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# The Legal 500 Country Comparative Guides

## South Africa

# RENEWABLE ENERGY

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This country-specific Q&A provides an overview of renewable energy laws and regulations applicable in South Africa.

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## SOUTH AFRICA

### RENEWABLE ENERGY



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#### 1. Does your jurisdiction have an established renewable energy industry? What are the main types and sizes of current and planned renewable energy projects? What are the current production levels?

The development of the renewable energy industry in South Africa dates to 2003 when the White Paper on Renewable Energy was released by the then Department of Minerals and Energy. The industry began to take shape when the Integrated Resource Plan 2010-2030, setting out the energy mix for the next 20 years in South Africa, was released in 2010. The Renewable Energy Independent Power Producers Procurement Programme (REIPPPP) was launched in 2011 to procure renewable energy from independent power producers (IPPs). 92 projects were procured from bid windows 1 to 4 of REIPPPP, all reached financial close, and 89 projects have already reached commercial operation. Following the release of the updated Integrated Resources Plan in 2019, 25 projects with a combined capacity of 2 583 MW were appointed as preferred bidders in bid window 5, and 2 have reached financial close with others still working towards financial close. Only 6 solar projects were appointed as preferred bidders in bid window 6, with grid constraints being cited as the main reason. Bid window 7 is expected to be launched in June 2023. Thus far, 6726MW of electricity has been contracted from 94 IPPs as part of the REIPPPP Programme. Recent rounds of REIPPPP have been limited to wind and solar PV. There has also been an exponential increase in the number of embedded residential, commercial and industrial (C&I) solar PV installations in recent months, largely in response to the shortage of electricity supply and rolling blackouts. This has also been made possible by changes to the regulatory requirements to do away with the need for a generation licence for systems greater than 1MW. According to the GreenCape 2023 Energy Services Market Intelligence Report, the estimated size of the rooftop solar market at the end of 2022 was 250MWp Residential, 1650MWp C&I and 400MWp Agricultural.

#### 2. What are your country's net zero/carbon reduction targets? Are they law or an aspiration?

South Africa published its Low Emission Development Strategy in February 2020, in terms of which it aims to reach a net zero carbon economy by 2050. The strategy is a living document which allows South Africa to be flexible in its approach to achieve this, taking into consideration innovations and energy alternatives coming to the fore. South Africa's updated Nationally Determined Contributions (Updated NDC) was published in September 2021 in terms of the Paris Agreement, of which it is a signatory. The Updated NDC committed to a fixed target for greenhouse gas emissions levels of 398-510 MtCO<sub>2</sub>e by 2025, and 350-420 MtCO<sub>2</sub>e by 2030, compared to 398 and 614 Mt CO<sub>2</sub>e between 2025 and 2030 as per their first NDC. South Africa has not incorporated any of the targets into law and at the moment these are just aspirations. The Updated NDC also sets out South Africa's GHG emission targets, finance support requirements and long-term decarbonisation plans, and makes provision for the implementation of National Climate Change Adaptation Strategy interventions for certain priority sectors. In June 2021, South Africa's Department of Forestry, Fisheries and the Environment (DFFE) published draft National Guideline for Consideration of Climate Change Implications (Draft Guideline) for comment. The Draft Guideline is intended to formulate a consistent approach for all sectors in respect of climate change impact assessments. South Africa's climate legislation and decarbonisation policy developed rapidly in 2022. The Carbon Tax Act is in effect and is being implemented. The Climate Change Bill is still currently awaiting parliamentary approval and eventual promulgation. In respect of decarbonisation considerations through the implementation of renewable energy facilities, notices have been published for comment, which seek to remove the requirement to obtain an environmental authorisation under certain conditions for the development or expansion of solar facilities and battery storage facilities in specific geographical areas. Following the Updated NDC, the final Just Transition

Framework for South Africa was released in July 2022 which aims to guide the transition away from fossil-fuel based energy, towards a low-emissions and climate-resilient economy. There are also several hydrogen and green hydrogen policy developments underway – South Africa has released its Hydrogen Society Roadmap for South Africa on 17 February 2022 which sets out ambitious goals for the production and use of hydrogen as a cleaner alternate fuel to contribute to just and inclusive net-zero carbon economic growth for South Africa by 2050.

