THE ENERGY REGULATION AND MARKETS REVIEW

THIRD EDITION

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Chapter 35

TURKEY

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I OVERVIEW

Over the past decade, Turkey's energy consumption has substantially increased. At the beginning of 2013, Turkey was ranked second in the list of countries with the world's highest energy consumption increases. According to the International Energy Agency, energy consumption in Turkey is expected to double over the next decade, while electricity demand growth is expected to increase at an even faster pace.² The Energy Minister declared that approximately US\$128 billion of investment (more than double the total amount invested in the past decade) will be needed to meet energy demands by 2023.

Turkey's strategy and targets for 2023 are:3

- a increasing installed power to 120,000MW;
- b increasing the share of renewable energy sources from 25 to 30 per cent;
- *c* maximising the use of hydropower;
- d increasing wind-power installed capacity to 20,000MW;
- e installing power plants with 600MW of geothermal and 3,000MW of solar energy;
- f extending the length of electricity transmission lines to 60,717km;
- g reaching a power distribution unit capacity of 158,460MVA;
- *h* extending the use of smart grids;
- *i* raising the natural gas storage capacity to 5 billion m³;

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² US Energy Information Administration, Countries, Turkey, Full Report: www.eia.gov/countries/analysisbriefs/Turkey/turkey.pdf.

³ Invest in Turkey, Energy: www.invest.gov.tr/en-US/sectors/Pages/Energy.aspx.

- j establishing an energy exchange;commissioning at least two nuclear power plants;
- k building a coal-fired power plant with a capacity of 18,500MW; and
- eliminating its costs for importing petroleum and gas, currently as high as US\$56 billion.

Among these targets, establishment of an energy exchange will only support market liberalisation but also ensure transparency and help maintain a healthy balance between supply and demand. Turkey enacted the new Electricity Market Law⁴ (EML) in 2013.⁵ The EML stipulates the creation of an electricity exchange market, which will be administered through a newly incorporated company, EPİAŞ. EMRA⁶ completed the preparation of EPİAŞ's draft articles of association. According to the draft, EPİAŞ's shareholding structure will be as follows: 30 per cent will be owned by TEİAŞ;⁷ 30 per cent will be owned by the Istanbul Stock Exchange (ISE); and 30 per cent will be owned by private energy companies. The ISE will own the remaining 10 per cent, on the condition that it will transfer this 10 per cent to a strategic purchaser.

The Turkish electricity market is one of the fastest-growing in the world, with an approximately 9 per cent annual increase on average. Natural gas consumption in Turkey is increasing as well. According to the MENR,8 natural gas demand is expected to increase with a growth rate of 2.9 per cent until 2020. Due to insufficient petroleum and natural gas sources, Turkey is dependent on imports. It imports petroleum mainly from Iran, Russia, Iraq, Saudi Arabia and Kazakhstan and natural gas from Russia, Turkmenistan, Azerbaijan and Iran, in addition to LNG imports from Nigeria and Algeria.

With the enactment of the Natural Gas Market Law⁹ (NGML) in 2001, BOTAŞ¹⁰ lost its monopoly rights on natural gas imports, distribution and sales. However, BOTAŞ remains a key player in the market, as it owns and operates the gas transmission network and still imports approximately 80 per cent of the natural gas consumed in Turkey. After BOTAŞ's natural gas agreement with Russia expired in 2011, four privately owned companies – Enerco, BosphorusGaz, Avrasya Gaz and Shell Gaz – signed agreements with Gazprom and obtained import licences.

⁴ Entered into force on 30 March 2013.

In addition to the EML, many long-awaited regulations entered into force in the last quarter of 2013 and in early 2014, such as the Electricity Market Licence Regulation, the Electricity Market Distribution Regulation and the Electricity Market Connection and Use of the System Regulation.

⁶ The Energy Market Regulatory Authority.

⁷ TEİAŞ is the state transmission entity.

⁸ The Ministry of Energy and Natural Resources.

⁹ Entered into force on 2 May 2001.

¹⁰ The Petroleum Pipeline Corporation. BOTAŞ is a state-owned company.

Turkey enacted the new Turkish Petroleum Law¹¹ (TPL) in 2013. Then, the Turkish Petroleum Law Implementation Regulation¹² entered into force in early 2014. An amendment law proposing substantive amendments to the Natural Gas Market Law (the Draft Amendment Law) was also prepared in 2013. However, at the time of writing, these amendments have not been enacted.

