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Preface

Having witnessed the profound change that Turkish energy markets have undergone since 2001, we are delighted to see how the energy market has been and will continue to be a common driver for development of Turkey. A steadily increasing demand continues to challenge Turkey in securing its energy supplies for growth and development in the forthcoming years and thus to create opportunities for investors. Taking into account the development and liberalization of the energy market in the last decade, we are confident that past accomplishments will pave the way for future success in terms of sustainability, implementation of market-oriented reforms and development in the Turkish energy sector.

This Turkish Energy Markets Booklet focuses on the legal and regulatory framework underpinning the functioning of Turkish energy markets. The ultimate goal of this booklet is to translate our regulatory expertise into a comprehensive roadmap for market players looking at entry into or expansion within the Turkish energy markets. The booklet is designed to present an overview of the main principles of Turkish energy policy and current trends, together with providing insight to the licensing regime, regulated market activities, tariffs and price formation and restrictions with respect to each of electricity, natural gas, petroleum and LPG markets.

Although being prepared based on the most recent legislation applicable at the time of publication, please be aware that the issues and information covered in this booklet may be subject to further changes in the future.

Finally, we hope that you find this booklet helpful, insightful and practical in navigating your business in Turkish energy sector. Should you need further information regarding any of the issues discussed herein, please do not hesitate to get in touch with us.

Zeynel Tunç
Partner
September 2018
I. Overview of the Turkish Energy Market

General Overview and Recent Trends

Turkey, officially the Republic of Turkey, is located at the junction of Europe and Asia. The location on two continents (3% European territory, 97% Asian territory) has been a central feature of the Turkish history, culture and politics. Thanks to its geographical location, Turkey is in close proximity to more than 75% of the world’s proven oil and gas reserves. Its unique location provides opportunities for Turkey in terms of ensuring its own energy supply and makes Turkey a key player in securing the regional energy supply. The goals of strengthening its position between East-West and South-North energy corridors and becoming an energy trade hub are thus duly reflected in the energy strategy of Turkey. Turkey is in constant exploration of new cross border projects by making use of its geography and geostrategy.

Turkey also finds its place in the heart of the Southern Gas Corridor (SGC), a landmark project to bring gas from Caspian and the Middle East to Europe. Within the context of Southern Gas Corridor, the Trans-Anatolian Natural Gas Pipeline (TANAP) and the Trans-Adriatic-Pipeline (TAP) are projects currently under development. The delivery of gas to Turkey through TANAP will start by the end of 2018 and to Europe in 2020.

Its unique location provides opportunities for Turkey in terms of ensuring its own energy supply and makes Turkey a key player in securing the regional energy supply.
Turkey’s efforts to establish a robust energy exchange market where oil and gas will be traded and priced, will further strengthen its position as a regional energy trade hub.

In this context, EPİAŞ was established in order to pioneer to the development of energy market through managing it in an effective, transparent and reliable manner on 18 March 2015. EPİAŞ is currently administrating electricity exchange market and has very recently started its wholesale activities in the natural gas market as of 1st September 2018. Its operations are expected to expand to include oil and derivatives in the forthcoming period. In addition to establishing an energy exchange, efforts for increasing the national gas storage capacity are also underway.

In the power sector, with an aim of using renewable energy resources effectively and efficiently, Turkey introduced the YEKA (Renewable Energy Resource Zones) projects which consist of (i) the establishment of a manufacturing facility in Turkey, (ii) construction and operation of a large generation facility using renewable energy resources, and (iii) procurement of R&D activities. In 2017, two YEKA tenders for solar and wind power plants each with a total installed capacity of 1,000 MW have attracted foreign direct investment through the local consortium. On the solar front, the YEKA tender is awarded to a Turkish-South Korean consortium with the lowest bid amounting to USD 6.99 cent/kWh. The wind YEKA agreement was signed with a Turkish-German consortium with the lowest bid amounting to USD 3.48 cent/kWh. It appears that the renewable energy zones will continue to be the trend in forthcoming years for sourcing renewable energy in Turkey. In 2018, the Ministry of Energy and Natural Resources, the MENR, released a new tender announcement for the first off-shore wind power plant of Turkey with a total installed capacity of 1,200 MW. The applications for this tender are accepted until 23 October 2018. Furthermore, the MENR signalled that two new tenders for both wind and solar energy will be held under the renewable energy zone scheme by announcing the new nominee sites to be designated renewable energy zones.

Turkey also aims to gradually add nuclear power into its energy mix by taking into due account its positive impacts on environment and with a view to meeting its ever increasing energy demand as well as reducing its dependency on imported fossil fuels. By 2023, Turkey plans to satisfy 10% of the total electricity demand from two NPPs which are to be built in Akkuyu (Mersin) and Sinop and start the construction of its third nuclear power plant. The government has announced that the discussions with China for the construction of third nuclear power plant are underway.

**Turkey’s Energy Market Policy**

As a founding member of the OECD and the IEA, Turkey’s energy policy has continuously evolved to serve a growing economy and population, mitigate rising import dependence and meet the country’s environmental goals, including at international level.

The limits of Turkey’s domestic energy sources in light of its growing energy demand have resulted in dependency on energy imports, primarily on oil and gas.

The primary aim of Turkey is to realize its own energy security. To this end, Turkey aims to:

- diversify its energy supply routes and source countries;
- increase the share of renewables and include the nuclear in its energy mix;
- take significant steps to increase energy efficiency; and
- contribute to EU’s energy security.

With a rapidly growing economy, Turkey has become one of the fastest growing energy markets in the world. Turkey has been experiencing rapid demand growth in all segments of the energy sector which is the underlying factor behind the fundamental changes in the liberalisation policies in the energy sector. Projections show that demand growth trend will continue.

**Turkey has been experiencing rapid demand growth in all segments of the energy sector which is the underlying factor behind the fundamental changes in the liberalisation policies in the energy sector.**
Turkey is progressing with its plans to deploy three NPPs in the next decade, and has accelerated the deployment of renewable energy especially through YEKA tenders. Regional integration is advancing, as Turkey and the EU will gain access to new gas sources from Azerbaijan by 2018-19 through the TANAP and from other sources in the Eastern Mediterranean and the Middle East in the future. For the first time, the Turkish electricity system was interconnected with the Continental European system through the ENTSO-E in 2015. The integration of the Turkish electricity system and market with those of Europe has hence been taken to a higher level. In this context, Turkey’s contribution is increasingly crucial for the regional energy security. Together, these policies enabled Turkey to receive a flow of foreign direct investments to take advantage of opportunities abounding in the Turkish energy and power sector and accordingly fostered its economic growth.

Turkish Energy Market with Figures
Turkey’s gross electricity consumption has been increasing rapidly and it reached at 294 billion kWh in 2017.

<table>
<thead>
<tr>
<th>Energy Source</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>Natural gas</td>
<td>37%</td>
</tr>
<tr>
<td>Coal</td>
<td>33%</td>
</tr>
<tr>
<td>Hydro</td>
<td>20%</td>
</tr>
<tr>
<td>Wind</td>
<td>6%</td>
</tr>
<tr>
<td>Geothermal</td>
<td>2%</td>
</tr>
<tr>
<td>Other</td>
<td>2%</td>
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Turkish Energy Market with Figures

Turkey’s gross electricity consumption has been increasing rapidly and it reached at 294 billion kWh in 2017. According to the projections of the MENR, electricity demand of Turkey is expected to reach at 387.4 billion kWh in 2023.

Natural gas accounted for 37% of total electricity generation in 2017.

### Energy sources used for electricity generation in 2017
By the end of 2017, the installed power capacity of Turkey has reached at 85,200 MW.

IV. Turkish Natural Gas Market

Turkey imports nearly 99.36% of the natural gas it consumes. In 2017, the natural gas import has increased 19.2% as compared to the import in 2016. In 2017, Turkey imported around 55,250 bcm of gas.

V. Turkish Petroleum Markets

Turkey imports around 89% of its oil supplies. In 2017, Turkey imported 42.7 million tonnes of oil.

VI. Turkish LPG Market

Thanks to its huge potential of renewable energy, Turkey is ranked 7th in the world in terms of geothermal potential. Alongside its geothermal power capacity, Turkey also places emphasis on developing wind and solar energy. In this context, as enshrined in the Strategic Plan for years 2015-2019 released by the MENR, the share of renewables is planned to increase to 30% of electricity generation by increasing the installed capacity of hydroelectric power to 32,000 MW, wind energy to 10,000 MW, solar energy to 3,000 MW and geothermal energy to 700 MW.

