

## Overview of Electricity regulation in Turkey (2015)

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### Overview

### Electricity market

**1. Provide an overview of the electricity market in your jurisdiction, including recent trends over the last 12 months.**

#### Overview

The Turkish energy sector has grown quickly in recent years. As a result, up-to-date regulations are required to ensure that the laws for the sector match sector requirements and economic realities. Continued privatisation of the energy sector has reduced the role of public institutions with the aim of creating a more competitive and liberal energy market.

The main law applicable to the Turkish electricity market is the Electricity Market Law No. 6446 (EML). The EML regulates the obligations of all real persons and legal entities directly involved in the generation, transmission, distribution, wholesale supply, retail supply, import, and export of electricity in Turkey. The EML entered into force on 30 March 2013 with the explicit purpose of establishing a more stable, strong, and transparent electricity market in Turkey.

**Background to the Electricity Market Law.** Prior to the EML, the Electricity Market Law No. 4628 applied. The Electricity Market Law No. 4628 was not completely repealed with the enactment of the EML. Rather, its title was changed to become the Law on the Organisation and Duties of the Energy Market Regulatory Authority (EMRA Law), with some parts superseded by the EML.

The EMRA Law established the Energy Market Regulatory Authority (EMRA) with the purpose of creating a mechanism to realise the EMRA Law's purposes. Accordingly, the EMRA was established as, and continues to be, an independent authority responsible for the regulation and supervision of the Turkish electricity market.

The EMRA Law was amended a number of times to ensure that it continued to address the electricity market's needs. Despite these reactive amendments, the EMRA Law reached a point where it no longer presented a sound legal basis for meeting the needs of the rapidly growing and changing electricity market, including the needs of industry participants as well as regulatory bodies.

Accordingly, the Ministry of Energy and Natural Resources (MENR) began working on developing the current EML in 2012 with the aim of:

- Ensuring the Turkish electricity market complies with EU regulations.
- Improving the market's attractiveness to investors.
- Establishing a more liberalised market structure.

After the enactment of the EML, provisions in the EMRA Law remain in effect regarding the EMRA's organisation and duties.

### Recent trends

Changes to the regulatory framework introduced by the EML include reforms to market structure and operation (for example, the establishment of a wholesale energy trading market), as well as practical reforms (for example, licensing procedures).

**Energy Stock Market (EP?A?).** A notable change was the establishment of the Energy Markets Operation Joint Stock Company (Enerji Piyasalar? ??letme Anonim ?irketi) (EP?A?). Under the EML, market operation activities are no longer carried out by the Market Financial Conciliation Centre (as under the EMRA Law), but rather by the newly established EP?A?. EP?A? will be authorised to operate the wholesale electricity markets, including financial conciliation activities for these markets. Market operation activities are defined under the EML and the right to undertake them becomes subject to obtaining a market operation licence from the EMRA.

EP?A? was established on March 2015 with its registration to the Istanbul Trade Registry. EP?A?' main shareholders are the Turkish Electricity Transmission Company (TE?A?) (as an A Group Shareholder) and Borsa ?stanbul (as a B Group Shareholder), both having 30% of its shares each. Additionally, other "market operators" will hold the remaining 40% of EP?A?'s shares (as C Group Shareholders).

**Solar Energy Licences.** The EMRA initiated pre-licence tenders in 2013 for a solar energy portfolio including projects which combine to a total production capacity of 600 MW. Projects within this scope are eligible to obtain the first solar energy licences. Previously, solar energy projects were not subject to a licence regime. Significant interest was shown in solar energy licences, with the first round of tenders in May 2014 receiving 496 applications, with a total capacity of 8,900 MW. The first round of tenders related to two solar power plant projects in:

- Elaz?? with 8 MW installed capacity.
- Erzurum with 5 MW installed capacity.

The winning bidders were the applicants who offered to pay the highest contribution amount to TE?A?. A second round of tenders (with a total capacity of 138 MW) and third round of tenders (with a total capacity of 92 MW) were completed in January 2015. The EMRA yet to issue the pre-licences of the winning solar power project owners following the tenders. As a result, the procedure and licence obligations applicable to the first solar power licence holders in Turkey remains unclear.

**License exemptions.** The EML also broadened the scope of licence exempt electricity generation opportunities.

Provided certain requirements outlined in the EML are met, some renewable electricity generation plants are exempt from having to obtain a generation licence from the EMRA and incorporate a company. Most importantly, the capacity threshold adopted to be exempt from licence obligations has been increased from 500kWh to 1MW. The Council of Ministers is authorised to increase this threshold up to 2.5MW (paragraph 2 of Article 14 of the EML) (see Question 7). As a result, barriers to developing small scale renewable generation plants are being reduced.

**Other features of the EML.** The EML also introduced a pre-licence requirement for the commencement of generation activities. The pre-licence framework provides limited authorisation to generation licence applicants, in order for them to:

- Obtain the approvals, permissions, licences and similar authorisations needed to start the generation plant investments.
- Become entitled to acquire property and usufruct rights pertaining to the site where the generation plant will be constructed.
- Other features of the EML include:

- The EML does not allow the generation licence applicants to carry out generation activities unless the pre-licence has been obtained.
- There is a 24-month time limit placed on holding a pre-licence, reportedly in response to the hoarding of licences by companies which invest in renewables only to diversify without any strategic interest in the sector.
- Generation pre-licence holders are not allowed to change their shareholding and control structures and/or to transfer the pre-licences to third parties before obtaining a generation licence. This means that any party which is interested in developing an energy project must apply for the licence itself and obtain the licence first hand from the EMRA.
- Separate wholesale and retail licence systems have been abolished and these licence types are combined into a single "supply licence".