In line with Turkey's substantial potential and its renewable energy targets, in 2013 Turkey also introduced the Regulation Regarding Generating Electricity without a Licence; ¹³ the Regulation on Documentation and Support of Renewable Energy; ¹⁴ the Regulation on Technical Evaluation of Solar Energy Based Licence Applications; ¹⁵ the Contest Regulation on Pre-Licence Applications Regarding Generation Facility Based on Solar and Wind Energy; ¹⁶ and the Regulation on Renewable Energy Resources For Electricity Generation. ¹⁷

II REGULATION

i The regulators

The MENR is ultimately responsible for preparing and implementing energy policies, plans and programmes in coordination with its affiliated institutions. The national regulatory authority, EMRA, is responsible for the regulation and supervision of the operation of the electricity, downstream petroleum and downstream natural gas markets. ¹⁸ It exercises its powers through the EMRA Board. ¹⁹ With its capacity to regulate and supervise the energy markets, EMRA has the following duties: ²⁰

- *a* issuing licences;
- *b* drafting, amending, enforcing and auditing performance standards, as well as distribution and customer services;
- c setting out the pricing principles indicated in the law; and
- d ensuring the development and implementation of an infrastructure.

¹¹ Entered into force on 11 June 2013.

¹² Entered into force on 22 January 2014.

¹³ Entered into force on 2 October 2013.

¹⁴ Entered into force on 1 October 2013.

¹⁵ Entered into force on 1 June 2013.

¹⁶ Entered into force on 6 December 2013.

¹⁷ Entered into force on 27 November 2013.

¹⁸ The General Directorate of Petroleum Affairs is the regulatory authority responsible for upstream market.

¹⁹ The Energy Market Regulatory Board.

²⁰ Invest in Turkey, The Energy Sector: A Quick Tour for the Investor: www.invest.gov.tr/en-US/infocenter/publications/Documents/ENERGY.INDUSTRY.PDF.

The primary legislation for the electricity market is the EML and the Electricity Market Licence Regulation.²¹ While the Petroleum Market Law,²² the Liquefied Petroleum Gas Market Law²³ and the Petroleum Market Licence Regulation²⁴ govern downstream petroleum activities, the NGML and the Natural Gas Market Licence Regulation²⁵ govern downstream natural gas activities. As for the upstream market, the TPL governs upstream oil and gas activities,²⁶ and the Law on Transit Passage through Petroleum Pipelines²⁷ (the Transit Law) governs the transit passage of oil and gas.

ii Regulated activities

Electricity

In order to conduct any one of the following market activities, companies must obtain a licence from EMRA:

- a generation;
- *b* transmission;
- c distribution:
- d wholesale;
- e retail:
- f trade;
- g import; and
- *h* export.

The recently enacted EML abolished the 'auto-production licence' system. Existing auto-producer licences are going to be *ex officio* converted to generation licences. However, individuals or legal entities (1) generating electricity for their own needs, and (2) having facilities or equipment that are not operating in parallel to the transmission and distribution network, are not required to obtain a licence, as long as they remain disconnected from the transmission and distribution networks and do not engage in wholesale or retail activities.

The EML introduces a new type of licence, called the 'supply licence', which combines wholesale and retail sale licences. The EML also introduces the 'preliminary licence' mechanism for generation licence applications. A preliminary licence is issued for a specified term, to those having submitted an application to EMRA to conduct electricity generation activities.

²¹ Entered into force on 2 November 2013.

²² Entered into force on 20 December 2003.

²³ Entered into force on 13 March 2005.

²⁴ Entered into force on 17 June 2004.

²⁵ Entered into force on 7 September 2002.

²⁶ Under the TPL, the definition of 'petroleum' includes both crude oil and natural gas.

²⁷ Entered into force on 29 June 2000.

Under the Regulation on Generating Electricity without a Licence,²⁸ generation facilities with an installed capacity of up to 1MW based on renewable energy resources are exempt from the requirement to obtain a licence.

Downstream petroleum and natural gas

The following downstream petroleum market activities require a licence:

- a refining;
- b processing;
- *c* lube oil production;
- d storage;
- *e* transmission;
- *f* eligible consumer;
- g bunker delivery;
- *h* distribution;
- *i* transportation; and
- *j* dealership.