VII. Glossary

Natural gas imports in 2017

Oil imports in 2017
II. Functioning of the Turkish Energy Market

Turkey’s energy policy is determined by the MENR while the regulator for the energy markets is EMRA which is an autonomous, public legal entity with administrative and financial authority established to regulate and monitor electricity, natural gas, petroleum and the liquid petroleum gas markets. This administrative authority is affiliated with the MENR and has independent regulatory power. EMRA is governed by the EMRA Board. EMRA often cooperates with the Competition Authority, and its decisions may be appealed before the administrative courts.

Each market is governed through its own general law such as the EML, the NGM Law, and in order to regulate the related sectors in more detail, EMRA and the MENR issue several other secondary legislation and numerous communiqués. In general, the failure to comply with the

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**Turkey’s energy policy is determined by the MENR while the regulator for the energy markets is EMRA**
Overview of the Turkish Energy Market

I. Functioning of the Turkish Energy Market

II. Turkish Electricity Market

III. Turkish Natural Gas Market

IV. Turkish Petroleum Markets

V. Turkish LPG Market

VI. Glossary

companies started to import natural gas as a result of contracts release of BOTAŞ only in 2011; currently, there are only 17 companies holding import licences other than BOTAŞ.

**Petroleum and LPG Markets.** As a part of the liberalization process, the Petroleum Market Law enacted in 2003 redefined the petroleum market and established a bipolar structure: while the upstream activities, i.e. the exploration and production of petroleum (including oil and gas), are governed by the Turkish Petroleum Law, the downstream activities are governed by the Petroleum Market Law. The GDPA, which is affiliated with the MENR, is responsible for granting oil and gas exploration and production licences. Currently TPAO is leading the exploration and production activities, which directly competes with the private sector entities in these fields. As to the downstream activities such as distribution, transmission, storage, EMRA is responsible for issuing licences, ensuring compliance with the Petroleum Market Law and drafting secondary legislation. Private legal entities can freely operate in the petroleum (downstream) and LPG markets by obtaining a licence from EMRA.

The electricity generation, distribution and supply activities are carried out by private entities.

applicable legislation may result in certain sanctions being imposed by EMRA, such as administrative monetary fines, suspension of market activities and cancellation of the relevant licence.

In addition to EMRA, under each market, there are separate state or Turkish Wealth Fund owned entities active in different fields.

**Electricity Market.** Following the liberalisation and privatisation of the electricity market in Turkey since 2001, the electricity generation, distribution and supply activities are carried out by private entities. On the other hand, EUAŞ, the state owned electricity generation company, and TEDAŞ, which was established for carrying out electricity distribution activities, are the state-owned players in the Turkish electricity market alongside private entities engaged in these specific activities. On the other hand, the electricity transmission is still at the monopoly of TEİAŞ, the Turkish electricity transmission company. Finally, a new type of licence, namely the “market operation licence” was introduced by the EML in 2013, which was issued for EPİAŞ and TEİAŞ on 1 September 2015. EPİAŞ is jointly owned by TEİAŞ (representing 30% of the share capital), Borsa İstanbul (representing 30% of the share capital), and private entities (representing 40% of the share capital).

**Natural Gas Market.** Natural gas market activities in Turkey were under the quasi-monopoly of BOTAŞ for decades. The NGM Law was enacted in 2001 to establish a more liberalized and transparent natural gas market framework by terminating most of the monopoly rights of BOTAŞ. After the promulgation of the NGM Law, EMRA started to launch tenders to open the distribution segment of Turkey to local private players other than BOTAŞ. The liberalisation of the wholesale market, on the other hand, started in 2007 where private natural gas import companies and spot LNG importers entered the market. Private
Turkey’s general energy policy is to maintain a high-quality, reliable, continuous and cost-effective supply while maintaining a liberal, competitive, transparent, non-discriminatory and stable market. Additionally, Turkey intends to reduce its dependence on imported energy. To achieve these ends, the Turkish government has been reforming its energy laws while trying to promote private investment in its energy market. Recent trends, in particular in the electricity and renewable energy sectors, show an even stronger push towards privatisation that corresponds with the growth of Turkey’s economy and population.

In response to the need for sustainable private involvement in the electricity sector, the government embarked on a far-reaching reform programme to create a competitive market structure with separate generation assets and distribution firms to be privatised. As such, motivations by the Turkish government to engage in power sector reform and to open its power sector to competition were driven by the high cost of energy supply, the high unreliability of the system and the significant underinvestment in energy.

During the course of this liberalisation process, a new legal framework for the Turkish electricity market was introduced by the enactment of

Turkey has also a large potential for renewable energy resources and the Turkish government policy pays special attention to the generation of electricity through renewable energy.
the EML in 2013. The Electricity Market Licensing Regulation was also ratified in 2013 to regulate in detail the aspects of the EML.

Turkey has also a large potential for renewable energy resources and the Turkish government policy pays special attention to the generation of electricity through renewable energy. In 2005, the Renewable Energy Law was enacted introducing certain advantages such as floor prices and priority of dispatch.

The regulatory framework for renewable energy was strengthened in January 2011 with the amendments to the Renewable Energy Law. Feed-in tariffs have been introduced for each type of generating technology. Please refer to Section III.7 for more details on the current regulatory environment on renewable energy.

Currently, the main types of market activities, which can only be carried out through obtaining a licence from EMRA are generation activities, transmission and distribution services, and electricity trading and market operation. While the generation, trading and distribution activities are carried out by private entities, the transmission and market operation are still under the monopoly of the state.

Pre-Licensing Regime

The EML introduced the ‘preliminary licensing regime’ that did not exist in the previous regime. Formerly, the generation licence contained three periods of time under which the licence holder had to fulfil certain obligations. The EML decomposed the ‘pre-construction period’ from the generation licence and redefined it as the preliminary licence. The pre-licensing regime is regulated and structured in detail under the Electricity Market Licensing Regulation. According to the relevant legislation, a preliminary licence will be granted to those companies intending to carry out generation activities.

Completion of the Pre-Investment. During the term of the preliminary licence, the preliminary licence holder must obtain the necessary permits, approvals and licences and other similar rights, including the ownership or usufruct right of the lands on which the generation facility will be constructed. For hydroelectric power plants, an expropriation decision for water storage areas should be taken. The preliminary licence holder is required to complete the acts enumerated under the Electricity Market Licensing Regulation within the term of the preliminary licence.

Term and Termination of the Preliminary Licence. The term of the preliminary licence cannot be longer than 36 months except for

Unlicensed Electricity Generation

The opportunity to generate electricity without having to obtain a licence or incorporating a company was first introduced to the Turkish system in 2007. However, due to the lack of a detailed secondary legislation regulating the procedures and principles for unlicensed electricity generation, the first application for unlicensed electricity generation in Turkey was only made in 2012. The enactment of the EML followed by the issuance of the new Regulation on Unlicensed Electricity Generation gave the investors a clear picture of how to engage in unlicensed electricity generation activities in Turkey.

According to the 2018 April monthly sector report published by EMRA, total installed power capacity of unlicensed electricity generation facilities in Turkey is 4,636.83 MW, which corresponds to less than one per cent of total installed power capacity in Turkey. Solar energy (photovoltaic) constitutes more than 94.71% of total unlicensed electricity generation in Turkey, whereas the sum of unlicensed electricity generation based on wind energy and hydropower constitute 1.17% of total unlicensed generation.

The EML lists the electricity generation facilities that can be constructed / operated without obtaining a licence or incorporating a company as follows:

Generation facilities based on the renewable energy resources having a maximum installed power capacity of 1 MW;

Emergency systems and generation facilities not having a connection with the transmission or distribution system;

Solid waste facilities owned by municipalities and generation facilities established for the purpose of disposal of muds from treatment facilities;

Micro generation facilities and cogeneration facilities determined by the MENR; and

Generation facilities based on renewable energy resources, which use all generated electricity without giving any energy to the transmission or the distribution system.

