CRE now requires that any marketer participating directly or indirectly and at any level in a transportation or storage company establish Chinese-wall rules to prevent undue exchange of information and discriminatory practices.

Other transactions among affiliates, on the other hand, are subject to the general principle of no undue discrimination embodied in the

regulations, and the general rules established in the antitrust laws to prevent anticompetitive practices. Under the Hydrocarbons Law, the CRE and the COFECE are required to issue the vertical integration rules that are necessary to promote an adequate legal, operational and accounting separation of the activities undertaken by affiliates in the segments areas of the natural gas industry.

36 Who enforces the affiliate restrictions and what are the sanctions for non-compliance?

Mainly the CRE, but see questions 26 to 28.

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Myanmar

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Description of domestic sector

1 Describe the domestic natural gas sector, including the natural gas production, liquefied natural gas (LNG) storage, pipeline transportation, distribution, commodity sales and trading segments and retail sales and usage.

Crude oil has been produced in Myanmar for many years. Owing to a history of military rule (1962–2010) and sanctions, and a lack of technical infrastructure, Myanmar's natural gas sector is underdeveloped. However, natural gas production has been rising substantially over the past decade, and is now the country's most important source of export revenue.

Proven gas reserves are 2.5 trillion cubic feet (tcf) onshore and 13.5tcf offshore. Daily gas production is reported to be 50.8 million cubic feet per day (mmcf/d) (onshore) and 1,927mmcf/d (offshore).

At present, there are four major gas fields in operation:

- Yadana, which has been exporting gas to Thailand since 1998, is currently the largest producer in the country, making up approximately 37 per cent of gas production in the country. Its operators are Total (31.2 per cent), Unocal (28.3 per cent), PTTEPI (25.5 per cent) and Myanmar Oil and Gas Enterprise (MOGE) (15 per cent). Its gas production rate is 750mmcf/d, of which approximately 620mmcf/d is exported;
- Yetagun, which has been exporting gas to Thailand since 2000 and produces approximately 22 per cent of gas production in the country. Its operators are Petronas (40.8 per cent), Nippon (19.4 per cent), PTTEPI (19.4 per cent) and MOGE (20.4 per cent). Its gas production rate is 450mmcf/d, of which approximately 440mmcf/d is exported;
- Shwe (Daewoo), which exports gas to China and domestic factories (first gas in July 2013), produces approximately 25 per cent of gas production in the country. Its operators are Daewoo International (51 per cent), MOGE (15 per cent), KOGAS (8.5 per cent), GAIL (8.5 per cent) and ONGC (17 per cent). Its gas production rate is 500mmcf/d, of which approximately 400mmcf/d is exported; and
- Zawtika, which started delivery to Thailand in March 2014, produces approximately 17 per cent of gas production in the country. Its operators are PTTEPI (80 per cent) and MOGE (20 per cent). Its gas production rate is 340mmcf/d, of which approximately 240mmcf/d is exported.

The majority of natural gas produced is currently exported to either Thailand (1,171mmcf/d from the Yadana, Yetagun and Zawtika fields) or China (394mmcf/d from the Shwe field).

There is no LNG storage in Myanmar.

The above statistics were current as at January 2017 and were taken from *Overview Plan of Explanation in Major Myanmar Oil & Gas Blocks*, MOGE, January 2017.

2 What percentage of the country's energy needs is met directly or indirectly with natural gas and LNG? What percentage of the country's natural gas needs is met through domestic production and imported production?

Current energy production in Myanmar fails to meet demand. Regarding Myanmar's population, 70 per cent live in rural areas and 74 per cent lack access to energy. Yangon is the largest city in Myanmar,

and it is estimated that only 67 per cent of its residents are connected to the grid.

The country's primary energy supply includes coal, oil, gas, hydropower and biomass. Biomass accounts for 66.6 per cent (9.51 million tonnes of oil equivalent (mtoe)) of the supply, followed by 11.8 per cent (1.68mtoe) from natural gas and 14.4 per cent (2.05mtoe) from oil. Coal and hydropower account for small shares of total energy supply (3.2 per cent (0.46mtoe) and 4 per cent (0.57mtoe) respectively). These shares are changing, however, to reflect the rapid expansion of coal and gas production.

Energy consumption by fuel type is shifting in favour of natural gas. Domestic utilisation of natural gas in the country is projected to be 350mmcf/d in 2017, and to be exceeded 500mmcf/d by 2030.

No LNG is imported into Myanmar; however, importation of LNG is under discussion. A tender for EOI was issued in 2016.

The above statistics and projections were taken from *Myanmar National Energy Policy and Master Plan 2016 Challenges and Opportunities* (Myanmar Engineering Society).

Government policy

3 What is the government's policy for the domestic natural gas sector and which bodies set it?

The State-Owned Economic Enterprises Law (SEE Law) states that the government has the sole right to carry out the exploration, extraction and sale of petroleum and natural gas, and the production of products of the same. However, the government may, in the interest of the state, permit such activities to be carried out jointly between the government and a private or foreign investor, through MOGE, or solely through any other organisations. The energy plan recently announced by MOGE includes a push to increase and promote private participation in the oil and gas sector of Myanmar.

The Ministry of Electricity and Energy is principally responsible for the oil and gas sector. It oversees three state-owned enterprises: MOGE, Myanmar Petrochemical Enterprise (MPE) and Myanmar Petroleum Products Enterprise (MPPE). It also oversees the Oil and Gas Planning Department (OGPD).

In 2013, the government created a National Energy Management Committee and an Energy Development Committee to strengthen coordination and planning among the energy sector's institutions.

The government is keen to attract foreign investment and issue production sharing contracts (PSCs). The first bidding round opened in 2011, and six companies were awarded eight blocks. Recent bid rounds included a round of bidding for 18 onshore blocks in January 2013, including three improved petroleum recovery contracts (IPRs) and 15 PSCs. In October 2013, 11 bidders were awarded 16 onshore blocks. In April 2013, the government announced a new round of bidding for shallow water blocks (11 PSCs) and deepwater blocks (19 PSCs). Thirty shortlisted bidders submitted bids for the second round of bidding in November 2013. In March 2014, 13 bidders were awarded 10 shallow water blocks and 10 deepwater blocks. On 7 May 2015, MOGE announced that another bidding round would not begin until 2016 at the earliest, but did not disclose how many onshore or offshore blocks it would make available. There has been no subsequent announcement.

Potential bidders were required to cooperate with at least one Myanmar nationally owned company registered at the OGPD for

onshore and shallow water blocks. As at October 2015 over 150 companies were registered with MOGE to serve as local partners. Bidders for deep offshore blocks could include a Myanmar nationally owned company.

At present, all PSCs have been signed.

The Ministry of Energy website provides government information on the oil and gas sector: www.energy.gov.mm.

Regulation of natural gas production

4 What is the ownership and organisational structure for production of natural gas (other than LNG)? How does the government derive value from natural gas production?

The natural gas sector is under the responsibility of MOGE, a 100 per cent state-owned enterprise. MOGE is responsible for the upstream petroleum sub-sector, and has four basic responsibilities:

- to explore and produce oil and gas using its own resources;
- to supply domestic natural gas by constructing its own pipelines;
- to supply compressed natural gas (CNG) as a substitute fuel for vehicles; and
- to participate in and oversee production-sharing agreements in cooperation with foreign oil companies.

The OGPD is responsible for negotiating PSCs with foreign oil companies. In practice, investors generally enter into a PSC or an IPR with MOGE when investing in oil and gas projects.

Three types of PSCs can be awarded: PSCs for onshore blocks, PSCs for shallow water offshore blocks and PSCs for deepwater offshore blocks.

All PSCs in Myanmar share the following features:

- production periods will generally last 20 years from the date of completion of the development plant, or as according to the gas sales agreement;
- contractors are required to allot US\$25,000 per year to a training fund during the exploration period and US\$50,000 per year during the production period;
- 0.5 per cent of the contractor's share of profits from petroleum is required to be used for research and development;
- a signature bonus is required 30 days after the exploration period begins; and
- 25 per cent of natural gas must be sold to the domestic market at 90 per cent of the fair market price.

All three of the standard PSCs used by the OGPD contain state buy-in provisions. For onshore blocks, the standard PSC reserves a 15 per cent undivided interest for MOGE, with the option for the state to increase its share up to a 25 per cent undivided interest in the project. For offshore blocks, MOGE has the right to buy in to the project up to 20 per cent upon a commercial discovery (increasing to 25 per cent if the reserves are greater than 5tcf).

Companies in the oil and gas sector are subject to a 25 per cent tax on profits under the Income Tax Law. The 2012 Foreign Investment Law (2012 FIL) was repealed by the 2016 Myanmar Investment Law (2016 MIL). Rules for the 2016 MIL have not yet been passed. It is uncertain about the tax holiday period under the 2016 MIL. Notification No. 10/2017 of the Myanmar Investment Commission (MIC) defines less developed regions, moderate developed regions and developed regions, and tax holiday periods are specified accordingly.

A royalty of 12.5 per cent of all available petroleum is also payable by the contractor. MOGE's share of profit petroleum (after a contractor's allowable cost recovery) depends on the level of daily production (and for offshore blocks, the depth of the well). MOGE's share of profit production ranges from 60 to 90 per cent.

5 Describe the statutory and regulatory framework and any relevant authorisations applicable to natural gas exploration and production.

Current legislation governing the oil and gas sector in Myanmar includes the following nine principal laws:

- the Oilfield Act of 1918;
- the Oilfield Rules of 1936;
- the Petroleum Act of 1934;
- the Petroleum Rules of 1987;

- the Essential Supplies and Services Act Law 13/2012;
- the Oilfields (Labour and Welfare) Act of 1951;
- the Petroleum Resources (Development Regulation) Act of 1957;
- the Law Amending the Petroleum Resources (Development Regulation) Act of 1969; and
- the Myanmar Petroleum Concession Rules of 1962.

The old petroleum laws deal mainly with rights characterised as concessions. Although the above-mentioned laws relating to petroleum are still applicable, in practice, investors generally enter into PSCs. The terms and conditions of these contracts govern the process so long as they are not contrary to the laws in force.

The above laws are mostly based on British legal codes of pre-independence Indian statutes. Although the terms and conditions of PSCs largely govern exploration & production (E&P) operations, the above-mentioned Oilfields (Labour and Welfare) Act 1951 is of continuing importance to contractors and their service companies. A new Petroleum Law has been drafted, and is under review by the Attorney General's Office. The draft is in the process of being finalised to ensure its compatibility with the amended clauses of the Constitution.

Of equal importance in the oil and gas sector are the following:

- the SEE Law (under which MOGE is assigned responsibility for the E&P sector under PSCs with private companies); and
- the 2012 FIL, Foreign Investment Rules and MIC Notification 26/2015 and Pyidaungsu Hluttaw Law No. 67/2015, stating: 'The Commission may distribute its power to the Region and State Governments for economic development of the Regions and States in accordance with the approval of the Union Government.' The 2012 FIL was superseded by the 2016 MIL, enacted in October 2016. Rules for the 2016 MIL have not yet been passed.

The Ministry of Environmental Conservation and Forestry issued the National Environmental Quality Emission Guideline (EQEG) on 29 December 2015 as Notification No. (615/2015). EQEG provides the basis for the regulation and control of noise and vibration, air emissions and liquid discharges from various sources in order to prevent pollution for the purposes of protection of human and ecosystem health. EQEG applies to the onshore and offshore oil and gas sector, including seismic exploration, exploratory and production drilling, development and production activities, offshore pipeline operations, offshore transportation, tanker loading and unloading, ancillary and support operations, and decommissioning.

6 Are participants required to provide security or any guarantees to be issued with a licence to explore for or to store gas?

The current model PSC requires both a parent company guarantee and a performance bank guarantee to be issued with a licence to explore for gas, the second of which is to be provided within 30 days after commencement of the operation date. The performance bank guarantee is issued by a corresponding bank of Myanmar Foreign Trade Bank, in respect of the minimum expenditure commitment of the contractor.

Regulation of natural gas pipeline transportation and storage

7 Describe in general the ownership of natural gas pipeline transportation, and storage infrastructure.

MOGE is responsible for the transportation of crude oil and natural gas in Myanmar.

8 Describe the statutory and regulatory framework and any relevant authorisations applicable to the construction, ownership, operation and interconnection of natural gas transportation pipelines, and storage.

The Ministry of Electricity and Energy is a state-owned enterprise with onshore operatorship, and it depends on the government's budget. It initiates the joint venture process for three drilling rigs, pipeline construction (onshore) and seismic acquisition. It is privatised in downstream (trading and marketing) and uses only conventional resources.

The Ministry of Electricity and Energy is divided into four organisations:

- regulation: OGPD, which is responsible for coordination, management and regulation;

- upstream: MOGE, which is responsible for exploration, drilling, production, on-land oil and gas pipeline network and CNG;
- midstream: MPE, which is responsible for refineries and process, fertiliser plants, methanol plant, CO² and LPG plants and waxing and tar; and
- downstream: MPPE, which is responsible for marketing and distribution.

9 How does a company obtain the land rights to construct a natural gas transportation or storage facility?

Similar to other former British colonies, the land tenure system in Myanmar recognises freehold and leasehold title. Such title must be registered to be effective, and is subject to reservation, in favour of the government, of all mines, mineral products and buried treasures. The government has the right to expropriate land with appropriate consideration.

Foreign nationals, or companies with one or more shares owned by foreign nationals, are barred from acquiring land (or any interest in land) by way of a transfer, grant, lease or mortgage, except with government permission. In September 2011, a notification was passed that a company operating under the old FIL may be granted a 'right to use' government-owned land or private land. The 2012 FIL allowed the sub-lease or mortgage of land and buildings under an MIC permit within an agreed term, and only with the MIC's approval.

Under the 2012 FIL, foreign companies may be granted a right to lease or use land for a period of up to 50 years, with two possible renewal terms of 10 years each. The MIC may grant a lease or right to use for a longer period in respect of investment in particularly underdeveloped regions.

The 2016 MIL provides a similar right to lease or use land. Definite procedures for granting land use rights under the 2016 MIL are expected to be provided in the MIL Rules.

10 How is access to the natural gas transportation system and storage facilities arranged? How are tolls and tariffs established?

This information is not available. On a case-by-case basis, such arrangements are negotiated with the relevant government regulator and local government organisation.

11 Can customers, other natural gas suppliers or an authority require a pipeline or storage facilities owner or operator to expand its facilities to accommodate new customers? If so, who bears the costs of interconnection or expansion?

This information is not available.

12 Describe any statutory and regulatory requirements applicable to the processing of natural gas to extract liquids and to prepare it for pipeline transportation.

This information is not available.

13 Describe the contractual regime for transportation and storage.

This information is not available.

Regulation of natural gas distribution

14 Describe in general the ownership of natural gas distribution networks.

MOGE is responsible for transporting natural gas, and is overseen by the Ministry of Electricity and Energy (see question 3).

The Ministry of Electricity and Energy has taken steps to expand the utilisation of LPG as a household fuel. Distribution of LPG is controlled by the government, through MPE. According to MPE, there are three LPG plants with a total design capacity of between 42 and 50mmcf/d. The Minbu LPG Extraction Plant was established by Mitsubishi Heavy Industry Co (Japan), while the remaining two plants, one in Nyaung Don and one in Kyun Chaung, were established by CMC Dong Fang International Co (China).

The Ministry of Electricity and Energy has also taken steps to promote CNG and CNG filling stations.

15 Describe the statutory and regulatory structure and authorisations required to operate a distribution network. To what extent are gas distribution utilities subject to public service obligations?

There is no clear legal or regulatory practice.

16 How is access to the natural gas distribution grid organised? Describe any regulation of the prices for distribution services. In which circumstances can a rate or term of service be changed?

The total domestic gas pipeline network ranges from 4 to 20 inches in diameter and spans 2,874km. The domestic pipeline from Yadana to Yangon is 24 inches in diameter and 436km long. The export pipelines from each of the natural gas fields vary in lengths and diameters: Yadana Pipeline (36 inches, 410km), Yatgun Pipeline (24 inches, 274km), Myanmar China Gas Pipeline (40 inches, 782km in Myanmar) and Zawtika Pipeline (28 inches, 300km).

Access to the gas pipeline requires contracting with MOGE.

17 May the regulator require a distributor to expand its system to accommodate new customers? May the regulator require the distributor to limit service to existing customers so that new customers can be served?

This information is not available.

18 Describe the contractual regime in relation to natural gas distribution.

This information is not available.

Regulation of natural gas sales and trading

19 What is the ownership and organisational structure for the supply and trading of natural gas?

See question 14.

20 To what extent are natural gas supply and trading activities subject to government oversight?

Natural gas supply and trading activities are under the control of MOGE.

21 How are physical and financial trades of natural gas typically completed?

This information is not available.

22 Must wholesale and retail buyers of natural gas purchase a bundled product from a single provider? If not, describe the range of services and products that customers can procure from competing providers.

This information is not available.

Regulation of LNG

23 What is the ownership and organisational structure for LNG, including liquefaction and export facilities, and receiving and regasification facilities?

There are currently no LNG facilities in Myanmar. There has been discussion about possible floating receiving and regasification facilities to address the current demand for gas, but no concrete plans have been put in place. A tender for EOI for LNG facilities was issued in 2016.

24 Describe the regulatory framework and any relevant authorisations required to build and operate LNG facilities.

The Ministry of Electricity and Energy is the regulator that would develop the regulatory framework and relevant authorisations required for LNG facilities in the future.

25 Describe any regulation of the prices and terms of service in the LNG sector.

Myanmar law is silent on this point.

Mergers and competition**26 Which government body may prevent or punish anticompetitive or manipulative practices in the natural gas sector?**

There is no government body to prevent or punish anticompetitive or manipulative practices specifically for the natural gas sector. The Competition Law, which entered into force on 24 February 2017, establishes the Myanmar Competition Commission under the Ministry of Commerce. The Commission will be the government body to prevent or punish anticompetitive or manipulative practices, including those in the natural gas sector. The Commission will be vested with investigative and adjudicative powers.

27 What substantive standards does that government body apply to determine whether conduct is anticompetitive or manipulative?

Myanmar law is silent on this point.

28 What authority does the government body have to preclude or remedy anticompetitive or manipulative practices?

Similar to other jurisdictions, the Competition Law prohibits anticompetitive agreements and the abuse of a dominant position.

29 Does any government body have authority to approve or disapprove mergers or other changes in control over businesses in the sector or acquisition of production, transportation or distribution assets?

Yes. If the business entity is under the MIC, it will require the MIC's approval. The MIC may seek advice from the Ministry of Commerce regarding merging regulations under the Competition Law once it has come into force.

30 In the purchase of a regulated gas utility, are there any restrictions on the inclusion of the purchase cost in the price of services?

Myanmar law is silent on this point. Section 13 of the Competition Law may be applicable once it has come into force.

31 Are there any restrictions on the acquisition of shares in gas utilities? Do any corporate governance regulations or laws regarding the transfer of assets apply to gas utilities?

The State-Owned Economics Enterprises Law prescribes that gas utilities may only be undertaken by a state-owned enterprise, subject to exceptions allowed by the government for joint ventures between the government and another person or economic organisation. Section 7 of the Competition Law may be applicable when it is enforced.

International**32 Are there any special requirements or limitations on foreign companies acquiring interests in any part of the natural gas sector?**

Foreign companies are restricted in acquiring interests in the natural gas sector by the SEE Law and MIC Notification 26/2015.

Myanmar's model PSC (2013) requires contractors to use 25 per cent of their annual budget to procure goods and services either in Myanmar or rendered by Myanmar nationals. The model contract also contains a general requirement that contractors give preference to Myanmar goods and services when they are available locally, and so long as they are of comparable quality, price and availability.

The model contract also requires a contractor to employ qualified citizens of Myanmar to the maximum extent possible. Further, the 2012 FIL and the 2012 FIL Rules provide certain specific proportionate local employment thresholds to be complied with in stages during the first six years of operation under an MIC permit (ie, 25 per cent of the skilled workforce must be Myanmar nationals within the first year, 50 per cent within the second year and 75 per cent within the third year). The new MIL relaxes these thresholds.

Previously, offshore oil exploration and production could be undertaken by a 100 per cent foreign-owned contractor. MOGE currently requires that the foreign contractor include a local joint venture partner holding a minority interest for both onshore and shallow water block projects. A deepwater block project may be undertaken by a 100 per cent foreign-owned contractor. For offshore exploration, the government allows a maximum of three blocks for each company.

A list of possible joint venture partners is available on www.energy.gov.mm.

33 To what extent is regulatory policy affected by treaties or other multinational agreements?

Myanmar is a member of ASEAN, and a participant in the Trans-ASEAN Gas Pipeline Project (TAGP project). Myanmar is a party to the ASEAN Memorandum of Understanding on the Trans-ASEAN Gas Pipeline signed on 5 July 2012 in Bali, Indonesia. The ASEAN Council on Petroleum is developing a regulatory framework including open access, gas transit principles and gas specification harmonisation to facilitate the TAGP project. The updated ASCOPE-TAGP Masterplan 2000 involves the construction of 4,500km of pipelines (mainly undersea) worth US\$7 billion. Eight bilateral gas pipeline interconnection projects, with a total length of approximately 2,300km, are currently operating.

The above statistics were produced by the ASEAN Centre for Energy.

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34 What rules apply to cross-border sales or deliveries of natural gas?

Cross-border sales or deliveries are regulated by the terms of the relevant PSC and gas sales agreement.

36 Who enforces the affiliate restrictions and what are the sanctions for non-compliance?

Not applicable.

Transactions between affiliates

35 What restrictions exist on transactions between a natural gas utility and its affiliates?

None.

Nigeria

Olusina Sipasi, Mutiat Adeyemo and Oritsemone Awala-Velly

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Description of domestic sector

1 Describe the domestic natural gas sector, including the natural gas production, liquefied natural gas (LNG) storage, pipeline transportation, distribution, commodity sales and trading segments and retail sales and usage.

Nigeria's most significant natural resource is natural gas. With estimated proven reserves of 187 trillion cubic feet, Nigeria is reputed to have the ninth-largest gas reserves in the world. These natural gas resources considerably exceed the crude oil reserves.

Gas utilisation within Nigeria is limited, however, because of an unattractive fiscal, commercial, legal and regulatory environment for the investments necessary for the development of a viable domestic gas market. Thus, Nigeria's gas reserves remain underutilised.

The sector is vertically integrated, with government involvement in all its functional segments either as a policymaker, regulator or commercial participant.

Gas production in Nigeria is undertaken under oil prospecting licences (OPLs) and oil mining leases (OMLs). The OPLs and OMLs are operated either under joint venture with the Nigerian National Petroleum Corporation (NNPC) or on a sole-risk basis.

The Nigerian Liquefied Natural Gas Company (NLNG), a joint-venture company established by the NNPC, Shell Petroleum Development Company (SPDC), Total and Eni, currently produces LNG; the company is responsible for the storage facilities of the LNG produced. The company currently operates six trains, with plans for the construction of a seventh train being at an advanced stage. Other proposed LNG projects include Brass LNG, OK LNG, Nnwa/Doro Floating LNG, the Western LNG Project and Southeast LNG/PLNG.

The Nigerian Gas Company (NGC), a subsidiary of the NNPC, owns and operates the main pipeline transmission systems in Nigeria. Other gas transmission pipelines are individually owned by the NLNG and the NNPC/SPDC/Total joint venture, and are dedicated to their respective operations. The NGC's pipeline infrastructure comprises two unintegrated pipeline networks totalling approximately 1,100km: the Alakiri-Obigbo-Ikot Abasi Pipeline, otherwise known as the eastern network, and the Escravos-Lagos Pipeline System (ELPS), also known as the western network. The ELPS is a strategic 560km pipeline that transports gas from fields in the Niger Delta to Lagos, Nigeria's commercial centre, and then spurs at Lagos on to the West African Gas Pipeline (WAGP), which was developed by the NNPC, Chevron, Shell and the governments of Nigeria, Ghana, Togo and Benin. The NNPC is currently constructing a 346km gas pipeline also from Escravos to Lagos (ELPS II).

The NNPC is currently constructing the East-West Pipeline, popularly called the Obiafu, Obrikom, Oben (OB3) gas pipeline, a 127km pipeline from Obiafu/Obrikom in Rivers State to Oben in Edo State. This pipeline, when completed, is expected to increase domestic gas supply from 1.5bscf/d to 2bscf/d. The market for wholesale gas in Nigeria is currently dominated by the NGC, which operates as a gas merchant in addition to its role as a gas transmission company. It has entered into several gas sale and purchase agreements (GSPAs) with gas producers in respect of the lean gas produced in their gas projects. There are, however, plans to restructure NGC into separate gas transmission and gas marketing companies. There are several gas distribution companies in Nigeria, including Shell Nigeria Gas, a subsidiary of

SPDC, Oando Gas and Power and Gaslink Limited. These companies distribute gas principally in the industrial areas in and around Lagos and in some parts of eastern Nigeria. LNG export forms the bulk of the natural gas trade in the international market. It is exported to countries including Belgium, Italy, Mexico, Portugal, Spain and the United States. The WAGP exports natural gas to countries in the West Africa sub-region. Local markets include power-generating plants, local industries (gas-to-liquids (GTL) plants, fertiliser plants) and domestic gas consumers. Plans to build a Trans-Saharan Pipeline Project that is intended to stretch across the Sahara desert and connect Nigeria's gas reserves to Europe via Algeria's Mediterranean coast are being pursued by the governments of Nigeria and Algeria. The memorandum of understanding between Nigeria and Algeria has been signed and a feasibility study for the project has been concluded. The Republic of Niger has been admitted as a co-sponsor of the 4,400km-long pipeline. However, work on the project has since stalled.

In 2008, the government approved the Nigerian Gas Master Plan (NGMP) to provide a framework for the commercial exploitation of the domestic gas sector. The NGMP is composed of three sections:

- the gas pricing policy, which provides a transparent framework for gas pricing;
- the domestic supply obligation, which ensures that there is sufficient gas available for use in the domestic market; and
- the gas infrastructure blueprint, which provides for a robust infrastructure to ensure gas supply from different sources to buyers and end users.

The National Domestic Gas Supply and Pricing Regulations and the National Domestic Gas Supply and Pricing Policy have been issued by the federal government as components of the NGMP. Under the NGMP, the federal government has designed three strategies: gas-to-power, gas-based industrialisation and a robust gas export market.

The NNPC has outlined a comprehensive gas infrastructure development programme projected to attract investment of over US\$16 billion within the next four years. An opportunity arising out of this is the proposed Ogidinben Gas-based Industrial Park, which is designed to emerge as Africa's largest gas city with fertiliser, methanol, power projects and a central processing facility.

2 What percentage of the country's energy needs is met directly or indirectly with natural gas and LNG? What percentage of the country's natural gas needs is met through domestic production and imported production?

There is no official information regarding the percentage of the country's natural gas needs that is met through domestic or imported production. However, it is estimated that natural gas meets about 34 per cent of the country's energy needs, consumed primarily by the industrial sector. Nigeria does not import natural gas.

Government policy

3 What is the government's policy for the domestic natural gas sector and which bodies set it?

The government's policies for the domestic natural gas sector are contained in the National Domestic Gas Supply and Pricing Policy (NDGPP) and the National Gas Policy (NGP). The main planks of the

NDGPP are the establishment of the domestic gas supply obligation, the establishment of a strategic gas aggregator and a pricing regime for domestic gas.

The NGP, however, seeks to review the existing policy. Under the NGP, the government seeks to move Nigeria from a crude-oil export-based economy to a gas-based industrial economy by giving primary attention to meeting local gas needs and developing a significant presence in international markets. It also seeks to give priority to domestic gas supply particularly for power generation. The policy also states that the issuance and renewal of upstream licences will be subject to strict compliance by the applicant of its domestic gas supply obligations.

The relevant officials and agencies responsible for the formulation of the Policy are the Minister of Petroleum Resources, the Minister of State for Petroleum Resources, the Department of Petroleum Resources and the NNPC.

At present, there is no commercial production of unconventional gas in Nigeria. As such, there is no specific regulation for the unconventional gas sector in Nigeria.

Regulation of natural gas production

4 What is the ownership and organisational structure for production of natural gas (other than LNG)? How does the government derive value from natural gas production?

The Constitution reserves title to gas in situ to the state. In addition, the government has the right to take associated gas produced free of cost at the flare or at an agreed cost without the payment of royalty. However, if the government does not exercise this right, title to gas would depend on the type of concession.

Title to gas discovered under production-sharing contracts (PSCs) is reserved for the NNPC. The PSC contractor is required to investigate the discovery of a viable quantity of natural gas and submit its proposal for the commercialisation of the discovery to the NNPC. Thereafter, a separate agreement must be negotiated and executed between the NNPC and the contractor in respect of the development of the discovery. The government has stated in its new gas policy that it will develop a model gas development agreement containing its terms for the development of gas resources in PSC concessions, addressing the contractual and fiscal issues relevant to gas production. It is expected that this agreement will then be negotiated with contractors.

Under the joint-venture arrangement, the concession is typically an OPL or OML held and operated by an international oil company in joint venture with the NNPC. Gas discovered in the concession area is developed in accordance with the provisions of the relevant joint-operating agreement. The OPL or OML gives the holder the right, subject to the payment of appropriate rents, royalties and taxes, to 'work, win and carry away' petroleum from the concession area. This, in essence, translates as having the title to the oil or gas produced in the concession or the proceeds thereof.

Holders of sole-risk concessions also have title to the gas produced subject to the payment of appropriate rents, royalties and taxes.

The government derives value from gas production through signature and production bonuses, royalties, taxes and state participation through the NNPC. A signature bonus is paid by a concessionaire at the time an OPL or OML is granted. Production bonuses are payable upon attainment of set cumulative production levels. Royalties are payable to the federal government at a rate of 7 and 5 per cent respectively for gas sold from onshore and offshore production. Gas sold excludes gas flared or waste gas appropriated by the federal government for its own use.

Companies' income tax is chargeable at a rate of 30 per cent on the assessable profits of companies that produce gas or utilise gas for downstream projects such as pipelines, power plants, industrial plants, refineries and fertiliser plants.

In addition, the government participates in petroleum operations through the NNPC. The NNPC participates in gas production through its participating interests in OMLs with several oil majors. It is also expected that the NNPC will have substantial economic interest in the PSC gas to be produced under the gas development agreements.

5 Describe the statutory and regulatory framework and any relevant authorisations applicable to natural gas exploration and production.

The Petroleum Act generally regulates gas exploration and production. Mandatory environmental impact assessments (EIAs) are required to be conducted in respect of gas projects by the Environmental Impact Assessment Act. The Land Use Act 2004 regulates the use and ownership of land. Other relevant statutes and policies include the Petroleum Profits Tax Act 2004, which regulates the taxation of upstream gas production; the Companies Income Tax Act 2004 for the taxation of downstream gas projects; and the National Domestic Gas Supply and Pricing Regulations that regulate supply and pricing of domestic gas. Because the Petroleum Act mainly focuses on oil and barely regulates gas, the government has stated its intention to pass new legislation to regulate the gas sector in its new gas policy. This is, however, uncertain, in light of the pendency of the Petroleum Industry Bill in the Nigerian legislature which seeks to regulate the gas sector as well as the oil sector.

The Ministry of Petroleum Resources and the Department of Petroleum Resources (DPR) are responsible for determining policies governing the production, transmission, distribution and supply of natural gas. The Department of Gas regulates the supply of gas to the domestic market. The Ministry of Petroleum Resources has general oversight responsibilities, while the DPR is the regulatory arm of the Ministry. The Federal Ministry of Environment (FMoE) also has oversight over the environmental aspects of the production, transmission, distribution and supply of natural gas. Both the Ministries of Petroleum Resources and Environment were created by declarations of the President; the Department of Gas was created by a regulation issued by the Minister for Petroleum Resources. They are fully independent of the regulated businesses. Redress from regulatory decisions may be sought before the Federal High Court by filing the necessary processes for commencement of action in court. The government has, however, stated plans in the new gas policy to establish a single independent authority to regulate both the oil and gas industry.

Under the existing regulatory framework, the holder of mineral rights may assign part or all of its rights, but with the consent of the Minister of Petroleum Resources. Each exploration and production activity, including drilling location and the quantity of gas to be produced, will require permitting and reporting obligations from the producer.

Pursuant to the Petroleum (Drilling and Production) Regulations, both the Minister of Petroleum Resources and the Director of Petroleum Resources (Chief Executive Officer of the DPR) are empowered to authorise and monitor drilling and production activities.

At present, there are no commercial productions of unconventional gas in Nigeria. As such, there is no specific regulation for the unconventional gas sector in Nigeria.

6 Are participants required to provide security or any guarantees to be issued with a licence to explore for or to store gas?

Depending on the type of concession, participants are generally required to provide evidence of both their financial and technical capabilities in order to participate in petroleum operations.

Regulation of natural gas pipeline transportation and storage

7 Describe in general the ownership of natural gas pipeline transportation, and storage infrastructure.

Most of the gas pipeline network in Nigeria is controlled by the NGC, the gas transportation subsidiary of the NNPC. The NGC owns and operates a 1,250km network of gas transmission pipelines. It has also granted gas distribution licences to Shell Nigeria Gas, a subsidiary of Shell Petroleum Development Company Limited, and Gaslink Nigeria Limited, a subsidiary of Oando Nigeria.

Various gas storage facilities have been built for gas export projects such as the LNG plant in Bonny, the NNPC/Mobil Oso condensate projects, the NNPC/Mobil NGL project, the NNPC/Chevron Escravos Gas projects and the NNPC/Chevron/Sasol GTL project. In addition, nine LPG butanisation depots with storage facilities were built by the NNPC in strategic locations in the country for LPG storage and distribution.

To facilitate the flexible deployment of gas to domestic and export markets, the Ministry of Petroleum Resources has developed a Gas Master Plan Infrastructure Blueprint. This includes a network of gas

hubs, which will consist of secondary gas-gathering facilities from designated nodes of the upstream gas producers to a network of gas-processing facilities where gas will be processed to a national specification and evacuated via transmission pipelines. Under this framework, transportation pipelines from the well heads to the designated nodes will be owned and operated by the gas producers, while pipelines for the transportation of gas from the designated nodes to the transmission pipelines will be owned and operated by the hub operator.

8 Describe the statutory and regulatory framework and any relevant authorisations applicable to the construction, ownership, operation and interconnection of natural gas transportation pipelines, and storage.

The Ministry of Petroleum Resources, acting through the DPR and the FMoE, is responsible for determining policies governing the construction, ownership and operation of transportation pipelines and storage facilities for natural gas. The Ministry of Environment was created by the pronouncement of the President, while the DPR is a department under the Ministry of Petroleum Resources.

The construction and operation of natural gas transportation pipelines are regulated by the Oil Pipelines Act. Detailed regulations for the design, construction and operation of oil and gas pipelines are contained in the Oil and Gas Pipelines Regulations, 1995. The construction and operation of gas storage facilities are regulated by the Petroleum Act. The Oil Pipelines Act and the Petroleum Act are implemented in accordance with guidelines issued by the DPR.

The main authorisations granted by the DPR are a permit to survey a route for a gas pipeline and a licence to construct, maintain and operate a gas pipeline. The storage of natural gas also requires a licence granted by the DPR. An EIA is mandatory for the construction and operation of any natural gas transportation and storage facility.

Redress from regulatory decisions may be sought before the Federal High Court by filing the necessary processes for commencement of action in court.

9 How does a company obtain the land rights to construct a natural gas transportation or storage facility?

Generally, the title to land for the construction of transmission pipelines is derived from rights of way issued by the government of the state in which the land is located. Subject to the payment of compensation, the use of land for the construction of gas pipelines constitutes an overriding public purpose for which the government may expropriate privately or communally held land.

Applications for rights of way for pipelines are advertised in newspapers and are subject to a public hearing, during which comments or objections to the application will be made to the DPR. In the absence of a genuine objection or major environmental impact, a permit to survey the proposed pipeline route will be granted prior to the issuance of a licence to construct, maintain and operate a gas pipeline.

The title to land for the construction of a gas storage facility could be obtained further to a certificate of occupancy from the government of the state in which the land is located or by private treaty with the holder of an interest in the land.

10 How is access to the natural gas transportation system and storage facilities arranged? How are tolls and tariffs established?

The present regulation on network access provides that any person may apply in writing to the Minister for Petroleum Resources for the right to use a gas pipeline constructed, maintained and operated by another person. The Minister may determine the terms and conditions of use only if the parties fail to agree. There is therefore no automatic right of third-party access to gas transportation and storage facilities.

Issues such as gas balancing, gas specification and adjustment of different gas qualities are treated in the respective gas sale agreements between the gas producer and offtaker and in the gas transmission agreements with the NGC. Physical balancing is handled by the NGC. The new gas policy proposes that the government pay an LNG export tolling price to owners of new LNG liquefaction facilities for liquefying the government's share of gas produced from its assets, while LNG shippers are to be paid transportation fees. The price and methodology for such tolls is stated in the policy to be developed with the industry in view of the liquefaction costs, regasification costs and standard shipping and insurance costs.

11 Can customers, other natural gas suppliers or an authority require a pipeline or storage facilities owner or operator to expand its facilities to accommodate new customers? If so, who bears the costs of interconnection or expansion?

The existing legal and regulatory framework does not provide for such a requirement.

12 Describe any statutory and regulatory requirements applicable to the processing of natural gas to extract liquids and to prepare it for pipeline transportation.

The processing of natural gas for the extraction of liquids is subject to a licence for the construction and operation of a gas processing facility issued by the DPR.

13 Describe the contractual regime for transportation and storage.

The transportation and storage of gas is subject to the agreement of the parties. Parties to a gas transportation transaction usually enter into a gas transportation agreement (GTA). Under the agreement, the transporter agrees to ship gas to the destination desired by the shipper. The shipper may be the seller or the purchaser of the gas, or a third-party shipper contracted by either the seller or purchaser of the gas. Key features of a typical GTA will include tariffs, the duration of the agreement, termination events, capacity reservation, input point and delivery point, lost gas, ship or pay provisions, make up gas, off-spec gas, measurement, pressure specification and scheduled maintenance.

Owing to its monopoly position, the NGC frequently imposes its terms, especially tariffs, on other parties. Recently, owing to the government's desire to increase domestic utilisation of gas to boost the power sector, there has been pressure on the NGC to negotiate terms that are commercially sensible with parties who desire to use its pipeline network.

Parties to a gas storage transaction usually enter into a throughput agreement, under which the facility owner stores the gas in its facilities for a specified period.

Regulation of natural gas distribution

14 Describe in general the ownership of natural gas distribution networks.

At present, the NGC dominates the country's distribution and transmission networks, operating as a gas merchant and a transmission company. The NGC has long-term GSPAs with producers, including franchise arrangements with several companies. These arrangements require the franchisee to develop gas distribution infrastructure and engage in gas distribution within specific geographical areas. The franchisees may either distribute NGC-owned gas to the NGC's customers, or sell and distribute gas on their own account to their own customers.

15 Describe the statutory and regulatory structure and authorisations required to operate a distribution network. To what extent are gas distribution utilities subject to public service obligations?

The statutory framework and governmental or administrative authorisations required to operate a distribution network are similar to those applicable to gas transmission pipelines (see questions 8, 9 and 10). The governmental bodies that determine the relevant regulatory policies are the Ministry of Petroleum Resources acting through the DPR and the FMoE.

There are no public service obligations with respect to gas distribution facilities beyond the power of the Minister for Petroleum Resources to take control of any works, plants or premises used for oil and gas activities.

16 How is access to the natural gas distribution grid organised? Describe any regulation of the prices for distribution services. In which circumstances can a rate or term of service be changed?

See question 10. Prices for distribution services are not regulated. Rates or terms of service are commercial issues covered in the respective distribution agreements.

- 17** May the regulator require a distributor to expand its system to accommodate new customers? May the regulator require the distributor to limit service to existing customers so that new customers can be served?

The existing legal and regulatory framework does not give the Minister for Petroleum Resources power to require a distributor to expand its system to accommodate new customers or to limit service to existing customers so that new customers can be served.

- 18** Describe the contractual regime in relation to natural gas distribution.

Gas distributors usually enter into GSPAs with end users. The features of a typical GSPA between a distributor and an end user include duration, calorific value per volume of gas, metering and delivery point, take-or-pay provisions, force majeure and tariff provisions.

Regulation of natural gas sales and trading

- 19** What is the ownership and organisational structure for the supply and trading of natural gas?

By virtue of the National Domestic Gas Supply and Pricing Regulations, local supply of gas is coordinated by a strategic aggregator, the Gas Aggregation Company of Nigeria Limited. The Department of Gas allocates a domestic gas supply obligation to every person licensed to produce petroleum, mandating them to make a specific volume of gas available to the Nigerian domestic market. A purchaser is required to apply to the strategic aggregator for the purchase of gas. The strategic aggregator will conduct a due diligence on the purchaser and, if satisfied, will issue a gas purchase order (GPO) to the purchaser. The GPO will specify the gas supplier expected to supply the required gas, the quantity, the price, the delivery schedule and the revenue due to the gas supplier.

- 20** To what extent are natural gas supply and trading activities subject to government oversight?

The supply and trading of gas is regulated by the government. Any person that wishes to engage in the supply and trading of natural gas is required to register with the DPR. Registration with the DPR is a form of authorisation to conduct activities in the gas sector. Guidelines issued by the DPR regulate the installation of facilities to be used by traders and suppliers of natural gas for their operations. The National Domestic Gas Supply and Pricing Regulations impose a domestic gas supply obligation on gas producers in Nigeria, similar to those implemented in countries such as Indonesia.

- 21** How are physical and financial trades of natural gas typically completed?

Trades in natural gas are conducted between producers, major suppliers and end users. A bulk of the natural gas produced is sold directly in liquefied form to offshore offtakers in overseas markets. Such sale of gas is usually transacted through long-term GSPAs for durations sometimes exceeding 20 years. The contract price is usually subject to the agreement of the contracting parties. The standard terms in these contracts include guarantee of adequate gas reserves to meet contractual obligations, nominations and variations (including annual contract quantity and daily contract quantity), transportation, measurement, contract price, price reopener terms, facilities and scheduled maintenance of facilities, excess gas, take-or-pay terms, carry forward gas, force majeure terms, delivery issues and insurance.

A fraction of the natural gas sold in the domestic market is usually used by domestic industries as either feedstock or fuel. Domestic users purchase gas from distributors via gas purchase agreements. The government regulates the process by which certain strategic utilities, such as electricity-generating plants, aluminium-smelting plants and steel plants, purchase gas from the NGC (the government-owned distribution and transportation company). The usual features of a typical gas purchase agreement between a distributor and a domestic end user include duration, calorific value per volume of gas, metering and delivery point, take-or-pay provisions, force majeure and tariff provisions.

There is no exchange-traded derivatives market in natural gas in Nigeria. In addition, we are not aware of any over-the-counter derivatives transactions in natural gas.

- 22** Must wholesale and retail buyers of natural gas purchase a bundled product from a single provider? If not, describe the range of services and products that customers can procure from competing providers.

The practice is for gas to be sold to customers as a bundled product.

Regulation of LNG

- 23** What is the ownership and organisational structure for LNG, including liquefaction and export facilities, and receiving and regasification facilities?

The only company presently engaged in LNG production is the NLNG. It was established as a special-purpose joint-venture company by SPDC, Total, Eni and the NNPC. The NLNG currently runs six production trains, with plans to build a seventh train having reached an advanced stage. It also owns a dedicated gas transmission system and liquefaction facility and a fleet of LNG vessels through a subsidiary company. Its customers own receiving and liquefaction terminals for LNG supplied by the company. Other proposed LNG projects include the Brass LNG and the Olokola LNG projects.

- 24** Describe the regulatory framework and any relevant authorisations required to build and operate LNG facilities.

LNG activities are regulated under the Petroleum Act and its subsidiary regulations, which include the Petroleum Refining Regulations. The export of LNG is regulated by:

- the Oil Terminal Dues Act;
- the Crude Oil (Transportation and Shipment) Regulations;
- the Nigerian Ports Authority Act;
- the Pre-shipment Inspection of Export Act;
- the Customs and Excise Act;
- the Foreign Exchange (Monitoring & Miscellaneous Provisions) Act; and
- the Foreign Exchange Manual (issued by the Central Bank of Nigeria).

The key authorisations for the construction and operation of LNG facilities are an EIA approval from the FMOE, approval of the design specifications of the plant and gas transmission system, and a licence to construct and operate the facility to be obtained from the DPR.

- 25** Describe any regulation of the prices and terms of service in the LNG sector.

The prices of gas produced for export are not regulated. These are subject to contractual terms and international market forces.

Except for specific fiscal exemptions granted pursuant to Nigerian LNG (Fiscal Incentives, Guarantees and Assurances) of Decree No. 39 1990 as amended by Decree No. 113 of 1993, the activities of the NLNG are regulated by the laws applicable to other gas projects.

Mergers and competition

- 26** Which government body may prevent or punish anticompetitive or manipulative practices in the natural gas sector?

Nigeria has yet to develop anti-competition rules for the gas sector.

- 27** What substantive standards does that government body apply to determine whether conduct is anticompetitive or manipulative?

See question 26.

- 28** What authority does the government body have to preclude or remedy anticompetitive or manipulative practices?

See question 26.

- 29** Does any government body have authority to approve or disapprove mergers or other changes in control over businesses in the sector or acquisition of production, transportation or distribution assets?

The Corporate Affairs Commission, the Securities and Exchange Commission and the Federal High Court are the agencies authorised

to approve mergers, acquisitions and other forms of changes of control of businesses in any sector in Nigeria. In addition, the approval of the Minister of Petroleum Resources is required for any change in ownership or control of a company engaged in gas production.

Given the existing bureaucracy, it may take up to 12 months to obtain approval for a merger or change of control from these agencies.

30 In the purchase of a regulated gas utility, are there any restrictions on the inclusion of the purchase cost in the price of services?

There are no such restrictions.

31 Are there any restrictions on the acquisition of shares in gas utilities? Do any corporate governance regulations or rules regarding the transfer of assets apply to gas utilities?

Except what may be stipulated in the memorandum and articles of association of the respective companies, there are no restrictions in the acquisition of shares in gas utilities. There is no specific regulation applying to the transfer of assets of gas utilities. The consent of the Minister for Petroleum Resources is required only if the transaction involves a change of ownership or control of a petroleum concession.

International

32 Are there any special requirements or limitations on foreign companies acquiring interests in any part of the natural gas sector?

Where the interests to be acquired relate to upstream assets, the transaction must be approved by the Minister of Petroleum. Additionally, where there is foreign direct investment or participation in a company, the company whose interests are being acquired by a foreign company is required to apply to the Nigerian Investment Promotion Commission for registration. Further, the transaction must comply with the requirements of the Central Bank of Nigeria for the importation of foreign capital. The Securities and Exchange Commission must approve the capital investment or acquisition if the company is quoted on the Stock Exchange.

33 To what extent is regulatory policy affected by treaties or other multinational agreements?

Treaties and multinational agreements are only of persuasive effect until passed into law by the National Assembly of Nigeria. However, the provisions of many regulatory instruments adopt the provisions of treaties and multinational agreements. It is, however, arguable that treaties relating to investment may be enforceable even if not passed into law by the National Assembly of Nigeria, by virtue of Nigeria's principal investment legislation, the Nigerian Investment Promotion Act, which provides for the settlement of investment disputes between the federal government and a foreigner within the framework of any

Update and trends

In October 2016, the President presented a document titled 'Short and Medium Term Priorities to grow the Nigerian Oil and Gas Industry', more popularly referred to as the '7 Big Wins'. While the document mainly focuses on the oil sector, it addresses the President's plans for the gas sector for the next four years. For the gas sector, the government intends to develop work on critical gas infrastructure such as ELPS II and OB3 and to promote the domestic utilisation of gas and gas products such as LPG and CNG, among other priorities.

In November 2016, the Nigerian government published its new gas policy document, which is based on a review of the government's previous policy positions emanating from the NGMP. The policy, to an extent, reiterates policies in the NGMP such as the domestic supply obligations of oil and gas companies, the focus on critical gas infrastructure, and so on. In addition, the policy seeks to establish a single independent petroleum regulatory authority and promulgate specific legislation to regulate the gas sector as a stand-alone sector. It also seeks to separate the upstream sector from the midstream sector of the gas industry. Finally, the policy seeks ways to attract private investment into the industry, especially the midstream sector and reduce government investment.

bilateral or multilateral agreement on investment protection to which the federal government and the country of which the investor is a national are parties, especially where such framework envisages international arbitration.

34 What rules apply to cross-border sales or deliveries of natural gas?

These activities are regulated by contract between the parties. Gas export prices are determined by economic fundamentals. An export permit from the DPR will be required. Depending on who the parties are, international agreements and treaties may also apply.

Transactions between affiliates

35 What restrictions exist on transactions between a natural gas utility and its affiliates?

The Petroleum Profits Tax Act (PPTA) and the Companies Income Tax Act (CITA) require that all transactions, especially between companies and affiliates, must be conducted at arm's length.

36 Who enforces the affiliate restrictions and what are the sanctions for non-compliance?

The Federal Inland Revenue Service (FIRS) is charged with the administration of the PPTA and the CITA. Therefore, if a transaction is deemed not to be at arm's length, the FIRS is authorised to impose its own cost estimates for the purposes of assessment for tax.



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Description of domestic sector

1 Describe the domestic natural gas sector, including the natural gas production, liquefied natural gas (LNG) storage, pipeline transportation, distribution, commodity sales and trading segments and retail sales and usage.

The Norwegian gas sector comprises large offshore production facilities producing approximately 117 billion Sm³ gas per year (2016). This is the highest amount ever produced and delivered from the Norwegian continental shelf (NCS). Almost all dry gas produced is exported to Europe through a pipeline network consisting of approximately 8,300km of pipelines. Two new fields came onstream in 2016, and 80 fields were in production at year end.

The wholly state-owned company Gassco is the operator for the integrated system for transporting gas from the NCS to other European countries. This role includes the overall responsibility for running the system on behalf of the owners of the transport system. The transport system, Gassled, is owned by various oil and gas companies as well as private investment funds. Statoil is the technical service provider for Gassco with respect to the Kårstø and Kollsnes processing terminals, as well as for most of the gas pipeline and platform infrastructure system. See also question 7.

Gas from the NCS covers approximately 20 per cent of the European gas consumption. The largest export quantities go to Belgium, France, Germany and the UK, where Norwegian gas accounts for between 20 and 40 per cent of the total gas consumption. However, the producing companies on the NCS also have gas sales agreements with buyers in other countries, including Austria, the Czech Republic, Denmark, Italy, the Netherlands, Spain and Ukraine.

In addition, the Snøhvit LNG Export Terminal (located on Melkøya Island in the municipality of Hammerfest) in the Barents Sea delivers LNG to markets in Asia, America and Europe.

An insignificant share of the gas produced on the NCS is used for domestic energy consumption. As a consequence, it has not been necessary to develop an onshore distribution network and separate onshore gas storage facilities to serve domestic end users.

2 What percentage of the country's energy needs is met directly or indirectly with natural gas and LNG? What percentage of the country's natural gas needs is met through domestic production and imported production?

Norway is among the world's largest per capita hydropower producers, and a large part of the country's total electricity consumption comes from domestic hydropower. This implies that the domestic need for Norwegian gas is very low, and that the relatively small amount of gas demand is met by domestic production.

Government policy

3 What is the government's policy for the domestic natural gas sector and which bodies set it?

The policy of the domestic natural gas sector is set by the parliament and the government, while the overall responsibility to execute the resource management is vested in the Ministry of Petroleum and Energy (MPE). The Norwegian petroleum industry is based on a principle of sustainable development that strives to facilitate long-term

profitable production benefiting the country as a whole. As part of this principle, the government also focuses on increased recovery from producing fields, and increased exploration in both mature and unexplored areas. A petroleum fund is established to ensure that the revenue from petroleum activities (including the natural gas sector) will be available for future generations. All activities shall comply with comprehensive safety regulations and high environmental standards (zero pollution policy).