Under the NGML, the following activities require a licence:

- a import;
- b export;
- c transmission;
- d storage;
- *e* wholesale;
- f distribution; and
- g sale, distribution and transmission of CNG.

iii Market restrictions

Petroleum

In the downstream petroleum market, a distributor's market share cannot exceed 45 per cent of the total domestic market and a distributor's sales through dealers under their ownership cannot exceed 15 per cent of the distributor's total domestic market share.

Another restriction regarding distributors and dealers derives from the Competition Board's interventions. Non-compete undertakings for indefinite terms or terms exceeding five years can no longer be granted a block exemption from the prohibition of agreements, concerted practices or decisions that restrict competition in a specific market. According to the Competition Board's latest decisions, all personal or real rights such as loan contracts, equipment contracts and long-term lease contracts and long-term usufructs, which relate to dealership agreements, must be limited to five years.

Natural gas

Under the NGML, import companies cannot conclude new natural gas purchase agreements (except for LNG) with countries that currently have existing natural gas

²⁸ Entered into force on 2 October 2013.

sale and purchase agreements with BOTAŞ. The barrier to market entry is actually even higher, because under EMRA Board Decree No. 725 (Decree No. 725), EMRA must obtain BOTAŞ's opinion on whether such import activity will affect the performance of BOTAŞ's obligations arising out of its existing contracts (in BOTAŞ's 'gas importer' capacity). In addition, Decree No. 725 requires consultation with BOTAŞ (in its transmission system operator (TSO) capacity) on the technical suitability of such import.

The NGML imposes storage-related obligations on applicants for import and wholesale licences. Import licence applicants must obtain commitments and guarantees from storage licence holders, regarding their capacity to store 10 per cent of the yearly imported natural gas in Turkey within five years. A similar obligation is imposed on wholesale licence applicants. Accordingly, wholesale licence holders must take the required storage-related measures within five years of the licence's issuance.

Under the NGML, the MENR's opinion is not required for natural gas market licences. However, if the Draft Amendment Law is passed as is, then the NGML will have a provision whereby EMRA will have to obtain the MENR's opinion for granting import and export licences.

Under the NGML, no company can sell natural gas corresponding to more than 20 per cent of the estimated national consumption determined by EMRA. Moreover, import companies cannot import natural gas corresponding to more than 20 per cent of estimated national consumption. The Draft Amendment Law will not change these market share restrictions.

iv Transfers of control and assignments

Licence holders must obtain EMRA's approval for any of the following transactions:

- *a* transfer of 10 per cent or more (5 per cent or more in publicly held companies) shares in licence holding companies;
- b any transaction, resulting in the change of control of a licence holding company; and
- c any transaction resulting in the change of ownership or usage right on licensed facilities.

III TRANSMISSION/TRANSPORTATION AND DISTRIBUTION SERVICES

Vertical integration and unbundling

Electricity

TEÏAŞ conducts all of Turkey's electricity transmission activities. The distribution network is divided into 21 regions, with a different distribution company in each region. All of these companies have recently been privatised. TEDAŞ²⁹ no longer operates any distribution companies, but continues to own the distribution assets.

The shareholders of distribution utilities can own the newly established retail sales utilities' shares. However, as of 1 January 2016, distribution utilities will not be

²⁹ The state distribution entity.

able to purchase administrative and support services from companies under the parent company's control.

Natural gas

Under the NGML, market participants active in: more than one market activity or one market activity in more than one facility, must keep separate accounts for each activity or facility. Cross-subsidising between accounts is prohibited. In addition to this account separation, companies holding distribution licences must maintain separate accounts for their sale and transportation activities.

Although the NGML stipulated that BOTAŞ was to be unbundled starting from 2009, BOTAŞ has not been divided into separate companies. The Draft Amendment Law includes provisions concerning BOTAŞ's restructuring. The plan is to separate BOTAŞ into three legal entities: the first for conducting transmission activities; the second for operating LNG facilities and storage activities; and the third to perform other natural gas market activities.

ii Transmission/transportation, distribution and storage access

Electricity transmission and distribution

TEİAŞ is required to meet the demands of individuals and companies for connection to the transmission. In cases where system connection and use of the system by generation companies are possible, the licence holder and TEİAŞ and/or the distribution licence holder must conclude connection and system usage agreements.³⁰

Petroleum transmission and storage

Companies holding distribution or storage licences cannot discriminate among third parties of equal status for access to transmission and storage networks. Transmission and storage licence holders which have spare capacity in their facilities must meet the transmission and storage demands, provided that these demands meet certain conditions.