Although the main purpose of unlicensed electricity generation is to provide the electricity subscribers with the opportunity to produce their own electricity for their own consumption, the surplus electricity can be sold by the users. Surplus electricity (i.e. the amount of electricity generated exceeding the actual need of the related consumption facility) generated in unlicensed generation facilities based on renewable energy resources will be utilized by the authorized supply company in the Renewable Energy Resource Support Mechanism. However, the total installed power capacity of the unlicensed electricity generation facility cannot exceed 30 times of the consumption facility’s connection capacity determined under the system connection agreement.

As in the licensing regime, there are certain share transfer and capacity restrictions for the unlicensed electricity generation companies as well.
term extensions granted as a result of force majeure events. The terms of preliminary licences for different energy resources are currently determined by a resolution of the EMRA Board.

The preliminary licence will cease to be effective upon the expiry of its term or upon the request or bankruptcy of its holder. During the term of the preliminary licence, any change in the direct or indirect shareholding of the preliminary licence holder, or the occurrence of a share transfer or any transaction resulting in a share transfer (subject to certain exceptions) will lead to the cancellation of the licence.

The preliminary licence holder will not be granted a generation licence unless it proves that it has fulfilled the required obligations within the preliminary licence term.

**Wind and Solar Applications.** Unlike other types of generation facilities, preliminary licence applications for wind and solar projects are received during a certain period of time each year and a wind or solar energy measurement report covering a certain period within the last five years will have to be provided to EMRA amongst other required documents. In case there are multiple licence applications for the same connection point or zone, TEİAŞ carries out a competition to determine the applicant that will be entitled to connect to the grid. The applicant offering the lowest price equal or below the feed-in tariffs determined in the Renewable Energy Law (i.e. 7.3 USD Cent/kWh for wind and 13.3 USD Cent/kWh for solar power plants). The winner applicant may also be entitled to benefit from further incentives set out in the Renewable Energy Law where the local components are used. The competition regulation sets out the principles and procedures regarding the competition to be held by TEİAŞ based on a reverse auction.

In addition to the above, the winning bidders of YEKA (*Renewable Energy Resource Zones*) tenders (as further explained below in Section III.7) must apply to EMRA for preliminary licences after executing the YEKA agreement.

**Licensing Regime**

There are five types of licences granted by EMRA for specific electricity market activities, namely, generation, supply, transmission, distribution and market operation.

There are five types of licences granted by EMRA for specific electricity market activities, namely, generation, supply, transmission, distribution and market operation.

Licences include conditions in relation to the term of the licence, which can vary between ten to 49 years, details in prices and tariffs, fees to be paid to EMRA, and the holders’ rights and obligations.

**Transfer of Licences.** According to the Electricity Market Licensing Regulation, licences may, under no condition, be transferred. However, if the banks and/or financial institutions provide limited or irrevocable project financing to the related licence holder within the scope of their loan agreements, the related banks and/or finance institutions may apply to EMRA to grant a new licence to another entity provided that such legal entity agrees to take on all of the obligations arising under the relevant licence. The legal entity proposed by such institutions shall be granted the related licence on the condition to comply with the obligations under the Electricity Market Licensing Regulation. There is no time restriction with respect to the transfer of licence under this Article such as prohibition of transfer during or after the construction or operation phase.

**Restrictions**

**Market Restrictions.** Foreign investors may invest in the Turkish energy market by participating to, or establishing, a Turkish legal entity holding a licence. There are no indigenous shareholder requirements for licence-holding entities, and foreign investors may own 100% of the shares in a licence holding company; however, there are some market restrictions applicable. First, the total market share of generation facilities operated by an individual private-sector generation company and their affiliates may
not exceed 20% of the published figure for the total installed capacity in Turkey in the previous year. Second, the total electricity to be purchased by supply licence holders from electricity generation and import licence holders, may not exceed 20% of the electricity consumed in the market in the previous year. Additionally, the amount of the electricity supplied by those companies to end users may, again, not exceed 20% of the electricity consumed in the market in the previous year.

Further, legal entities carrying out electricity market activities cannot have direct shareholding in a distribution company and vice versa. It should be noted that the EML makes reference to a ‘direct shareholding’ rather than ‘control’.

The law further prohibits distribution companies from involving in any activity other than distribution activities. Under the same provision, it is provided that the rules and procedures allowing a distribution company to carry out an activity outside the market, which would increase efficiency in its distribution activities, shall be determined by secondary legislation.

**Share Transfer Restrictions.** The preliminary licence holders are not allowed to make any direct or indirect change in their shareholding structure during the term of their preliminary licence except where such change is due to bankruptcy or inheritance or falls under the exceptions enumerated under the Electricity Market Licensing Regulation.

The direct or indirect acquisition of more than 10% of shares of a licence-holder company (or 5% in publicly offered companies) or share transfers resulting in the change of control in the licence-holder company is subject to EMRA’s approval. In any case, any change in the shareholding structure of a licensed company, though not required to obtain EMRA’s approval based on the above-mentioned criterion, will have to be notified to EMRA.

**Tariffs**

EMRA creates the principles and procedures for setting certain tariffs, and it reviews and approves the methodologies and tariffs submitted by certain other authorities. The relevant legislation sets out the criteria for preparation of tariff proposals by TEİAŞ, EUAŞ and other entities. Generally, tariffs must be cost-effective and are created ex ante according to a pre-defined methodology. Once they have been approved they are published in the Official Gazette and on EMRA’s website to ensure transparency. Broadly speaking, there are seven categories of tariffs: connection, transmission, distribution, wholesale price for EUAŞ, retail supply, market operation and end user supply price. Electricity and/or capacity generated by generation companies are sold under private law bilateral agreements. The sale price to be applied by generation companies is not within the scope of the Electricity Market Tariffs Regulation and, therefore, is not subject to EMRA’s approval.

Also, as described below, Turkey has passed laws with respect to renewable energy, which provide incentives and benefits for renewable energy projects, including feed-in tariffs.

**Electricity Sale Markets**

The legislation provides the framework for the establishment of a market relying primarily on physical bilateral contracts between market participants and the balancing (day-ahead, intra-day and real-time) and settlement mechanism. The BSR describes the market parameters. Under the BSR, the balancing of the system is conducted by EPİAŞ and TEİAŞ under the National Load and Dispatch Centre. EPİAŞ also has the Market Management System which handles monetary transactions, and the market players participate in this market through a market participation agreement. EPİAŞ, which carries out wholesale activities, is also responsible for the operation of organized wholesale markets and financial settlement of the activities realized in such markets.

The legal basis for the formation of an energy stock market is also provided under the EML. The incorporation of EPİAŞ was the primary step for the establishment of an electricity stock market, which made the electricity prices more predictable. The markets on which standardized electricity agreements are accepted as capital market instruments and other electricity based derivative products are being publicly traded and operated by Borsa İstanbul.

Finally, import and export activities may be carried out within the electricity market by generation and/or supply licence holders, through EMRA approval after the positive opinion of the MENR is obtained, provided that interconnection is established between the import/export countries and Turkey. While import activities may be carried out by supply licence holders only, the generation licence holders may also carry out export activities in addition to the supply companies. Additionally, the generation companies situated at the border cities may export electricity via direct line without using national transmission/distribution lines. Turkey already established grid connection with its neighbours and the electricity trade is being realized through public auctions. The Turkish national dispatch...
system was connected to the ENTSO-E in September 2010. After the successful completion of the ENTSO-E synchronous parallel trials through non-commercial transit of electricity, Turkey commenced limited commercial electricity trade with Bulgaria and Greece in July 2011 within the trial operation phase, which was announced by ENTSO-E to have been successfully completed. The necessary arrangements in order to have permanent synchronous parallels have been completed by Turkey. Following the full compliance with ENTSO-E related standards and responsibilities, the long term agreement ensuring permanent connection to the ENTSO-E was executed on 15 April 2015. Turkey also became the first and sole observer member state of ENTSO-E in January 2016.

Renewable Energy

As mentioned before, Turkey’s geographical and climate conditions are well suited for the continued growth of this sector with the generation of wind, solar and geothermal power.

The Turkish renewable energy sector has been growing since 2005 when Turkey passed the Renewable Energy Law. The Renewable Energy Law defines renewable energy resources as (i) those using wind, solar, geothermal, wave, tidal, drift, biomass, biogas resources; (ii) river or canal type hydroelectric generation facilities; and (iii) hydroelectric generation facilities with a reservoir area below 15 square kilometres.

There are certain incentives and feed-in tariffs applied for the electricity generation from the renewable energy resources which are determined by law.