The government has announced its goal to increase the use of natural gas in the domestic market; however, access to cheap energy produced from Norwegian hydropower implies that it will take many years to achieve a substantial increase in the domestic consumption of natural gas. See also question 2.

Only conventional natural gas is produced in Norway; therefore, there are no specific regulations relating to unconventional natural gas.

Regulation of natural gas production

4 What is the ownership and organisational structure for production of natural gas (other than LNG)? How does the government derive value from natural gas production?

Pursuant to the Petroleum Act of 29 November 1996 No. 72 (Petroleum Act) and the analogous Onshore Petroleum Act of 4 May 1973 No. 21, the state has a proprietary right to all petroleum deposits and the exclusive right to resource management. The MPE is, however, empowered to grant licences pertaining to exploration and production of petroleum (see question 5). The granted licences contain criteria the licensees must comply with, and are given for a limited time period within a predefined area. The licensees obtain ownership in the petroleum produced equal to their relative share in the production licence once the petroleum has passed the well head. Petroleum deposits are defined to include all liquid and gaseous hydrocarbons.

The state participates in petroleum activities on the NCS through the state's direct financial interest (SDFI). The participating interest held by the SDFI in production licences, transportation pipelines (see questions 7 and 8) and specific land-based plants are managed by the state-owned limited company, Petoro AS (Petoro). Petoro is a licensee in selected licences, and participates on equal terms and conditions as other licensees. There are no limitations on the maximum participating interest to be reserved to the SDFI, but Petoro's share will normally be less than 50 per cent. Petoro does not hold operatorships.

The government's value from natural gas production is derived through the SDFI's direct ownership in production licences and dividends from the state's 67 per cent ownership in Statoil. Value is also derived through tax, as corporate income tax at a rate of 24 per cent is levied on income from gas extractions, processing and transportation by pipeline. The tax basis is the gross income less the costs incurred in acquiring, securing and maintaining the income, including operation costs, depreciations and financing costs.

In addition to the corporate income tax, income from petroleum activities is also subject to a special tax. The current rate of the special tax is 54 per cent. The basis for the special tax equals the basis for the corporate income tax, after an additional tax depreciation, or uplift, to ensure a regular rate of return on capital investments. The uplift equals 5.4 per cent of the investments each year for four years, in total 21.6 per

cent. In total, capital investments are hence depreciated 121.6 per cent in the basis for the special tax.

To ensure income from sales of natural gas is not reduced for tax purposes by different trading activities, companies are under an obligation to report the terms in all sales agreements entered into. For tax purposes, the companies can ask the tax authorities for a preliminary statement regarding the pricing in intra-group sales of gas. A preliminary statement is binding for the company.

5 Describe the statutory and regulatory framework and any relevant authorisations applicable to natural gas exploration and production.

The main statute providing the legal framework relevant for petroleum activities on the NCS is the Petroleum Act, regulating subsea activities and onshore activities that form an integrated part of the offshore petroleum production. Detailed rules and adaptations are set out in the appurtenant Petroleum Regulations of 27 June 1997 No. 653. Access to third-party infrastructure is also subject to other governmental regulations (see question 10). To date, no onshore exploration and production activities have been conducted in Norway.

Petroleum activities on the NCS are regulated by a licensing system administered by the MPE and the Norwegian Petroleum Directorate, and there are two distinct licences that may be granted by the MPE: exploration licences and production licences. In addition, a specific licence to install and operate pipelines is also granted by the MPE. The exploration licence is not exclusive, and does not give a preferential right if a subsequent production licence is granted. A production licence is, on the other hand, exclusive, meaning licensees are given a sole right to conduct surveys, exploration and production within the geographical area defined by the production licence.

The award of a production licence is, pursuant to the Hydrocarbons Licensing Directive (94/22/EC), made on impartial, objective and non-discriminatory criteria whereby the applicant's technical expertise, financial strength, geological understanding and experience on the NCS, or similar areas, will be weighted.

Exploration and production licences are awarded separately, and an exploration licence will not necessarily be awarded prior to a production licence. Exploration licences are granted for a period of three calendar years, unless otherwise specifically stipulated in the licence. Production licences are granted for an initial period of up to 10 years, and if the licence is granted for a shorter period of time, the MPE may subsequently extend the licence period within the 10-year limit. When licensees have fulfilled the mandatory work obligations set out in a production licence, the production licence may be further extended. The possible extension period is, as a general rule, up to 30 years, but may under specific circumstances be up to 50 years.

Offshore areas regarded as mature parts of the NCS are subject to a simplified annual licensing round termed awards in predefined areas. Areas not regarded as mature, on the other hand, are subject to ordinary licensing rounds, which traditionally have been held every second year. Applicants that are prequalified as upstream petroleum companies can apply individually or as a group. Companies being awarded a production licence are obliged to enter into a joint venture, which normally is established through a decision made by the MPE on the date that the production licence is awarded.

The joint venture is governed by a standard joint operating agreement (JOA) and accounting agreement stipulating detailed rules pertaining to, inter alia, the role of the management committee and the operator, and the licensees' rights and obligations. The award of a production licence is conditional upon the companies' signature to the JOA and the accounting agreement.

If the licensees decide to develop the petroleum deposit, a plan for the development and production (PDO) must be submitted to the MPE for approval, as provided under section 4-2 of the Petroleum Act. The MPE shall also approve the production schedule stipulated by the licensees.

In addition to ordinary awards, licences on the NCS can also be obtained through a transfer of assets. Such transactions require the consent of both the MPE and the Ministry of Finance (MoF) (section 10-12 of the Petroleum Act and section 10 of the Petroleum Taxation Act of 13 June 1975 No. 35).

The MPE, the MoF, the Ministry of Labour and Social Affairs, the Ministry of Climate and Environment, and the Ministry of Trade,

Industry and Fisheries, are the main governmental bodies responsible for petroleum activities on the NCS.

The MoF has overall responsibility for ensuring that the state collects taxes and fees (corporate tax, special tax, CO² tax and NO_x tax) from the petroleum activities. The Petroleum Taxation Office is part of the Norwegian Tax Administration, and reports to the MoF. Its primary task is to ensure correct levying and payment of taxes and fees adopted by the parliament.

Other important authorities include the Petroleum Safety Authority, which sits under the Ministry of Labour and Social Affairs and has the regulatory responsibility for technical and operational safety, including emergency preparedness and a safe working environment for petroleum activities. The Norwegian Environment Agency is the administrative body responsible for all environmental issues related to petroleum activities, including granting requested permissions to pollute. Finally, the Norwegian Coastal Administration, which sits under the Ministry of Transport and Communications, is responsible for the state's emergency preparedness in the event of pollution (spill of oil).

Decisions of subordinate bodies may be appealed to the relevant ministry in charge. Further, decisions made by the ministries as a first instance may be appealed to the King in Council. Administrative decisions may also, to the extent all administrative rights of appeal have been exhausted, be appealed to ordinary courts. In such case, the court may normally only assess the procedure and application of law, and not the administrative authority's application of discretion.

6 Are participants required to provide security or any guarantees to be issued with a licence to explore for or to store gas?

The MPE has the authority to request participants to provide security to ensure the fulfilment of all obligations undertaken and liability incurred while conducting petroleum activities. The Petroleum Act does not limit the MPE to request a specific form of security. Traditionally, security has been requested in the form of a parent company guarantee at the time when the company is becoming a new licensee on the NCS. The guarantee is unlimited, and is based on a standard agreement signed by all licensees on the NCS forming part of a company group. The MPE is, however, provided with the authority to request adjustments to the security already provided or additional security at any time. This may, for instance, be done prior to upcoming activities increasing the risk of incurring liability, typically in connection with the MPE's approval of a PDO or decommissioning plan.

If a stand-alone company with limited financial resources is entering into the development, operation or decommissioning phase, it is expected that the MPE will demand other forms of security (bank guarantees, deposits, etc).

Regulation of natural gas pipeline transportation and storage

7 Describe in general the ownership of natural gas pipeline transportation, and storage infrastructure.

The majority of the transportation system (ie, the pipelines and terminals) for Norwegian gas is owned by Gassled, a joint venture established on 1 January 2003 consisting of oil and gas companies on the NCS and various investment funds. See also question 1. The state is the majority owner, holding a share of 45.79 per cent in Gassled through the wholly state-owned company Petoro, which administers the SDFI (see question 4).

Gassled includes rich and dry gas facilities (including onshore processing facilities and specific storage facilities) that are either used by both the owners and others, or are planned for such use. When a third party uses a pipeline or transport-related facility, such facilities shall as a starting point be included in Gassled and become part of the central upstream gas transport system.

Gassled is operated by an independent system operator, Gassco, a limited company wholly owned by the state (established in 2001). Gassco is responsible for running the infrastructure on behalf of the owners. The cost of operating the transport system is met by its users through tariff payments. The capital element in these tariffs also covers investments made by the owners.

Gassco studies and advises the authorities on transport solutions. It contributes to the holistic development of Norwegian gas infrastructure. Its operations are run on a non-profit basis.

Norway does not have any onshore gas storage.

8 Describe the statutory and regulatory framework and any relevant authorisations applicable to the construction, ownership, operation and interconnection of natural gas transportation pipelines, and storage.

If the licensees decide to develop a petroleum deposit, a PDO must be submitted to the MPE for approval (section 4-2 of the Petroleum Act). The MPE's approval of a PDO will normally contain a permission for the construction, placing, operation and use of offshore and onshore pipelines and installations (including LNG facilities governed by the Petroleum Act), but such approval may also be granted following a separate and specific application to install and operate the pipeline pursuant to section 4-3 of the Petroleum Act (licence to install and operate).

When new offshore pipelines are to be constructed for connection to onshore facilities (domestically or abroad), an application for a specific licence to install and operate is normally required. An impact assessment must be completed prior to any such laying of gas pipelines from offshore installations to onshore locations in Norway or abroad.

Gas pipelines and specific processing facilities are operated by Gassco acting as an independent system operator with limited regulatory power. The MPE (in accordance with instructions from the government and policies issued by parliament) determines the regulatory policies related to transmission, distribution and supply of natural gas.

The possibility to challenge or appeal a decision is discussed in question 5.

9 How does a company obtain the land rights to construct a natural gas transportation or storage facility?

The state has the proprietary right to subsea petroleum deposits and the exclusive right to resource management. The right to build infrastructure in terms of pipelines or structures on the NCS is hence subject to licences and approvals issued by the MPE (see question 5 and 8). Pursuant to the United Nations Convention on the Law of the Sea (UNCLOS), article 79, all states are entitled to lay submarine cables and pipelines on the continental shelf. Further terms and conditions are set out in bilateral treaties.

Onshore land rights can be obtained through private acquisition or expropriation.

10 How is access to the natural gas transportation system and storage facilities arranged? How are tolls and tariffs established?

Players' access to the gas transportation system on the NCS is governed by section 4-9 of the Petroleum Act and Chapter 9 of the Petroleum Regulations, the latter implementing the regulated access regime in the EC Gas Directive. According to said rules, natural gas undertakings and eligible customers who have a duly substantiated reasonable need for transportation or processing of natural gas shall have access to the upstream pipeline networks subject to certain criteria:

- spare capacity must be available in the transportation system;
- the shipper must demonstrate a duly substantiated reasonable need for transport;
- the shipper's gas must comply with certain technical specifications (quality and pressure); and
- the shipper must demonstrate sufficient finances or provide a guarantee.

The gas transportation system on the NCS is a natural monopoly, with significant infrastructure investments. Tariffs for gas transport are regulated through separate regulations stipulated by the MPE, ensuring profits are extracted in the fields rather than in the transport system (see the Tariff Regulations of 20 December 2002 No. 1724). Available capacity is launched for long-term and medium-term bookings twice a year, while short-term bookings can be made on a daily basis.

The access regime is operated and managed by Gassco, acting as a neutral and non-discriminatory system operator. Gassco shall determine whether the conditions for access are met, reserve booked capacity, and allocate capacity in accordance with the principles and requirements in the Petroleum Act and regulations.

In accordance with the Gas Directive, the Norwegian access regime consists of a primary and a secondary market. Agreements in the primary market shall be entered into in accordance with a standard agreement drawn up by the operator and approved by the MPE (standard terms and conditions for transportation of gas in Gassled). Said agreement also includes provisions related to different gas qualities, including the consequences of delivering 'off-spec gas' in the system.

An agreement in the primary market includes the right to use spare capacity in upstream pipeline networks entered into by a natural gas undertaking or eligible customer with the owner of the upstream pipeline network acting in his or her capacity as owner, or with the operator acting on behalf of the owner in his or her capacity as owner. An agreement in the secondary market means an agreement for the transfer of rights to use capacity in upstream pipeline networks other than contracts in the primary market.

While the principle for tariffs in the primary market is governed by the Petroleum Act and regulations, the tariff in the secondary market shall be the market clearing price and is not directly controlled by the MPE.

Tariffs in the primary market cover the right the user has to capacity in the upstream pipeline network, irrespective of whether that capacity is actually used. The tariff consists of a capital element and an operating element.

The secondary market is immature, and third-party access requests have, to date, been predominantly related to the primary market. The authorities are also empowered with legal tools to handle inappropriate pricing in the secondary market: the Price Policy Act of 11 June 1993 No. 66 and the Competition Act of 5 March 2004 No. 12 (see also question 25).

11 Can customers, other natural gas suppliers or an authority require a pipeline or storage facilities owner or operator to expand its facilities to accommodate new customers? If so, who bears the costs of interconnection or expansion?

Customers and natural gas suppliers are not empowered with the right to require a pipeline or storage facility owner, or operator, to expand its facilities. They may, however, through a demonstrated need for access to capacity related to new developments, etc, encourage Gassco to propose plans for expanding the capacity in existing facilities. Moreover, Gassco shall at all times consider the necessity of expanding the transport facilities. Before any conclusions are made with respect to expanding the facilities, approval from the MPE must be obtained. The costs related to the expansion shall be carried by the third-party users of the facilities (ie, the shippers) through their payment of tariffs.

In new field developments, the authorities put considerable emphasis on exploring various transport solutions to ensure the best possible resource management. In many instances, it is prudent to construct pipelines that are somewhat larger than is initially necessary, thereby allowing gas from potential new gas fields to be transported in the already existing pipeline system.

12 Describe any statutory and regulatory requirements applicable to the processing of natural gas to extract liquids and to prepare it for pipeline transportation.

Facilities used for the processing of natural gas that falls within the scope of the Petroleum Act are governed by the licensing system described in question 5. Third-party access, as described in question 10, also applies to processing facilities.

13 Describe the contractual regime for transportation and storage.

All shippers requesting transportation capacity in the facilities owned by Gassled are obliged to enter into a standard agreement (standard terms and conditions for transportation of gas in Gassled) with Gassco (see question 10). In addition to transportation, Gassled also offers the services of processing of gas, which must be booked and paid for separately by the shippers. Gassco is the operator of the gas processing plants at Kårstø and Kollsnes, located on the west coast of Norway.

Regulation of natural gas distribution

14 Describe in general the ownership of natural gas distribution networks.

The right to own and distribute natural gas will, as a starting point, be subject to a concession granted by the MPE under the Natural Gas Act of 28 June 2002 No. 61 and the Natural Gas Regulations of 14 November 2003 No. 1342 (see also question 15). As stated in question 1, only a small amount of gas is consumed nationally. The few gas pipelines located onshore are privately owned and are normally built to provide gas capacity between different facilities. The 65km gas pipeline between the processing facilities at Kollsnes and the refinery at Mongstad may serve as an example.

15 Describe the statutory and regulatory structure and authorisations required to operate a distribution network. To what extent are gas distribution utilities subject to public service obligations?

The operation of a distribution network is governed by the Natural Gas Act and the Natural Gas Regulations. The provisions are based on the second EC Gas Directive (ie, Directive 2003/55/EC). Construction of facilities meant for transmission, LNG facilities and other facilities used for distribution of natural gas are subject to a concession granted by the MPE. Small-scale facilities are, however, exempted.

The concession may be subject to certain criteria as set out in section 2-4 of the Natural Gas Regulations, including the concessionaire's organisation and competence, technical requirements and choice of route of the distribution network. The MPE may also make the concession conditional upon the performance of public services pertaining to security, including security of supply, regularity of service, the quality and price of the transportation services, and protection of the environment. In terms of safety issues related to the distribution network, the Directorate for Civil Protection is the responsible authority.

Moreover, the construction and operation of a distribution network is normally subject to an impact assessment pursuant to the Planning and Building Act of 27 June 2008 No. 71 as further detailed in the appurtenant Impact Assessment Regulations of 19 December 2014, No. 1726, with the local municipalities being the responsible authority. The said Act further requires local building permissions for all constructions.

With regard to the possibility to challenge or appeal a decision, see question 5.

16 How is access to the natural gas distribution grid organised? Describe any regulation of the prices for distribution services. In which circumstances can a rate or term of service be changed?

The Natural Gas Act and regulations provide the framework for obtaining access to the natural gas distribution system. The main principle is that natural gas undertakings and qualified customers shall have access to the system, but no detailed rules have been implemented due to the reasons outlined below.

With the introduction of the second Gas Directive (2003/55/EC) in 2005, Norway was granted a temporary derogation from, inter alia, the applicable downstream provisions related to third-party access, designation of distribution system operators of natural gas, and the rules on requirements for business and functional separation of vertically integrated natural gas undertakings.

The European Economic Area (EEA) Joint Committee is in the process of incorporating the Third Gas Directive (2009/73/EC) into the EEA Agreement. The Third Gas Directive repeals and replaces the Second Gas Directive (see also question 33). The new Directive includes the same derogation provisions as mentioned above for states qualifying as emergent markets (article 49, second paragraph). According to the Third Gas Directive (article 49, fifth paragraph), the derogation may be granted for a 10-year period for gas infrastructure other than distribution infrastructure. For distribution infrastructure, the derogation may be granted for a period not exceeding 20 years from the date when gas is first supplied through the relevant infrastructure. Norway has still not established a functioning downstream market for transportation and distribution of gas to Norwegian customers, and it is therefore expected that Norway will apply for a derogation under article 49, second paragraph.

All rates and terms introduced for distribution services will be governed by the restrictions set out in the Price Policy Act of 11 June 1993 No. 66 and the Competition Act of 5 March 2004 No. 12.

Detailed regulations regarding third-party access to distribution networks and provisions governing rates and terms for distribution services are expected to be implemented as soon as the downstream infrastructure has become more mature.

17 May the regulator require a distributor to expand its system to accommodate new customers? May the regulator require the distributor to limit service to existing customers so that new customers can be served?

As a starting point, there are no provisions requiring the distributor to expand its system to accommodate new customers or to limit services to existing customers in order to serve new customers. Specific conditions pertaining to, inter alia, expansion of the distribution network may, however, be included in the concession given in accordance with the Natural Gas Act; see question 15.

18 Describe the contractual regime in relation to natural gas distribution.

Norway has not established a functioning downstream gas market with an integrated pipeline network. Hence, the immature market for natural gas distribution means that no contractual regime has yet been developed (the Norwegian downstream gas system is defined as an emergent market (see question 16)).

Regulation of natural gas sales and trading

19 What is the ownership and organisational structure for the supply and trading of natural gas?

As mentioned in question 4, licensees obtain ownership of the produced petroleum equal to their relative share in the production licence. Further, licensees are responsible for marketing and selling their own gas. As regards the state's equity (through the SDFI) in produced gas, this is both marketed and sold by Statoil, together with its own gas.

The transportation network is owned by Gassled (see question 7), and to the extent any third party uses a pipeline or transport-related facility, a predefined tariff is paid. The pipeline infrastructure from the NCS has landing points in the UK and on the Continent. In addition to gas being transported through pipelines, LNG is also transported by LNG ships from the Snøhvit plant (Melkøya) in the Barents Sea to markets in Asia, America and Europe.

20 To what extent are natural gas supply and trading activities subject to government oversight?

Licensees are required to report to the MPE on a quarterly basis the volumes sold and the main terms of conditions in their gas sales agreements. The obligation to report includes both internal and external gas sales, and the authorities may request further information as deemed necessary.

21 How are physical and financial trades of natural gas typically completed?

Physical trading of natural gas is typically completed bilaterally. The gas producers trade their share of the gas on an individual basis. Historically, all upstream gas sales were completed by entering into long-term contracts with take-or-pay obligations for the buyer. New gas sale contracts entered into with long-term take-or-pay obligations now tend to have a shorter duration. The new contracts also often have a more market-oriented price formula than before (ie, not only oil indexed). Contracts based on spot gas prices are taking an increasing share of the market, and are arguably the most used contract form in new gas sales contracts.

Shippers on the gas infrastructure from the NCS to continental Europe must accept the standard terms and conditions issued by Gassco for transportation of gas in Gassled (See question 13).

Norwegian gas sellers frequently use their own terms and conditions when entering into gas sales agreements with continental buyers. Standard short-term contracts include, inter alia, the European Federation of Energy Traders General Agreement Concerning the Delivery And Acceptance of Natural Gas. Standard agreements related

to the liquid trading points, such as the National Balancing Point in the UK, the Zeebrugge Hub in Belgium, the Title Transfer Facility in the Netherlands, and Gaspool/NCG in Germany, are increasingly relevant to Norwegian gas sellers. The legislation for completing financial trades of natural gas is in place, but the market is still in its start-up phase. One of several standards is the International Swaps and Derivatives Associations Master Agreement.

22 Must wholesale and retail buyers of natural gas purchase a bundled product from a single provider? If not, describe the range of services and products that customers can procure from competing providers.

Buyers of natural gas from producers are offered a bundled product through the Norwegian transportation system owned by Gassled (see question 7). The downstream market is an emergent market, but potential retail buyers may procure gas from various providers.

Regulation of LNG

23 What is the ownership and organisational structure for LNG, including liquefaction and export facilities, and receiving and regasification facilities?

In the upstream sector, only companies being granted a licence under the Petroleum Act will be entitled to own and operate an LNG facility. The ownership is organised as a joint venture, and the various licensees become owners of the LNG. Statoil sells LNG owned by the state (through SDFI) together with its own LNG.

Norway has only a limited number of LNG facilities, and the only full-scale facility with liquefaction, receiving, regasification and export facilities is the Snøhvit facility (Melkøya) located in the Barents Sea. Tjeldbergodden air gas plant has a smaller fractionation and LNG facility with a capacity of approximately 35 million Sm³ per year.

24 Describe the regulatory framework and any relevant authorisations required to build and operate LNG facilities.

LNG facilities forming an integrated part of the offshore petroleum production or transportation are subject to the licensing system set out in the Petroleum Act (see question 5). Other LNG facilities are governed by the Natural Gas Act, and hence are subject to the licensing system described in question 15.

Norway has no domestic downstream LNG facilities (see question 23).

25 Describe any regulation of the prices and terms of service in the LNG sector.

Third-party access to LNG facilities falling within the scope of the Petroleum Act is governed by the Regulations relating to the use of facilities by others of 20 December 2005, No. 1625. A party requesting access to an LNG facility owned by another party shall, on objective and non-discriminatory terms and conditions, be entitled to use the facility. Access is obtained through negotiations, and shall be based on the principle that profits from production shall primarily be earned by the producing field and not in the transportation system. If the parties are unable to reach a mutual agreement, the dispute may be brought before the MPE for a decision.

All rates and terms introduced for third-party access to LNG facilities not governed by the Petroleum Act will fall within the scope of the restrictions set out in the Price Policy Act and the Competition Act.

Mergers and competition

26 Which government body may prevent or punish anticompetitive or manipulative practices in the natural gas sector?

The Norwegian Competition Authority (NCA) enforces competition law in Norway, including ensuring compliance with the competition rules in markets in the natural gas sector. The Ministry of Trade, Industry and Fisheries provides the framework for the NCA's activities, and shapes the competition policy on a more general level through guidelines and delegated legislation. The ministry is also the appellate authority from the NCA's decisions. However, a new appeal system for the NCA's decisions, with the appointment of an autonomous appeal body, has been enacted, but has not yet entered into force.

Some hard-core infringements of the Competition Act, such as participation in cartels, are criminalised, and ØKOKRIM, the Norwegian National Authority for Investigation and Prosecution of Economic and Environmental Crime, may investigate and prosecute individuals for participation in such violations.

27 What substantive standards does that government body apply to determine whether conduct is anticompetitive or manipulative?

Undertakings operating in Norway are obliged to comply with two sets of competition legislation: the competition rules in the Competition Act and the competition rules applicable to undertakings under the EEA Agreement.

The NCA has powers under sections 10 and 11 of the Competition Act to take action concerning agreements that may restrict competition and the abuse of a dominant position, in either case where there may be an effect on trade in Norway. The provisions in sections 10 and 11 are, to a large extent, harmonised with articles 101 and 102 of the Treaty on the Functioning of the European Union (TFEU). The NCA will, thus, normally apply sections 10 and 11 in a manner consistent with EU law.

Further, articles 53 and 54 of the EEA Agreement prohibit certain agreements that may restrict competition and abuse of a dominant position respectively. The application of the provisions on competition in the EEA Agreement shall be aligned with the EU courts' interpretation of articles 101 and 102 TFEU.

28 What authority does the government body have to preclude or remedy anticompetitive or manipulative practices?

The NCA has broad powers to investigate an alleged infringement of the Competition Act. The Act prohibits agreements restricting competition and abuse of a dominant position (see question 27). The NCA may impose administrative decisions and fines on undertakings found to have infringed the competition provisions. The NCA has also established a leniency programme, under which full or partial immunity from fines may be granted to undertakings that notify the NCA of the existence of anticompetitive agreements.

Following recent amendments to the Competition Act, the NCA also has the authority to formally end an investigation after reaching a settlement with the undertakings under investigation.

The ESA has similar powers to enforce the competition provisions under the EEA Agreement.

29 Does any government body have authority to approve or disapprove mergers or other changes in control over businesses in the sector or acquisition of production, transportation or distribution assets?

As briefly described in question 5, all transactions are subject to the consent of both the MPE and the MoF. Transactions include both transfers of licences and the assignment of shares giving decisive control of a company holding a participating interest in one or several licences on the NCS.

Moreover, Chapter 4 of the Norwegian Competition Act establishes a general merger control system also applicable to mergers in the gas sector. The term 'merger', used in this context, includes a broader range of corporate transactions compared with what the term usually refers to.

The merger review system requires the parties to a merger to submit a pre-merger notification to the NCA if the merger is above the filing thresholds. Mergers are subject to a filing obligation when more than one of the parties have an annual turnover exceeding 100 million Norwegian kroner in Norway and the parties have an aggregate turnover exceeding 1 billion Norwegian kroner in Norway. The NCA must, within fixed time limits, notify the parties and determine whether the notified concentration is likely to significantly impede effective competition, in particular as the result of the creation or strengthening of a dominant position. The NCA may clear or prohibit the merger, or approve the merger subject to conditions as proposed by the parties.

30 In the purchase of a regulated gas utility, are there any restrictions on the inclusion of the purchase cost in the price of services?

No restrictions apply.

Update and trends

New major pipeline from the Barents Sea will ensure sufficient transportation capacity

Norway is the largest gas producer and holder of natural gas reserves within the European Economic Area (EEA) and the world's third-largest natural gas exporter. Norwegian gas supplies approximately 20 per cent of the EU's gas consumption. The Troll field and the Ormen Lange field remain the two largest gas fields in Norway, and recent gas discoveries like Aasta Hansteen in the Norwegian Sea make sure that the high gas production is upheld in the years to come. A new pipeline (Polarled), to run for 480km, will tie the Aasta Hansteen field and other gas discoveries in the Norwegian Sea to the Nyhamna gas processing facility located in the north-western part of Norway. The pipeline reaches a depth of 1,260 metres and the laying was completed in late September 2015, with expected start-up in the end of 2018.

New awards of production licenses in the Barents Sea (23rd licensing round) and new acreage opened for application

Following the delimitation agreement entered into between Norway and Russia effective 7 July 2011, the Barents Sea south-east has subsequently been opened for production of oil and gas and the first licences in this area were awarded by the MPE on 18 May 2016 in the 23rd licensing round. Thirteen companies were awarded participating interests in 10 different production licences consisting of 40 prospective blocks.

The Norwegian government announced on 17 March 2016 that new acreage is opened for application in the yearly awards in predefined areas (APA). The predefined area has been expanded by 24 blocks in the Norwegian Sea and 32 blocks in the Barents Sea. Several blocks are located around the Aasta Hansteen field in the Norwegian Sea. In the Barents Sea the blocks are mainly located in the area around the discoveries Castberg, Alta and Gotha. Additional resources in the area surrounding a planned or producing field may increase profitability, optimise utilisation of resources and value creation from the petroleum resources. The deadline for applications to this APA round expired on 6 September 2016, and 33 companies have shown their interest in receiving oil and gas exploration licences in these areas.

The Norwegian government is also keeping up its phase on new acreage awards in frontier areas, and announced in the end of August 2016 that companies were invited to nominate blocks for the 24th licensing round. Nominations are welcomed in all opened areas of the North Sea and the Barents Sea that are not already covered by annual awards in predefined areas (APA) rounds. The MPE expect to officially announce the specific areas offered for application by mid-2017, which normally implies that licences could be awarded before the end of 2018.

Shift from long-term gas sales contracts to short-term

Historically, all Norwegian upstream gas sales were completed by entering into long-term contracts (15 to 30 years) with take-or-pay obligations for the buyer. New gas sale contracts entered into with

long-term take or pay obligation tend to have a shorter duration than previously. Another shift is that the new contracts often have a more sophisticated price formula than previously (not only oil-indexed). Contracts based on spot gas prices are taking an increasing share of the market, and are arguably the most used concept in new gas sales contracts.

Expected increase in requests for access to third-party infrastructure on the NCS

Access to third-party infrastructure is governed by the Petroleum Act section 4-8 and two different regulations. Access to the gas transportation network (Gassled) is governed by Regulations of 20 December 2002 relating to stipulation of tariffs, etc for certain facilities (Tariff Regulations). Gassled is an unincorporated joint venture which owns the Norwegian offshore gas pipeline infrastructure and operates pursuant to licences granted by the MPE. Third-party access to other offshore infrastructure is governed by the Regulations of 20 December 2005 relating to the use of facilities by others (TPA-Regulations). The Tariff Regulations provide rules on regulated access with set tariffs, while access to infrastructure under the TPA-Regulations is based on negotiated terms within set criteria. The aim with both sets of regulations is to ensure efficient use of existing infrastructure on the NCS, and the overriding principle is that the owner only shall be entitled to maximise its profit through production and not in the transportation network and other infrastructure.

Historically, many of the field developments on the NCS have been stand-alone projects. During recent years more new developments on the NCS are tied in to existing facilities and thereby also being dependent on reaching an agreement on the terms and conditions for the services used in accordance with the principles laid down in the TPA-Regulations. The increased use of third-party facilities on the NCS is very positive from a resource-management perspective, but is also likely to give rise to more disputes related to the specific tariff level and other applicable terms and conditions under the TPA-Regulations.

Dispute between the Norwegian state and four new stakeholders in Gassled

Four of the stakeholders in Norway's gas pipeline network (Gassled) have through a ruling by the District Court of Oslo on 25 September 2015 lost a major case against the Norwegian state. The companies are among the investors that acquired a total of 44 per cent stake in Gassled from oil and gas majors back in 2011 and 2012. In 2013 (after the acquisition was completed), the Norwegian government introduced changes in the Tariff Regulations implying a cut in Gassled tariffs by as much as 90 per cent (effective as from 1 October 2016). The new owners held that this reduction was unlawful, and claimed damages amounting to 34 billion kroner, which was argued to represent the reduced tariff income during the period 2016 until 2028 (the end of the licence period). The case has been appealed, and the new trial will take place during the first quarter of 2017.

31 Are there any restrictions on the acquisition of shares in gas utilities? Do any corporate governance regulations or rules regarding the transfer of assets apply to gas utilities?

Except for common restrictions on the acquisition of shares, there are no particular restrictions on the acquisition of shares in gas utilities.

There are no particular corporate governance regulations or rules regarding the transfer of assets applying to gas utilities. Companies are not obliged to follow the common Norwegian corporate governance regulations. If listed companies derogate from common corporate governance regulations, an explanation needs to be filed.

International

32 Are there any special requirements or limitations on foreign companies acquiring interests in any part of the natural gas sector?

There are different requirements depending on whether an exploration or production licence has been granted. The MPE may grant an exploration licence to a body corporate irrespective of whether the company is domiciled or registered, or both, in Norway. Exploration licences may also be granted to physical persons domiciled in a state within the EEA. Production licences may, on the other hand, and as a starting point, only be granted to a body corporate established in

conformity with Norwegian legislation and registered in the Norwegian Register of Business Enterprises. However, pursuant to the EEA Agreement, companies applying for a production licence may also be established in an EEA state. In addition, production licences may be granted to a physical person domiciled in an EEA state.

Moreover, pursuant to the Petroleum Act, a licensee is, as a main rule, obliged to have an organisation based in Norway capable of handling its petroleum activities on the NCS in a prudent manner that safeguards good resource management, health, safety and the environment. To ensure compliance with these requirements, the MPE may, to the extent deemed necessary in relation to the scope of the licensee's activity, set special requirements regarding the licensee's organisation in Norway. The MPE may also, if indicated by the consideration for prudent resource management, or health, safety and the environment, order the licensee to use specific bases. In practice, more or less all companies being awarded a production licence have been domiciled in Norway and registered as a company with limited liability within a reasonable period of time following the award.

The downstream gas sector is defined as an emergent market, but will otherwise comply with the requirements to open up the market for foreign companies as laid out in the European gas directives and applicable regulations implemented into Norwegian law through the EEA Agreement. For more details, see question 33.

33 To what extent is regulatory policy affected by treaties or other multinational agreements?

As a party to the EEA Agreement, Norway is largely affected by legislation enacted by the EU and the EEA. Hence, statutes and regulations on a national level cannot be inconsistent with the rules of, inter alia, non-discrimination and the four freedoms (ie, free movement of goods, capital, services and persons). Two of the most important directives that further elaborate on the basic rules of the EU and the EEA, and which have been implemented by Norway, are Directive 94/22/EC (Hydrocarbons Licensing Directive) and Directive 98/30/EF (Gas Market Directive), the latter being repealed by Directive 2003/55/EC, which, in turn, is repealed by Directive 2009/73/EC. Directive 2009/73/EC is expected to be implemented into the EEA Agreement in 2017. See also question 16.

An example of an important regulation is Commission Regulation (EU) No. 984/2013, which supplements Regulation (EC) No. 715/2009. Said regulations set out transparent, efficient and non-discriminatory rules for access to gas infrastructure for all network users.

Important international treaties are OSPAR and UNCLOS, which are both applicable under Norwegian law.

34 What rules apply to cross-border sales or deliveries of natural gas?

The same rules apply to cross-border sales and potential domestic deliveries of natural gas. All cross-border sales must be conducted under a production licence with an approved plan for development and operation, and the MPE must have approved the production profile for the field in question. The gas sales contracts are sent to the MPE for information purposes. See also questions 5, 8 and 20.

Transactions between affiliates**35 What restrictions exist on transactions between a natural gas utility and its affiliates?**

According to common restrictions set out in both the Public Limited Liability Companies Act and the Limited Liability Companies Act (sections 3-8 and 3-9), the transaction agreement shall be based on commercial terms and shall be in writing (the arm's-length principle). Further, the agreement has to be approved by the general meeting if the amount of the transaction exceeds certain thresholds.

36 Who enforces the affiliate restrictions and what are the sanctions for non-compliance?

The arm's-length principle is enforced by the tax authorities. Non-compliance may lead to surtax or criminal sanctions against the company in question, its officers, or both. In addition, civil claims may be imposed on the board and management of the company.



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Description of domestic sector

- 1 Describe the domestic natural gas sector, including the natural gas production, liquefied natural gas (LNG) storage, pipeline transportation, distribution, commodity sales and trading segments and retail sales and usage.

As of 2016, gas is Pakistan's primary source of energy and has committed to various pipeline and terminal natural gas projects for delivery to homes, industries and power plants. Currently Pakistan has 4–5 million LNG tonnes contracted and another 4–5 million within the current fiscal year. The government also wants LNG deregulated to allow the price to be set by the market. Pakistan is also about to start importing LNG from Russia to meet the needs in Punjab. The country is also importing LNG from Qatar, even as Japan and Russia, among others, are keeping an eye on the LNG purchase tender of Pakistan. Total LNG demand of Pakistan is around 30 million tonnes a year and seven LNG regasification terminals are being constructed with a 2019 completion date. All natural gas produced in Pakistan is domestically used and LNG imports used to meet the created supply gap. The country does not import natural gas. The Pakistan–Iran Gas Pipeline Project is still on the books to help meet the needs for gas in Pakistan with the international sanctions against Iran halting the project.

- 2 What percentage of the country's energy needs is met directly or indirectly with natural gas and LNG? What percentage of the country's natural gas needs is met through domestic production and imported production?

Pakistan has 30 million tonnes a year LNG demand. Gas makes up more than a half of the country's energy source and it uses its natural gas production for domestic use, with imports of LNG being considered to meet the supply gap. Natural gas caters for 37.68 per cent of the country's total energy supply, with a 40 per cent increase in gas demand during the winter.

Government policy

- 3 What is the government's policy for the domestic natural gas sector and which bodies set it?

Broadly, the domestic natural gas sector and the entire energy policy of the nation is determined and formulated by local institutional, provincial and federal entities that address issues related to energy production, consumption and distribution such as petroleum standards and gas mileage. The Ministry of Water and Power is also responsible, among other things, for formulating policy and liaising with other provincial government entities on energy-related issues. The Pakistan oil and gas sector is highly complex, rapidly changing and extensively regulated. Gas and oil industry activities are regulated and administered via the Directorate General of Petroleum Concessions (DGPC), the Ministry of Petroleum and Natural Resources' Policy Wing.

Regulation of natural gas production

- 4 What is the ownership and organisational structure for production of natural gas (other than LNG)? How does the government derive value from natural gas production?

All activities relating to the development, exploration, distribution and transmission of gas are regulated by the Oil and Gas Regulatory

Authority (OGRA). Sui Northern Gas Pipelines Limited (SNGPL) and Sui Southern Gas Company Limited (SSGCL) are two public-sector gas companies that engage in distribution and transport of natural gas. To derive value from natural gas production, a regulatory mechanism has been established with laws providing for extraction, production, distribution and consumption of gas and other petroleum products. The laws define the model agreements amongst all stakeholders, liabilities, rights, taxation and fiscal arrangement among other provisions for investors and government to maximise returns from exploitation of the resource.

- 5 Describe the statutory and regulatory framework and any relevant authorisations applicable to natural gas exploration and production.

OGRA regulates all activities related to the exploration, development, transmission and distribution of gas, while the federal government sets the gas sector orientation and policy. Consumer and producer gas tariffs are also set by the body but sanctioned by the federal government. Pakistan has two legal arrangements for the upstream petroleum industry, with one founded on a concession system for onshore regions with the other on production-sharing system for offshore areas. OGRA is also mandated with renewal, suspension and extension of licences and has regulatory functions such as legislative power to create rules and regulations with federal government approval in determination of tariffs and their revision, standards of service provision set-up, dispute resolution, enforcement and monitoring of rules compliance, fines prescription and advising the government. Before commencing petroleum operations a company has to submit to the Pakistan government an environment protection plan as set out in the Pakistan Onshore Petroleum (Exploration and Production) Rules 2009 and Pakistan Offshore Petroleum (Exploration and Production) Rules 2003, including being cleared by the Pakistan Environmental Protection Agency, and follow the guidelines of the Oil and Gas (Safety in Drilling and Production) Regulations 1974 relating to the safety and health and environmental protection.

- 6 Are participants required to provide security or any guarantees to be issued with a licence to explore for or to store gas?

As per the Pakistan Onshore Petroleum Rules 2009 on Exploration and Production as well as the Rules 2003 of Pakistan Offshore Petroleum on Exploration and Production, the participants have to provide an unconditional and irrevocable guarantee to the government of Pakistan in form of bank guarantee equalling 25 per cent of the minimum financial obligation provided by a globally reputable bank or a parent company guarantee from a globally reputable company. On local assets or local production, the government can acquire security in preferred and first lien on the production of the commodity or the assets depending on the individual case. The government also accepts escrow account deposits as guarantee.

Regulation of natural gas pipeline transportation and storage

- 7 Describe in general the ownership of natural gas pipeline transportation, and storage infrastructure.

Currently, all pipelines for gas transportation and related infrastructure are controlled and owned by two corporations owned by the state,

SNGPL and SSGCL. OGRA has also issued licences to other operators for the sale and transmission of natural gas, contributing to about 20 per cent of the total natural gas sale. Companies can lay pipelines for transportation of natural gas within the areas leased up to the field gate from the wellhead from where distribution of gas to commercial and residential consumers will be taken over by SNGPL and SSGCL.

8 Describe the statutory and regulatory framework and any relevant authorisations applicable to the construction, ownership, operation and interconnection of natural gas transportation pipelines, and storage.

A company can only lay a gas transportation pipeline to the field gate from the wellhead. To do this, a submission has to be made to DGPC with an environmental protection and management plan, including a safety plan. At the same time an environmental impact assessment as per the Environmental Protection Act 1997 has to be submitted to the Federal Environmental Protection Agency.

9 How does a company obtain the land rights to construct a natural gas transportation or storage facility?

To lay down a transportation or storage facility for natural gas, land is available by grant or lease immediately, whether provincial or federal. Where the land is owned privately the provincial government acquires it as per the Land Acquisition Act 1894 via compulsory acquisition and offers it to the interested party on a land lease agreement. Such conditions and terms are certified by OGRA according to the Oil and Gas Regulatory Authority Ordinance of 2002 after the licensee has applied certifying that the property acquired is for public use while certification by OGRA simply means the Land Acquisition Act 1994 is sufficient proof that the acquisition proposed is for public use.

10 How is access to the natural gas transportation system and storage facilities arranged? How are tolls and tariffs established?

All the Pakistan natural gas transportation pipelines and related infrastructure are controlled and owned by SNGPL and SSGCL, companies whose main business is the buying of natural gas in bulk from other companies and transmitting to the load areas via high-pressure system of transmission for sale to industrial, commercial and domestic customers via their supply networks. OGRA regulates all tariffs and costs via the Natural Gas Regulatory Authority Licensing Rules 2002. A licensee is not allowed to charge beyond the tariff approved by OGRA. The Tariff Rules 2002 offer ways of altering or determining tariffs by petitioning OGRA.

11 Can customers, other natural gas suppliers or an authority require a pipeline or storage facilities owner or operator to expand its facilities to accommodate new customers? If so, who bears the costs of interconnection or expansion?

Rule 20 of the Natural Gas Regulatory Authority (Licensing) Rules 2002 provides that every licensee should provide, at a cost determined by the authority, open access that is unbiased in its distribution or transmission facilities if spare capacity is available, as well as provide interconnection to the transmission facilities or non-exclusive facilities of distribution on conditions and terms mutually agreed upon, offering spare capacity that is available as well as technically feasible interconnection, and in addition extending and expanding distribution or transmission facilities if a person has requested so, if at all feasible technically and cost apportionment is not in disagreement.

12 Describe any statutory and regulatory requirements applicable to the processing of natural gas to extract liquids and to prepare it for pipeline transportation.

OGRA is empowered to award licences for the extension, suspension and renewal of the same in the operation or construction of storage facilities or pipelines and other natural gas installations as well as transmission of gas, sale and distribution, construction or operation of LPG processing or production facilities, among others, as well as operation or construction of LNG installations.

13 Describe the contractual regime for transportation and storage.

OGRA enforcement and legislative powers encompass the storage and transportation contractual regime in its mandate to enforce service and performance standards, resolution of disputes and complaints between a licensee, a person or among different licensees.

Regulation of natural gas distribution

14 Describe in general the ownership of natural gas distribution networks.

At present the natural gas distribution networks and related infrastructure are controlled and owned by SSGCL and SNGPL, which distribute gas to the commercial and residential consumer.

15 Describe the statutory and regulatory structure and authorisations required to operate a distribution network. To what extent are gas distribution utilities subject to public service obligations?

Energy and petroleum companies are able to put in place gas distribution pipelines only to the field gate from the wellhead and doing so requires them to present to the DGPC a safety plan and environmental protection and management plan as well as environmental impact assessment to the Federal Environmental Protection Agency as per the Environmental Protection Act 1997.

16 How is access to the natural gas distribution grid organised? Describe any regulation of the prices for distribution services. In which circumstances can a rate or term of service be changed?

SSGCL and SNGPL control and own all the natural gas distribution networks and associated infrastructure. The main business of the two state-owned companies is the purchase of natural gas in large quantities from energy and petroleum companies and distributing it across load centres through a high-pressure system of transmission for sale to industrial, commercial and domestic customers via its network of supply.

17 May the regulator require a distributor to expand its system to accommodate new customers? May the regulator require the distributor to limit service to existing customers so that new customers can be served?

SSGCL and SNGPL have the exclusive responsibility of granting system expansion and capacity increase.

18 Describe the contractual regime in relation to natural gas distribution.

The government of Pakistan owns SSGCL and SNGPL in their exclusive distribution of natural gas. The contractual regime is largely controlled by OGRA, which also requires government approval – in most terms and conditions the government has an influence.

Regulation of natural gas sales and trading

19 What is the ownership and organisational structure for the supply and trading of natural gas?

Natural gas trading as such does not apply to Pakistan. Supply including distribution and transportation of natural gas is regulated by OGRA.

20 To what extent are natural gas supply and trading activities subject to government oversight?

Natural gas trading does not apply to Pakistan but the supply including distribution and transportation of natural gas is subjected to government oversight via OGRA and the two state-owned public listed companies that supply natural gas to the consumer.

21 How are physical and financial trades of natural gas typically completed?

Natural gas trading does not apply to Pakistan.

- 22 Must wholesale and retail buyers of natural gas purchase a bundled product from a single provider? If not, describe the range of services and products that customers can procure from competing providers.**

Natural gas trading does not apply to Pakistan.

Regulation of LNG

- 23 What is the ownership and organisational structure for LNG, including liquefaction and export facilities, and receiving and regasification facilities?**

Currently, Elengy Terminal remains Pakistan's single terminal for the regasification of 400–450mmcf/d of LNG imports, mostly from Qatar. The second terminal (the contract for which was awarded to Gas Port in 2016) will be ready in May 2017, with five more being proposed for construction at Karachi and Gwadar ports for the processing, treatment, storage, regasification and handling of 3,000mmcf/d of LNG by 2018. In anticipation of these LNG imports the government of Pakistan has these policies and rules in place:

- Liquefied Natural Gas Policy 2006 (updated through the Liquefied Natural Gas Policy 2011); and
- Oil and Gas Authority LNG Rules 2007 (LNG Rules).

- 24 Describe the regulatory framework and any relevant authorisations required to build and operate LNG facilities.**

OGRA grants licensing for the construction, ownership and operation of LNG facilities as per the LNG Rules and they have to comply with technical standards and HSE as well as other LNG Rules provisions. As per the LNG Policy 2006 (updated 2011), an imported LNG project could be structured as an integrated project structure or unbundled type of project structure. Government departments such as Naval Headquarters, Ministry of Defence, Chief Inspector of Explosives, Environmental Protection Agency and port authorities including local and provincial agencies have to provide licences and permits to RLNG buyers, LNG buyers, LNG terminal operators and owners and LNG developers in the carrying out of their activities.

- 25 Describe any regulation of the prices and terms of service in the LNG sector.**

Under the LNG Policy 2006 (updated 2011), with an integrated type of product structure – an RLNG buyer in the public sector procuring RLNG – it can be expected that the purchase contract will be for a minimum of 20 years, even as LNG procurement by an LNG developer will be provided at the lowest price at the delivery place selected.

Under the unbundled project structure with LNG procurement through an LNG buyer in the public sector, the contract shall stand for a 20-year minimum period with the RNLG price resolved by OGRA as per the purchase price of LNG, indirect and direct transportation costs, regasification and storage that the LNG owner or operator has incurred as well as a return on investment that is reasonable enough for the LNG terminal owner or operator.

Apart from as mentioned above, LNG buyers and LNG developers can sell the RLNG to a consumer directly as per the prices negotiated, which have to be approved by OGRA.

Mergers and competition

- 26 Which government body may prevent or punish anticompetitive or manipulative practices in the natural gas sector?**

OGRA, under section 6(2)(g) of the Oil and Gas Regulatory Authority Ordinance 2002, has the power to promote effective efficiency and competition in all activities under its jurisdiction. The Competition Ordinance 2007 established the Competition Commission of Pakistan mandated with the provision of free competition in all areas of economic and commercial activity within Pakistan as well as the protection of consumers from behaviour described as anticompetitive. The Competition Act 2010 moved the right of appeal to a Competition Tribunal from the High Court.

- 27 What substantive standards does that government body apply to determine whether conduct is anticompetitive or manipulative?**

The Competition Act 2010 sets out the criteria to be followed by the regulator. According to section 3 of the Competition Act no individual is allowed to abuse a position deemed dominant and a person already in a dominant position cannot continue, maintain or undertake a practice that distorts, reduces, restricts and prevents competition within the pertinent industry. Section 3(3) of the Competition Act 2010 has clearly indicated practices that could distort, reduce, restrict or prevent competition within a relevant market.

Section 4 of the Competition Act 2010 prohibits undertakings from making agreements where associations of undertakings are involved and went ahead and prohibited the making of decisions in respect of the control, acquisition, distribution, supply or production of goods or services provision that have the effect or object of reducing, restricting or preventing competition in the market relevant unless the Competition Commission has made an exemption. Section 4(2) sets out the prohibited agreements.

Section 10 of the Competition Act 2010 also indicates undertakings prohibited from foraging into deceptive practices in the market. Misleading market practices occur or are thought to occur where the undertaking has resorted to the false and deceptive distribution of information that could harm business interests of other undertakings, misleading and false distribution of information to end users including information distribution without a reasonable foundation in relation to character, method, price or production place, properties, user suitability or goods quality including the misleading and false comparison of goods in the process of advertising or fraudulently using a trademark belonging to another, name of the firm, packaging or labelling of a product.

Section 11 of the Competition Act 2010 also prohibits an undertaking from merging if the merger ends up lessening competition substantially through the strengthening or creating of a dominant position within that industry.

- 28 What authority does the government body have to preclude or remedy anticompetitive or manipulative practices?**

The Competition Commission has the power to have a number of orders passed as indicated in section 31 of the Competition Act 2010. This includes the case of a dominant position being abused where the Competition Commission is allowed to compel the concerned undertaking to take specific actions as might be needed for the restoration of competition not to have prohibitions repeated or engaging in practices with the same kind of effect.

Where agreements were entered into that contravene the Competition Act provisions, these agreements can be annulled or the concerned undertaking could be required to have the agreement amended or practice related and not to have the prohibitions specified repeated or entered any kind of agreement or engagement in any type of practice that might have similar effect or object.

The regulator can also in the matter of deceptive market practice demand the concerned undertaking to undertake specific actions in the necessary order for the restoration of the former market conditions while refraining from the repetition of specified prohibitions in section 10 or the destruction, forfeiture and confiscation of goods that could have a harmful or hazardous consequence.

Where mergers are involved the merger could be authorised subject to specific conditions, allowing a second-phase review, or the authority can prohibit or undo the merger, although only at the conclusion of the second-phase review.

The Competition Act 2010 also gives the Competition Commission the power to:

- issue interim orders as per section 32;
- search and enter premises with reasonable grounds in written record as per section 34;
- request information in relation to an undertaking according to section 36;
- make its own inquiries relating to any issue for Competition Act purposes as per section 37; and
- impose penalties as per section 38 that could reach 75 million rupees or 10 per cent of the yearly turnover and any continual default the Competition Commission could impose a further 1 million-rupee daily fine.