Natural gas transmission and distribution

Companies holding distribution or transmission licences cannot discriminate among third parties of equal status for access to transmission and distribution networks. Licence holders may only decline third-party access requests based on certain specific grounds. If an applicant undertakes to cover the expenses to overcome the lack of capacity or connection situations, access cannot be denied.

Distribution companies must connect all consumers within their region. A connection agreement must be concluded between the distribution company and consumers, and the technical connection and service lines must be established.

^{30 (1)} The Electricity Market Grid Regulation; (2) the Electricity Market Tariff Regulation; (3) the Electricity Market Distribution Regulation; and (4) the Electricity Market Connection and Use of the System Regulation regulate the terms and conditions regarding the applicable tariffs for connection to and use of the system.

LNG and natural gas storage

Companies holding storage licences must provide storage services to users in an objective and fair manner. In principle, except for the exclusive grounds mentioned above for distribution and transmission networks, companies must accept storage requests. On the other hand, in practice, there are only six storage licences in force.³¹ As the current storage capacity is insufficient, third-party access is practically impossible.³² In order to increase Turkey's natural gas storage capacity, an agreement was concluded with Chinese company TCC-China Tianchen Engineering Corporation in 2011 for the construction of the Tuz Gölü natural gas storage facility.

iii Tariffs

Electricity

EMRA is responsible for regulating the connection and use of system tariffs including transmission and distribution tariffs in the electricity sector. Licence holders must prepare and submit their tariff proposals to EMRA by the end of October every year. EMRA must complete the examination and evaluation of these tariff proposals before 31 December of the current year. The tariffs approved will be effective for the tariff period between 1 January and 31 December of the following year.

Natural gas

As it does in the electricity market, EMRA regulates connection tariffs, storage tariffs and tariffs pertaining to the control of transmission and dispatch in the natural gas market. Companies using the gas transmission system are charged connection tariffs. Fees can be determined freely between the parties, provided that EMRA's connection tariff principles are reflected in the relevant connection agreements.

iv Security and technology restrictions

There is various legislation in Turkey dealing with the security of energy infrastructure facilities.³³ Turkey is also a party to international agreements and forums regarding the security of critical infrastructure facilities.³⁴

Two new storage licences were issued in February 2014.

EMRA is fully aware of the existing storage conditions in Turkey. Considering the current circumstances, EMRA does not strictly monitor the performance of storage-related obligations and, in practice, does not impose penalties on market players even if the obligations are not mer

i.e., the Transit Law; the General Directorate of BOTAŞ, Technical Security and Environment Regulation on Construction and Operation of Crude Oil and Natural Gas Facilities; the Turkish Criminal Code; the Petroleum Market Law; the NGML; and the BOTAŞ Transmission Network Operation Principles.

e.g., NATO and Critical Infrastructure Facilities; the Convention on Nuclear Safety; the Energy Charter Treaty; the INOGATE Project (Interstate Oil and Gas Transport to Europe); the Convention on Cybercrime; the OSCE Strategy Document For the Economic and

IV ENERGY MARKETS

i Development of energy markets

In Turkey, supply licence holders can conduct electricity trading activities.³⁵ Electricity traders must either conclude a bilateral electricity purchase agreement with another licence holder or contribute to the organised markets themselves, in order to participate in the electricity market. The MFRC³⁶ operates the day-ahead market, as well as the balancing market.

As for natural gas, since there is no energy exchange in Turkey yet, gas trading is physical. In Turkey, gas trading is conducted by four types of licence holders:

- a production lease;
- b import licence;
- c export licence; and
- d wholesale licence.

ii Energy market rules and regulation

In addition to the EML and the Electricity Market Licence Regulation, regulations on electricity trading are set forth under the Regulation on Electricity Market Balancing and Settlement.³⁷ The Regulation on Electricity Market Balancing and Settlement sets forth the principles and procedures regarding the day-ahead market and real-time balancing of the active electricity demand and supply, as well as settlement of trade in these markets. On the other hand, natural gas trading is regulated under the provisions set forth in each separate licence and the Network Operation Manual of BOTAŞ.

iii Contracts for sale of energy

Electricity is traded mostly through bilateral negotiated agreements on an over-the-counter basis. Agreements are not subject to EMRA's approval and, thus, all commercial terms and conditions are freely negotiable. Electricity can also be traded on a day-ahead and real-time basis.