**Privatisation agenda.** In addition to legislative changes, the Prime Ministry Privatisation Administration has undertaken a programme to restructure and liberalise the Turkish electricity sector in order to create a competitive and liberal energy market. The programme involves expanding the private sector's role in the Turkish electricity sector, to reduce the burden of public institutions on the government budget and improve operational efficiency through increased commercial competition.

In line with this, privatisation of state-owned electricity distribution facilities has been completed. In 2013, the Privatisation Administration announced that all 18 electricity distribution companies (formerly state-owned) had been successfully transferred to private sector consortiums. Upon completion of the privatisations, the state share in electricity distribution and retail sales is reduced down to zero.

The privatisation programme and tender process for the generation facilities held by the Electricity Generation Company (EÜA?) (state-owned electricity generation company) continues. The process began in 2006 with the aim to reduce the market share of the state owned EÜA? in electricity generation. The ultimate aim is to completely privatise state owned EÜA? assets, achieving complete privatisation of both electricity generation and distribution. In this way, the only state owned player in the electricity market will be TE?A?, the state owned electricity transmission company. However, privatisation of TE?A? is not planned in the short or medium term.

## Regulatory structure

### 2. Describe the regulatory framework for the electricity sector, including the regulatory authorities.

#### Regulatory framework

The Electricity Market Law No. 6446 (EML) is the main piece of legislation for the Turkish electricity sector. The implementation and interpretation of new mechanisms introduced by this legislation are outlined by secondary legislation. Some secondary legislation has been introduced and more is expected.

The most notable piece of secondary legislation in this area is the Electricity Market Licence Regulation (Licence Regulation) published in the Official Gazette on 2 November 2013. The Licence Regulation introduces a new licensing regime, intended to reform and stimulate the market.

- Other relevant key legislation published after the enactment of the EML are the:
- Electricity Grid Regulation, published in the Official Gazette on 28 May 2014 No. 29013.
- Electricity Market Export and Import Regulation, published in the Official Gazette on 17 May 2014 No. 29003.
- Electricity Market Connection and System Utilisation Regulation, published in the Official Gazette on 28 January 2014 No. 28896.
- Regulation on Electricity Generation Without Licence in Electricity Market, published in the Official Gazette on 2 October 2013 No. 28783.
- Regulation on Distribution in Electricity Market, published in the Official Gazette on 2 January 2014 No. 28870.

Other key pieces of legislation and regulation related to electricity generation, distribution and supply activities include:

- The Renewable Energy Law, No. 5346.
- The Energy Efficiency Law, No. 5627.
- The Law on Establishment of Nuclear Power Plants and Energy Sales, No. 5710.
- The Geothermal Energy Law, No. 5686.

### Regulatory authorities

In Turkey, there are two main governmental authorities regulating the electricity market:

- The Ministry of Energy and Natural Resources (MENR).
- The Energy Market Regulatory Authority (EMRA).

**The MENR.** The MENR has the following functions:

- Determining Turkey's short-term and long-term requirements for energy and natural resources.
- Planning appropriate policy objectives for procurement.
- Supervising all exploration, facility building, development, production, and distribution activities for energy and natural resources.
- Co-ordinating a range of public entities, including:
  - the Electricity Generation Company (Elektrik Üretim A.?, (EÜA?)), the state-owned generation company;
  - the Turkish Electricity Distribution Company (Türkiye Elektrik Dağıtım A.?, (TEDA?)), the state-owned distribution company;
  - the Turkish Electricity Transmission Company (Türkiye Elektrik İletim A.?, (TEİA?)), the state-owned transmission company;
  - the Turkish Electricity Trading and Contracting Company (Türkiye Elektrik Ticaret ve Taahhüt Anonim Şirketi, (TETA?)), the state-owned trade and contracting company which operates as a wholesale supply company.

**The EMRA.** The EMRA is an autonomous authority responsible for:

- Regulating and supervising the electricity market.
- Monitoring all energy market activities and has the power to:
  - issue licences for generation, transmission, distribution and supply;
  - prepare, enforce, amend, and implement electricity market legislation in order to create performance standards;
  - establish and supervise the tariff pricing mechanism for consumers which legislation prevents from choosing their own retail supplier;
  - impose sanctions for improper activities (for example, monetary penalties or licence suspension); and
  - resolve disputes between licence holders.

## Electricity companies

### Main companies

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

In Turkey, generation, transmission, distribution and supply of electricity are undertaken by different companies. In recent years, private companies have been allowed to carry out these activities as a result of liberalisation in the electricity market (see Question 1).