Update and trends

In the past year we have seen various efforts by the government of Pakistan to import LNG with any eye on creating sustainable international partners that will boost its energy security. Since last year there have been ongoing negotiations regarding the 1,100km North-South pipeline with Russia. Rostec was demanding a high price because of US sanctions. In the past Pakistan has used methods such as the imposition of the Gas Infrastructure Development Cess and other taxes to pass the cost on to LNG consumers, so this might be an option if a higher price structure is accepted to proceed with the contract. As Russia is funding 85 per cent of the project the chances are that it will be able to get the price increased, as the pressure from US sanctions on its firm RT Global Resources is already taxing its financial profitability parameters in the project.

With negotiations under way since 2015, even though a price seemed to have been agreed in December 2016 and in February 2017, Pakistan was asking for some price concessions; looking at the economic and political realities of how such projects generally pan out in Pakistan, it seems that Russia is quite justified in its demand. The other problem is that while Russia generously offered to finance 85 per cent of the project last year, the Russian firm expected to work on the project, RT Global Resources, was hit by US sanctions in January 2016 around the time the contract was awarded. As Pakistan is already facing many problems in getting reliable, long-term partners to help in financing in its endeavours to secure its LNG supplies and to cater for local demand, this may well be a good option to accommodate a friendly country, which extended the first offer of help, now that it is constrained itself by US sanctions.

The price being asked by Russia previously was US\$1.2 per million British thermal units (mmbtu) for gas supply. However, a negotiating committee, set up with the approval of the Economic Coordination Committee, later agreed on 85 cents per mmbtu for Pakistan. Currently Pakistan is also importing LNG from Qatar and local gas utilities are paid more than 85 cents per mmbtu for gas transmission through their pipeline networks. The fee agreed with Russia earlier was less than the fee being charged by the gas utilities.

After a much repeated and litigated bidding saga, Gas Port finally won the contract for Pakistan's LNG terminal in 2016. It is possible to see that this will be a tough road ahead for Gas Port. Pricing and contract negotiation have become controversial as foreign bidding companies are looking at how Engro suffered in the contract for the first LNG terminal due to tax relief being denied to it by the government. In April 2015 there was a controversy that the Federal Board of Revenue of Pakistan was claiming that Engro's LNG terminal was not entitled to a five-year income tax holiday and a relief in import duties. This would effectively mean that the promised blanket income tax exemptions in the LNG policy would not help Engro or any other similar LNG provider.

If everything goes well, the project has to be implemented in 11 months at Port Qasim, but given that the contract has yet to be finalised, there is likely to be a lack of time.

Even the contract given to Engro to build and run the first LNG terminal in 2014 was offered with less than favourable investor terms, with clauses binding the government to pay a penalty of US\$150,000 a day if there were construction delays, no protection by sovereign guarantees and the risk of any eventuality being transferred onto the investors. There was also controversy and debate over the 'take or pay' requirement (which would mean that Engro would have to be paid even if LNG is not imported through the terminal). It was later stipulated by Engro that the take or pay arrangement was in the proposal documents for bidders.

Bearing all this in mind, depending on how things work out and learning from the experience of Engro, Gas Port has a long way to go in achieving successful delivery of the project. Its success will be in negotiating a sound LNG services agreement, so it is not subjected to unpleasant regulatory, tax and bureaucratic surprises later!

Other foreign bidders and successful tenders in 2017 for natural gas

As expected, ENI from Italy has managed to win a 15-year LNG supply tender in Pakistan as of 2017, and Gunvor, based in Switzerland, has also won a five-year deal to supply LNG to Pakistan.

It has become important for Pakistan to import LNG, as its second LNG terminal is still a year away from becoming functional. The main issue is, of course, the fact that it is using the previous benchmark of 13.37 per cent of the price of Brent crude oil (as agreed with its previous and ongoing suppliers, Gunvor and Qatar) and is not prepared to pay more than this to ENI. ENI has shown a willingness to supply up to 3 million tonnes of LNG each year.

Apart from Italy, other potential European LNG sellers are firms from France such as Engie (formerly GDF Suez). GDF Suez partnered with the Netherlands-based 4Gas in 2006 for the Mashal LNG project, which was scrapped amid allegations of political influence and corruption. It is hoped that the deal will be much more beneficial for Engie this time around as it is a government-to-government deal and should provide more security.

Other potential LNG sellers to Pakistan could be China and Malaysia, which the government is already in touch with. Given that the current Pakistani gas shortage is around 2 billion cubic feet per day, if Pakistan continues to rely on foreign LNG the supply/demand gap could reach 8.5 billion cubic feet per day (60 million tonnes per year) in the next 10 to 15 years. Bearing this in mind and setting aside the political risk (which damaged 4Gas and GDF Suez previously), Pakistan may be a good destination for future LNG suppliers from Europe.

29 Does any government body have authority to approve or disapprove mergers or other changes in control over businesses in the sector or acquisition of production, transportation or distribution assets?

Together with other powers that the Competition Act has conferred on the Competition Commission, the Commission can prohibit mergers that decrease competition significantly by strengthening and creating a dominant position within the applicable market.

The Commission requires that premerger notifications be extended to it as per section 11(2) of the Competition Act 2010, where the concerned undertakings meet the threshold of the premerger notification as indicated in the Competition Merger Control Regulations 2007; in addition, Competition Commission approval must be sought prior to the merger being allowed to proceed. The threshold for premerger notification is that the gross asset value of the undertaking, without goodwill value not above 300 million rupees, or the undertaking's combined value with the acquired undertaking does not fall below 1 billion rupees, the annual turnover in the previous year does not fall below 500 million rupees or the combined undertaking's turnover and the undertaking being acquired whose shares do not fall below 1 billion rupees, where the transaction is related to an asset or share acquisition with a value of 100 million rupees or above, or in the matter of a share acquisition by an undertaking where the acquired voting shares, once combined with the voting shares the acquirer holds, shall make the acquirer possess over 10 per cent of the entire voting shares.

If after 30 days the Competition Commission has not given a response to the premerger notification it is deemed that clearance has been approved. If the Competition Commission has initiated a second phase, it is required that the Competition Commission completes the review within 90 days of receipt. Where a decision has not been rendered in 90 days the Competition Commission is deemed to have not objected to the merger.

The Competition Commission subject to conditions it might have determined can grant clearance. In cases where clearance has already been provided with conditions, the Competition Commission could within 12 months have the approval order reviewed to satisfy the circumstances of the current market or when the undertaking's circumstances have changed to require the order to be reviewed.

The merger could be revoked by the Competition Commission or modified where its approval is found to have been granted on misleading or false information or if the order's specific conditions have not been complied with fully.

30 In the purchase of a regulated gas utility, are there any restrictions on the inclusion of the purchase cost in the price of services?

In 1976 the government, exercising its powers under the Regulation of Mines and Oilfields and Mineral Development (Government Control) Act 1948, promulgated the Natural Gas (Price for Supplies by Producers) Rules 1976. Pursuant to these rules, the government (ie, Director General Gas) notifies prices for natural gas produced by the

holder of petroleum rights, ie, E&P companies that the government-owned gas distribution companies purchase. These prices are subject to revision every six months as per the fluctuations in the prices of dependent determinants. The prices are determined on the basis of terms and conditions contained in gas pricing agreements in line with the provisions of the 1976 rules. Prices are now determined and notified by OGRA with the approval of the federal government under the mandate given in the OGRA Ordinance 2002.

31 Are there any restrictions on the acquisition of shares in gas utilities? Do any corporate governance regulations or rules regarding the transfer of assets apply to gas utilities?

As stated above, all natural gas transportation pipelines and associated infrastructure are owned by the two state utilities, SSGCL and SNGPL. SSGCL and SNGPL are public limited companies, which are listed on the Karachi, Lahore and Islamabad stock exchanges, with a majority and direct shareholding by the government of Pakistan. In principle a foreign company could acquire a stake in them through the purchase of shares on the stock exchange.

International

32 Are there any special requirements or limitations on foreign companies acquiring interests in any part of the natural gas sector?

All natural gas transportation pipelines and associated infrastructure are owned by the two state utilities, SSGCL and SNGPL. In principle a foreign company could acquire a stake in them through the purchase of shares on the stock exchange. Foreign companies not operating in Pakistan but having operated concessions in other geographical areas of the world can only be eligible to acquire petroleum rights subject to their financial and technical capabilities.

33 To what extent is regulatory policy affected by treaties or other multinational agreements?

International treaties are not by themselves applicable or enforceable in Pakistan. All international or multinational treaties signed by Pakistan have to be ratified by parliament in order for them to be binding, as has been the case with the Arbitration (International Investment Disputes) Act 2011.

34 What rules apply to cross-border sales or deliveries of natural gas?

In Pakistan, cross-border sales and deliveries of natural gas are transacted pursuant to bilateral agreements between the parties and the availability of cross-border capacity. Since 2015, importing natural gas has been a high priority of Pakistan based on the energy crisis in Pakistan. However, Pakistan is a signatory to a framework agreement between Turkmenistan and Afghanistan, which envisages import of gas through a 1,680km-long pipeline through Turkmenistan and Afghanistan. Furthermore, Pakistan has signed a memorandum of understanding with Qatar and Iran for importation of gas through pipelines. In light of the above the government of Pakistan has incorporated Inter-State Gas Systems (Private) Limited (a joint venture between SSGCL and SNGPL) to work as an interface between the government and external agencies to facilitate the import of natural gas. See also 'Update and trends'.

Transactions between affiliates

35 What restrictions exist on transactions between a natural gas utility and its affiliates?

The working interest owner cannot sell, assign, transfer, convey or dispose of all or any part of its rights and obligations under a licence, lease or an agreement without the written consent of the DGPC. As regards assignment to affiliates, PCA or PSA (as the case may be) would need to make appropriate provisions permitting such an arrangement.

36 Who enforces the affiliate restrictions and what are the sanctions for non-compliance?

The DGPC office may impose any condition as it may consider appropriate to ensure full payment of any royalty, corporate tax and windfall levy by the assignee in respect of the interests assigned or transferred.



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Description of domestic sector

1 Describe the domestic natural gas sector, including the natural gas production, liquefied natural gas (LNG) storage, pipeline transportation, distribution, commodity sales and trading segments and retail sales and usage.

The Portuguese natural gas sector has been undergoing a consolidation of the liberalisation started in 2006 with the unbundling of the activities of transport, distribution and supply. In 2012, Decree-Law 230/2012 and Decree-Law 231/2012, both of 26 October 2012, completed the transposition of Directive 2009/73/EC into Portuguese law by reinforcing the provisions regarding independence and unbundling of supply activities and the operation of transmission networks; and assigning new powers to the national regulatory entity, reinforcing its independence in carrying out its functions of regulating, monitoring and certifying entities.

Currently, competition has started to emerge in the retail sector and there have been many infrastructural improvements, which have strengthened the network and delivered greater security of supply. Nonetheless, decline in consumption following the economic crisis, alongside low coal prices, low prices under the European Union Emissions Trading Scheme (EU-ETS) and the high penetration of variable renewable electricity are all having a severe impact on the sector. Natural gas demand in the electricity market has significantly decreased.

There is no domestic production of natural gas in Portugal, although there is some shale gas prospecting currently taking place in central Portugal. Therefore, the natural gas consumed in Portugal comes from third countries (Algeria and Nigeria) either through high-pressure pipelines or marine tankers (LNG).

In relation to transmission, Portugal has opted for full ownership unbundling of the transmission activity. REN Gasodutos, SA (the transmission system operator) operates the national transport network, while the activities of reception, regasification and storage of LNG are operated by REN Atlântico, SA. The activity of subterranean storage of natural gas is performed by REN Armazenagem, SA and Transgás Armazenagem, SA. All these activities are performed through public service concession contracts entered into with the state that regulate the rights and obligations of the parties.

The distribution networks are operated by several private companies.

Portugal's natural gas supply market has been fully liberalised since January 2010; since then, customers have been free to choose their suppliers. In 2015 (up to June), about 70,000 households changed their supplier. This tendency is decreasing, there being expected for 2016 a total of 20,000 household changes (the data made available by ERSE refers to June 2015). The most important suppliers are EDP Comercial, GALP, Endesa, Iberdrola and Gold Energy.

In order to grant households all the necessary information and in order to manage the supplier-switching process ensuring that such switch is expeditious, simple, transparent and based on simple procedures, the Portuguese Budget Law for 2017 (Law No. 42/2016 of 28 December) has authorised the Portuguese government to create, within 90 days from the publication of the referred legislation, a Logistics Operator for Switching Suppliers (OLMC).

2 What percentage of the country's energy needs is met directly or indirectly with natural gas and LNG? What percentage of the country's natural gas needs is met through domestic production and imported production?

Portugal does not produce natural gas. Imports come mainly from a few long-term contracts held by the GALP Group with Algeria (through Spain) and Nigeria (imported as LNG). According to data made available by Redes Energéticas Nacionais SGPS SA (REN) in 2016, natural gas consumption totalled 55.8TWh, which represents an increase of about 7 per cent in relation to 2015 (in which a total of 52.2TWh was registered). According to REN's forecast (included in the investment plan submitted in 2015), an increase of 1.3 per cent (per year) is expected for the period between 2016 and 2025.

Government policy

3 What is the government's policy for the domestic natural gas sector and which bodies set it?

The domestic natural gas sector is a regulated sector, namely in respect of access to the networks, quality of supply and determining prices and tariffs (although it is undergoing a process of phasing-out of end-user regulated natural gas tariffs, expected to occur until December 2017).

Regarding the national level of regulation, it is possible to differentiate between two sub-levels: state regulation that is exercised by government bodies (the Directorate General for Energy and Geology (DGEG)); and independent regulation that is carried out by independent regulatory entities.

At the latter level, alongside horizontal regulation (through the Portuguese Competition Authority (AdC)), there is also vertical regulation (specialised) that is carried out by the Regulatory Entity for Energy Services (ERSE) and by other entities (such as the Portuguese Securities Commission).

DGEG depends from the Ministry of the Economy. Its primary functions are to issue, amend and withdraw registers for natural gas supply and to oversee the security of supply.

The regulation of access to the networks, quality of supply and determining prices and tariffs are attributed to ERSE, which can also impose fines on energy companies for non-compliance with the laws and applicable regulations. ERSE is an independent administrative entity with administrative and financial autonomy and its own assets. Besides its functional independence, ERSE is also independent from the government. In fact, ERSE's board members are independent, and not subject to instructions or specific guidelines.

DGEG's decisions may be challenged by appeal to the Minister of the Economy. In any case, decisions from any of the regulatory entities may always be challenged by court proceedings.

Regarding the unconventional natural gas sector, which is at the moment in a preliminary stage of studies and data collecting, there is no specific legislation regulating the exploration and production of shale gas in Portugal. Therefore, this is subject to the same legal framework that applies to the prospecting of and exploration for petroleum (eg, Decree-Law No. 109/94, 26 April), regulated by DGEG.

Without prejudice of ERSE's inspection competences, in accordance with the Portuguese Budget Law for 2017 (Law No. 42/2016 of 28 December), the government is authorised to proceed with a reallocation of the inspection competences within the energy

sector. It is expected, within 90 days from approval of the above-mentioned legislation, that a new inspection entity will be created, which will concentrate all the inspection responsibilities currently spread between several entities.

Regulation of natural gas production

4 What is the ownership and organisational structure for production of natural gas (other than LNG)? How does the government derive value from natural gas production?

Not applicable.

5 Describe the statutory and regulatory framework and any relevant authorisations applicable to natural gas exploration and production.

Not applicable.

6 Are participants required to provide security or any guarantees to be issued with a licence to explore for or to store gas?

As previously stated, there is no exploration for natural gas in Portugal. Activities of storage of natural gas and LNG are performed under a public concession contract (see question 8), under which the grantees are obliged to provide bank guarantees or a cash deposit in an amount of €5 million.

Regulation of natural gas pipeline transportation and storage

7 Describe in general the ownership of natural gas pipeline transportation, and storage infrastructure.

Portugal has two natural gas storage facilities: the Carriço underground storage – with a maximum working volume of 300 million cubic metres of natural gas, a nominal withdrawal capacity of 7.14 million cubic metres a day and an injection capacity up to 2.0 million cubic metres a day – and LNG storage at the Sines terminal with a combined storage capacity of 390,000 cubic metres, roughly a storage capacity of 240 million cubic metres of natural gas.

Transportation activities and storage (subterranean storage and LNG storage at the Sines terminal) are exercised according to a public service concession regime. According to this regime, the ownership of transportation and storage assets belongs to the concessionaire during the concession's period, being transferred to the state at the end of the concession.

Natural gas pipeline transportation is wholly owned by REN, which is the national network concessionaire. Subterranean storage facilities are currently owned by REN Armazenagem (wholly owned by REN) and Transgás Armazenagem, SA (a company within the Galp Energia Group). REN Atlântico, SA (wholly owned by REN) owns the facilities for the reception, regasification and storage of LNG.

Transportation and storage operators are subject to requirements of direct and indirect unbundling from other activities of the SNGN.

8 Describe the statutory and regulatory framework and any relevant authorisations applicable to the construction, ownership, operation and interconnection of natural gas transportation pipelines, and storage.

Transportation and storage activities are exercised according to a public service concession regime. Transport activity is performed exclusively by one company in the whole continental Portuguese territory: REN Gasodutos, SA is currently the only transport network operator. REN Armazenagem, SA and Transgás Armazenagem, SA are the subterranean storage operators. REN Atlântico, SA is the operator of the Sines Terminal. All these activities are regulated by DGEG and ERSE. The regulation includes supervision, namely of the enforcement by the operators of the legal and regulatory provisions applicable to the concession contracts (which are, mainly, in DGEG's competence) and the promotion of competition between operators to assure access to the networks in equal circumstances (ERSE's competence).

Projects involving construction of natural gas transportation pipelines and storage facilities are subject to an approval from the government and to DGEG's licence. Civil works are subject to a licensing procedure (including environmental licensing) involving several administrative entities (namely, municipalities).

9 How does a company obtain the land rights to construct a natural gas transportation or storage facility?

The transportation network and storage facilities are public concessions granted by the state and therefore are subject to a specific regime, namely concerning rights for the use of the land.

The approval of projects grants the party the right to use the public domain or assets and goods belonging to the state and the municipalities for the installation of storage facilities or passage of integral parts of the network, as well as to request the expropriation by urgent public utility or the establishment of administrative easements regarding immovable assets necessary for the installation of the network or storage facility.

10 How is access to the natural gas transportation system and storage facilities arranged? How are tolls and tariffs established?

Access by third parties to the natural gas infrastructure (eg, the storage facilities infrastructures or transmission network) is one of the cornerstones of the SNGN. As a result, it is the operators' duty to grant all system users access to the infrastructure on a non-discriminatory and transparent basis.

Right of access to the infrastructure is granted by entering into a written agreement regarding the use of such infrastructure. Pursuant to these agreements, operators have the right to receive compensation for the use of their facilities and inherent services. This compensation is set out by ERSE in the Tariffs Regulation specifically for each type of infrastructure. Setting out regulated tariffs assures not only equal treatment for the infrastructure users, avoiding the risk of discrimination between them, but also that the amount of the tariffs is not subject to over-inflated increases defined by the relevant operators as a consequence of the networks being natural monopolies.

Decree-Law 230/2012 of 26 October opened up the possibility of concessions for underground storage that benefit from a system of negotiated access.

11 Can customers, other natural gas suppliers or an authority require a pipeline or storage facilities owner or operator to expand its facilities to accommodate new customers? If so, who bears the costs of interconnection or expansion?

As a general principle, operators may reasonably refuse to grant access to their infrastructure based on a lack of capacity or lack of connection.

As a consequence of the transposition of Directive 2009/73/EC, the transmission system operator was given the obligation to elaborate, every two years, a long-term plan for the development of the transportation and storage facilities as well as the reception, storage and regasification of the LNG system. The current and predicted demand of customers is a key factor in the elaboration of this plan, which is approved by the government. Operators shall comply with the terms and deadlines stated in the plan, with this obligation being supervised by ERSE.

Further, the government has the power to require operators to expand the transportation and storage facilities as well as the reception, storage and regasification of the LNG system, in situations mentioned in the concession contract.

Additionally, the transportation system operator has the obligation to undertake necessary improvements to the infrastructure, directly bearing the costs of that investment, whenever it is economically viable. In any case, the operator is compelled to perform said investment whenever there is a potential client interested in and willing to pay for it.

The costs of this expansion are taken into account in the determination of the regulated tariffs.

12 Describe any statutory and regulatory requirements applicable to the processing of natural gas to extract liquids and to prepare it for pipeline transportation.

Not applicable.

13 Describe the contractual regime for transportation and storage.

As stated above, transport and storage activities are regulated activities. Therefore, the general terms and conditions of contracts for the

use of infrastructures are approved by ERSE. These contracts are valid for one gas year (the period between 12am on 1 July of the current year and 12pm on 30 June of the following year), and shall be automatic and successively renewed for equal periods.

Regulation of natural gas distribution

14 Describe in general the ownership of natural gas distribution networks.

During the concessions or licence periods, the distribution networks are owned by the concessionaires or licensees, being transferred to the state at the end of the concession contract or licence. There are also some parts of the infrastructure that are privately owned (eg, private distribution networks).

15 Describe the statutory and regulatory structure and authorisations required to operate a distribution network. To what extent are gas distribution utilities subject to public service obligations?

Distribution activity can be performed through a concession or a public service licence. The distribution networks' operators have exclusive rights regarding the relevant parts of the national territory within the concessions or the licences for local distribution. Nevertheless, local distribution licences regarding areas where there is already a regional distribution concession may be exceptionally granted if the concessionaire considers that it is unable to cover the relevant area due to technical or economic reasons duly justified and acknowledged by the assigning entity.

In 2006, along with the unbundling process regarding distribution and supply, the concession contracts and the licences pursuant to the distribution of natural gas were adapted. However, the 11 relevant concessionaires and licensees, most of which are companies within the Galp Energia Group, kept their concessions and licences. All of them are private companies, subject to private law.

The distribution operator is subject to a legal, organisational and decision-making unbundling from other activities of the SNGN.

The operation of a natural gas distribution network is a regulated activity, subject to ERSE's regulation.

Undertakings are subject to the public service obligation relating to security, environmental protection and consumer protection, as set out in article 8(2) of Decree-Law 140/2006, of 26 July, as amended. These obligations are similar to those applicable to the concessionaires that carry out transport, reception, regasification and storage activities.

16 How is access to the natural gas distribution grid organised? Describe any regulation of the prices for distribution services. In which circumstances can a rate or term of service be changed?

Access to the distribution grids depends on the prior execution of an agreement for its use and on the payment of the regulated tariffs published by ERSE. The agreement's terms and conditions are also approved by ERSE. Therefore, neither the rates nor the agreements can be freely modified by the parties. The execution of an agreement is not required for retail traders who belong to a company that is party to a concession contract, or that holds distribution licences with fewer than 100,000 connected customers and has not unbundled its supply activity from the distribution activity. The gas distributor's obligations include provision of information to consumers, switching suppliers, quality of supply and metering.

17 May the regulator require a distributor to expand its system to accommodate new customers? May the regulator require the distributor to limit service to existing customers so that new customers can be served?

Similar to transport and storage operators, distribution operators may, as a general principle, reasonably refuse to grant access to their infrastructure based on lack of capacity or lack of connection.

As a consequence of the transposition of Directive 2009/73/EC, the distribution system operator was attributed the obligation to elaborate, every two years, a medium-term plan for the development of the distribution facilities. The current and predicted demand of customers is a key factor in drafting this plan, which is approved by the government following an opinion issued by ERSE. The operators shall then

comply with the terms and deadlines stated in the plan, this obligation being supervised by ERSE.

Further, the government has the power to require operators to expand distribution facilities in the situations mentioned in the concession contract.

Additionally, the distributor operator has the obligation to undertake necessary improvements to the infrastructure, directly bearing the costs of that investment whenever it is economically viable. In any case, the operator is compelled to perform the said investment whenever there is a potential client interested and willing to pay for it.

The costs of this expansion are taken into account in the determination of the regulated tariffs.

18 Describe the contractual regime in relation to natural gas distribution.

The general terms and conditions of agreements for the use of the network are approved by ERSE. These agreements are valid for one gas year (the period comprehended between 12am on 1 July of the current year and 12pm on 30 June of the following year), and shall be automatically and successively renewed for equal periods, unless they are rejected by the system user, which shall give 60 days' notice as to the term of the agreement or its renewal.

Regulation of natural gas sales and trading

19 What is the ownership and organisational structure for the supply and trading of natural gas?

The Portuguese natural gas supply market has been fully open since January 2010. Therefore, customers can buy natural gas from the supplier they choose, with which they agree a supply contract that has to follow some parameters established by law (for the protection of the consumer). The prices are set freely. There are still, however, suppliers of last resort who are obliged to supply household consumers (with an annual consumption lower than 10,000 cubic metres) until the end of 2017 and, after that, to supply economically vulnerable consumers as defined by law. In this case, the tariffs are set by ERSE. Suppliers of last resort are also obliged to supply consumers whose supplier has been prevented from exercising its activity, and also consumers who do not have the possibility of choosing a supplier because there is no supplier in their region.

20 To what extent are natural gas supply and trading activities subject to government oversight?

Suppliers are subject to a prior registration or licensing procedure (supplier of last resort) by DGEG. Otherwise, the oversight and regulation of said activities is carried out by ERSE; for instance, regarding some information duties that these companies are obliged to fulfil towards ERSE (eg, information related to prices).

Note that these companies are also subject to national competition law.

21 How are physical and financial trades of natural gas typically completed?

Physical and financial trades of natural gas are typically completed through bilateral contracts entered into between suppliers and buyers.

In recent years, Portugal has taken a number of steps towards market opening and integration with Spain. It abolished transmission exit fees in the interconnection with Spain in June 2012 and Spain reduced the exit price (towards Portugal) in cross-border tariffs.

In 2015, after several years of negotiation and preparatory work between the Portuguese and Spanish authorities, an Iberian organised market for gas was implemented through the creation of MIBGAS, SA. The creation and implementation of MIBGAS has the following objectives:

- increasing the security of supply through market integration;
- increasing the level of competition, reflecting the larger size of the market and the increase in the number of participants;
- simplifying and harmonising the regulatory framework in both countries; and
- encouraging the efficiency of regulated and liberalised activities as well as market transparency.

Owing to the Spanish political crisis the MIBGAS system was blocked in 2016. However, at the end of 2016, both the Portuguese Energy Secretary of State and Spanish Energy Minister debated the full implementation of MIBGAS. As a result, new measures are expected to be taken by the Portuguese and Spanish governments during the first semester of 2017 in order to reactivate and boost the implementation of MIBGAS for the next few years.

22 Must wholesale and retail buyers of natural gas purchase a bundled product from a single provider? If not, describe the range of services and products that customers can procure from competing providers.

Wholesale and retail buyers purchase natural gas from the supplier, which takes on the responsibility for the gas's availability to its clients. The supplier thus acts as an intermediary between the client and the infrastructure operators, entering into the necessary agreements for the use of the grids and paying the regulated tariffs set out in the Tariff Regulation on behalf of its clients. All rights and obligations, namely those regarding the granting of guarantees, regulated services and compensations for breaches in the quality standards, may also be transferred from the clients to the suppliers.

A supplier may choose to provide other services jointly or additionally to the provision of natural gas. Thus, for example, there are suppliers in the Portuguese market who jointly provide natural gas and electricity to their clients.

Regulation of LNG

23 What is the ownership and organisational structure for LNG, including liquefaction and export facilities, and receiving and regasification facilities?

There is currently only one LNG terminal in Portugal, located near the port town of Sines. Since 2006, this terminal is owned by REN Atlântico, SA, a company within the REN Group. REN Atlântico, SA entered into a public service concession contract with the state that granted it the performance of reception, storage, regasification and delivery of LNG to the national natural gas transmission network. Under said contract, REN Atlântico, SA also performs the loading and dispatching of tank trucks and marine tankers.

The LNG terminal can load up to 4,500 tanker trucks a year and its configuration allows receipt of LNG not only from the Atlantic basin (Nigeria, Norway, and Trinidad and Tobago) but also from sources such as Qatar and Egypt, thereby diversifying supply and increasing security of supply, while providing flexibility for smaller market players to also access the terminal.

According to information provided by ERSE in a report on the analysis of natural gas market investments dated June 2015, the Sines LNG terminal will be subject to several investments over the next few years, namely regarding operational safety, upgrading of equipment and systems, and the remodelling and adaptation of the terminal. According to the Analysis of the Investments on Natural Gas Market carried by ERSE (June 2016), a total investment amount of €7.46 million is estimated for 2017.

24 Describe the regulatory framework and any relevant authorisations required to build and operate LNG facilities.

Building LNG facilities is subject to a licensing procedure (including environmental licensing) involving a number of administrative authorities, municipalities included.

Operation of LNG facilities is subject to the public service terms and conditions set out in the public service concession contract. Said operation and activity is also subject to ERSE's regulation according to the terms specified above.

25 Describe any regulation of the prices and terms of service in the LNG sector.

Access to the LNG terminal at Sines depends on entering into an agreement for the use of the infrastructure, as well as on the payment of the relevant tariff approved by ERSE. The general terms and conditions of said contract have been approved by ERSE.

Mergers and competition

26 Which government body may prevent or punish anticompetitive or manipulative practices in the natural gas sector?

The entity responsible for the prevention and punishment of anticompetitive or abusive (exploitative or exclusionary) practices is the AdC.

Nevertheless, the legal competition framework establishes that the AdC shall work in close cooperation with and consult other regulatory authorities in areas where their supervision powers overlap. Such is the case in the natural gas sector, which is regulated and supervised by ERSE.

27 What substantive standards does that government body apply to determine whether conduct is anticompetitive or manipulative?

The substantive standards applicable under Portuguese law are similar to the ones applicable at the Community level. As with EU competition law, two main practices are prohibited under Portuguese competition law:

- (i) agreements or concerted practices between undertakings, and decisions of associations of undertakings that may have as their object or effect the prevention, restriction or distortion of competition in Portugal or in a significant part thereof; and
- (ii) the abuse of a dominant position by an undertaking within the Portuguese market. Portuguese competition law also prohibits the abuse of economic dependence, an exploitative conduct practiced by a non-dominant undertaking.

In regard to the conduct described in (i), such conduct may be deemed justified (and therefore exempted from the application of the prohibition) if it:

- contributes to improving the production or distribution of goods and services, or promotes technical or economic progress;
- allows users of such goods and services to obtain a fair share of the resulting benefits;
- does not impose on undertakings restrictions that are indispensable to reach the objectives of the conduct; and
- does not afford such undertakings the possibility of eliminating competition with respect to a substantial part of the relevant market.

There is a presumption that agreements that would be considered justified under the EU block exemptions, but that do not have an effect on Community trade, would also be considered justified under Portuguese competition law.

With regard to (ii), abuse of a dominant situation, there are no relevant specificities in Portuguese competition law comparable with those under EU competition law with regard to the criteria used for determining the existence of a dominant position: a company enjoying a position of economic strength, capable of behaving to an appreciable extent independently of its competitors, customers and ultimately consumers, will be considered to have a dominant position and, therefore, would be able to prevent effective competition. Further, there are no similar block-exempted practices for the conduct of undertakings that are in a dominant position, which, therefore – under the special responsibility that is vested upon dominant entities – requires that all actions be assessed for an eventual detrimental effect on competition and, should that be the case, for the strength of the efficiencies generated by such practices.

28 What authority does the government body have to preclude or remedy anticompetitive or manipulative practices?

Regarding practices that could be construed as anticompetitive or manipulative (described in question 27), the AdC has the power, on the one hand and under its own initiative, to initiate sectoral inquiries from which (non-binding) recommendations could ensue; or, on the other hand, ex officio or following a complaint, to initiate proceedings against companies that could be involved in anticompetitive practices.

Should the AdC determine the existence of an anticompetitive practice, it may impose sanctions on the infringing undertakings (fines), as well as remedies of a structural or behavioural nature.

29 Does any government body have authority to approve or disapprove mergers or other changes in control over businesses in the sector or acquisition of production, transportation or distribution assets?

The AdC is the authority responsible for merger control in Portugal, which includes the approval or refusal of mergers or other changes in control over businesses in the sector, and the acquisition, production, transportation and distribution of assets.

According to Portuguese law, a concentration that meets one of the following thresholds must be notified to the AdC prior to its implementation:

- market share: creation or reinforcement of a market share equal to or greater than 50 per cent on the national market for a particular good or service, or on a substantial part of it;
- turnover: an aggregate turnover, in Portugal, of more than €100 million in the previous financial year, as long as each of at least two of the undertakings concerned achieve a turnover of more than €5 million in Portugal; and
- mixed criterion: the creation or reinforcement of a market share equal to or greater than 30 per cent but smaller than 50 per cent on the national market for a particular good or service, or on a substantial part of it, as long as each of at least two of the undertakings concerned achieve a turnover of more than €5 million in Portugal in the previous financial year.

Regarding the substantive appraisal of a merger, according to Portuguese competition law, the main criterion considered when assessing a concentration is whether such merger leads to a significant impediment to effective competition in the Portuguese market or of a substantial part thereof, in particular as a result of the creation or strengthening of a dominant position.

By way of an extraordinary appeal by the notifying party or parties, a merger that has been prohibited by the AdC may exceptionally be authorised by a duly grounded decision of the Council of Ministers, upon proposal from the Minister for the Economy, when the benefits resulting from the concentration for the pursuit of fundamental strategic interests to the national economy concretely outweigh the disadvantages for competition inherent in its implementation.

30 In the purchase of a regulated gas utility, are there any restrictions on the inclusion of the purchase cost in the price of services?

Restrictions arise from the method of establishing the tariffs and costs that are allowed to be included.

31 Are there any restrictions on the acquisition of shares in gas utilities? Do any corporate governance regulations or rules regarding the transfer of assets apply to gas utilities?

The sole existing restrictions concern the purchase of shares of companies that are the concessionaires of the national transport network and the existing LNG terminal. In fact, no one (national or foreign) may

hold, directly or indirectly, more than 25 per cent of the share capital of each company that is the concessionaire of said infrastructures. These restrictions do not apply to the state, to companies controlled by the state and to the relations of domination within the corporate group that operates the transportation network operator or the LNG terminal operator.

Besides the above-mentioned restrictions, no other specific limitations on the transfer of shares apply solely to the natural gas sector. However, as most activities comprehended in the sector are performed under a concession contract, it is common for these contracts to submit the transmission of shares in the relevant companies, as well as the transfer of assets, to authorisation by the competent government member. Failure to request said authorisation renders the transaction null and void.

International

32 Are there any special requirements or limitations on foreign companies acquiring interests in any part of the natural gas sector?

Decree-Law 138/2014 of 15 September 2014 sets out a special regime for the transfer of strategic assets in public utilities sectors. According to this regime, the transfer of such assets to foreign companies (outside the EU) can be rejected by the Portuguese government where such acquisition compromises national security and defence, as well as the country's security of supply.

33 To what extent is regulatory policy affected by treaties or other multinational agreements?

As Portugal is a member of the European Union, natural gas regulation is highly influenced by European law.

The legislative package enacted in 2006, which deeply restructured the natural gas sector, derives directly from the Second Gas Directive 2003/55/EC, which sets out the common rules for the natural gas internal market. As a member state, Portugal was compelled to transpose said Directive.

The same occurred with the Third Gas Directive, approved by Directive 2009/73/EC, which obliged Portugal to introduce some adjustments in its legislation, namely concerning unbundling requirements, the powers of the national regulator and customers' rights.

34 What rules apply to cross-border sales or deliveries of natural gas?

There are no specific rules. It is, however, expected that, with the implementation of the Iberian natural gas market, requirements for connection between the grids and the management of capacity between Portugal and Spain would be established.

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Transactions between affiliates

35 What restrictions exist on transactions between a natural gas utility and its affiliates?

Not applicable.

36 Who enforces the affiliate restrictions and what are the sanctions for non-compliance?

Not applicable.

South Africa

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Description of domestic sector

- 1 Describe the domestic natural gas sector, including the natural gas production, liquefied natural gas (LNG) storage, pipeline transportation, distribution, commodity sales and trading segments and retail sales and usage.**

In the search for indigenous gas, the South African Agency for Promotion of Petroleum Exploration and Exploitation (SOC) Limited (Petroleum Agency) records over 300 wells drilled in South Africa's entire offshore area, with the results of these exploration and appraisal wells being discoveries of several small oil and gas fields. Commercial production of natural gas has to date only resulted from the offshore gas field situated in block 9, in the Bredasdorp Basin. PetroSA (then Soekor), the state-owned oil and gas exploration company, commenced commercial production of natural gas in block 9 in 1992, and in 1993 the PetroSA gas-to-liquids (GTL) plant in Mossel Bay became operational. Natural gas is also imported from the Temane and Pande gas fields in Mozambique (Mozambique gas fields) by Sasol Gas. Most of the imported gas is utilised in Sasol's chemical and GTL facilities, with the remainder being supplied to gas traders, local gas distributors and a significant number of industrial customers. The domestic gas market in South Africa is therefore predominately composed of GTL plants and industrial users.

There are separate markets for the transmission, distribution, trading and reticulation of piped gas in South Africa. In 1966, the South African Gas Distribution Company (now Sasol Gas) was formed to market and distribute piped gas. Initially, gas was sourced from industrial coal-to-gas processes. Today, Sasol Gas distributes and trades in natural gas sourced from the Mozambique gas fields as well as methane-rich gas.

Currently, the piped gas distribution network is limited to four out of nine provinces. The Rompco cross-border pipeline supplies natural gas from the Mozambique gas fields to Sasol's Secunda plant. Sasol Gas imports the gas primarily as feedstock for its Sasolburg and Secunda plants. Gas is then distributed domestically through the pipeline network from Sasolburg to industrial users in the Gauteng and Mpumalanga markets. Transnet Pipelines, one of five operating divisions of Transnet SOC Limited, owns and operates over 3,000km of high-pressure pipelines. The Transnet pipeline network predominately transports crude oil and petroleum products; it has, however, diversified into natural gas transportation. The Transnet gas pipeline, known as the Lilly line, carries methane-rich gas from Sasol's Secunda plant to Durban with offtake points at Newcastle, Empangani, Richards Bay and the Durban area. PetroSA owns and operates the offshore Mossel Bay gas pipeline and condensate pipeline from its offshore FA platform to the onshore GTL refinery plant in Mossel Bay, where gas is utilised in the production of liquid fuels such as unleaded petrol, kerosene (paraffin), diesel, propane, liquid oxygen and nitrogen, distillates, eco-fuels and process oils. Coal gas is produced domestically and consumed mainly by industrial users.

South Africa is currently a net importer of gas. It is not on any traditional LNG trading route, and there are therefore no LNG facilities in South Africa. To increase the gas economy in South Africa, so as to extend to LNG projects, the current gas infrastructure will require expansion well beyond its current capacity. See 'Update and trends' for an update on South Africa's proposed gas infrastructure development plans.

- 2 What percentage of the country's energy needs is met directly or indirectly with natural gas and LNG? What percentage of the country's natural gas needs is met through domestic production and imported production?**

Prior to 2000, natural gas accounted for less than 2 per cent of the primary energy demand in South Africa, with coal at that stage remaining the dominant energy source. To date, South Africa's domestic energy resource market remains dominated by coal: the Department of Energy (DoE) reports that gas, including coal gas, now accounts for 5 per cent. Most of the country's natural gas needs are met through piped imported gas.

Government policy

- 3 What is the government's policy for the domestic natural gas sector and which bodies set it?**

The 1998 White Paper on Energy Policy (Energy Policy) is the overarching domestic energy policy in South Africa. The primary objective of the Energy Policy is to ensure that demand for energy will be met in an optimal manner and over the long term. Importantly, the Energy Policy recognises natural gas as an attractive option in the diversification of South Africa's energy mix.

Other impacting plans and policy documents include the Integrated Resources Plan 2010–2030 (IRP) and the National Development Plan 2012 (NDP). The NDP recognises gas utilisation as a means to moving South Africa to a low carbon economy. The IRP, which was promulgated in March 2011, sets out, inter alia, the country's national electricity plan to 2030, and includes preferred generation technologies and timelines. Under the IRP, the government commits to an energy mix consisting of coal, gas, hydro, nuclear, solar and wind with the aim of securing and expanding the country's electricity supply network to meet demand. It also contains an allocation for gas at 3,126MW base load or mid-merit combined cycle gas turbines (CCGT) generation, or both, to be secured between the period 2019 to 2025, with a further 1,659MW CCGT capacity to be procured later. The IRP is revised by the DoE every two years.

The government has formulated a policy document, namely the Integrated Energy Plan (IEP) and is in the process of formulating a further policy document, the Gas Utilisation Master Plan (GUMP). The IEP provides a roadmap for gas infrastructure investment and policy development, whereas GUMP sets out South Africa's plans to utilise natural gas until 2050, and outlines the role that gas could play in the electricity, transport, domestic, commercial and industrial sectors. GUMP is also expected to promote an accelerated and enabling environment for gas development by considering various supply options, including the potential for domestic production of natural gas, shale gas, coal bed methane, and importation of LNG and piped gas from Namibia and Mozambique. GUMP has not been finalised as yet.

Regulation of natural gas production

- 4 What is the ownership and organisational structure for production of natural gas (other than LNG)? How does the government derive value from natural gas production?**

In natural gas production, the state can currently elect to acquire up to a 10 per cent participating interest in a production right, and a further 10 per cent participating interest or shareholding is retained for

historically disadvantaged South Africans (HDSA) through a black economic empowerment (BEE) entity. Both the state and the BEE entity are required to pay their pro rata share of development costs once the project proceeds to commercial production. See question 5 for a discussion on the proposed amendments to state participation. The remaining participation interest is usually held by an independent oil company (IOC) solely or jointly with other IOCs in the form of an unincorporated joint venture.

The government also derives value from natural gas production by imposing corporate taxes, royalties and acreage rentals. South Africa implements a resident-based income tax system, meaning resident oil and gas companies are taxed on their worldwide income. A non-resident will be taxed on profits from a South African source, or from a source deemed to be South African unless a double taxation agreement exists. Corporate taxes are imposed on oil and gas companies at a rate of 28 per cent for resident companies and 31 per cent for non-resident companies. Tax incentives for oil and gas companies are contained in 10th Schedule of the Income Tax Act 1962. The incentives allow, inter alia, an oil and gas company to record an assessed loss at 100 per cent of the capital expenditure at exploration and 50 per cent at production. Royalties are imposed when the resource is extracted and transferred. This includes consumption or disposal of the resource, or both. The tax royalty rate is variable, but is capped at a minimum of 0.5 per cent and a maximum of 5 per cent per annum. Any transfer of an exploration and production right will attract transfer duty unless certain exemptions apply. The government derives further value from natural gas production by requiring the holder of a technical cooperation permit, exploration right or a production right to pay annual acreage fees, which are calculated in accordance with a formula linked to the size of the area.

5 Describe the statutory and regulatory framework and any relevant authorisations applicable to natural gas exploration and production.

The Constitution of the Republic of South Africa (Constitution) mandates the government to implement legislative measures to ensure the ecologically sustainable development and use of South Africa's natural resources. Flowing from this constitutional imperative are a number of laws and regulations that collectively provide the legal framework for gas projects in South Africa.

Conventional and unconventional gas exploration and production projects fall within the portfolio of the Minister of Mineral Resources, and is primarily regulated by the Mineral and Petroleum Resources Development Act 28 of 2002 (MPRDA), the National Environmental Management Act (NEMA) and Mining Titles Registration Act 16 of 1967 (MTRA). The MPRDA is fundamentally based on principles of optimal exploration and exploitation of petroleum resources (oil and gas resources). It declares petroleum resources are the common heritage of the people of South Africa, and the state the custodian thereof. The MPRDA makes provision for a party to acquire a reconnaissance permit, technical cooperation permit (collectively permits) as well as exploration and production rights (collectively rights) on application to the Petroleum Agency. Exploration and production activities are listing notice 2 activities in terms of NEMA, read with the Environmental Impact Assessment (EIA) Regulations 2014. Thus, in accordance with the EIA Regulations, an applicant for a right will need to conduct and prepare a scoping and EIA report for public consultation, and then prepare and submit an environmental impact report (EIR) that includes the final scoping and environmental report for approval. Technical cooperation permits are desktop studies, and as such the permit holder is not permitted to access the land or to remove and dispose of any samples. For this reason, the activities associated with technical cooperation permits fall outside of the activities listed in NEMA's EIA Regulations. Reconnaissance permit activities are also not listed in the EIA Regulations; however, reconnaissance activities extend to seismic acquisitions, and for this reason the Petroleum Agency requires that an environmental management programme be submitted prior to the approval of such permit (reconnaissance EMP). Where a right has been granted, the MTRA requires that such right be registered at the Mineral and Petroleum Titles Registration Office. Registration fortifies the status of these rights as limited real rights that are binding on third parties. Permits are not registered under the MTRA; they are merely recorded and filed, and as such remain personal rights between the holder and the state.

As custodian of South Africa's petroleum resources, the state acting through the Minister of Mineral Resources is responsible for promoting and regulating indigenous gas exploration and production. The Department of Mineral Resources, and ultimately the Minister of Mineral Resources, is responsible for determining regulatory policies associated with gas exploration and production. In accordance with the MPRDA, the Minister is empowered to grant issue or refuse applications for permits and rights. In addition, the Minister is empowered to initiate 'licensing rounds'. The Minister has by ministerial delegation vested certain powers granted in terms of the MPRDA to the Director General (DG) and Deputy Director General (DDG) of the Department of Mineral Resources. The Petroleum Agency is the agency designated under the MPRDA to receive and process applications for the aforementioned permits and rights as well as receiving and processing competitive bids in the event of licensing rounds. Its powers to receive, process and review applications for permits and rights are prescribed by the MPRDA, and its discretionary powers are limited. It makes recommendations to the DG or DDG, who then approves or rejects the applications for permits or rights. It is also responsible for promoting the hydrocarbon potential of South Africa, and for quantifying South Africa's oil and gas resources through its Frontier Geology Department and Resource Evaluation Department. The Petroleum Agency is a state-owned enterprise. Once a permit or right has been granted, the Mineral and Petroleum Titles Registration Office as established under the MTRA is the designated registry office responsible for recording permits and registering rights. Reconnaissance EMPs are approved by the Minister of Mineral Resources through ministerial delegations as explained above, and environmental authorisations pursuant to an EIR and EIA process are obtained from the Department of Environmental Affairs (DEA).

Offshore and onshore drilling activities for unconventional or conventional gas are monitored by the Petroleum Agency. Onshore drilling activities are regulated by the Regulations for Petroleum Exploration and Production (Drilling Regulations). These regulations are not exhaustive, and compliance with environmental laws and an approved EMP, EIR and EIA process are still required. Although the Drilling Regulations aim to primarily address hydraulic fracturing, an unconventional drilling technique, these regulations are equally applicable to onshore exploration and production of conventional gas.

Internal appeal processes allow any person whose rights or legitimate expectations have been materially and adversely affected or who is aggrieved by an administrative decision to appeal such decision internally. The processes for internal appeals are usually contained in the underlying legislation. For example, in terms of the MPRDA, an aggrieved party may appeal an adverse administrative decision to the DG if it is an administrative decision by the DDG, and in the alternative the Minister of Mineral Resources if it is an administrative decision by the DG. An aggrieved party is required to lodge an appeal against an adverse administrative decision within 30 days of becoming aware of such decision. The internal appeal process must be exhausted prior to seeking judicial review of an administrative decision. The initiation and commencement of an internal appeal process, unless suspended by the relevant minister, does not usually suspend an administrative decision; thus, an aggrieved party that requires an interim suspension of such decision or any other form of urgent interim relief may be required to make an application to a competent court to obtain such relief.

6 Are participants required to provide security or any guarantees to be issued with a licence to explore for or to store gas?

In relation to gas exploration, the regulations to the MPRDA require that an applicant for an exploration right make financial provision for rehabilitation or management of negative environmental impacts caused by or associated with such operations. Methods for financial provision are listed in the regulations as a contribution to a trust fund, a bank guarantee, a designated account payment or such method as may be directed by the DG. In relation to the storage of gas, the Piped Gas Regulations provides that the National Energy Regulator of South Africa (NERSA) in its capacity as gas regulator, may, as a condition to an application to store gas, prescribe that environmental performance bonds by means of an insurance policy, bank guarantee, trust fund or other financial arrangement be provided for rehabilitation purposes.

Regulation of natural gas pipeline transportation and storage

7 Describe in general the ownership of natural gas pipeline transportation, and storage infrastructure.

There are three gas transmission pipelines in South Africa, and these are predominately state owned (see question 1). Sasol owns 50 per cent of the Rompco transmission pipeline, the government of Mozambique owns 25 per cent of Rompco and 25 per cent is owned by iGas, South Africa's state gas infrastructure company. Transnet Pipelines owns and operates the Lilly line transmission pipeline and PetroSA, the national oil company of South Africa, owns and operates an offshore gas pipeline and condensate pipeline in Mossel Bay for its own use. Gas transmission, distribution, storage and reticulation facilities are predominately privately owned; see question 14.

8 Describe the statutory and regulatory framework and any relevant authorisations applicable to the construction, ownership, operation and interconnection of natural gas transportation pipelines, and storage.

The Gas Act 48 of 2001 (Gas Act), read with the rules and regulations thereto provides the licensing framework for the construction of gas transmission, storage, distribution, liquefaction and regasification facilities, and the conversion of infrastructure into such facilities, as well as the operation of gas transmission, storage, distribution, liquefaction or regasification facilities and trading in gas. All these activities require a licence. Piped Gas Regulations, published under the Gas Act, make provision for third-party access to transmission pipelines and storage facilities. The Gas Regulator Levies Act 75 of 2002 makes provision for the imposition of levies based on the amount of gas, measured in gigajoules, delivered by importers and producers to inlet flanges of transmission or distribution pipelines and paid by the person holding the title to the gas at the inlet flange. In May 2013, the Gas Act Amendment Bill (Gas Bill) was published for public comment. The amendments, aimed primarily at facilitating gas infrastructure development and cooperation between the private and public sectors, specifically states that licences are required for the construction, conversion or operation of LNG facilities and trading in LNG. No date has been set for the promulgation of the Gas Bill as yet. Environmental authorisations are required in terms of NEMA and the EIA Regulations, and compliance with the Major Hazard Installation Regulations is also required for the construction of gas pipeline facilities and the construction of gas storage facilities.

NERSA, acting on behalf of the DoE, is the designated gas regulator. The gas regulator is empowered to regulate and issue gas licences provided for in the Gas Act. NERSA is a Schedule 3A Public Finance Management Act 1 of 1999 public entity established in terms of the National Energy Regulator Act 40 of 2004, and it reports to the Minister of Energy. Environmental authorisations are obtained from the DEA.

In terms of the provisions of the Promotion of Administrative Justice Act 3 of 2000 (PAJA), internal appeal processes, as explained in question 5, are equally applicable to administrative decisions of the gas regulator and the DEA. Grounds for judicial review of an administrative decision, in the event of an unsatisfactory internal appeal, are contained in PAJA. Section 10 of the National Energy Regulator Act specifically provides that any person may institute proceedings in the High Court of South Africa for judicial review of an administrative action taken by the gas regulator, or alternatively may appeal the decision of the gas regulator sitting as a tribunal.

9 How does a company obtain the land rights to construct a natural gas transportation or storage facility?

A company may purchase or lease the land on which a facility is intended to be constructed. If access to land cannot be obtained through voluntary means, section 25 of the Constitution read with section 35 of the Gas Act allows the gas regulator to expropriate land for gas transmission, storage, distribution, liquefaction or regasification facilities. The gas regulator may only expropriate land if a licence holder is unable to acquire such land or come to an agreement with the landowner, and if such land is reasonably required and necessary for the establishment of facilities aimed at enhancing South Africa's gas infrastructure.

10 How is access to the natural gas transportation system and storage facilities arranged? How are tolls and tariffs established?