YEKA (Renewable Energy Resource Zones). With the enactment of Regulation on Renewable Energy Resource Zones in 2016, a new model has been introduced for the development of large scale renewable energy projects. The subject matter of the YEKA tenders mainly consists of three elements: (i) establishment of a manufacturing facility; (ii) the construction and operation of power plants with a total installed capacity of 1,000 MW; and (iii) the establishment of a research and development centre.

Renewable energy resource zones are designated either directly by the MENR following the relevant preparatory studies or based on a competition for capacity allocation.

In competition based designation, the MENR first holds a competition and collect bids from investors for specific connection zones and capacities. The winner is awarded the right to execute a renewable energy zone usage right agreement with the MENR for that specific capacity. In this method, designating project sites and obtaining all relevant permits are the investor’s responsibility.

The competition will be a reverse auction, with the ceiling purchase price (cent/kWh) to be determined by the MENR based on the feed-in tariffs under the Renewable Energy Law. Winners of the competition must apply to EMRA for a preliminary licence after executing the renewable energy zone usage right agreement.

The electricity generated in the generation facilities will be purchased for a pre-determined price (i.e. the winning bid in the competition) and for a term to be specified under the competition specifications.

Renewable Energy Support Mechanism (YEKDEM). An optional feed-in tariff is also provided for the electricity generated from renewable energy resources within the scope of the RER Support.

Accordingly, in order to benefit from the RER Support, legal entities holding renewable energy generation licences and renewable energy resource certificate should apply to EMRA by 31 October of the year preceding the year they wish to benefit from the feed-in tariffs. Please note that this system operates on annual basis and once entered to the RER Support mechanism, the licence holder cannot leave the system in the relevant year.

With the amendments introduced to the RER Regulation in April 2016, Turkey’s renewable energy system is now based on a mixture of feed-in tariffs and feed-in premiums. In other words, electricity generated from renewable energy resources will be sold on the electricity spot market and participants to the RER Support mechanism may receive a premium in addition to the market price of their electricity generation, provided that they accurately determine the electricity to be generated from the power plants.

The Renewable Energy Law provides different feed-in tariffs (fixed minimum electricity sale prices) depending on the type of the renewable energy projects as follows:

<table>
<thead>
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<th>Energy Source</th>
<th>Feed-in Tariff</th>
</tr>
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<td>Wind</td>
<td>0.10 cent/kWh</td>
</tr>
<tr>
<td>Solar</td>
<td>0.15 cent/kWh</td>
</tr>
<tr>
<td>Geothermal</td>
<td>0.20 cent/kWh</td>
</tr>
<tr>
<td>Wave, Tidal, Drift</td>
<td>0.25 cent/kWh</td>
</tr>
<tr>
<td>Biomass, Biogas</td>
<td>0.30 cent/kWh</td>
</tr>
<tr>
<td>Wave, Tidal, Drift</td>
<td>0.35 cent/kWh</td>
</tr>
<tr>
<td>Hydroelectric</td>
<td>0.40 cent/kWh</td>
</tr>
</tbody>
</table>

There are certain incentives and feed-in tariffs applied for the electricity generation from the renewable energy resources which are determined by law.
I. Overview of the Turkish Energy Market

II. Functioning of the Turkish Energy Market

III. Turkish Electricity Market

IV. Turkish Natural Gas Market

V. Turkish Petroleum Markets

VI. Turkish LPG Market

VII. Glossary

The RER Support mechanism also features further incentives for licence holders, which use locally produced mechanical and/or electro-mechanical equipment or components in renewable energy facilities. The prices mentioned in the Renewable Energy Law for the locally produced equipment shall be added to the above feed-in prices.

Nuclear Energy

Turkey’s total import bill in 2017 amounted to USD 233.79 billion, out of which energy accounted for 15.9%. Turkstat’s annual data for 2017 showed that the country paid USD 37.19 billion for its energy imports last year compared to USD 27.16 billion in 2016. Turkey imports 75.21% of the energy it uses. In order to decrease its dependency on energy import and secure its own energy supply, Turkey strategically put the nuclear power on the upfront as a key aspect of the country’s aim for economic growth.

In May 2010, Turkey and Russia signed an intergovernmental agreement for the first NPP to be constructed and operated at the Akkuyu site; with a total of four units and installed capacity of 4,800 MW. Turkey is also planning the construction of second NPP at the Sinop site. To achieve this, the Bilateral Cooperation Agreement between Turkey and Japan on the Development of a Nuclear Power Plant was ratified by the Parliament and published in the Official Gazette dated 10 April 2015. The cooperation agreement provides for, among other things, the design, development, construction, financing, insurance, commissioning, operation, maintenance and repair of an NPP to be constructed in Sinop, Turkey.

A third NPP is planned to be constructed in Kirklareli; however, the details of this project are yet to be determined.

Along with the plans to construct NPPs, Turkey is in the process of enhancing its human resources and nuclear knowledge capacity and updating its existing nuclear legislation by taking into consideration the latest safety standards series issued by the IAEA. The company wishing to construct and operate an NPP needs to apply to Nuclear Regulating Authority (NRA) (formerly TAEK) by submitting required documents describing the nature of the installation to be constructed and showing its technical and financial capabilities. Once the initial application is accepted by NRA, the licensing process will start. According to the relevant legislation, the licensing process is completed in three phases: (i) site licence; (ii) construction licence; and (iii) operation licence. In addition to these licences, an electricity generation licence will also need to be issued for the NPP to generate electricity. For NPPs, the site licence granted by NRA needs to be submitted to apply for a preliminary licence.

Coal

Coal forms a major part of Turkey’s national energy resource and historically has been the primary thermal energy source. However, it has now been overtaken by natural gas.

In Turkey, most coal resources consist of lignite with a relatively small amount of hard coal. Turkey has total hard coal (anthracite and bituminous coal) reserves of approximately 1.3 billion tonnes and lignite reserves of around 11.5 billion tonnes.

In Turkey, most coal resources consist of lignite with a relatively small amount of hard coal. Turkey has total hard coal (anthracite and bituminous coal) reserves of approximately 1.3 billion tonnes and lignite reserves of around 11.5 billion tonnes.

Coal; especially lignite; has been a major source of fuel for electricity generation in Turkey. The installed power capacity of lignite plants and hard coal plants are 8,140 MW and 3,616 MW, respectively. The domestic hard coal and lignite power plants are located at the pithead of the mines.

Import dependency is a concern for supply security and the Turkish government announced its decision to increase the share of indigenous sources in electricity generation. One of the major indigenous sources is lignite. In order to promote local coal, the Turkish government amended the EML and launched further incentives for generation of electricity from local coal.

• 7.3 cent/kWh for hydroelectric power plants;
• 7.3 cent/kWh for wind power plants;
• 10.5 cent/kWh for geothermal power plants;
• 13.3 cent/kWh for biomass power plants; and
• 13.3 cent/kWh for solar power plants.

Above mentioned feed-in tariffs will be applicable for the legal entities holding generation licence for a certain period, to be determined by the Council of Ministers, and be valid for a period of ten years from the operation date.

The RER Support mechanism also features further incentives for licence holders, which use locally produced mechanical and/or electro-mechanical equipment or components in renewable energy facilities. The prices mentioned in the Renewable Energy Law for the locally produced equipment shall be added to the above feed-in prices.
Natural gas market activities in Turkey were under the quasi-monopoly of BOTAŞ for decades. In 2001, the NGM Law was enacted to establish a more liberalized and transparent natural gas market framework by terminating most of the monopoly rights of BOTAŞ. The enactment of the NGM Law aimed to create a competitive market and to harmonize the domestic legal framework with that of the European Union. Accordingly, the NGM Law introduced a new licensing regime for each of the import, export, transmission, storage, wholesale and distribution activities in the natural gas market, by paving the way for private investors to enter into the natural gas market.

In addition to the NGM Law, EMRA issues secondary legislation (e.g. regulation, communiqué) and adopts decisions for the purpose of regulating and supervising the natural gas market in Turkey. For instance, the operation of the transmission network is governed by the detailed and technical provisions of the natural gas grid operation principles, also referred to as BOTAŞ transmission network operation principles or ŞİD, as approved by EMRA.

Unbundling of BOTAŞ in the natural gas market did not occur until 2003. After the promulgation of the NGM Law in 2001, EMRA started to launch tenders to open the distribution segment of Turkey to local businesses.

