ENERGY GOVERNANCE IN TURKEY
Report on Compliance with the Energy Community Acquis
ENERGY COMMUNITY SECRETARIAT
1 OCTOBER 2015
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# Table of Contents

**ENERGY COMMUNITY ACQUIS**  
4

**PREFACE**  
7

**1 EXECUTIVE SUMMARY**  
8

**2 ELECTRICITY MARKET**  
10  
a. Sector Overview  
10  
b. Legal Assessment  
12  
c. Concluding Remarks  
19

**3 NATURAL GAS MARKET**  
21  
a. Sector Overview  
21  
b. Legal Assessment  
25  
c. Concluding Remarks  
30

**4 ENERGY MARKET REGULATORY AUTHORITY (EMRA)**  
32  
a. Legal and Regulatory Framework  
32  
b. Organisation of EMRA  
32  
c. Independence of EMRA  
32  
d. Competences of EMRA  
32  
e. Concluding Remarks  
33

**5 OIL**  
34  
a. Sector Overview  
34  
b. Concluding Remarks  
36

**6 RENEWABLE ENERGY**  
37  
a. Sector Overview  
37  
b. Legal Assessment  
39  
c. Concluding Remarks  
39

**7 ENERGY EFFICIENCY**  
41  
a. Sector Overview  
41  
b. Legal Assessment  
42  
c. Concluding Remarks  
44

**8 ENVIRONMENT AND CLIMATE CHANGE**  
45  
a. Sector Overview  
45  
b. Legal Assessment  
45  
c. Climate Change  
45  
d. Concluding Remarks  
46

**9 COMPETITION AND STATE AID**  
47  
a. Sector Overview  
47  
b. Legal Assessment  
47  
c. Concluding Remarks  
48

**10 STATISTICS**  
49  
a. Sector Overview  
49  
b. Legal Assessment  
50  
c. Concluding remarks  
50

**GLOSSARY**  
52
TABLES
1. Acquis on Electricity 4
2. Acquis on Gas 4
3. Acquis on Environment 4
4. Acquis on Renewable Energy 4
5. Acquis on Energy Efficiency 5
6. Acquis on Oil 5
7. Acquis on Statistics 5
8. Electricity Facts and Figures 10
9. Electricity Imports and Exports in 2014 11
10. Licenses in the Electricity Market 12
11. Gas Facts and Figures 21
12. Natural Gas Storage Facilities in 2014 22
13. Natural Gas Import Contracts by Country 29
14. Crude Oil and Natural Gas Production 2010 - 2014 34
15. Refinery Output by Product 2012 - 2014 34
16. Petroleum Sales per Distributor in 2014 35
17. Present and Targeted Renewable Energy Capacities in 2013 37
18. Feed-in Tariffs for Renewable Energy 37
19. Energy Efficiency Facts and Figures 41

GRAPHICS
1. Turkey’s Electricity Market Scheme 12
2. Installed Electricity Generation Capacity 13
3. Distribution of Generation Capacity in 2014 (in %) 13
4. Development of TETAS Electricity Tariffs 14
5. Eligibility Thresholds 16
6. Number of Eligible Consumers 16
7. Tariffs for Non-eligible Consumers 17
8. Distribution of Bilateral, Day-ahead and Balancing Market Volumes 17
9. Day-ahead and Balancing Power Market Prices 18
10. Gas Natural Gas Consumption 2004 - 2015 (in bcm) 21
11. Natural Gas Utilisation in 2014 (in %) 22
13. Natural Gas Exports to Greece (in mcm) 23
14. Natural Gas Imports by Company (in %) 24
15. Turkey’s Gas Market Scheme as defined by Law No. 4646 24
16. Natural Gas Market Licenses 25
17. Oil and Refined Petroleum Products Storage Capacity in 2013 35
18. Energy Intensity 42
### Acquis on Electricity

<table>
<thead>
<tr>
<th>Title of Document</th>
<th>General Implementation Deadline</th>
<th>Implementation Deadline Moldova / Ukraine</th>
</tr>
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<tbody>
<tr>
<td>Regulation (EC) 714/2009 on conditions for access to the network for cross-border exchanges in electricity and repealing Regulation (EC) 1228/2003</td>
<td>1 Jan 2015</td>
<td>1 Jan 2015</td>
</tr>
<tr>
<td>Regulation (EU) 838/2010 on laying down guidelines relating to the inter-transmission system operator compensation mechanism and a common regulatory approach to transmission charging</td>
<td>1 Jan 2014</td>
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</tr>
</tbody>
</table>

### Acquis on Gas

<table>
<thead>
<tr>
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</table>

### Acquis on Environment

<table>
<thead>
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</thead>
<tbody>
<tr>
<td>Directive 2009/28/EC on the promotion of the use of energy from renewable sources</td>
<td>1 Jan 2014</td>
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</tr>
</tbody>
</table>

### Acquis on Renewable Energy

<table>
<thead>
<tr>
<th>Title of Document</th>
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<th>Implementation Deadline Moldova / Ukraine</th>
</tr>
</thead>
<tbody>
<tr>
<td>Directive 2009/28/EC on the promotion of the use of energy from renewable sources</td>
<td>1 Jan 2014</td>
<td>1 Jan 2014</td>
</tr>
</tbody>
</table>
The acquis on competition rests on three pillars:

1. The prohibition of anticompetitive agreements established by Article 101 of the Treaty on the Functioning of the European Union (TFEU);
2. The prohibition of abuse of a dominant position provided for in Article 102 of the TFEU; and
3. The prohibition of State aid granted in violation of Article 107 of the TFEU.

With reference to Article 106 of the TFEU, public undertakings, including undertakings providing services of general economic interest, must also comply with the above rules.

The Contracting Parties are under an obligation to introduce, to the extent the trade of network energy between the Contracting Parties may be affected, rules prohibiting cartels (agreements between undertakings, decisions by associations of undertakings and concerted practices), abuses of a dominant position, and rules prohibiting State aid. Moldova and Ukraine are under the same obligation from May 2010 and February 2011 respectively. The respective prohibitions are to be applied to public undertakings and undertakings to which special or exclusive rights have been granted by virtue of Article 19 of the Treaty.
This Report on Turkey’s compliance with the *acquis communautaire* – by which it is not bound as an Observer to the Energy Community – pays tribute to a country which not only followed but shaped the Athens Process ten years ago in a decisive manner. Despite the Government at the time eventually deciding not to sign the Treaty, Turkey in many ways remained in the focus of the Energy Community, and *vice versa*. In terms of size, competitiveness and attractiveness for investors, its energy market is advanced in comparison to many Contracting Parties’. Turkey can be considered as a pioneer of liberalization and a benchmark for a region still struggling to overcome its unfortunate fragmentation. To honour the country’s key role for the Energy Community, and to further comparability between its energy policy and the *acquis communautaire*, the Energy Community Secretariat publishes this first-ever Report on an Observer’s compliance with the *acquis* for Turkey.

