

# Electricity regulation in Morocco: overview

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A Q&A guide to electricity regulation in Morocco.

The Q&A gives a high-level overview of the domestic electricity market, including domestic electricity companies, electricity generation and renewable energy, transmission, distribution, supply and tax issues. It covers the regulatory structure; foreign ownership; import of electricity; authorisation and operating requirements; trading between generators and suppliers; rates and conditions of sale and proposals for reform.

## Overview

### Electricity market

#### 1. What is the role of the electricity market in your jurisdiction?

#### Overview

Until recently, the Moroccan National Office for Electricity and Potable Water (*Office National de l'Électricité et de l'Eau Potable*) (ONEE) had a monopoly on the generation, transport and distribution of electricity in Morocco.

In 2009, Morocco adopted a national energy strategy aimed at strengthening the security of its energy supply as well as securing general cost-effective access to electricity. It also accelerated the development of renewable energies to reduce energy dependence and decrease greenhouse gas emissions.

In this context, the Morocco Agency for Solar Energy (now the Morocco Agency for Sustainable Energy) (MASEN) was created in 2010 to implement the Moroccan solar programme. Law No 13-09 relating to renewable energies (Law 13-09) was also promulgated in 2010 to liberalise and develop the renewable energy sector in Morocco through the opening up of renewable electric and thermic production to competition.

In its preamble, Law 13-09 describes the main aims of the Moroccan energy policy as:

- Strengthening the security of energy supplies through the diversification of sources and resources, optimisation of the energy balance and control of capacity planning.

- Widening access to energy, through widening the availability of modern energy for all segments of the population at competitive prices.
- Allowing sustainable development through the promotion of renewable energies, to strengthen the competitiveness of the productive sectors of the country, preserve the environment, limit greenhouse gas emissions and reduce the pressure on forestry.
- Strengthening regional integration by opening up to the Europe-Mediterranean market and the harmonisation of energy regulations.

The main operators on the electricity generation market are now:

- The ONEE.
- Independent power producers developing projects launched by MASEN.
- Independent power producers developing projects under Law 13-09.

The ONEE has maintained a monopoly on electricity transmission. Distribution activities are operated either by municipalities (through a municipal electricity distribution service (*régies*) or a delegation to private concessionaires) or by the ONEE directly in locations that are not served by municipal distribution services or private concessionaires.

#### Government policy objectives

At the 2016 United Nations Climate Change Conference (COP 22) held in Marrakech, Morocco raised its target of increasing the share of renewable energy in installed power to 42% by 2020 and to 52% by 2030.

Electricity generated by renewable energy is currently produced by four solar plants and 11 wind farms. The solar plant of Noor Ouarzazate has the highest installed capacity (580 megawatts (MW)). In the wind power sector, the Tarfaya plant has the highest installed capacity (301 MW), followed by Aftissat and Akhfenir (200 MW each).

Projects that have not yet been launched include the solar plants of Noor Midelt I and Noor Midelt II, with capacities of 800 MW and 230 MW respectively. A consortium composed of EDF Renewables, Masdar, and Green of Africa was selected in 2019 as the successful bidder for Noor Midelt I. MASEN launched a call for expression of interest in July 2019 in relation to Noor Midelt II.

In 2020, Morocco executed an agreement with Germany for the development of the green hydrogen production sector. The Hydrogen National Commission was created in July 2020 to strengthen the development of renewable energy in Morocco.

The Energy ministers of 14 Arab countries, including Morocco, announced an ambitious energy project to establish an Arab Common Market for electricity. The final version of two international conventions related to this project were finalised on 27 July 2020.

### Recent trends

The main recent legislative reforms in the energy sector include:

- Law No 58-15 dated 12 January 2016, which amended Law 13-09 to allow independent producers to access the low voltage grid, allowing them to sell surplus renewable energy to the ONEE.
- Law No 16-08 adopted in October 2008, which enables industrial installations to produce up to 50 KW of their own electricity from renewable energies.
- Law No 54-14 promulgated in August 2015, which allows national electricity self-producers to join the transmission network to carry energy from production sites to consumption sites.
- In addition, the following draft laws were issued in 2019 and 2020:
- Draft law No 40-19 amending Law 13-09, which aims to resolve the difficulties met by independent power producers and promote the development of a national industry for renewable energy.
- Draft law relating to self-generation of electricity, which sets out a comprehensive legal and regulatory framework for self-generation projects.

In addition to these legislative changes, the institutional framework has also been modified as follows:

- Law No 57-09, promulgated in February 2010, created MASEN. This is a private company with a public shareholding. MASEN is in charge of implementing a large-scale national integrated solar energy project aimed at establishing a total capacity of 2,000 MW of renewable energy electricity production. Law No 38-16 implemented the transfer to MASEN of all ONEE real estate assets used for renewable energy installations except for:
  - energy transfer pumping stations;
  - production installations aimed at stabilising the national electricity system; and
  - renewable energies-based electricity production installations governed by Law 13-09 (*see above*).
- Law No 16-09, further amended by Law No 39-16, created a national agency for the development of renewable energies and energy efficiency, the Moroccan Agency for Energy Efficiency (*Agence Marocaine pour l'efficacité énergétique*) (AMEE).
- Law No 48-15 dated 24 May 2015 on the regulation of the electricity sector and the establishment of the Moroccan Energy Authority (*Autorité Nationale de Régulation de l'Energie*) (ANRE), sets out the powers and resources of the ANRE (*see Question 2, Regulatory authorities*). The ANRE's members were appointed in August 2020, and the ANRE is scheduled to start its activities by the end of 2020.