As for natural gas, suppliers and consumers must conclude private law contracts in order to participate in natural gas trading. A natural gas sale agreement is the primary agreement executed within the framework of natural gas sale and purchase activities.

In addition to a natural gas sale agreement, the following agreements must be concluded by the parties:

- a operation agreements;
- b system connection agreements; and
- c lease agreements.

Environmental Dimension; and the Decision on Protecting Critical Energy Infrastructure from Terrorist Attacks.

³⁵ i.e., wholesale, export, import and retail sales.

³⁶ The Market Financial Reconciliation Center.

³⁷ Entered into force on 15 April 2009.

iv Market developments

Turkey aims to create a liberal and competitive energy sector and increase investment opportunities by establishing an energy exchange market at the end of this year.³⁸ Aside from this, Turkey's involvement in international oil and gas pipelines significantly supports its aim to become a regional energy hub in the next few years.

International oil and gas pipelines

The transit passage of oil and gas through Turkey is governed by the Transit Law. However, in order for the Transit Law to apply as the legal regime of a transit pipeline, there must be an international agreement regarding that pipeline. In this event, the Transit Law, the international agreement (generally an IGA) and the project agreements apply as the legal regime to the transit pipeline.

In addition to 'transit' pipelines transiting through Turkey (e.g., the BTC Pipeline and the contemplated TANAP³9), there are pipelines that transport oil or gas to or from Turkey. These are non-transit pipelines, such as the Kirkuk-Yumurtalık Oil Pipeline. The legal regime applicable to these pipelines is either in the form of a Council of Ministers' Decree (pursuant to the former Petroleum Law⁴0 (PL)) or an IGA signed specifically for that pipeline.

There are currently two international crude oil pipelines in Turkey:

- a the Baku-Tbilisi-Ceyhan (BTC) Crude Oil Pipeline, transporting crude oil from the Caspian Sea to Ceyhan, Adana (transit); and
- b the Kirkuk-Yumurtalık Crude Oil Pipeline, transporting crude oil from Iraq to Adana (import).

Currently, the following pipelines exist for the import or export of natural gas:

- a the Baku-Tbilisi-Erzurum Pipeline, transporting natural gas from Azerbaijan's Shah Deniz gas field (Stage I) to Turkey (import);
- b the Blue Stream Natural Gas Pipeline, transporting natural gas from Russia to Turkey through the Black Sea (import); and
- c the Interconnector Turkey-Greece, transporting natural gas between Turkey and Greece (export).

The following contemplated projects will make Turkey a true oil and gas transport hub:

- a TANAP, to transport natural gas from Azerbaijan's Shah Deniz gas field (Stage II) to Europe, through Turkey;
- b the Trans Adriatic Natural Gas Pipeline, to transport natural gas from Turkey to Southern Italy and further to Europe through Greece and Albania;
- c the South Stream Natural Gas Pipeline Project, to transport natural gas from Russia to Europe through Turkey's Black Sea territorial waters;

For further information, see Section I, *supra*.

³⁹ Trans Anatolian Natural Gas Pipeline.

⁴⁰ Entered into force on 16 March 1954.

- d the Trans Caspian Natural Gas Pipeline Project, to transport natural gas from Turkmenistan to Erzurum, Turkey and possibly to Europe;
- e the Mashreq-EU Natural Gas Pipeline Project, to transport natural gas from the Mashreq countries to Turkey, Iraq and the EU;
- f the Northern Region of Iraq-Turkey Crude Oil Pipeline Project, to transport crude oil from the Northern Region of Iraq to Turkey; and
- g the Iran-Germany Natural Gas Pipeline Project, to transport natural gas from Iran to Germany through Turkey.