The Report also comes at a time when Turkey is further reinforcing its energy links with Europe. In 2010, the electricity network of Turkey was synchronized with the *European Network of Transmission System Operators for Electricity* (ENTSO-E). At the end of 2014 permanent synchronous operation between the Turkish electricity system and ENTSO-E was achieved. In parallel, the transmission system operator of Turkey, TEIAS, joined the *Coordination Auction Office in South East Europe* (SEE CAO) for the Eighth Region established under the Energy Community Treaty. Joint network capacity allocation from Croatia in the North to Turkey in the South will soon become a reality. There is also no doubt that Turkey’s electricity companies will participate in and benefit from the regional market coupling initiatives currently underway. In the gas sector, Turkey is bound to become the gateway to Europe’s diversification strategy through pipeline connections to be built in the *Southern Gas Corridor*. The integration of its own national network with that of the internal energy market will undoubtedly further integrate the gas markets further. Moreover, Turkish energy policy corresponds to the Energy Community’s objectives in its efforts to modernize the governance of the energy sectors, ensure security of supply and affordability of energy for its citizens and actively contribute to greater sustainability of the sectors.

The present analysis follows the same methodology as the Secretariat’s Annual Implementation Report, it benchmarks Turkey’s legal framework against the Energy Community *acquis* currently in force in the areas of electricity, gas, oil, renewables, energy efficiency, environment, competition and energy statistics. Given that Turkey is under no legal obligation to implement the *acquis*, the compliance assessment is replaced by a comparison between the legal situation in Turkey and the Energy Community rules.

The main conclusion to be drawn from the Report is that Turkey has made substantial progress in enhancing its energy sector and legal framework and aligning its energy legislation with the legal framework required under the Energy Community Treaty. The efforts for full membership would thus not be as high as in other countries that recently joined the Energy Community, especially if the *acquis* was adapted to the requirements and specifics of Turkey. Therefore, in case Turkey decided to join the Energy Community, transposition and implementation of the relevant *acquis* would be smooth as a result of the advanced development of the Turkish energy markets.
1 Executive Summary
Turkey and the Energy Community – a shared legal DNA
By Dirk Buschle, Deputy Director

The present Report does not aim to present or explain Turkish energy policy. Neither does it give an account of Turkey’s relations with the Energy Community to which the country is an Observer. The objective of the Report is rather to compare the legal frameworks governing the Turkish energy sectors and the Energy Community’s acquis communautaire. The findings of the present Report in this respect are clear: Turkey and the Energy Community are not only closely linked. They are also closely related as they share the same legal DNA. Convergence may differ slightly depending on the sector. But in all sectors covered by this Report, the design of Turkish energy law and governance resembles the acquis to such an extent that the similarities by far outnumber the differences. This is evidently not a coincidence – the acquis communautaire has been and continues to be a template for energy reforms in Turkey. What is striking is the degree of harmonization already reached. In borrowing a term from the technical sphere, one could call Turkey and the Energy Community “legally synchronized”.

Electricity sector governance in Turkey arguably provides the best illustration for this finding. As was the case in the Contracting Parties of the Energy Community, the sector evolved from its beginnings based on small private initiatives to nationalization and central state planning, re-privatization and the introduction of a transitional single buyer model to a relatively open wholesale market based on bilateral contracts. There is no price regulation at the wholesale level. The State still holds around 30% of the generation capacities. But unlike most of the Contracting Parties, Turkey also opened its balancing market and has established a power exchange which is about to start operations of day-ahead and intra-day transactions. In terms of unbundling, the national transmission system operator TEIAS complies with the Second Package (but not yet the Third Package) requirements. The 21 regional distributors have been unbundled already in 2013. Third party access is being granted at regulated tariffs in line with Directive 2009/72/EC. Cross-border capacity allocation on the interconnector with Greece takes place through the Coordinated Auction Office in South East Europe established in Montenegro under the auspices of the Energy Community. The only major deviation from the acquis is the fact that eligibility is not defined in accordance with customer categories (non-household and household customers) but depending on consumption with thresholds set annually by the national regulatory authority EMRA. In practice, the retail market is relatively open at around 85% ‘Suppliers of last resort’ at regulated prices are available for both eligible and non-eligible customers in all 21 distribution areas. Customer protection is well developed.

Turkey’s gas sector is at around 50 bcm/year and characterized by a growing demand for imports, half of which is used for electricity generation. At the same time, the country provides one of the most important transit routes for European gas diversification and will host the TANAP pipeline which will connect gas sources from Azerbaijan with the TAP pipeline, one of the Energy Community’s projects of common interest. While third party access on the domestic transmission system, including its interconnectors such as the so-called ITGI, is regulated in compliance with the entry/exit model, transit on separate pipelines is currently exempted and not subject to regulated access tariffs. In terms of market structure, the development towards full liberalization mirrors that of the EU’s and the Energy Community’s. While not enjoying a legal monopoly anymore, the gas incumbent BOTAS is still vertically integrated and dominates the wholesale/import market. However, Turkish energy policy pursues the goal to reduce BOTAS’ market shares to a maximum of 20% by implementing contract release programmes as well as a ban on new import contracts. As in electricity, eligibility is defined on the basis of annual consumption. Since 2013, non-household customers are already fully eligible. If adopted, a draft amendment to the Natural Gas Market Law submitted to Parliament in 2014 would further enhance overall compliance significantly.

The national regulatory authority EMRA has a reputation, as well as the necessary legal conditions in place, for being competent and independent.

As a member of the International Energy Agency (IEA), Turkey largely complies also with the provisions of the acquis requiring the creation and maintenance of emergency oil stocks. The Report concludes that full harmonization with Directive 2009/119/EC requires only minor efforts.

As regards the promotion of renewable energy, Turkey pursues an indicative target of 30% of renewable energy in the overall electricity consumption by 2023, as well as a 10% target for transport. This development is driven by the increasing demand for electricity and the desire to reduce import dependency. A national renewable energy action plan has been adopted already in 2014. Support is being provided through feed-in tariffs as well as priority access/dispatch in line with the Renewable Energy Directive. Connection to the networks, very often a bone of contention in the Contracting Parties, is organized through tenders.