With its consumption of 53,857,136,920.39 Sm³ of natural gas in 2017, Turkey has one of the biggest natural gas markets in Europe.
players other than BOTAŞ. The tenders run by EMRA from 2003 until 2017 has led the number of distribution companies from six to 72. The liberalisation of the wholesale market, on the other hand, has started only in 2007 where private natural gas importing companies and spot LNG importers entered in the market. Private companies started to import natural gas as a result of contracts release of BOTAŞ only in 2011; currently companies other than BOTAŞ hold 17 import licences in total.

With its consumption of 53,857,136,920.39 Sm³ of natural gas in 2017, Turkey has one of the biggest natural gas markets in Europe. Majority of the natural gas is consumed by the conversion/cycling sectors, followed by residential consumption and industry and service sectors. Approximately 99% of the natural gas demand of Turkey is met by imports from Russia (~52%), Iran (~17%) and Azerbaijan (~12%). In the past, Turkey suffered from supply deficits due to natural gas supply disruptions between Ukraine and Russia in the late 2000s, several cutbacks by Iran (second largest gas exporter to Turkey) due to technical issues and lack of sufficient storage capacity in the country.

Table 1 - Natural gas consumption in Turkey by sector (in million Sm³)

<table>
<thead>
<tr>
<th>Sector</th>
<th>2016</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conversion / cycle</td>
<td>16,736.28</td>
<td>20,536.52</td>
</tr>
<tr>
<td>Energy</td>
<td>1,756.54</td>
<td>2,056.51</td>
</tr>
<tr>
<td>Transportation</td>
<td>456.05</td>
<td>529.42</td>
</tr>
<tr>
<td>Industrial</td>
<td>12,600.34</td>
<td>13,372.13</td>
</tr>
<tr>
<td>Service</td>
<td>3,123.33</td>
<td>3,725.76</td>
</tr>
<tr>
<td>Residential</td>
<td>11,701.25</td>
<td>13,514.94</td>
</tr>
<tr>
<td>Other</td>
<td>106.99</td>
<td>121.86</td>
</tr>
<tr>
<td>Total</td>
<td>46,480.78</td>
<td>53,857.14</td>
</tr>
</tbody>
</table>

Source – EMRA Natural Gas Market Annual Report for 2017

Considering Turkey’s significantly low domestic gas production is less than 1% of the total consumption, the need to prevent seasonal inconsistencies of supply and demand, and occasional supply interruptions, the government has deemed it necessary to increase the natural gas storage capacity available.

Market Access

A legal entity may freely engage in natural gas market activities on the condition to fulfil the conditions set forth under the applicable legislation and obtain the relevant licence or certification from EMRA. Foreign investors can freely access the natural gas market and obtain a relevant licence and/or certification as well, provided that they establish a legal entity in Turkey. There is no restriction on the ownership of shares and a foreign investor may hold up to 100% of the shares of the licence holder. If the foreign investor will acquire the shares of a licence holder entity, the transfer of shares may be subject to the prior approval of EMRA.

Market participants at all levels of the value chain in the Turkish natural gas market can expect to be subject to an antitrust analysis by the Competition Authority in connection with their contractual arrangements and activities. To conduct such antitrust analysis in this highly regulated market, the Competition Authority relies on its Natural Gas Market Study, which was published in 2012 and which provides a thorough analysis of the market, the phases of the liberalisation process, a diagnosis of sector-specific issues and suggestions to address them.

Licensing Regime

The principles and procedures related to the licences to be granted to legal entities that wish to engage in natural gas market activities are set forth in the NGM Licensing Regulation. The NGM Licensing Regulation governs the rules applicable to issuance, cancellation, termination, renewal and amendment of licences as well as the rights and obligations of the licence holders.

Legal entities which intend to engage in natural gas market activities must obtain a licence from EMRA for each activity.

Legal entities which intend to engage in natural gas market activities must obtain a licence from EMRA for each activity. Licences include conditions in relation to the term of the licence, which vary between ten to 30 years, details in prices and tariffs, fees to be paid to EMRA and the licence holders’ rights and obligations. Types of licences that are granted by EMRA are related to import, transmission, storage, wholesale, export, distribution, and transmission of CNG.

Pursuant to the NGM Licensing Regulation, transfer of licences is strictly prohibited except for transfers resulting from universal succession due to merger of the licence holder.
Further, banks and/or finance institutions providing limited or irrevocable project financing to a licence holder may request from EMRA, within the scope of their loan agreements, that another legal entity be granted the relevant licence on the condition that it assumes all obligations of the related licence holder within the framework of the provisions of the NGM Licensing Regulation (i.e. step-in right).

**Market Activities**

The natural gas market activities as determined under the NGM Law are briefly summarised below. However, the production of natural gas is not considered as a natural gas market activity and is subject to the provisions of the Turkish Petroleum Law. Accordingly it is not EMRA, but GDPA who is the competent body for the issuance of respective exploration and operation licences for natural gas exploration and production operations.

**Import.** Import licence holders import natural gas in LNG or gaseous form for the purpose of (i) selling it to wholesale companies, eligible consumers or export companies, or (ii) directly exporting it. Each import licence authorizes its holder for the respective import connection; for every new connection a separate licence should be obtained.

The annual quantity of natural gas which any import company has imported under one or more import licences shall not exceed 20% of the total estimated national consumption in that calendar year as determined and announced by EMRA in the month of January every year.

Under the NGM Law, EMRA is empowered to determine the obligation of the importers to store natural gas in national storage facilities within five years of their licence term. EMRA may increase the storage obligation of importers up to 20% of the imported natural gas on the condition that there is enough underground natural gas storage capacity available in Turkey for all importers.

**Table 2 - Natural gas imports of Turkey by country (in million Sm³)**

<table>
<thead>
<tr>
<th>Country</th>
<th>Russia</th>
<th>Iran</th>
<th>Azerbaijan</th>
<th>Algeria</th>
<th>Nigeria</th>
<th>Others (in LNG)</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Year</td>
<td>2017</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source – EMRA Natural Gas Market Annual Report for 2017

**Transmission.** BOTAŞ is currently the transmission licence holder of the national grid, responsible for performance of services required for ensuring natural gas flow and operation of the national natural gas grid. In addition, the transmission licence holder is obligated to take all required measures to ensure transmission of natural gas through pipelines under its responsibility in a secure, effective and cost-efficient manner.

Transmission licence holder must, to the extent of the availability of the system, connect any user who wishes to be connected to the system in accordance with the criteria defined by EMRA.

For transmission of LNG, a separate transmission (LNG) licence must be obtained by the respective entity to fill, transport and deliver LNG.

**Wholesale.** Wholesale companies can purchase natural gas from the production companies, import companies or other wholesale companies. Wholesale companies may sell natural gas so purchased to export companies, eligible consumers, CNG supply companies, importers, distributors and other wholesalers throughout Turkey.

The wholesale companies must reach the required supply and storage capacity and must also take necessary storage measurements within the five year period following the date of the licence.

Natural gas market participants shall balance their quantities of natural gas incoming into the gas transmission system with the ones taken out of the system. Where a market participant causes a gas shortage in the system, it shall be subject to an imbalance payment, which may be considered as a penalty amount issued by the system operator.

As of 1 September 2018, by way of the establishment of the organized wholesale exchange market (i.e. a spot market), EPİAŞ, the energy exchange operator of Turkey, started operating the natural gas trade, as a way forward for the transparency and development of the natural gas market.

**Distribution.** As of end 2017, 72 distribution companies supply natural gas to 78 cities (out of 81) in Turkey. Natural gas distribution companies shall ensure that consumers in their respective distribution region have access to the distribution network in accordance with the principles and procedures set forth in the relevant regulations and communiqués issued by EMRA and provide services related to the sale and delivery of natural gas to such consumers. Distribution companies who obtained their licences through tendering processes must also comply with the terms and conditions of the tenders in addition to their licence terms. In addition to its supervision and guidance, EMRA conducts regular inspections on distribution companies through institutions accredited to that purpose. Distribution companies shall procure natural gas transmission and
ancillary services to the eligible consumers and their suppliers upon request. A distribution licence holder may purchase at most 50% of the natural gas it will distribute within a calendar year from the same legal entity, unless otherwise decided by EMRA.