While projects launched by MASEN under the national wind and solar programmes started operating, Moroccan authorities are currently focusing on the development of independent power production projects under Law 13-09, as well as self-generation projects.

### Regulatory structure

#### 2. What is the regulatory framework for the electricity sector?

### Regulatory framework

The main laws regulating the electricity sector are:

- Dahir No 1-63-226 dated 5 August 1963 relating to the ONEE, amended by Law No 38-16 dated 25 August 2016 (ONEE Dahir). This gives ONEE a monopoly on the production, transportation and distribution of electricity.
- Law 13-09, which opened up electric production from renewable energy installations to competition.
- Law No 47-09 on energy efficiency.
- Law No 48-15 dated 24 May 2015, on the regulation of the electricity sector and the establishment of the ANRE.

- Law No 57-09 on the establishment of the Morocco Agency for Sustainable Energy (MASEN).
- Law No 142-12 relating to nuclear and radiological safety and security and the creation of the Moroccan Agency for Nuclear and Radiological Safety and Security.
- Law No 17-83 establishing the national centre for nuclear energy, sciences and technologies.

### Regulatory authorities

**Moroccan Energy Authority (ANRE).** The ANRE monitors the free market in electricity generated from renewable sources and regulates self-producers' access to the national electricity transmission grid.

The ANRE has powers to:

- Approve the scope, allocation rules and principles determining the financial relationships between the ONEE's separate activities.
- Approve the national electricity transmission grid code.
- Approve the national electricity transportation grid operator's multi-year investment programmes, and monitor their implementation.
- Approve the rules and tariffs for access to electricity interconnections.
- Approve the quality indicators to be met by the national electricity transportation grid.
- Approve codes of conduct for the management of the national electricity transportation grid.
- Set tariffs for the use of the medium-voltage electricity distribution grids.
- Give its opinion on the draft specifications of the national electricity transportation grid operator.
- Give its opinion, at the government's request, on draft legislative and regulatory texts relevant to its responsibilities.
- Propose draft laws or regulations relating to the electricity sector on its own initiative or at the request of the government.
- Carry out any study on the electricity sector and publish, by any appropriate means, information to inform the electricity sector, including consumers.
- Give opinions on the set selling rates for electricity authorised under the regulations in force.

The ANRE's members were appointed in August 2020, and the ANRE is scheduled to start its activities by the end of 2020.

In addition, the ANRE will have a dispute resolution committee with jurisdiction to hear all disputes between

transmission and/or distribution grid operators and users of the grid in relation to grid connection, access and use.

**Ministry of Energy, Mines and Sustainable Development (MEM).** The MEM is responsible for:

- The development and implementation of public policy in the field of energy.
  - Ensuring the supervision of the companies and public institutions under its authority and the control of the other sectors under its authority.
  - The management and development of energy assets.
  - Taking the necessary decisions and measures to:
    - ensure the security of energy supplies;
    - widen access to commercial energy services for rural and urban populations; and
    - ensure the safety of people and energy installations.
  - Implementing a strategic storage policy and taking emergency measures to ensure security of supply in the event of a crisis.
  - Ensuring that a strategic and forward-looking vision is in place, to ensure harmonious institutional development, continuous adaptation and progress in the energy sector.
  - Ensuring the organisation and functioning of the electricity market within the framework of the consolidation of a liberalised and integrated regional energy market, to enable Morocco to play an active role in the regional and international development of the sector.
  - Leading actions aimed at strengthening exchanges and consultation with all administrations, organisations and partners involved in the development of the energy sector.
  - Establishing the databases and information necessary for the preparation of economic and strategic analyses and impact studies, through the establishment of an energy observation and planning system.
  - Ensuring the promotion of national engineering in the energy sector as well as the training of the required human capacities and the preparation of the necessary management structures.
- Other.** Other relevant authorities include the:
- Institute for Research in Solar Energy and Renewable Energies (IRESEN), which carries out a broad range of energy R&D activities in close collaboration with the private sector.
  - AMEE, which is responsible for implementing energy efficiency programmes.

- Energy Investment Company (SIE), which provides services to public establishments, state-owned companies and territorial collectivities for the implementation of their energy efficiency projects.

## Electricity companies

### Main companies

#### 3. What are the main companies involved in electricity generation, transmission, distribution and supply?

### Generation

The ONEE is a public entity with legal personality and financial autonomy. It is in charge of the public service of producing, transporting and distributing electricity.

The ONEE is the main player in the Moroccan electricity sector and is fully owned by the government of Morocco. The ONEE has a monopsony as the only purchaser of power from generators, except for renewables generation, where Law 13-09 has opened up the production of electricity from renewable energy to competition.