In terms of energy efficiency, it is to be noted that Turkey’s energy intensity has been decreasing over the last years. The country set itself the target of decreasing it further by 20% by 2023, while special targets apply for public buildings. Turkey is
working already on the implementation of Directive 2012/27/EU which, in the Energy Community, was only incorporated in October this year. A national energy efficiency action plan as required by that Directive is currently under preparation and should be adopted still before the end of 2015. A market for energy service companies (“ESCOs”) already exists. The Labeling as well as the Eco-Design Directives have been largely transposed.

With regard to the Energy Community’s environmental acquis, the Report concludes that Turkey is very close to transposition of the latest version of the Environmental Impact Assessment Directive (not even applicable yet in the Energy Community) and complies with the so-called Sulphur in Fuels Directive. The Large Combustion Plants Directive which limits emissions of certain pollutants stemming from (mostly) coal-fired power plants applies already to new plants, and will apply to existing plants as from 2019. Implementation of this latter Directive by the existing Contracting Parties continues to be of great concern to the Secretariat.

The acquis requiring (principle) bans of anti-competitive conduct and State aid has also been well transposed by Turkey. However, as is not unusual in the Contracting Parties of the Energy Community, enforcement of these provisions in the energy sectors does not live up to the quality of the legal provisions and the enforcement system in general. This is particularly true in the area of State aid. As a unique feature in the Energy Community, structural measures aiming at reducing the market shares of electricity and gas incumbents to below 20% have been taken in sector-specific legislation.

The Energy Community acquis on statistics has been well transposed.

In conclusion, the present Report confirms that Turkey, if its compliance were to be assessed together with the existing Contracting Parties, would be ranked rather high, especially in the electricity sector, the status and performance of the regulatory authority, the acquis related to oil stocks as well as environment and energy efficiency. Only the gas sector governance would require major interventions, which could be taken care of through adaptations and deadline extensions in the course of accession negotiations. On the basis of the same legal DNA as the Energy Community’s, Turkey’s full integration in the internal energy market would require limited efforts.
2 Electricity Market

<table>
<thead>
<tr>
<th></th>
<th>2012</th>
<th>2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electricity generation [GWh]</td>
<td>239,497</td>
<td>240,154</td>
</tr>
<tr>
<td>Net imports [GWh]</td>
<td>5,827</td>
<td>7,429</td>
</tr>
<tr>
<td>Net exports [GWh]</td>
<td>2,953</td>
<td>1,227</td>
</tr>
<tr>
<td>Total electricity supplied [GWh]</td>
<td>242,371</td>
<td>246,357</td>
</tr>
<tr>
<td>Losses in transmission [GWh]</td>
<td>6,024.7</td>
<td>5,639</td>
</tr>
<tr>
<td>Losses in transmission [%]</td>
<td>2.49%</td>
<td>2.29%</td>
</tr>
<tr>
<td>Losses in distribution [GWh]</td>
<td>29,632</td>
<td>31,495</td>
</tr>
<tr>
<td>Losses in distribution [%]</td>
<td>12.23%</td>
<td>12.78%</td>
</tr>
<tr>
<td>Consumption of energy sector [GWh]</td>
<td>11,790</td>
<td>11,177</td>
</tr>
<tr>
<td>Final consumption of electricity [GWh]</td>
<td>194,923</td>
<td>198,045</td>
</tr>
</tbody>
</table>

Consumption structure

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Industrial &amp; SME [GWh]</td>
<td>149,548</td>
<td>153,074</td>
</tr>
<tr>
<td>Households [GWh]</td>
<td>45,375</td>
<td>44,971</td>
</tr>
<tr>
<td>Total maximum electrical capacity of power plants [MW]</td>
<td>57,072</td>
<td>64,007</td>
</tr>
<tr>
<td>Coal-fired</td>
<td>12,395</td>
<td>12,427</td>
</tr>
<tr>
<td>Gas-fired</td>
<td>17,164</td>
<td>20,253</td>
</tr>
<tr>
<td>Net maximum electrical [MW]</td>
<td>5,632</td>
<td>6,279</td>
</tr>
<tr>
<td>Other thermal</td>
<td>19,620</td>
<td>22,289</td>
</tr>
<tr>
<td>Capacity of power plants [MW]</td>
<td>2,261</td>
<td>2,759</td>
</tr>
<tr>
<td>Wind power</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Solar power</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Horizontal transmission network [km]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>380 kV</td>
<td>16,344</td>
<td>16,808</td>
</tr>
<tr>
<td>220 kV</td>
<td>85</td>
<td>85</td>
</tr>
<tr>
<td>154 kV</td>
<td>33,943</td>
<td>33,943</td>
</tr>
<tr>
<td>66 kV</td>
<td>509</td>
<td>509</td>
</tr>
<tr>
<td>Substation capacity [MVA]</td>
<td>112,846</td>
<td>122,236</td>
</tr>
<tr>
<td>Electricity customers</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>Non-households</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>Eligible customers</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>Active eligible customers</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>Internal market</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Electricity supplied to active eligible customers [MWh]</td>
<td>52,174,058</td>
<td>64,303,371</td>
</tr>
<tr>
<td>Share of final consumption [%]</td>
<td>23.41</td>
<td>29.46</td>
</tr>
</tbody>
</table>

Source: TEIAS Statistics, Turkey Statistical Institute, EPAS Statistics, compiled by the Energy Community Secretariat

a. Sector Overview

The Turkish electricity market has undergone different phases related to the ownership structure of generation, transmission and distribution assets. Starting from the very early years of the Turkish Republic up to the 1970s, the electricity market was dominated by small scale generators owned by private entities. Transmission and distribution networks were historically owned by both public institutions and private companies. Such a fragmented structure complicated the overall planning and integrity of the electricity system as there was no single authority to monitor the sector and to decide on its strategic development.

A major milestone was the establishment of a vertically integrated undertaking, the Turkish Electricity Corporation (TEK), in 1970, responsible for the further electrification of Turkey. Most of the transmission and distribution assets, except a few regional networks run by private companies and municipalities, were consolidated into TEK. In the early 1980s, the municipalities also transferred their ownership of the electricity infrastructure to TEK and a centrally planned electrification process was initiated.