### Generation

As of 2015, around 78% of Turkey's installed generation capacity is privately owned. The 627,431 MW total installed capacity is made up of:

- Independent power producers (54%).
- The Electricity Generation Company (EÜA?) (the state-owned generation company) (20%).
- Build-operate power plants (17%).
- Build-operate-transfer power plants (5%).
- Companies operating under transfer of operational rights agreements (2%).
- EÜA? subsidiaries (2%).
- Transmission

Electricity transmission is managed by the Turkish Electricity Transmission Company (TE?A?), a state-owned company with a legislatively mandated monopoly on the Turkish electricity transmission network. TE?A? comprises 21 separate transmission, facility and management directorships and ten load dispatch operation directorates located around Turkey.

### Distribution

Electricity distribution is divided into 21 separate regions. Each region is controlled by private distribution companies which have each obtained distribution licences from the Energy Market Regulatory Authority (EMRA). Before the privatisation process was initiated, the state-owned company the Turkish (TEDA?) controlled all electricity distribution.

### Supply

Electricity supply in Turkey is undertaken by numerous private sector companies, as well as the state-owned the Turkish Electricity Trading and Contracting Company (TETA?). Each supplier must obtain a supply licence from the EMRA.

The EMRA Law required separate licences for undertaking wholesale and retail activities. With the Electricity Market Law No. 6446 (EML), the separate wholesale and retail licence system has been abolished and these two licences are combined into a single supply licence.

### Unbundling requirements

"Legal unbundling" is the separation of distribution and retail supply activities, which were previously both carried out by distribution companies. From 1 January 2013, electricity distribution companies were required to separate their distribution and retail supply activities (Article 23, the now repealed former Licensing Regulation dated 4 August 2002).

The EMRA required the partial demerger of electricity companies so that distribution and retail supply activities are undertaken by separate legal entities (Procedures and Principle regarding Legal Unbundling of Distribution and Retail Sale Activities, dated 12 September 2012).

The EML and Licence Regulation also adopt the same principle and require distribution companies to carry out generation and supply operations under separate legal entities. This requirement carries forward principles regarding legal unbundling of distribution and wholesale activities which were established in earlier legislation.

# Foreign ownership

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

The Electricity Market Law No. 6446 (EML) does not specifically address foreign investors and there are no specific restrictions on foreign ownership of electricity companies in Turkey. Foreign investors are not subject to any:

- Entry barriers.
- Restrictions on capital amount or capital transfer.
- Currency conversion.

# Import of electricity

## 5. To what extent is electricity imported? How are any interconnection issues regulated/resolved?

According to the World Bank group, over 60% of Turkey's production relies on imported energy. The Turkish government aims to increase energy security by reducing this foreign dependency, focusing on untapped potential in wind, geothermal and hydro generation.

Electricity import is carried out by supply licence holders who are entitled to undertake wholesale and/or retail sales within Turkey without being subject to any regional restrictions.

Supply licence holders can also import or export electric energy and/or capacity to or from foreign countries, provided the country meets the technical conditions for international interconnection and the licence holder obtains the Ministry of Energy and Natural Resources (MENR) and the Energy Market Regulatory Authority's (EMRA) approval. Permission to engage in import and/or export activities will be stated in the supply licence. The conditions for international interconnection are defined in the Electricity Market Export and Import Regulation, published in the Official Gazette on 17 May 2014.

Generation licence holders can only export electricity if the country meets the technical conditions for international interconnection, the licence holder obtains the MENR's and EMRA's approval, and export activity is stated in the generation licence.

In 2013, the European Network of Transmission System Operators for Electricity's (ENTSO-E) Regional Group Continental Europe (RG CE) announced positive results from a trial operation which tested the viability of the Turkish electricity transmission system in connection with the Continental Europe system.

TE?A?, the state-owned transmission company, publicly announced that after its assessment of the rules and technicalities outlined in the ENTSO-E RG CE handbook, it anticipates signing a long-term contract with ENTSO-E, binding them to permanently comply with ENTSO-E's standards. TE?A? has not indicated an expected date for this.

After the approval of the agreement between ENTSO-E and the Turkish Electricity Transmission Company (TE?A?), permanent interconnection between continental Europe and Turkey will be established. Permanent interconnection is expected to increase import and export volumes.

# Electricity generation and renewable energy

## Sources of electricity generation

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

According to statistics published by the Electricity Generation Transmission Company (EÜA?), as of January 2015, the sources of electricity generation in Turkey are:

- Natural gas (40%).
- Lignite and coal (30%).
- Hydro (22%).
- Wind (4%).
- Geothermal (1%).
- Other sources (3%).

#### Fossil fuels

According to statistics published by the EÜA?, in 2015, fossil fuels constitute about 70% of total electricity generation in Turkey.

#### Nuclear fission

Not currently applicable. However, since nuclear projects are under way, this percentage will increase in the short to medium term.

#### Renewable energy

According to statistics published by the EÜA? in 2015, the main renewable sources and their share in the total energy electricity generation in Turkey were:

- Wind and geothermal (4%).
- Hydro (22%).

Despite debates on the international stage about whether hydro is appropriately deemed to be a renewable energy resource or not, Turkish regulation accepts hydro energy as being renewable energy. Turkish regulation specifically includes hydro energy within the definitions of renewable energy resources (Article 4, the Licence Regulation; Article 3, the Renewable Energy Law No. 5346).