In addition to its own production, the ONEE purchases energy from independent power producers (*Article 2.6, ONEE Dahir*), having entered into power purchase agreements with companies such as Jorf Lasfar Energy Company, Abdelkhalek Torres Wind, Electric Power of Tahad-dart, SAFIEC and TAREC. Electricity generated by renewable energy production installations projects launched by MASEN under the national solar and wind programmes are also ultimately sold to ONEE.

Law 13-09 allows independent producers to produce electricity from the following renewable energy sources:

- Hydropower with installed capacity between 12 MW and 30 MW.
- Solar.
- Wind.
- Geothermal.
- Wave and tidal energy.
- Biomass, landfill gas, wastewater treatment plant gas and biogas.

Independent power producers can also sell electricity to:

- The state for the national market, under an agreement with the state.
- A consumer or a consumer group connected to the national medium-voltage, high-voltage and very

high-voltage grid under private power purchase agreements.

(*Articles 25 and 26, Law 13-09.*)

In addition, energy is also generated by independent producers to cover their own energy consumption (self-production).

### Transmission

The ONEE has a monopoly on energy transmission activities under Article 2 of the ONEE Dahir, and is therefore acting as system operator and transmission asset owner. As a result, and in accordance with Law No 48-15 on electricity regulation and the creation of the ANRE, the ONEE must manage electric energy flows and maintain the stability and balancing of its grid.

Law 13-09 provides for a right of access to the national low-voltage, medium-voltage, high-voltage and extra-high-voltage electricity grid for electricity produced by independent operators from renewable energy sources, within the limits of available technical capacity.

The terms and conditions for access to the national low-voltage, medium-voltage, high-voltage and extra-high-voltage electricity grid are determined by the relevant agreement between the operator and ONEE, or where applicable, the operator(s) of the low and medium voltage electricity network concerned. These agreements must set out the:

- Duration of validity of the agreement.
- Technical conditions for grid connection.
- Commercial conditions for the transportation of electricity by the operator from production sites to consumption sites.
- Dispute resolution procedure.

### Distribution

Under Article 2 of the ONEE Dahir, the ONEE is responsible for the public service of electricity distribution, subject to Article 3 of the ONEE Dahir, which provides that the ONEE distribution role does not affect pre-existing municipal electricity distribution services.

Municipalities can decide not to use ONEE services for the distribution of electricity on their territory and can opt either for direct management of distribution through the creation of a municipal electricity distribution service (*régies*), or delegate the management of the service to a private concessionaire (*gestion déléguée*). In practice, the distribution of electricity is mainly performed by concessionaires in the main cities of Rabat, Tangier and Casablanca.

Draft Law No 40-19 provides that the operator of the distribution network will be entitled to reduce or interrupt injection of electricity to maintain electricity balancing.

### Supply

There is no specific status applicable to electricity suppliers. Aside from ONEE's monopoly, the only authorised suppliers (each subject to a specific statute) are as follows:

- Independent power producers in the renewable sector under Law 13-09.
- Municipalities acting through municipal electricity distribution services.
- Private distributors under a concession (*convention de gestion déléguée*) entered into with the relevant municipality.

### Unbundling requirements

There is no specific law or regulation relating to electricity storage activities. The main electricity storage assets available in Morocco are operated by the ONEE (for example, Afouer pumped storage power station and the upcoming Abdelmoumen pumped storage power station) or in the context of projects launched by MASEN for the national solar and wind programmes.

### Foreign ownership

#### 4. Are there any restrictions concerning the foreign ownership of electricity companies or assets?

It is not necessary to have a majority of local shareholders and there is no particular balance required with respect to the nationality of shareholders of companies carrying out energy projects in Morocco.

### Insolvency

#### 5. Are there any special insolvency regimes that apply to companies operating in this sector?

The Moroccan insolvency regime is set out in Law No 15-95 forming the Code of Commerce, promulgated by Dahir No 1-96-83 dated 1 August 1996. It does not provide for specific rules in relation to companies operating in the energy sector.

### Import of electricity

#### 6. To what extent is electricity imported and/or exported?

### Import of electricity

Morocco was historically an importer of electricity, but has been a net exporter since 2019. There are two transmission lines with Spain. Morocco is planning a third interconnector with Spain and a new one with Portugal. In addition, there are two transmission lines with Algeria.

### Export of electricity

Morocco has been a net exporter of electricity since 2019, with 1,207.7 gigawatt hours (Gwh) exported. This mainly results from the start of commercial operation of the 1600 MW Safi thermal power plant activities in December 2018, which has capacity to meet 25% of the national electricity demand.

The ONEE has a monopoly over the construction and operation of transmission lines. In addition, the operator of a renewable energy electricity production installation connected to the national medium-voltage, high-voltage and extra-high-voltage electricity grid can in principle export the electricity produced, after technical advice from the ONEE (*Articles 27 to 30, Law 13-09*).

In this context, Spain requested the European Commission to implement an EU carbon border import tax mechanism. This mechanism is also part of the European Green Deal strategy intended to make the EU climate-neutral by 2050.