The Piped Gas Regulations to the Gas Act make provision for third-party access to transmission pipelines and storage facilities. It requires that an allocation mechanism be put in place so as to ensure third-party access to uncommitted capacity. Access to uncommitted capacity is then arranged on commercial terms by way of a third-party user agreement, which will be subject to the provisions of Piped Gas Regulations. The gas regulator sets a range of gas specifications for each licensed activity where gas is to be commingled from two or more separately owned sources. The Piped Gas Regulations specifically state that where it is not technically feasible or economically viable to make gasses from two different sources compatible, those gasses must be conveyed in separate pipeline systems and stored in separate storage facilities.

The Gas Act also makes provision for a network charge or gas service charge (ie, a tariff) in addition to a gas price (see question 21 for a discussion on gas pricing). It also provides that the gas regulator is empowered to monitor, approve and, if necessary, regulate gas transmission and storage tariffs. In fulfilling this mandate, the gas regulator publishes guidelines for monitoring and approving piped gas transmission and storage tariffs (Tariff Guidelines). It is important to note that the gas regulator will not set tariffs; instead, it monitors and approves tariffs by reviewing the tariff proposed by the licensee or an applicant for a transmission pipeline or storage facility licence (tariff applicant). In preparing such proposal, the tariff applicant is required to indicate its preferred tariff methodology, which may be chosen from the list of options in the Tariff Guidelines. In reviewing the tariff application, the gas regulator can request to amend the levels of tariff or tariff structure, or both, and it can also decide not to approve a tariff. If the tariff is not approved, then in terms of the Gas Act, the gas regulator must regulate the tariff. Once an approved or regulated tariff is determined, this becomes the applicable tariff, and although discounts are permitted, the applicable tariff is binding on third parties accessing the system or facility, or both.

11 Can customers, other natural gas suppliers or an authority require a pipeline or storage facilities owner or operator to expand its facilities to accommodate new customers? If so, who bears the costs of interconnection or expansion?

The gas regulator may impose licence conditions that make provision for interconnections with the facilities of gas suppliers, transmitters, storage companies, distributors, reticulators and eligible customers. Provided that such interconnection is technically feasible and the party requesting such interconnection bears the increased costs occasioned therewith, which must be taken into account when setting such party's tariff, the interconnection must be carried out. The Piped Gas Regulations also require transmission pipeline operators and storage facility operators to make provision for an allocation mechanism to ensure third-party access to uncommitted capacity.

12 Describe any statutory and regulatory requirements applicable to the processing of natural gas to extract liquids and to prepare it for pipeline transportation.

The processing of natural gas to extract liquids and to prepare it for pipeline transportation will require compliance with NEMA, its regulations and the Occupational Health and Safety Act 85 of 1993 (OHSA). In addition, the Piped Gas Regulations, which require that gases including liquefied petroleum gas (LPG) that are incompatible must be conveyed in separate pipeline systems and stored in separate storage facilities, will be applicable. The South African Bureau of Standards is a statutory body mandated to develop, promote and maintain South African National Standards (SANS). It currently has 6,861 standards, one of which is the SANS 1774:2004 specifications. This SANS regulates blending and odourising of LPG for pipeline transportation.

13 Describe the contractual regime for transportation and storage.

South Africa has a hybrid licensing regime for gas transportation and storage facilities coupled with a third-party contract regime governing user access to such facilities (see question 10). If a project requires port access by subsea and land pipeline and port storage, an operating lease

agreement will need to be concluded with Transnet National Ports Authority (TNPA), a state-owned division of Transnet SOC Limited. Operating lease agreements with TNPA usually take the form of build, own, operate, transfer agreements. Road loading transportation agreements are concluded on a commercial basis.

Regulation of natural gas distribution

14 Describe in general the ownership of natural gas distribution networks.

The piped gas distribution network includes reticulation pipelines and distribution pipelines that facilitate the supply of gas to end-use consumers; the distinction between these pipeline networks is that the operating pressure for gas reticulation pipelines is less than 2 bar gauge, while that of a distribution pipeline network operates between 2 and 15 bar gauge. Piped gas consumers in South Africa are mostly industrial users who utilise gas turbines for power generation. Household consumption of gas is limited to the utilisation of gas in cylinders. Reticulation and distribution networks are predominantly privately owned.

15 Describe the statutory and regulatory structure and authorisations required to operate a distribution network. To what extent are gas distribution utilities subject to public service obligations?

The DoE is the gas policy maker in the context of transmission, distribution and trading in gas, with NERSA acting as the gas regulator, as explained in question 8. Operation of a gas distribution network is regulated by the Gas Act and the Piped Gas Regulations, and the distributor will need to apply for and be granted construction, operation and trading licences. Environmental authorisations, pursuant to EIAs, must be obtained for the construction of the distribution network, and the distributor must demonstrate its technical ability and ability to comply with the OHS Act when applying to operate a distribution network. Construction, operating and trading licences are issued for a term of 25 years, or such longer period as may be determined by the gas regulator. These licences will be limited to a particular gas specification as specified in the licence conditions. Gas distribution in the form of gas cylinder for domestic or industrial use requires compliance with SANS.

Due to the absence of pipeline networks to domestic properties and domestic gas meters, there is no designated gas distribution utility company in South Africa.

16 How is access to the natural gas distribution grid organised? Describe any regulation of the prices for distribution services. In which circumstances can a rate or term of service be changed?

South Africa does not have an established gas market; other than the transmission, distribution and reticulation distribution network, as explained above, there is no notable gas infrastructure in South Africa. See question 18.

17 May the regulator require a distributor to expand its system to accommodate new customers? May the regulator require the distributor to limit service to existing customers so that new customers can be served?

In terms of the Gas Act, distributors must allow interconnections, provided such interconnection is technically feasible and the party requesting such interconnection bears the increased costs occasioned therewith. Distributors are not required to expand or limit their system to grant access to new customers.

18 Describe the contractual regime in relation to natural gas distribution.

The contractual regime for third-party user access to a gas transmission or distribution network is in practice governed by a third-party user agreement, whereas gas supply agreements are entered into between a gas trader and the end customer. The gas regulator guidelines on tariffs and maximum prices have a direct impact on the commercial terms of gas supply agreements and third-party access agreements. Further, the Piped Gas Regulations, licence conditions and SANS have a direct impact on gas specifications. The Piped Gas Regulations specifically

prohibit discriminatory practices in relation to customers or classes of customers and third-party users; such conduct can be reported to the gas regulator under the terms of the regulations. The regulations further provide that the gas regulator may, at the request of one or more parties, negotiate for third-party access to gas transmission pipelines, or fix a time period within which such negotiations must be completed, or both.

Regulation of natural gas sales and trading

19 What is the ownership and organisational structure for the supply and trading of natural gas?

South Africa currently has nine licensed gas traders, all of which are privately owned entities. Trading licences are geographically exclusive for a 25-year period, or such longer period as may be determined by the gas regulator.

20 To what extent are natural gas supply and trading activities subject to government oversight?

To trade in gas, a licence to trade in gas must be issued by the gas regulator in terms of the Gas Act. The trading licence sets out the terms and conditions of such licence that, if not complied with, can result in the revocation of the licence by the gas regulator. In addition, the gas regulator's power to monitor, approve and, if necessary, regulate tariffs (as explained in question 10), is coupled with the ability to monitor, approve and, if necessary, regulate maximum prices for distributors, reticulators and all classes of consumers purchasing gas. In fulfilling this mandate, the gas regulator has developed a methodology for approving maximum prices for gas in the piped gas industry (Maximum Prices Methodology). The requirement to approve maximum prices and hence to use the Maximum Prices Methodology is, in terms of the Gas Act, contingent on the gas regulator determining that there is inadequate competition as contemplated in the Competition Act 89 of 1998 (Competition Act). This determination forms part of a separate assessment conducted by the gas regulator, which is performed on a periodic basis. In approving maximum prices, the gas regulator will not set prices, but will monitor and approve prices by reviewing the price proposed by the licensee or an applicant for a trading in gas licence (gas price applicant). In preparing such proposal, the gas price applicant is required to indicate its preferred gas pricing methodology, which may be chosen from the Maximum Price Methodology. The Methodology essentially consists of two alternative approaches: the use of energy indicators and the 'pass-through' of costs approach. In reviewing the gas price application, the gas regulator can request an amendment of the maximum price proposed, and can also decide not to approve a proposed maximum price. If the maximum price is not approved, the gas regulator must set the maximum price in terms of the Gas Act.

21 How are physical and financial trades of natural gas typically completed?

Not applicable.

22 Must wholesale and retail buyers of natural gas purchase a bundled product from a single provider? If not, describe the range of services and products that customers can procure from competing providers.

The South African natural gas market is underdeveloped, and competition in this sector scarce. Domestically, wholesale buyers and retailer buyers have the option of acquiring natural gas, methane-rich gas and LPG.

Regulation of LNG

23 What is the ownership and organisational structure for LNG, including liquefaction and export facilities, and receiving and regasification facilities?

South Africa does not import or export LNG, and as such it currently has no LNG facilities. See 'Update and trends'.

24 Describe the regulatory framework and any relevant authorisations required to build and operate LNG facilities.

The Gas Act defines gas as including LNG. It further provides that no person may construct or operate gas transmission, storage,

Update and trends

South Africa is currently experiencing a significant and long-term power shortage. The country's need for power, government's recognition that the demand for energy extends beyond the coal-dominated fleet, combined with regional gas discoveries, the availability of US and Australian gas and the potential for domestic shale gas plays has created the perfect storm for LNG infrastructure projects in South Africa. Recent developments in the regulation of South African gas sector have taken into account the aforementioned. These developments are to date as follows.

MPRDA amendments and shale gas regulation

On 27 December 2012, the DMR published the Draft Mineral and Petroleum Resources Development Amendment Bill 2012 (Amendment Bill) for public comment. At the beginning of 2016, the Amendment Bill was returned to the National Assembly by the President with certain reservations. Between the first and third quarter of 2016 the Amendment Bill progressed through the National House of Traditional Leaders and the National Assembly. The Amendment Bill is currently with the National Council of Provinces (NCOP). The NCOP will conduct public consultative processes in early 2017.

The most significant and debated amendments introduced by the Amendment Bill pertained to state participation. Currently, the state is afforded a 10 per cent carried interest at production and it is required to pay its pro-rata share of development costs. The Amendment Bill, however, proposes the state will have a 20 per cent carried interest with no obligation to pay a pro-rata share of the development costs. It further provides that the state may acquire a further interest on normal commercial terms and that the 10 per cent interest usually reserved for HDSA/BEE participation can be taken up by the state if a suitable BEE partner is not found. The extent of the additional percentage of interest to be acquired by the state and more importantly what constitutes 'normal commercial terms' from a government perspective is unclear and investors have taken little comfort that these are to be specified in the regulations.

In late 2016, the Department of Mineral Resources made additional proposals to the NCOP, which are expected to be adopted. Important additional proposals include a 20 per cent state carried interest with a cost-recovery mechanism during the production stage and the requirement for a 10 per cent black economic empowerment shareholding structure.

In early 2011, the potential for shale gas exploration in the country's semi-arid Karoo region caused a sequence of ministerial moratoriums to be issued. The moratoriums all aimed at allowing government an opportunity to properly assess and address unconventional exploration risks, froze the processing of shale gas permits and rights received prior to 1 February 2011 and also the acceptance of new applications. By 21 April 2011, the Cabinet announced the formation of an interdepartmental task team to investigate potential environmental risks posed by hydraulic fracturing and on 7 September 2012 the report of the task team was delivered and approved by the Cabinet. On 3 June 2015, Drilling Regulations aimed at addressing the gaps identified in the current regulatory framework governing exploration and exploitation of petroleum resources, particularly in relation to hydraulic fracturing and well integrity, were published by the Minister. Processing of new applications in the Karoo

region remains under moratorium but applications received prior to 1 February 2011 are currently being processed by the Petroleum Agency. The shale gas potential in the Karoo Basin is estimated by the US EIA at 390 Tcf, this estimate is followed by a cautious 42 Tcf estimate by the Petroleum Agency. Given that the PetroSA Gas to Liquid (GTL) plant in Mossel Bay was constructed on 1 Tcf, even a cautious 42 Tcf would be game-changing for South Africa.

Gas IPP programme, Gas Bill and GUMP

To address the power shortage capacity crisis, gas is currently being considered by the DoE as feedstock for electricity generation. The Minister of Energy in 2015 announced that the DoE has in accordance with the IRP started the design of a Gas to Power Procurement Programme for a combined 3,126MW allocation (Gas IPP Programme) and in March 2016 the Minister of Energy advised that a further 600MW were required.

The DoE subsequently issued a request for information (RFI), in 2015, the results of which have not been published. It is anticipated that the RFI responses would see LNG imports and infrastructure development as a dominant near-term gas source for South Africa. It is also anticipated that the RFI will be followed by a request for qualification (RFQ) and then a request for proposal (RFP). The DoE has decided to postpone the release of the RFQ so as to align it with the procurement programme and the IRP. The IRP is scheduled to commence public consultation process and subsequently finalise the IRP for the Cabinet to initiate its approval process.

The DoE also released the Preliminary Information Memorandum and the Information Memorandum in late 2016 which sets out the framework of the LNG-to-power independent power producer procurement programme for prospective and interested bidders to consider.

The Gas IPP Programme and RFI is running concurrently with Eskom's project on the conversion of fuel-based power plants, Ankerlig and Gourikwa, to natural gas. Although not a prerequisite, it is likely that the DoE will seek to finalise GUMP and the amendments contained in the Gas Bill prior to closing of the first transaction.

Once these supply shortages are addressed, demand for LPG is expected to increase for a number of reasons, including:

- LPG is an alternative source of energy to electricity, being efficient and cost-effective for thermal applications; and
- increasing electricity prices, as well as electricity availability constraints, particularly during peak periods of demand, are likely to incentivise more consumers to utilise LPG for cooking and heating.

Sunrise Energy is developing and constructing a LPG import terminal in Saldanha Bay, Western Cape, South Africa, with the facility scheduled for commissioning by the second quarter of 2017. Sunrise Energy aims to provide affordable and efficient energy infrastructure services to its customers. The terminal will be an open-access facility, which means that it can be utilised by any gas importer, distributor or downstream user for the import of LPG, commercial propane or commercial butane. The facility will be commissioned and operational by April 2017.

distribution, liquefaction and regasification facilities, or convert infrastructure into such facilities, without a licence issued by the gas regulator. As explained in question 8, Gas Bill amendments are aimed primarily at facilitating LNG infrastructure development, and cooperation between the private and public sectors in this context. No date has been announced for the promulgation of the Gas Bill as yet. However, the current provisions of the Gas Act remain applicable to the regulation and licensing of LNG facilities. Environmental authorisations, as explained in question 8, are applicable. Further, in the event that LNG is imported, an import licence would have to be applied for from the International Trade Administration Commission of South Africa, and an import permit would need to be granted by the South African Revenue Service excise and customs.

25 Describe any regulation of the prices and terms of service in the LNG sector.

South Africa does not have an LNG market; as such, tariffs and maximum prices (as explained above) have not been appropriately tested in this context.

Mergers and competition

26 Which government body may prevent or punish anticompetitive or manipulative practices in the natural gas sector?

The Competition Act establishes three independent bodies: the Competition Commission (Commission), the Competition Tribunal (Tribunal) and the Competition Appeal Court. The functions of the Commission include, inter alia, investigating anticompetitive conduct in contravention of Competition Act, and assessing the impact of mergers and acquisitions on competition and approving (conditionally or unconditionally) or prohibiting mergers. The decisions of the Commission may be appealed to the Tribunal and the Competition Appeal Court. The Tribunal adjudicates on any conduct prohibited in terms of the Competition Act to determine whether any prohibited conduct has occurred, and if so, to impose any remedy provided for in the Competition Act. The Competition Appeal Court may review any decision of the Tribunal.

27 What substantive standards does that government body apply to determine whether conduct is anticompetitive or manipulative?

The Competition Act prohibits horizontal restrictive practices, vertical restrictive practices and abuse of a dominant position. Horizontal restrictive practices may be summarised as practices involving competitors who have engaged in a relationship that has the effect of direct or indirect price fixing, dividing markets and collusive tendering. Vertical restrictive practices may be described as practices between parties in a producer/supplier relationship that have the effect of preventing or reducing competition in the market. Forms of abuse of a dominant position entail, inter alia, excessive pricing and refusal to allow competitors access to essential facilities.

28 What authority does the government body have to preclude or remedy anticompetitive or manipulative practices?

In exercising its investigative powers, the Competition Commission has the power to issue subpoenas and conduct search and seizures. The Competition Act imposes administrative penalties of up to 10 per cent of the firm's annual turnover in the Republic and its exports from the Republic, as well as fines and imprisonment, are penalties also provided for in the Competition Act.

29 Does any government body have authority to approve or disapprove mergers or other changes in control over businesses in the sector or acquisition of production, transportation or distribution assets?

Section 12 of the Competition Act contains a notification and approval process for mergers and acquisitions, when one or more firms directly or indirectly acquire, or establish direct or indirect control over, the whole or part of the business of another firm, and that occurs through the purchasing of shares, interest and assets of the target firm, such constituting a merger for competition purposes. Once a transaction falls within the definition of 'merger' as defined in the Competition Act, it has to be determined whether the transaction must be notified. In determining whether a transaction is notifiable, a review of the thresholds contained in section 11 of the Competition Act is necessary. The approval process is estimated at approximately 60 days.

30 In the purchase of a regulated gas utility, are there any restrictions on the inclusion of the purchase cost in the price of services?

Not applicable.

31 Are there any restrictions on the acquisition of shares in gas utilities? Do any corporate governance regulations or rules regarding the transfer of assets apply to gas utilities?

Not applicable.

International**32 Are there any special requirements or limitations on foreign companies acquiring interests in any part of the natural gas sector?**

In terms of the Companies Act 71 of 2008, a foreign company may conduct its business in South Africa in its own name either through a South African branch or a South African subsidiary. A South African subsidiary company must be incorporated at the Companies Intellectual Property Commission (CIPC), whereas a South African branch of a foreign company must register with CIPC as an external company within 21 days of establishing a place of business in South Africa or owning immovable property in South Africa. BEE initiatives coupled with state participation (as explained above) are applicable to the acquisition of certain interests in the natural gas resources sector in South Africa.

33 To what extent is regulatory policy affected by treaties or other multinational agreements?

South Africa is signatory to a number of international treaties and multinational agreements that mould the interpretation and application of its domestic laws. The Constitution requires that the judiciary prefer a reasonable interpretation of domestic laws that is consistent with international law as opposed to an interpretation that proves inconsistent with international law.

34 What rules apply to cross-border sales or deliveries of natural gas?

Not applicable.

Transactions between affiliates**35 What restrictions exist on transactions between a natural gas utility and its affiliates?**

Not applicable.

36 Who enforces the affiliate restrictions and what are the sanctions for non-compliance?

Not applicable.



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Description of domestic sector

1 Describe the domestic natural gas sector, including the natural gas production, liquefied natural gas (LNG) storage, pipeline transportation, distribution, commodity sales and trading segments and retail sales and usage.

Spain is a renowned gas importer, with less than 1 per cent of the gas consumed within the country coming from domestic production. Spain received natural gas from 11 different countries in 2015, Algeria being the main supplier (55 per cent) followed by France (13 per cent), Qatar (9 per cent) and Nigeria (8 per cent).

Natural gas enters the Spanish gas system in the following ways:

- international interconnections of gas pipelines. The main supply routes are the Maghreb and Medgaz gas pipelines, which connect Spain with Morocco and Algeria respectively. There are other gas pipelines of smaller capacity that connect the Spanish and French networks as well as the Spanish and Portuguese networks; or
- in the form of LNG, to be regasified in domestic regasification plants. Spain has the highest number of regasification plants in Europe (seven at present), and is positioned as the gateway to Europe for the importation of LNG from anywhere in the world owing to its geographical location, capacity and operational flexibility.

In 2015, supplies obtained through international interconnection pipelines in the form of natural gas amounted to approximately 58 per cent, the remaining 42 per cent coming as LNG.

The Spanish gas system is liberalised, entitling consumers to freely choose their supplier and negotiate on price (except for last-resort consumers, who have access at a regulated price).

Transportation and distribution activities are regulated, which entails, among other things, transporters and distributors receiving regulated remuneration. Access by third parties to the transportation and distribution network (TPA) is regulated, as well as the tolls to be paid for such access.

The Spanish gas technical system operator and main transporter is Enagas, which is responsible, among other duties, for guaranteeing the continuity and security of the gas supply and for ensuring proper coordination between the access points and transportation and distribution networks.

2 What percentage of the country's energy needs is met directly or indirectly with natural gas and LNG? What percentage of the country's natural gas needs is met through domestic production and imported production?

According to the annual Spanish energy book published by the Secretary of State for Energy in 2015, total natural gas consumption in Spain was 285,935.82GWh, amounting to 19.9 per cent of the total consumption of primary energy. This represented an increase of 3.9 per cent compared with 2014.

Internal gas production totalled 699GWh in 2015, which covered 0.2 per cent of internal gas demand and meant that 99.8 per cent of internal gas consumption was met through importation.

Government policy

3 What is the government's policy for the domestic natural gas sector and which bodies set it?

Spain's natural gas sector policies and legal regime are primarily governed by the European Union through Directive 2009/73/EC concerning common rules for the internal market in natural gas and repealing Directive 2003/55/EC. The energy policies behind this directive are mainly focused on ensuring the security and safe supply of energy at the lowest possible cost, boosting energy efficiency, ensuring the functioning of the energy market, and promoting the interconnection of energy networks.

At state level, such policies and legal regime have been implemented in Spain through Law 34/1998 on Hydrocarbons (LH), as amended from time to time to transpose EU regulations. As per the Spanish Constitution, the LH is basic legislation. That is, legislation on the energy regime is reserved to the state, which establishes the National Energy Plan and determines the tolls for the use of facilities affected by TPA rights, among other functions. Also at state level, the role of the Ministry of Energy, Tourism and Digital Agenda (MINETAD) includes granting the relevant authorisations for facilities when they affect the territorial scope of more than one autonomous community and providing instructions regarding the extension, improvement and adaptation of the transport and distribution infrastructures.

Broadly speaking, the Regional Administrative Authorities of the Autonomous Communities are in charge of developing the basic state-level legislation. They also grant the necessary authorisations when the relevant gas infrastructure solely affects their territory, unless such authorisations are expressly reserved to the MINETAD.

The National Commission for Markets and Competition (CNMC) is the independent regulator in charge of supervising and controlling the proper functioning of the energy and gas sectors and safeguarding competition in such sectors.

Finally, there are no major differences as regards conventional and unconventional sectors, as detailed in question 4.

Regulation of natural gas production

4 What is the ownership and organisational structure for production of natural gas (other than LNG)? How does the government derive value from natural gas production?

Gas production in Spain is very limited; as stated, less than 1 per cent of the gas consumed within the country comes from domestic production. However, despite its limited impact in the gas sector, domestic production is heavily regulated, as explained in question 5.

Under the LH, natural gas fields and underground stores existing within the state territory and in the territorial subsea and sea depths are under the sovereignty of Spain and shall be deemed to be public property belonging to the state (public domain goods). This affects the authorisation regime for the performance of these activities, which ranges from a simple administrative authorisation for exploration activities to the requirement of an administrative concession to exploit the gas deposit.

On 23 May 2015, Law 8/2015 was passed amending the LH and establishing a tax on the value of the extraction of gas, oil and condensates. Furthermore, several surface fees must be paid in order to obtain gas production licences.

5 Describe the statutory and regulatory framework and any relevant authorisations applicable to natural gas exploration and production.

Any legal person with legal, technical and financial capacity may perform exploration, research and exploitation of hydrocarbons by obtaining the corresponding authorisations, permits and concessions, which are granted by the MINETAD or by the competent regional administrative authority if such performance only affects its territorial scope.

The exploration authorisation grants its owner a non-exclusive right to carry out exploration in free areas. Thus, in practice, interested parties directly require a research permit.

Research permits grant their owner an exclusive right to conduct research on a given surface and to obtain operating concessions at any time during the period of validity of the permit. Permits are granted for six years and can be extended for a further three years under certain conditions. Once a research permit has been requested, the MINETAD begins a competitive process so that other operators may attempt to obtain the permit, which is ultimately awarded on the basis of the best offer received.

Exploitation concessions empower their owner to exploit resources that have been discovered. Concessions are granted for 30-year periods and can be extended for two additional periods, each of 10 years. The granting of exploitation concessions is an exclusive competence of the MINETAD.

Article 9.5 of the LH expressly permits non-conventional extraction of natural gas, such as fracking. The exploration, research and exploitation regime does not substantially differ from the conventional extraction regime explained above.

Mineral rights may also be leased to third parties provided that they fulfil the necessary requirements.

Authorisations, permits and concessions, and any administrative resolutions may be challenged in an administrative proceeding before either the administrative authority that granted them or the relevant superior administrative body. They can subsequently be challenged before the competent courts, which may be the Superior Court of Justice of an Autonomous Community, the Supreme Court, or lower courts, depending on the specific administrative resolution being challenged.

6 Are participants required to provide security or any guarantees to be issued with a licence to explore for or to store gas?

To obtain research permits and exploitation concessions, operators must constitute a guarantee in favour of the administrative authorities. This guarantee must be established in the corresponding resolution and calculated to cover the investment, tax, social security and restoration obligations arising from the research permits or concessions.

Regulation of natural gas pipeline transportation and storage

7 Describe in general the ownership of natural gas pipeline transportation, and storage infrastructure.

The natural gas transportation network comprises:

- primary transport networks of natural gas pipelines with a maximum design pressure of 60 bar or more;
- secondary transport networks made up of pipelines with a maximum design pressure between 60 and 16 bar;
- LNG regasification plants; and
- basic storage of natural gas.

The LH recognises free enterprise for the exercise of transportation activities. However, they must be carried out guaranteeing the supply of gas to final consumers within the national territory. Gas transportation facilities can be privately owned and any market operator can build infrastructure for the transportation of natural gas provided that it complies with the legal, technical and financial conditions set out in Royal Decree 1434/2002 and obtains the necessary administrative authorisations for the construction and exploitation of transportation facilities. (See question 8.)

Companies carrying out transportation activities are required to have such activity as their exclusive corporate purpose, and a vertically integrated group of companies carrying transport or distribution activities cannot carry out generation or trading activities either directly or through companies within its group of companies, unless it fulfils

several unbundling obligations established in the LH (keep separate accounting for each activity, maintain different management for each activity, keep commercially sensitive information secret from other companies within the group, establish a group code of conduct to fulfil unbundling obligations, and so on).

Furthermore, there are additional unbundling obligations for transporters owning specific high-pressure pipelines which are fundamental to the security and functioning of the system (red troncal) and which are part of a vertically integrated group of companies. In such cases, transporters must obtain a certificate granted by the CNMC qualifying them as managers of the transportation network. This certificate will follow one of the models established in the LH pursuant to EU regulations: a transmission system operator model (TSO) (under which the transporter still has ownership of the assets but specific unbundling obligations have to be implemented); or an independent system operator model (ISO) (where the transporter still has the property but the specific asset is managed by another ISO-certified transporter).

8 Describe the statutory and regulatory framework and any relevant authorisations applicable to the construction, ownership, operation and interconnection of natural gas transportation pipelines, and storage.

Pursuant to the LH and Royal Decree 1434/2002, the construction, enlargement, modification and operation of natural gas transportation facilities are subject to the following authorisations:

- administrative authorisation, to be granted in conjunction with the environmental impact study, which provides the applicant with the right to install a facility subject to certain conditions;
- approval of the execution project implementation plan for the facility, which allows the applicant to carry out its construction; and
- operating authorisation, which allows the applicant, once the project has been constructed, to inject gas in the facilities and to proceed to commercial exploitation and obtain the specific remuneration regime established for transportation activities.

To obtain such authorisations, transporters must also comply with the legal, technical and financial conditions set out in Royal Decree 1434/2002:

- legal capacity: the entity must be a Spanish trading company or a company of another EU member state;
- technical capacity: which will be directly recognised if the company (or one of its shareholders, provided it holds at least 25 per cent of the share capital) has carried out transportation activity during the previous three years; and
- financial capacity: which will be directly recognised if a certain amount of the company's equity is dedicated to the transportation activity (the larger figure of the following: €5,000,000 or 25 per cent of the budget for the facilities to be authorised).

The applicant company must provide a guarantee (2 per cent of the budget of the project).

Administrative authorisations are preferably awarded through public tenders. However, direct awards are also envisaged under certain circumstances (when a facility is considered as a necessity – properly justified and agreed by the relevant authority – and no tender procedure has begun).

The MINETAD is the relevant authority for the award of the authorisations regarding the facilities that belong to the basic natural gas network. The corresponding regional administrative authority awards authorisations for secondary transmission facilities, unless the scope of the facility affects more than one autonomous community, in which case authority again falls to the MINETAD.

As explained in question 5, administrative resolutions may be challenged in an administrative proceeding either before the same administrative authority that granted them or before the relevant superior administrative body. They can subsequently be challenged before the competent court, which may be the Superior Court of Justice of an Autonomous Community, the Supreme Court, or a lower court depending on the specific administrative resolution being challenged.

9 How does a company obtain the land rights to construct a natural gas transportation or storage facility?

According to the provisions of article 102 LH, the holders of the different authorisations and permits have a right to occupy the public domain and any other areas of public easements of access and ways. The relevant public authority will provide the necessary authorisation for such occupation.

Furthermore, article 103 LH establishes that natural gas transportation and storage facilities are declared to be of public utility. Consequently, on private domain lands, transporters may negotiate and reach private agreements with the owners to obtain the corresponding rights and easements. If a private agreement cannot be reached, operators can apply to the administrative authority to obtain such rights by means of a compulsory expropriation process. This procedure aims to establish the price to be paid for such rights over the land (which either party can subsequently challenge in court) and enables operators to obtain the rights before the price is fixed.

10 How is access to the natural gas transportation system and storage facilities arranged? How are tolls and tariffs established?

According to Royal Decree 984/2015, the parties with TPA rights to access the transmission and distribution networks are:

- direct market consumers;
- traders;
- transportation and distribution operators;
- the technical system operator; and
- the corporation for strategic reserves of oil (CORES).

The process for obtaining TPA rights is based on principles of non-discrimination, transparency and objectivity. The process is carried out through a unique telematic platform managed by the technical system operator, in which parties request and contract access to the transportation and distribution networks, entering into a standard model contract approved by the Secretary of Energy of the MINETAD, which cannot be amended by the parties.

The aforementioned platform includes five products that entitle the use of contracted capacity for a certain period of time:

- annual product: during all the days of a year. the annual capacity can be offered, at most, for the next 15 years of gas;
- quarterly product: during all the days of a quarter;
- monthly product: during all the days of a natural month, beginning on the first of each month;
- daily product: during a gas day; and
- intraday product: from the effective time of contracting until the end of the gas day.

The CNMC resolves any discrepancies involving the denial of a request to access the network.

Tolls and tariffs to be paid to the network for the TPA are calculated each year and approved by means of a Ministerial Order of the MINETAD. They are mainly established for the following services: regasification, transportation, distribution, underground storage and LNG storage.

The calculation of the tolls and tariffs follows a criterion such that income from TPA tolls and tariffs is essentially sufficient to cover the regulated remuneration of transporters and distributors: the investment made in transport and distribution facilities is recovered during their lifespan and the tariffs allow for a reasonable return on the investment. Thus calculation of the tolls and tariffs is mainly based on the gas demand forecast, the remuneration of regulated activities and the forecast for the use of regasification, storage and transport and distribution facilities.

There is also a secondary capacity market in which parties that have already obtained capacity through the aforementioned procedure can sell or sublease such contracted capacity to other parties.

As regards balancing, third parties with TPA rights must pay a tariff in case of unbalancing between their entries and exits of natural gas through the gas system. The methodology for establishing this tariff is approved by the CNMC.

11 Can customers, other natural gas suppliers or an authority require a pipeline or storage facilities owner or operator to expand its facilities to accommodate new customers? If so, who bears the costs of interconnection or expansion?

Pursuant to article 4 LH, transport assets considered obligatory for the security of supply are subject to the National Energy Plan approved by the government. In such cases, the MINETAD initiates a public tender. Direct awards can also be made and if no transporter requests the administrative authorisations for the obligatory assets, then the MINETAD can directly request the technical system operator (Enagas) to execute them.

The applicant for expansion authorisations bears the costs of any expansion, which are reflected in the corresponding regulated transporter remuneration.

12 Describe any statutory and regulatory requirements applicable to the processing of natural gas to extract liquids and to prepare it for pipeline transportation.

See questions 5 and 8 (as regards regasification). In addition, once the LNG has been duly regasified in order for it to enter the transportation pipelines it has to fulfil specific technical requirements established in Ministerial Order ITC/3126/2005 approving the technical regulations on the management of the gas system.

13 Describe the contractual regime for transportation and storage.

Transportation and distribution facilities need to obtain the necessary administrative authorisations (see question 8). The conditions for the use and exploitation of such facilities are hence mainly included in the administrative authorisations. Furthermore, the contractual regime to access transportation and storage is regulated through TPAs (see question 10).

Regulation of natural gas distribution

14 Describe in general the ownership of natural gas distribution networks.

The distribution network comprises the distribution of natural gas through the pipeline network to the points of final consumption. It encompasses pipelines whose pressure is \leq to 16 bar as well as any others, regardless of pressure, that conduct the gas to a single consumer.

As for the ownership of the distribution facilities, they are privately held and any market operator can build distribution infrastructures. In this sense, question 7 in relation to transport facilities applies mutatis mutandis to distribution facilities.

However, financial capacity will be directly recognised if a certain amount of the company's equity is dedicated to the distribution activity (the larger figure of €1,000,000 or 25 per cent of the budget for the facilities to be authorised).

15 Describe the statutory and regulatory structure and authorisations required to operate a distribution network. To what extent are gas distribution utilities subject to public service obligations?

Question 8 applies mutatis mutandis to the distribution network.

The relevant authority for the award of the distribution facility administrative authorisations is the competent regional administrative authority, unless the facility affects more than one autonomous community, in which case the MINETAD will be the competent authority.

16 How is access to the natural gas distribution grid organised? Describe any regulation of the prices for distribution services. In which circumstances can a rate or term of service be changed?

Question 10 applies mutatis mutandis to the distribution network.

17 May the regulator require a distributor to expand its system to accommodate new customers? May the regulator require the distributor to limit service to existing customers so that new customers can be served?

Pursuant to the provisions of article 74 LH, the obligations of natural gas distributors include extending the distribution facilities in

the geographical scope of their authorisation to meet new gas supply demand when necessary. Where there are several distributors in a given area and none of them decides to undertake expansions to serve new customers, the administration will determine which of these distributors should take responsibility, taking into account their individual conditions.

18 Describe the contractual regime in relation to natural gas distribution.

See question 13.

Regulation of natural gas sales and trading

19 What is the ownership and organisational structure for the supply and trading of natural gas?

The trading of natural gas in Spain is carried out by suppliers who acquire natural gas from producers or other traders for its sale to consumers or to other traders, or for international transit, and access the facilities of transporters and distributors to vehicle the acquired gas.

Unregulated activities are conducted on the free market; therefore, the market is open to all economic agents and prices can be set freely (with the exception of the tariff of last resort (TUR), as described in question 20).

20 To what extent are natural gas supply and trading activities subject to government oversight?

Any entity wishing to carry out trading activities must be a Spanish trading company or equivalent in its country of origin. It must be able to prove its technical capacity at any time, be able to prove at any time that it can guarantee the supply of natural gas and grant the necessary guarantees to cover its supply undertakings.

Trading may only be carried out by companies that have filed a prior declaration of responsibility with the relevant awarding authority stating that they fulfil the above-mentioned requirements. Prior administrative authorisation is not needed.

Trading companies must have their business activity dedicated to gas trading, not being able to carry out any transportation, regasification, basic storage or distribution activities (see question 7 in relation to unbundling obligations for vertically integrated groups of companies).

If the trading company is not from an EU member state, it will have to obtain prior administrative authorisation to carry out trading activities. However, if the country of origin has agreed the mutual recognition of natural gas trading licences with any EU member state, then it will be deemed to fulfil the conditions to carry out activities in Spain, though it must satisfy the obligation to grant any necessary guarantees.

In addition, traders sell the natural gas at market prices (to direct consumers in the market or those directly accessing third-party gas networks) or, in the case of TUR traders, at regulated prices to TUR customers, for customers meeting the specific requirements of being connected at pressures below 4 bar and having an annual consumption not higher than 50,000kWh/year.

Trading companies are subject to the oversight of the CNMC and also to trading activity regulations implemented by the MINETAD.

21 How are physical and financial trades of natural gas typically completed?

The gas market in Spain operates under a free market regime. The sale of natural gas is completed through bilateral over-the-counter contracts, whose conditions are set exclusively by the intervening parties. To simplify and accelerate negotiations, marketers sign framework agreements, the most common of which are EFET (European Federation of Energy Traders, ISDA (International Swaps and Derivatives Association) and Specific Spanish Master Agreement (designed by Spanish players for the national market). These agreements essentially regulate operational and economic risk, allowing the renegotiation of gas volumes with third parties.

The basic and defining characteristic of the gas market in Spain in previous years was that neither the technical system manager nor third parties outside the agreement knew the purchase price of the gas. The only available information was the volume traded between the contracting parties (declared by the parties on the electronic platform managed by Enagas).

Royal Decree 984/2015 was enacted in October 2015 and created the organised Iberian (Spain and Portugal) gas market (MIBGAS) as a key element to provide greater transparency as regards price-fixing in the sale and purchase of gas, as well as to increase competition in the gas sector and encourage the entry of new traders. The MIBGAS operations began in December 2015 and both number of participants and volumes traded have been steadily increasing since that time.

22 Must wholesale and retail buyers of natural gas purchase a bundled product from a single provider? If not, describe the range of services and products that customers can procure from competing providers.

In general terms, customers contract gas supply from a trader as a bundled product. Therefore, the traders acquire the gas, enter into the necessary TPA contracts and pay the TPA tolls to access the transportation and distribution network.

It should also be noted that direct market consumers (qualified consumers) directly connected to the transportation network may acquire gas without having to engage a trader, and to do so they will directly enter into the TPA agreements.

Regulation of LNG

23 What is the ownership and organisational structure for LNG, including liquefaction and export facilities, and receiving and regasification facilities?

As explained in question 1, the production of natural gas in Spain is very limited, meaning no LNG export facilities are in operation. However, Spain is host to the largest number of regasification plants in Europe.

LNG regasification activities (regasification plants) to supply the transportation network are considered transportation activities.

Furthermore, satellite LNG plants to supply the distribution network are considered distribution facilities.

Therefore, questions 7 and 14 would apply mutatis mutandis to regasification plants and satellite LNG plants.

24 Describe the regulatory framework and any relevant authorisations required to build and operate LNG facilities.

See questions 8 and 15.

25 Describe any regulation of the prices and terms of service in the LNG sector.

See question 10.

Mergers and competition

26 Which government body may prevent or punish anticompetitive or manipulative practices in the natural gas sector?

The CNMC is the public authority in charge of preventing and punishing anticompetitive practices.

27 What substantive standards does that government body apply to determine whether conduct is anticompetitive or manipulative?

Spanish law mainly identifies the following practices as anticompetitive or manipulative:

- concerted practices with the purpose of preventing, restricting or distorting competition in the national market, such as:
 - fixing of price/commercial terms;
 - limits or controls over production, distribution, technical development or investments; and
 - market sharing;
- abuse of a dominant position, including among other actions:
 - imposing unfair prices or commercial terms;
 - limiting production, distribution or technical development to the detriment of consumers or other companies;
 - unjustified refusal to satisfy demand for products or services; and
 - applying in their commercial relationships unequal terms for equal services in commercial relationships, thereby placing some competitors at a comparative disadvantage.

28 What authority does the government body have to preclude or remedy anticompetitive or manipulative practices?

The CNMC is vested with powers to investigate anticompetitive practices, to initiate infringement proceedings and impose the relevant sanctions and remedies.

29 Does any government body have authority to approve or disapprove mergers or other changes in control over businesses in the sector or acquisition of production, transportation or distribution assets?

As regards merger control, under Spanish law a given transaction must be notified to the CNMC where either of the following thresholds is met:

- the combined turnover of the parties to the transaction in Spain is in excess of €240 million and the individual turnover of each of at least two parties to the transaction in Spain is in excess of €60 million; or
- as a result of the transaction the party or parties will acquire a share of 30 per cent or more of the Spanish market or of a market within Spain.

Spanish law establishes a two-stage procedure. The first (with a one-month maximum term) analyses concentrations that do not entail a competition issue. A more detailed analysis is carried out at the second stage, with interested third parties participating in the procedure so that the CNMC can adopt its final resolution for clearance or impose conditions. If the CNMC bans the concentration or makes it conditional on the assumption of certain undertakings, the issue will be referred to the Ministry of Economy and Competitiveness. Within 15 days the Ministry will then refer it to the Spanish Council of Ministers, which will adopt a final resolution within one month.

If the given transaction would have a European Union dimension pursuant to the thresholds established by Council Regulation (EC) no. 139/2004, the CNMC will not be competent to analyse the transaction and a notification before the European Commission will be deemed necessary.

30 In the purchase of a regulated gas utility, are there any restrictions on the inclusion of the purchase cost in the price of services?

Transporters and distributors are subject to the government-approved TPA tolls. In addition, traders supplying services to customers under the TUR may not increase the cost of such services.

31 Are there any restrictions on the acquisition of shares in gas utilities? Do any corporate governance regulations or rules regarding the transfer of assets apply to gas utilities?

The Ninth Additional Provision of Law 3/2013 (NAP) establishes the obligation to notify the MINETAD upon either of the following events:

- acquisition by companies that carry out regulated activities (such as transport or distribution of natural gas) in other companies or assets, which may have a significant impact on the development of the activities of the transport or distribution companies due to their value or other circumstances. Such acquisition could be made directly or indirectly, in the latter case through other companies controlled by the regulated companies; and
- acquisition of shares of transport or distribution companies, or of shares of companies that carry out such regulated activities indirectly, through companies under their control.

In addition, if the transaction implies a real and sufficiently serious threat to the guaranteed supply of gas and hydrocarbons within the scope of the companies with regulated activities, conditions related to the exercise of such activities may be imposed.

The CNMC has temporarily taken responsibility for this function of the MINETAD until the latter creates the relevant body to assume it. The notification period for acquisitions is within 15 working days of the acquisition taking place.

On the other hand, article 34 of Royal Decree Law 6/2000 establishes limits on the holding of stakes in the main operators (production and supply) of the gas system. The CNMC publishes an annual resolution establishing the main operators. If a shareholder holds stakes, directly or indirectly, in two or more gas main operators, limits as to voting rights and appointment of directors in such operators will apply.

In addition, RD 1434/2002 establishes the need for previous authorisation for the direct transfer of transmission and distribution assets.

International**32 Are there any special requirements or limitations on foreign companies acquiring interests in any part of the natural gas sector?**

Pursuant to the NAP, when the acquisition is carried out by entities of states that are not members of the European Union or the European Economic Area, if it considers that there is a real and sufficiently serious threat to the guaranteed supply of gas and hydrocarbons within the scope of the acquirer's activities, the MINETAD may establish conditions relating to the exercise of the activity of the companies subject to the transaction, as well as certain specific obligations that may be imposed on the acquirer to ensure compliance with competition laws.

33 To what extent is regulatory policy affected by treaties or other multinational agreements?

As Spain is an EU member state, Spanish regulatory policies on gas have to be developed and implemented in accordance with EU Directives relating to the energy sector. Spain is also affected by the Energy Charter Treaty.

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34 What rules apply to cross-border sales or deliveries of natural gas?

No specific requirements apply to international sales of natural gas. However, access to the capacity of the international transport pipeline interconnections in Europe is regulated at an EU level: European Commission Regulation 984/2013 of 14 October establishes a network code on capacity allocation mechanisms in gas transmission systems, supplementing Regulation (EC) No 715/2009 of the European Parliament and of the Council on conditions for access to natural gas transmission networks.

Both European regulations have been transposed in Spain by the CNMC in Circular (letter) 1/2014, establishing capacity allocation mechanisms to be applied at international gas pipeline connections with Europe, and Circular (letter) 1/2013 establishing congestion management mechanisms to be applied at international gas pipeline connections with Europe. The PRISMA European Capacity Platform GmbH is the electronic platform that is primarily used to allocate capacity at interconnection points between EU member states.

Transactions between affiliates**35 What restrictions exist on transactions between a natural gas utility and its affiliates?**

As explained, companies carrying out transportation and distribution activities are required to have such activity as their exclusive corporate purpose, and a group of companies carrying transport or distribution activities cannot carry out generation or trading activities either directly or through companies within their group of companies, unless they fulfil several unbundling obligations established in the LH (keep separate accounting for each activity, maintain different management for each activity, keep commercially sensitive information secret from other companies within the group, establish a group code of conduct to fulfil unbundling obligations, and so on).

36 Who enforces the affiliate restrictions and what are the sanctions for non-compliance?

The MINETAD, relevant authorities of the autonomous communities and the CNMC enforce restrictions and may impose sanctions for any infringement, each of them within the scope of their respective competences. Sanctions can include not only fines but also revocation of authorisations or disqualifications to carry out the activity.

Sweden

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Description of domestic sector

- 1 Describe the domestic natural gas sector, including the natural gas production, liquefied natural gas (LNG) storage, pipeline transportation, distribution, commodity sales and trading segments and retail sales and usage.**

Natural gas was first introduced in Sweden 1985 and represents a relatively small part of Sweden's total use of energy. Sweden's need for natural gas is nearly exclusively met by import from Denmark.

The interconnected Swedish natural gas network (the Gas Network) is located in south western Sweden. It starts in Trelleborg in the south, continues along the west coast and ends in Stenungsund, north of Gothenburg. Out of 290 municipalities in Sweden around 30 have access to the Gas Network. The Gas Network is connected to Denmark through a pipeline that goes from Dragør in Denmark to Klagshamn in southern Sweden. The Gas Network consists of a 620km transmission pipeline and 2,720km of distribution pipelines. The Gas Network is divided into four operational areas: transmission, distribution, gasification and storage. Sweden has only one storage facility.

The transmission pipeline between Klagshamn and Gothenburg has an annual capacity of transporting natural gas up to 22TWh. However, by increasing the working pressure, the capacity can be further increased to 30TWh annually. The pressure is then reduced in metering and regulation stations before the gas is delivered to the consumers, either directly or through the distribution networks. The distribution pipelines are owned and operated by E.ON Gas Sverige AB, Göteborg Energi Gasnät AB, Kraftringen Nät AB, Varberg Energi AB and Öresundskraft AB.

In 2012, the company Swedegas AB was certified as transmission system operator (TSO) and one year later Swedegas was appointed by the government as system balance administrator for the Gas Network. Thus, Swedegas not only handles operation and maintenance of the transmission pipelines, but also takes on responsibility for maintaining short-term balance between natural gas input and outflow. In order to maintain the short-term balance in the Gas Network, Swedegas has contracts for balancing responsibility with suppliers of natural gas as balance administrators. The methods used to design the contracts must be approved by the Swedish Energy Market Inspectorate (EI) before being put into use. Such suppliers are financially responsible in relation to Swedegas for ensuring that the end-users' consumption is equivalent to the supply. Balancing is carried out on a daily basis.

In addition to the Gas Network, a city gas network exists in Stockholm. This city network is physically separated from the Gas Network and is not connected to any national or international transmission pipeline. Instead, the network is supplied to a wide extent with LNG. From 1 January 2015, the city gas network in Stockholm is legally treated in the same way as the Gas Network by also being governed by the Swedish Natural Gas Act (2005:403) (the Natural Gas Act). Gasnätet Stockholm AB, a company within the Finnish Fortum Group, owns and operates the network. Today there are two LNG terminals in use in Sweden with a combined volume of around 50,000 cubic metres. The terminals are granted the right to handle LNG gas equivalent to 11.1TWh per year in total.

- 2 What percentage of the country's energy needs is met directly or indirectly with natural gas and LNG? What percentage of the country's natural gas needs is met through domestic production and imported production?**

Since 2010, the total use of natural gas in Sweden has decreased from 18.7TWh to 10.4TWh in 2015, or only around 2 per cent of the total energy use in Sweden. The reduction has been a consequence of an increased use of forms of energy other than natural gas, warm weather and low electricity prices.

However, in the municipalities connected to the Gas Network, natural gas accounts for approximately 20 per cent of the energy usage, an amount equivalent to the usage in the rest of Europe.

Sweden does not produce any natural gas of its own, but approximately 2.4 per cent (2014) of the gas in the Gas Network consists of domestically produced biogas. Biogas production as such, as well as the amount of biogas fed into the gas network, is continuously increasing and there is a long-term political ambition to completely replace natural gas with biogas. There are currently nine biogas producers linked to the west Sweden natural gas system, of which two are connected so as to allow input in the transmission network. A further two biogas producers are connected to Gasnätet Stockholm AB's network. The total amount of biogas produced in Sweden was 1,784GWh (2014).

Government policy

- 3 What is the government's policy for the domestic natural gas sector and which bodies set it?**

Generally, Swedish policies are affected by Sweden's EU membership and the precedence of EU legislation before Swedish national law. However, the government has pronounced that Sweden shall show leadership to meet the climate challenge internationally as well as on a national level. The aim is to decrease rapidly Sweden's dependence on fossil fuels, for example, natural gas, and reduce negative impacts on the climate. The Swedish government strives towards the aim of not having any net emissions of greenhouse gases in the atmosphere by 2050. No subsidies shall promote the development of the natural gas sector.

Regulation of natural gas production

- 4 What is the ownership and organisational structure for production of natural gas (other than LNG)? How does the government derive value from natural gas production?**

There is no commercial production of natural gas in Sweden.

- 5 Describe the statutory and regulatory framework and any relevant authorisations applicable to natural gas exploration and production.**

Natural gas is a gaseous hydrocarbon. Hence, natural gas is subject to the Swedish Minerals Act (1991:45), which applies to exploration and exploitation of deposits situated on a person's own land or on land belonging to another person. Exploration may be performed only by those who have exploration permits and exploitation only by those who have a mining concession. In this regard the Minerals Act imposes specific requirements on access to technical expertise and financial resources for those wishing to explore and extract gas deposits. Further, the Swedish Minerals Act sets out that activities covered by its scope will

be subject to continuous supervision by the Chief Mining Inspector. On top of the provisions set out in the Minerals Act, most of the exploring and extraction activities must comply with the Swedish Environmental Code (1998:808).

On 27 January 2012 the European Commission published a study on the licensing and permitting procedures for shale gas projects, in which lawyers at Ramberg Advokater provided information regarding the Swedish market.

In Sweden, the potential of shale gas is deemed to be very small compared with other European countries such as Poland, in particular regarding so-called deep shale gas. Conducted analyses of shales in southern Sweden have shown that the organic material is overripe, namely, the shale contains no recoverable gas. The Mining Inspectorate of Sweden is the main authority with the responsibility to review applications on exploration permits and mining concessions.

Several concessions have been issued regarding shale gas, mainly in the counties of Östergötland and Öland.

6 Are participants required to provide security or any guarantees to be issued with a licence to explore for or to store gas?

Exploration permits in accordance with the Minerals Act are conditional on the permit holder providing security for compensation that shall be paid by the permit holder for damage or encroachment resulting from exploration work.

A concession in accordance with the Natural Gas Act may, in order to be valid, be made dependent on the party holding the concession providing security for the costs of removing the pipeline or storage facility and for other restorative measures.

Regulation of natural gas pipeline transportation and storage

7 Describe in general the ownership of natural gas pipeline transportation, and storage infrastructure.

Swedegas owns the Swedish high pressure transmission pipelines as well as the only natural gas storage facility.

8 Describe the statutory and regulatory framework and any relevant authorisations applicable to the construction, ownership, operation and interconnection of natural gas transportation pipelines, and storage.

