

# Energy **2020**

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## Angola

#### Ana Luís de Sousa, Joana Pacheco & Catarina Coimbra VdA

#### Introduction

Angola is sub-Saharan Africa's third-largest economy, and has a vast amount of natural resources with tremendous energy potential, although there is still a long way to go in terms of the development of the energy sector. The Government has set as the major targets for this sector: an increase in access to electric power for all the Angolan population; and the promotion of renewable sources of energy, with several projects currently in the pipeline, focused mainly on hydropower and natural gas.

## Overview of the current energy mix, and the place in the market of different energy sources

According to the Ministry of Energy and Water (MINEA), Angola's current installed capacity is estimated at 5.01 GW. The total generation capacity of the country was supposed to reach 6.3 GW by the end of 2018, comprising 64% hydropower (4 GW), 12% natural gas (750 MW) and 24% other fossil fuels (1.5 GW). But the Government of Angola only expects to reach this capacity once the Soyo Combined Cycle Plant (750 MW, natural gas), and the Laúca Hydroelectric Power Plant (2.1 GW) are fully operational.

Angola has its eyes set on the Angola Energy 2025 Plan, which envisages a new and more developed country that has the necessary energy infrastructure to compete on the global stage. The plan starts with the goal of bringing electricity to about 50% of the population by 2022 and 60% by 2025; a big increase when compared to the current 42% rate.

It is expected that by 2025 the demand for power will increase more than four times, reaching a load of 7.2 GW, mainly due to a 60% electrification rate, along with electricity consumption *per capita* tripling. Even though big strides are being made in the energy sector, the rural electrification rate only amounts to about 6%, meaning that there is still a great deal of improvement to be made.

Hydro and gas power plants account for 75% of the country's total energy consumption, which has been accompanied by a 25% reduction in diesel-driven electricity consumption. Following the Angola Energy 2025 plan, the government has been dedicating a lot of time to the promotion of renewable energy.

## Changes in the energy situation in the last 12 months which are likely to have an impact on future direction or policy

The Angola 2025 Energy Plan

In the first trimester of 2019, the Angola 2025 Energy Plan was launched, which provides

a high-level overview of the policies intended to increase access to electricity to 60% of the population, with 70% of electricity expected to be derived from renewable sources. In this context, a boost in investment in renewable energy projects is expected.

#### Solar

The Angola 2025 Energy Plan sets a target of 800 MW of installed renewable capacity by 2025, focusing primarily on solar projects. Angola has a high solar resource potential, with an annual average global horizontal radiation of between 1.350 and 2.070 kWh/m²/year.

In the same vein, at the end of 2018, the Angolan Ministry of Energy and Water (MINEA) presented the "Scaling Solar" programme, an initiative carried out by the World Bank aimed at promoting private investment in on-grid PV solar projects in Africa in the period 2018-2022. According to public statements made by MINEA representatives, several sites are already identified for the construction of solar power plants, and all of the country's regions have favourable conditions for large-scale renewable energy projects, although so far only a limited number of off-grid projects have been implemented across the country, mostly in the provinces of Zaire, Bié, Lunda Norte, Lunda Sul, Moxico, Cunene, Huíla, Cuando Cubango and Cuanza Sul.

#### Hydro

The Angola 2025 Energy Plan also focuses on the hydroelectric potential of the country. In fact, Angola has exceptional hydro resources, with 159 sites identified in previous studies as having potential for large hydropower plants, in addition to those already under construction. The 2025 Energy Plan focuses greatly on this natural advantage, and MINEA plans to grow Angola hydropower generation capacity, from its current levels of around 1,200 MW, to 9,000 MW by 2025. In addition, there are still many locations suitable for micro-hydro which would have the potential to generate an estimate of 600 MW each.

To support the development of hydroelectric projects, the GAMEK (Gabinete de Aproveitamento do Médio Kwanza), the utility company responsible for implementing and managing the hydro projects in the Kwanza river, was expanded to include oversight of the development and construction of most major power projects in the country.