### Electricity generation and renewable energy

#### Sources of electricity generation

#### 7. What are the main sources of electricity generation?

### Fossil fuels

Based on data provided by the International Energy Agency for the year 2017, 9.1% of the total energy generation was provided by petrol, 18.6% by natural gas and 53.5% by coal (*source: [www.connaissancedesenergies.org/la-situation-energetique-du-maroc-decryptee-par-laie-190516](http://www.connaissancedesenergies.org/la-situation-energetique-du-maroc-decryptee-par-laie-190516)*).



### Nuclear fission

Not applicable.

### Renewable energy

The portion of electricity generated by renewable energy sources accounts for 14.8% of the electricity generated in Morocco, as follows:

- Wind: 9.5%.
- Hydroelectricity: 4%.
- Solar: 1.3%.

(Source: [www.connaissancedesenergies.org/la-situation-energetique-du-maroc-decryptee-par-laie-190516](http://www.connaissancedesenergies.org/la-situation-energetique-du-maroc-decryptee-par-laie-190516).)

#### 8. Are there any government policies, targets or incentives in place to encourage the use of renewable or low carbon energy?

### Renewable energy targets

See table, [Common forms of renewable energy sources](#).

As part of its national energy strategy adopted in 2009, Morocco aims to increase the share of renewable energy to 42% of total installed capacity by 2020 and to 52% by 2030. The share of renewable energy currently amounts to 34% of the Moroccan energy mix. The plan aims to install 2,000 MW of solar energy and 2,000 MW of wind energy by 2020. At the end of 2018, MASEN announced that Morocco had 34% of its total installed capacity generated by renewable energy. New announcements are expected in 2021 to confirm that Morocco reached its objective of 42%.

### Government policies/incentives

The government policy of encouraging the development of renewable or low carbon energy is illustrated by the recent enactment of Law 13-09 (see Question 3).

Various Moroccan cities have also launched several calls for tender to implement energy performance contracts designed to improve street lighting efficiency.

#### 9. What are the main obstacles to the development of renewable energy?

Despite significant political action, legislative reforms and investments made by the Moroccan Government to promote the development of renewable energies, the following major obstacles remain:

- Absence of clear directives for access to the low voltage grid in the absence of publication of a decree

implementing Law 13-09 in relation to access to the low voltage grid.

- Lack of legal and fiscal status of residential and tertiary self-producers.
- No definition of the tariff conditions for electricity supplied into the network.
- No specific regulatory framework for independent production.

In 2019 and 2020, the government has taken various actions to resolve these issues, including the preparation of a draft law amending Law 13-09 and a draft law regulating self-generation projects. In addition, the members of the ANRE have been appointed and the ANRE is expected to start its activities by the end of 2020.

#### 10. Are there any plans to build new nuclear power stations?

The Moroccan Government is considering building nuclear power plants. The regulatory framework was recently reformed with the adoption of Law No 142-12 dated 18 September 2014 relating to nuclear and radiological safety and security and the creation of the Moroccan Agency for Nuclear and Radiological Safety and Security. Law No 142-12 will come into force, at the latest, one year after the publication of its implementing regulations. Draft implementing regulations are currently in the process of being adopted. However, only one regulation has been published in the *Moroccan Official Gazette* in September 2020 (out of 17 implementing regulations).

Consequently, nuclear activities are still regulated by Law No 005-71 dated 20 October 1971 relating to protection against ionising radiation, which imposes a prior authorisation or declaration regime on any activity involving exposure to ionising radiation and, in particular, on the production, importation, processing, handling, use, storage, transportation and disposal of natural or artificial radioactive substances. The requirements are determined by Decree No 2-94-666 relating to the authorisation and control of nuclear installations.

In 1993, Decree No 2-90-352 established a National Council for Nuclear Energy under the supervision of the prime minister to:

- Propose strategies and objectives for national policy on the peaceful use of nuclear energy for economic, scientific and technological purposes.
- Co-ordinate the scientific and technical nuclear programmes of various public departments and bodies.

In addition, Law No 17-83 established the National Centre for Nuclear Energy, Sciences and Technology (CNESTN) to:

- Conduct research on nuclear energy, science and technologies and promote their development with a view to their use in different sectors, and the implementation of a national nuclear power programme.
- Study the sites of any nuclear installation project. (This will be performed by the Moroccan Agency for Nuclear and Radiological Safety and Security on entry into force of Law No 142-12.)
- Inspect nuclear installations during their building, operations and during and after their dismantling. (This will be performed by the Moroccan Agency for Nuclear and Radiological Safety and Security on entry into force of Law No 142-12.)
- Control the management of nuclear materials.
- Import, store and distribute nuclear fuel, as the CNESTN holds a monopoly on these activities.
- Collect and store nuclear waste on behalf of radioactive materials users.

### Authorisation and operating requirements

#### 11. What are the authorisation requirements to construct electricity generation plants?

### Construction and operation of power projects

The ONEE has a monopoly on electricity generation in Morocco (*Article 2.1, ONEE Dahir*). In addition, the ONEE and private legal entities can enter into agreements for the production of electric energy (other than renewable energy) exceeding 50 MW (*Article 2.6, ONEE Dahir*). The following requirements must be met:

- The production must be exclusively for the ONEE's needs.
- Economic balance conditions must be described in the agreement and maintained during the whole duration of the agreement.