The legal framework for the natural gas sector consists of the Natural Gas Act (implementing the third EC Gas Directive 2009/73/EC), as well as several other acts that are particularly applicable during the construction process. An authorisation (concession) from the Swedish government is required to construct or to operate a natural gas pipeline or storage. However, concession is not needed for pipelines located after a metering and regulation station (ie, distribution pipelines). Concession may only be granted if the pipeline or storage is suitable from the public perspective, and it is normally granted for a period of 40 years. A concession may only be granted to an applicant who is, from a public perspective, suitable to exercise the activities covered by the concession. In this regard, essential conditions are the applicant's ability to demonstrate sufficient relevant skill level and financial capacity.

A concession may not be in conflict with a local plan or area regulations, announced in accordance with the Planning and Building Act (2010:900). The concession application must contain an environmental impact assessment in accordance with the requirements set out in the Environmental Code.

9 How does a company obtain the land rights to construct a natural gas transportation or storage facility?

To obtain the land rights after having been granted a concession (see question 8), a company may apply for a utility easement, which could be agreement-based or official. Utility easements are regulated by the Utility Easements Act (1973:1144). A utility easement entails the right for the owner of a pipeline to use, without restriction in time, a real property in a specific way, and is registered in the Real Property Register. To secure land rights regarding storage facilities, the developer will need to reach an agreement with the landowner.

10 How is access to the natural gas transportation system and storage facilities arranged? How are tolls and tariffs established?

The holder of a natural gas pipeline is, upon request, obliged to connect, on reasonable terms, other natural gas pipelines, storage facilities and gasification facilities. The term 'holder' includes both the owner and the usufructuary. The obligation concerns holders of both transmission pipelines as well as distribution pipelines. This obligation does not apply if the pipeline lacks the necessary capacity. The natural gas pipeline must physically, in addition to existing transport of gas, be able to cope with the increased transmission resulting from the new connection. In this respect it must be assessed not only the additional amount of gas to be transferred but also the period of time during which the transfer of gas shall take place.

Further, the obligation to connect others does not apply if a pipeline is used exclusively by its holder or if a connection cannot be granted for another particular reason, for example, if the natural gas pipeline to be connected does not have a non-compatible technical design.

Connection to a natural gas pipeline shall be granted on reasonable terms. The methods for designing agreements for connections to various types of natural gas facilities must be approved by EI before being put into use.

A party who is already connected to a pipeline can request the capacity of his or her connection to be changed or that the transfer shall take place during a different time than agreed. In such a situation, the holder of the main pipeline shall make a renewed capacity assessment.

The obligation to provide its services to others applies also in relation to:

- holders of storage facilities;
- transmission pipelines for storage; and
- a gasification facility connected to the Swedish natural gas system.

In its role as holder of the transmission pipeline in Sweden, Swedegas provides distribution pipeline holders and natural gas users connected to the transmission pipe line, contracts for transportation of natural gas. As the storage holder, Swedegas provides balance administrators contracts for the storage of gas.

According to the Natural Gas Act, prices and charges for connection, transport and storage services must be reasonable, objective and non-discriminatory. Holders of such facilities must request a revenue framework for a four-year period from EI. EI will then take a decision upon the proposed revenue framework. The revenue framework applies to the natural gas company's revenues from transmission, storage of natural gas and from access to a gasification plant.

In addition, such companies are obliged, according to the Natural Gas Act, to draw up, in the form of an annual report, separate financial accounts for their transmission, distribution, storage and gasification activities. The annual report must have reached EI within seven months of the end of the financial year. This forms the basis of further supervision by EI.

11 Can customers, other natural gas suppliers or an authority require a pipeline or storage facilities owner or operator to expand its facilities to accommodate new customers? If so, who bears the costs of interconnection or expansion?

In the Government Bill 2004/05:62 implementing the Directive 2003/55/EG, the legislature drew attention to the possibility of establishing minimum requirements for a system operator regarding maintenance and expansion of the operators' transmission and distribution system. However, the legislature found that sufficient reasons for such laws did not exist and, hence, did not introduce any such rules.

12 Describe any statutory and regulatory requirements applicable to the processing of natural gas to extract liquids and to prepare it for pipeline transportation.

The Natural Gas Act is applicable also to activities relating to processing of natural gas. In addition, all such activities may be subject to requirements set out in, for example, the Environmental Code (1998:808). There is no specific regulation that applies solely for processing of natural gas.

13 Describe the contractual regime for transportation and storage.

An operator of transmission of natural gas or a holder of a natural gas storage is obliged to publish its tariffs on a relevant website. All conditions applicable to the transmission of gas in the Swedish high pressure grid and gas storage are set out in Swedegas' general terms and conditions on transmission and storage, respectively, which are both to be found on Swedegas' website.

Regulation of natural gas distribution**14 Describe in general the ownership of natural gas distribution networks.**

Several distribution networks are connected to the transmission network. Distribution networks are owned individually by different holders. The market in Sweden is dominated by a few players, which in most cases are engaged both in distribution pipe line operations as well as gas supply, although conducted by different companies. As for 2015, there are seven distribution network holders in the Swedish market offering distribution services to all customers connected to their respective networks. Holders of gas distribution networks that have received a revenue framework decision by EI for the period 2015-2018 are E.ON Gas Sverige AB, Göteborg Energi Gasnät AB, Krafringen Nät AB, Gasnätet Stockholm AB, Varberg Energi AB and Öresundskraft AB.

15 Describe the statutory and regulatory structure and authorisations required to operate a distribution network. To what extent are gas distribution utilities subject to public service obligations?

See question 10. Gas distribution utilities are not subject to public service obligations.

16 How is access to the natural gas distribution grid organised? Describe any regulation of the prices for distribution services. In which circumstances can a rate or term of service be changed?

See question 10.

17 May the regulator require a distributor to expand its system to accommodate new customers? May the regulator require the distributor to limit service to existing customers so that new customers can be served?

See question 11.

18 Describe the contractual regime in relation to natural gas distribution.

The holder of a distribution network has transport service contracts with the customers connected to its pipelines. The charges on end customers must be reasonable, objective and non-discriminatory (see question 10). The Swedish Gas Association (SGA) has prepared general terms and conditions for connection and distribution, which are widely used.

Regulation of natural gas sales and trading**19 What is the ownership and organisational structure for the supply and trading of natural gas?**

The market for supply of natural gas is open and subject to competition. Gas suppliers active on the Swedish market are, for example, E.ON Försäljning Sverige AB, DONG Energy AB, Göteborg Energi AB, Varberg Energimarknad AB and Öresundskraft Marknad AB.

The SGA has also prepared general terms and conditions for the supply of natural gas.

20 To what extent are natural gas supply and trading activities subject to government oversight?

Although the retail market for natural gas in Sweden is fully exposed to market competition, EI continually monitors the function of the market as a result of its regulatory role as stipulated by the Natural Gas Act. Further, EI monitors and analyses the development of the natural gas market and submits proposals for changes in regulations or other measures to improve the function of the market. EI must also promote effective competition in the natural gas market.

Regarding private consumers, the SGA and the Swedish Consumer Agency have entered into an agreement obligating the Swedish gas companies to include certain provisions on customer protection in their general terms and conditions.

Regarding the function of the competition on the supply market of natural gas, the Swedish Competition Authority has a general duty of supervision and inspections in order to prevent any irregularities.

21 How are physical and financial trades of natural gas typically completed?

The gas suppliers and wholesalers on the Swedish natural gas market imports gas from a gas producer or other gas traders mainly by bilateral agreements, and then sell the gas to the gas users in Sweden. There is no form of price regulation; the price is set as an agreement between the supplier and the user and it is not public unless the parties decide to publish it.

Natural gas from Denmark can be traded on the Danish gas exchange, Gaspoint Nordic. Gaspoint Nordic organises the physical trade of natural gas. The exchange is a marketplace for producers, natural gas suppliers, energy companies and larger consumers. As of January 2015 Energinet.dk and the European Energy Exchange, EEX, share joint ownership of Gaspoint Nordic.

Owing to the implementation of Council Directive 2004/39/EC on Markets in Financial Instruments (MiFID) as of 1 November 2007, the definition of 'financial instruments' under the Swedish Securities Markets Act was extended. If contracts traded are entered into for speculative purposes they could be deemed to be 'financial instruments' under the Securities Markets Act, even though they are physically settled. The definition of 'financial instruments' would, eg, also cover derivatives that are traded on a bilateral basis for speculative purposes. Trade in such financial instruments will require a licence from the Swedish Financial Supervisory Authority under the Securities Markets Act.

22 Must wholesale and retail buyers of natural gas purchase a bundled product from a single provider? If not, describe the range of services and products that customers can procure from competing providers.

No. As described above, the gas customer has to have two contracts, one with the holder of the pipeline to which the customer's facility is connected on transport and one with a gas supplier on the commodity. A supplier is not allowed to enter into transport agreements.

Regulation of LNG**23 What is the ownership and organisational structure for LNG, including liquefaction and export facilities, and receiving and regasification facilities?**

At present, there are two operative LNG facilities in Sweden, and neither of them are connected to the gas network. The first Swedish LNG terminal was put into operation in 2011, and is located in Nynäshamn, 58km south of Stockholm. The Nynäshamn terminal is owned by the company AGA AB, which forms part of the German Linde Group. The deliveries of LNG to the Nynäshamn terminal are received from production facilities and terminals in northern Europe. The Nynäshamn terminal is a transit storage for LNG, which is further transported to the customers either by trucks or the pipe to the Nynas AB's refinery close to the terminal. The second LNG terminal was put into operation in 2014 and is located in Lysekil, on the west coast of Sweden, next to one of the fuel company Preem's refineries. The Lysekil terminal mainly delivers LNG to the Preem refinery, but also distributes LNG by trucks to other customers on the Swedish market, for example, the steel company SSAB. The Lysekil terminal is owned by Skangas Terminal AB, a company within the Finnish Gasum Corporation.

Swedegas, in collaboration with Gothenburg harbour, is planning to build an LNG terminal in Gothenburg, at the present the only PCI project for gas in Sweden, but the project seems to be delayed. Swedegas is also planning to build an LNG terminal in Norrsundet, 200km north of Stockholm, with a connected pipeline aimed at different end users, such as Ovako, a steel company in Hofors. This project competes with a Skangas project for a LNG terminal in nearby Gävle.

24 Describe the regulatory framework and any relevant authorisations required to build and operate LNG facilities.

To build and operate an LNG facility requires several authorisations. Construction and operation of an LNG terminal is regarded as an environmentally hazardous activity and, thus, a specific environmental permission is required, according to the Environmental Code. An LNG facility is also subject to the regulations of Ordinance (1999:382) for the Prevention and Limitation of the Consequences of Serious Chemical Accidents. Further, permissions according to the Inflammable and Explosive Goods Act (2010:1011) and to the Planning and Building Act (2010:900) are needed for the facility. If the facility is connected to a gas network, a concession, is required, on the same conditions as for pipelines and storage facilities, see further question 8.

25 Describe any regulation of the prices and terms of service in the LNG sector.

Facilities for gasification of LNG are subject to the Natural Gas Act only if they are connected to a pipe line used for transfer of gas. If so, price and terms of services must be reasonable, objective and non-discriminatory. Gasnätet Stockholm AB has received a revenue framework decision by EI for the period 2015–2018 for its gasification activities.

Mergers and competition

26 Which government body may prevent or punish anticompetitive or manipulative practices in the natural gas sector?

According to the Natural Gas Act, EI shall ensure that the regulations in the Act are observed. Also, anticompetitive or manipulative practices may be prevented or punished by the Swedish Competition Authority.

27 What substantive standards does that government body apply to determine whether conduct is anticompetitive or manipulative?

EI monitors that new actors may be granted access to existing transmission and distribution networks on reasonable terms and that charges and prices are reasonable, objective and non-discriminatory.

The substantive standards applied by the Swedish Competition Authority are found in the Swedish Competition Act that is an implementation of the competition laws of the European Union.

28 What authority does the government body have to preclude or remedy anticompetitive or manipulative practices?

EI may, according to the Natural Gas Act, issue such enforcement orders and request such information as are required in order to ensure compliance with the regulations and provisions that are covered by its role as regulator. An enforcement order may be associated with a fine, which may amount up to 10 per cent of a company's turnover.

Also, anticompetitive or manipulative practices contrary to the Swedish Competition Act may be penalised by the Swedish Competition Authority. Sanctions include administrative fines, orders imposing obligations (backed up by default fines), nullity and damages. A trading prohibition may also be imposed on a person who exercises management control over an undertaking.

29 Does any government body have authority to approve or disapprove mergers or other changes in control over businesses in the sector or acquisition of production, transportation or distribution assets?

Since there are concession requirements for natural gas transmission, storage and gasification, EI will, to some extent, indirectly control questions regarding mergers, acquisition or other changes in control. Also, mergers or other changes in control, which are subject to the requirement of notification under the Swedish Competition Act, must be granted by the Swedish Competition Authority.

30 In the purchase of a regulated gas utility, are there any restrictions on the inclusion of the purchase cost in the price of services?

Regarding the constraints in terms of pricing of services, see question 10.

Update and trends

In 2015, the Swedish government commissioned EI to follow the work of the EU regarding gas quality and to propose technical rules. One part of the commission involved EI following the ongoing work within the EU concerning gas quality. The other part of the commission involved proposing rules for greater transparency by means of requirements to disclose technical rules for network connection when connecting facilities for gas from renewable energy sources. The result of the commission was presented in 2016 in the report *Conditions for biogas in the natural gas network*. In the report, EI proposes a number of amendments to the Natural Gas Act in order to increase transparency for gas market participants. The proposals are a consequence of new regulatory frameworks within the EU regarding natural gas. Among other things, EI proposes an amendment to the law that will also give biogas production facilities the right to be connected to a natural gas pipeline. As a result of this, there is also an explanation of what is meant by a production facility. EI also proposes that gas network companies disclose technical conditions for connecting the input of gas. With gas network companies having an obligation to place demands on the quality that is fed into the pipeline network, EI finds it natural for the pipeline owner also to have responsibility for the quality that is transported in the network, and therefore proposes that the owner of a natural gas pipeline is required to transmit natural gas of good quality on reasonable terms. Responsibility for the good quality of gas has not previously been imposed on either the pipeline owner or any other actor.

31 Are there any restrictions on the acquisition of shares in gas utilities? Do any corporate governance regulations or rules regarding the transfer of assets apply to gas utilities?

With the aim of preventing cross-subsidisation, the Natural Gas Act sets out a requirement that gas network companies and gas supply companies are functionally unbundled. For instance, this means that operations must be kept separate for the purposes of accounting. This also means that a company that transmits, stores or gasifies natural gas may not conduct trade in natural gas within the same company. Further, board members, managing directors or authorised signatories in a company that is a holder of a natural gas pipeline may not occupy any of these roles in a company that trades in natural gas. However, please note that there is no Swedish legislation forbidding a gas network company from being part of a group of companies that also conducts production of or trade in natural gas. Also, all companies that are involved in transmission, storage or gasification of natural gas must produce a supervision plan in accordance with requirements set out in the Natural Gas Act. The companies must also publish an annual report that provides an account of the measures they have implemented according to the plan. The aim of the requirement of this monitoring plan is to ensure that a company acts objectively and does not improperly favour any particular market actor. In this regard, the monitoring plan must include a statement of the measures that will be taken by the company in order to prevent discriminatory behaviour against other actors in the market.

Given that the requirements mentioned are followed, an ownership of a company having a concession may freely change without a reassessment of the concession being necessary. However, please note that a concession may be revoked, in whole or in part, if the concessionaire to a significant extent is not fulfilling its obligations under the Natural Gas Act, other applicable regulations issued under the act, the terms of the concession or other safety regulations that apply to the management or operation of the facility.

International

32 Are there any special requirements or limitations on foreign companies acquiring interests in any part of the natural gas sector?

No.

33 To what extent is regulatory policy affected by treaties or other multinational agreements?

As a member of the European Union, the laws of Sweden are largely affected and influenced by EU legislation. Also, Sweden's regulatory

policy is partly developed through several cooperations on an international level.

34 What rules apply to cross-border sales or deliveries of natural gas?

There is no Swedish law specifically regulating cross-border sales of natural gas.

Transactions between affiliates

35 What restrictions exist on transactions between a natural gas utility and its affiliates?

In addition to the regulations regarding unbundling in articles 9 and 26 in Directive 2009/73/EC, general restrictions on transactions between a parent company and its subsidiaries according to the Companies Act (2005:551) apply.

36 Who enforces the affiliate restrictions and what are the sanctions for non-compliance?

Apart from what has been stated in questions 26 and 31, transactions that do not comply with, for example, the Companies Act, may be sanctioned by various authorities, for example, the Swedish Tax Agency.

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Thailand

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Description of domestic sector

1 Describe the domestic natural gas sector, including the natural gas production, liquefied natural gas (LNG) storage, pipeline transportation, distribution, commodity sales and trading segments and retail sales and usage.

The following is an overview of the natural gas sector in Thailand regarding 2016 gas production, distribution, import and sales.

In 2016 (calculations based on 11-month totals from statistics from January to November), Thailand imported 148.8kboe/d (thousand barrels of oil equivalent per day) of natural gas from Yadana, Yetagun and Zawtika in Myanmar and 69.6kboe/d of LNG, and procured 612.6kboe/d from domestic resources (including the Malaysia-Thailand Joint Development Area (MTJDA)), totalling 830.9kboe/d of natural gas. In August 2014, Thailand started to receive delivery of natural gas from Zawtika in Myanmar.

Thailand is a net importer of both oil and gas. Given the current petroleum resource base and demand profile, Thailand will remain a net importer of hydrocarbons for the foreseeable future.

The major domestic gas resources of Thailand include the Arthit, Baanpot, Benchamas, Bongkot, Erawan, Funan, Jakrawan, Maliwan, Nampong, Pailin, Satun, Siphuhorm, Sirikit, South Satun, Surat, Tantawan and Yala fields. Natural gas production from the MTJDA commenced at the end of 2007.

Gas is produced principally by PTT Exploration and Production Public Company Limited, Chevron, ExxonMobil and Hess.

PTT Public Company Limited (PTT) is, with only a few exceptions, the purchaser of all natural gas, which is sold under gas sales agreements (GSAs) to power, petrochemical and other industrial users. There are no retail sales of natural gas other than natural gas vehicles.

Thailand completed construction and officially began commercial operations of Thailand's first LNG-receiving terminal on 6 September 2011 in Map Ta Phut industrial estate. PTT LNG has adopted an expansion programme of the LNG plant to be completed by the second quarter of 2017. The facility can currently offtake and unload up to 5 million tonnes of LNG a year (700mmcf/d) and consists of two 160,000 cubic metre LNG storage tanks and a port for LNG vessels from 125,000 to 264,000 cubic metres. Expansion plans to add a second five-million tonne unit will bring the capacity of the receiving terminal to 10 million tonnes of LNG a year (1,400mmcf/d). In 2016, Thailand imported (calculations based on 11-month totals) 70kboe/d of LNG.

In December 2012, PTT signed a long-term contract with Qatargas for 2 million tonnes of LNG annually for 20 years starting in 2015.

2 What percentage of the country's energy needs is met directly or indirectly with natural gas and LNG? What percentage of the country's natural gas needs is met through domestic production and imported production?

Throughout the first 11 months of 2016, 63 per cent of Thailand's electricity generation was fuelled by natural gas.

Thailand's natural gas needs in 2016 were met as follows: 74 per cent through domestic production (including the MTJDA), 18 per cent through gas imported from Myanmar and 8 per cent LNG imports.

The Petroleum Institute of Thailand (PTIT) is the best source of statistics on the petroleum and petrochemical business. It collects information from concerned government departments, including the

Department of Mineral Fuels (DMF), the Department of Alternative Energy Development and Efficiency (DEDE), PTT, the Department of Energy Business, the Customs Department and the Energy Policy and Planning Office.

PTIT was established in 1985 to operate as a non-profit foundation with support from the government and the academic and private sectors. Some of PTIT's publications include:

- *PTIT Focus*, published monthly with one additional annual issue;
- *Thailand's Petroleum Exploration and Production Fact Book*;
- *Thailand Petroleum and Petrochemical Complex Capacity*;
- *Petrochemical Products Classification*;
- *Petroleum Encyclopaedia*;
- *Petrochemicals Encyclopaedia*; and
- a variety of codes of practice.

The PTIT website address is www.ptit.org.

Government policy

3 What is the government's policy for the domestic natural gas sector and which bodies set it?

The Ministry of Energy establishes policies and plans in relation to the energy sector. Its aims are as follows:

- to enhance energy security and ensure sufficient and reliable energy supply;
- to supervise market-based pricing structures that reflect the true cost and promote competition;
- to promote renewable and alternative energy;
- to promote energy saving and energy efficiency; and
- to promote and set mandates on clean energy by alleviating the impact on the environment, promoting public and private participation, and by setting up clean development mechanism projects.

The Energy Regulatory Commission was established under the Energy Industry Act, BE 2550 (2007) (EIA). Two departments in the Ministry of Energy also play a role in implementing policy: the DMF and the DEDE.

The government is actively promoting alternative energy projects, has completed an LNG terminal and approved a 15-year alternative energy plan in January 2009. A 10-year alternative energy plan was approved in November 2011.

Regulation of natural gas production

4 What is the ownership and organisational structure for production of natural gas (other than LNG)? How does the government derive value from natural gas production?

Under the Petroleum Act, BE 2514 (1971), as amended (PA), petroleum belongs to the state. No person may explore for or produce petroleum in any area, whether such area is owned by such person or other persons, except by virtue of a concession.

However, petroleum produced by the concessionaire belongs to the concessionaire. The concessionaire has the right to sell and dispose of the petroleum that it produces.

The concessionaire must be a company. However, it may be 100 per cent foreign-owned.

Gas separation, distribution and trading are subject to ceilings on foreign ownership under the Foreign Business Operations Act, BE 2542 (1999) (FBOA), the Land Code and other laws.

The government benefits from gas production by receiving royalty and income tax, and maintaining a sufficient and reliable supply of gas for power plants, industrial plants and petrochemical complexes.

Expansion of investment in the petrochemical complex was in a period of uncertainty in 2010 as a result of an injunction filed by the Association for Global Warming Prevention and 42 individuals against eight government agencies for not complying with section 67 of the 2007 Constitution, in which 76 projects in Map Ta Phut were alleged to have failed to comply with the environmental assessment and community consultation requirements under the constitution.

As a result of those proceedings, the cabinet imposed measures to increase scrutiny of projects that it identifies as severe in terms of non-compliance. The court decision in September 2010 determined that most projects were not classified as severe and would not have to face more stringent scrutiny.

5 Describe the statutory and regulatory framework and any relevant authorisations applicable to natural gas exploration and production.

The PA governs the exploration and production of petroleum (natural gas and oil). It is administered by the DMF, formerly under the Ministry of Industry and, since 2002, under the Ministry of Energy. The lease of petroleum rights is by way of petroleum concessions.

In 2007, the PA was amended by Petroleum Act No. 6. Four ministerial regulations under the PA and a revised form of petroleum concession were published in 2012.

Thai practice in granting petroleum concessions (for oil and gas exploration and production) is to award them only following publication of an international invitation, usually on at least 45 days' notice. Applications are evaluated on a points system by the Petroleum Committee, which forwards its recommendations to the cabinet for approval.

Most concession terms and conditions are prescribed in the act and its regulations. The standard concession form was initially set out in 1972 in Regulation No. 4, which includes only 18 sections. In 1989, a new concession form was prescribed in Regulation No. 17. A new concession form was also prescribed in 2012. In practice, concession applicants are rarely permitted to negotiate changes in its standard terms.

The Petroleum Income Tax Act, BE 2514 (1971), as amended, (PITA) prescribes a special income tax regime for exploration and production companies.

The Ministry of Energy determines regulatory policies governing the production, transmission, distribution and supply of natural gas, based on advice and recommendations of the Petroleum Committee and the DMF. The Energy Regulatory Commission has a role in policies governing transmission, distribution and supply of natural gas. The Energy Regulatory Commission has also announced a 20-year (2011–2030) Energy Efficiency Development Plan, which will eventually require large-scale businesses in the natural gas industry to implement energy conservation promotion measures to encourage customers to reduce energy use by specified minimum standards, as opposed to voluntarily engaging in such activities, as has been the previous practice. See also question 8.

6 Are participants required to provide security or any guarantees to be issued with a licence to explore for or to store gas?

Petroleum concessionaires are required to post both parent company guarantees and bank guarantees to secure their work obligations. The mandatory requirement to provide bank guarantees was introduced in the announcement of the 21st bid round on 21 October 2014. The deadline for submission of bids was 8 February 2015. Bids must include bid security of 3 million baht per block, and a letter of intent to place a performance bond to secure expenditure obligations and physical work obligations. The 21st bid round was suspended, and finally cancelled.

Regulation of natural gas pipeline transportation and storage

7 Describe in general the ownership of natural gas pipeline transportation, and storage infrastructure.

PTT has a monopoly on the natural gas pipeline business, and owns the natural gas pipeline system. PTT is a public limited company that is majority-owned by the Ministry of Finance. There are a few private pipelines for the transportation of oil products.

A number of government bodies are concerned with the transportation of petroleum (oil and gas), which may be divided into the following categories:

- marine transport: the Water Transport and Merchant Marine Department and the Ministry of Transport and Communications;
- railway transport: State Railways of Thailand; and
- tanker truck transport: the Department of Land Transport and the Ministry of Transport and Communications.

8 Describe the statutory and regulatory framework and any relevant authorisations applicable to the construction, ownership, operation and interconnection of natural gas transportation pipelines, and storage.

Under the EIA the Energy Regulatory Commission is empowered to regulate, inter alia, the following:

- location and surrounding conditions of an energy business facility;
- technical, engineering and safety standards;
- standards and quality of the service provisions;
- tariffs;
- efficiency of energy and resource utilisation;
- efficiency of energy business operations and service provisions;
- categories and types of fuel, including requirements for the use of renewable energy;
- processes and technologies used in energy industry operations;
- protection against and solutions to energy shortages;
- competition in energy industry operations and prevention of abusive use of monopoly power;
- shareholding structure and relationship with other energy-related business operators;
- opinion-hearing process and public relations to raise the understanding of the general public and stakeholders;
- environmental standards;
- measures to alleviate community and environmental impact in the vicinity of energy business facilities; and
- comprehensiveness and completeness of reports to the commission.

Sections 100 and 119 to 121 of the act provide for settlement of disputes by the Regional Energy Consumer Committee (in the case of complaints by energy consumers), or otherwise in accordance with regulations prescribed by the Commission. Decisions of the commission on appeal are treated as final.

9 How does a company obtain the land rights to construct a natural gas transportation or storage facility?

Under the EIA, when it is necessary for a licensee that is a government agency to use immovable property for the purpose of constructing an energy network system (defined as a power network system or a natural gas network system) or other structures necessary and related to such an activity, the expropriation of property will be undertaken by the Energy Regulatory Office, and the ownership of the expropriated property shall belong to the state pursuant to the law on the expropriation of immovable property.

The Energy Regulatory Office has the duty to take care of, maintain, use and acquire interests in immovable property vested in the state in accordance with rules, procedures and conditions prescribed by the Energy Regulatory Commission.

10 How is access to the natural gas transportation system and storage facilities arranged? How are tolls and tariffs established?

Under the EIA, a licensee who has an energy network system (defined as a power network system or a natural gas network system) must allow other licensees or energy industry operators to utilise or connect to its system in accordance with terms stipulated and announced by the licensee who has an energy network system.

The terms concerning connection of energy network systems, use of system services and operation of systems must be based on the following principles:

- they must not adversely affect the security, safety and quality of the energy system;
- they must not disadvantage energy consumers and the public;
- they must not discriminate or hinder other licensees or energy industry operators;
- the technical specifications at the end-use points or at the point of connection to the energy network system must be clear, technically feasible and must not impose an undue burden on the person who asks to use or connect to the system;
- the duties and responsibilities of both the person who asks to use or connect to the system and the person who allows the use of or connection to the system must be clearly specified; and
- any other characteristic specified by the Energy Regulatory Commission.

11 Can customers, other natural gas suppliers or an authority require a pipeline or storage facilities owner or operator to expand its facilities to accommodate new customers? If so, who bears the costs of interconnection or expansion?

Expansion of an energy network system must be approved by the Energy Regulatory Commission. If the expansion plan affects the material interest of the public, the Commission must conduct an opinion-hearing process. A licensee that has an energy network system must conduct operations in line with what is stipulated in the approved expansion plan.

12 Describe any statutory and regulatory requirements applicable to the processing of natural gas to extract liquids and to prepare it for pipeline transportation.

At present, PTT is the sole purchaser of natural gas and builder and operator of gas separation plants. A sixth gas separation plant was completed on 25 January 2011 (at the time, GSP-6 was the world's largest gas separation plant). The plants are subject to the legal regime applicable to factories in general. There is no special statutory or regulatory regime.

13 Describe the contractual regime for transportation and storage.

Pipeline systems can be interconnected by private contract. A licensee that has an energy network system must disclose the contracts, agreements, conditions and tariffs for the use of or connection to its system, pursuant to the rules, procedures and conditions established by the Energy Regulatory Commission.

If the Commission considers that the terms concerning interconnection of energy network systems, use of system services and system operations do not conform to the principles mentioned in question 10, it has the power to order the licensee issuing such terms to revise or improve them in line with those principles.

Regulation of natural gas distribution

14 Describe in general the ownership of natural gas distribution networks.

PTT has a monopoly on natural gas pipelines and local distribution business.

15 Describe the statutory and regulatory structure and authorisations required to operate a distribution network. To what extent are gas distribution utilities subject to public service obligations?

Under the EIA, the natural gas business – which means natural gas transmission through pipelines and natural gas network systems, natural gas storage and transformation of natural gas from liquid to gas, natural gas procurement and gas wholesale or retail through natural gas distribution systems, excluding natural gas business operations in the transportation sector – is under the supervision of the Energy Regulatory Commission, comprising a chair and six other members.

Licensees must provide energy services pursuant to standards established by the Energy Regulatory Commission.

The Energy Regulatory Commission may assign a licensee to provide energy services in a particular locality where no service exists, or where services are not extensive or are inadequate to meet the demand of energy consumers in that locality.

The Ministry of Energy is empowered to set the policy on extensive provision of energy services, as well as energy services for the underprivileged, including the policy dealing with energy consumers' complaints.

If an energy consumer is adversely affected by the service provided by a licensee, the consumer shall have the right to make a written complaint to the Regional Energy Consumer Committee. The complaint must clearly indicate the facts and be accompanied by documents and evidence related to the case.

Disputes between licensees shall be resolved in accordance with regulations prescribed by the Energy Regulatory Commission. The decision of the Commission on appeal shall be treated as final.

The Administrative Court has jurisdiction over claims by private sector parties against government agencies.

16 How is access to the natural gas distribution grid organised? Describe any regulation of the prices for distribution services. In which circumstances can a rate or term of service be changed?

Access to the natural gas distribution grid is organised according to regulations of the Energy Regulatory Commission.

Prices for distribution services are regulated by the Energy Regulatory Commission.

17 May the regulator require a distributor to expand its system to accommodate new customers? May the regulator require the distributor to limit service to existing customers so that new customers can be served?

See question 11.

18 Describe the contractual regime in relation to natural gas distribution.

A natural gas distribution system is defined as an energy business and is regulated by the Energy Regulatory Commission (see question 8).

Regulation of natural gas sales and trading

19 What is the ownership and organisational structure for the supply and trading of natural gas?

PTT negotiates GSAs with the various users of natural gas.

Natural gas trading is subject to ceilings on foreign ownership under the FBOA, the Land Code and other laws.

In addition, to be licensed as an oil trader under the Fuel Oil Trading Act, BE 2543 (2000), the applicant must be a private or public company registered under the Civil and Commercial Code or the Public Limited Companies Act with a registered capital meeting the minimum requirements of the Department of Energy Business.

20 To what extent are natural gas supply and trading activities subject to government oversight?

Generally, the Ministry of Energy and the Energy Regulatory Commission supervise all chains of gas supply, such as trading, distribution, import, export, storage, transport and standards of equipment.

The EIA was enacted on 10 December 2007. It became effective on 11 December 2007.

This act establishes a new regulatory regime for the electricity and natural gas business. One purpose of the act is to restructure energy industry management by separating policy making, regulation and operational functions.

Under the act, the natural gas business, which covers natural gas transmission through pipelines and through natural gas network systems, natural gas storage and transformation of natural gas from liquid to gas, natural gas procurement, and gas wholesale or retail sale through natural gas distribution systems, excluding natural gas business operations in the transportation sector, is under the supervision of the Energy Regulatory Commission comprising a chair and six other members.

Update and trends

The subjects of Thailand III Terms, form of contract (petroleum concession versus production-sharing contract), royalty rates and other subjects have been discussed at high level in recent years. In the 21st bid round announced on 21 October 2014, the form of contract and royalty rates were retained, but some conditions of bidding were amended. The 21st bid round was cancelled on 26 February 2015 pending proposed amendments to the PA.

Amendments to the PA and PITA were drafted by the DMF, approved by the cabinet on 12 May 2015, 4 August 2015 and 8 December 2015, and have been forwarded to the National Legislative Assembly. The amendments have not been disclosed to the private sector. The major amendments are reported to include:

- amending section 23 (concession application and form) of the PA, and adding division 3-bis (production-sharing contract and risk-service contract) in relation to allowing the government to use the systems of production-sharing contract and risk-service contract, and authorising the Ministry of Energy to set the rules and procedures for these systems; and
- amending division 7-ter of PITA in relation to the production-sharing contract system.

The Ministerial Regulation re Decommissioning was published on 12 February 2016.

Additional pending issues:

- expiring concessions, 2012–23;
- the Thailand–Cambodia Overlapping Claim Area resolution; and
- decommissioning rules.

The Energy Regulatory Office was established as a state agency with the status of a juristic person, and is under the supervision of the Energy Regulatory Commission.

The Energy Regulatory Commission is empowered to issue announcements determining the licences for different types of energy industry operations, and recommend to the Minister the issuance of royal decrees determining the categories, capacities and characteristics of the energy industry exempt from the licensing requirement.

Under the act, a licensee who has an energy network system (including a gas piping system) must carry out operations in line with the energy network system expansion plan. An energy network system licensee that is a state agency stipulated by the Energy Regulatory Commission shall develop its energy network system expansion plan for submission to the Minister of Energy for approval by the cabinet. A licensee that is not a state agency under paragraph 2 must develop its energy network system expansion plan for submission to the Energy Regulatory Commission for approval pursuant to the scope and rules prescribed by the Commission.

Regulations and notifications governing the energy industry, including the ownership and organisational structure for pipelines, were issued on 4 December 2008.

As of January 2016, 24 ministerial regulations and 15 notifications and announcements under the PA have been published. No royal decrees have been issued under the PA.

On 3 March 2009, the cabinet approved a royal decree (effective 5 June 2009) stipulating the categories and sizes of entities operating in the energy business that do not need to obtain energy operation licences:

- power-generating businesses where the total production capacity of each production site is lower than 1MW;
- power-distribution system businesses where the power-generating operator uses the production for its own business;
- power-distribution businesses with a distribution lower than 1MW through the power-distribution system;
- power system control centre businesses that normally have no capacity to directly control power generation; and
- storage and transformation of natural gas from liquid to gas where the total storage of LNG of each storage unit is less than 50,000 litres.

21 How are physical and financial trades of natural gas typically completed?

There are no physical or financial trades of natural gas in the Thai market.

22 Must wholesale and retail buyers of natural gas purchase a bundled product from a single provider? If not, describe the range of services and products that customers can procure from competing providers.

PTT is the sole seller of natural gas in the Thai market, and it generally only sells under long-term contracts.

Regulation of LNG

23 What is the ownership and organisational structure for LNG, including liquefaction and export facilities, and receiving and regasification facilities?

LNG trading is subject to ceilings on foreign ownership under the FBOA, the Land Code and other laws.

Thailand completed construction and officially began commercial operations of Thailand's first LNG-receiving terminal on 6 September 2011. An expansion of the LNG plant is under way by PTT LNG with a tentative completion date in the second quarter of 2017. PTT has made arrangements for procuring supplies of LNG, storage, regasification and distribution via the existing natural gas network. The LNG receiving facility in Ma Ta Phut includes a port that can support LNG vessels of 125,000 to 264,000 cubic metres.

24 Describe the regulatory framework and any relevant authorisations required to build and operate LNG facilities.

The same regulatory framework and governmental and administrative authorisations apply to LNG plants and industrial plants. The first LNG-receiving terminal is operational in Map Ta Phut Industrial Estate.

25 Describe any regulation of the prices and terms of service in the LNG sector.

No regulations governing the prices and terms of service in the LNG sector have been issued.

Mergers and competition

26 Which government body may prevent or punish anticompetitive or manipulative practices in the natural gas sector?

Generally, the Trade Competition Act, BE 2542 (1999) established the Trade Competition Commission and prohibits certain practices that might lead to a monopoly or unfair competition. The implementation of this Act has been limited, and the government is considering amendments to create a more effective law.

At present, the EIA prescribes objectives to promote competition in the energy industry, prevent abusive use of dominance in energy industry operations, and promote fairness and transparency in the provision of services for energy network systems without unjust discrimination.

27 What substantive standards does that government body apply to determine whether conduct is anticompetitive or manipulative?

Announcements and regulations for promoting competition in energy industry operations and preventing abusive use of monopoly powers are currently under consideration by the Energy Regulatory Commission.

28 What authority does the government body have to preclude or remedy anticompetitive or manipulative practices?

See question 27.

29 Does any government body have authority to approve or disapprove mergers or other changes in control over businesses in the sector or acquisition of production, transportation or distribution assets?

The Trade Competition Commission established under the Trade Competition Act, BE 2542 (1999) is empowered to approve or disapprove mergers and other changes in control over businesses that result in a monopoly or unfair competition.

In the future, announcements and regulations for promoting competition in energy industry operations and preventing abusive use of monopoly power may be enacted.

30 In the purchase of a regulated gas utility, are there any restrictions on the inclusion of the purchase cost in the price of services?

Under the EIA, the Minister of Energy has the power, with the approval of the National Energy Policy Council (NEPC), to establish the policies and guidelines for fixing tariffs for energy industry operations.

Subject to policies and guidelines approved by the NEPC, the Energy Regulatory Commission may prescribe rules for fixing tariffs for each type of licence under the following guidelines:

- they should reflect the actual cost by taking into account a reasonable return of investment of an efficient energy industry operation;
- they should be at a level to ensure efficient and adequate energy procurement to meet the demand for energy within the country;
- they should encourage the improvement of efficiency of energy industry operations;
- fairness must be ensured for both energy consumers and licensees;
- consideration should be given to the assistance of underprivileged power consumers and decentralisation of development to provincial areas;
- the calculation of the tariffs must be clear and transparent, and the tariffs must be made public; and
- there must be no unjust discrimination against energy consumers or those who wish to use energy.

31 Are there any restrictions on the acquisition of shares in gas utilities? Do any corporate governance regulations or rules regarding the transfer of assets apply to gas utilities?

No restriction exists on the acquisition of shares in gas utilities, except ceilings on foreign ownership under various laws and policies.

International

32 Are there any special requirements or limitations on foreign companies acquiring interests in any part of the natural gas sector?

A petroleum concessionaire must be a company. However, it may be 100 per cent foreign-owned.

Gas separation, distribution and trading are subject to ceilings on foreign ownership under the FBOA, the Land Code and other laws.

33 To what extent is regulatory policy affected by treaties or other multinational agreements?

Thailand is a party to many international treaties, bilateral investment protection treaties and double tax treaties, including those of the WTO. Thailand is not a party to the ICSID Convention.

ASEAN integration, which began on 1 January 2016, includes plans for interconnection of current and planned pipelines among the member states. Such integration will require regulators and governments to collaborate, creating a regulatory framework for transborder trading of energy and natural gas.

34 What rules apply to cross-border sales or deliveries of natural gas?

At present, the Thailand–Malaysia Joint Authority Act, BE 2533 (1990) applies to gas exploration and production in the MTJDA.

Other major laws applicable to the export and import of oil and gas include:

- the Export and Import of Goods into the Kingdom Act, BE 2522 (1979);
- the Customs Act, as amended;
- the Emergency Decree on Remedy and Prevention of Shortage of Fuel Oil, BE 2516 (1973); and
- the Fuel Oil Trading Act, BE 2543 (2000), as amended.

In connection with Thailand integrating with ASEAN in 2016, Thailand will become subject to ASEAN policies on transborder trading in natural gas. The ASEAN Plan of Action for Energy Cooperation (APAEC) 2016–2020 specifies cooperation in seven areas, including the Trans-ASEAN gas pipeline.

Transactions between affiliates

35 What restrictions exist on transactions between a natural gas utility and its affiliates?

At present, no restrictions exist on transactions between a natural gas utility and its affiliates.

36 Who enforces the affiliate restrictions and what are the sanctions for non-compliance?

Not applicable.

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Çakmak Avukatlık Ortaklığı

Description of domestic sector

1 Describe the domestic natural gas sector, including the natural gas production, liquefied natural gas (LNG) storage, pipeline transportation, distribution, commodity sales and trading segments and retail sales and usage.

Despite the Turkish government's efforts since 2001 to progressively liberalise the natural gas market in Turkey, the natural gas sector largely remains under government control owing to its strategic importance in industrial and economic growth. The ongoing rapid increase in Turkey's demand for natural gas is mainly the result of gas-fired electricity generation, despite the government's attempt to reduce the use of natural gas in electricity generation by emphasising alternative sources, including domestic coal and renewable and potential nuclear energy.

A major step towards liberalisation was made in 2001 with the introduction of the Natural Gas Market Law and the establishment of the Energy Market Regulatory Authority (EMRA), an independent regulatory authority responsible for the regulation and supervision of the energy market in order to ensure a strong, competitive and transparent environment.

In gas production, although the number of private players is growing, the state-owned Turkish Petroleum Corporation (TPAO) remains the dominant market participant in exploration and exploitation activities. The majority of 2015 natural gas production, amounting to a total of 381.37 million Sm³, was produced by TPAO and Thrace Basin Natural Gas Corporation. The Turkish Petroleum International Company (TPIC), founded by TPAO, is another state-owned company that engages in natural gas exploration and production and is active both domestically and internationally. There are also private companies engaged in oil and natural gas upstream activities on their own or partnering with TPAO.

As Turkey's natural gas production is very small, Turkey depends almost entirely on gas imports to meet its demand. The Petroleum Pipeline Corporation (BOTAŞ) is Turkey's state-owned gas trade and transmission company and imports its gas on the basis of several long-term contracts for the supply of gas from Algeria, Azerbaijan, Iran, Nigeria and Russia. BOTAŞ's share of gas imports in 2015 was 83.84 per cent, and the remaining share was realised by several private companies holding import licences. The Turkish Stream and TANAP are major ongoing projects for the construction of natural gas pipelines designed to deliver gas to Turkey from Russia and Azerbaijan respectively.

Although the monopoly rights of BOTAŞ on the import, distribution, sales and pricing were abolished by the Natural Gas Market Law in 2001, BOTAŞ still holds a dominant position in the natural gas wholesale market with a share of 83.18 per cent in 2015 and a monopoly in national grid transmission activities.

With regard to the storage of natural gas, although five companies hold licences for storage activities, the underground storage facility of TPAO is the only one that is currently active. There are, however, several pending projects for underground gas storage, which is one of the targets of the government for gas security. There are two operational LNG terminals for the storage and regasification of gas imported from Algeria and Nigeria and bought from the spot market; one is owned and operated by BOTAŞ, and the other is built and operated by a private

company. There is also a plan for the development of a third LNG terminal in Turkey.

2 What percentage of the country's energy needs is met directly or indirectly with natural gas and LNG? What percentage of the country's natural gas needs is met through domestic production and imported production?

The figures currently available on the website of the Turkish Ministry of Energy and Natural Resources indicate that Turkey's energy needs in 2014 were met as follows:

- natural gas: 32.4 per cent;
- coal: 31.5 per cent;
- oil: 26.2 per cent; and
- renewable and other sources: 9.8 per cent.

According to EMRA's 2015 Natural Gas Market Sector Report, domestic production met only 0.78 per cent of Turkey's natural gas demand and 99.22 per cent of the natural gas demand was met by imports in 2015.

Government policy

3 What is the government's policy for the domestic natural gas sector and which bodies set it?

While the Turkish Ministry of Energy and Natural Resources (MENR) is responsible for high-level energy policies and strategies, the natural gas sector is widely regulated and supervised by EMRA, an independent regulatory authority.

The government's main policy in the natural gas sector is to incrementally liberalise and deregulate the oil and gas sectors to ensure supply security and competitive prices. One of the government's long-term objectives is to end the vertically integrated structure of state-owned natural gas company (eg, BOTAŞ) and to develop the natural gas market in a direction that renders Turkey an international trading hub. As part of the restructuring of BOTAŞ and the liberalisation of the natural gas market, BOTAŞ is expected to issue further tenders to transfer existing natural gas sale or purchase agreements to private investors until its total import rate falls to 20 per cent of the annual national consumption. However, only very limited progress has been made in this regard, and BOTAŞ maintains its dominant position in the market.

The liberalisation of the natural gas market began with the introduction of the Natural Gas Market Law and the establishment of EMRA in 2001. The government's policy objectives in this regard include the reduction of natural gas in electricity generation and the participation in international pipeline projects, such as the Turkish Stream or TANAP, in order to ensure supply security and diversity.

Regulation of natural gas production

4 What is the ownership and organisational structure for production of natural gas (other than LNG)? How does the government derive value from natural gas production?

Pursuant to the Constitution of the Republic of Turkey, natural resources are at the disposal and control of the state. The state may delegate the right to explore and exploit resources to individuals or private corporations for a certain period of time by issuing licences subject

to the payment of a royalty to the state. TPAO has the right to receive exploration and exploitation rights in the name of the state.

Both foreign and domestic private companies may engage in natural gas exploration and production activities on the basis of licences issued by the General Directorate of Petroleum Affairs (GDPA) in accordance with the Turkish Petroleum Law No. 6491 published in the Official Gazette No. 28674, dated 11 June 2013 (the Petroleum Law), which regulates, inter alia, oil and natural gas exploration and production activities. Whereas licence applications are generally made to GDPA, the granting of exploration and operation licences in the seas beyond territorial waters are subject to the approval of the Council of Ministers. Licence-holders may sell the natural gas which they have produced in the domestic market and are also entitled to export 35 per cent of the natural gas which they have produced from onshore fields and 45 per cent from offshore fields.

The Petroleum Law requires licence-holders to pay the state an annual fixed amount per hectare for each exploration area and a 'state share' amounting to one-eighth of the natural gas extracted and stored, which is the only royalty requested by the government from the produced natural gas.

5 Describe the statutory and regulatory framework and any relevant authorisations applicable to natural gas exploration and production.

Natural gas market activities are governed by the Natural Gas Market Law No. 4646, published in the Official Gazette No. 24390, dated 18 April 2001 (the Natural Gas Market Law), and its secondary legislation. The Natural Gas Market Law regulates midstream and downstream operations, but excludes upstream activities, which are regulated by the Petroleum Law. Midstream and downstream natural gas market activities comprise import, transmission, storage, wholesale, distribution, and export; whereas upstream activities include exploration and production. All participants in the natural gas market are required to obtain a licence from the GDPA or EMRA, depending on the type of market activity they wish to undertake.

With regard to natural gas transmission, the transmission network is owned and operated by BOTAŞ and transportation activities are regulated under the BOTAŞ Transmission Network Operation Principles (the Network Code), which sets out the rules and principles on access and the operation of the transmission network. The Network Code is issued and implemented by EMRA.

The following bodies are involved in the supervision and regulation of natural gas exploration and production:

- MENR is responsible for preparing and implementing high-level energy policies, strategies and plans in co-ordination with its affiliated institutions and other public and private entities.
- EMRA is an independent regulatory and supervisory authority responsible for the implementation of relevant laws pertaining to the energy sector, including all natural gas market activities under the Natural Gas Market Law. The main tasks of EMRA include the examination of licence applications for all midstream and downstream natural gas market activities and the granting of licences and the issuance of secondary legislation in the relevant energy sector. EMRA is allowed to cancel licences in certain cases detailed in respective laws and replace the managing bodies of licence-holders either partially or entirely.
- GDPA is affiliated with MENR and is responsible for ensuring the efficient utilisation of oil and gas fields and granting oil and gas exploration and exploitation licences. In this regard, GDPA is also the authority responsible for monitoring drilling activities.

Pursuant to Turkish administrative law, all administrative entities must use their authority within the limits of the law. As such, all administrative acts of government entities, including the above-mentioned authorities, may be challenged before administrative courts in accordance with administrative procedure rules.

6 Are participants required to provide security or any guarantees to be issued with a licence to explore for or to store gas?

Licences for the exploration and production of natural gas are issued in accordance with the Petroleum Law and the Regulation on the Implementation of the Turkish Petroleum Law. Applicants are obliged

to provide a security for, inter alia, losses that may occur during exploration activities (currently 0.1 per cent of the exploration licence fee per hectare) and the investment amounts presented in the work plan (2 per cent of their investment amount). These amounts may be increased or decreased by the Council of Ministers. Exploration licences for certain exploration areas that may be determined by the GDPA are granted only through tenders issued by the GDPA. The security to be provided in these cases is indicated in the relevant tender specifications issued by the GDPA.

The procedures regarding natural gas storage licences are set out in the Natural Gas Market Law and the Natural Gas Market Licensing Regulation, published in the Official Gazette No. 24869, dated 7 September 2002 (the Licensing Regulation), which does not require the provision of a security by the applicants. However, once the licence application is approved, applicants must pay a fixed application fee and an annual licence fee that is relative to the market activity in question and must also obtain comprehensive risk insurance on the facility.

Regulation of natural gas pipeline transportation and storage

7 Describe in general the ownership of natural gas pipeline transportation, and storage infrastructure.

The national transmission network is currently owned and operated by BOTAŞ, and transportation activities including interconnections are regulated under the Network Code, which sets out the rules and principles on access and the operation of the transmission network.

Owing to the fact that supply security is an important issue in the natural gas sector, natural gas storage is regarded essential to minimising dependence on imports and ensuring the sufficient and continuous supply of gas to meet seasonal changes in demand. Therefore the government gives special importance to projects regarding storage activities. However, although a number of private companies have obtained storage licences, their storage facilities have not yet become operational. The underground storage facility operated by the state-owned TPAO is currently the only active one. There are two LNG storage facilities in Turkey, one operated by BOTAŞ and the other by a private company. The Natural Gas Market Law further provides that entities duly licensed to engage in exploitation activities in accordance with the Petroleum Law that wish to utilise their underground natural gas facilities for storage may apply to EMRA in order to have part of their exploitation licence changed into a storage licence.

8 Describe the statutory and regulatory framework and any relevant authorisations applicable to the construction, ownership, operation and interconnection of natural gas transportation pipelines, and storage.

The construction and operation of pipelines require several licences including, but not limited to, licences issued by EMRA and GDPA, construction licences, land allocation decisions to be issued by the relevant municipalities and ministries, as well as environmental impact assessment decisions to be rendered by the Ministry of Environment and Urban Planning. Investors will also be required to obtain additional administrative and environmental permits, such as for waste management, pollution control and workplace operations. The Natural Gas Market Law further states that licence-holders wishing to enter into a construction or services agreement pertaining to the natural gas market may only do so with entities that are certified by EMRA. As all decisions relating to such licence and permit applications are adopted by administrative bodies, they constitute administrative actions that may be challenged before administrative courts in accordance with Turkish legislation on administrative procedure.

As explained above, the transmission network is currently owned and operated by BOTAŞ and transportation activities including interconnections are regulated under the Network Code.

Transit pipeline projects, however, are subject to different regimes, which are normally subject to international treaties as well as local requirements explained above.

9 How does a company obtain the land rights to construct a natural gas transportation or storage facility?

The Natural Gas Market Law contains general rules on expropriation and incorporeal rights on property. Accordingly, where natural gas market activities deem it necessary, expropriations may take place in

line with the rules of the Expropriation Law No. 2942, published in the Official Gazette No. 18215, dated 4 November 1983. EMRA may issue decisions on such necessity, which are considered evidence of a public interest. Whereas the ownership of the expropriated land will be transferred to the Turkish treasury, the company will be responsible for the payment of the expropriation compensation and will obtain usufruct rights. Companies may also request the establishment of an incorporeal right or a lease on the land belonging to the state, provided that the company pays the relevant fees.