Finally, within the powers vested in it, EMRA evaluates each complaint received from (residential) consumers and enforces the provisions of the natural gas market consumer services legislation. From the statistics provided by EMRA, we understand that the regulatory body receives complaints mainly in relation to interruption of natural gas, natural gas counters, invoicing and consumer services.

Storage. The NGM Law defines storage activity as storage of natural gas as LNG or gas, in order to meet the daily and seasonal changes and the deficit arising from lessening or stoppage of natural gas supply.

In order to carry out natural gas storage activities, storage licence applicants must
(i) have technical and economic sufficiency;
(ii) undertake to operate its storage facility to ensure that the system is operated in a coordinated and secure manner; and
(iii) undertake to provide neutral and equal storage services provided that the system is suitable.

The UPP Regulation lays out the procedures and principles that must be included in the usage procedures and principles, or UPPs, to be prepared and published by storage companies. UPPs include detailed information on capacity reservation, capacity reservation calendar, capacity reservation duration, storage fees and payment calendar, the procedure of amendments, among others.

Storage companies offer their draft UPP for opinion on its website and submit the finalized UPP for the approval of EMRA before its operation date set forth under the storage licence. If deemed appropriate, EMRA has the right to amend the UPP in accordance with the relevant legislation by taking the interested parties prior opinion. Amendments to the UPP are subject to the same procedure.

According to MENR’s Strategic Plan 2015-2019 the natural gas storage capacity will be increased to meet at least 10% of the annual gas consumption figures by 2019 and even up to 20% in the longer run (5.4 billion cubic metres by 2023). Together with the commissioning of the first phase of the Salt Lake Natural Gas Underground Storage Facility in 2017, the total underground storage capacity has risen approximately to 3.2 billion cubic metres by the end of 2017.

Export. Export licence holders may purchase natural gas from production companies, wholesale companies or import companies, and export natural gas in accordance with the terms of their licences.

In 2017, BOT AŞ exported 630.67 million Sm3 of natural gas to Greece.

CNG. Based on the provisions of their licence, CNG licence holders may, throughout Turkey, perform the activities of compressing, filling into pressurized containers and selling of natural gas, transportation of CNG filled in pressurized containers by means of special vehicles between cities, and selling of CNG by reducing its pressure at places where the transmission or distribution network does not exist.

CNG licence holders shall be responsible for planning, designing, construction, procurement and operation of CNG filling, loading and unloading facilities in accordance with the principles, procedures and standards set forth in the legislation.

Table 3 – CNG sale volumes by years (in million Sm3)

<table>
<thead>
<tr>
<th>Year</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sale Volume</td>
<td>55.5</td>
<td>54.9</td>
<td>76.6</td>
<td>120.09</td>
<td>178.93</td>
<td>191.78</td>
<td>222.09</td>
</tr>
</tbody>
</table>

Source – EMRA Natural Gas Market Annual Report for 2015 and 2017

Restrictions

Market restrictions. Natural gas market licence holders are not allowed to create an encumbrance, mortgage or pledge on transmission, distribution and storage facilities without EMRA’s approval.
No legal entity, except for the production companies in Turkey (which are governed by the Turkish Petroleum Law), may sell more than 20% of the national natural gas consumption forecast determined by EMRA for the relevant year.

Any legal entity performing activities in the natural gas market may participate in (i.e. acquire the ownership of the shares of) only one of the legal entities performing activities in a field other than its own field of activity provided however that it does not directly or indirectly (i) obtain the majority of the capital or commercial assets of the legal entity it has participated in, or (ii) have the right to use the majority of voting rights, the right to assign the majority of the members of the audit board, board of directors or the bodies authorised to represent the company, or the rights regarding the management of business of such company.

Licence holders may not engage in any activity outside the natural gas market, other than those stated in their respective licences as activities that may be carried out without prior approval of EMRA. In issuing such approval, EMRA takes into consideration the type of the licence requested, the nature of the non-market activity and its relation with the energy market.

Legal entities may engage in more than one activity in the market upon obtaining a separate licence for each market activity and for each facility where such activities shall be carried out. However, legal entities engaged in natural gas wholesale activity may not perform transmission or distribution activities nor participate in companies engaged in those activities.

If a legal entity holds more than one licence for natural gas market activities or it has more than one facility to conduct the same activity, such legal entity is required to keep separate accounts and records for each activity or facility, and it is prohibited to cross subsidise between accounts.

Share Transfer Restrictions. The direct or indirect transfer of shares representing 10% (5% for publicly offered companies) or more of the share capital of a licence holder to an individual or legal entity that results in a shareholder to hold 10% or more and/or less than 10% of the share capital of the licence holder company is subject to the approval of EMRA.

There is an exception for storage licence holders, according to which any direct or indirect transfer of shares representing 10% (5% for publicly offered companies) of the share capital of the licence holder will be subject to the approval of EMRA, regardless of whether or not this share transfer results in a shareholder to hold more or less than 10% of shares in the licence holder.

The above rules are applicable in cases of acquisition of voting rights or establishment pledges over the shares of the licence holder entity.

Mergers involving natural gas market licence holders, issuance of privileged shares and issuance of usufruct certificates are also subject to the approval of EMRA.

The tariffs addressed in the NGM Tariffs Regulation are subject to the approval of EMRA.

Tariffs
The aim of the NGM Tariffs Regulation is to determine the principles and procedures concerning preparation, review, evaluation, determination, approval, announcement and revision of tariffs applicable to natural gas market activities.

The tariffs addressed in the NGM Tariffs Regulation are subject to the approval of EMRA. Terms and conditions of the tariffs approved by EMRA shall be binding on all individuals and legal entities subject to such tariffs. The NGM Tariffs Regulation covers the principles and procedures concerning (i) connection, (ii) transmission and dispatch control, (iii) storage, (iv) wholesale, and (v) retail sale tariffs.

EMRA determines the tariffs by taking into account the financial records of the relevant legal entities, their tariff proposals and the market essentials, which shall then be approved by EMRA Board. EMRA may revise tariff principles and limits taking inflation and other related matters into account.

Certification
According to the NGM Law, all construction works and services in relation to natural gas market activities must be performed by certificate holders. Certificates concerning internal installations and service lines are granted by public or private companies authorized by EMRA and local distribution companies.

Companies intending to conduct feasibility, project, surveying, consultancy, control and audit studies and construction, service, maintenance and repair works must also obtain a certificate from EMRA. The Natural Gas Market Certificate Regulation sets forth the principles and procedures regarding the certificates to be granted to individuals or legal entities.
Due to its geopolitical position between the petroleum sourcing regions (Middle East, Caspian Region and Central Asia) and consuming regions (Europe), Turkey has a strategic importance for the transit passage of oil and petroleum products. In addition, Turkey is a major consumer in the region with a rapidly increasing demand.

Turkey’s demand is mostly met from imported petroleum. According to EMRA’s statistics, 42,653,421 tonnes of petroleum products were imported in 2017. Turkey mostly imports petroleum products from Iran (16.94%), the Russian Federation (18.87%), Iraq (16.55%), and India (8.23%). Crude oil and diesel oil form more than 90% of Turkey’s petroleum product imports. On the other hand, in 2017, Turkey has consumed 28.2 million tonnes of crude oil along with 26.5 million tonnes of other oil products. Turkey met only 7% of its oil requirements from domestic production (according to the data provided by MENR). Domestic production is therefore insufficient to cover Turkey’s domestic energy requirement.

Turkey exported 10,081,991 tonnes of petroleum products in 2017. Most of Turkey’s exports were to the United Arab Emirates (13.55%), Malta (8.10%) Egypt (7.87%), Singapore (7.10%), and more than 89% of Turkey’s exports are aviation fuels, maritime fuels and gasoline.
Due to its geopolitical position between the petroleum sourcing regions and consuming regions, Turkey has a strategic importance for the transit passage of oil and petroleum products.

The main legislative source of the petroleum market is the Petroleum Market Law. The purpose of the Petroleum Market Law is to assure transparency, equality and consistency of market activities with respect to offering of petroleum products to the market, either in the form of crude oil or processed oil, in a secure and an economically competitive environment.

The Petroleum Market Law lays out the framework for market activities that are subject to licensing by EMRA and identifies the fundamental rights and obligations of licence holders. The principles for price creation in the markets, obtaining land usage rights, supervision of market players, obligations of licence holders, such as usage of national markers and the national stock obligation, and administrative sanctions are also regulated under the Petroleum Market Law.