The ONEE can also enter into concession agreements for the production of electric energy from fossil energy resources. This electric energy is produced primarily for the producer's consumption and the surplus must be sold exclusively to the ONEE (*Article 2.8, ONEE Dahir*).

MASEN project electric generation plants are structured on the basis of a BOOT (build, own, operate and transfer)

model, under which a private investor as independent power producer obtains a concession to design, finance, build, operate and maintain production infrastructure for a fixed period.

The ONEE Dahir also provides that self-electricity generation projects can be developed, subject to prior authorisation of the MEM and provided that the following requirements are met:

- The production cannot exceed 50 MW or must exceed 300 MW.
- The production must be exclusively for the producer's needs.
- The production must not have any impact on the national electricity network.
- Any surplus electricity generated by the producer must be sold exclusively to the ONEE.

### Renewable energy projects developed by independent power producers

Projects developed by renewable energy independent power producers are regulated by Law 13-09, which provides for specific regimes depending on the installed capacity of the contemplated production facilities:

- Renewable energy electricity production installations can be freely operated if their maximum total power per site or group of sites owned by the same operator is below 20 KW (or below 8 thermic MW for renewable energy thermic production installations).
- The realisation, operation, capacity extension or modification of renewable energy production installations are subject to a declaration regime if their installed power per site or group of sites owned by the same operator is between 20 KW and 2 MW (or 8 thermic MW or over for renewable energy thermic production installations).
- The realisation, operation, capacity extension or modification of renewable energy electric production installations is subject to authorisation if their installed power is equal to or exceeds 2 MW.

**Declaration regime.** An applicant under the declaration regime must provide the MEM with a declaration including:

- An administrative file identifying the applicant and the nature of the contemplated activities.
- A technical file describing the:
  - contemplated power production capacity;
  - production technology; and
  - site where the installation will be built.

The applicant receives a final receipt (*récépissé définitif*) within two months following the submission of a complete declaration to the MEM.

The commissioning of the renewable energy production installation must occur within three years following the date of the final receipt, failing which the applicant will need to make a new declaration.

**Authorisation regime.** The authorisation regime includes two steps. A provisional authorisation is awarded on an evaluation of the project's technical documentation. The applicant must provide the MEM with an application including:

- A description of the contemplated renewable energy installation.
- The expected duration of construction.
- The location of the project site.
- Technical and safety measures.
- Measures implemented to protect the environment and urban spaces.

A provisional authorisation allows the start of construction works. The provisional authorisation is notified to the applicant within three months after the ONEE has given its technical opinion on the contemplated project. The installation must be realised within three years of notification.

The applicant must then apply for a final authorisation within two months of the completion of the works related to the installation.

The application must include, among other things, the specifications (*cahier des charges*) in accordance with the template of specifications available in the Order of the MEM No 313-14, which include:

- The duration of the authorisation.
- The insurance to be subscribed to by the operator.
- An environmental impact study.
- Fees and exploitation rights.

The final authorisation is awarded by the MEM after verification of the conformity of the installations with the purpose of the provisional authorisation.

The final authorisation is valid for a maximum of 25 years from award, and can be prolonged once for the same period. If the installation does not start operations within one year from the award of the final authorisation, the authorisation is null.

### General requirements

Any industrial project is subject to environmental and urban regulations, which can require the main following authorisations:

- An environmental impact assessment.
- Authorisation from regional and/or national environmental assessments committees in charge of delivering a prior decision of environmental acceptability (*décision d'acceptabilité environnementale*).
- An authorisation awarded by the regional Wali (governor) under the Dahir on classified establishments.
- Building permits.
- Conformity certificates.
- Temporary authorisations to use public land.
- Authorisations to access public water and electricity networks.

### 12. Are there any requirements to ensure new power stations are ready for carbon capture and storage (CCS) technology, or requiring a plant to retrofit CCS technology once this is ready?

There is no specific legislation relating to CCS technology in Morocco. However, energy efficiency is specifically regulated by Law 47-09 on energy efficiency. Devices and equipment commercialised in Morocco using electricity, natural gas, gaseous or liquid oil products, coal and renewable energies must comply with minimum energy performance requirements.

In addition, general building regulations (*réglement général de construction*) set out energy performance rules related to construction to ensure a better energy balance for each building, depending on the climate zone where it is located.

### 13. What are the authorisation and main ongoing requirements to operate electricity generation plants?

See Question 11 for the regulatory requirements applicable to each category of electricity producer.

In addition to prior authorisations, permits, certificates and approvals required to build and operate an electricity generation plant, ongoing requirements apply to the operation of the plant depending on its characteristics.

These requirements mainly result from Moroccan environmental laws and regulations and relate to:

- Air pollution.
- Use of industrial water and sewage.
- Waste management, including hazardous waste management.



These regulations require operators to establish an environmental organisation to manage activities that have an impact on the environment.

### 14. What requirements are there concerning connection of generation to the transmission network or a distribution network?

The ONEE manages connection to the electric transmission or distribution grid, except where municipalities have established a municipal electricity distribution service or appointed a private distributor under a concession agreement. The ONEE is also in charge of electricity generation, except for self-generation projects and renewable energy projects developed by independent power producers.