#### Renewables

The national strategy for new renewables is strongly committed to biomass as an alternative energy source, with a target of 500 MW by 2025. The Government's strategy in this subsector is mainly focused on hydrothermal projects with 300 MW, which take advantage of existing forest areas in the central region of the country.

#### 1st Angola International Renewable Energy Forum

On June 19, 2019, the 1st Angola International Renewable Energy Forum was held in Luanda, organised by the Private Investment and Export Promotion Agency (AIPEX). The main goal of this event was to promote actions aimed at attracting foreign investment to the energy sector, particularly in production with renewable resources such as solar, hydro, biomass and wind. This was a remarkable initiative that could positively impact foreign investment in this sector in the near future.

#### Developments in government policy/strategy/approach

Pursuant to the Angola 2025 Energy Plan, the Government has set out a two-fold action plan: on the one hand, the electrification of the main populated areas through the electricity grid; and on the other hand, the provision of energy services based on decentralised

solutions for rural and dispersed populations across the country. Regarding energy supply from interconnected systems, a goal was established to increase electricity coverage from 30% to 60% by 2025.

With respect to energy sources, there has been a clear investment in renewable sources of energy, with around US \$18 billion worth of investments into renewables under way. Private investment in the sector is expected, along with the gradual update of electricity tariffs, to which the recent implementation of the new tariff regime will contribute with the creation of a financially self-sustaining sector.

The Government expects to substantially reduce public expenditure on energy projects, especially given its current budgetary constraints, and the economic downturn. In this context, public financing is to be directed only towards projects in the public sphere (large dams, national transport network). In fact, the key to achieve the goals set out in the Angola 2025 Energy Plan is to further expand private investment.

In this context, Angola has been making the necessary changes in its governing policy and legislation in order to create a far better environment for private investment. In addition to the review of the energy sectorial legislation, these changes came in the form of anti-corruption policies, the adoption of many economic and financial reforms, and a reduction of bureaucracy.

One of the main issues to tackle in the near future are the four energy systems – the northern, central, southern and eastern systems – spread throughout Angola that need to be connected with each other and with neighbouring States. However, this venture will cost about US \$1,800 million and the government has opened its doors to private investment to fund the project. As of yet, only the northern system (Luanda) is connected to the central system. Thus, the goal is to develop the southern system so as to allow it to be connected to Namibia and the East as far as Zambia.

Aside from this investment, there are other projects that encompass the Democratic Republic of Congo, through the province of Cabinda. Angola has already started to show a surplus in energy production, meaning that the challenge now is to ensure the excess energy reaches all the Angolan population, and to eventually also sell energy to neighbouring countries.

The Government has also been engaged in multilateral organisations in order to fulfil the goals established for the energy sector. In this context, Angolan utilities are members of the Southern Africa Power Pool (SAPP) and the Central Africa Power Pool (CAPP). Angola intends to integrate into SAPP through the development and implementation of power generation projects with a regional impact, namely the Laúca Hydroelectric Power Plant, the Soyo Combined Cycle Plant, the Cambambe I and II hydroelectric plant, and the Hydroelectric of Caculo-Cabaça. Angola also intends to develop the interconnection of the transmission line with Namibia, to initially provide electricity to cities in the south of Angola.

In addition, as part of the Government's strategy of development of renewable energy projects, the Sustainable Energy Fund for Africa (SEFA), managed by the African Development Bank (AfDB) has approved a US\$1 million grant to Independent Power Producers (IPP) in Angola to promote private investment in renewable energy. These funds will be used to establish a one-stop shop unit known as the Energy Project Implementation Support Unit (EPISU) that will work as a facilitator to improve the bankability of projects. In addition, this unit also aims at increasing capacity-building by providing technical assistance on project procurement, contract design, implementation and monitoring of IPP projects in Angola.