### **3. Is there a legal definition of 'renewable energy' in your jurisdiction?**

Renewable energy is not defined in legislation in South Africa. However, the following definition, included in the bid documentation of the REIPPP Programme, is widely used and accepted – Renewable Energy is the harnessing of naturally occurring non-depletable sources of energy, including solar, wind, biomass, hydro, tidal wave, ocean current and geothermal, to produce electricity, gaseous and liquid fuels, heat or a combination of these energy types.

### **4. Who are the key political and regulatory influencers for renewables industry in your jurisdiction and who are the key private sector players that are driving the green renewable energy transition in your jurisdiction?**

The Minister of Mineral Resources and Energy (Minister) sets the energy policy in South Africa and directs how generation capacity from renewable energy resources is to be developed and procured. NERSA is the custodian and enforcer of the Electricity Regulation Act, 2 of 2006 (ERA). NERSA also empowered to issue licences for various activities and regulates electricity prices and tariffs. Eskom Holdings SOC Ltd (Eskom), the national utility, has been designated as the offtaker in the REIPPPP Programme. To date Eskom also performs the functions of generator, the National Transmission Company (NTC), distributor and system operator. Significant strides have been made towards the unbundling of Eskom into separate generation, transmission and distribution divisions. The transmission division is on track for separation by the end of 2023. Other key political and regulatory influences include the DFFE in respect of the development of environmental policy and legislation to facilitate a renewables industry, as well as the Department of Public Works; Infrastructure and Infrastructure South Africa, a programme within the Ministry of Public Works and Infrastructure; and

Development Financial Institutions such as the Industrial Development Corporation (IDC) and the Development Bank of Southern Africa (DBSA).

Key private sector players include South Africa's private banking institutions; accounting firms; as well as a number of large miners, steel, manufacturing and heavy industry corporates.

### **5. What are the approaches businesses are taking to access renewable energy? Are some solutions easier to implement than others?**

The access to renewable energy has only recently been eased through the amendment of the ERA, which removed the capacity threshold for embedded generation and the need to obtain an electricity generation licence. The threshold was increased from 1MW to 100MW in August 2021, which saw a significant increase in C&I related renewable projects. In 2021 only 135 MW of electricity generation projects were registered with the local regulator, with a total of 1 646 MW electricity generation projects registered in 2022. In January 2023 the 100MW threshold for embedded solutions was removed allowing for embedded generation projects to be developed to utility scale capacities. This has resulted in the pipeline of C&I embedded renewable projects ever increasing, with over 1GW registered in the first two months of 2023.

The ease of restrictions on licencing and registration requirements has contributed significantly towards making renewable energy more accessible to businesses and energy intensive industries such as mining, and a more feasible and strategic investment. A large number of businesses have turned to rooftop solar, as this is the easiest and quickest installation process, given the infrastructure already in place, the limited regulatory permits required and the favourable climatic conditions in South Africa. Energy intensive industries such as mining and manufacturing prefer the development of large-scale tracking solar PV facilities, as the scale of electricity production is more aligned with their energy requirements. The increasing ease of access to alternate electricity supply not only serves as a means to ensuring security of electricity supply, but also enables businesses to achieve their internal carbon neutrality goals.

### **6. Has the business approach noticeably changed in the last year in its engagement with renewable energy? If it has why is this**

**(e.g. because of ESG, Paris Agreement, price spikes, political or regulatory change)?**

The relaxation of licencing of electricity generation facilities, and the business sense and opportunity that embedded generation presents, has resulted in a significant rise in the development and implementation of C&I electricity projects. We have seen a significant change in behaviour from business, with the implementation of rooftop and battery energy storage solutions being installed across all sectors. This is largely due to the electricity rationing, also known as loadshedding occurring in South Africa, where electricity is only available for certain periods during the course of the day. The impact of loadshedding also triggered the regulatory change required which eased the licencing and registration provisions for the productions of electricity as set out in detail under question 5.

Internal ESG policies and sustainability goals and commitments, coupled with the global move to decarbonisation has been a significant factor in business investing in renewable energy solutions. The prospects that decarbonation presents to a business in terms of not only decreasing its own carbon footprint, but allowing for the production of “green” or “clean” products has been identified as ESG and sustainability backed commercial benefits as customers seek sustainable products, globally.

**7. How visible and mature are discussions in business around reducing carbon emissions; and how much support is being given from a political and regulatory perspective to this area (including energy efficiency)?**

From a tax policy perspective, there is support from government in relation to tax incentives and the like which is discussed below at 11. There has been a development where listed companies in South Africa are beginning to publish their sustainability reports as well as climate impact reports for each financial year. There is also a lot of transparency in the private sector around the establishment of decarbonisation projects such as the implementation of renewable energy projects at major operations or the introduction of hydrogen-fuel cell powered machinery. Please refer to the discussion above at 2 in respect of carbon neutrality regulatory developments. In terms of energy efficiency, the DMRE has implemented regulations, currently subject to a transitional period, which require buildings of a certain use and capacity to display energy efficiency

certificates.