V RENEWABLE ENERGY AND CONSERVATION

i Development of renewable energy

In recent years, investments in electricity generation from renewable energy resources have increased greatly. In the first 10 months of 2013, in terms of total capacity, 54.75 per cent of energy investments were in renewable energy based facilities. One of Turkey's targets is to increase the share of electricity generated from renewable energy sources to 30 per cent by 2023. This is expected to entail the increase of wind-power installed capacity to 20,000MW as well as the installation of new power plants with 600MW of geothermal and 3,000MW of solar energy.

Incentive regime

The Law on the Utilisation of Renewable Energy Resources for the Purpose of Generating Electrical Energy⁴¹ (the RER Law) established a renewable energy support mechanism. This mechanism includes price, terms, procedures and principles regarding payments, from which individuals generating energy based on renewable energy resources within the scope of the RER Law can benefit. The RER Law provides that the prices in Schedule I (see below) will apply for 10 years for generation licences subject to the RER Support Mechanism that are commissioned until 31 December 2020.⁴²

Type of facility	Prices applicable (USD cent/kWh)
Hydroelectric	7.3
Wind	7.3
Geothermal	10.5
Biomass (including landfill gas)	13.3
Solar power	13.3

The RER Law further provides that renewable energy facilities can benefit from certain tax incentives upon a Council of Ministers' Decree. Additional incentives are provided if domestic equipment is used in facilities commissioned before 31 December 2020.

⁴¹ Entered into force on 18 May 2005.

⁴² Although the initial date set in the RER Law was 31 December 2015, a Council of Ministers' Decree dated 18 November 2013 extended the incentive term until 31 December 2020.

ii Energy efficiency and conservation

Under the Energy Efficiency Law,⁴³ the EECC⁴⁴ regulates energy efficiency activities. This law sets forth several mandatory obligations.⁴⁵ It also includes provisions regarding energy efficiency education and awareness.

The Energy Efficiency Law requires industrial entities to appoint an energy efficiency controller. These entities must inform the GDRE⁴⁶ of their annual energy consumption. Furthermore, industrial businesses may (1) voluntarily submit projects that increase efficiency or (2) conclude agreements with the GDRE, undertaking to reduce their consumption levels by at least 10 per cent, in return for certain incentives.

iii Technological developments

Renewable energy is a developing sector in Turkey. Although Turkey has remarkable potential in terms of renewable energy resources, there is currently insufficient legislation encouraging technological developments in the renewable energy sector.

VI THE YEAR IN REVIEW

i Privatisations

In 2013, Turkey completed the privatisation of all state-owned electricity distribution companies, which had been on the PHC's⁴⁷ agenda since 2004. In addition to distribution companies, several electricity generation assets have finally been privatised.

The PHC approved the privatisations of four distribution companies on 7 March 2013. Further, final negotiations on the privatisation of four electricity distributor companies took place on 15 March 2013. Turkey generated US\$7.3 billion from these eight privatisations.⁴⁸ In addition, Turkey realised 13 privatisations in 2012 and 2013.⁴⁹ One privatisation⁵⁰ has been approved and, at the time of writing, is waiting for the parties' signatures. Finally, the final bids for the privatisation of four thermal power

⁴³ Entered into force on 2 May 2007.

⁴⁴ The Energy Efficiency Coordination Committee.

⁴⁵ e.g., the use of labelled equipment in industrial companies and buildings.

⁴⁶ The General Directorate of Renewable Energy.

⁴⁷ The Privatisation High Council.

The privatised distribution companies are Akdeniz, Gediz, Boğaziçi, Aras, Dicle, Van Gölü, Ayedaş and Toroslar.

⁴⁹ i.e., (1) Seyitömer Thermal Power Plant (TPP); (2) Kangal TPP; (3) Hamitabat TPP; (4) Haraklı-Hendek, Pazarköy-Akyazı, Bozüyük Hydroelectric Power Plants (HPP); (5) Engil, Erciş, Hoşap HPPs; (6) Koçköprü HPP, (7) Kısık HPP; (8) Göksu HPP; (9) Bozkır, Ermenek HPPs; (10) Hasanlar HPP; (11) Ladik-Büyükkızoğlu, Durucasu HPPs; (12) Arpaçay-Telek, Kiti HPPs; and (13) Berdan HPP.

⁵⁰ i.e., Anamur, Bozyazı, Mut-Derinçay, Silifke, Zeynel HPPs.

plants⁵¹ were submitted to the PHC in April 2014 and final bids for five hydroelectric power plants⁵² are required to be submitted to the PHC on 9 May 2014.