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

#### Government policies/incentives

Renewable energy is regulated in Turkey by the Law on Utilisation of Renewable Energy Sources for the Purpose of Generating Electrical Energy No. 5346 (Renewable Energy Law). This legislation came into force in 2005 and is the first renewable energy law in Turkey.

Entities which have a renewable energy generation licence can apply to the Energy Market Regulatory Authority (EMRA) for a Renewable Energy Resource Certificate (RER certificate). The RER certificate allows the certificate holder to benefit from the RER support mechanism, including regulated fees, procedures and principles applicable to renewable energy generation. RER certificate holders are given the opportunity to sell their generated capacity to the RER support mechanism.

The RER support mechanism contains certain incentives to encourage the generation and use of renewable energy:

**Purchase guarantee.** Default electricity suppliers in an area must purchase a certain amount of electricity from companies participating in the RER support mechanism. Where the renewable generator chooses to sell their capacity to the RER support mechanism, a minimum price per kWh is set by regulation. To be eligible to receive this price, the generator must apply annually indicating that they wish to sell their capacity to the RER support

mechanism. Generators can do this for up to ten years from when the renewable generation plant is commissioned. The current minimum rates are:

- hydroelectric generation plant, US\$ cent/kWh 7.3;
- wind power plant, US\$ cent/kWh 7.3;
- geothermal power plant, US\$ cent/kWh 10.5;
- biomass energy plant (including landfill gas), US\$ cent/kWh 13.3;
- solar power plant, US\$ cent/kWh 13.3.

The incentives above were first provided to facilities that became operational before the end of 2015. However, the scope has been extended by a decision of Council of Ministers (published in the Official Gazette dated 5 December 2013). Accordingly, renewable energy facilities which become operational between 1 January 2016 and 31 December 2020 will also be eligible to benefit from the feed-in tariffs for the first ten years of their operation.

- **Regulated rate for energy produced using domestically manufactured components.** If generation plants use mechanic and/or electro-mechanic devices which are manufactured in Turkey, electric energy generated in these plants and fed into the transmission or distribution systems (not consumed on-site) is eligible for a regulated minimum rate. The components which must be domestically manufactured to qualify for this rate include:
  - electromechanical systems;
  - research, development, and manufacturing of electricity generation systems using solar cells and focusing units;
  - research and development for the generation of electric energy or fuel using biomass sources.

**Generation licences for solar facilities.** The Electricity Market Law No. 6446 (EML) states that if the owner of a site intended for generation of solar electricity files a licence application to the EMRA, no other applications for the same site can be filed. According to the EML, the following renewable energy facilities are exempt from needing to obtain a generation licence from the EMRA or incorporate a company:

- renewable energy generation plants which have a maximum installed capacity of 1 MW;
- renewable energy generation plants where 100% of the energy generated is consumed on the same site, without feeding any capacity into the transmission or distribution system.

Within this scope, the EMRA initiated pre-licence tenders in 2013 for a solar energy portfolio including projects which combine to a total production capacity of 600 MW (see Question 1).

#### Renewable energy targets

As of 2013, Turkey only met 27% of its energy needs from its own sources, including renewables and coal. While there are no legally binding targets, by 2023 Turkey aims to meet 35% of its energy need from renewable energy sources alone. The EMRA estimates that Turkey has 45 GW of hydropower potential, 48 GW of wind potential and 600 MW of geothermal power potential. Both the EBRD and World Bank have EUR1 billion loan programs in place for clean energy projects in Turkey. Turkey aims to improve energy production as the amount of imported energy is one of the main contributors to the Turkish economy's current deficit, with over 60% of Turkey's production relying on imported energy.

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

Complicated bureaucratic and administrative procedures represent a major obstacle to renewable energy development in Turkey.

Another major obstacle to renewable energy development is the inadequacy of incentives. Lengthy discussions about these incentives by the Turkish parliament contributed to the late enactment of the Law on Utilisation of Renewable Energy Sources for the Purpose of Generating Electrical Energy No. 5346 (Renewable Energy Law).



The length of the preparation phase while the investor tries to obtain all the necessary permits can hamper development of renewable energy in Turkey. Projects are often challenged with administrative lawsuits, particularly on the basis of environmental issues.

Frequent changes in secondary legislation reduce the perception of market predictability for foreign investors. For wind projects in particular, obtaining a generation licence takes a long time due to the frequent changes in legislation. Environmental Impact Assessment process obligations and list of projects that are subject to Environmental Impact Assessment also frequently change, which results in uncertainties and additional costs for investors.

The licence and permission processes for renewable energy are overseen and maintained by different administrative authorities. As a result, gathering all these permissions and starting the construction process involves a major investment of time for potential applicants.

In this manner, the 24 months pre-licence period stipulated under the EML is criticised for being too short to be able to fully complete the necessary obligations (see Question 10). A major obstacle facing investors is obtaining the opinion and/or approvals of approximately 40 different public institutions in order to obtain development plans for projects. In most cases, investors complain of being unable to locate the correct institution, or point of contact, for any specific matter. Even if the correct institution is located, there are many shifts in the planning and development of lands and forest areas on a major scale, which delays or sometimes even blocks the approval of requests.