**8. How are rights to explore/set up or transfer renewable energy projects, such as solar or wind farms, granted? How do these differ based on the source of energy, i.e. solar, wind (on and offshore), nuclear, carbon capture, hydrogen, CHP, hydropower, geothermal and biomass?**

Renewable energy resources are free, and no licences are required to explore or determine the feasibility of renewable energy projects. Access to privately owned land on which projects will be developed is secured by purchasing or leasing the land. An environmental authorisation is required in terms of the National Environmental Management Act 107 of 1998, for the development of facilities over 10MW, excluding where such development of facilities or infrastructure is for photovoltaic installations and occurs within an urban area or on existing infrastructure. The requirements for environmental and regulatory permitting for various renewable resources differ, with wind projects for example being subject to greater bird and bat monitoring requirements and hydropower being subject to stringent water licencing considerations.

Projects also need to secure a connection to the Eskom distribution or transmission system. Certain projects are required to apply for a generation licence from NERSA, while others do not have to apply for a licence but may still be required to register with NERSA. South Africa does not have large scale geothermal resources to generate electricity or use for direct heat.

**9. Is the government directly involved with the renewables industry? Is there a government-owned renewables company or are there plans for one?**

South Africa does not have a government-owned renewables company. Government has until recently only played a limited role in in developing renewable energy generation capacity through Eskom. The Minister of Public Enterprises recently announced that Eskom intends playing a significant role in the creation of renewable electricity generation capacity and that it is establishing a ‘Clean Energy Unit’ that will focus on the development and establishment of renewable and alternate technology energy capacity. Furthermore, as part of its “Just Transition Program”, at the end of 2022 Eskom leased some of its land across some of its existing generation sites in Mpumalanga province, that

already have transmission connections, for the purposes of renewable energy projects. It hopes as much as 4 GW of capacity can be added over time.

**10. What are the government's plans and strategies in terms of the renewables industry? Please also provide a brief overview of key legislation and regulation in the renewable energy sector, including any anticipated legislative proposals?**

The energy demand in South Africa is projected to more than double by 2050, which will require proportionate expansion of the installed generation capacity. The aim is that by 2030, 25 GW will have to be added to installed capacity with the requisite supportive transmission and distribution network infrastructure. South Africa's National Infrastructure Plan 2050 notes the following in relation to government's plans: regularised prescheduled bi-annual bid windows are intended to procure about 5GW of renewable energy annually from IPPs; municipalities will be enabled to procure power from IPPs; there is intended acceleration of transmission and distribution infrastructure investment; and up to 5 000 MW battery storage is to be procured by 2023/4.

The regulation of the electricity supply industry is governed by the ERA. In terms of section 34 of the ERA, the Minister, in consultation with the NERSA, may determine that new generation capacity is needed to ensure the continued uninterrupted supply of electricity, the types of energy sources from which electricity must be generated and the percentages of electricity that must be generated from such sources, the buyer and seller of such electricity and the procurement process to be followed.

Schedule 2 of the ERA was amended in January 2023 to remove the MW capacity threshold for embedded generation. The draft Electricity Regulation Amendment Bill released in 2022 (ERA Amendment Bill) seeks to transform the electricity market to competitive multimarket electricity supply industry and it being managed by a transmission system operator. This will bring forth diverse ways to buy and sell electricity and foster competition to decrease electricity costs. The ERA Amendment Bill will allow for a trading platform where market participants may trade with each other, private power purchase agreements where registered generators enter into power purchase agreements (PPAs) with direct customers, and generators will enter into PPAs with the transmission system operator.

**11. Are there any government incentive schemes promoting renewable energy (direct or indirect)? For example, are there any special tax deductions or subsidies offered? Equally, are there any disincentives?**

Several significant tax incentives are available to promote investment in or sale of utility-scale and/or embedded renewable power as highlighted below.