Connection to the transmission or distribution grid is therefore only an issue for self-generation projects and projects developed by independent power producers, which may need to access the grid to operate their plants (except for off-grid projects).

For these projects, an authorisation from the MEM is required to build and operate the electric generation plant either under the self-generation (*autoproduction*) regime or Law 13-09. (see *Question 11*). Authorisation will only be awarded if the relevant distribution grid operator provides the MEM with a favourable technical opinion on the development of the project. As a result, the distribution grid operator has indirect control on connection projects contemplated by private operators to operate their plants.

For self-generation projects, a grid access agreement must be concluded with the ONEE (or the relevant distribution grid operator) to specify the:

- Technical conditions for connection to the grid.
- Commercial conditions applicable to the purchase of electricity surplus by the ONEE (or the relevant distribution grid operator).

(ONEE Dahir.)

Under Law 13-09, an independent power producer has a right of access to the electric grid. To benefit from this right of access, an independent power producer must agree on the requirements for the connection of generation facilities to the transmission grid with its counterparty, which may be either:

- The ONEE acting as national transmission grid operator or distribution grid operator.
- A municipal electricity distribution service or a private distributor under a concession agreement entered into with the relevant municipality acting as distribution grid operator.

The grid access agreement must specify the:

- Duration of the access right.
- Technical conditions applicable to the connection of the independent power producer to the grid.
- Commercial conditions applicable to the connection to the grid.
- Applicable dispute resolution procedure.

### 15. What requirements are there concerning the decommissioning of a generation plant at the end of its period of operation?

There are no specific rules relating to decommissioning activities at the end of a plant's operations, except in the context of independent power production projects developed under Law 13-09. Renewable energy production installations and the generation site must be transferred to the state at the expiry of the authorisation and, if required by the MEM, the operator must carry out decommissioning works and restore the generation site at its own cost (*Law 13-09*).

Despite the lack of specific statutory requirements on this matter, Moroccan authorities can request an operator to restore a site damaged by its activities, in accordance with environmental regulations.

## Electricity transmission

### Authorisation and operating requirements

#### 16. What are the authorisation requirements to construct electricity transmission networks?

The ONEE is in charge of the construction of the electricity transmission grid (*Articles 2 and 3, ONEE Dahir*). These works are subject to the permits described in *Question 11, General requirements*.

The construction of electricity transmission lines is also subject to approval of the MEM (*ONEE specifications (cahier des charges de l'ONEE) approved by Decree No 2-73-533 dated 29 November 1973*).

Additionally, the construction of electricity transmission lines by the ONEE must comply with Dahir No 1-61-346 dated 24 October 1962 (Dahir on Distribution Lines), which contains specific rules relating to technical conditions applicable to the construction of electricity distribution systems (such as the distances to be

maintained between new and existing electric lines), and distinguishes between electric lines on private land and those on public land.

The ONEE can allow third-party operators to erect part of the transmission network. This is in the context where the connection to the grid is made by the private partner (at its risks and costs) under the ONEE's supervision. For this specific category of projects, the ONEE enters into an agreement setting out the conditions under which the investor will build a part of the transmission network in accordance with ONEE's technical requirements and guidelines, and specifying that those works will be approved by the ONEE before being connected to the transmission network.

The ONEE has implemented a registration process to allow third parties to participate in calls for tenders for the construction of electricity transmission networks. The ONEE grants different types of approval for the construction of:

- Medium and low voltage systems.
- Power lines.
- Electricity sub-stations.

Law 13-09 also allows independent producers to build a direct line to export electricity. This requires a specific authorisation of the ONEE, and entering into a concession agreement with the ONEE.

### 17. What are the authorisation and main ongoing requirements to operate electricity transmission networks?

Works relating to electric transmission lines must be approved by the MEM before commissioning (*ONEE specifications*).

In addition, the Dahir on Distribution Lines and its implementing regulations set out the main technical ongoing requirements applicable to the operation electric lines (for example, maintenance requirements, repair works, and so on).

### Transmission charges

#### 18. How are the charges and conditions for the transmission of electricity regulated?

Users of the transmission grid must enter into agreements with the ONEE, which is in charge of the national transmission grid (*Article 8, Law 48-15*). These agreements must set out the:

- Duration of the agreement.
- Commercial conditions for connection to the transmission grid.

In addition, a copy of this agreement must be sent to the ANRE.

Tariffs for access to the national transmission grid are established by the ANRE, after the opinion of the ONEE has been given.

In determining these tariffs, the ANRE must take into consideration the:

- Costs related to the operation, maintenance, development and modification of the transmission grid.
- Proportionate contribution paid to the ONEE, whose rate is provided by a regulation.
- Stranded costs.

Applicable tariffs to access the national grid are also regulated by Law 13-09, which provides that terms and conditions for access to the transmission grid must be governed by an agreement between the entity in charge of the network and the relevant independent power producer, referred to as a grid access convention (*convention d'accès au réseau*).

## System balancing

### 19. How is electricity supply and demand balanced?

There is no rule governing the balancing of supply and demand, and no Moroccan equivalent of the electricity exchange market in Europe.