Expropriation of project areas is also a complicated process, which takes a minimum of two to three years to finalise. In almost all cases, expropriation works continue even after the projects start generation. Therefore, it is very difficult to calculate costs associated with such procedures.

To encourage foreign investment and strategic partnerships, the Turkish government must make the process for obtaining generation licences more stable and streamlined, as well as improve incentives available to renewable generation developers.

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

### Government policy

Turkey has discussed establishing nuclear power generation since 1970. Today, plans for nuclear power are a key aspect of the country's economic growth plan and there are plans underway to build two nuclear power stations in Turkey, with a combined capacity of 10,400 MW.

The Law on Establishment of Nuclear Power Plants and Energy Sales No. 5710 came into force in 2007 (Nuclear Energy Law) and established a framework to provide incentives to private sector companies to construct and operate nuclear power plants. This framework includes:

- Empowering the Council of Ministers to provide incentives for investment regarding technology acquisition for nuclear power plants and also training of personnel to be employed in those power plants. No such incentives have been announced yet.
- Empowering the Ministry of Finance and Council of Ministers with the discretion to grant a licence for the access and use of the proposed nuclear generation site, free of charge.

There are currently two draft laws being discussed, aimed to provide a more comprehensive regulatory framework for the upcoming projects in nuclear sector:

- Draft law on Liabilities Against Third Parties in the Nuclear Energy Sector.
- Draft law on Nuclear Energy and Radiation.

The latter provides a wide range of regulations, including uranium and thorium mining, as well as outlining a framework for the ownership, production, storage and use of nuclear substances and radioactive wastes. It also

addresses the location, construction, and management of nuclear plants and radioactive waste facilities. The following amendments are planned within the scope of the two draft laws noted above:

- Nuclear and Radiation Regulation Authority will be established and authorised to monitor nuclear activities, as well as grant licences and permits.
- The construction and operation of nuclear plants and radioactive facilities will require licences, whereas decommissioning of the plants and facilities and other uses of nuclear power will require permits.
- Liability regime of nuclear power plant operators will be regulated.

#### The Akkuyu nuclear power plant project

The Akkuyu nuclear power plant will be Turkey's first nuclear power plant with the estimated cost of construction and related procurement being around US\$20 billion. According to an inter-governmental agreement signed on 12 May 2012, Turkey and Russia will co-operate in the building and operation of the power plant via a build-own-operate (???) model. According to estimates, construction of the power plant will start in 2015 and the first unit of the plant will generate electricity in 2019.

Under the inter-governmental agreement, four reactors will be built, with a combined installed capacity of 4,800 MW. After construction is complete, the plant is predicted to be capable of generating 35 billion kWh of electricity energy per year. With this scale of potential generation, it is possible that electricity may be exported to south Europe and Asian countries. The service life of the Akkuyu plant is 60 years.

#### The Sinop nuclear power plant project

The Japanese government has indicated its interest in negotiating to build a 4,400 MW nuclear plant and signed an agreement in December 2010 with the Turkish government to prepare a bid for the project. Discussions were temporarily suspended at Japan's request following the Fukushima accident in March 2011. However, in May 2013 the Turkish and Japanese governments signed an agreement regarding the construction and operation of the Sinop nuclear power plant. Currently, a consortium comprised of Japanese and French companies plans to build Sinop nuclear power plant but the contractual structure which will be used for the construction and operation is not yet known.

The construction of the plant is scheduled to begin in 2017 and result in the development of four reactors with an installed capacity of 4,400 MW.

#### Other nuclear power plant projects

There are currently proposals to build further nuclear plants at other sites, as part of the 100 GW of nuclear generation planned to have been developed by 2030. The Turkish Atomic Energy Authority has identified possible sites for the third plant as ??neada (on the Black Sea, 12 km from the Bulgarian border) and Akçakoca (on the Black Sea, around 200 km from Istanbul). Other sites mentioned as possibilities include Ankara and Tekirda?.

## Authorisation and operating requirements

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

#### Generation license

Electricity generation can only be carried out by parties which hold a generation licence. Generation licences are granted by the Energy Market Regulatory Authority (EMRA) and are subject to obligations in the Electricity Market Law No. 6446 (EML) and the Licence Regulation.

## Pre-licence

Under the Licence Regulation, electricity generation companies are now required to obtain a pre-licence from the EMRA first, while they complete the necessary process to be granted a full generation licence.

A pre-licence allows holders to obtain further approvals, permissions, licences and similar authorisations which are necessary to begin investments in generation plants, as well as to acquire property and usufruct rights pertaining to the proposed site of the generation plant. The period of the pre-licence cannot be more than 24 months.

Pre-licence obligations include:

- Making the necessary arrangements for the ownership right or utilisation rights of the site that will be used to construct the generation facilities. These rights must be obtained from third parties or the treasury by way of acquisition or expropriation, depending on the ownership of the land.
- Applying to the Turkish Electricity Transmission Company (TEİAŞ) to execute system connection and system utilisation agreements.
- Obtaining a positive environmental impact assessment (EIA) from the Ministry of Environment and Urban Planning, or a decision by the Ministry that an EIA is not required in the circumstances.
- Obtaining a construction permit.
- Obtaining approval for the development plans.