After economic and political turmoil during the 1970s and 1980s, private sector involvement in the energy sector was on the agenda again. The Law Regarding Assignment of Corporations other than TEK for Generation, Transmission, Distribution and Supply proved to be another milestone in the history of the Turkish electricity market. This Law enabled private sector participation through several public-private partnership models. The Law also required unbundling of TEK and separation of
distribution and retail supply from transmission and generation as an initial step. The distribution and retail supply activity was allocated to the Turkish Electricity Distribution Corporation (TE-DAS), whereas the generation and transmission activities were allocated to the Turkish Electricity Generation and Transmission Corporation (TEAS) in 1993. Within the framework of the Law, private sector participation in the generation segment eventually led to the establishment of the auto-producer model which allowed generation of electricity by industrial companies for their own consumption.

In 1996, the adoption of the first EU Electricity Directive 96/92/EC gave an important momentum to the liberalisation efforts in the electricity sector of Turkey. In line with the spirit of the Directive, the Electricity Market Law No. 4628 was adopted in 2001 and amended in 2013 by Electricity Market Law No. 6446. The Energy Market Regulatory Authority (EMRA) was also established pursuant to the Law No. 4628. The 2001 Law unbundled the vertically integrated state-owned electricity company (TEAS) into three separate entities responsible for generation (EÜAS), transmission (TEIAS), and wholesale trade (TETAS). The Turkish Electricity Distribution Company (TEDAS) was also restructured in 2005, and regional distribution companies were established and prepared for privatization. EMRA was assigned to carry out the duties of directing, monitoring, regulating and supervising the electricity sector. The Law and secondary legislation enacted by EMRA envisaged transformation of the market from a single buyer model to full retail competition, which was basically a market model based on bilateral contracts supplemented by a balancing mechanism.

EMRA has become the regulator and licensing authority for all operators engaged in generation, transmission, distribution, wholesale, retail, import and export. The legislative and regulatory framework enables the dominance of private enterprises in all activities, except transmission. Licenses are granted for minimum 10 years and maximum 49 years.

Following the adoption of Law No. 4628, significant steps have been taken towards the establishment of a competitive and functioning market in the Turkish electricity sector. The public entities have been restructured, and Market Rules were implemented. The Law No. 6446 also introduced an energy exchange, Energy Markets Operation Joint Stock Company (EPIAS) and a supplier of last resort. EPIAS was founded in March 2015 and EMRA published the Regulation on the Organisational Structure and Working Principles of EPIAS, on 1 April 2015. The Regulation sets out the duties, authorities and responsibilities of the new institution, as well as the principles and procedures of its organisational structure. EMRA also appointed the Chairman and the Board of directors of EPIAS, and decided that EPIAS is to be located in Istanbul.

In 2014, Turkish electricity generation amounted to 251,963 GWh and the consumption was 257,220 GWh. In the same year, Turkey imported 7,953 GWh and exported 2,696 GWh of electricity. The State electricity company and its affiliates generated a total of 70,469 GWh of electricity. The remaining 181,494 GWh were generated by private companies.

<table>
<thead>
<tr>
<th>Country</th>
<th>Share of Turkish Imports (%)</th>
<th>Share of Turkish Exports (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bulgaria</td>
<td>66.6</td>
<td></td>
</tr>
<tr>
<td>Iran</td>
<td>28.3</td>
<td></td>
</tr>
<tr>
<td>Nakhichevan1</td>
<td>1.2</td>
<td></td>
</tr>
<tr>
<td>Greece</td>
<td>0.1</td>
<td>70.1</td>
</tr>
<tr>
<td>Georgia</td>
<td>3.7</td>
<td></td>
</tr>
<tr>
<td>Iraq</td>
<td></td>
<td>29.9</td>
</tr>
</tbody>
</table>

Source: TEIAS Annual Report 2014

The electricity market activities were re-defined with the new Electricity Market Law from 2013 as generation, transmission, distribution, supply (wholesale and retail), import and export. A new activity - market operator – was added.

Transmission and distribution tariffs are regulated. The supply of electricity to non-eligible customers and wholesale supply by TETAS are also provided at regulated prices. By contrast, generation and supply to eligible customers are open to competition and are not regulated.

A simplified market operation scheme can be seen on the next page.
b. Legal Assessment

1. Authorisation and Licensing

Performance of an electricity market activity requires a license from EMRA. The licensing procedure is defined in the Electricity Market Law and the Electricity Market Licensing Regulation which was published on 2 November 2013 and later amended following the changes in the market structure.

A new licensing mechanism, “Preliminary License” for generation is introduced with the new Law. A legal entity applying for a generation license shall in the first place be granted by EMRA a preliminary license for a term not exceeding 24 months. During that period the applicant must obtain the relevant permits, approvals, licenses and other documents stipulated by the Law as well as the ownership or the right to use the land for construction of the power plant. Legal entities that fail to fulfil such requirements during the term of preliminary license may not be granted a generation license. EMRA may extend the period of validity of the preliminary license for an additional six months depending on the type of source and installed capacity. The main objective of such an extension is to promote investment and prevent transfers of licenses. The final license is granted for a minimum of ten to a maximum of 49 years.

The number of licensees issued for each market activity is presented in the following table.

### Licences in the Electricity Market

<table>
<thead>
<tr>
<th>Type</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preliminary license</td>
<td>237</td>
</tr>
<tr>
<td>Generation</td>
<td>1,692</td>
</tr>
<tr>
<td>Auto-producers</td>
<td>3</td>
</tr>
<tr>
<td>Transmission</td>
<td>1</td>
</tr>
<tr>
<td>Supply</td>
<td>206</td>
</tr>
<tr>
<td>Distribution</td>
<td>21</td>
</tr>
<tr>
<td>Distribution in Organised Industrial Zone</td>
<td>155</td>
</tr>
</tbody>
</table>

Source: EMRA Website

---

i. Generation

Generation of electricity was initially conceived as a state-owned monopoly. Starting with the establishment of EMRA in 2001, initial steps of liberalising the energy markets were taken. Secondary legislation prepared by EMRA has opened the generation market for private investors. Following the liberalisation, private sector holdings and investments gained a massive share which was also supported by the privatisation of existing generation assets. By the end of July 2015, the total installed generation capacity was 71,908 MW of which the State still holds 29.6%.

The Electricity Market Law stipulates that new investments are to be made by the private sector, unless there is a problem...
with security of supply. Therefore, unless a risk in security of supply is foreseen, EÜAS will not be allowed to make further investments.