The ONEE, as grid operator/manager, must:

- Manage electric energy flow on the national transmission grid.
- Preserve the balance, in real time, between production capacity and consumption needs, through bringing available production capacity online and exchanges with other national grids.
- Preserve the safety, stability and efficiency of the national transmission grid.

(*Article 2, Law 48-09.*)

## Electricity distribution

### Authorisation and operating requirements

#### 20. What are the authorisation requirements to construct electricity distribution systems?

Under Article 83 of Organic Law No 113-14, electricity distribution falls under the jurisdiction of regional municipalities. The municipalities can therefore create and operate public services for the distribution of power. Consequently, the distribution of electricity is either under the control of the ONEE or directly managed by the relevant municipality (*Articles 2 and 3, ONEE Dahir*).

The construction of electricity distribution systems is regulated by the ONEE Specifications and the Dahir on Distribution Lines. In most cases, the construction of electricity distribution systems must be authorised by the MEM. Depending on the characteristics of the distribution network and its location, other authorisations may be required (*see Question 11, General requirements*).

### 21. What are the authorisation and the main ongoing requirements to operate electricity distribution systems?

Moroccan distribution grids are managed by one of the following:

- The ONEE.
- Specific municipal utility providers (*régies communales*).
- Private companies under concessions granted by the relevant municipality.

The municipalities choose between these distribution management systems.

Private companies and the ONEE have authority to operate electricity distribution systems under either the ONEE Dahir or Organic Law No 113-14.

Ongoing requirements applicable to the operation of electricity distribution systems are mainly set out in the Dahir on Distribution Lines and Order No 127-63 dated 15 March 1963.

## Distribution charges

### 22. How are the charges and conditions for the distribution of electricity regulated?

The distribution of power is under the direct control of either the ONEE or the relevant municipality.

Where private companies carry out distribution activities under a concession entered into with a municipality, the concession agreement will set out the relevant charges and conditions.

## Electricity supply

### Authorisation and operating requirements

#### 23. What are the authorisation and the main ongoing requirements to supply electricity to end consumers?

Law 13-09 allows any legal entity or individual that implements and operates a renewable energy production installation to commercialise the energy produced to consumers or to a group of consumers.

The ONEE and municipalities have the right to supply electricity to end consumers under:

- Dahir No 1-15-85 dated 7 July 2015 promulgating Organic Law No 113-14, which provides that municipalities can create and operate public installations relating to the provision of services such as the distribution of water and electricity.
- ONEE Dahir, which gives ONEE the sole authority to distribute electricity, provided that pre-existing municipal electricity distribution services are not affected.

In addition, private distributors can also distribute power to end customers under a concession entered into with the relevant municipality.

### Trading between generators and suppliers

#### 24. How is electricity traded between generators and suppliers?

There is no power trading between producers and suppliers in Morocco, as the liberalisation of the market is not yet advanced enough.

Electricity is traded through either:

- Private power purchase agreements (PPAs) governed by the Law 13-09.
- PPAs entered into with the ONEE or MASEN under BOOT concession models.

#### 25. How is electricity trading (between generators and suppliers) regulated?

There is no power trading between producers and suppliers in Morocco, as the liberalisation of the market is not yet advanced enough.

### Electricity price and conditions of sale

#### 26. How is the price for electricity and conditions of sale regulated at the consumer and wholesale level?

Generally, the prices of products and services must be freely established by the market (Article 2, Law No 104-12 on free pricing and competition). However, the prices of specific products and services listed in a specific order of the delegated ministry to the prime minister are expressly regulated.

Order No 2451-14 dated 21 July 2014 establishing electric energy tariffs sets out prices for the sale of electricity, including prices for the sale of energy to distributors and for the sale of electricity to final consumers.

However, where private companies carry out distribution activities under a concession granted by a municipality, the concession agreement will determine the prices for the sale of electricity to final consumers.

### Statutory powers

#### 27. Do companies involved in the generation, transmission, distribution or supply of electricity have any statutory powers to undertake work (for example, compulsory purchase powers or street works powers)?

The ONEE, ANRE and municipalities have broad statutory powers to undertake works that are necessary to achieve public policy aims in relation to electricity.

Under Article 3 of Law 7-81 related to compulsory purchase in the public interest (Law 7-81), the state and the local authorities have compulsory purchase powers (*droits d'expropriation*) justified by the public interest (*utilité publique*). Existence of a public interest must be decided by an administrative decision defining the area subject to a compulsory purchase procedure.

In addition, Article 50 of Law 7-81 recognises temporary occupancy rights that allow provisional possession of a land to facilitate the performance of public works (*travaux publics*).

The ONEE has the same compulsory purchase power rights as the state and local authorities and can also, among other easement rights, occupy parts of the public domain that are necessary for the construction of electric energy production, transportation and distribution installations (*Article 2 bis, ONEE Dahir*).

These occupancy rights are not subject to the payment of a fee.

In addition, the ONEE Dahir provides for specific easement rights on private lands to allow performance of works required to ensure electric energy production, transportation and distribution.