Pre-licence applicants are asked to provide a letter of guarantee in proportion to the type and size of the plant they seek to develop. The letter of guarantee is kept by the EMRA and cashed if the applicant cannot fulfil the procedural obligations required during the preliminary generation licence process. Furthermore, they should also comply with the minimum capital requirements set forth under the Licence Regulation. Pre-licence applicants must submit their articles of association to the EMRA during their application for the pre-licence in order to prove that the company's minimum capital has been raised to 5% of the total investment cost projected by the EMRA for the generation facility. This threshold is 1% for the construction of a nuclear energy based generation facility. Direct or indirect changes in shareholding structure and/or share transfers (or similar acts) are forbidden within the pre-licence period. The EMRA may cancel a pre-licence if such an action occurs.

The EMRA will cancel a pre-licence if the holder cannot fulfil its obligations within the stipulated pre-licence period.

### **11. 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?**

Turkey became a party to the Kyoto Protocol in 2009 but not to the compliance regime. As a result, Turkey cannot access the Kyoto Protocol's mandatory carbon trading markets. Therefore, Turkey currently has no requirements under the Kyoto Protocol concerning carbon capture and storage technology for power stations and there are no public plans to adopt these requirements.

However, power plant facilities can choose to obtain carbon credit certificates in order to voluntarily participate in the carbon financing market. Voluntary transactions within carbon trading markets have provided additional revenues for a significant number of Turkish renewable energy projects, including wind, geothermal, hydro and landfill gas.

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

- Once a party has obtained a generation licence from the Energy Market Regulatory Authority (EMRA), the following ongoing requirements will apply for operation of the facility:
- Generation licence holders must pay an annual licence fee to the EMRA, calculated for 2015 as 0.003 Kuruş for each generated kWh (EMRA Resolution No. 5379, dated 25 December 2014).
- Generation licence holders must prepare an annual activity report and submit it to the EMRA in April of each year.

- Generation licence holders must prepare two progress reports each year and submit these to the EMRA in January and July.
- Any direct or indirect transfer of 10% or more of a generation licence holder's shares is subject to prior approval by the EMRA. This threshold is 5% for publicly held companies (Article 57, Licence Regulation).
- Within the first three months of each fiscal year, generation licence holders must sign an auditing agreement with an independent auditing institution. This obligation does not apply to the fiscal year in which the generation licence is obtained.
- The total market share of a private sector generation company (including its affiliates), cannot exceed 20% of the total national installed electricity generation capacity for the previous year.
- Generation licence holders must register themselves with the Energy Stock Market (EP?A?) as a market participant. They must also execute a standard form market participation agreement and a day-ahead market participation agreement (Article 17, Balancing and Settlement Regulation).
- All transmission system users must pay transmission system usage fees. As a transmission system user, generation companies must pay this fee to the Turkish Electricity Transmission Company (TE?A?) on an annual basis.

### **13. What requirements are there concerning interconnection of generation to the transmission grid?**

The requirements for generation licence holders relating to the connection to the electricity transmission grid are outlined in:

- The Electricity Market Interconnection and System Utilisation Regulation published in the Official Gazette on 28 January 2014.
- The Electricity Grid Regulation published in the Official Gazette on 28 May 2014.

During the pre-licence stage (see Question 10), the Energy Market Regulatory Authority (EMRA) requests an opinion from the state-owned transmission company (TE?A?), or from the relevant distribution company, regarding the potential connection of the generation facility to the transmission system. TE?A?, or the relevant distribution company, evaluates the connection capacity and presents its opinion to the EMRA within 45 days of receiving the EMRA's request (Article 15, Licence Regulation). TE?A?' opinion forms part of the EMRA's decision-making process regarding granting full generation licences to applicants.

Once the EMRA grants a full generation licence to a facility, the licence holder must apply to TE?A? again, this time seeking to execute a system connection agreement and a system utilisation agreement.

The necessary provisions of system connection agreements and system utilisation agreements are outlined in the Electricity Market Interconnection and System Utilisation Regulation. The agreements must be executed in the standard form provided by this regulation.

## **Electricity transmission**

### **Authorization and operating requirements**

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

Under the Electricity Market Law No. 6446 (EML), construction of electricity transmission networks is the exclusive role of the Turkish Electricity Transmission Company (TE?A?), the state-owned transmission company.

During the construction of generation facilities, TE?A? executes facility agreements with private generation companies. Under these agreements, the generation companies finance and build the transmission facilities, but ownership of the facilities remains with TE?A?. The construction costs for the transmission facilities are subsequently deducted from the fees which the generation company must pay to TE?A? under the system connection agreement.

Principles regarding the safety and quality of electricity transmission systems are governed by the Electricity Transmission System Supply Safety and Quality Regulation published in the Official Gazette on 10 November 2004.

This Regulation defines the system designs, safety instructions and technical criteria which TEİA and system users must follow in building transmission networks.

Building electricity transmission networks is subject to obtaining certain environmental licences and permits. An EIA report for the electricity transmission facilities must be obtained for the proposed transmission facilities from the Ministry of Environment and Urban Planning. Construction of such facilities will not be permitted unless the EIA report is positive, or the Ministry decides that an EIA is not required in the circumstances.