Generation may be performed by public and privately owned generation companies as well as by legal entities of the organized industrial zones within the scope of their licenses. Multiple applications for preliminary license for installation of electricity generation facilities based on wind or solar to be connected to the same transformer shall be evaluated by TEIAS on a competitive basis, selecting those that commit to the highest fee per unit/MW, payable within maximum three years after commissioning of the power plant. Total installed capacity that a single entity could have in generation facilities under their control, may not exceed 20% of the total installed capacity in Turkey in the previous year. There are currently 1,700 generation licensees with a total licensed capacity of 111,714 MW.

### Installed Electricity Generation Capacity

<table>
<thead>
<tr>
<th>Installed Capacity (MW)</th>
</tr>
</thead>
<tbody>
<tr>
<td>80,000</td>
</tr>
</tbody>
</table>

Source: TEIAS MYTM Reports

#### ii. Transmission

TEIAS is the only transmission company owned by the State. It is seen as a strategic asset which has not been subject to privatization. In addition TEIAS shall not engage in any activity other than those defined by the Law.

A department of TEIAS, the National Dispatch Centre (MYTM), acts as the system operator. It operates the balancing power market and ancillary services as part of this market.

The new Electricity Market Law also introduced electricity market operation as a new activity. The market operation license gives the right to operate the organised electricity market and to perform financial settlement of market activities. The licensee is the recently established energy exchange (EPIAS), which took over the responsibilities of operating the day-ahead market from the current market operator, EPID (the electricity market operations department of TEIAS). The establishment of the energy exchange was completed in March 2015. Shareholding of EPIAS is divided between TEIAS (30%), the Istanbul Stock Exchange (30%) and private participants in the electricity and

### Distribution of Generation Capacity in 2014 (in %)

- **Natural Gas**: 31%
- **Coal**: 21%
- **Wind**: 5%
- **Fuel Oil**: 8%
- **Hydro**: 34%
- **Geothermal**: 1%

Source: TEIAS MYTM Reports
gas markets (40%). The Electricity Market Law envisages that EPIAS will also operate the natural gas and carbon spot markets in the future.

The intra-day market is in operation since 1 July 2015. As of 1 September 2015 it is run by EPIAS.

iii. Distribution

The 21 regional distribution companies have been privatised together with their supply functions. These companies used to hold two licenses, namely for distribution and retail supply, and conducted their operations based on separate accounts. In 2013, these companies were also legally unbundled. Incumbent supply companies with supplier of last resort obligations were established in the designated areas. The unbundled suppliers can sell to non-eligible customers in their designated areas, and to eligible customers without regional restrictions. Distribution companies, as regulated entities, are not allowed to engage in other market activities such as supply.

iv. Supply

Following the legal unbundling of the distribution companies, the former incumbent companies but also other private companies obtained licenses for the supply of electricity to eligible customers. Undertakings previously operating as wholesale companies have also been transformed into supply companies.

Currently, there are 203 supply companies, 21 of which are also entrusted with a function of supplier of last resort.

TETAS is the only remaining state-owned supply undertaking after privatization. At the beginning of the liberalization process, TETAS acted as a single buyer for private generation and then was transformed into a market participant exposed to competition. Within the framework of the Electricity Market Law, TETAS has the same rights and responsibilities as the private suppliers. As an exemption, the tariff for its sales to suppliers with a last resort obligation is determined by the regulator.

The amount of electricity to be purchased by the private legal entities holding a supply license from generation and import companies shall not exceed 20% of the electricity amount consumed at national level in the previous year. Moreover, the amount of electricity which those private undertakings will sell to the final consumers shall not exceed 20% of the electricity amount consumed at national level in the previous year.

2. Unbundling

The state-owned transmission system operator TEIAS was legally unbundled by virtue of Law No. 4628. Market operation and system operation is performed by different departments in TEIAS.

After the enactment of Law No. 4628, no vertically integrated undertaking remained, besides the State itself which owns

---

**Development of TETAS Electricity Tariffs**

<table>
<thead>
<tr>
<th>Year</th>
<th>TETAS Tariff (Kr/kWh)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2006</td>
<td>8.98</td>
</tr>
<tr>
<td>2007</td>
<td>9.69</td>
</tr>
<tr>
<td>2008</td>
<td>9.53</td>
</tr>
<tr>
<td>2009</td>
<td>13.285</td>
</tr>
<tr>
<td>2010</td>
<td>14.66</td>
</tr>
<tr>
<td>2011</td>
<td>13.815</td>
</tr>
<tr>
<td>2012</td>
<td>17.9275</td>
</tr>
<tr>
<td>2013</td>
<td>17.1975</td>
</tr>
<tr>
<td>2014</td>
<td>17.85</td>
</tr>
<tr>
<td>2015</td>
<td>18.8325</td>
</tr>
</tbody>
</table>

Source: TEIAS MYTM Reports
the transmission company and some undertakings performing activities other than transmission.

3. Third Party Access

The Electricity Market Law requires transmission and distribution companies to grant non-discriminatory access by all third parties to their networks.

TEIAS conducts its transmission activities in accordance with the Electricity Market Law and the By-law on Electricity Grid adopted by EMRA. Accordingly, TEIAS is under an obligation to offer non-discriminatory access and has to sign a system usage agreement to be prepared in accordance with the By-law on Electricity Market Connection and System Usage. In case of disagreement, access and connection disputes are to be settled by EMRA according to the By-law on Electricity Grid.

The same applies with regard to access to the distribution grids. TEIAS or the distribution operators can only refuse access and system use under the following conditions:

- Insufficient technical capacity on the node of request at the date of the planned connection;
- Non-conformity of the applicant's facility to the applicable technical standards;
- Evidence presented by TEIAS or the distribution system operator proving that the requested connection prevents the fulfilment of public service obligation;
- Insufficiency of the system to meet the technical limits;
- In case the requested connection decreases the quality of electricity required by legislation;
- In case there is another connection point which makes it technically or economically more feasible to connect wind or solar energy generators.

The transmission and distribution tariffs are regulated by EMRA based on the provisions of the Electricity Market Law. TEIAS and the distribution system operators prepare the tariffs to be approved by EMRA in accordance with the respective methodology developed by the authority. The tariffs are published in advance for the following calendar year. In addition, a market operation tariff is determined by EMRA in order to compensate EPIAS for conducting market operation services.

4. Market Opening and Price Regulation

The concept of eligibility in Turkey is linked to the level of consumption. It is defined as the right of customers consuming more electricity than the level determined by EMRA to freely sign a contract with a supplier. The price of supply is freely negotiated between the parties. The eligibility threshold is determined annually by a decision of EMRA.