10 How is access to the natural gas transportation system and storage facilities arranged? How are tolls and tariffs established?

Access to the network and infrastructure is considered crucial to ensuring sustainable competition in Turkey and is provided for in the Natural Gas Market Law.

The Regulation on the Natural Gas Market Grid Operation, published in the Official Gazette No. 24918, dated 26 October 2002, governs access to the network and requires the grid operator and distribution companies to ensure access to the network. The Network Code of BOTAŞ was based on this regulation and constitutes the main regulatory document in this regard.

The Natural Gas Market Law further provides that licence-holders for storage activities must ensure that their respective storage capacities are utilised in a coordinated manner and that services are provided fairly. Access to storage facilities is regulated by specific regulations. Pursuant to the Regulation on the Main Usage Principles and Procedures of Underground Natural Gas Storage Facilities, published in the Official Gazette No. 27954, dated 4 June 2011, as well as the Regulation on the Main Usage Principles and Procedures of Underground Liquefied Natural Gas Storage Facilities, published in the Official Gazette No. 27230, dated 16 May 2009, storage companies must prepare a document setting out the principles and procedures regarding storage services of a given storage facility. These principles shall include a list of documents required for access, operating conditions, rules on balancing and adjustment, rates and prices, etc. This document must be approved by EMRA. The applicable rates and prices are set in accordance with the principles and procedures issued and announced by EMRA.

11 Can customers, other natural gas suppliers or an authority require a pipeline or storage facilities owner or operator to expand its facilities to accommodate new customers? If so, who bears the costs of interconnection or expansion?

Suppliers can require expansion of storage facilities. Pursuant to the Licensing Regulation, access to storage facilities may not be rejected if the user seeking connection to the system accepts to cover necessary investment expenses. Similarly, the Network Code regulates that applicants wishing to connect to the transmission network bear the cost regarding the construction of a pipeline for the extraction of natural gas from the system.

12 Describe any statutory and regulatory requirements applicable to the processing of natural gas to extract liquids and to prepare it for pipeline transportation.

The BOTAŞ Network Code regulates the rights, obligations and general conditions pertaining to the pipeline transportation of natural gas via the transmission network operated by BOTAŞ. The Network Code includes rules on access to the system, the required quality specifications of the natural gas entering the system, capacity allocation, delivery control, etc. It also contains provisions relating to gas control centres which ensure the continuity of natural gas transmission activities and inter alia control and monitor pressure and measuring stations.

13 Describe the contractual regime for transportation and storage.

The BOTAŞ Network Code regulates the rights and obligations of the parties concerning the transportation of natural gas via the transmission network. The rights and liabilities of the parties to gas import and supply contracts other than the ones executed with BOTAŞ may be freely agreed upon by the parties, whereas gas sale, transportation and delivery contracts must be in compliance with certain aspects of

the Network Code related to transport and delivery terms and conditions of natural gas in Turkey. The shipper must execute a transportation contract and a delivery contract with BOTAŞ in accordance with the Network Code if the final delivery point is outside of a distribution region. If the final delivery point is located within a distribution region, on the other hand, the shipper must execute transportation and delivery contracts with the respective distribution company as well. The Network Code becomes an integral part of such agreements. Transportation agreements must also be in accordance with principles and procedures determined by EMRA and shall not contain any provision that may hinder the effective functioning of the system.

The same is true for storage activities as well. The rights and obligations of the parties regarding the storage of natural gas are set out in the principles and procedures regarding storage services published by each storage company and approved by EMRA.

In addition, the Natural Gas Market Tariffs Regulation, published in the Official Gazette No. 29856, dated 13 October 2016, regulates the procedures for determining applicable tariffs for natural gas market activities.

Regulation of natural gas distribution

14 Describe in general the ownership of natural gas distribution networks.

Pursuant to the Natural Gas Market Law, local distribution services of natural gas are provided by private entities that have obtained a distribution licence through tenders initiated for set distribution areas determined by EMRA. Rules concerning the distribution licence and the tender procedure for designating a distribution company are set out in the Natural Gas Market Distribution and Customer Services Regulation, published in the Official Gazette No. 24925, dated 3 November 2002 (the Customer Services Regulation). Accordingly, private companies that are successful in such distribution licence tenders also obtain the ownership of the natural gas distribution network for the term of their licences. The distribution network used to be state-owned; however, all of the distribution regions have been privatised since enactment of the Natural Gas Market Law in 2001.

15 Describe the statutory and regulatory structure and authorisations required to operate a distribution network. To what extent are gas distribution utilities subject to public service obligations?

The distribution of natural gas is a market activity listed in the Natural Gas Market Law and is therefore subject to licensing. Legal entities that have obtained a distribution licence from EMRA by way of a tender procedure or upon privatisation are obliged to comply with the provisions set out in relevant legislation published by EMRA. Licenced distribution companies are responsible for the planning, design, construction, extension and operation of the distribution network and must ensure that subscribers and eligible consumers have effective access to the network, all of which can be categorised as the public service obligations of distribution companies.

All decisions and actions of EMRA as the regulatory authority in the energy sector may be challenged before administrative courts in line with Turkish legislation on administrative law and procedure. However, in respect of EMRA's tender procedure for granting distribution licences, the Customer Services Regulation contains an exception exempting EMRA from liability for its decisions rejecting bids or cancelling tenders.

16 How is access to the natural gas distribution grid organised? Describe any regulation of the prices for distribution services. In which circumstances can a rate or term of service be changed?

The principles and procedures relating to the distribution services and customer relations of distribution utilities are set out in the Customer Services Regulation. A distribution utility is obliged to provide access to customers located in its distribution area who have duly applied to the utility for connection, unless it lacks capacity or the connection is not possible for technical or economic reasons. Applicants must ensure that they have adequate domestic installations in place. If the application is rejected by the distribution utility, applicants may appeal to

EMRA, which shall review the circumstances and render a decision that is binding on the distribution utility.

The Natural Gas Market Tariffs Regulation contains provisions on different tariffs applicable in the natural gas market. Each year, EMRA determines the applicable threshold values regarding connection and distribution services that companies may charge their subscribers. Accordingly, prices for distribution services applied by each distribution company are subject to EMRA's approval.

17 May the regulator require a distributor to expand its system to accommodate new customers? May the regulator require the distributor to limit service to existing customers so that new customers can be served?

The Customer Services Regulation requires distributors to ensure that their capacity meets the demand in their respective distribution areas. They are required to undertake the investments necessary to expand their distribution system to accommodate new subscribers. In this regard, distributors must take account of annual subscription forecasts and locations which remain outside of the network's reach.

18 Describe the contractual regime in relation to natural gas distribution.

The distribution of natural gas to end users is effected on the basis of subscription agreements concluded between customers and the distribution utility. Pursuant to the Customer Services Regulation, distributors conclude standardised agreements which shall not contain any provision contrary to relevant legislation. The principles concerning the determination of retail sales prices are set out in the Natural Gas Market Tariffs Regulation.

Regulation of natural gas sales and trading

19 What is the ownership and organisational structure for the supply and trading of natural gas?

Pursuant to the Natural Gas Market Law, all participants in the natural gas market are required to be licensed for each market activity they undertake. The licences can only be obtained by Turkish limited liability companies (formed either as 'anonim şirket' or 'limited şirket'). In order to sell natural gas, traders must hold one of the import, wholesale or distribution licences, and to buy natural gas, they must have one of the import, export, wholesale, compressed natural gas (CNG) (which can include transmission, distribution and supply of CNG), or distribution licences or be qualified as an eligible consumer.

20 To what extent are natural gas supply and trading activities subject to government oversight?

EMRA has extensive supervisory powers over natural gas supply and trading activities by regulating and inspecting the markets (including the applicable prices and tariffs) and imposing sanctions on the market players as well as cancelling licences in certain cases detailed in respective laws.

EMRA also has the right to set base and/or ceiling prices regionally or countrywide for retail petroleum and LPG prices for periods not exceeding two months, if it deems that agreements or concerted practices in the petroleum and LPG markets take place to restrict or violate the competitive environment in the market. EMRA has used this power three times so far in June–August 2009, March–May 2014 and February–April 2015 in the past by determining the ceiling price for certain petroleum products and deciding on the amount of the profit margins and the share of the margin between the distributors and the dealers.

In addition to the general oversight of EMRA, the Natural Gas Market Law provides for certain market share restrictions on import and wholesale activities. The total sales volume of a wholesale or import company (under one or more import licences) may not exceed 20 per cent of the national consumption forecast for such calendar year as determined by EMRA. This restriction does not apply to BOTAŞ. The annual quantity of natural gas that an import company may import (under one or more import licences), also may not exceed 20 per cent of the total estimated national consumption in that calendar year as announced by EMRA.

21 How are physical and financial trades of natural gas typically completed?

A physical sale of natural gas within the Turkish natural gas market first requires a natural gas sale contract executed between the parties. The seller must hold either an import or wholesale licence and the buyer must be either an eligible customer or an entity holding an import, export or wholesale licence. Eligible consumers are those customers who are entitled to choose their supplier. EMRA sets and announces the eligible consumer threshold every year. In accordance with the existing EMRA resolutions, all consumers, except for residential consumers, are eligible. For residential consumers, the eligibility threshold is set at 75,000 cubic metres for 2017.

The terms of natural gas sale contracts can be agreed upon freely between the parties. There are, however, certain regulations which govern the rights and obligations of the parties within the context of the transportation and delivery of natural gas, and therefore must be referred to in the contracts.

The main piece of legislation with which natural gas sale contracts must conform in certain aspects is the Network Code of BOTAŞ, in its capacity as the operator of the transmission network. The Network Code regulates the rights and obligations of the seller as the 'shipper' of the natural gas and BOTAŞ as the 'transporter' of the natural gas to either the facilities of the buyer or the station of the distribution company (if the buyer is located within the region of a distribution company). The process for the delivery of natural gas to the buyer differs depending on the location of the buyer's facilities.

The financial trading of natural gas is currently not possible. In August 2014, a draft law amending the Natural Gas Market Law was submitted to parliament, which foresees the creation of organised wholesale natural gas markets, with the aim of establishing a fully liberalised natural gas market. According to the draft, depending on the nature of the activity, the Energy Markets Operation Corporation (EPIAŞ), the Istanbul Stock Exchange (Borsa İstanbul) or both will be responsible for market operations and financial settlements between market participants. Further, natural gas-derivative products are stipulated to be traded on the Borsa İstanbul. The draft law is not on the immediate agenda of parliament; therefore it is not expected to be enacted soon. According to recent press reports, there are ongoing efforts to prepare a new draft that would include the establishment of a natural gas balancing mechanism (spot market) to be operated by EPIAŞ, similar to the electricity balancing mechanism.

22 Must wholesale and retail buyers of natural gas purchase a bundled product from a single provider? If not, describe the range of services and products that customers can procure from competing providers.

The Natural Gas Market Law does not require the purchase of bundled products; thus, buyers who qualify as eligible consumers can purchase freely from competing providers. However, BOTAŞ has a legal monopoly in respect of the transmission of natural gas owing to its position as the operator of the national transmission network, and each distribution region has a single natural gas distributor from whom the end users (who are not qualified as eligible consumers) are required to purchase both the natural gas commodity and the distribution services.

Regulation of LNG

23 What is the ownership and organisational structure for LNG, including liquefaction and export facilities, and receiving and regasification facilities?

Market activities relating to LNG, which are its import, storage, wholesale and export, are also subject to the Natural Gas Market Law and EMRA's licensing requirement. Entities holding a spot LNG import licence can make imports with this single licence and are not required to obtain a separate licence for each spot LNG import transaction. There are two operational LNG terminals for the storage and regasification of gas imported from Algeria and Nigeria and bought from the spot market: one is owned and operated by BOTAŞ, and the other is built and operated by a private company.

24 Describe the regulatory framework and any relevant authorisations required to build and operate LNG facilities.

The regulatory framework for building and operating an LNG terminal is overseen by EMRA, which is an independent body. LNG terminals can be built and operated by private persons holding a storage licence obtained from EMRA.

In addition to the licence from EMRA, operators are required to obtain the permits and authorisations required by environmental legislation. The key permits are the environmental permit to be obtained under the Environmental Permits and License Regulation and the environmental impact assessment affirmative opinion under the Environmental Impact Assessment Regulation. The authorised governmental body in respect of both is the Ministry of Environment and Urban Planning.

As all decisions relating to such licence and permit applications are adopted by administrative bodies, they constitute administrative actions that may be challenged before administrative courts in accordance with Turkish legislation on administrative procedure.

25 Describe any regulation of the prices and terms of service in the LNG sector.

The natural gas market legislation does not provide for a specific price regulation for import, export or wholesale of LNG. Storage of LNG, on the other hand, is subject to the storage tariffs regulated by EMRA.

Additionally, the Licensing Regulation provides for a mandatory access requirement to storage facilities. Applications for access may be rejected only on the basis of specific reasons set out in the provision, ie, lack of sufficient capacity, which must be brought to the attention of EMRA in order to be raised as a justified rejection of access. Furthermore, access to the system may not be rejected if the user seeking connection to the system accepts to cover necessary investment expenses.

Mergers and competition

26 Which government body may prevent or punish anticompetitive or manipulative practices in the natural gas sector?

With respect to competition, operations in the natural gas market are overseen by EMRA, within the scope of the Natural Gas Market Law, and the Competition Authority, within the scope of Law No. 4054 on the Protection of Competition, published in the Official Gazette 22140, dated 13 December 1994.

The measures provided by the Natural Gas Market Law are of a more preventive nature than those provided to the Competition Authority. As explained above, the Natural Gas Market Law envisages certain market restrictions for wholesale and import of natural gas. Distribution licence-holders are not allowed to purchase more than 50 per cent of the natural gas they distribute from a single supplier. Finally, pursuant to the Natural Gas Market Law, a natural gas market licence-holder company can only participate in one company that does not operate in the natural gas market, provided that it does not:

- directly or indirectly hold more than 50 per cent of the share capital, commercial assets or voting rights;
- have the right to appoint more than 50 per cent of the board of directors' members or auditors; or
- have the right to manage the business of such company.

Except for the distribution companies, natural gas market licence-holder companies cannot participate in other companies operating in the natural gas market. Distribution companies, however, may participate in one company that operates in the natural gas market, upon obtaining EMRA's prior approval.

27 What substantive standards does that government body apply to determine whether conduct is anticompetitive or manipulative?

The supervision of EMRA under the Natural Gas Market Law has a preventive nature; in contrast, the Competition Authority has an ex post investigation authority in respect of anticompetitive practices. There are no substantive standards either in natural gas or in antitrust legislation for determining whether a conduct is anticompetitive or manipulative; the assessment is made on a case-by-case basis.

Competition violations set forth under the competition legislation are numerous and can be grouped under the categories of:

- agreements, concerted practices and decisions limiting competition;
- failure to duly notify mergers or acquisitions that are subject to the approval of the Competition Board; and
- abuse of dominant position.

The Competition Authority prepared and announced a sector analysis in respect of the natural gas market in which it emphasised the importance of competition in the liberalisation of the natural gas market and the Competition Authority's intention to closely monitor such process. Finally, a protocol was entered into between EMRA and the Competition Authority on 28 January 2015 for cooperation between the two authorities in the monitoring of anticompetitive or manipulative conduct in the electricity, natural gas, petroleum and LPG markets.

28 What authority does the government body have to preclude or remedy anticompetitive or manipulative practices?

The Competition Authority performs its duty to preclude or remedy anticompetitive or manipulative practices by way of supervising the markets in respect of any anticompetitive or manipulative practices and imposing sanctions in the case of violations as well as reviewing and approving, entirely or subject to certain restrictions, beforehand any mergers or acquisitions between undertakings with turnover volumes exceeding the thresholds set forth by its board.

29 Does any government body have authority to approve or disapprove mergers or other changes in control over businesses in the sector or acquisition of production, transportation or distribution assets?

Yes, mergers and acquisitions are regulated by article 7 of the Law on the Protection of Competition, which authorises the Competition Board to issue the requirements of notification and assessment of mergers and acquisitions and to review the individual applications in respect of transactions between undertakings with turnover volumes exceeding the turnover thresholds set by its board. Pursuant to Communiqué No. 2010/4 on Mergers and Acquisitions Subject to the Approval of the Turkish Competition Board, there are two thresholds according to which a merger and acquisition transaction becomes subject to the Turkish Competition Board's review and approval. In order for a merger or acquisition transaction to become legally effective, the Board's approval is required if either:

- the total turnover of all parties in Turkey exceeds 100 million Turkish liras and the individual turnovers of at least two parties in Turkey separately exceed 30 million Turkish liras; or
- in acquisition transactions, assets or activities subject to the transaction, and in merger transactions, the individual turnover of at least one of the transaction parties in Turkey exceeds 30 million Turkish liras and the global turnover of at least one of the other transaction parties exceeds 500 million Turkish liras.

The merger of two undertakings, acquisitions or control of property and shareholdings or any other means such as joint venture agreements that provide controlling authority in the management of an undertaking are considered to be a merger or an acquisition within the meaning of Turkish competition legislation subject to the condition that control is transferred from one independent undertaking to another.

The Competition Authority must finalise its review of the merger and acquisition notifications within 30 days from the date of submission. In the event of additional questions or document requests by the Competition Authority, the 30-day review period restarts from the date of submission of the requested information and/or documents by the applicant to the Competition Authority.

Under the natural gas market legislation, the transfer of a licence-holder's shares is also subject to EMRA's prior approval for:

- direct or indirect acquisition of 10 per cent or more (5 per cent or more in public companies) of the share capital of a licence-holder by a real person or legal entity; and
- resulting in a shareholder's share percentage exceeding or falling below 10 per cent of the relevant company's share capital.

Update and trends

The primary objective of the Turkish government in respect of the domestic natural gas sector is its liberalisation. Despite the government's attempt to progressively liberalise the natural gas market in Turkey since 2001, the natural gas sector largely remains under government control because of its strategic importance in industrial and economic growth.

A draft law amending the Natural Gas Market Law was submitted to parliament in August 2014. The draft includes the framework for the creation of organised wholesale natural gas markets in a structure similar to that introduced in the Turkish electricity market in March 2015, with the aim of establishing a fully liberalised natural gas market. BOTAŞ is designated in the draft law as the national system operator to be in charge of curing imbalances in the system. Depending on the nature of the activity, EPIAŞ and/or Borsa İstanbul would be responsible for market operations and financial settlements between the market participants. Natural gas-derivative products would be traded on the Borsa İstanbul as well. The draft law is not on the immediate agenda of parliament and, at the time of writing, it is not expected to be enacted soon. According to press reports, there are ongoing efforts to prepare a new draft that would establish a natural gas

balancing mechanism (spot market) to be operated by EPIAŞ, similar to the electricity balancing mechanism.

With regard to the storage of natural gas, in addition to the one currently operated by TPAO, there are four pending projects for underground gas storage. One of these facilities will be operated by BOTAŞ with a total capacity of 1.5 billion cubic metres; whereas the other three will be operated by private entities. Expansion of underground storage facilities is one of the main targets of the government for gas security. There is also a plan for the development of a third LNG terminal in Turkey which is expected to enter into operation by 2021.

As a recent development, after an interruption of six years owing to a political crisis in 2010, Turkish and Israeli ministers met in October 2016 and declared their intention to restore bilateral relations with the possibility of building a natural gas pipeline from Israel to Turkey. The contemplated pipeline is expected to help Turkey in diversifying its energy sources. According to press reports, Israel is building regional energy cooperation links with Egypt, Jordan, Cyprus and Greece, and sees Turkey as an important potential partner.

In respect of storage licence-holders, on the other hand, share transfers for any reason pertaining to 10 per cent or more (5 per cent or more in public companies) of the share capital is subject to EMRA's prior approval regardless of such share transfer resulting in a shareholder's share percentage exceeding or falling below 10 per cent (5 per cent or more in public companies) of the relevant company's share capital.

30 In the purchase of a regulated gas utility, are there any restrictions on the inclusion of the purchase cost in the price of services?

The price applied by a distributor company to its customers must consist of the purchase price, the cost of using the transmission network, the applicable taxes and other similar financial obligations. Wholesale companies pass on any costs they incur for the transmission and transportation of natural gas to each customer via the respective distributor companies. Pursuant to the principles and procedures set forth in a board decision of EMRA, No. 3577, dated 22 December 2011, wholesale licence-holders who supply to distribution companies must notify at the beginning of each month to the respective distribution companies the final wholesale price including any transmission and transportation fees, storage costs (if any), and costs arising from any commitments such as minimum and maximum purchase orders.

31 Are there any restrictions on the acquisition of shares in gas utilities? Do any corporate governance regulations or rules regarding the transfer of assets apply to gas utilities?

A natural gas market licence-holder company can participate in only one company that does not operate in the natural gas market, provided that it does not:

- directly or indirectly hold more than 50 per cent of the share capital, commercial assets or voting rights;
- have the right to appoint more than 50 per cent of the board of directors' members or auditors; or
- have the right to manage the business of such company.

Except for the distribution companies, natural gas market licence-holder companies cannot participate in other companies operating in the natural gas market. Distribution companies, however, may participate in one company which operates in the natural gas market, upon obtaining EMRA's prior approval.

International

32 Are there any special requirements or limitations on foreign companies acquiring interests in any part of the natural gas sector?

There are no particular requirements for or limitations on foreign companies acquiring interests in any part of the Turkish natural gas sector; however, the licences required for operations in the natural gas market can only be obtained by Turkish limited liability companies (formed

either as 'anonim şirket' or 'limited şirket'). Thus a foreign entity would need to establish a Turkish subsidiary for the contemplated operation and apply for the necessary licences through such subsidiary. Additionally, as share transfers exceeding certain thresholds are also subject to EMRA's prior approval, EMRA can monitor the foreign shareholding in licence-holder companies.

33 To what extent is regulatory policy affected by treaties or other multinational agreements?

Owing to the strategic importance of natural gas-related activities, it could be stated that treaties and international agreements do not have a direct impact on Turkey's regulatory policy. However, Turkey is party to several international treaties, which have the same effect as domestic laws pursuant to article 90 of the Turkish Constitution. Also, EMRA has entered into several cooperation arrangements with international institutions and organisations. On the other hand, transit natural gas pipeline projects are realised under international treaties and host government agreements.

34 What rules apply to cross-border sales or deliveries of natural gas?

The import and export of natural gas can be conducted with specific licences issued by EMRA. Under the Natural Gas Market Law, import is defined as the supply of natural gas from abroad in LNG or gas form for the sale to wholesale companies, eligible consumers, export companies, distribution companies and compressed natural gas (CNG) companies or for direct sales abroad. In other words, an import licence-holder can sell the gas that it imported to:

- wholesale companies;
- export companies;
- distribution companies;
- CNG companies; or
- eligible consumers.

Import licence-holders can also conduct wholesale activities without obtaining a wholesale licence. For conducting direct sales abroad, on the other hand, an import licence-holder must obtain a separate export licence from EMRA.

Export is defined as the sale of the natural gas outside Turkey. For this purpose, export companies can purchase natural gas from production companies, import companies or wholesale companies. Production companies and import companies may engage in export activities by obtaining an export licence from EMRA as well.

Wholesale companies must obtain separate import or export licences in order to conduct import or export activities.

The only transit law in Turkey is the Law No. 4586 concerning the Transit Passage of Petroleum via Pipelines, which was initially enacted for the Baku-Tbilisi-Ceyhan Petroleum Pipeline Project; however, which also applies as a general law applicable to cross-border transit of petroleum and natural gas products.

Transactions between affiliates**35 What restrictions exist on transactions between a natural gas utility and its affiliates?**

The law does not provide for any restriction on transactions between a natural gas utility and its affiliates. However, as explained above, a natural gas market licence-holder company can only participate in one company that does not operate in the natural gas market, provided that it does not:

- directly or indirectly hold more than 50 per cent of the share capital, commercial assets or voting rights;
- have the right to appoint more than 50 per cent of the board of directors' members or auditors; or
- have the right to manage the business of such company.

Except for the distribution companies, natural gas market licence-holder companies cannot participate in other companies operating

in the natural gas market. As a further restriction on distribution companies which might have participated as such in a wholesale or import licence-holder, the Natural Gas Market Law prohibits distribution licence-holders from purchasing 50 per cent or more of the natural gas they distribute from a single supplier.

36 Who enforces the affiliate restrictions and what are the sanctions for non-compliance?

EMRA is the responsible authority in respect of the above-referred restrictions on natural gas market licence-holders. In the case of violation of the relevant prohibitions, EMRA imposes an administrative fine (which is subject to change each year) on the relevant licence-holder and orders remedying of the prohibited violation within 30 days starting from its notification. The amounts of the administrative fines applicable in 2017 vary from 643,368 to 1,102,918 Turkish liras.

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Description of domestic sector

- 1 Describe the domestic natural gas sector, including the natural gas production, liquefied natural gas (LNG) storage, pipeline transportation, distribution, commodity sales and trading segments and retail sales and usage.

The UK domestic gas industry comprises:

- exploration and production operations in the North Sea and Irish Sea. There are 322 producing offshore oil and gas fields. The fields are connected to onshore receiving terminals through a 14,000km offshore pipeline network. The main gas receiving terminals are located at St Fergus, Teesside, Easington, Bacton and Barrow;
- an onshore high pressure transmission network that transports gas from the receiving terminals to lower pressure distribution networks (DNs) and large consumers directly connected to the transmission network (the national transmission system (the NTS)). In 2010, there were approximately 23.2 million industrial, commercial and residential connections in Great Britain (GB). In Northern Ireland there is a smaller network, with approximately 150,000 connections. The Northern Ireland network is connected to the pipeline networks in GB and the Republic of Ireland (RoI);
- four gas interconnectors link Bacton-Zeebrugge (Belgium), Bacton-Balgzand (Netherlands), Moffat (Scotland)-Gormanston (RoI) and Moffat-Loughshinny (RoI). The RoI interconnector connects at Twynholm to a pipeline to Ballylumford (Northern Ireland);
- a number of gas storage facilities located both offshore and onshore, where gas is stored in depleted gas fields or in natural and man-made salt caverns; and
- gas trading operations, where gas shippers and traders buy and sell physical gas at the receiving terminals (beach trading) and trade gas entitlements within the transmission network (see question 13).

For an overview of the LNG industry in the UK, see question 23.

- 2 What percentage of the country's energy needs is met directly or indirectly with natural gas and LNG? What percentage of the country's natural gas needs is met through domestic production and imported production?

According to the Department for Business, Energy and Industrial Strategy's (BEIS) (formerly the Department for Energy and Climate Change (DECC)) Electricity: Digest of UK Energy Statistics (DUKES) 2016, in 2015 gas accounted for 30 per cent of electricity generation and about 34 per cent of total primary energy consumption in the UK. Gas production in the UK peaked in 2000, and since then the UK has become more reliant on gas imports to meet its demand. The UK is now a net importer of natural gas, with net imports reaching 349.3TWh in 2014. In 2015, however, net imports dropped to 330.8TWh. In 2015, LNG imports accounted for 31 per cent of gas imports, compared with 47 per cent in 2011.

Government policy

- 3 What is the government's policy for the domestic natural gas sector and which bodies set it?

The Secretary of State for BEIS (the SoS), BEIS and the recently formed Oil & Gas Authority (OGA) are responsible for the setting of government policy relating to the gas sector. BEIS has a strategic role in ensuring that the overall policy framework is clear, safeguarding security of supply, supporting the necessary investment in energy infrastructure and promoting energy efficiency. The Gas Generation Strategy, setting out the government's views on the role of gas in the UK electricity market, was presented to Parliament in December 2012. Under the strategy, the government aims to lower the barriers to investment in gas power plants, with measures including a cap on low-carbon expenditures, greater flexibility in the planning system and establishing the Office for Unconventional Gas and Oil to act as a point of contact for potential investors. The UK aims to reduce dependence on fossil fuels. Under the Climate Change Act 2008, the UK has committed to at least an 80 per cent reduction in greenhouse gas emissions below 1990 levels by 2050. As part of the implementation of the 2008 Act, the UK is also committed to a 34 per cent reduction in greenhouse gas emissions by 2020. Gas will, however, continue to provide a major source of fuel in the UK, and BEIS believes it is important that the UK maintains secure and reliable gas supply sources and infrastructure.

To ensure the security of supply, BEIS has implemented measures to improve the functioning of the commodity and capital markets, to encourage investment in new import capacity and storage, and through reform of the planning and consents regime. These measures were introduced in October 2011 through the Energy Act 2011, which includes measures to mitigate against situations that could lead to gas supply disruptions or high wholesale prices, or both, for consumers and, in relation to planning, in April 2013 through the Growth and Infrastructure Act 2013, which gives applicants the right to apply for planning permission directly to the SoS where a local planning authority is not determining applications quickly enough, and limits the information that a local planning authority may request in support of an application. In December 2013, the Energy Act 2013 received royal assent, implementing the main aspects of energy market reform. This act includes measures to attract the £110 billion investment to replace current generating capacity and upgrade the grid by 2020, and to cope with a rising demand for electricity.

In June 2013, the then Secretary of State for Energy and Climate Change, Edward Davey, asked Sir Ian Wood to conduct a review into the recovery of oil and gas from the UK's continental shelf. The result of that review, *UKCS Maximising Recovery Review: Final Report* (the Wood Review) was published on 24 February 2014. In its response to the Wood Review, the government said that it would establish the OGA to 'undertake the licensing, exploration and development functions work currently carried out by DECC [now BEIS]'. Accordingly, the OGA was established as an executive agency on 1 April 2015 as an arm's length body accountable to the SoS and DECC (now BEIS). The OGA currently has a management team of eight people with offices in Aberdeen and London. The OGA's aim is to maximise the economic benefit from the UK's oil and gas reserves and it is responsible for regulating onshore and offshore oil and gas activities in the UK, which includes:

- oil and gas licensing;
- oil and gas exploration and production;
- oil and gas fields and wells;
- oil and gas infrastructure; and
- carbon capture and storage licensing.

The Energy Act 2016 received Royal Assent on 12 May 2016 and implements the following:

- formally establishes the OGA as an independent regulator, taking the form of a government company, charged with the asset stewardship and regulation of domestic oil and gas recovery;
- transfers the SoS's existing regulatory powers on upstream oil and gas to the OGA. The SoS's regulatory functions in relation to the environment will not be transferred;
- gives the OGA additional powers, including access to operating committee meetings; data acquisition, retention and transfer; dispute resolution; and sanctions; and
- introduces provisions in relation to charges for the offshore oil and gas environmental regulator's service to the industry.

Pursuant to the Energy Act 2016, the OGA was incorporated as a government company on 1 October 2016 with the SoS as the sole shareholder. The government continues to support open and integrated EU gas markets as the mechanism by which customers and gas shippers in the UK, and across the EU, have access to wider gas supply sources. The EU Third Internal Energy Market Package, introduced in September 2009, has been implemented in the UK since March 2011 through the amendments made to the Gas Act 1986 (the Gas Act) by the Electricity and Gas (Internal Markets) Regulations 2011 and the Electricity and Gas (Internal Markets) Regulations 2014.

Development policy for the energy sector, including land use policy, is contained in a series of national policy statements (NPSs), which received designation by the SoS on 19 July 2011 and were adopted as national policy in November 2011. NPSs include the government's objectives for the development of nationally significant infrastructure projects (NSIPs). Guidance is provided on issues such as how actual and projected capacity and demand have been taken into account in setting policy, and specific locations for some types of NSIPs are identified to aid investment and consideration of development proposals. There is a separate NPS for each of the following sectors: overarching energy, renewable energy, fossil fuels, oil and gas supply and storage, electricity networks and nuclear power. Proposals being formulated now should have regard to these policies. In addition, the National Infrastructure Plan (December 2013) sets out the government's ambitions for the energy sector (including gas) and the actions it will take to support their realisation.

Regulation of natural gas production

4 What is the ownership and organisational structure for production of natural gas (other than LNG)? How does the government derive value from natural gas production?

The Petroleum Act 1998 (Petroleum Act), the principal UK legislation governing offshore gas operations, vests ownership of all of the UK's gas resources in the Crown. The OGA can grant licences that confer rights on licence holders to explore for and produce gas. All licences confer these rights in relation to a limited area and for a limited period.

Licences contain binding and enforceable conditions that the licence holder must comply with. They are primarily designed to ensure efficient and maximised oil and gas production, to ensure that the licence rights are properly exploited. The conditions of the licence are set out as model clauses established in secondary legislation. The Petroleum Licensing (Exploration and Production) (Seaward and Landward Areas) Regulations 2004 and the Petroleum Licensing (Production) (Seaward Areas) Regulations 2008 and 2014 set out the model clauses for the various types of licences (see question 5). Licensees must also now comply with the Offshore Petroleum Licensing (Offshore Safety Directive) Regulations 2015 (OPL Regulations). These regulations are supplemental to the existing licence regime and require prospective licensees to demonstrate financial capability, among other things, to the OGA.

In respect of taxation, a ring-fenced corporation tax applies to profits from gas extraction activities or the acquisition, enjoyment or exploitation of gas rights, and is designed to ensure profits from these

activities are not reduced for tax purposes by set off against losses from different trading activities. These profits are ring-fenced and treated as arising from a separate trade for tax purposes. The main current rate of applicable corporation tax is 30 per cent, together with a further 10 per cent charge (known as a supplementary charge (SC)), which is imposed on profits (excluding financing costs) that arise as a result of these ring-fenced activities.

For chargeable periods ending on or before 31 December 2015, a petroleum revenue tax (PRT) was imposed on taxable fields which received development consent before 16 March 1993, for which the boundary of the fields was determined by BEIS. Broadly the tax was levied on the field's licensees based on the share of profits from that field, taking into account claims for deductions for certain specific expenditures and special reliefs (including oil allowance, certain production expenditures and safeguards intended to ensure a minimum return). The Finance Act 2016 reduced the current rate of PRT to zero per cent. Companies may still obtain a PRT refund for payments in accounting periods up to 31 December 2015 against decommissioning losses.

In order to incentivise growth in the shale gas sector, the Finance Act 2014 introduced a new allowance covering both conventional and unconventional hydrocarbons onshore. The allowance removes an amount equal to 75 per cent of the capital expenditure incurred by a company on or after 5 December 2013 from its adjusted ring-fence profits subject to the SC, generally so long as not related to the acquisition of an asset that has previously generated an onshore allowance on or after 16 March 2016.

The government also derives revenue through licence charges, and each licence carries an annual charge, called a rental. In the case of most types of licence, rentals fall due each year on the anniversary of the licence award. They are charged at an escalating rate on each square kilometre within the area covered by the licence.

5 Describe the statutory and regulatory framework and any relevant authorisations applicable to natural gas exploration and production.

Licences

The Crown has the exclusive right to search for, develop and produce petroleum in the UK and beneath the sea adjacent to the UK (the UK continental shelf). A licence is required to carry out exploration and production activities. Licences are usually awarded by the SoS following annual licensing rounds. Licence applications are considered by reference to BEIS's financial criteria and standards of operatorship. The main types of licence are:

- onshore Petroleum Exploration and Development Licence (PEDL): an exclusive right to explore and produce onshore, the production term lasting up to 20 years subject to extension with the agreement of the OGA;
- offshore/onshore exploration: a non-exclusive right to conduct non-intrusive exploration operations for three or six years;
- offshore production: an exclusive right to conduct operations from exploration through to production, subject to the OGA approving the field development plans. The production phase can last for up to 18 years, subject to extension with agreement from the OGA; and
- offshore innovate licence: from the 29th Licensing Round, all new offshore production licences have become 'Innovate Licences', offering greater flexibility for each applicant to design a work programme around particular circumstances. The licence has an initial term of up to nine years divided into three phases: phase A for geotechnical studies and geophysical data reprocessing; phase B for undertaking seismic surveys and acquiring other geophysical data; and phase C for drilling.

Offshore production licences and PEDL licences are valid for a sequence of terms. The terms follow the exploration, appraisal and production phases of field development. A licence will expire automatically at the end of each term unless the licensee can demonstrate sufficient progress (in terms of exploration, appraisal or development) to merit the continuation of the licence to the next operational phase. Licences may be held by a single company or jointly by several companies working together. Petroleum Act licences do not cover all gas-related activities, for instance, offshore exploration and production activities are subject to additional control by the OGA, BEIS, the Health and Safety Executive (HSE) and Offshore Safety Directive Regulator (OSDR), and

onshore licence holders are subject to necessary permissions from landowners, planning authorities, BEIS, the HSE and Environment Agency (EA) in England, Natural Resources Wales (NRW) in Wales and Scottish Environment Protection Agency (SEPA) in Scotland.

In addition to the production licences described above, the exploration for and production of natural gas, including the construction and operation of pipelines, is regulated under a range of environmental and safety legislation. Different requirements apply depending on whether the pipeline is onshore or offshore. Both offshore and onshore pipeline safety is governed by the Pipelines Safety Regulations 1996 (PSR), which are enforced by the HSE.

Offshore Safety Directive

The Offshore Safety Directive 2013/30/EU (OSD) entered into force on 18 July 2013. It was introduced as a response to the Deepwater Horizon incident in April 2010 in the Gulf of Mexico.

The OSD introduces for the first time an EU-wide framework law relating to the environmental and safety management of offshore oil and gas operations in EU waters. It sets common standards and requirements for EU governments to apply in relation to offshore safety and environmental management, and the regulation of offshore activities.

In the UK, the directive has not required any fundamental changes to the existing legal regime for offshore safety and environmental regulation. Indeed, the OSD is modelled on the UK regime in many respects. However, there are a number of measures of potential significance for operators under the OSD and national implementing regulations that provide for new obligations and changes to existing requirements.

These include requirements in relation to the reporting by operators of information relating both to operations and to safety and environmental management, the extension of the meaning of 'water damage' under the Environmental Liability Directive 2004/35/EC to include 'marine waters' and a new requirement to produce corporate major accident prevention policies that not only cover installations within the EU but will also need to specify the extent to which equivalent policies are in place for operations outside the EU. Important 'structural' changes have also been introduced. These include a consolidation of environmental and safety duties, with a single operator having to be responsible for both environmental compliance and safety management at any one time.

The OSD has been implemented in relation to the territorial sea adjacent to Great Britain and any areas designated by order under section 1(7) of the Continental Shelf Act 1964, by the Offshore Installations (Offshore Safety Directive) (Safety Case etc) Regulations 2015 (SCR 2015), the OPL Regulations and the Merchant Shipping (Oil Pollution Preparedness, Response and Co-operation Convention) (Amendment) Regulations 2015 (OPRC Amendment Regulations). These implementing regulations came into force on 19 July 2015. Application of the new regime is phased in over a transitional period between 19 July 2015 and 19 July 2018.

The SCR 2015 amend a range of current legislation applying to offshore gas activities including the Offshore Installation and Pipeline Works (Management and Administration) Regulations 1995 (MAR), Offshore Installations (Prevention of Fire and Explosion and Emergency Response) Regulations 1995 (PFEER), Offshore Installations and Wells (Design and Construction, etc) Regulations 1996 (DCR), Offshore Installations (Safety Case) Regulations 2005 (SCR 2005) and Reporting of Injuries, Diseases and Dangerous Occurrences Regulations 2013 (RIDDOR), making some changes to duty holder and operator terminology.

Unconventionals

Unconventional gas is produced from shale rock and is extracted by means of hydraulic fracturing (fracking). Separate licensing rounds are held for offshore and onshore licences. The last landward licensing round took place in December 2015.

In February 2013, the UK Onshore Operators Group (UKOOG), an industry body representing the UK onshore oil and gas industry, published 'UK Onshore Shale Gas Well Guidelines: Exploration and appraisal phase'. The UKOOG published a second issue of these guidelines, updating the first, in January 2015. The guidelines focus on the exploration and appraisal stages of shale gas projects and set out the best practice by reference to the legislation governing shale gas exploration.

Key regulation governing compliance with environmental laws does not fall within the jurisdiction of BEIS or the OGA (except in relation to certain pipelines), and is implemented by the Department for Environment, Food and Rural Affairs, the EA (which plays a role in issuing some of the permits required to carry out onshore exploration and production in England), NRW in Wales, SEPA (in Scotland) and relevant local authorities (for obtaining planning permissions).

In addition to obtaining a PEDL, operators intending to explore, develop and produce shale gas must obtain a range of other consents and permissions, depending on the location and physical and environmental conditions and constraints that apply to any particular project. Consents and permissions required include (as appropriate) landowner consents, planning permissions, environmental permits, Coal Authority authorisation, well consents (in certain circumstances), field development consents, well notifications, a notification of intention to drill to search for or extract minerals, abstraction licences, and flaring and venting consents.

The HSE enforces health and safety law onshore under the Health and Safety at Work etc Act 1974. The HSE monitors well integrity and site safety perspective of shale gas operations. Regulations applying to shale gas operations include the Borehole Site and Operations Regulations 1995, the DCR (which apply to wells both on and offshore), Environmental Permitting (England and Wales) Regulations 2016 and Water Resources Act 1991, among others. Onshore and offshore pipeline safety is governed by the PSR, enforced by the HSE.

Local authorities in England and Wales are able to keep 100 per cent of business rates collected from shale gas sites. UK Community Foundations is running a pilot scheme at selected shale gas sites in the UK to consult on how to share out the £100,000 community benefits scheme for each gas well site (which rewards communities hosting shale gas exploration sites). UKOOG has also consulted with stakeholders on how the incentive of 1 per cent revenue from production wells could be shared with local communities. In August 2016, BEIS initiated a consultation on setting up a sovereign/shale wealth fund to benefit local communities and regional economies.

Licence conditions

The conditions in the different types of licence impose a variety of obligations on licence holders, such as:

- obligations to maintain records and samples and to provide information to the SoS;
- obligations to establish and follow exploration, development and production work programmes;
- obligations on the commencement, abandonment and plugging of wells; and
- obligations to develop fields that cross licence boundaries in partnership with the adjacent licence holders.

BEIS is responsible for the setting of government policy for the gas industry. The OGA has primary responsibility for regulating offshore gas exploration and production activities through the petroleum licensing regime.

Environmental and safety regulation

In parallel with BEIS and the OGA's role, the production, transmission, distribution and supply of natural gas are regulated by a range of environmental and safety regulators. Generally, for environmental matters, a division within BEIS is the regulator in the offshore context whereas the EA (in England), NRW (in Wales), SEPA (in Scotland) and local authorities regulate the onshore environment. The HSE has primary responsibility for regulating safety matters both offshore and onshore. In the offshore world, UK implementation of the OSD triggered the creation of a new consolidated competent authority regulator to regulate OSD matters – the OSDR, made up of HSE and BEIS acting jointly on both environmental and safety matters. That said, HSE and BEIS will continue to exist as individual safety and environmental offshore regulators and have separate functions under individual permitting regimes.

Most offshore environmental requirements in this context are imposed by bespoke secondary legislation, which is specific to the oil and gas industry. Key obligations include the requirement, at various stages in offshore exploration and production, to carry out an environmental impact assessment, obligations on operators to prepare

oil pollution emergency plans (see the following paragraph), the prohibition of discharges or combustion activities except in accordance with conditions set in offshore permits and the regulation of carbon emissions.

The Merchant Shipping (Oil Pollution Preparedness, Response and Co-operation Convention) Regulations 1998 (as amended in 2015 by the OPRC Amendment Regulations) and the Offshore Installations (Emergency Pollution Control) Regulations 2002 (together, OPEP Regulations) are the main components of the legal framework under which the UK government regulates potential environmental incidents involving offshore installations to ensure that preventative measures are in place to limit pollution. In particular, obligations are imposed on operators to implement robust emergency planning arrangements, and powers are reserved for the UK government to step in and take measures to enforce any necessary remedial actions.

Other key pieces of secondary environmental legislation (as amended in some cases) applicable to offshore activities include:

- MAR, PFEER, DCR, SCR 2005 and RIDDOR, all amended by SCR 2015 which implement the OSD (see Offshore Safety Directive section above for full references to legislation);
- the Offshore Petroleum Activities (Oil Pollution Prevention and Control) Regulations 2005;
- the Offshore Combustion Installations (Pollution Prevention and Control) Regulations 2013;
- the Offshore Petroleum Production and Pipe-lines (Assessment of Environmental Effects) Regulations 1999;
- the Offshore Chemicals Regulations 2002;
- the Pipeline Safety Regulations 1996;
- the Greenhouse Gas Emissions Trading Scheme Regulations 2012;
- Energy Savings Opportunity Scheme Regulations 2014;
- Environmental Assessment of Plans and Programmes Regulations 2004 (and Scotland and Wales equivalent regulations);
- Offshore Petroleum Production and Pipe-lines (Assessment of Environmental Effects) Regulations 1999;
- Offshore Petroleum Activities (Conservation of Habitats) Regulations 2001;
- Offshore Marine Conservation (Natural Habitats, &c) Regulations 2007; and
- Marine and Coastal Access Act 2009 and Marine Licensing (Exempted Activities) Order 2011 (and Scotland and Wales equivalent orders).

The Petroleum Act 1998 is not primarily concerned with environmental protection (its principal purpose is to regulate the terms on which petroleum rights are granted to companies). However, it does impose certain requirements and duties on oil and gas companies in respect of environmental matters. For example, applicants for production licences must demonstrate adequate environmental competence and (usually) include an environmental assessment of the licence block's environmental sensitivities. Companies are also required pursuant to the Petroleum Act regime to provide evidence of environmental management systems, and also financial provision to cover the costs of remediating damage caused by pollution in the event of a spillage. The Petroleum Act also establishes a specific regulatory regime for the decommissioning of offshore oil and gas installations and infrastructure.

For onshore operations, the Petroleum Act 1998 also governs the granting of petroleum rights, but a different suite of legislation to that which is applicable offshore applies in respect of environmental regulation. While the laws differ for onshore upstream operations, the basic principles are the same. The principal legal regimes are:

- the planning regime including the Planning Act 2008 (in relation to NSIPs), implemented by the Infrastructure Planning (Environmental Impact Assessment) Regulations 2009, and the Town and Country Planning Act 1990 (TCPA), implemented by the Town and Country Planning (Environmental Impact Assessment) Regulations 2011, which impose obligations in relation to certain kinds of development to carry out an environmental impact assessment and prevents the granting of consent unless the decision-maker has first taken into account environmental information provided by the applicant. The TCPA and Planning Act 2008 also enable decision makers to impose on a consent conditions relating to the environment; and

- the environmental permitting regime under the Environmental Permitting (England and Wales) Regulations 2016, which require an environmental permit to be obtained and complied with for certain regulated activities associated with onshore upstream activities such as groundwater discharges and mining waste generation.

6 Are participants required to provide security or any guarantees to be issued with a licence to explore for or to store gas?

No.

Regulation of natural gas pipeline transportation and storage

7 Describe in general the ownership of natural gas pipeline transportation, and storage infrastructure.

Offshore

All offshore gas pipelines in the UK are in private ownership. Ownership of an offshore pipeline is commonly linked to ownership of the producing assets and the connected receiving terminal. An example of this is the 1,660km Langeled pipeline, which delivers Norwegian gas to the Easington terminal. It is owned by Gassled, a joint venture owned by Exxon Mobil, Total, Statoil, ConocoPhillips and others that hold interests in the producing fields in Norwegian waters.

The two gas interconnectors connecting the UK to the continent are also in private ownership. The Bacton-Zeebrugge (Belgium) pipeline is owned by Interconnector UK, a joint venture made up of CDPQ (a Canadian pension fund), Fluxys and SNAM. The Bacton-Balgzand (Netherlands) pipeline is owned by BBL, a joint venture between Nederlandse GasUnie, E.ON and Fluxys. The interconnector linking Scotland and Northern Ireland (SNIP) is owned by Premier Transmission Limited, a mutual company, and the interconnector to RoI is owned by Gas Networks Ireland, the RoI state-owned gas company.

Onshore

The onshore gas pipeline network comprises a 7,600km high pressure (85 bar) NTS, which transports gas to 40 power stations and 12 lower pressure local distribution zones systems (LDZs). The LDZs are grouped into eight regional DNs. DNs comprising one or two LDZs.

Until 2005, the entire onshore pipeline network was owned and operated by National Grid Gas plc (NGG), formerly known as Transco, and originally part of British Gas plc. NGG is a privately owned regulated utility that is now part of National Grid plc following a merger in 2002 with the owner and operator of the electricity transmission system in England and Wales.

On 1 June 2005, NGG sold four of the DNs to independent private operators – Scotland and South of England (SGN), Wales and West of England (Wales and West Utilities) and North of England (Northern Gas Networks), while retaining ownership of the NTS and the four other DNs (London, North West England, West Midlands and East of England). However, in late 2016, NGG announced the planned disposal of a majority stake in its distribution business, National Grid Gas Distribution Limited to a consortium backed by Macquarie, the Australian investment bank, and China Investment Corporation, China's sovereign wealth fund.

Storage

There are a number of gas storage facilities in the UK, which vary in size and deliverability. All facilities are in private ownership. The only long-range facility is Rough (a depleted offshore gas field), which is owned and operated by Centrica. There are medium/short-range facilities at Hornsea (SSE), Humbly Grove (Star Energy), Aldbrough (SSE/Statoil), Hole House Farm (EDF), Hatfield Moor (Scottish Power) and Holford (E.ON).

Total UK storage capacity is approximately 5.1bcm. However, the expected completion in 2017–18 of two further facilities (Hill Top Farm and Stublach) will together add around 0.5bcm of storage capacity. In addition, there is approximately 5bcm of potential capacity in projects with planning permission, the largest of which is the 1.5bcm Gateway project.

8 Describe the statutory and regulatory framework and any relevant authorisations applicable to the construction, ownership, operation and interconnection of natural gas transportation pipelines, and storage.

Regulation of onshore gas markets (transportation, storage and distribution)

The Office of Gas and Electricity Markets (Ofgem), which carries out the work of the Gas and Electricity Markets Authority (GEMA), the independent energy regulator, is responsible for regulation of gas markets in GB. GEMA takes decisions on a range of matters, including price controls and licence enforcement (for onshore gas operations), and determines strategy to achieve its objective of protecting the interests of consumers in relation to gas conveyed through pipes, wherever appropriate, by promoting effective competition between persons engaged in, or in commercial activities connected with, the shipping, transportation or supply of gas.

Decisions of Ofgem can be challenged in the same manner as decisions of any other UK public and statutory body. The most frequent form of challenge is by judicial review, a process that challenges the basis by which a decision has been reached (with a view to the decision being declared unlawful).

In Northern Ireland, regulation of the gas market is carried out by the Northern Ireland Authority for Utility Regulation (NIAUR).

Offshore

In relation to offshore pipelines, under the Petroleum Act, a Pipeline Works Authorisation (PWA) issued by the OGA is required for the construction and use of any offshore oil and gas pipeline. While the PWA is the principal consent, it is underpinned by a comprehensive environmental regime that imposes additional requirements.

Following OSD implementation, SCR 2015, PFEER, MAR and PSR establish the framework of duties for offshore pipeline operators and the interface between the pipeline and installation operator.

The PSR (Pipelines Safety Regulations) apply to all pipelines in Great Britain, territorial waters and the UK Continental Shelf. The PSR also apply to apparatus and works associated with pipelines including valves and valve chambers connecting pipelines to plant, offshore installations or wells, structures supporting a pipeline, apparatus for facilitating the flow of fluid or for treating or cooling fluid to flow through a pipeline, apparatus for the supply of energy or the transmission of information for the operation of the pipeline and apparatus for the cathodic protection of a pipeline. The PSR impose obligations on 'operators' in relation to the design, safety systems, construction, installation, maintenance and decommissioning of pipelines. The 'Operator', in relation to a pipeline, is the person who is to have or has control over the conveyance of fluid or any mixture of fluids in the pipeline, or where this person is not known, the person who commissions the design and construction of the pipeline. When a pipeline is no longer used, or not for the time being used, the 'Operator' is the person last having control over the conveyance of fluid or any mixture of fluids in it.