In July 2019, Angola joined the Lusophone Compact, an MoU signed by Portugal and the AfDB in November 2018, aimed at enhancing the development of the private sector in the African Portuguese Speaking Countries (PALOP) in several areas, including renewable energies.

#### Developments in legislation or regulation

#### Electricity

In 2014, under the US \$1 billion African Development Bank Electricity Sector Transformation Program Loan, the Angolan energy sector went through major reforms, aimed at continuing the restructuring process started by the Energy Sector Development Strategy, approved by Resolution No. 21/02, and the National Energetic Safety Policy and Strategy, approved by Presidential Decree No. 256/11.

By means of Law No. 14-A/96, of 31 May, the General Electricity Act, which establishes the legal regime for the generation, transmission, distribution and commercialisation of electricity in Angola, was approved. In November 2014, Presidential Decree No. 305/2014 established the unbundling of the energy sector, which created three public entities operating under the Ministry of Energy and Water (MINEA): PRODEL, (*Empresa Pública de Produção de Electricidade*), the national production company; RNT (*Rede Nacional de Transporte de Electricidade*), the national transmission company; and ENDE, (*Empresa Nacional de Distribuição de Electricidade*), the national distribution company.

The General Electricity Act was amended in 2015, aiming at ensuring major participation of the private sector and clearly signalling a change in the Angola Government's policy for the energy sector. The main changes introduced by this amendment concern the liberalisation of the commercialisation of electricity, and the provision of economic incentives for investment in renewable energy sources, thus making room for greater private investment. In addition, the 2015 amendment has also created the National Rural Electrification Fund, a public entity responsible for promoting the electrification of the rural areas, which, as noted above, is one of the bigger issues in the Angolan energy sector.

The licensing procedures, permits/authorisations required to carry out these activities, and main rights and obligations of the relevant entities, are dispersed in the legislation. Most of these statutes have still not been adapted to the new market model introduced by the General Electricity Law, where electricity production is one of the activities of the value chain available to private investors, who establish a commercial relationship with the entity responsible for the management of RNT through a Power Purchase Agreement (PPA).

In this respect, the Angolan Government has recently carried out a revision and creation of sector regulations, in order to enhance private investment in the energy sector. Thus, a new Presidential Decree, aiming at regulating in one piece of legislation all the activities of the value chain of the energy sector, has been prepared and is currently out for public consultation. In addition, this draft Presidential Decree also includes a Model of Power Purchase Agreement for Renewable Energy, aligned with international best practices in the energy sector.

In May 2019, there was a significant change in electricity prices due to the enactment of Executive Decree No. 122/19, of 24 May, which established a new tariff system for electricity utilisation. Among others, this statute provides for rules regarding the protection of vulnerable consumers, by means of the provision of clearer rules regarding the

allocation of subsidies. This change was mainly established to make sure that subsidies would only benefit more vulnerable consumers; however, public opinion on this matter has been mainly negative as electricity prices have nearly doubled since the implementation of this new tariff regime, in July 2019. This modification to the tariff regime goes hand in hand with the strategy of the Angolan Government of slowly reducing public expenditure in the energy sector, leaving room for the private sector to fill its place.

#### Natural gas

The Angolan Government has recently approved a new legal framework for the exploitation of natural gas reserves, which until now has been governed by the petroleum regulations. Indeed, the Legislative Decree No. 7/18, of 18 May establishes the legal and fiscal regime applicable to the activities of prospecting, research, evaluation, development, production and sale of natural gas in Angola. The purpose of this Legislative Decree is to create a legal and fiscal regime base that fits and promotes the exploitation of natural gas, as well as the related industries.

#### Private investment

Foreign investment in the Angolan energy sector is expected to be enhanced by the new legislation on private investment, under which the generation and distribution of electricity is one of the priority sectors. This inclusion seeks to attract foreign investors, as it will allow them to be granted special benefits, in particular tax benefits, irrespective of the amount of such investments.