## **15. What are the authorization and main ongoing requirements to operate electricity transmission networks?**

The right to operate the transmission network in Turkey is exclusively granted to the Turkish Electricity Transmission Company (TEİA), the state-owned transmission company (Article 8, Electricity Market Law No. 6446 (EML)). TEİA has been granted a 49-year transmission licence, running from 2003 to 2052.

The following ongoing requirements apply to TEİA for operation of the Turkish transmission network:

- Operate within the terms of the transmission licence issued by the Energy Market Regulatory Authority (EMRA).
- Comply with the EMRA's regulations and related legislation, including particularly:
  - the Licence Regulation;
  - the Electricity Transmission System Supply Safety and Quality Regulation;
  - the Electricity Market Tariffs Regulation.
- Ensure maintenance of a competitive environment.
- Receive applications from holders of pre-licences seeking preliminary approval to connect to the transmission grid, then provide an opinion on each application to the EMRA within 45 days.
- Execute system connection and system utilisation agreements upon the request of generation licence holders. Provided the conditions are met, TEİA cannot refuse to enter such agreements.
- Compose investment plans for construction of new transmission facilities.

## **Rates**

### **16. How are the rates and conditions for the transmission of electricity regulated?**

According to the Electricity Market Tariffs Regulation, the Energy Market Regulatory Authority (EMRA) determines the applicable tariff rates and conditions for the transmission of electricity on an annual basis, taking into account proposals by Turkish Electricity Transmission Company (TEİA).

- The EMRA's annual tariff decision includes:
  - Principles and procedures for implementation of tariffs.
  - Transmission system utilisation rate.
  - Transmission system operation rate.
- The market operation rate.

The EMRA annually publishes the electricity transmission tariff rates which apply to transmission system users and generation companies by way of a price list outlining the rates for the 14 different tariff regions. These regions are different to the 21 regions allocated to distribution licence holders.

## **Electricity distribution**

### **Authorisation and operating requirements**

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

Distribution activity is defined by the Electricity Market Law No. 6446 (EML) as "distribution of electricity via transmission grids". Prior to privatisation, networks under 36 kV (defined as distribution systems), were the monopoly of the Turkish Electricity Transmission Company (TEİAŞ) and only TEİAŞ was allowed to construct distribution systems. After privatisation, construction of distribution systems is still defined as one of the primary roles of TEİAŞ, the state-owned transmission company. However, a distribution licence holder may build new distribution facilities under 36 kV within its relevant licence area, provided it obtains permission from TEİAŞ and these new facilities are in line with the Energy Market Regulatory Authority's (EMRA) investment plan.

Construction of electricity distribution networks is subject to obtaining the necessary environmental licences and permits. An EIA report must be obtained for the proposed electricity distribution facilities from the Ministry of Environment and Urban Planning. Construction of distribution facilities is not permitted unless the EIA report is positive or the Ministry decides that an EIA is not required in the given circumstances.

To build electricity distribution facilities, a workplace opening and operation licence for the facility, as well as additional permits and licences regarding the zoning plans, must also be obtained from the relevant municipality.

## **18. What are the authorization and the main ongoing requirements to operate electricity distribution systems?**

The Turkish Electricity Distribution Company (TEDAŞ), the state-owned distribution company, owns all distribution facilities in Turkey. Distribution companies in Turkey must obtain a licence from the EMRA for the right to distribute electricity in a specific area, as defined in the licence (Article 9, Electricity Market Law No. 6446 (EML)).

There is no pre-licence stage for obtaining a distribution licence, as there is for generation licences.

Distribution companies must obtain an operation right for the relevant distribution facilities from TEDAŞ. Accordingly, in order to obtain a distribution licence from the EMRA, distribution companies must first execute an agreement with TEDAŞ to assign operation rights to the distribution company (Article 18, EML). Assigning the right to operate distribution facilities to a licence holder does not affect TEDAŞ' ownership of the facilities.

In turn, distribution licence holders are responsible for executing connection and system utilisation agreements with users of the distribution facilities (Article 7, Regulation on Distribution in Electricity Market). Licence holders are responsible for maintaining a competitive environment when evaluating connection requests (Article 33, Licence Regulation).

Distribution companies cannot hold direct ownership of shares in other entities in the electricity market and cannot themselves have other electricity market entities as shareholders (Article 33(5), Licence Regulation).

# **Rates**

## **19. How are the rates and conditions for the distribution of electricity regulated?**

Distribution rates are determined in line with tariffs prepared by distribution companies and submitted to the Energy Market Regulatory Authority (EMRA) for approval (Electricity Market Tariffs Regulation published in the Official Gazette on 11 August 2002).

The EMRA determines the final consumer tariffs to be applied to non-eligible consumers, taking into account the retail sale tariffs which are proposed by the default supply companies. The EML states that final consumer tariffs should include the profit margin of default suppliers. The final consumer tariffs are planned to be abolished after privatisation for generation activities is completed. These activities are aimed to be finalised by 2019 and intended to

lead to a more competitive market.

A national tariff exists with a price equalisation mechanism, ensuring that consumers are protected from exposure to price differences across distribution areas (temporary Article 1, Electricity Market Law No. 6446 (EML)). All distribution companies are subject to the price equalisation mechanism and the current provision is operative until 31 December 2015.