Pipelines also fall within the SCR 2015, which define installation to include any part of a pipeline connected to an offshore installation as is within 500 metres of any part of its main structure, and any apparatus or works which are situated on its main structure or wholly or partly within 500 metres of any part of its main structure and associated with a pipe or system of pipes connected to any part of that installation. Production and non-production installation under SCR 2015 also include pipelines. The SCR 2015 does not require a safety case for offshore pipelines, but the installation safety case does need to address risks arising from pipelines. In particular, the safety case will need to include details of how the SCR 2015 duty holder will ensure that no fluid is conveyed in a pipeline unless safe operating limits have been established and that a pipeline is not operated beyond its safe operating limits, or how the SCR 2015 duty holder has co-operated or will co-operate with the pipeline operator to ensure compliance with specified parts of the PSR (if the SCR 2015 duty holder is not the pipeline operator).

Most offshore environmental requirements are imposed by bespoke secondary legislation, which is specific to the oil and gas industry. Key obligations include the requirement at various stages in offshore exploration and production to carry out an environmental impact assessment, obligations on operators to prepare oil pollution emergency plans, the prohibition of discharges or combustion

activities except in accordance with conditions set in offshore permits and the regulation of carbon emissions. Also see questions 5, 9 and 10.

Onshore

In relation to onshore pipelines, a Pipeline Construction Authorisation (PCA) must be obtained for onshore oil and gas pipelines (except those of gas transporters) that are more than 10 miles in length (Pipe-lines Act 1962). Such applications may be subject to environmental impact assessment by virtue of the Pipe-line Works (Environmental Impact Assessment) Regulations 2000. Since the enactment of the Planning Act 2008, such pipelines are considered to be nationally significant infrastructure projects and, as such, the application for consent under the Pipe-lines Act 1962 must be made to the National Infrastructure Directorate (NID) of the Planning Inspectorate under the Planning Act 2008. Pipelines that are 40 kilometres or less are considered to be local pipelines, requiring planning consent from the local authority.

The conveyance of natural gas through pipelines to domestic and other customers is dealt with under the Gas Safety (Management) Regulations 1996, which require gas transporters to prepare a safety case for approval by the HSE.

The regulatory regime for gas is founded in the Gas Act, the principal UK legislation governing onshore gas operations. The Gas Act prohibits certain gas activities in GB unless the person or company carrying out those activities is licensed to do so, or benefits from an exemption (the position in Northern Ireland is similar). The prohibited activities are (broadly):

- conveying gas through pipelines to premises (or certain other pipeline systems) other than a gas interconnector. A person licensed to convey gas through pipelines is a gas transporter;
- supplying to premises gas that has been conveyed through pipes. A person licensed to supply gas is a gas supplier;
- arranging with a gas transporter for the conveyance of gas in a pipeline system. A person licensed to make arrangements with a gas transporter is a gas shipper; and
- participating in the operation of an interconnector, an interconnector being a pipeline system situated in GB for conveying gas between GB and another country.

Licences to carry out these activities are granted subject to conditions. The conditions of the licences are the principal tool by which Ofgem regulates the activities of licence holders. Overall, the regulatory regime comprises the Gas Act (and certain other primary legislation), regulations issued under the Gas Act, licence conditions, and a number of codes and subsidiary documents that exist pursuant to licence conditions (including the Uniform Network Code (the UNC); see question 13).

The UK regime complies with the requirements of the European regulations and directives on the internal gas market.

Gas transporter

A gas transporter owns and operates a pipeline system in GB that conveys gas from one point of the pipeline system to another. A gas transporter is prohibited from holding a gas shipper's licence or a gas supplier's licence. NGG and each of the DN operators are gas transporters, holding gas transporter licences. NGG is licensed as operator of the NTS. Each gas transporter is responsible under its licence for ensuring that its pipeline system has adequate capacity to meet the firm demand that is connected to it. Gas transporters' tariffs are regulated by Ofgem.

As NTS operator, NGG is responsible for the physical balancing of the GB pipeline system. Broadly, NGG is required to ensure, on a daily basis, that the quantities of gas put onto the GB pipeline system by gas shippers match the quantities of gas taken off the GB pipeline system. However, this does not impose on NGG any obligation as to the availability of gas for delivery to the system – in the case of a shortfall in gas supplies, the system is kept in balance by load shedding under prescribed emergency arrangements. The arrangements for this balancing mechanism are set out in the UNC (see question 13).

Gas shipper

The role of a gas shipper is to contract with the gas transporters for transportation of gas on their pipeline systems. The gas shipper is effectively required by its licence to comply with the network code for the relevant gas transporter across whose network it will be arranging for

gas to be conveyed. In practice, if a gas shipper wishes to ship gas across the GB pipeline system, it will need to comply with the UNC.

Gas shippers typically contract with upstream parties, such as offshore producers, LNG importers and interconnector shippers, to purchase gas at the point at which gas is delivered into the GB pipeline system. An upstream party may act as gas shipper itself provided that it holds a shipper's licence.

In terms of the offtake of gas from the GB pipeline system, in principle a gas shipper will on-sell the gas to a licensed gas supplier for supply to the consumer (see below). In practice, many gas suppliers also act as gas shipper (holding both types of licence) so that no transaction for the sale and purchase of gas is required prior to the supply of the gas to the consumer. A person who engages in gas trading as described below will need to be licensed as a gas shipper. See also question 13.

Gas supplier

A gas supplier contracts with a customer to supply gas offtaken from the GB pipeline system to the customer's premises. Customers include power generators, large-scale industrial users and domestic customers. Competition in supply exists at all levels of the GB market; all consumers are free to contract with a gas supplier of their own choice. There are no price controls applicable to gas suppliers – the level of supply tariffs is not regulated. As noted above, in principle the supplier will also contract with a gas shipper to arrange for the gas to be conveyed across the pipeline system to the premises. In practice, gas suppliers normally also hold a gas shipper licence.

The distinction in GB between gas shipping and gas supply is important. The gas shipper's role is a wholesale role, and it is required to contract with a gas transporter to have gas transported through the transporter's pipeline system. Gas suppliers have a retail role (which is reflected in the consumer-protection conditions of their licences). They do not contract with gas transporters; instead, they contract with a gas shipper for this purpose. The gas supply activity is regulated and requires a Gas Act licence, whether the supply is for industrial, commercial or residential use.

Interconnectors

An interconnector operator operates an interconnector that connects one country to another (eg, the Bacton-Zeebrugge interconnector between GB and Belgium).

Each interconnector has an interconnection agreement with National Grid NTS governing the operation of the interconnection point. It is a requirement of the EU Codes that there is an interconnection agreement at each interconnection point. Different rules for booking capacity, nominations and allocations apply at the interconnection points, for example, capacity is booked on the European capacity booking platform, PRISMA. These rules can be found in the EID section of the UNC.

Licensing

A person wishing to carry out a licensable activity must apply for a licence to do so. This application will be made to Ofgem. Ofgem is responsible for granting licences under the Gas Act, enforcing the conditions of the licence and proposing modifications to it. Its enforcement functions are twofold. First, it may enforce the conditions of a licence by imposing an enforcement order requiring the licensee in breach to remedy the breach and take other appropriate actions. Second, it may also impose a financial penalty of up to 10 per cent of the licensee's turnover. Ofgem also has competition law functions to take action for a breach of the Competition Act 1998 and European competition law. It exercises these competition powers concurrently with the Competition and Markets Authority (the CMA).

Exceptions and exemptions

The Gas Act sets out some exceptions from the requirement to hold a licence. None of these apply to a gas shipper. BEIS is responsible for granting exemptions from the requirement to hold a licence. BEIS may grant class exemptions or individual exemptions. It is very rare for BEIS to grant an individual exemption, and a strong case would need to be put giving robust and compelling reasons why an individual exemption should be granted. BEIS has granted some class exemptions. These are set out in statutory instruments made by the SoS.

Licence conditions

All Gas Act licences are granted subject to conditions. The conditions impose a variety of obligations on licence holders, such as:

- obligations to provide information to Ofgem;
- obligations in relation to regulatory accounts;
- obligations as to cross-subsidy between different businesses, and non-discrimination between classes of user or customer;
- price controls for price-regulated activities (network ownership and operation);
- obligations to establish and maintain codes and other documents that underpin the operation of the GB market; and
- consumer protection obligations.

The conditions broadly divide into standard conditions (which apply in all licences of the relevant class) and special conditions (which apply only to a particular licence holder). The Gas Act sets out the framework under which licence conditions can be modified. Broadly speaking, Ofgem can modify licence conditions provided Ofgem gives notice to each relevant licence holder, BEIS, HSE and Citizens Advice agencies, these stakeholders are properly consulted (with BEIS able to reject modifications outright) and Ofgem provides reasons for its decision. Ofgem's decision is subject to appeal to the CMA.

Most energy-related proposals in England and Wales (and their territorial waters) will require an application for development consent, will need to comply with planning policy (see question 3) and will be subject to environmental impact assessment. Depending on the size of infrastructure proposed, such consent will be determined either by a local level municipal body (the local planning authority) or the National Infrastructure Directorate within the Planning Inspectorate, an executive agency of the government. The National Infrastructure Directorate took over the functions of the Infrastructure Planning Commission under the terms of the Localism Act 2011. The aim of this change was to reintroduce democratic accountability to the decision-making process in respect of NSIPs, with decisions in respect of development consent being taken by the relevant secretary of state on advice from the Planning Inspectorate.

Environmental and safety regulation

In addition to the licensing requirements under the Gas Act regime referred to above, the construction and operation of pipelines is regulated under a range of environmental and safety legislation. This area of law gives rise to legal requirements for safety case documents to be prepared, risk assessments to be carried out, operational permits relating to construction works and prescribed processes to be obtained (eg, gas processing activities or the generation of waste materials), and wide-ranging duties relating to the operation and maintenance of pipelines. The principal pipelines safety legislation is the Pipelines Safety Regulations 1996. In relation to environmental regulation, gas transportation activities are subject to a range of operational duties and potential liabilities in the event of an accident.

9 How does a company obtain the land rights to construct a natural gas transportation or storage facility?

Offshore

The laying of offshore pipelines is governed by the Petroleum Act. It is illegal to construct or use a controlled pipeline (broadly, a pipeline in the sea adjacent to the UK or within any designated area under the Continental Shelf Act 1964) in the absence of an authorisation issued by the OGA. In relation to a new storage facility, the developer must obtain a lease of the seabed from the Crown Estate (the body that manages the Crown's property rights).

Onshore

The Pipe-Lines Act 1962 contains an authorisation regime for pipelines on land. It gives the SoS powers to make a compulsory purchase order to facilitate the construction of a pipeline. The authorisation regime does not apply to all onshore pipelines (specifically excluded are pipelines constructed by gas transporters (see question 8)); however, the laying of gas pipes by a gas transporter, in qualified circumstances, is subject to general development consent. In addition, the SoS may grant a compulsory purchase order for the benefit of a gas transporter under powers contained in the Gas Act.

Storage

There is no specific legislation in relation to onshore storage facilities; the developer would need to secure land rights through direct negotiation with the landowner.

10 How is access to the natural gas transportation system and storage facilities arranged? How are tolls and tariffs established?

Offshore

Access to offshore pipelines (and onshore reception terminals) is governed by an Infrastructure Code of Practice adopted in 2012 (the ICoP) (replacing an earlier code published in 2004). The aim of the ICoP is to facilitate access to offshore infrastructure, particularly where required to support development of small marginal fields.

The ICoP establishes a framework for the negotiation of access terms and tariffs. The ICoP does not prescribe terms or tariffs, and the parties are free to agree these having regard to certain principles set out in the ICoP. The ICoP principles require the parties to provide each other with adequate information during the negotiation process, for infrastructure owners to provide access in a transparent and non-discriminatory manner, for the parties to agree fair and reasonable tariffs and for the parties to publish key agreed commercial provisions once terms are agreed (including the agreed tariff). In addition, the principles require the parties to settle disputes by referral to the SoS.

Under the ICoP, infrastructure owners are required to publish details of available capacity. A potential user can then ask the owner for outline commercial terms and an indicative tariff, and the user must then supply information about its capacity requirements. This should allow meaningful negotiations to start, with the aim of reaching agreement within six months.

Though the ICoP is a voluntary arrangement and, therefore, not binding, it applies to all offshore infrastructure owners, those parties holding existing capacity rights and potential users. In the event agreement is not reached, an application may be made to the OGA to exercise powers under the Energy Act 2011 to grant access. When considering an application, the OGA must take into account:

- capacity which is or can reasonably be made available in the pipeline or at the facility;
- any incompatibilities of technical specification that cannot reasonably be overcome;
- difficulties that cannot reasonably be overcome and that could prejudice the efficient, current and planned future production of petroleum;
- the reasonable needs of the owner and any associate of the owner for the conveying and processing of petroleum;
- the interests of all users and operators of the pipeline or facility;
- the need to maintain security and regularity of supplies of petroleum; and
- the number of parties involved in the dispute.

The government has published guidance on how applications will be considered. To date, instances of this have been very rare as, in general, parties negotiating access terms prefer to find their own solution rather than having terms imposed on them by the SoS.

Onshore

Access to onshore pipelines is governed by the Gas Act. Here, the requirement is for the owner of the pipeline network to negotiate with potential users on the basis of its published commercial terms and tariffs. In the event agreement cannot be reached, an application may be made to Ofgem to resolve the dispute. Where Ofgem is satisfied that granting access will not prejudice the efficient operation of the pipeline or the transportation of gas under existing contractual commitments, it may specify access terms and a tariff and require the pipeline owner to enter into an agreement setting out such terms with the user by a specified date. In specifying terms, Ofgem must give due consideration to the cost to the pipeline owner of operating the pipeline and setting the tariff at a level that allows the owner to recover an appropriate return on the capital value of the pipeline. See also questions 13 and 16.

Storage

The current requirements for third-party access to storage facilities are set out in the Gas Act. These requirements reflect the Second EU

Gas Directive and the accompanying GB legislation, the Gas (Third Party Access) Regulations 2004 (the TPA Regulations). The negotiated third-party access (TPA) requirements apply to those facilities for which access is economically necessary to secure an efficient market for storage services. Currently, only two facilities in GB are affected by the TPA Regulations: Hornsea (SSE) and Rough (Centrica). In relation to Rough, a series of regulatory undertakings also applies that place additional constraints on the sale of storage capacity, and which was introduced in 2003 when Centrica acquired the facility from Dynergy. These undertakings have now been amended (in May 2016) in order to introduce more flexibility in those constraints where Centrica cannot meet its capacity obligations otherwise. The main provisions governing access require storage operators not to discriminate between parties in giving access to the facility; negotiations for access are to be conducted in good faith by the storage operator; and storage operators to publish the contractual terms for access on an annual basis.

An exemption is available from the TPA requirements where Ofgem is satisfied that use of the facility by other users is not necessary for the operation of an economically efficient gas market or where certain specific requirements are met, including where the facility will increase the UK's security of supply and the owner is a person other than a gas transporter.

In September 2009, the Third Internal Energy Market Package came into force and, since March 2011, GB storage operators have been obligated to comply with the relevant provisions of the Third EU Gas Directive and Gas Regulation as transposed into GB legislation. In relation to access to gas storage facilities, storage operators must follow new requirements, including:

- additional provisions to prevent discrimination in respect of TPA storage facilities;
- the unbundling of storage operators from vertically integrated companies;
- increased transparency and information provision; and
- enhanced monitoring and enforcement powers for Ofgem.

In relation to the offshore storage of gas, the Energy Act 2008 introduced a new framework that allowed for the grant by the OGA of a licence to store gas offshore. Prior to this, offshore storage had been permissible; however, the new legislation clarified the law and vested in the Crown Estate the exclusive right to store gas (including carbon dioxide) offshore. As a result, a new offshore gas storage project will require both a gas storage licence and a lease from the Crown Estate.

11 Can customers, other natural gas suppliers or an authority require a pipeline or storage facilities owner or operator to expand its facilities to accommodate new customers? If so, who bears the costs of interconnection or expansion?

Offshore

In relation to controlled pipelines, the Petroleum Act gives the OGA powers to require alteration of the route of a new pipeline and the modification of the capacity of an existing pipeline. Where the capacity increase (or new connection) is in response to a request from a user, the OGA can require the user to compensate the pipeline owner for the costs incurred in modifying the pipeline.

Onshore

Under the Gas Act, a similar arrangement exists in relation to pipelines operated by a gas transporter. On application for a connection or increase in capacity, Ofgem can require the gas transporter to make the connection or increase the capacity. To the extent the associated costs are not recoverable elsewhere, Ofgem can require the user to compensate the gas transporter.

Storage

There are no equivalent provisions to those noted above regarding storage facilities.

12 Describe any statutory and regulatory requirements applicable to the processing of natural gas to extract liquids and to prepare it for pipeline transportation.

There are no requirements under either the Petroleum Act or the Gas Act specifying statutory or regulatory requirements in relation to the processing of natural gas to extract liquids.

The Gas Safety (Management) Regulations 1996 (GSMR), which came into force in 1996, impose requirements on the composition and pressure of gas and in respect of gas escapes. The GSMR ensure no person can transport gas in a pipeline network unless a safety case has been prepared and accepted by the HSE. Various specific gas processing activities are regulated under the Environmental Permitting (England and Wales) Regulations 2016, so any such activities that are necessary as part of a gas storage operation would require a permit under that regime.

13 Describe the contractual regime for transportation and storage.

Transportation

Network codes and the uniform network code (UNC)

The UNC contains the contractual framework for onshore gas transportation in GB. It has a common set of rules, which ensure that competition can be facilitated on level terms.

Each gas transporter is required by a condition in its licence to establish transportation arrangements (ie, arrangements that enable gas shippers to use that transporter's pipeline system) and to have in place a network code (an individual network code) that sets out those transportation arrangements. The transportation arrangements (and network codes) are required to meet certain objectives set out in the licence condition (such as ensuring effective competition between gas shippers and gas suppliers). Thus, NGG and each of the DN operators are required to have a network code. A gas transporter may only contract with gas shippers on the terms of its network code.

In order to maintain consistency of terms for use of different pipeline systems, the gas transporters are also required by their licences to establish collectively a uniform network code. Each of the individual network codes must incorporate the UNC. In practice, the UNC contains all of the detailed rules required, and the individual network codes are very short documents (one page only) that simply incorporate the UNC (the term UNC is used to include the individual network codes into which it is incorporated). Prior to the disposal of four DNs in 2005, NGG had a single network code for the whole system. The UNC was introduced at the time of the disposal to deal with the fragmentation of the network to maintain a common set of transportation arrangements across a number of networks owned and operated by different transporters.

The individual network codes are codes, not contracts as such. However, they are given contractual force through framework agreements signed by the gas transporter with the gas shippers (or other parties) who are to be bound by the rules in the UNC. Thus NGG has signed a framework agreement with the gas shippers who use the NTS, as has each of the DN operators with those gas shippers using their network. Each framework agreement contains accession arrangements to allow new gas shippers to sign. Any shipper wishing to ship gas on the NTS or LDZs must sign the relevant framework agreement or agreements, and, thereby, be bound by the UNC. Gas suppliers are not parties to the UNC but are (in effect) represented by their gas shippers.

Xoserve and funding, governance and ownership

Xoserve was established at the time NGG sold four of its DNs in 2005. It was set up as a 'Transporters Agency' in order to provide a centralised approach to data flows between different gas transporters and gas shippers. Its functions include operating UK Link, the IT system which supports the UNC, managing customer switching, billing transportation charges, and managing and updating the supply point register. Xoserve is jointly owned and controlled by the gas transporters.

In October 2013, Ofgem reviewed Xoserve's role and funding in the context of future gas industry changes, and determined a more fully cooperative governance model should be established (the funding, governance and ownership or FGO Decision).

The main consequence of the FGO Decision is that, from 1 April 2017, gas transporters and gas shippers will be required to jointly participate in Xoserve's governance and fund its activities. However, there will be no change to Xoserve's legal ownership arrangements. The gas transporters will remain Xoserve's legal owners but the new governance arrangements will mean Xoserve will be required to respond to the needs of all its customers (ie, gas shippers as well as gas transporters) and operate as a 'not for profit' business, with its customers as its 'economic' owners.

Gas shippers will now have a greater say over the governance and operations of Xoserve, and will nominate 'gas shipper' directors to the Xoserve board. They will also now be responsible (along with gas transporters) for directly funding Xoserve's costs in delivering UNC related services.

Scope of UNC

Under the UNC, NGG as operator of the NTS is known as National Grid NTS; the operators of the LDZs are known as DN operators; National Grid NTS and the DN operators are referred to collectively as transporters. The users of the systems are referred to as users. Gas shippers are users. The term user also includes the DN operators as users of the NTS (NTS exit capacity from the NTS to an LDZ is held by the relevant DN operator). The NTS and each LDZ is a system; the term total system refers to the NTS and all LDZs taken together.

The UNC defines rights and obligations for all users of the total system. It creates contractual rights between each transporter and the users of its system, and between NGG as operator and the DN operators as users of the NTS. Generally, the UNC does not create rights and obligations as between gas shippers.

Structure of UNC

The UNC comprises a number of separate parts:

- the Transportation Principal Document, setting out the transportation arrangements between transporters and users;
- the Offtake Arrangements Document, setting out technical and operational arrangements between transporters governing the interfaces between their systems;
- the European Interconnection Document, setting out provisions relating to interconnection points which differ from, or are additional to, the provisions of the Transportation Principal Document in respect of other entry and exit points (including in respect to capacity, nominations and allocation);
- the Modification Rules, setting out procedures for the modification of the UNC;
- General Terms, setting out common legal boilerplate provisions applicable to all parts of the UNC; and
- the Transition Document, containing rules for the transition from the network code arrangements pre-2005 to the UNC.

Of these parts, the Transportation Principal Document contains most of the rules applicable to gas shippers.

Governance of the UNC

Under their gas transporters licences, the transporters are required to establish joint governance arrangements, including a joint office. The governance procedures of the UNC are operated by the Joint Office of Gas Transporters. The most important function of the Joint Office is to manage the modification procedures.

Modification

The UNC is non-negotiable, but it can change over time to reflect industry and regulatory developments. The gas transporters licence contains a condition requiring the transporters to establish and operate procedures for the modification of the UNC. These procedures are contained in the Modification Rules, which form part of the UNC.

Overview of UNC - Transportation Principal Document

The UNC Transportation Principal Document includes the following main operational areas:

- the entry and exit capacity regime (see below);
- energy balancing (see below);
- entry and exit requirements: the requirements for physical deliveries and offtakes, including gas specification, flow restrictions, flow profile notifications, and liabilities of the transporter for failure to accept delivery of gas or make gas available for offtake;
- supply point administration: the processes that support competition in retail supply, including procedures for managing the database of supply points (individual consumers' premises) and for customer switching;
- interruption: related to exit capacity, the rules under which exit points can be designated as interruptible and subject to

interruption for the purposes of managing transportation constraints in a system;

- metering; and
- maintenance and operational planning.

Entry and exit capacity regime

The UNC classifies the various kinds of points at which gas can enter and exit the NTS and LDZs, including NTS entry points and NTS exit points. The UNC generally operates on the basis of separate NTS entry and exit capacity (rather than point-to-point rights). Users must hold NTS entry capacity in order to deliver gas to the NTS at an NTS entry point, and NTS exit capacity in order to offtake gas from the NTS at an NTS offtake point. NTS entry capacity is released and allocated by NGG in a variety of timescales (ranging from 15 years to daily) through auction mechanisms. NGG can also buy back NTS entry capacity through similar auction mechanisms. The price controls in NGG's licence conditions provide it with incentives to optimise the amount of NTS entry capacity that is made available.

The UNC approach to NTS exit capacity is broadly the same as for NTS entry capacity. This approach distinguishes between two kinds of exit capacity - flat capacity (for a given daily offtake quantity) and flexibility capacity (allowing a within-day profile of offtake). The auction-based approach for exit capacity was introduced in 2009 and replaced the use of interruption rights for managing NTS transportation constraints.

Energy balancing

The energy balancing arrangements include the daily balancing rules (see below) under which daily imbalance charges are calculated for each user. They also include provisions for:

- users to nominate gas flows at entry points and at exit points (or groups of exit points) each day, and the payment by users of scheduling charges where their nominations are inaccurate;
- the estimation of demand at exit points at which the meters are not daily-read (on the basis of demand profiling algorithms);
- the reconciliation of estimated demand at non-daily read exit points when periodic meter readings are obtained, and other reconciliations, and the cash-out of the reconciliation quantities; and
- energy balancing neutrality, under which NGG NTS (as the counterparty to the energy balancing cash-out transactions) is kept neutral to the overall net energy balancing charges, subject to certain incentives imposed on NGG NTS.

Daily gas balancing

The gas balancing regime under the UNC operates on a daily basis, by reference to the gas day, which starts at 5am, and on the basis of the energy content (in kWh) of gas rather than volume. The gas balancing regime comprises arrangements under which NGG NTS can take measures to keep the system in physical balance over the gas day; and arrangements that provide for incentives for gas shippers (as users) to balance the quantities of gas they deliver to and offtake from the system each gas day.

There is no obligation on a user to balance its deliveries and offtakes on a gas day. However, the balancing regime provides an incentive to do so. The intensity of the incentive depends on how tight supply and demand are on the gas day. For each user, a daily imbalance is calculated. The daily imbalance is the difference between the quantities of gas delivered to and offtake from the system by the user on the gas day. The daily imbalance is cashed-out each day. Cash-out is characterised as a transaction between NGG and the user by which a quantity of gas equal to the daily imbalance is sold and purchased between the user and NGG NTS. Where the daily imbalance is positive, the user's position is long (in other words, it has delivered more gas to the system than it took on the gas day) and the imbalance quantity is sold by the user to NGG. Conversely where the daily imbalance is negative, the user's position is short (in other words, it has delivered less gas to the system than it took on the gas day), and the imbalance quantity is purchased by the user from NGG NTS. The price at which the imbalance is cashed-out is derived from the balancing actions taken by NGG on the gas day (see below).

National balancing point (NBP)

The daily imbalance can be calculated in the way set out above because of the entry/exit capacity regime. Where gas is delivered to the system at an NTS entry point, the user will pay the cost of the NTS entry capacity required to be held for such delivery. The gas is then 'entry-paid'. The cost (of NTS exit capacity) required to offtake the gas from the system does not depend on where the gas entered the system. In other words, gas that enters the system at any entry point is homogenous in value with gas delivered at any other entry point. For this reason, a single gas balance can be calculated in respect of gas delivered to, and taken from, the system, irrespective of the entry points and exit points of delivery and offtake. There is, therefore, conceptually a 'national balancing point' to which all gas entering the system can be treated as delivered, and from which all gas exiting the system can be treated as taken. The NBP is purely conceptual - it is a virtual and not a physical point.

Trade nominations - NBP trading

As well as delivering gas to the system and system entry points, and taking gas to system exit points, users are entitled to trade entitlements to gas within the system. Such trades are made between two users by submitting trade nominations to NGG. The trade nomination submitted by one of the two users is an acquiring trade nomination, and the trade nomination submitted by the other user is a disposing trade nomination. The two trade nominations must be for an equal quantity of gas.

Trade nominations are reflected in the calculation of a user's daily imbalance. The quantity under an acquiring trade nomination is credited to the user, and the quantity under a disposing trade nomination is debited from the user. Thus, the full equation for a user's daily imbalance is:

- aggregate quantities delivered by the user to the system at system entry points, plus
- aggregate quantities under acquiring trade nominations submitted by the user, less
- aggregate quantities offtaken by the user from the system at system exit points, plus
- aggregate quantities under disposing trade nominations submitted by the user.

Users can therefore contract to buy and sell gas and perform those contracts by submitting trade nominations. The quantity of gas subject to an acquiring trade nomination is treated (in the imbalance calculation) as equivalent to gas that has been delivered to the system at a system entry point, and is therefore entry paid. Thus, trade nominations can be considered as transactions in gas at the NBP. As indicated above, this is conceptual only.

NGG balancing actions

NGG is responsible for maintaining the physical balance of the system each gas day. NGG is permitted to take a variety of actions for this purpose, including buying and selling gas (to increase or decrease the quantities of gas coming onto or leaving the system). For these purposes, NGG can itself make NBP trades with users and submit trade nominations (although no imbalance is calculated for NGG itself).

NGG can trade gas through the on-the-day commodity market (OCM), which is a day-ahead and within-day gas trading market run by an independent market operator, APX. The market has its own market rules, which shippers must sign up to if they wish to participate in the market. NGG participates in this market for the purposes of buying and selling balancing gas. The market is an anonymous, screen-based, fully cleared trading platform for day-ahead and within-day gas trading. Once a trade on the OCM is accepted, APX will submit details of the trade to NGG by making the appropriate trade nominations in accordance with the network code. NGG can also trade gas (for NBP delivery) by transactions off the OCM, such as over-the-counter (OTC) trades and trades on other trading platforms. NGG's use of balancing actions, and net revenues earned (as system operator) from balancing actions, is controlled by conditions in its licence. It is also required to report and publish certain details of the quantities and prices of the trades it enters into for balancing purposes.

Cash-out prices

The cash-out price for a user's daily imbalances on a gas day is derived from the balancing actions taken by NGG for that gas day. For this purpose, the UNC provides for the calculation of three different prices:

- the system average price (SAP) is the weighted average price of all balancing actions taken by NGG for a gas day;
- the system marginal buy price (SMBP) is the price of the highest-priced balancing action taken by NGG for the gas day for the purchase of gas (that is, for an acquiring trade nomination by NGG). The SMBP is subject to a floor of the system average price plus 0.0287p/kWh (the floor on the SMSP and cap on SMBP ensure that a price can be calculated when no balancing actions of the relevant kind were taken, and also ensure a minimum spread between these prices and SAP, and so a minimum incentive to balance); and
- the system marginal sell price (SMSP) is the price of the lowest-priced balancing action taken by NGG NTS for the gas day for the sale of gas (that is, for a disposing trade nomination by NGG NTS). The SMSP is subject to a cap of the SAP less 0.0324p/kWh.

The cash-out price payable by a user in respect of its daily imbalance is:

- where the daily imbalance is positive (in other words, the user's position is long) the system marginal sell price; and
- where the daily imbalance is negative (in other words, the user's position is short) the system marginal buy price.

In effect, the cash-out regime is based on the assumption that the user's imbalance was the marginal imbalance on the system, causing NGG to take the most expensive balancing action that would remedy that imbalance. In principle, the cash-out price will be less attractive to the user than a market price contracted for in advance; and so the user has an incentive to avoid the cash-out price by minimising its imbalance.

Interconnectors

The interconnector licence requires the licensee to submit a charging methodology to Ofgem for approval in respect of access to its interconnector. The charges and the application of the charging methodology must be objective, transparent, non-discriminatory and published.

Storage

Each of the different storage operators publishes storage terms, usually in the form of a standard storage contract or SSC. In most cases the terms offered are based on the SSC prepared for Rough and Hornsea at the time of the separation of British Gas's transportation and storage businesses in 1999.

The key features of the SSC are as follows:

- the SSC is a bilateral agreement between the storage operator and the user. The terms of the SSC between the storage operator and different users are identical and this facilitates the trading of capacity and gas in store between users;
- storage capacity comprises deliverability (the rate at which gas can be withdrawn), space (the entitlement to have gas stored in the facility) and injectability (the rate at which gas can be injected). In most cases capacity is sold in 'bundled' units (ie, each unit comprises a fixed element of deliverability, space and injectability) (though the SSC supports trading on an 'unbundled' basis);
- storage users are entitled to use their firm capacity rights for the term of the SSC subject to the storage operator's maintenance and other outage rights. Capacity may also be constrained where the quantity of gas in store affects the operation of the facility (eg, high inventory levels reduce injection rights). Interruptible capacity may also be available when storage users are not using their firm capacity rights in full, or where the storage operator is able to create additional capacity where users are nominating in a different direction (ie, by netting off injections and withdrawals); and
- storage users pay storage charges on a monthly basis in arrears; the charges comprising a capacity and commodity element.

Regulation of natural gas distribution**14 Describe in general the ownership of natural gas distribution networks.**

Separate from the DNs (see question 7), there are a number of much smaller networks (typically on a residential or industrial estate) built by

developers and connected to the local LDZ. The Gas Act requires the developer (referred to as an independent gas transporter) to hold a gas transporter's licence and to prepare a network code (which need not be as complex as the UNC).

15 Describe the statutory and regulatory structure and authorisations required to operate a distribution network. To what extent are gas distribution utilities subject to public service obligations?

In relation to the operation and use of a gas DN, see questions 8 and 13.

As regards public service obligations:

- a gas transporter is under a duty in the Gas Act to connect premises to its DN where the premises are located within a specified distance, or where the owner of the premises undertakes to supply the connecting pipeline; and
- the conditions of a gas supplier licence contain public service type requirements, including specific regulations for domestic customers, the protection of specific classes of domestic customer and the requirement to provide 'last resort' services in the event of the failure of another gas supplier.

Climate change levy and tax

From 2001, a climate change levy has been imposed on downstream activities, chargeable on supplies of commodities used as fuels for lighting, heating and power by business (not domestic) customers. Broadly, from 1 April 2016, supplies of electricity are charged at 0.559p per kWh, gas supplied by a gas utility at 0.195p per kWh, petroleum gas and liquid hydrocarbons at 1.251p per kilogram and any other commodity at 1.526p per kilogram.

Relief or exemption from the levy is available for certain supplies to charities, certain high energy users and where used to conduct environmental processes, although an exemption for supplies made by certain renewable energy sources was removed from 1 August 2015. Broadly, only energy suppliers, or wholesalers and retailers, making supplies to business end users are required to register for the levy.

Natural gas, not intended for road fuel use, is generally VAT-exempt and free of customs duty when imported to the UK from any other country.

16 How is access to the natural gas distribution grid organised? Describe any regulation of the prices for distribution services. In which circumstances can a rate or term of service be changed?

Third-party access to a gas DN is implemented through the Gas Act, as noted in question 10, and in a manner that is broadly similar to the approach adopted under the Petroleum Act in relation to offshore pipelines. In practice, however, rights of access to onshore pipelines are regulated through the terms of the gas transporter's licence granted under the Gas Act.

The conditions of this licence require the gas transporter to establish transportation arrangements that are designed to achieve the efficient and economic operation of the transporter's pipeline network (and the pipeline networks of other gas transporters) and the promotion of effective competition in gas supply. For this purpose, the licence requires the gas transporter to prepare a network code, and together with other gas transporters to prepare the UNC (an overview of which is given in question 13). The licence also requires the gas transporter to carry on its transportation business so as to ensure no affiliate, gas shipper or supplier or DN operator obtains an unfair commercial advantage from a preferential or discriminatory arrangement.

Transportation charges must be set by the gas transporter to comply with the price control conditions in the gas transporter's licence. National Grid and the DNs are funded by a price control mechanism that is agreed with and set by Ofgem. Historically Ofgem carried out a price-control review over a five-year period based on a retail price index model with an element of incentivised efficiency savings; this funding model was known as RPI-X. Ofgem has now introduced a new regulatory framework to replace RPI-X known as RIIO: Revenue = Incentives + Innovation + Outputs. This RIIO model is intended to offer incentives for securing investment and driving innovation. The current RIIO framework applies to the eight years from 2013 to 2021.

17 May the regulator require a distributor to expand its system to accommodate new customers? May the regulator require the distributor to limit service to existing customers so that new customers can be served?

Under the Gas Act, a person may ask a gas transporter to increase the capacity of the gas transporter's pipeline or to connect it to a different pipeline. Subject to the gas transporter's representations and health and safety considerations, Ofgem can direct the gas transporter to make the necessary modifications. The directions may specify the following: the nature of the modification the gas transporter must make to its pipeline; and the charges payable by the person requesting the modification, and the arrangements that person should make to provide security for the charges that will be payable once the modification is finished.

18 Describe the contractual regime in relation to natural gas distribution.

See the overview of the UNC in question 13. The UNC and individual framework agreements comprise the contractual regime for use of the whole GB pipeline network (in other words, both the high-pressure NTS and the 12 LDZs).

Regulation of natural gas sales and trading

19 What is the ownership and organisational structure for the supply and trading of natural gas?

Since the introduction in 1996 of the network code (and the UNC since 2005), the major UK platform for gas trading has been the NBP trading mechanism (see question 13). NBP trading has increased over time (with beach trade volumes decreasing) as traders have adopted the standard NBP terms established in 1997 as the principal trading tool. Revised standard NBP terms were published in 2015. Unlike physical trading, NBP trading is concerned with trading entitlements to gas delivered to the NTS, and therefore the usual risks associated with specification and under or over-delivery are avoided.

20 To what extent are natural gas supply and trading activities subject to government oversight?

The trading of gas does not itself require a licence, although all gas traders will hold a Gas Act licence. This may be a gas supplier's licence where trading is to support physical supply operations, and a gas shipper's (or supplier's) licence where trading gas at the NBP. To do this, the trader must be party to the UNC and therefore hold a gas shipper licence (even though the trader may not be physically delivering or off-taking gas from the GB pipeline network). See also question 13.

21 How are physical and financial trades of natural gas typically completed?

As explained in question 22, users are entitled to trade entitlements to gas within the system. OTC or non-exchange trades of natural gas in the UK are bilateral trades between gas shippers. OTC trades consist of NBP spot, forward and option transactions, beach contracts and interconnector trades. Transactions at the NBP are documented using the Short Term Flat NBP Trading Terms and Conditions 2015 (NBP 15). As mentioned previously, the NBP is conceptual no physical gas delivery occurs and delivery is effected by the submission of trade nominations. The reference to flat reflects the fact that there is no interruption and no volume tolerance. NBP transactions may be entered into over the phone or on screen between parties directly or through a broker. Where there is a shortfall in the delivered quantity of gas resulting in the buyer incurring an imbalance charge, the buyer is compensated on the basis of the SMBP. The NBP 15 includes a confirmation, which confirms the details of a transaction entered into, including the details of the buyer and seller, the supply period, the daily quantity, contract price and any special conditions. Where parties wish to amend the NBP 15, the market practice is to enter into a master netting agreement that incorporates the NBP 97 by reference and amends such terms (NBP amending agreement). A template NBP Annex has been published by the International Swaps and Derivatives Association (ISDA) to facilitate OTC trading at the NBP under each of the 1992 ISDA master agreement and 2002 ISDA master agreement. Similarly, an NBP appendix template has been developed by the European Federation of Energy

Traders (EFET) for use with the general agreement concerning the delivery and acceptance of natural gas (GA). The ISDA NBP Annex or EFET NBP appendix are likely to be used where parties already have an ISDA master agreement or EFET GA in place.

Financial NBP trades can be entered into under an ISDA master agreement or EFET GA without the need to enter into an NBP Annex or NBP appendix (as the case may be).

'Beach' trades of natural gas from producers at receiving terminals to gas shippers with delivery at a receiving terminal are documented using the standard terms and conditions for the sale and purchase of natural gas for UK short-term deliveries at the beach (Beach 2015). Unlike NBP 15 transactions, beach transactions provide for the delivery of and transfer of title of physical gas. Like the NBP 15, the Beach 2015 provides for compensation if there is a shortfall in the delivery of the quantity of gas resulting in an imbalance charge.

NBP gas can also be traded for balancing purposes or trading purposes on the OCM. This is a regulated anonymous screen-based market operated by ICE Endex, which 'clears' day-ahead and within-day NBP transactions. Only NGG as system operator and licensed shippers can trade on the OCM. The OCM allows for NGG to buy or sell natural gas to balance the NTS and for gas shippers to manage their positions.

22 Must wholesale and retail buyers of natural gas purchase a bundled product from a single provider? If not, describe the range of services and products that customers can procure from competing providers.

No. The wholesale markets operate on an unbundled basis. Gas shippers and gas suppliers can trade gas at the 'beach' or at the NBP (see question 13). Independently, gas shippers can buy (and sell) NTS entry and exit capacity through auction arrangements set out in the UNC, and the UNC facilitates the trading of capacity among gas shippers. In relation to storage operations, the SSC will allow users to trade gas in store independently of storage capacity, and users can trade storage capacity on an unbundled basis.

Regulation of LNG

23 What is the ownership and organisational structure for LNG, including liquefaction and export facilities, and receiving and regasification facilities?

Currently, there are four receiving and regasification facilities in the UK; there are no liquefaction or export facilities. The regasification facilities are located at the Isle of Grain (National Grid Grain LNG, a subsidiary of National Grid plc), and at Milford Haven where there are two facilities, South Hook (Qatar Petroleum, Exxon and Total) and Dragon LNG (owned 50:50 between Shell and Petronas).

The levels of deliveries of LNG are determined by the holders of capacity in each of the terminals and the access they have to LNG cargoes. LNG imports peaked in 2011 at 271TWh, declining sharply in 2012 and 2013 to 103TWh, before rising to 124TWh in 2014 and 152TWh in 2015.

A number of LNG storage sites were owned and operated by NGG but they have all since closed. In addition, there are small LNG storage sites, supplied by road tanker, which support town networks at Thurso, Wick, Campbeltown and Oban in Scotland.

24 Describe the regulatory framework and any relevant authorisations required to build and operate LNG facilities.

The regulatory framework for onshore LNG regasification and conventional importation is set down in the Gas Act. The requirements reflect the Third EU Gas Directive and the TPA Regulations. These provide for regulated third-party access based on published terms and non-discriminatory prices.

An exemption from the TPA requirements is available where Ofgem is satisfied that use of the facility by other users is not necessary for the operation of an economically efficient gas market or certain specific requirements are met, including where the facility will increase the UK's security of supply and where the level of risk is such that the investment needed to construct the facility (or new capacity) would not be available in the absence of an exemption. Each of the LNG receiving and regasification facilities at the Isle of Grain and Milford Haven has been granted an exemption by Ofgem following approval by the European Commission. Of the currently operational storage facilities

in GB, only two have not been granted TPA exemptions; the Rough and Hornsea facilities.

In relation to the offshore LNG, and specifically the unloading and regasification of LNG, the relevant framework is set down in the Energy Act 2008, which was introduced to update the existing legislative framework in the UK to reflect the changed nature of the UK energy market. In relation to any new offshore LNG project, the developer will need both a licence to unload gas (the definition for the purposes of the statute includes gas in its liquid form) and a lease of the seabed from the Crown Estate (see question 9).

Onshore LNG development proposals will require development consent, issued by the relevant determining authority (see question 3), which is likely to be the Infrastructure Planning Unit within the Planning Inspectorate.

25 Describe any regulation of the prices and terms of service in the LNG sector.

The Third EU Gas Directive requires regulated third-party access to LNG facilities on the basis of published terms and prices approved by Ofgem, which are to be applied on a non-discriminatory basis.

Mergers and competition

26 Which government body may prevent or punish anticompetitive or manipulative practices in the natural gas sector?

The CMA and the European Commission are the main competition authorities with powers to take action in respect of anticompetitive practices in the UK (although the European Commission may only take action where the practices may affect trade between EU member states). In the natural gas sector, under the Competition Act 1998 (the Competition Act) and the Enterprise Act 2002 (the Enterprise Act), GEMA (acting through Ofgem) has concurrent powers (ie, it can exercise the same powers as the CMA in respect of anticompetitive practices). It also has powers to take action under the Gas Act. NIAUR in Northern Ireland has similar powers.

27 What substantive standards does that government body apply to determine whether conduct is anticompetitive or manipulative?

Competition Act

The CMA and Ofgem each have powers under Chapter I and Chapter II of the Competition Act to take action concerning agreements that may restrict competition or behaviour that amounts to an abuse of a dominant position (in either case, where there may be an effect on trade within the UK). The Chapter I and Chapter II prohibitions are based on Articles 101 and 102 of the Treaty on the Functioning of the European Union (the TFEU), and UK competition authorities are required to deal with cases brought under those prohibitions in such a way as to ensure consistency with EU law as far as is possible. As explained above, the UK authorities and the European Commission apply Articles 101 and 102 where the agreement or behaviour under investigation affects trade between EU member states.

Certain agreements will be considered to breach the Chapter I prohibition (or article 101 of the TFEU as appropriate) irrespective of their actual impact on competition. These are agreements that have as their 'object' the prevention, distortion or restriction of competition, and include the most serious infringements such as price fixing, output restrictions and market sharing. Otherwise, an agreement will only infringe the competition rules if it has an 'appreciable' effect on competition. Guidance published by the European Commission (and also applied by the UK competition authorities) provides that an agreement between competing undertakings will not have an appreciable impact on competition if their combined market share does not exceed 10 per cent. The relevant threshold for agreements between non-competing undertakings is 15 per cent. Both thresholds are reduced to 5 per cent where there is a cumulative foreclosure effect.

Enterprise Act

Market investigation reference

The test for either the CMA or Ofgem to make a market investigation reference is that they have reasonable grounds for suspecting that

competition has been prevented, restricted or distorted by any feature of a market in the UK.

Cartel offence

An individual is guilty of the criminal cartel offence if he or she agrees with one or more persons to make or implement, or cause to be made or implemented, one of the prohibited arrangements, that is price-fixing, market or customer sharing, bid-rigging or output limitation. There are certain exclusions from and defences to the cartel offence under the Enterprise Act, for example, where the person(s) concerned did not intend to conceal the arrangements from their customers.

Previously there was a dishonesty requirement that also had to be satisfied in order for a person to be found guilty of the offence, but this was removed as from 1 April 2014 as part of the changes brought about by the Enterprise and Regulatory Reform Act 2013. Offenders can be sentenced to up to five years in prison and/or issued with an unlimited fine.

Only the CMA has the relevant power to enforce the cartel offence (ie, Ofgem is not entitled to do so).

Gas Act

Ofgem may take enforcement action under the Gas Act and under licence conditions granted under the Gas Act. However, Ofgem may not take enforcement action under the Gas Act if it is satisfied that it would be more appropriate to address the issue under the Competition Act.

28 What authority does the government body have to preclude or remedy anticompetitive or manipulative practices?

Under the Competition Act, the CMA and sectoral regulators (including Ofgem), have concurrent powers to enforce articles 101 and 102 of the TFEU and the Chapter I and Chapter II prohibitions of the Competition Act. They may impose fines of up to 10 per cent of worldwide turnover for breaches of competition law.

Decisions under the Competition Act can be appealed to the Competition Appeals Tribunal.

Under the Enterprise Act, if the CMA decides that there is an adverse effect on competition in relation to a market it has investigated, it may take action to remedy, mitigate or prevent the adverse effect concerned.

Ofgem also monitors its licensing regimes and may seek to ensure compliance with licence conditions and statutory provisions. It has the power to impose fines of up to 10 per cent of the turnover of the licence holder for breach of a relevant condition or requirement, or failure to achieve any standard of performance prescribed by law. Where infringements of more than one provision are under consideration, Ofgem will determine the most appropriate power to remedy the anticompetitive behaviour identified.

As explained above, Ofgem is under an obligation to consider first whether it would be more appropriate to deal with any suspected breach under its competition powers before using its power to enforce any licence conditions.

29 Does any government body have authority to approve or disapprove mergers or other changes in control over businesses in the sector or acquisition of production, transportation or distribution assets?

Corporate transactions involving a change in control, such as mergers and changes in control of assets that amount to a business, may be subject to EU or UK merger control. The EU and UK authorities apply slightly different standards to the definition of control. The UK merger control regime in the Enterprise Act not only applies to acquisitions of majority control over another company but also to acquisitions of lesser shareholdings, including the acquisition of the ability to exercise 'material influence'; while the EU Merger Regulation (139/2004/EC) provides that a merger arises only with an acquisition of 'decisive influence' – acquisitions of minority shareholdings can count as mergers under the EU Merger Regulation in certain circumstances but the Regulation will not catch shareholdings as low as those caught under the UK's 'material influence' test. Depending on the way they are structured, joint ventures can also qualify for assessment by the competition authorities if the parties meet the relevant jurisdictional tests.

A transaction that is caught by the EU Merger Regulation will be subject to the exclusive jurisdiction of the European Commission.

Update and trends

Brexit

Energy

The UK government's decision to leave the EU, following a national referendum on membership on 23 June 2016, has the potential to significantly influence UK gas policy and legislation. It is not yet clear the extent to which UK law that has been implemented to comply with EU requirements, such as the EU Third Internal Energy Market Package, will be amended, removed or otherwise diverge from EU law. Leaving the EU may also affect the regulation of gas interconnectors. Any changes will only take place after the government issues a notice under article 50 and either negotiates a deal with the other EU countries or automatically exits the EU two years after issuing the notice (either of which is likely to be in 2019).

Environment, health and safety

The UK government's decision to leave the EU is unlikely to reverse the trend of increasing corporate liability in the event of major incidents in the offshore industry. UK law had been moving in this direction well before the Macondo incident or the OSD. Brexit has certainly created uncertainty across a range of environmental and safety law fields, but the need for accountability in the offshore industry (and the perceived need for it) is unlikely to decline following any withdrawal of the UK from the EU.

At the time of writing, it is our understanding that despite Brexit there are no plans on the part of the UK government to weaken environmental or safety provisions, or to repeal EU-derived standards or requirements in this area. Indeed, depending on what model of Brexit is pursued, it is possible that EU law in the field of environment and safety will continue to apply.

Notification to the European Commission for merger clearance is compulsory in such circumstances and completion of the transaction must be made conditional on the receipt of that clearance. As well as considering whether or not a change of control arises, this will also depend on whether or not the relevant parties meet the turnover thresholds under the EU Merger Regulation.

Alternatively, a transaction amounting to a change of control will qualify for investigation by the CMA under the Enterprise Act if either:

- the target has a turnover exceeding £70 million in the UK; or
- the acquisition creates or enhances a share of supply of at least 25 per cent of goods or services of a particular description, either in the UK or in a substantial part of the UK.

Under the Enterprise Act, the CMA must refer an acquisition for a second phase investigation if it believes that it may result in a substantial lessening of competition within any market in the UK. The CMA may accept undertakings in lieu of a reference from the parties to remedy the adverse effects of the transaction and avoid a second phase investigation. Ofgem has no defined role under the Enterprise Act in respect of mergers, but it is generally consulted by the CMA where the transaction touches on any of the markets it regulates.

Following a reference for second phase investigation, the CMA carries out a detailed investigation in order to determine whether a merger may result in a substantial lessening of competition. If the CMA considers that this is the case, it is required to take action to remedy, mitigate or prevent it. This may include prohibiting the merger or imposing a range of structural or behavioural undertakings.

There is no obligation for mergers or other transactions that meet the UK jurisdictional tests outlined above to be made conditional on CMA approval. However, if a transaction is not conditional on CMA approval, the purchaser will take the competition risk in the sense that the transaction can be referred for second phase investigation by the CMA for a period of four months from the date the merger occurred or the date when the merger came to the CMA's attention. Ultimately the CMA can order the purchaser to sell all, or part, of the acquired business.

The CMA must decide whether or not to refer the transaction for second phase investigation within 40 working days of receiving the necessary information to commence its investigation (subject to an extension to consider remedies or wait for further information to be provided by the parties). The CMA must reach a second phase decision on a reference and publish its report within 24 weeks, subject to an extension of up to eight weeks in appropriate circumstances.

30 In the purchase of a regulated gas utility, are there any restrictions on the inclusion of the purchase cost in the price of services?

The transportation charges recoverable by a gas transporter are subject to price control through the terms of the gas transporter's licence (see question 8). It is unlikely a purchaser could persuade Ofgem to include the purchase price for a utility within the cost base used to establish transportation charges.

In relation to other gas utilities, such as gas shippers and gas suppliers who are not subject to any form of price control (on the basis that the GB market is open to full competition), it is unlikely their

charges would remain competitive if they were increased to recover the purchase price.

31 Are there any restrictions on the acquisition of shares in gas utilities? Do any corporate governance regulations or rules regarding the transfer of assets apply to gas utilities?