In order to regulate certain concepts provided under the Petroleum Market Law in a detailed manner, EMRA and the MENR have issued several other secondary legislation, such as the Petroleum Market Licensing Regulation, the Regulation on Application of National Marker and the Regulation on Pricing in the Petroleum Market. Further, EMRA has published numerous communiqués with respect to technical standards for each type of fuel product. Products that are non-compliant with these specifications cannot be put into use in any market activity. In general, the failure to comply with the applicable legislation may result in certain sanctions being imposed by EMRA, such as administrative monetary fines, suspension of market activities and supply of products, sealing of facilities and cancellation of the relevant licence.

Petroleum product sales to end users may be subject to the provisions of the Consumer Protection Law and relevant consumer protection legislation. In the event of the sale of a defective product, the consumers may use their rights arising from the Consumer Protection Law against the seller or importer.

Licensing Regime

Petroleum market activities that are subject to licensing by EMRA are (i) transportation, (ii) lubricant production, (iii) bunker fuel delivery, (iv) distribution, (v) transmission, (vi) dealership, (vii) storage, (viii) refinery, (ix) processing, and (x) eligible consumer activities.

All licence holders are obliged to comply with the relevant commercial and technical legislation, take necessary measures to prevent harming the environment, take out insurance policies with respect to their facilities and/or activities that fall within the scope of compulsory insurance requirement under the relevant legislation, provide EMRA with standard contracts and amendments thereto related to their activities, avoid possessing mobile tankers, equipment or any tool that may be used for obtaining or selling contraband fuel products or counterfeit national marker.

Licences may be granted for up to 49 years, except for lubricant licences, which are granted for ten years.

Distributor Licence. Distribution in the petroleum market is the activity of selling and supplying fuel to eligible consumers and dealers. Provided that the relevant activity is incorporated in the distributor licence, distributors may also engage in storage, transportation, bunker fuel delivery and lubricant production activities.

Distribution licence holders have to set up an audit system in their dealerships to avoid sales of contraband petroleum products and fuel smuggling. This remote automation system allows the distributor to track and supervise every movement of petroleum products in a given dealer. Distributors have to ensure that EMRA has access to their system at all times.

Sales made through dealers operated by the distributor cannot exceed 15% of the total domestic market share of the distributor. Furthermore, a

1 Under the Petroleum Market Law, an eligible consumer is defined as a consumer that has at least 5,000 tonnes of annual consumption of petroleum.
Fuel trade between distributors is subject to the approval of the EMRA Board, whereas crude oil trade is only permitted between refineries and petroleum producers. A distributor’s total market share cannot exceed 45% of the total domestic market. A distributor licence holder has to sell at least 60,000 tonnes of white products (gasoline and diesel oil) in a given year.

Dealership Licence. Dealership licence holders are engaged in the sale of fuel or bunker fuel products to users. Dealership relationship between a distributor and a dealer is constituted through exclusive sales agreement executed between the parties, in which the distributor authorizes the individual or legal entity dealer to supply fuel products to users.

EMRA reserves the right to cancel a dealership licence, if a dealer does not engage in any dealership activity for more than six months without a just cause or existence of a force majeure event.

In case of any change in the ownership of the distributor, the distribution licence holder has to complete all changes with respect to the new corporate identity in its dealership within six months, which consist of distinguishing features such as trademarks, advertisements, logos, letterings, emblems, illustrations and all advertising displays, equipment and other similar materials.

Dealers cannot supply fuel from third party distributors or dealers of such distributors, other than their exclusive distributor.

The distance between dealers on highways connecting cities has to be at least ten kilometres, whereas this distance must be at least one kilometre in urban roads.

Bunker Fuel Delivery Licence. Bunker fuel delivery is the activity of delivering tax-free or taxed fuel and lubricant products to marine vessels in coastal waters and/or adjacent to coastal waters and to domestic or foreign aeroplanes in airports. Besides bunker fuel delivery licence holders, this activity may also be carried out by refinery and distribution licence holders, provided that this activity is incorporated into the respective licences as a sub-heading.

Bunker fuel delivery licence holders have to inform EMRA of the type and amount of fuel products they have brought to customs warehouses for delivery to marine vessels/aeroplanes every three months.

Storage Licence. Storage licence holders provide storage services to satisfy the storage and operational needs of market players in storage facilities operated by them. Information included in storage licences are, among others, the capacity and status (duty-paid or bonded warehouse) of relevant marine vessel or enter into a service agreement (i.e. barge/charter agreements) to fulfil this requirement.
Although the principle is price formation based on free market conditions in Turkey, the Petroleum Market Law entrusts EMRA with the authority and duty to intervene and determine floor/ceiling prices.

Storage tanks, workplace opening and operation permit and specification of the relevant national marker (adding) device kept available in the storage facility.

Tariff proposals relating to storage facilities connected to transmission lines can only be effective after the approval of EMRA, whereas tariffs relating to facilities that do not have any connections to transmission lines may be directly put into effect by storage licence holders. Tariffs include information on storage service fees, fees to be applied for taking delivery and delivery of relevant products, which vary depending on the method of delivery (by land, by sea or through pipelines).

A fuel storage licence holder may request from EMRA the termination of its licence on the condition to provide satisfactory evidence that it has fulfilled its contractual obligations against third parties until the termination date.

Transmission Licence. Transmission licence holders can transport petroleum through pipelines and operate transmission facilities. Tariff proposals relating to transmission activities can only be effective after the approval of EMRA.

Price Formation in the Petroleum Market

The enactment of the Petroleum Market Law introduced the partial deregulation of petroleum product prices in Turkey. Accordingly, the Council of Ministers’ decision no. 98/10745 dated 1 July 1998 Pricing of Crude Oil and Petroleum Products, which adopts the principle of ‘automatic pricing of petroleum products’, was abrogated effective as of 1 January 2005 and the principle of ‘price formation based on free market conditions’ was adopted in the petroleum market of Turkey.

Pursuant to the Petroleum Market Law, prices with respect to market activities of refinery and distribution licence holders are to be notified to EMRA by licence holders as ‘ceiling prices’, with due consideration to formation of the closest accessible global free market conditions.2

Although the principle is price formation based on free market conditions in Turkey, the Petroleum Market Law entrusts EMRA with the authority and duty to intervene and determine floor/ceiling prices and take necessary precautionary measures in the petroleum market on a regional or a national basis for two months at most each time, in case there are any arrangements or market practices that have the aim and effect of restricting and disrupting competition and market activities.

Pursuant to the Petroleum Market Law, prices with respect to market activities of refinery and distribution licence holders are to be notified to EMRA by licence holders as ‘ceiling prices’, with due consideration to formation of the closest accessible global free market conditions.2

2 The closest accessible global free market from Turkey’s perspective is Mediterranean Processed Product Market in Geneva, Italy (i.e. CIF Mediterranean). CIF Mediterranean was the reference point of price formation until the adoption of EMRA Board’s decision no. 5291 dated 3 November 2014 ‘Decision on Tracking Prices of Fuel Products’.
The Turkish liquefied petroleum gas (LPG) market is a liberal market regulated and supervised by EMRA. The government encouraged LPG applications on account of its extended benefits as a clean, safe and cheaper alternative to oil and natural gas which has resulted in the growth of the LPG market over the years. LPG avails itself as one of the principal fuel sources for transportation as well as for cooking and heating for households and for industrial activities.

With demand rising to 4.4 million tonnes in 2017, Turkey is a dominant regional LPG consumer across Europe. In addition to the steady growth in demand since 2003, Turkey’s production has also increased by 4.43% in 2017 and reached 1 million tonnes.

The increase in Turkey’s consumption of LPG has been dominated by the autogas sector. Autogas accounts for 40% of the vehicles in Turkey. According to the WLPGA Statistical Review of Global LP Gas Report in 2016, Turkey has the second biggest autogas market in the world and the biggest across Europe. In 2017, the autogas sales had kept its steady rise and increased 47% compared to the previous year.

In recent years EMRA introduced positive changes to the regulatory framework in the LPG sector to simplify and facilitate obtaining a licence to enter into LPG market.