With regard to natural gas distribution companies, in 2013, BaşkentGaz 53 was privatised. The only remaining significant state-owned natural gas distribution company is $\bar{\text{IGDA}}\$.^{54}$

ii Takeovers

In addition to above-mentioned privatisations, there have been a number of takeovers in Turkey's energy market in 2013. Turkish energy company Global Enerji acquired an 80 per cent stake in Geliş Madencilik,⁵⁵ and raised its stake in Galata Enerji to 85 per cent with the acquisition of an additional 25 per cent stake. Another notable transaction was Aksa Enerji's acquisition of a 93 per cent stake in Kapıdağ Rüzgar⁵⁶ for approximately US\$32 million.

iii Significant new installations

While achieving remarkable improvement in market liberalisation, 2013 was also a year in which several new facilities were put into operation. In August 2013, the RWE and TURCAS Joint Venture commissioned a gas-fired combined-cycle power plant in Denizli.⁵⁷ In September 2013, the inauguration ceremony of the Kızıldere-2 geothermal power plant was held.⁵⁸ The Kızıldere-2 geothermal power plant.⁵⁹ will be the largest in Turkey after the Kızıldere geothermal power plant.

iv Pending projects

The Akkuyu Nuclear Power Plant, in Mersin, will be the first nuclear power plant in Turkey. This plant is expected to produce approximately 35GW per year. Following the approval of the environmental impact assessment report,⁶⁰ the project will need a construction licence and a generation licence, which could be in place by mid-2014, enabling construction to start before 2016 and operation of the first unit in 2020.

In 2013, Turkey signed an IGA with Japan for the construction and operation of a nuclear power plant in Sinop. This US\$20+ billion project will be constructed and operated by the consortium formed by Mitsubishi Heavy Industries and Areva. The

i.e., Kemerköy TPP, Yeniköy TPP, Çatalağzı TPP and Yatağan TPP.

⁵² i.e., Esendal, Işıklar (Visera), Kayaköy, Dere, and İvriz.

⁵³ Ankara's natural gas distribution company.

⁵⁴ Istanbul's natural gas distribution company.

⁵⁵ Operating in the mining sector.

Operating in the wind energy sector.

⁵⁷ With 775MW installed power.

This power plant was constructed by the Zorlu Group in Denizli with an investment totalling US\$250 million.

With a capacity of 600 million kWH/year.

⁶⁰ In July 2013, the environmental impact assessment report was submitted to the MENR.

project company and the MENR are currently negotiating the HGA for this project. This plant is expected to become operational in 2023.

Following the success of the Baku-Tbilisi-Ceyhan Crude Oil Pipeline, Turkey became the obvious candidate for hosting pipelines transporting petroleum and natural gas from the Caspian to Europe. In mid-2012, Turkey and Azerbaijan signed an IGA for the construction and operation of the TANAP. Attached to the IGA is a HGA signed between Turkey and the TANAP Project Company. Turkey ratified the IGA and HGA in March 2013. The Turkish government places great importance on this project, which will be the longest energy pipeline in the region at approximately 2,000km.

In January 2013, Turkey and the UAE signed an IGA for what was going to be the largest foreign direct investment in Turkey to date, with a value of approximately US\$12 billion. The project entailed the construction and operation of a coal-based power plant,⁶¹ in Turkey's Afşin-Elbistan region. The project was initially planned to start in mid-2013. However, due to other priorities, in August 2013, TAQA decided to defer its investment decision until 2014.

Additionally, in September 2013, Borusan EnBW Energy commenced the construction of a wind power plant in the northwestern province Tekirdağ. 62

v Significant developments

In November 2013 the EU, Turkey, Iraq and the Mashreq countries⁶³ reached a consensus to connect the Arabian natural gas pipeline to Turkey, Iraq and the EU. The aim is to develop regional cooperation in the natural gas sector through the Euro-Arab Mashreq gas market centre and to extend its participation to Iraq and Turkey.

The Northern Region of Iraq-Turkey Natural Gas Pipeline Project has been among the radical energy (as well as political) developments in Turkey in late 2013. In November 2013, the Turkish government formally met with the administration of the Northern Region of Iraq to begin negotiations for the transport of petroleum to Turkey. Negotiations are likely to continue in 2014, with the participation of the central government of Iraq.

vi New discoveries

Turkey has begun to conduct hydraulic fracturing operations, to extract shale gas from wells in the Thrace and Southeast regions. In the Thrace and Southeast regions, 4.6 trillion m³ of shale gas reserves have been detected.