Development of the eligibility threshold and the number of eligible customers can be seen in the charts on the next page. Starting from 2003 with a limit of 9 GWh/year in 2015, every customer connected to the transmission network or the distribution network with a consumption of at least 4 MWh/year is currently deemed eligible. In the 2009 ‘Electricity Market and Security of Supply Strategy’ prepared by the Ministry of Energy and Natural Resources (MENR), the eligibility threshold was expected to be lifted completely by 2015. However, this has not happened yet. Instead, the eligibility threshold is gradually being lowered by EMRA.
As of January 2015, the total number of eligible customers, i.e. the number of customers that actually switched their suppliers, is 1,338,311. According to the 2014 Annual Report of EMRA, market opening is at a level of 85%.

The following tariffs and prices exist in the Turkish electricity sector:

- **Connection tariffs**: prices, terms and conditions for connection to a distribution system and a transmission system, are included in the relevant connection agreement, based on the principle of non-discrimination. The connection tariffs do not include the grid investment costs and are limited to the costs incurred by providing the connection;

- **Transmission tariff**: the transmission tariff is developed by TEIAS and approved by EMRA. Prices, terms and conditions for services applied to all users of the transmission system are based on the principle of non-discrimination. Grid investments to be made by TEIAS and transmission surcharges are included in the transmission tariff;

- **Distribution tariffs**: the distribution tariffs are developed by the distribution companies and approved by EMRA. Prices, terms and conditions for services are applied to all customers connected to the distribution system based on the principle of non-discrimination;

- **Wholesale prices**: the electricity wholesale prices is freely determined by the parties on the basis of the principle of non-discrimination and under the principles and procedures developed by EMRA;

- **Retail prices**: The retail tariffs applicable to non-eligible consumers are proposed by the supply company and shall be reviewed and approved by EMRA. The license of the company holding a supply license may include obligations for applying different end-user prices to different customers depending on quantities of electricity consumption;

- **Market operation tariff**: this tariff is prepared on the basis of the principle of financial sustainability including revenues of EPIAS necessary for carrying out its activities;

- **Tariff for the supply of last resort**: this tariff takes into account the market prices to encourage the eligible customers to switch supplier, as well as including a reasonable profit for the supplier of last resort.

In general, wholesale prices are not regulated but are determined freely by the market. However the tariff of TETAS regarding its sales to distribution system operators for the purpose of covering technical and non-technical losses, public lighting as well as for sales to the supplier of last resort is determined by EMRA.

On the retail level, eligible customers are supplied through bilateral agreements with suppliers at unregulated prices. Eligibility gives the customers the right to choose their supplier, but it does not impose an obligation to do so. Eligible customers which choose not to exercise their eligibility right are entitled to be supplied at regulated prices by their local (unbundled) supplier as supplier of last resort. Supply tariffs for non-eligible customers are calculated by supply companies with a last resort obligation and approved by EMRA. The suppliers of last resort have an obligation to buy electricity from TETAS at regulated wholesale prices for the portion they sell to last resort customers.
The regulated end-user prices are currently not cost-reflective, but a transition to cost-reflectivity is ongoing. Although there are 21 incumbent suppliers acting as suppliers of last resort, measures for price convergence are being taken to provide for a national retail tariff for customers across Turkey. This single national retail tariff, which is accepted as a ceiling price for the market, is also the last resort tariff.

5. Organized Market

The Turkish electricity market operates mostly as a bilateral market. Those bilateral contracts (excluding non-eligible consumption) are done over the counter. In addition, there is a day-ahead market, supplemented with balancing and settlement. The day-ahead market is currently (still) supervised by EPID (a department of TEIAS) where prices of electricity for every hour of the next day are a function of the supply and demand equilibrium. License holders can sign day-ahead market participation agreements. The day-ahead market has the second largest volume for electricity trade after the bilateral market.
The intra-day market is in operation since 1 July 2015. Day-ahead and intra-day market operations were to be transferred to EPISAS under the same rules and conditions as of 1 September 2015. The transfer process is still ongoing.

6. Balancing

Balancing is handled by the National Dispatch Centre (MYTM) in Turkey. Real time balancing is composed of ancillary services and a balancing power market. The balancing market supplies the system operator with backup reserves that can be activated in a maximum of 15 minutes.

Ancillary services are composed of primary frequency control, secondary frequency control, reactive power supply, black start, instantaneous demand control and regional capacity rentals. While primary frequency control is an obligation of generators, secondary frequency control is secured according to a merit order of the bids of generators on the balancing power market. Instantaneous demand control services are procured from customers on a voluntary basis. The remaining services are supplied under agreements with generators.

Balance responsible parties are required to be in balance with their electricity procurements, generation and electricity imports to their electricity consumption, sales and exports. They are defined as participants with at least one unit or node in the system where supply or demand of electricity is expected to take place and which is subject to settlement. Balance responsible parties that can independently increase or decrease their load by 10 MW have an obligation to participate in the balancing power market. The market is not regulated and is based on bids of the parties. The imbalance amount is calculated by netting off the participants’ bids and offers on the day-ahead market, load and unload bids and offers in the balancing market, bilateral procurement and sales and generation and consumption.

7. Interconnections and Cross-Border Trade in Electricity

On the interconnections with Greece and Bulgaria, TEIAS performs monthly explicit auctions for capacity. Total cross-border capacity of Turkey with ENTSO-E system is 650 MW (imports) and 500 MW (exports), split at 65:35 between the borders of Bulgaria and Greece respectively. The capacity is shared on a 50:50 basis between Turkey and ENTSO-E. Since September 2015, the monthly interconnection capacities between Turkey and Greece are allocated in a regionally coordinated manner through the Coordinated Auction Office in South East Europe. It is envisaged that this will be extended to allocation of yearly capacities in the near future.

Regarding the interconnections with the non-ENTSO-E neigh-
bours, applications for interconnection capacity allocation are collected by EMRA. In case of congestion, EMRA holds an explicit auction for the capacity.

8. Customer Protection

In order to protect consumers’ rights, EMRA adopted a By-law on Electricity Market Customer Service in 2014. This By-law stipulates the fundamental responsibilities of suppliers to customers. The scope of the By-law includes quality standards to be followed by supply undertakings for provision of efficient and continuous service, determination of electricity consumption and invoicing of customers, rules and procedures to be followed in case of non-technical losses, the content of retail agreements, the procedure to be followed in case of customer complaints, evaluation and handling of these complaints, compensation of customer damages due to bad electricity services as well as principles of customer switching.