### Tax issues

#### 28. What are the main tax issues arising on electricity generation, distribution, transmission and supply?

Electricity activities are subject to the Moroccan Tax Code and Customs Code in the same way as other commercial activities.

However, the following provisions apply specifically to electricity activities:

- Electricity meter rentals are subject to value added tax (VAT) at 7% (instead of the 20% standard VAT rate).
- Supplies of electricity are subject to VAT at the rate of 14% (with right to deduct).
- Minimum corporate tax applies to electricity production at 0.25%, instead of 0.5% for other activities (minimum tax is calculated on the annual turnover and applies mainly in the case of tax losses).
- An electricity supplier must collect on behalf of the state a tax relating to a TV broadcasting royalty (capped at MAD100 per month). The tax collected includes a 5% remuneration for the electricity supplier.

### Insurance

#### 29. Are there any insurance requirements from the regulatory authority?

There are no specific insurance requirements in relation to energy production-related activities.

However, in the context of the approval of a project under Law 13-09, the MEM will consider whether sufficient insurance has been subscribed to by an independent power producer contemplating the commercialisation of renewable energy.

In addition, the Moroccan Insurance Code sets out a list of mandatory insurances to be subscribed to when carrying out activities in Morocco (such as employees' medical insurance, work injury insurance, decennial liability insurance, and so on). This general set of insurance requirements is also applicable to an energy production project.

### Reform

#### 30. What reform proposals are there for the regulation of the electricity sector?

Various legislative and regulatory developments are expected in the following months to strengthen the Moroccan legislative and regulatory framework relating to the electricity sector. In this regard, the following draft laws were issued in 2019 and 2020:

- Draft law No 40-19 amending Law 13-09, which aims to resolve the difficulties met by independent power producers and promote the development of a national industry for renewable energy.
- Draft law relating to self-generation of electricity, which sets out a comprehensive legal and regulatory framework for self-generation projects.

There is no public information available relating to the status of these draft laws. Law 40-19 has been approved by the Government Council and must now be discussed at the Moroccan Parliament. The draft law relating to self-generation has not yet been approved by the Government Council.

The ANRE's members were appointed in August 2020. The ANRE is scheduled to start its activities by the end of 2020, with the publication of a strategic roadmap for the period 2021-2025. The ANRE will also need to approve the electricity network code to be drafted by the ONEE.

### Contributor profiles

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**Professional qualifications.** Legal adviser/attorney registered with the Paris Bar

**Areas of practice.** Projects (energy and infrastructure) with a focus on the energy sector (power, gas, oil, mining, renewables); public law; regulatory.

#### Recent transactions

- Advising various independent power producers (Nareva, Engie, Voltalia, Total Solar, Total Eren,

and so on) on the development of renewable energy projects in Morocco in the context of the self-generation (*autoproduction*) and IPP regimes (for example, drafting solar lease agreements, power purchase agreements, analysing the regulatory issues raised by the projects).

- Assisting an international contractor in relation to the drafting of an EPC contract and tax structuring of its intervention in a project for an ammoniac production plant.
- Advising a French consortium in relation to the PPP for the design, financing, development, operation and maintenance of a desalination plant and a wind farm in Morocco.
- Advising the ONEE in relation to electricity/water distribution regulatory issues.
- Advising sponsor in relation to the design, financing, development, operation and maintenance of a 700 MW coal-fired power plant based in El Jadida (Morocco).
- Advising a Chinese EPC consortium in relation to its bid to develop a hydroelectric project in Morocco.
- Advising multiple private operators in the context of the development of renewable energy projects (solar, biomass, wind) in Morocco.
- Advising MASEN on the implementation of the proposed development of a 500 MW solar power complex.
- Advising independent power producers in relation to the PPA and related aspects during the bidding process of phase 2 of the Ouarzazate Solar Power Project.
- Advising independent power producers in relation to the development of several hydroelectric power plants in Morocco.
- Advising the Kingdom of Morocco in relation to the preparation of the new Moroccan mining code.

**Languages.** French, English, Arabic

#### Professional associations/memberships.

Member of the Paris Bar Association since 2005. Listed as "leading individual" in the Public/Project section of Legal 500 Morocco (2018, 2019 and 2020).

#### Publications

- *Training seminars on energy law at the International Chamber of Commerce (ICC) Morocco since 2013.*



- Author of a press article "A long wait: The new mining code should bring about big changes" Oxford Business Group - The report Morocco 2013.

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#### **Recent transactions**

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agreements, power purchase agreements, analysing the regulatory issues raised by the projects).

- Assisting an international contractor in relation to the drafting of an EPC contract and tax structuring of its intervention in a project for an ammoniac production plant.
- Advising a French consortium in the preparation of its bid in relation to the PPP for the design, financing, development, operation and maintenance of a desalination plant in Morocco.
- Advising private operators in the context of the development of renewable energy projects (solar, biomass, wind) in Morocco.
- Advising the ONEE in relation to electricity/water distribution regulatory issues.
- Advising an investor in the context of the acquisition of the energy activities of a Moroccan company.
- Advising an institutional player in the port industry with respect to issues in relation to the implementation of authorisations and port concessions.

**Languages.** French, English

**Professional associations/memberships.** Member of the Paris Bar Association since 2016.

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