There are no special rules that apply to the purchase of shares in natural gas utilities, and the normal rules apply in relation to the application of competition law to takeover and merger situations. Such acquisitions are, therefore, subject to normal competition law. A transfer of all or part of a licence must comply with the procedures set out in the Gas Act, which include obtaining Ofgem's consent to the transfer. Ofgem requires applications to transfer licences to satisfy the same criteria as new licence applications and takes into account the technical and financial suitability of the applicant, its ability to comply with relevant health and safety standards and its ability to discharge the licence obligations. See also question 35.

International

32 Are there any special requirements or limitations on foreign companies acquiring interests in any part of the natural gas sector?

No. There are, however, certain residence requirements in relation to applications for licences under the Petroleum Act. A licence holder must have a place of business in the UK, and if the licence is for a producing field the licence holder must be registered with Companies House or have a fixed place of business in the UK – this is a tax requirement. Similarly in relation to Gas Act licences the licence holder must hold certain business and tax registrations.

33 To what extent is regulatory policy affected by treaties or other multinational agreements?

The UK gas industry is required to comply with EU law, whether gas industry-specific or relating to health and safety, environmental or competition matters. The Third Gas Directive has been fully implemented by the TPA Regulations. The TPA Regulations amended the Petroleum Act and the Gas Act. The Petroleum Act was amended to provide a way for applicants to gain access to offshore gas storage facilities. The Gas Act was amended to provide applicants with the ability to gain access to onshore storage facilities and LNG facilities. In each case, the amendments allowed for the possibility for an exemption from the TPA requirements. The requirements relating to interconnectors were implemented through the Energy Act 2004, which amended the Gas Act by introducing a licence regime for interconnectors.

The remainder of the Third Gas Directive was already largely implemented by existing UK legislation, principally through the Gas Act and the conditions of the gas transporter's licence issued by Ofgem (see question 8).

The EU third internal package gave the European Network of Transmission System Operators for Gas powers to create new cross-European gas network codes that would regulate capacity auctions, nominations and the arrangements between interconnectors at interconnection points across Europe. The purpose is to harmonise these

areas across all interconnection points. In the past couple of years, the Commission has published Commission Regulations establishing:

- a network code on capacity allocation mechanisms in gas transmission systems;
- a network code on gas balancing of transmission networks; and
- a network code on interoperability and data exchange rules (the EU Codes).

In the past couple of years, Ofgem and National Grid NTS made changes to licence conditions, the UNC and the interconnection agreements with the other interconnectors at Bacton and Moffat to achieve compliance with the EU Codes, which became effective on 1 October 2015.

The UK is also party to a number of other international agreements that impact on the gas industry, including the UN Convention on the Law of the Sea 1982 and the Convention for the Protection of the Marine Environment of the North East Atlantic (OSPAR Convention) 1998. In addition, there are specific maritime delimitation agreements between the UK and Denmark, Norway and the Republic of Ireland.

34 What rules apply to cross-border sales or deliveries of natural gas?

There are no specific rules applying to the terms of a cross-border gas sales agreement, although the counterparties would need to acquire capacity in an interconnector or LNG receiving and regasification facility to facilitate the sale process.

Transactions between affiliates

35 What restrictions exist on transactions between a natural gas utility and its affiliates?

An assignment of a Petroleum Act licence is prohibited in the absence of the consent of the OGA (the absence of which would lead to revocation). In recent years, the approval procedure has been much

streamlined. The assignment of any accompanying joint operating arrangement also requires approval from the OGA, and this too has been streamlined through the open permission regime, which was revised in 2003, and the online petroleum e-business assignments and relinquishment system (PEARS), which was revised in 2016.

A gas transporter is also subject to conditions relating to the manner in which it carries on its regulated transportation business. It cannot do this so as to give an affiliate or related undertaking any commercial advantage through a preferential arrangement (or discriminatory arrangement in respect of a non-group company).

As noted, there is a restriction in the Gas Act on the transfer of licences, which can only take place with the consent of Ofgem.

36 Who enforces the affiliate restrictions and what are the sanctions for non-compliance?

Offshore

Licences issued under the Petroleum Act for offshore and onshore exploration, and production operations are enforced by the OGA. The sanction for material non-compliance is revocation of the licence.

Onshore

Ofgem is responsible for the enforcement of Gas Act licence conditions. In the event of any breach of a licence, a number of sanctions are available. Ofgem can impose a fine on the licensee of up to 10 per cent of the turnover of the licence holder (eg, in October 2010, Ofgem imposed a £70 million fine on Npower following the overcharging of customers in 2007). For more serious breaches of a licence, Ofgem has the power to revoke the licence.

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Description of domestic sector

1 Describe the domestic natural gas sector, including the natural gas production, liquefied natural gas (LNG) storage, pipeline transportation, distribution, commodity sales and trading segments and retail sales and usage.

Operations in the upstream segment of the United States gas sector are conducted by the same kinds of entities that engage in the exploration and production of liquid hydrocarbons. This segment is occupied by a variety of private parties, from individual entrepreneurs to large integrated firms, engaged in securing grants of licences and leases to explore for and produce valuable substances. Processing of gas and fractionation of natural gas liquids can occur in the field by the lessee, or in plants on gathering or trunk lines between the field and the main trunkline pipeline systems. Operations in the midstream and downstream segments of gas and LNG storage, trunkline transportation and local distribution are typically conducted by private entities subject to public utility regulation at the federal or state level, or by municipal utility districts.

The US (including Puerto Rico) has 13 LNG terminals. Seven of these terminals have been approved for the export of LNG and are under construction. Three additional terminals have been approved for export but are not yet under construction as of January 2017. Seven projects have export applications pending at the Federal Energy Regulatory Commission (FERC), and another eight terminals have begun the pre-filing process at FERC for export authority.

As of January 2016, the US natural gas pipeline network consisted of over 1.5 million miles of transmission and distribution pipelines (excluding gathering and service systems). More than 1,000 entities (many of which are affiliated) operate the interstate and intrastate transmission system, and more than 1,300 entities operate the distribution system.

A 2015 Department of Energy (DoE) report predicted the US interstate transmission network will continue to expand until 2030. Between 2015 and 2030, DoE anticipates the addition of 38 to 46.5 billion cubic feet per day (bcf/d) of interstate pipeline capacity at a cost of between US\$42 billion and US\$53.5 billion. DoE projects much of that expansion and investment will be front-loaded over the next few years (2015–2020), with subsequent years (2021–2030) experiencing slower rates of expansion and comparatively less investment. DoE's long-term forecast of slower interstate transmission capacity expansion and lower investment reflects the fact that much of future natural gas production and demand are expected to be in close geographic proximity with one another, thereby reducing the need for additional infrastructure. DoE's long-term projections also reflect its expectation that existing natural gas pipelines will support much of the changing supply and demand conditions and government energy policies.

2 What percentage of the country's energy needs is met directly or indirectly with natural gas and LNG? What percentage of the country's natural gas needs is met through domestic production and imported production?

According to the Energy Information Administration of the DoE, in 2015 natural gas (including regasified LNG) accounted for approximately 29 per cent of US energy consumption, which is a 2 per cent increase from 2014. Natural gas consumption was approximately 27.31

trillion cubic feet (tcf), and roughly 92 per cent of that demand was met through domestic production. Net imports satisfied the balance of demand. Since 2007, the US net import rate has declined due to increases in domestic natural gas production. Total natural gas imports to the US increased slightly from 2014 (2,695.4 bcf) to 2015 (2,718.3 bcf). Most of the natural gas that the US imported via pipeline in 2015 was from Canada (97 per cent). The amount of natural gas imported via pipeline in 2015 (2,626.5 bcf) was the lowest since 1994.

US natural gas demand is projected to increase significantly in the years ahead. The Energy Information Administration's 2017 Annual Energy Outlook predicts that natural gas will comprise 40 per cent of total US energy production by 2040, driven by increases in US domestic electric and industrial consumption. Exports (via pipelines to Mexico and LNG terminals in the Gulf of Mexico and elsewhere) are also expected to be significant long-term sources of demand.

Government policy

3 What is the government's policy for the domestic natural gas sector and which bodies set it?

A central feature of governmental policy for the domestic natural gas sector is to prevent firms with monopoly power from being able to abuse that power. However, this is balanced by policies that support increased domestic gas production and, for limited parts of the sector, deregulation and the promotion of competitive market forces. Policies are set by the legislative and executive branches of both federal and state governments. Principal authority for establishing policies of the US federal government regarding natural gas has been delegated to administrative agencies that are part of the executive branch, particularly FERC.

Regulation of natural gas production

4 What is the ownership and organisational structure for production of natural gas (other than LNG)? How does the government derive value from natural gas production?

In contrast to the oil sector, in which some companies are active in all segments, it is more common for companies in the natural gas sector to concentrate on two or three segments (eg, production and gathering, or transmission and storage). Ownership of pipeline transportation capacity is separated from ownership of the natural gas transported via pipeline, although some Canadian producers also own pipelines that cross from Canada into the US.

The federal government does not participate directly as a party in private natural gas production transactions. It derives value from natural gas production through the royalties, annual rentals and bonus payments it receives for production on federally owned lands. The Office of Natural Resources Revenue, an agency within the Department of Interior (DoI), is responsible for the management of production revenues. Production on state lands is managed by the appropriate state agency. In addition, government agencies impose a variety of taxes and charges. For example, FERC is authorised to recoup its entire budget appropriation through the imposition of annual charges and filing fees.

5 Describe the statutory and regulatory framework and any relevant authorisations applicable to natural gas exploration and production.

Production, drilling and supply

Natural gas producers are not directly regulated by the federal government, and the Natural Gas Act of 1938 (NGA) exempts production and gathering facilities from FERC jurisdiction. Rather, the prices producers charge are generally a function of competitive markets. State public utility commissions may exercise regulatory authority over retail natural gas rates and consumer protection issues.

In May 2016, the Environmental Protection Agency (EPA), acting under its Clean Air Act authority, adopted a suite of updates to its New Source Performance Standards aimed at reducing greenhouse gases emitted at natural gas well sites, with an emphasis on methane. The updates added methane to the pollutants covered by the existing pollution control rules, imposed new requirements for detecting and repairing leaks (fugitive emissions), and limited emissions from pneumatic pumps used at well sites.

Transmission

The primary federal regulatory agency governing natural gas transmission is FERC. It has jurisdiction over the regulation of interstate pipelines, and is concerned with overseeing the implementation and operation of the natural gas transportation infrastructure. In addition, FERC has primary regulatory authority to permit, site, and approve onshore and nearshore LNG import and export terminals.

FERC's regulatory authority extends to the interstate transportation of natural gas, the import and export of natural gas by pipeline or LNG terminal, and certain environmental and accounting matters. FERC obtains its authority and directives in the regulation of the natural gas industry from a number of laws:

- the NGA;
- the Natural Gas Policy Act of 1978;
- the Outer Continental Shelf Lands Act;
- the Natural Gas Wellhead Decontrol Act of 1989;
- the Energy Policy Act of 1992; and
- the Energy Policy Act of 2005.

The Office of Pipeline Safety of the Department of Transportation (DoT) has jurisdiction over interstate pipeline safety, while DoE has authority over permits to import and export LNG. Comprehensive rules have been issued by those agencies.

State authorities regulate pipeline capacity that is considered to be 'intrastate'.

Distribution

State regulatory utility commissions have oversight of issues related to the siting, construction and expansion of local distribution systems.

State public utilities commissions have jurisdiction over retail pricing, consumer protection, and natural gas facility construction and environmental issues not covered by FERC or DoT. FERC also regulates interstate pipeline rates, and ensures that rates and charges for such pipeline services are just and reasonable and not the product of undue discrimination.

FERC is designed to be independent from influence from the executive or legislative branches of government, or industry participants, including the energy companies over which it has oversight. It is composed of five commissioners who are nominated by the President and confirmed by the US Senate. Each commissioner serves a five-year term, and one commissioner's term is up every year.

The DoI, DoT, EPA, and DoE are cabinet-level agencies, and their respective secretaries or administrators are chosen by the President, subject to Senate confirmation.

There are several adjudicatory options for challenging or appealing decisions of the regulator. FERC may make a decision without any further procedures, hold a trial-type hearing before an administrative law judge, or hold a technical conference or 'paper' hearing. Alternate dispute resolution, like mediation and arbitration, may also be used. FERC decisions may be appealed to the federal courts of appeal.

Where FERC is implementing a federal statute, an objecting party must usually show that FERC's implementation is an 'arbitrary and capricious' interpretation of the federal statute. This is a high standard that is rarely satisfied. Additionally, a party must show that it has

standing to bring the suit, and satisfy other justiciability concerns such as ripeness and mootness.

Members of state regulatory commissions are appointed in most states, but are elected in some states. Decisions of state regulatory commissions on matters such as intrastate pipeline and distribution rates, as well as customer billing and service issues, can be appealed through the state court system. However, such decisions are rarely overturned unless the appellant can convince the court that a decision is patently contrary to the evidence taken as a whole.

The government authorisations required to carry on natural gas exploration and production activities depend on whether the proposed project is to be conducted on federal, state, or privately owned land, and whether it is proposed to be conducted onshore or offshore.

Federal lands

Federal lands are managed by DoI. Within DoI, the Bureau of Ocean Energy Management (BOEM) and the Bureau of Safety and Environmental Enforcement (BSEE) regulate offshore drilling, the Bureau of Land Management (BLM) regulates onshore drilling on federal lands and the Bureau of Indian Affairs oversees mineral leasing on Indian lands.

Offshore

BOEM and BSEE oversee the management of the mineral resources located more than three miles from the coast on the outer continental shelf (OCS). BOEM is responsible for managing development in an environmentally and economically responsible manner, and BSEE is responsible for enforcing safety and environmental regulations. DoI prepares a five-year programme that specifies the size, timing, and location of areas to be assessed for federal offshore natural gas leasing. Bids are usually solicited on the basis of a cash bonus and a royalty agreement, with the highest bidder awarded the lease. OCS leases contain decommissioning obligations requiring lessees to return the leased area to the legally required condition, and BOEM requires lessees to post security to ensure the decommissioning and other lease obligations are met.

Additionally, federal regulations require open access to OCS pipelines. The open access rule provides complaint procedures for shippers of oil and gas produced on federal leases on the OCS who believe that they have been denied open and non-discriminatory access to an OCS pipeline.

Onshore

BLM is charged with managing and conserving federally owned land, including natural gas resources. Unless they are specifically carved out of the leasing programme, all BLM-managed lands and national forests are open to leasing. Gas leasing is generally not permitted in the national park system, in national wildlife refuges, in the Wild and Scenic River Systems, or in wilderness areas. Leasing in national forests requires permission from the US Forest Service of the Department of Agriculture. BLM reviews and approves permits and licences for companies to explore, develop, and produce natural gas on federal lands. Once projects are approved, BLM enforces regulatory compliance.

State lands

Drilling on state lands is managed by state departments of natural resources and related agencies. Coastal states additionally have authorisation rights over submerged lands and 'inland waters' generally within three miles of the coast. Each state has its own set of requirements and regulations governing the leasing of such state-owned lands.

Privately owned lands

The leasing of private land is generally negotiated by lessees and individual landowners.

6 Are participants required to provide security or any guarantees to be issued with a licence to explore for or to store gas?

BLM requires natural gas producers operating on public lands to post a bond prior to drilling. In addition, many states have bonding requirements that exceed the federal requirements as a prerequisite to issuance of a well permit or authorisation of other drilling or exploration

operations. Security requirements associated with the storage of natural gas may also be included in the storage provider's tariff.

Offshore, BOEM, with input from BSEE, has adopted and enforces an array of financial responsibility and security requirements applicable to lease holders. This includes a requirement to post a base bond in an amount set by regulation. In addition, and depending on a number of factors, the agency may require supplemental security from lessees to cover decommissioning and other lease obligations.

EPA is currently evaluating whether it should adopt financial responsibility rules under its Superfund law authority.

Regulation of natural gas pipeline transportation and storage

7 Describe in general the ownership of natural gas pipeline transportation, and storage infrastructure.

Pipeline transportation and storage of natural gas are conducted by the private sector. According to DoT data from January 2016, there are roughly 160 FERC-regulated operators of interstate natural gas transmission pipelines and 900 operators of intrastate transmission pipelines in the United States.

The interstate natural gas pipeline market in particular is highly concentrated. As of January 2015, nearly half the interstate natural gas transmission capacity was operated by 10 companies.

As of November 2015, private companies operated 385 underground storage facilities, mainly in depleted reservoirs, aquifers and salt caverns.

8 Describe the statutory and regulatory framework and any relevant authorisations applicable to the construction, ownership, operation and interconnection of natural gas transportation pipelines, and storage.

Pursuant to section 7 of the NGA, interstate pipelines and gas storage facilities must obtain certification from FERC before constructing or expanding facilities. Intrastate gas transmission and distribution facilities are subject to certification by state and local authorities.

Under applicable statutes, FERC will issue a certificate to a pipeline if there is a benefit to the public, as demonstrated by the applicant, including compliance with environmental standards. Current FERC policy is generally to issue certificates to all proposed pipelines that comply with the statutory standards, but to let the market decide which pipelines will be built. FERC decisions may be appealed to a US Court of Appeal and state commission decisions may be appealed to the state court system. FERC may impose conditions on certificates requiring the recipient to obtain additional approvals or permission from other federal and state administrative agencies.

As discussed in question 5, EPA has updated its New Source Performance Standards for the oil and gas industry to reduce greenhouse gases, most notably methane. The updates affect equipment at natural gas transmission compressor stations by adding requirements for detecting and repairing leaks and requirements to limit emissions from items of equipment.

The Pipeline and Hazardous Materials Safety Administration within the DoT regulates the safety of gas pipeline and storage facilities. In December 2016, the agency issued broad new safety requirements for both interstate and intrastate underground gas storage facilities. Those new regulations were issued under a statute (the Protecting our Infrastructure of Pipelines and Enhancing Safety (PIPES) Act of 2016) incorporating lessons learned from a massive October 2015 leak from the Aliso Canyon storage facility in southern California. The requirements include new safety standards for interstate and intrastate underground storage facilities, annual safety reporting obligations, adverse event reporting requirements, and mandatory prior event reporting for certain significant events (eg, change of operator or new facility construction). Operators will have one year to comply with the new requirements. In addition, the agency has signalled that more safety requirements could be forthcoming.

9 How does a company obtain the land rights to construct a natural gas transportation or storage facility?

The location, construction and operation of interstate pipelines, facilities, and storage fields involved in moving natural gas across state boundaries must be approved by FERC. The pipeline company proposes the route or location, which is then reviewed by FERC. If a

proposed pipeline route is on or adjacent to private land, the company will inform the private landowners and obtain any necessary rights of way (or alternative access rights) prior to construction. The applicant must consider alternative routes or locations to avoid or minimise the effects on buildings, fences, crops, water supplies, soil, vegetation, wildlife, air quality, noise, safety, and landowner interests. FERC staff will consider whether the pipeline can be placed near or within an existing pipeline, power line, highway, or railroad rights of way. By federal law, a pipeline certified by FERC has eminent domain authority. Storage facilities are usually located in depleted oil or natural gas production fields or in salt deposits.

10 How is access to the natural gas transportation system and storage facilities arranged? How are tolls and tariffs established?

There are essentially three major types of pipelines along the transportation route: the gathering system, the transmission pipeline, and the distribution system. The gathering system transports raw natural gas from the wellhead to the processing plant. Transmission pipelines use higher pressure and larger diameter pipes to move natural gas quickly over long distances; they are typically interstate, but can also be intrastate. Interstate natural gas pipeline networks transport processed natural gas from processing plants in producing regions to those locations with high natural gas requirements, particularly large, populated urban areas. Distribution systems deliver natural gas to homes, businesses, and power plants, although power plants may also be served directly from transmission pipelines through FERC-approved laterals.

Transportation of natural gas is closely linked to its storage. If the natural gas being transported is not required at the time, it can be put into storage facilities for when it is needed. Natural gas pipeline companies have customers on both ends of the pipeline – the producers and processors that deliver gas into the pipeline, and the consumers and local distribution companies that take gas out of the pipeline.

In accordance with FERC rules, access to interstate natural gas transportation and storage services must be provided on a non-discriminatory basis. Generally, purchasers of gas interstate transportation and storage services negotiate individual contracts with pipeline and storage companies, which are subject to the service provider's tariff as approved by FERC. Where there is limited capacity for interstate storage or transportation, capacity is allocated through a bidding process in which the pipeline or storage capacity is generally awarded to the highest bidders. Under FERC rules, the terms and rates charged for all interstate pipeline transportation and storage services must be applied in a non-discriminatory manner, cannot be unduly restrictive, and must be fair to all parties.

Traditionally, balancing of natural gas volumes was on a once-per-day basis, known as the gas day. However, with the increase in the use of natural gas to generate electricity, FERC moved to align gas nominations and balancing more closely to scheduling of electricity by system operators. In 2015, FERC issued an order to change the Timely Nomination Cycle for scheduling gas transportation from 11:30 Central Clock Time (CCT) to 1pm CCT, and to add an additional intraday scheduling opportunity during the Gas Day to the existing two.

11 Can customers, other natural gas suppliers or an authority require a pipeline or storage facilities owner or operator to expand its facilities to accommodate new customers? If so, who bears the costs of interconnection or expansion?

FERC is authorised under section 7(a) of the NGA to order a company to establish physical connection of its transportation facilities with the facilities of, and sell natural gas to, persons engaged in local distribution of natural or artificial gas to the public. Such an order will be issued if FERC finds that it is 'necessary or desirable in the public interest' to do so and that 'no undue burden will be placed upon a natural gas company'. Customers and natural gas suppliers can petition FERC to order an expansion of interstate natural gas transportation facilities. FERC is prohibited from compelling the enlargement of transportation facilities, the establishment of physical connection, or the sale of natural gas if those actions would impair a natural gas company's ability to render adequate service to its existing customers. The costs of such expansion are considered in determining rates to be charged for service by the natural gas company.

12 Describe any statutory and regulatory requirements applicable to the processing of natural gas to extract liquids and to prepare it for pipeline transportation.

The processing of natural gas is largely unregulated at the federal and state levels except for applicable environmental, health, safety, and related regulations enforced by federal or state agencies. This may include a requirement that the operator confirm the gas has been processed to remove contaminants or impurities before putting it into a transmission pipeline. Processing facilities not directly involved in jurisdictional (interstate) transportation of gas are generally exempt from FERC jurisdiction.

13 Describe the contractual regime for transportation and storage.

Each pipeline or storage company providing gas transportation or storage services subject to FERC jurisdiction is required to file and obtain FERC acceptance of a tariff for such services. Each tariff contains the general terms and conditions of service, rate schedules and form agreements. General terms and conditions in both transportation and storage tariffs typically address:

- priority and curtailment of service;
- nominations and scheduling;
- receipt and delivery points;
- quality and pressure;
- title and risk of loss;
- measurement;
- fuel reimbursement; and
- balancing.

Transportation rate schedules typically set forth maximum and minimum rates for the various types and classes of service, and mutually agreed recourse rates that are no less than the minimum tariff rate.

Contracts for intrastate transportation and storage of natural gas can also be privately negotiated. In many states, these contracts are subject to the provider's tariff that has been filed with a state governmental authority.

Regulation of natural gas distribution

14 Describe in general the ownership of natural gas distribution networks.

In addition to interstate and intrastate pipeline companies that deliver natural gas directly to large-volume users, natural gas local distribution companies (LDCs) transport gas to specific customer groups. In 2015, 215 LDCs classified themselves as investor-owned, 929 as municipally owned, and 123 as privately owned. An additional 61 identified as cooperative or other ownership structures. Even though the number of municipally owned LDCs far exceeded the number of investor-owned LDCs, investor-owned LDCs delivered significantly more natural gas to end users in 2015.

15 Describe the statutory and regulatory structure and authorisations required to operate a distribution network. To what extent are gas distribution utilities subject to public service obligations?

The operation of a local distribution network by an LDC is governed by the state regulatory authority with jurisdiction where the facilities are located. The LDC may be required to obtain certificates of convenience and necessity to serve in the state, and comply with all applicable safety regulations.

Service by LDCs is generally required to be non-discriminatory and at rates approved by the state regulatory authority. While each LDC retains the right to disconnect service for non-payment, those rights are subject to consumer protection regulations in most jurisdictions.

In the past, LDCs offered only bundled services, combining the cost of natural gas transportation and distribution into one price reflected on consumers' bills. However, many states have moved toward retail unbundling, following FERC's example at the wholesale level, and now offer customer choice programmes that allow them to purchase natural gas from one supplier, and use the LDC only for service and delivery of the gas.

16 How is access to the natural gas distribution grid organised? Describe any regulation of the prices for distribution services. In which circumstances can a rate or term of service be changed?

State and federal regulatory agencies have authority over access to the natural gas distribution grid and, as a result, requirements differ from state to state. Generally, LDCs are granted the exclusive right to serve customers within a geographic area. An LDC has the benefit of a known customer base, but is also subject to rate regulation and an obligation to provide service. In many states, large customers have the ability to bypass the LDC with respect to the purchase of gas because of their ability to buy in significant quantities; however, even these customers will need to avail themselves of the LDC's distribution services. In some circumstances, large retail customers can receive service directly from interstate pipelines through FERC-approved laterals, thus bypassing the LDC completely.

Privately owned LDCs generally have their rates determined by the state regulatory authority, but the rates of publicly owned LDCs are normally set by the LDC's governing body. Rates typically allow the LDC a reasonable return on investment, based on the cost of providing service and returns on investments of comparable risk. Bundled rates include fees for access to the distribution system.

Periodic adjustments may be made to rates and terms of service, either at the LDC's request or by order of the governing state regulatory authority. Changes are typically made on the basis of changes in operating costs or the applicable law. New capital investments may also be the basis for a rate increase request.

17 May the regulator require a distributor to expand its system to accommodate new customers? May the regulator require the distributor to limit service to existing customers so that new customers can be served?

If an LDC has been granted an exclusive right to serve within a particular geographic area by state law, it will also generally be required to extend its system to serve new customers within that area if it can do so without jeopardising the service provided to existing customers. The process for expanding an existing system (including issues such as the manner in which costs of expansion are recouped) is set forth in state statutes or regulations.

18 Describe the contractual regime in relation to natural gas distribution.

Most contracts for natural gas distribution are either established by a filed tariff or bilateral service agreement, with terms such as quantity and type of service specific to the customer being served. However, certain terms of service will likely be the same for all customers of the LDC who are within the same customer class. There is typically little flexibility for negotiation by individual customers with respect to the terms of a service agreement.

Regulation of natural gas sales and trading

19 What is the ownership and organisational structure for the supply and trading of natural gas?

Natural gas is supplied and traded by private-sector companies, pursuant to privately negotiated transactions. These companies can be privately or publicly owned and range in size from entrepreneurs to very large organisations. There are both physical and financial markets for trading natural gas, and prices vary depending on supply and demand in each particular regional market. While physical trading involves an obligation to deliver or take delivery of natural gas in exchange for payment, financial trading is based on the movement of the price of natural gas. Financial trading is conducted only through financial instruments and does not involve physical delivery of gas, although pricing and settlement of the financial products are tied to physical natural gas.

Pricing and trading takes place at various locations across the country, primarily at the intersections of major pipeline systems known as hubs. While there are more than 20 hubs, the key trading hub used as a benchmark for the US natural gas market is Henry Hub in the Gulf of Mexico region in Louisiana.

20 To what extent are natural gas supply and trading activities subject to government oversight?

Under the current regulatory regime, only pipelines and LDCs are directly regulated. Interstate pipeline companies are regulated regarding the rates they charge, the access they offer to their pipelines, and the siting and construction of new pipelines. Similarly, LDCs are regulated by state utility commissions that oversee their rates and construction issues, and that ensure that proper procedures exist for maintaining adequate supply to customers.

The trading of natural gas is largely market-driven; however, rules are in place to ensure that the market is operated fairly. FERC has also implemented 'anti-manipulation' rules that prohibit fraudulent or deceptive practices, and omissions or misstatements of material facts in connection with purchases or sales of natural gas or transportation services subject to FERC jurisdiction.

The Dodd-Frank Wall Street Reform and Consumer Protection Act (Dodd-Frank), enacted in 2010, granted new oversight and rule-making authority to the Commodity Futures Trading Commission (CFTC) to regulate derivatives transactions, including trades involving energy commodities such as natural gas. Many transactions previously exempt from regulation under the Commodities Exchange Act are now regulated under Dodd-Frank.

The CFTC has oversight authority for a wide range of practices in the over-the-counter (OTC) derivative market, requiring registration of swap dealers and major swap participants, imposing capital and margin requirements on participants, requiring that derivatives trading take place on regulated exchanges or swap execution facilities, and creating a derivatives clearinghouse.

Dodd-Frank includes an 'end user' exception, allowing an exemption from clearing and exchange trading requirements for trades in which one party is not a 'financial entity' (as defined by Dodd-Frank), the purpose of the trade is to mitigate 'commercial risk' (to be defined by the CFTC), and the entity notifies the CFTC how it will meet its financial obligations associated with entering into uncleared swaps (to be defined by the CFTC). The final rule incorporating the end user exemption was issued by the CFTC in 2012.

In 2014, FERC and the CFTC entered into a memorandum of understanding (MOU) on jurisdiction and information sharing to resolve issues arising out of their overlapping responsibilities. Pursuant to the MOU, the two agencies work together to share appropriate data relating to financial markets for natural gas and electricity on an ongoing basis in order to further the mutual interest of the agencies in protecting the nation's energy markets. In addition, the participating agencies will, to the extent practicable, take steps to avoid duplicative information requests, and coordinate oversight (including market surveillance), investigative, and enforcement activities.

21 How are physical and financial trades of natural gas typically completed?

There are two primary types of natural gas marketing and trading: physical trading and financial trading. Physical trading is the buying and selling of natural gas. Financial trading, on the other hand, involves derivatives and other financial instruments where neither buyer nor seller may take physical delivery of the natural gas. The North American Energy Standards Board serves as an industry forum for the development and promotion of standards and form contracts for natural gas and electricity markets.

Physical trading contracts are negotiated between buyers and sellers. There are numerous types of such contracts but they normally contain standard terms, such as specifying the buyer and seller, the price, the amount of natural gas to be sold, the receipt and delivery points, and the term of the contract. Additional terms and conditions outline the payment dates, quality specifications and any other provisions agreed to by both parties.

There is a significant market for natural gas derivatives and financial instruments in the US, exceeding the value of physical natural gas trading.

Natural gas derivatives are traded on the New York Mercantile Exchange (NYMEX) and other exchanges. One of the most common derivatives is a futures contract that requires the seller to deliver and the buyer to take delivery of the natural gas at the contractually agreed price, in a specified future month. The price to be paid in the future month when the contract matures is determined at the time

the contract is sold. Other natural gas derivatives include options contracts, calendar spread options and basis swap futures contracts. In addition to the derivatives available on NYMEX, other derivatives are traded in OTC markets.

The International Swaps and Derivatives Association (ISDA) has also created a standard contract – the ISDA master agreement – for OTC derivatives transactions, which can be used for physical and financial trades as well. The ISDA master agreement contains general terms and conditions, such as provisions relating to payment netting, tax gross-up, tax representations, basic corporate representations, and basic covenants and events of default and termination, but does not include details of any specific derivatives transactions the parties may enter into. Details of individual derivatives transactions are included in 'confirmations' entered into by the parties to the ISDA master agreement. Each confirmation sets out the agreed commercial terms of a particular transaction.

22 Must wholesale and retail buyers of natural gas purchase a bundled product from a single provider? If not, describe the range of services and products that customers can procure from competing providers.

In its Order No. 636, FERC required interstate pipelines to separate or unbundle their services for gas transportation and sales. Regulators in many states have also required LDCs to offer unbundled sales and transportation services for large customers located in their distribution systems. As a result, LDCs, large industrial customers, and electric utilities can now buy gas directly from producers or marketers in a competitive market; contract with interstate pipelines for transportation; and separately arrange for storage and other services formerly provided by interstate pipelines or LDCs (such as nominating, balancing, parking, loaning, metering and billing) from marketers, market centres, hubs, storage operators, and other third-party providers.

Some state regulatory agencies allow smaller-volume customers to participate in aggregation programmes in order to purchase unbundled services. As of 2015, 24 states and the District of Columbia allowed residential consumers and other small users to purchase natural gas from suppliers other than LDCs, up from 20 states and the District of Columbia in 2001. Such customers are typically offered unbundled services on a limited basis through an intermediate marketer who 'rebundles' the services and offers them as a competitively priced alternative. Where unbundled LDC services are available, some states require that smaller customers purchase a standby service from the LDC. Participation in customer choice programmes has more than doubled in recent years, up from 3.3 million in 2001 to 7 million in 2015, although only 19.6 per cent of customers eligible to participate in such programmes choose to do so. There are over 1,300 gas LDCs in the US, serving more than 65 million households, more than 5 million commercial customers, and over 190,000 industrial and power generation customers.

Regulation of LNG

23 What is the ownership and organisational structure for LNG, including liquefaction and export facilities, and receiving and regasification facilities?

All currently operating US LNG facilities are ultimately owned by US or foreign private companies. Ownership structures vary from project to project and may include direct ownership by a single entity, joint ventures among two or more parties, or many other possible structures. Terminals may be operated on a 'tolling' basis, where the terminal operator does not take title to the hydrocarbons; on a 'merchant' basis, where the terminal operator purchases and takes title to gas and then sells the LNG after completion of the regasification process or following delivery; or on a 'hybrid' basis where the terminal operator or an affiliate engages in tolling and buy-sell arrangements.

24 Describe the regulatory framework and any relevant authorisations required to build and operate LNG facilities.

Responsibility for regulating construction and operation of LNG facilities and for authorising LNG exports is divided between different agencies. Under section 3 of the Natural Gas Act, FERC is responsible for authorising the siting and construction of onshore and near-shore LNG import or export facilities. The Deepwater Port Act (DPA) provides that

the US Maritime Administration (MARAD) is responsible for siting and construction of offshore facilities. The DPA also provides that the governor of a state adjacent to the proposed offshore facility must approve of the facility, effectively providing veto power to the state.

FERC or MARAD must also ascertain whether a proposed LNG export terminal meets environmental standards subject to the National Environmental Policy Act (NEPA). Various state and local land, environmental, wildlife and historical preservation agencies also play a role in approving or denying a proposed facility's environmental impact statement (EIS), as well as outside advocacy groups. The environmental and construction approval process is very lengthy and takes about three years on average to complete, including a mandatory six-month pre-filing process with FERC.

To export LNG overseas, project operators must apply for export authorisation from the DoE. Separate authorisations are required for exports to countries with which the US already has a free trade agreement (FTA) and countries that have not yet signed FTA agreements with the US (non-FTA countries). By statute, approval for exports to countries with FTA agreements is essentially automatic. To obtain approval for exports to non-FTA countries, (including Japan and most European countries), DoE must make a determination that allowing exports is in the 'public interest'. This determination must be made based upon an administrative record that includes public comments. It also includes DoE's analysis of the economic impact of allowing exports. In determining whether to grant approval, DoE generally looks at whether exporting natural gas will have a significant impact on the domestic supply of natural gas and the potential impact on prices in the US.

In addition, DoE must make an independent determination regarding whether allowing LNG exports is consistent with the requirements of NEPA. This determination is generally based on the EIS or Environmental Assessment prepared by FERC or MARAD, with respect to which DoE is a 'cooperating agency', but may also include additional analysis prepared by DoE.

The natural gas industry and importing countries have placed significant pressure on Congress and the Administration to expedite LNG export applications. Legislation to achieve this objective is currently pending before Congress.

As of January 2017, FERC had approved construction and operation of 11 export terminals and DoE had approved 16 applications to export LNG to both FTA and non-FTA countries. Thirteen export terminal applications were pending before FERC, seven of which were still at the pre-filing stage, and 19 non-FTA applications were pending DoE approval.

25 Describe any regulation of the prices and terms of service in the LNG sector.

LNG terminals built after FERC's *Hackberry* decision and the passage of the Energy Policy Act of 2005 are not required to offer open access to terminal customers. Instead, the owner of the terminal may operate the terminal in accordance with market conditions, thereby offering access to customers of its choosing at prices and on such terms and conditions as may be agreed between the owner and the customer. The terms and conditions of such access are generally reflected in a terminal use agreement between the terminal owner and the customer. However, open access requirements still apply to interstate pipelines transporting regasified LNG from LNG terminals in the US and with respect to the terms and conditions of LNG import and regasification services provided by non-*Hackberry* terminals (which are still subject to regulation by tariff). FERC can deny an application if an LNG terminal is not open-access, thus providing FERC discretion to decide whether to allow non-open access in connection with new or expansion applications.

Mergers and competition

26 Which government body may prevent or punish anticompetitive or manipulative practices in the natural gas sector?

Prohibitions on anticompetitive and manipulative conduct are found in federal and state laws of general application (called 'antitrust laws' in the US), and in the laws and regulations applicable to public utilities in particular. The antitrust laws include the Sherman Act (combinations

in restraint of trade, monopolisation), the Clayton Act (mergers, exclusive dealing) and the Robinson-Patman Act amendments to the Clayton Act (discrimination on price and other terms of sale), and are enforced at the federal level by the Federal Trade Commission (FTC) and the antitrust division of the Department of Justice (DOJ). The FTC may also enjoin unfair acts of competition under the Federal Trade Commission Act (FTC Act). Many states have analogues to some or all of the federal antitrust laws, and some of the state laws have particular application to petroleum products, including natural gas. The main federal and state antitrust laws are also enforced by state attorneys general, local governmental bodies and, in some cases, by private parties injured by the conduct in question.

The governmental bodies responsible for regulation of public utilities enforce their own rules, particularly FERC and the various state public utilities commissions. FERC created its own Office of Enforcement (superseding the former Office of Market Oversight and Investigations) with responsibility for identifying and taking action against fraud and anticompetitive practices in the electricity and natural gas sectors. The Energy Policy Act of 2005 broadened the scope of FERC's rule-making and enforcement authority under the NGA to prevent market manipulation. Competition principles also inform the review and approval by these bodies of the rates and terms and conditions of tariffs for interstate and intrastate transportation and storage services.

In delegating enhanced authority to the CFTC, Dodd-Frank provides increased oversight of anticompetitive or manipulative practices with regard to commodities (including natural gas). The CFTC rule-making process is still ongoing, and it is unclear when this rulemaking will be finalised.

27 What substantive standards does that government body apply to determine whether conduct is anticompetitive or manipulative?

The antitrust laws generally draw a distinction between conduct that is highly likely to be anticompetitive without redeeming justification and per se unlawful (eg, cartels), and conduct whose anticompetitive effects must be examined and weighed against any justifications, employing a 'rule of reason'. The definition of the relevant geographical and product market, and measures of industrial concentration within that market, must be evaluated under the rule of reason and other antitrust laws dealing with market power and monopolisation offences. The FTC Act and similar acts enjoining unfair competition employ a wider variety of standards that may not fall within the scope of specific laws, potentially including manipulation of prices or price indices.

Congress delegated to the CFTC expanded authority to regulate manipulative conduct with respect to certain commodities in interstate commerce (including natural gas), as well as futures, derivatives and OTC swap markets. Given the similarity between the statutes prohibiting manipulative conduct in the securities and commodities contexts, the CFTC modelled its regulations on Securities and Exchange Commission (SEC) Rule 10b-5 and similar standards already in place at FERC and the FTC. Rule 10b-5 is the most predominant regulation covering manipulative conduct associated with the purchase or sale of publicly traded securities. CFTC rules broadly prohibit fraud and manipulation in connection with any swap or contract of sale of any commodity in interstate commerce.

28 What authority does the government body have to preclude or remedy anticompetitive or manipulative practices?

All of the federal and state antitrust enforcement agencies have power to seek monetary damages and a variety of equitable remedies for violation of the laws they are authorised to enforce. Many of these laws carry criminal penalties, and damages can be trebled or otherwise subject to increase for punitive or exemplary purposes. Federal and state agencies have the power to revoke authorisations for market-based rate-making in the event that an entity is found to have engaged in anticompetitive practices. Violations of an unfair competition law are ordinarily subject to an injunction, but a violation of that injunction can result in fines. Private parties can seek damages for injuries to them occasioned by violation of the laws, and in some cases can bring class actions for others similarly situated.

Pursuant to the Energy Policy Act of 2005, FERC has the authority to issue rules to inhibit market manipulation and to facilitate price

Update and trends

Lengthier and more controversial FERC gas pipeline reviews

There is no time limit for FERC to issue a certificate authorising an interstate natural gas pipeline project, and FERC's review of applications has never been quick. Since 2015, those reviews have become even slower. Bloomberg calculates that the average interstate pipeline project can now expect to wait an average of 382 days before receiving FERC authorisation. However, even that estimate does not reflect a project's entire approval timeline because it omits the additional time a project may spend in FERC's optional pre-filing review process.

The principal source of project approval delay has been lengthier environmental reviews under the National Environmental Policy Act (NEPA). FERC staff solicits comments from stakeholders (federal and state agencies and the public) regarding the expected impact of a potential project. Based on its evaluation of those comments, FERC staff prepares and issues either an Environmental Assessment (EA) if a project is not expected to cause significant environmental impacts, or an Environmental Impact Statement (EIS) if the project is likely to cause significant environmental impacts. Those documents in turn inform FERC's decision regarding whether and under what conditions to approve the project.

FERC's review process has slowed as opposition to interstate natural gas pipeline projects has become increasingly well organised

and sophisticated. National environmental organisations have made challenging natural gas pipelines a key component of their climate change efforts. By cutting off natural gas transportation capacity, these groups hope to keep natural gas in the ground where it cannot contribute to greenhouse gas emissions. Opponents argue for NEPA reviews that take into consideration not only pipeline emissions, but also upstream (production) and downstream (end user) greenhouse gas emissions that will occur as a result of a proposed project.

State governments have also begun to employ increasingly creative legal tactics in order to play a greater role in FERC's environmental review of proposed natural gas pipeline projects. A particular flashpoint has been the issuance of state water quality certification under section 401 of the federal Clean Water Act.

It is unclear whether the longer FERC review timelines for natural gas pipeline projects are the new normal or a passing phenomenon. The Trump Administration's carbon-friendly policies are likely to mean less pressure on FERC from other federal agencies, but environmental groups have signalled that they will consequently redouble their efforts to mobilise challenges to pipeline projects by local stakeholders and state governments. Because of these outside challenges, sponsors of pipeline projects should be prepared for the current trend toward extended FERC review timelines to continue into 2017.

transparency in natural gas markets. FERC has recently instituted regulations that require certain gas market participants to annually report information regarding their wholesale physical natural gas transactions; their reporting of transactions to price index publishers; and their blanket certificate status. Similar regulations require interstate and certain major intrastate pipelines to post capacity, daily scheduled flow information, and daily actual flow information.

In addition, the Energy Policy Act of 2005 confers greater enforcement authority to FERC in order to prevent market manipulation. FERC has the ability to seek injunctions prohibiting those who have engaged in energy market manipulation from further engaging in activities subject to FERC's jurisdiction. The Act also increases the maximum civil penalties to US\$1 million per violation per day, and increases the maximum criminal penalties to US\$1 million per violation and up to five years' imprisonment.

As a result of Dodd-Frank, the CFTC has the authority to seek an injunction, penalise manipulative or anticompetitive behaviour, and issue penalties.

States also have antitrust statutes and the ability for plaintiffs to seek damages in state courts. This remedy took on new importance as a result of the US Supreme Court's decision in *Oneok v Learjet* in 2015. In that decision, the court held that FERC's exclusive jurisdiction under the NGA did not pre-empt state law antitrust claims for gas market manipulation.

29 Does any government body have authority to approve or disapprove mergers or other changes in control over businesses in the sector or acquisition of production, transportation or distribution assets?

Mergers and certain changes in control are subject to notification to the FTC and DOJ under the Hart-Scott Rodino Antitrust Improvements Act of 1976, as amended. (Natural gas transactions are usually reviewed by the FTC.) The reportability of a transaction depends on the size of the transaction, and in certain circumstances on the size of the parties thereto. A higher threshold exists for acquisitions of natural gas and oil reserves and associated production assets, including gathering pipelines; that minimum is US\$500 million. For midstream and downstream transactions, transactions greater than US\$80.8 million may require review. The structure of the transaction – whether it is a merger, contribution to an existing business or other form – can also affect whether the deal is reportable.

The purpose of the requirements is to provide the enforcement agencies with the information needed to evaluate whether the combination would violate the antitrust laws, and the time needed to seek an injunction in court barring the deal from proceeding. The parties ordinarily may not consummate the transaction until 30 days after the filing (although the agencies can make a second request for more

information and stop the clock while the additional information is assembled and delivered). For non-controversial transactions, as is typical in the upstream sector, the agencies grant an early termination of this waiting period, and a merger can be completed within two weeks from the filing. For controversial transactions, the agencies may signal their willingness to enter into a consent decree conditioned on certain divestitures or promises to engage or refrain from engaging in certain acts, or the parties can enter into sustained negotiations or litigation occupying months. Moreover, the agencies can forego the opportunity to enjoin the merger and instead challenge it long after the deal has closed. This has occurred several times in the energy industry.

FERC itself has limited grounds for reviewing mergers in the natural gas sector. In some cases, FERC action must be taken for issuance or revision of certificates of public convenience and necessity, or for abandonment of assets under the NGA.

30 In the purchase of a regulated gas utility, are there any restrictions on the inclusion of the purchase cost in the price of services?

The purchase of a regulated gas utility is subject to state regulation. Upon purchase of a regulated utility, most states will set rates based on the net book value of facilities instead of the purchase price. Additionally, states typically bar the inclusion of any acquisition premium in rates.

31 Are there any restrictions on the acquisition of shares in gas utilities? Do any corporate governance regulations or rules regarding the transfer of assets apply to gas utilities?

With the repeal in 2005 of the Public Utility Holding Company Act of 1935, there are no general federal prohibitions on entities that may own a gas utility company or requirements for registration with the SEC. However, acquisition of assets that have been dedicated for use by public utilities is often also subject to review and approval by the state commission with jurisdiction. Examples are California Public Utilities Code section 851, requiring approval by the California Public Utilities Commission of any transfer of public utility assets, and section 854, requiring Commission approval of any utility merger.

International

32 Are there any special requirements or limitations on foreign companies acquiring interests in any part of the natural gas sector?

There are no special requirements or limitations on foreign companies acquiring interests in the natural gas sector. However, an entity applying for certification of an LNG facility under section 3 of the NGA and the regulations issued pursuant to that section by FERC is required to

disclose on its application any ownership by a foreign government or subsidisation by a foreign government.

In addition, under the Exon-Florio Amendment to the Defense Production Act of 1950, the Committee on Foreign Investment in the United States (CFIUS) reviews proposed foreign investments in US facilities to determine whether such investment threatens US national security. Exon-Florio was amended by the Foreign Investment and National Security Act of 2007 to treat 'energy security' and 'critical infrastructure' as falling within the concept of national security. The law mandates full-scale CFIUS review where the proposed purchaser is owned by a foreign government. Finally, there are other laws applicable to the natural gas industry restricting foreign ownership, including the Mineral Lands Leasing Act, which forbids aliens and foreign corporations from directly owning mineral leases on federal lands. However, these laws do not prohibit aliens and foreign corporations from forming a US entity that owns mineral leases on federal lands.

In June 2016, the SEC adopted new disclosure rules for payments by resource extraction issuers (ie, oil, natural gas and mining companies that file annual reports with the SEC). Resource extraction issuers must comply with the final rule for fiscal years ending on or after 30 September 2018. While similar rules were adopted by the SEC in 2012, such rules were vacated by the US District Court for the District of Columbia. Under the newly adopted rules, disclosure will be required for payments made to the US government and foreign governments for the purpose of the commercial development of oil, natural gas or minerals.

An acquired US company may need to obtain a licence from the Department of Commerce to export technology. Defence-related technologies used in energy projects may be subject to this requirement.

33 To what extent is regulatory policy affected by treaties or other multinational agreements?

While treaties and other multinational agreements have little direct effect on purely domestic US gas regulatory policies, they do have an effect on international import, export and trade of natural gas. Multilateral agreements, like the General Agreement on Tariffs and Trade (GATT), entered into by the US and other members of the World Trade Organization (WTO), typically dictate how WTO members may treat goods exported from other WTO members, including gas and other petroleum products. It is not settled whether the export provisions of regional trade agreements conflict with the obligations of the US and other parties under GATT.

Many US LNG import facilities have sought export or re-export authorisations from DoE for LNG (pertaining to domestically produced and previously imported natural gas, respectively). As discussed in question 24, the NGA, as amended, has deemed free trade agreement (FTA) exports to be in the public interest, and applications shall

be authorised without modification or delay. FTA countries include Australia, Bahrain, Canada, Chile, Colombia, Costa Rica, Dominican Republic, El Salvador, Guatemala, Honduras, Israel, Jordan, Korea, Mexico, Morocco, Nicaragua, Oman, Panama, Peru and Singapore.

Potential exporters must also seek approval from DoE under section 3 of the NGA to export to countries with which the US does not currently have an FTA in place. It is not settled whether gas export restrictions remaining after entering into regional trade agreements conflict with the obligations of the US and other parties under GATT.

34 What rules apply to cross-border sales or deliveries of natural gas?

The NGA prohibits the import or export of natural gas to or from the US without obtaining the prior approval of the DoE. The DoE offers two types of import and export authorisations: long-term authorisation and 'blanket' (short-term) authorisation.

Long-term authorisation must be sought by a party wishing to import or export natural gas pursuant to a signed gas purchase and sale contract that has a term longer than two years. The applicant must submit to the DoE an application, a copy of the gas purchase and sale contract identifying the seller of the gas and the markets in which the gas will be sold, and the term of the contract.

In addition, with the development of liquefaction facilities for LNG in the US, DoE has been requested to issue orders pertaining to the long-term, multi-contract export of domestically produced natural gas. As of December 2016, 16 companies had received final approval from DoE to export domestic LNG to both FTA and non-FTA countries, and applications from 19 companies were under DoE review.

Vessels that are importing LNG into the US are deemed to pose a special security risk. The USCG and the US Bureau of Customs and Border Protection scrutinise such vessels more closely than many other vessels importing cargo into the US, which often results in delays in the delivery and unloading of LNG.

Like most goods imported into the US, gas imports are subject to US customs regulations. While many of these regulations apply uniformly across products, in the case of bulk petroleum imports, certain additional information is required in order for imports to be cleared by customs.

Transactions between affiliates

35 What restrictions exist on transactions between a natural gas utility and its affiliates?

FERC requires interstate natural gas pipelines with affiliates that engage in gas marketing functions to comply with FERC's Standards of Conduct rules. These rules are designed to ensure that pipelines treat all customers, both affiliated and non-affiliated, on a non-discriminatory

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basis with respect to the transportation of natural gas in interstate commerce, and also to ensure that the reliability and integrity of transportation systems are not compromised.

In furtherance of these goals, FERC issued Order No. 717, amending the Standards of Conduct rules governing, inter alia, transactions by jurisdictional natural gas transmission providers and their affiliates. Clarified by Orders No. 717-A to 717-D, the rules are designed to foster compliance with the Standards of Conduct to facilitate enforcement by the commission and to conform the rules to the 2006 decision of the US Court of Appeals (DC Circuit) in *National Fuel Gas Supply Corporation v FERC*. The standards now have three principal rules:

- the ‘independent-functioning rule’, which requires employees handling transmission functions and employees handling marketing functions (such as commodity sales) to operate independently of each other;
- the ‘no-conduit rule’, which prohibits employees of a transmission provider from passing information about transmission functions to marketing function employees; and

- the ‘transparency rule’, which imposes streamlined posting requirements on transmission providers to help FERC and other interested parties detect any instances of undue discrimination or preference.

36 Who enforces the affiliate restrictions and what are the sanctions for non-compliance?

FERC has enforcement authority with respect to its regulations governing transactions between a natural gas utility and its affiliate. It has the ability to impose sanctions that could include restrictions on or revocation of operating authority, and civil penalties.

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