In November 2011, TPAO⁶⁴ and Shell signed an agreement to explore for gas and oil in Diyarbakır and Batman. They began drilling Turkey's first wells for shale gas exploration in Diyarbakır in October 2013. Shell will be in charge of well operations, and if shale gas is found, the company plans on drilling over 20 wells in the area.

With a capacity of up to 8,000MW.

⁶² With 50MW installed power.

⁶³ Egypt, Jordan, Lebanon and Syria.

⁶⁴ The Turkish Petroleum Corporation.

vii Solar-based energy and wind-based energy generation licence applications

2013 also witnessed significant developments in renewable energy investment. EMRA received applications for solar-based energy generation licences between 10 and 14 June 2013. Although the designated total capacity for solar-based generation licences is 600MW, applications were submitted for nearly 8,900MW. Thus, several contests will be organised in different regions to decide who will obtain the generation licence in the relevant region. The first contest will be held on 12 May 2014 for Elazığ and Erzurum provinces. As for wind-based energy, EMRA will receive applications for generation licences between 24 and 30 April 2015.

viii Conversion of auto-production licences

EMRA Board Decree No. 4952-18 sets forth the general principles regarding termination of current auto-production licences and issuance of generation licences for the relevant entities. Pursuant to these principles, the EMRA Board issued another Decree No. 4969, providing that as of 1 May 2014, 260 of 274 auto-production licences will be terminated and generation licences will be issued to the auto-production licence holders. Due to their specific circumstances, separate procedures will be carried out for the remaining 14 auto-producion licences.

ix Turkish Petroleum Law

In 2013, the long-awaited TPL was enacted, replacing the PL after nearly 60 years. The TPL brings a more liberal and investor-friendly regime than the provisions that the PL imposed on upstream participants. With this new law, Turkey is now divided into two petroleum districts, namely onshore and offshore, whereas previously there were 18 petroleum districts.⁶⁵

Perhaps the most significant change brought by the TPL is the abolition of the 'national interest' concept. Based on the 'national interest' concept, the TPAO had a statutory right to obtain exploration licences on behalf of the state, and by virtue of this right the TPAO had an advantage in respect of exploration licence applications. With the abolition of this concept, the TPAO no longer has that privilege.⁶⁶

x New Electricity Market Law

The new Electricity Market Law entered into force in March 2013. This law aims to address various new issues that have long been awaited in the market, such as the introduction of a 'preliminary licence' mechanism for generation licence applications.

Another novelty of the TPL is the abolition of the restriction on the number of licences a company can obtain for a single petroleum district. Under the PL, companies were limited to eight licences per district.

Among some of the other novelties is that the TPL allows petroleum right holders to market and export natural gas that they have produced to wholesale companies, export companies, distribution companies or to eligible consumers without being subject to any conditions regarding storage capacity.

This law also provides for the establishment of an electricity exchange, which will create a whole new market of its own and become a significant investment opportunity.

VII CONCLUSIONS AND OUTLOOK

Economic expansion, rising per capita income, positive demographic trends and the rapid pace of urbanisation are the main drivers of Turkey's growing energy demand, estimated to increase by approximately 7 per cent each year until 2023. Due to this increase in energy demand, the Turkish energy market has been experiencing vast changes. These changes include liberalisation, attracting private sector participation and the establishment of a competitive market.

At present, domestic resources provide approximately 26 per cent of the total energy demand, the remainder being imported. Due to insufficient domestic energy generation, Turkey's primary goal is to strengthen its security of supply. Turkey aims to diversify its energy supply routes and sources, such as nuclear energy, and to increase the share of renewable energy.

Turkey's importance in the energy markets is not just increasing as a growing consumer with a huge domestic market, but also as an energy transit hub. Although Turkey has limited energy resources, its position is critical for petroleum and natural gas trade between the East and the West, as it lies between energy-demanding European countries and energy-rich eastern countries. Turkey is a natural transit country for the maritime and pipeline transportation of gas and oil. Accordingly, international crude oil and natural gas pipelines and pipeline projects hold great importance and improve Turkey's role as a reliable transit country.

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