- Section 12B of the Income Tax Act 58 of 1962 (ITA) provides for an accelerated capital depreciation allowance in respect of solar (CSP or PV up to or more than 1 MW), hydropower (up to 30 MW), wind (no cap) or biomass (no cap) renewable energy generation assets owned or acquired by the taxpayer in terms of an instalment credit agreement and brought into use for the first time by that specific taxpayer for the purposes of its trade.
- Solar plant producing less than 1MW qualifies for a 100% write off period in year one, whereas the other categories of renewable energy mentioned above qualify for a three year write off period.
- Notably, section 12B caters only for the actual plant and machinery generating the renewable energy and improvements thereon (including supporting structures like foundations). Therefore, section 12U of the ITA was introduced in April 2016 to allow a specific deduction in respect of expenditure incurred in respect of utility scale renewable energy projects for other general supporting infrastructure including roads, fences and the like.
- In response to the severe energy crisis, the Minister of Finance announced in the National Budget Speech 2023, two additional tax incentives designed to increase the uptake in renewable energy as follows: 1. a rooftop solar tax credit / rebate for individuals who invest in solar photovoltaic (PV) panels in their residential households, which credit is limited to 25% of the cost of the solar PV panels up to a maximum of R15,000 and which is only available for solar PV panels brought into use for the first time between 1 March 2023 and 28 February 2024; 2. an enhanced capital depreciation allowance for renewable energy plant and equipment used during one's trade of 125% of the cost of such asset (plus improvements and supporting structures).



- Notably, the enhanced capital depreciation allowance (contained in a new proposed section 12BA of the ITA) does not make a distinction between the generation thresholds of the renewable energy plant and hence all plant generating any renewable energy in the categories mentioned above (see discussion regarding section 12B) will qualify for a 100% write-off period in year one. However, the incentive is only available for two years in that the plant must be brought into use for the first time between 1 March 2023 and 28 February 2025.
- In terms of section 12N of the ITA, improvements associated with certain public sector procurement like the REIPPPP made to a property that is leased and not owned by the taxpayer, qualify for a depreciation allowance on the value of the improvement. The allowance also applies to depreciation associated with section 12B of the ITA.
- In terms of section 12L of the ITA, any taxpayer can deduct a further allowance in respect of “energy efficiency savings” prior to years of assessment ending before 1 January 2026. The allowance is aimed particularly at energy intensive industries to encourage a change in behaviour by utilising less energy intensive methods and/or implementing energy use mitigation initiatives within their processes. To claim the allowance, taxpayers must obtain a certificate from the South African National Energy Development Institute (SANEDI) which confirms and certifies the energy savings in kilowatt-hours or the equivalent thereof.

A carbon tax became effective on 1 June 2019 with the promulgation of the Carbon Tax Act 15 of 2019 (CTA). The tax is being implemented in a phased manner, with various tax-free allowances available during the first phase (June 2019 to December 2025). In terms of the CTA, taxpayers may utilise credits generated through eligible carbon offset projects as a means of reducing their carbon tax liability up to a maximum of 5-10%. Certain Clean Development Mechanisms (CDM), Verified Carbon Standard or Gold Standard approved renewable energy projects are now eligible as carbon offsets under the new carbon tax regime.

**12. Has your Government had to help with the basic cost of energy over the last year and has that led to any discussion about de-linking the gas price and renewables**

**prices?**

The South African government has not subsidised the cost of basic energy over the last year. The gas and renewables prices are not linked.

**13. If there was one emerging example of how businesses are engaging in renewable energy, what would that be? For example, purchasing green power from a supplier, direct corporate PPAs or use of assets like roofs to generate solar or wind?**

The C&I sector in South Africa is booming, partially due to decarbonization efforts, but mostly to ensure security of supply amidst electricity rationing, also known as loadshedding.

**14. What are the significant barriers that impede both the renewables industry and businesses' access to renewable energy? For example, permitting, grid delays, credit worthiness of counterparties, restrictions on foreign investment.**

Some of the barriers encountered include severe grid constraints on the Eskom grid, particularly in areas where wind and solar resources are abundant such as the Northern Cape, Western Cape and Eastern Cape. Only 6 of the 56 bids submitted in bid window 6 of REIPPPP were appointed as preferred bidders, because of such grid constraints. Furthermore, South Africa has a limited manufacturing capacity for renewable energy infrastructure, making it difficult for bidders to comply with local content obligations of government programmes such as REIPPPP. Permitting was previously associated as a barrier to renewable energy development due to extensive delays in the grant of certain environmental licences. There has however been significant improvement in permitting timeframes, especially for projects under REIPPPP which are given “strategic infrastructure project” (SIP) status in terms of the Infrastructure Development Act 23 of 2014. SIPs benefit from expedited permitting timeframes with permitting timeframes reduced by up to 100 days. Other delays include legal challenges to environmental permits and land use.