#### Judicial decisions, court judgments, results of public enquiries

To the best of our knowledge, there is no available case law, judicial decisions, court judgments or results of public enquiries in Angola on the interpretation and application of the relevant legislation of the energy sector.

Angola often refers to Portuguese court decisions, but, in the energy sector, no court decisions have been issued.

Regarding public enquiries, no relevant results are available. Nevertheless, as mentioned above, a draft Presidential Decree, regulating in one piece of legislation all the activities of the value chain of the energy sector, has been prepared and is currently under public consultation.

#### Major events or developments

#### **Hydro**

Regarding ongoing projects, it is worth mentioning that the last two turbines of the Laúca hydroelectric project (which is the largest civil engineering project ever in the country and the second-largest dam in Africa), with a capacity of 333 MW of power each, are due to start operating by the end of the year. The major project in the pipeline in this subsector is the Caculo Cabaça Hydroelectric, located in Kwanza Norte province and financed by Chinese Government loan, which has an installed capacity of 2,171 MW and is expected to be, within five years, the largest dam in Angola.

New rivers and basins have also been identified by the Government as having a significant hydroelectric potential, such as the River Queve with the Balalunga and Cafula projects, and the River Catumbela with the Cacombo, Lomaum 2 and Calengue projects, and other smaller hydro projects throughout the country.

#### Wind projects

The Government has decided to limit the Tombwa wind project to the outflow capacity of the planned infrastructures, having in addition selected two medium-size projects with favourable conditions in areas close to the main network: one in Cuanza Norte and another near the city of Lubango.

#### Gas to power projects

The Soyo Combined Cycle Thermal Power Plant, which produces energy through the use of natural gas from several Angolan oil blocks, and which is currently the largest gas turbine power station project in Africa, has recently started producing and supplying electricity to the city's public grid.

#### Proposals for changes in laws or regulations

The main change required in the Angolan legal framework on the energy sector concerns the creation of laws and regulations that are aligned with the central principles established in the General Electricity Act and enhance private investment and the bankability of energy projects.

The first step to achieve this goal has been taken with the draft Presidential Decree that is currently under public consultation. In fact, one of the major issues in the Angolan legal framework on the energy sector relates to the large number and diversity of laws and regulations, most of them outdated and not in line with Government strategy for the sector. Therefore, it is expected that this Presidential Decree will centralise all the activities included in the energy value chain in one single piece of legislation. The inclusion of model PPA in this Presidential Decree is also a step further to achieve the legal certainty that is decisive for private generators to obtain finance and therefore to develop projects.

In order to attract the private financing sector, which plays a pivotal role in the development of an energy project, investors need to be sure that their investment will be reasonably protected against non-market risks. Therefore, a clear legal and regulatory framework protecting investors, providing guarantees, legal stability mechanisms or other measures that protect investments in the event of changes to the regulatory framework, is highly needed.

Another aspect concerns the procurement processes, which are often time-consuming, governed by the general rules on public procurement and under which the private investor bears a considerable level of risk. Thus, the creation of specific procurement procedures for energy projects (in particular, for renewable energy projects), which limits the discretion of the Government in the negotiation of concession agreements and PPAs, whilst ensuring competitiveness and transparency, would contribute to the creation of a favourable environment for private investment.



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Ana Luís de Sousa joined VdA in 2001. Head Partner of the Energy & Natural Resources practice, Ana is widely recognised as an expert in the development and financing of cross-sector projects. Ana has been involved in several road infrastructure projects and PPPs in the health sector and water and waste concessions, but her practice has been specially focused on energy projects, in Portugal as in all of VdA Legal Partners' jurisdictions, acting as legal adviser to the administrative authorities, sponsors and financial institutions (in particular, investment banking and EIB). She is admitted to the Portuguese Bar Association.



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