With demand rising to 4.4 million tonnes in 2017, Turkey is a dominant regional LPG consumer across Europe.
Overview of the Turkish Energy Market

I. Functioning of the Turkish Energy Market

II. Turkish Electricity Market

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IV. Turkish Petroleum Markets

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Licensing Regime

LPG market activities that are subject to licensing by EMRA are (i) transportation, (ii) distribution, (iii) autogas dealership, (iv) storage, (v) LPG cylinder production, and (vi) LPG cylinder inspection, repair and maintenance activities. LPG market licences are granted for up to 49 years. All licence holders are obliged to comply with the relevant commercial and technical legislation, take necessary measures to prevent harming the environment, take out insurance policies with respect to their facilities and/or activities that fall within the scope of compulsory insurance requirement under the relevant legislation and provide EMRA with standard contracts and amendments thereto related to their activities.

The amendment of licences and extension of their terms are subject to rules similar to those applicable in the petroleum market.

Distributor Licence. Distribution in the LPG market is the activity of distribution of autogas LPG to stations, supply of bulk LPG to users and distribution and marketing of cylinder LPG. Distributors have to have at least one operational filling station in order to distribute autogas to the market.

The distributor licence includes information on, among others, the location and status (duty-paid or warehouse) of storage facilities, filling facilities and details on the transportation of LPG.

A distributor’s total market share cannot exceed 45% of the total domestic market. There are no vertical market share restrictions in the LPG market as opposed to the petroleum market.

Distributors cannot subsidize or engage in favourable practices for the benefit of their own dealerships compared to their treatment of third party distributors.

Distributor licence holders are permitted to engage in storage, filling and transportation activities, provided that these activities are included as a sub-heading in the distributor licence. Distributor licence holders may also engage in the import and export of LPG.

An LPG distribution licence holder may request from EMRA the termination of its licence on the condition to provide satisfactory evidence that it has fulfilled its contractual obligations against third parties until the termination date.

Autogas Dealership Licence. Autogas dealership licence holders are engaged in the sale of fuel or LPG to users. Dealership relationship between a distributor and an autogas dealer is constituted through exclusive sales agreement executed between the parties, in which the distributor authorizes the individual or legal entity dealer to supply LPG to users.

Dealers cannot supply fuel from third party distributors or dealers of such distributors, other than their exclusive distributor.

The distance between dealers in highways connecting cities has to be at least ten kilometres, whereas this distance will be at least one kilometre in urban roads.

LPG Storage Licence. Storage licence holders provide storage services to satisfy the storage and operational needs of market players in their storage facilities. Information included in storage licences are, among others, the capacity and status (duty-paid or warehouse) of storage tanks, workplace opening and operation permit and the details of LPG pipelines.

An LPG storage licence holder may request from EMRA the termination of its licence on the condition to provide satisfactory evidence that it has fulfilled its contractual obligations against third parties until the termination date.

LPG Cylinder Inspection, Repair and Maintenance Licence. LPG cylinder inspection, repair and maintenance licence holders engage in the activity of inspection, repair and maintenance of LPG cylinders to assure the adequacy and regularity of LPG cylinders with the relevant technical standards.

Tracking of LPG Cylinders

As per the Communiqué on Tracking LPG Cylinders in the Market, all distributors have to set up a tracking system based on 2D barcoding in order to trace LPG cylinders from the filling phase until the cylinders reach to end users. All distributors are responsible for integrating their LPG cylinder dealers into the system.

Under the Communiqué on Tracking LPG Cylinders in the Market, which entered into force on 15 October 2016, distributors have 18 months to set up the tracing system. After 15 April 2018, LPG cylinders that do not have a 2D barcode cannot be filled or sold and filling stations cannot have any LPG cylinders lacking a 2D barcode in their stocks.

Each barcode will include an 11-digit unique number, with the first four-digits representing the distributor and the remaining eight-digits will be the serial number of the LPG cylinder.
Glossary

bcm billion cubic metres
Borsa İstanbul Borsa İstanbul Anonim Şirketi, the sole exchange entity of Turkey
BOTAŞ the Petroleum Transport via Pipeline Company (Boru Hatları ile Petrol Taşıma Anonim Şirketi)
BSR the Electricity Market Balancing and Settlement Regulation published in the Official Gazette no. 27200 dated 14 April 2009
BTE the Baku-Tbilisi-Erzurum Natural Gas Pipeline
cent/kWh cents per kilowatt hour
CNG compressed natural gas
Communiqué on Tracking LPG Cylinders the Communiqué on Tracking LPG cylinders in the Market published in the Official Gazette no. 29858 dated 15 October 2016
Consumer Protection Law the Consumer Protection Law no. 6502 published in the Official Gazette no. 28835 dated 28 November 2013
Electricity Market Licensing Regulation the Electricity Market Licensing Regulation published in the Official Gazette no. 28809 dated 2 November 2013
Electricity Market Tariffs Regulation the Electricity Market Tariffs Regulation published in the Official Gazette no. 29453 dated 22 August 2015
EML the Electricity Market Law no. 6446 published in the Official Gazette no. 28603 dated 30 March 2013
EMRA the Energy Market Regulatory Authority of Turkey (Enerji Piyasası Düzenleme Kurumu, EPDK)
EMRA Board the board governing EMRA
ENTSO-E  the European Network of Transmission System Operators for Electricity
EPIAŞ  the Energy Exchange Istanbul, EXIST (Enerji Piyasaları İşletme Anonim Şirketi)
EU  the European Union
EÜAŞ  the Electricity Generation Company (Elektrik Üretim Anonim Şirketi)
GDPA  the General Directorate of Petroleum Affairs of Turkey (Petrol İşleri Genel Müdürlüğü, PİGM)
IAEA  the International Atomic Energy Agency
IEA  the International Energy Agency
kW  kilowatt
LNG  liquefied natural gas
LPG  liquefied petroleum gas
MENR  the Ministry of Energy and Natural Resources of Turkey (Enerji ve Tabii Kaynaklar Bakanlığı)
MW  megawatt
NGM Law  the Natural Gas Market Law no. 4646 published in the Official Gazette no. 24390 dated 2 May 2001
NGM Licensing Regulation  the Natural Gas Market Licensing Regulation published in the Official Gazette no. 24869 dated 7 September 2002
NGM Tariffs Regulation  the Natural Gas Market Tariffs Regulation published in the Official Gazette no. 29856 dated 13 October 2016
NPP  nuclear power plant
OECD  the Organization for Economic Co-operation and Development
Official Gazette  the national and only official journal of Turkey that publish legislation (e.g. laws, decisions of the Council of Ministers, regulations, communiqués), certain case-law and official notices, especially public administration appointments and tender notices
Petroleum Market Law  the Petroleum Market Law no. 5015 published in the Official Gazette no. 25322 dated 20 December 2003
Petroleum Market Licensing Regulation  the Petroleum Market Licensing Regulation published in the Official Gazette no. 25495 dated 17 June 2004
Regulation on Unlicensed Electricity Generation  the Regulation on Unlicensed Electricity Generation in Electricity Market published in the Official Gazette no. 28783 dated 2 October 2013
RER Regulation  the Renewable Energy Resource Documentation and Support Regulation published in the Official Gazette no. 28782 dated 1 October 2013
RER Support  renewable energy resource support
SGC  the Southern Gas Corridor
Sm³  standard cubic meter
ŞİD  BOT AŞ transmission network operation arrangements (şehbe işleyiş düzenlemeleri)
TAEK  the Turkish Atomic Energy Authority (Türkiye Atom Enerjisi Kurumu)
TANAP  the Trans-Anatolian Natural Gas Pipeline
TAP  the Trans-Adriatic-Pipeline
TEDAŞ  the Turkish Electricity Distribution Company (Türkiye Elektrik Dağıtım Anonim Şirketi)
TEİAŞ  the Turkish Electricity Transmission Company (Türkiye Elektrik İletim Anonim Şirketi)
TPAO  the Turkish Petroleum Company (Türkiye Petrolleri Anonim Ortaklığı)
Turkey  the Republic of Turkey
Turkish Petroleum Law  the Turkish Petroleum Law no. 6491 published in the Official Gazette no. 28647 dated 11 June 2013
UPP  usage procedures and principles
UPP Regulation  the Regulation on Determination of Basic Usage Procedures and Principles for Underground Natural Gas Storage Facilities published in the Official Gazette no. 27954 dated 4 June 2011
YEKA  the renewable energy resource zones (yenilenebilir enerji kaynakları alanları)
YEKDEM  renewable energy resources support mechanism (yenilenebilir enerji kaynakları destekleme mekanizması)
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