Regarding the protection of vulnerable customers, the Electricity Market Law allows for setting a different tariff for customers in difficult economic and social situations whose consumption levels are comparably lower according to the current retail tariff for suppliers of last resort. There is a discounted price category for the families of martyrs and war veterans. The Law also provides for direct subsidies to support customers. The amount of the subsidies as well as the principles and procedures governing protection of vulnerable customers shall be determined by the Council of Ministers upon a proposal from the Ministry and shall be paid from the budget of the relevant institution, without intervening in the end-user price.

9. Security of Supply

Based on the ‘Strategic Plan 2015 – 2019’ prepared by MENR, the main pillars of security of supply are management of demand and provision of infrastructure for generation, import, transmission and distribution.

The energy policy sees the dependency on natural gas for electricity generation as a main source of risk and urgently requires diversification of natural gas import sources, along with a reduction of the share of natural gas generation in the generation portfolio. The Strategic Plan sets a target to reduce the share of natural gas power plants in the total generation from 43.8% in 2013 to 38% by 2019.

In order to increase the utilisation of domestic resources in the electricity generation portfolio, the Strategic Plan also sets a generation target of 60 billion kWh generated from domestic coal.

Another main pillar in the security of supply strategy is the development of renewable energy sources. This goal is supported through feed-in tariffs as well as through the development of financing opportunities, revision of legislation, strengthening of transmission infrastructure and increasing investor awareness.

Nuclear energy is also seen as an important tool for maintaining security of supply. While there are already two nuclear power plant projects foreseen, the Strategic Plan includes a third project, for which the date for completion of feasibility studies is set for 2019.

The Ministry is responsible for monitoring the security of electricity supply and taking appropriate measures. TEIAS is responsible for planning, establishment and operation of the transmission network. By the end of December each year, suppliers of last resort and companies holding licenses for supply which have the obligation of meeting the demand of non-eligible customers must report to EMRA their estimated peak electricity demand, amount of electricity needed, contracts concluded as well as the estimated additional energy or capacity for the next five years. EMRA is responsible for monitoring whether the holders of generation licenses are taking the necessary measures in order for generation facilities to become operational on the foreseen date. EMRA further informs the Ministry on a regular basis about the newly licensed generation capacity amounts to be commissioned within five years and to be taken into account by TEIAS when developing supply – demand balances. The Ministry prepares and submits to the Council of Ministers the Security of Electricity Supply Report by 31 December each year, taking into account the supply – demand balance, diversification of resources, the transmission and distribution system and the situation of generation facilities according to the results of the studies developed by TEIAS and the Report on Development of the Electricity Markets prepared by EMRA.

C. Concluding Remarks

The Turkish electricity sector has been developing in parallel with the electricity markets of the EU Member States since the opening of the market in 2002. There has been continuous progress despite certain bottlenecks and difficulties arising in areas such as cross-subsides, tariffs, privatisations, etc. The important progress has also been reflected by the EU’s Progress Reports since 2002. In the past 10 years, EMRA adopted several regulations, communiqués and decisions in order to improve market conditions and to increase competition in the sector.

In general, the Turkish electricity market legislation, both primary and secondary, is aligned with Directive 2009/72/EC and Regulation (EC) 714/2009. The Electricity Market Law No. 6446 adopted in 2013 has further improved harmonisation with the EU acquis. During 2013 and 2014, important By-laws entered into force, aligning the national legislative framework further with the EU acquis.

Compliance with the acquis is most advanced as regard;

- By-law on Access and System Usage;
- By-law on Network Code;
- Rules of authorisation by way of licensing according to...
• Pre-determined, transparent rules;
• The connection of new production facilities to the transmission network under non-discriminatory conditions;
• Legal unbundling of supply and distribution;
• The role and responsibilities of EMRA in third party access rules and the approval of transmission and distribution tariffs as well as handling of customer complaints;
• Clearly defined switching rules;
• Monitoring security of supply in line with clearly defined responsibilities.

In addition, the legal unbundling of the transmission system operator TEIAS and the prohibition to be involved in any other activity other than transmission as well as the establishment of EPIAS provides transparency of trade activities.

The long-term agreement of synchronization signed by TEIAS and ENTSO-E indicates that Turkey complies with the acquis in most aspects of transmission system operation such as third party access rules and transmission network regulations, effective and market-based balancing mechanism, auctioning of interconnector capacities, etc. In order to be granted Observer status in ENTSO-E, TEIAS has to prove that it complies with the requirements from Directive 2009/72/EC. A procedure to assess the independence of TEIAS is ongoing. The Energy Community Secretariat is in close cooperation with the Turkish institutions to verify the fulfilment of the criteria stipulated in the Directive.

Although the target to remove eligibility limits by 2015 has been missed, EMRA is undertaking the necessary steps to decrease the limits in order to make all customers eligible. Until then, eligibility is not yet granted in accordance with the EU acquis. In addition, cost-reflective retail tariffs are not fully applied, and cross-subsidies between consumers in the tariff still exist.

In conclusion, the assessment indicates that the Electricity Market Law is in line with the EU Directive to a large extent and the level of alignment with the acquis is at an advanced level. However, further improvement in implementation and alignment are expected particularly in granting eligibility to all customers including households and cost-reflective pricing mechanism.
a. Sector Overview

Natural gas consumption has been rising gradually in the last ten years. Natural gas consumption in 2014 reached over 48.5 bcm. Each year, EMRA declares the national natural gas consumption forecast. For the year 2015, the natural gas consumption forecast was projected to be 50.8 bcm.