## Electricity supply

### Authorization and operating requirements

#### 20. What are the authorisation and the main ongoing requirements to supply electricity systems?

All public and private supply companies in Turkey must obtain a licence from the Energy Market Regulatory Authority (EMRA) for the right to supply electricity (Article 10, Electricity Market Law No. 6446 (EML)). There is no pre-licence stage to obtain supply licences, as there is for generation licences. Electricity supply licences are generally issued for 49-year periods.

The EMRA Law required entities to obtain separate licences for undertaking wholesale and retail supply activities. However, the current licensing regime abolished the requirement to obtain separate licences and allows supply companies to undertake both wholesale and retail supply activities without seeking any further permission.

The state-owned Turkish Electricity Trading and Contracting Company (TETA?) operates as a wholesale supplier and has around 53% market share in the Turkish market as of December 2013.

The following requirements apply to electricity supply licence holders on an ongoing basis:

- If supply licence holders wish to import or export electric energy or capacity, they must first obtain the EMRA's approval and the other country involved must meet the technical conditions for international interconnection.
- Private legal entities must not purchase an amount of electric energy from either a generation or import company which exceeds 20% of Turkey's national consumption in the previous year. This restriction does not apply to public legal entities.
- Private legal entities must not sell an amount of electric energy to an end-user which exceeds 20% of Turkey's national consumption in the previous year. This restriction does not apply to public legal entities.
- Supply licence holders must pay a fee to the EMRA when obtaining, renewing, modifying and duplicating their licences. The EMRA announces these fees on an annual basis.
- Supply licence holders must pay an annual licence fee, which is announced each year by the EMRA.
- Supply licence holders must provide information regarding their consumers to TE?A? or the relevant distribution company.
- Supply licence holders must take all necessary measures to maintain a competitive environment.

## Trading between generators and suppliers

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

Wholesale electricity trading activities are conducted by state-owned Turkish Electricity Trading and Contracting Company (TETA?) as well as private supply companies. These trading activities are regulated by provisions in:

- The Electricity Market Law No. 6446 (EML).
- The Licence Regulation and decisions issued by the Energy Market Regulatory Authority (EMRA) regarding wholesale supply activities.
- The terms and conditions of the parties' respective licences.
- Bilateral agreements, such as those which involve generation, distribution and supply companies.



# Rates and conditions of sale

## 22. How are the rates and conditions of sale regulated at the consumer and wholesale level?

### Retail supply

If a consumer consumes more than a certain amount per month on electricity (currently 4,000 kWh), he or she is eligible to select his or her electricity supplier, as an "eligible consumer".

Consumers below this threshold are defined to be "non-eligible consumers". They can only purchase electricity from the "default supplier" allocated in their region (retail supply companies, incorporated as a result of "legal unbundling"). Retail tariffs for non-eligible consumers are regulated by the Energy Market Regulatory Authority (EMRA), taking into account submissions from the relevant supply company.

In January 2015, the threshold for being an eligible consumer was reduced from 4,500 kWh to 4,000 kWh. This was considered to be an amendment which will encourage a more competitive electricity retail market by allowing more consumers to choose between electricity suppliers. The EMRA's ultimate aim is to reduce the threshold to zero. However, the timeframe for this is not yet set out.

Consumers, who consume more than 4.000 kWh per month on electricity, can select their retail electricity suppliers. These consumers can execute agreements with electricity suppliers on whatever terms they see fit and these agreements (including the tariffs) are not subject to the EMRA's approval (Article 4, Electricity Market Eligible Consumers Regulation, published in the Official Gazette on 4 September 2002).

### Wholesale supply

Wholesale electricity prices are set by supply companies and not subject to the EMRA's approval, provided they comply with the EMRA's rules and principles.

The EMRA sets tariff rates for the Turkish Electricity Trading and Contracting Company's (TETA?) sales to consumers which are subject to regulated tariffs. TETA?'s sales to consumers whose tariffs are not subject to regulation are not determined by the EMRA and prices, terms and conditions of sale to such consumers are freely agreed between the parties. In practice, due to TETA?' significant share of the wholesale market, the tariffs which the EMRA sets for TETA? also affect and influence the tariffs adopted by private supply companies.

## Tax issues

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

There are certain tax exemptions and incentives provided to electricity generation, distribution and supply companies in Turkey. Notable incentives include:

- **Privatization activities.** Income obtained in relation to transfers, mergers, or spin-offs which is received before 31 December 2023 within the scope of privatising electricity distribution companies and generation plants is exempt from corporate income tax.
- **Generation licence holders which are beginning operation for the first time.** Generation licence holders which are starting their operation for the first time before 31 December 2020 are entitled to receive the following exemptions and incentives:
  - 50% discount in transmission system usage fees for five years, starting from the date the generation plant begins operation;
  - acts and documentation executed and issued in relation with generation plants during the investment period are exempted from stamp tax and duty.



# Reform

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

The Electricity Market Law No. 6446 (EML) came into force in 2013 with the explicit purpose of reforming the Turkish electricity sector, including both structural and operational elements. Accordingly, a considerable number of new initiatives and frameworks were only relatively recently introduced into the market (see Question 1). Other than the ongoing changes in the electricity market, no other reform proposals are on the agenda at present.

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