**15. What are the key contracts you typically expect to see in a new-build renewable energy project?**

New new-build renewable projects typically require the following contracts -

- An agreement between the owner of lessor of the land / rooftop on which the renewable energy project is to be developed and the developer or project company;
- Financing agreements for debt and equity finance. Project finance is commonly used to finance renewable energy projects.
- Engineering, procurement and construction agreements set out the conditions and responsibilities for the design and construct an entire facility. Both fully wrapped and split EPC structures are common in the South African market.
- Operation and maintenance agreements between the project company and a professional management company to operate and maintain the facility.
- Power Purchase Agreement between a power producer and off-taker.

#### **16. Are there any restrictions on the export of renewable energy, local content obligations or domestic supply obligations?**

Section 7 of the ERA prohibits the generation, transmission or distribution, importation or exportation of electricity without a licence unless a person is exempted in terms of Schedule 2 thereof.

#### **17. Has deployment of renewables been impacted in the last year by any non-country specific factors: For example, financing costs, supply chain or Covid 19?**

The lockdown measures of the Covid-19 pandemic impacted the renewables industry and lead to delays in construction, with a number of projects under REIPPPP declaring force majeure. A number of disputes have arisen between Eskom and the IPPs in that regard. Supply chain disruption has also affected and delayed the commissioning of new renewable projects.

#### **18. Could you provide a brief overview of the major projects that are currently happening in your jurisdiction?**

The amendments to schedule 2 of ERA to allow for electricity generation, without the need for a generation licence has enable a significant growth of the private generation market. Several of the large mining and

heavy industries in South Africa have entered into or are considering entering into private PPAs to secure a reliable supply of electricity.

#### **19. How confident are you that your jurisdiction can become a leader in newer areas like offshore wind or hydrogen?**

South Africa has been on a journey to establish a hydrogen economy for more than a decade, with significant government support and public/private investments in the research and development of fuel cells, hydrogen production process, storage and delivery with platinum-group metals as a backbone to the development of this economy. Despite this, the hydrogen economy has not really gained any traction from a commercial perspective.

In early 2021, the discussion around green hydrogen as a potential clean alternate fuel seemed, at that point in time, to be very much an abstract concept. However, what has occurred to date with the significant traction in establishing a clean hydrogen society globally and regionally, and a hydrogen economy in South Africa, has been very encouraging to witness. The endorsement by the largest industrial economies of the world of clean hydrogen as the best route to significantly contribute to the decarbonisation of hard to abate industries - replacing carbon molecules for zero or low-carbon molecules - has created a basis to fast-track the commercial production of green hydrogen at scale.

As a direct consequence of this, South Africa and several other jurisdictions in Africa have been identified as an ideal location to produce green hydrogen on a cost-competitive basis at scale. South Africa with its history in hydrogen research and development has all the ingredients to become a leading player to commercialise green hydrogen for its own industrial use, but also to become a global leader in the export of green hydrogen and its derivate products.

Recapping the developments that have played out over 2022, it would be appropriate to start with acknowledging the South African Hydrogen Society Roadmap (HSRM), published, in February 2022, by the South African Department of Science and Innovation, marking an important milestone in the launch of South Africa's hydrogen economy. The HSRM provides the framework on how existing sectors and proposed energy developments can become part of the value chain of a hydrogen economy.

Should the HSRM be successfully implemented in South Africa, the country could achieve "just and inclusive net-

zero carbon economic growth by 2050". With the release of the Green Hydrogen Commercialisation Strategy on 7 December 2022 with the HSRM, the basis for the commercialisation of South Africa green hydrogen economy can be streamlined.

The inaugural Green Hydrogen Summit: South Africa by Infrastructure South Africa that was officially opened by President Cyril Ramaphosa on 29 November 2022 brought together stakeholders from governments and various industries to discuss and unpack the potential that green hydrogen holds for South Africa, and other African countries such as Namibia, Kenya and Egypt. The discussions during the summit by industry leaders,

international and regional investment institutions and governments representatives from several jurisdictions re-affirmed the fact that South Africa has the right ingredients to be a leading player in green hydrogen.

## 20. How are renewables projects commonly financed in your jurisdiction?

Limited recourse project finance is commonly used to finance utility scale renewable energy projects in South Africa. C&I projects are funded in a variety of ways including bank financing, equipment rental agreements and upfront capital investments.

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