---

### Natural Gas Market

<table>
<thead>
<tr>
<th></th>
<th>2013</th>
<th>2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>Natural gas production</td>
<td>0.632</td>
<td>0.537</td>
</tr>
<tr>
<td>Import flows</td>
<td>45.27</td>
<td>45.92</td>
</tr>
<tr>
<td>Export flows</td>
<td>0.611</td>
<td>0.682</td>
</tr>
<tr>
<td>Stock changes</td>
<td>-1.110</td>
<td>-0.054</td>
</tr>
<tr>
<td>Total supply</td>
<td>46.40</td>
<td>45.83</td>
</tr>
<tr>
<td>Consumption in energy sector</td>
<td>21.63</td>
<td>21.05</td>
</tr>
<tr>
<td>Available to final consumption of natural gas [bcm]</td>
<td>45.24</td>
<td>45.18</td>
</tr>
<tr>
<td>Interconnectors’ capacity [bcm]</td>
<td>57.65</td>
<td>57.65</td>
</tr>
<tr>
<td>Storage working capacity [bcm]</td>
<td>4.7</td>
<td>4.7</td>
</tr>
<tr>
<td>Length of transmission network [km]</td>
<td>23,267</td>
<td>23,270</td>
</tr>
<tr>
<td>Length of distribution network [km]</td>
<td>70,000</td>
<td>95,000</td>
</tr>
<tr>
<td>Natural gas customers</td>
<td>458,581</td>
<td>n/a</td>
</tr>
<tr>
<td>out of which:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-households</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eligible customers</td>
<td>n/a</td>
<td>372,000</td>
</tr>
<tr>
<td>Households</td>
<td>8,713,042</td>
<td>9,484,324</td>
</tr>
<tr>
<td>Internal market</td>
<td>34.84</td>
<td>36.40</td>
</tr>
<tr>
<td>Gas supplied to active eligible customers [bcm]</td>
<td>77</td>
<td>81</td>
</tr>
<tr>
<td>Share of total consumption (%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Final consumption of natural gas per sector [bcm]</td>
<td>20.63</td>
<td>21.05</td>
</tr>
<tr>
<td>Consumption structure [bcm]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Energy transformation</td>
<td>43.6</td>
<td>45.2</td>
</tr>
<tr>
<td>Industry and commercial customers</td>
<td>45.9</td>
<td>48.7</td>
</tr>
<tr>
<td>Households</td>
<td>8.47</td>
<td>9.54</td>
</tr>
</tbody>
</table>

Source: EMRA Natural Gas Market Report 2012 and 2013, BOTAS Annual Reports 2012 and 2013, compiled by the Energy Community Secretariat
In 2014, around 48% of natural gas was used for electricity production, 25% was used by the industry and 19% was used in households.

To cover its consumption, Turkey is dependent on imports of natural gas, as only 1% (470 mcm in 2014) of its consumption is produced domestically. The chart below illustrates the country of origin and the amount of corresponding natural gas import during 2005 - 2014.

*Boru Hatları ile Petrol Taşıma A.S. (BOTAS)* signed a contract for the construction of underground natural gas storages in central Turkey on 29 November 2011. The capacity of the underground storage, which will be formed of salt domes, will be up to 1 bcm. There will be twelve gas storages in total. The first six gas wells are expected to be in operation by 2016 and the remaining ones in 2019. The facility will have a send out daily capacity of 40 mcm of gas into the Turkish gas transmission system.

**Natural Gas Utilisation in 2014 (in %)**

- **Electricity Generation**: 48%
- **Industry**: 25%
- **Households**: 19%
- **Government Offices and Commercial Firms**: 6%
- **Others**: 2%

**Natural Gas Imports by Importing Country 2005 - 2014**

**Natural Gas Storage Facilities in 2014**

<table>
<thead>
<tr>
<th>Company</th>
<th>Facility</th>
<th>Location</th>
<th>Storage Capacity (in mcm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>TPAO</td>
<td>Underground</td>
<td>Silvri / Istanbul</td>
<td>2,661</td>
</tr>
<tr>
<td>BOTAS</td>
<td>Underground</td>
<td>Sultanhanı / Aksaray</td>
<td>1,500</td>
</tr>
<tr>
<td>BOTAS</td>
<td>LNG</td>
<td>Marmara Ereğlisi / Tekirdag</td>
<td>0.255 (85,000 cm x 3)</td>
</tr>
<tr>
<td>Ege Gaz A.S.</td>
<td>LNG</td>
<td>Aliaga / İzmir</td>
<td>0.280 (140,000 cm x 2)</td>
</tr>
</tbody>
</table>

**Source:** EMRA Natural Gas Market Report 2014
Turkey also exports certain volumes of natural gas, namely to Greece. The graph below shows the annual gas exports in the period 2007 - 2013 through the Turkey-Greece Interconnector (ITG).

In the future, a number of projects envisage transit of natural gas through Turkey. In June 2012, an intergovernmental agreement between the Republic of Turkey and the Republic of Azerbaijan and, as an attachment to the intergovernmental agreement, a host government agreement between the Republic of Turkey and the Trans Anatolian Natural Gas Pipeline Company were signed for the Trans Anatolian Natural Gas Pipeline Project (TANAP). The TANAP project will have initially 16 bcm/year capacity and will be scalable up to 31 bcm/year to accommodate future natural gas volumes originating and transiting from Azerbaijan. Annually, 6 bcm of natural gas are foreseen to be delivered to Turkey through this pipeline in late 2018, and the remaining 10 bcm to Europe via the Trans Adriatic Pipeline (TAP) in 2020.

The liberalisation of the Turkish natural gas market began with the adoption of the Natural Gas Market Law No. 4646 in 2001. Prior to that, BOTAS was a legal monopoly performing import, transmission and sales of natural gas. Municipal gas distribution could be performed either by BOTAS or by (altogether seven) companies authorised by the Council of Ministers, of which two are owned by BOTAS and four by the respective municipalities. The Natural Gas Market Law from 2001 aimed at introducing a gas market with essentially all segments (including transmission and distribution) open to competition. The market scheme on the next page shows the market structure envisaged in the Natural Gas Market Law.

However, in 2015 BOTAS is still a vertically integrated undertaking and its dominant position in import/supply persists. Currently, BOTAS performs import, transmission, storage and LNG activities. According to 2013 figures, BOTAS covers 80% of natural gas imports, while the remaining 20% are imported by private companies.

Concerning imports, the Natural Gas Market Law required BOTAS to decrease its market share to 20% until 2009 by either contract or volume releases. However, only one contract release was completed successfully. Under the same provision, BOTAS is prevented from signing any new import contracts (except LNG) until its market share falls below 20% of national consumption. Since 2009, significant steps have been taken in order to achieve supply side competition within the Turkish natural gas market.

EMRA adopted a decision which paves the way for private sector companies to import natural gas from Iraq, a country with which BOTAS did not have import agreements. After an evaluation process by EMRA, one company obtained an import license in September 2013 in order to import natural gas from Russia via Malkoçlar entry point for 6 bcm/year on the basis of natural gas sale and purchase agreements. Accordingly, EMRA evaluated the applications, and four companies that fulfilled the license conditions obtained a natural gas import license from EMRA for the total of 6 bcm/year.
As a result of this, as well as the previous tenders for contract release and taking domestic production and other imports by the private sector into account, the market share of BOTAS decreased to 75% of the total consumption.

Finally, on 13 March 2014, EMRA adopted another decision inviting license applications for gas imports from Kazakhstan. The evaluation process of these applications is ongoing. These developments clearly show Turkey's decisiveness in creating supply side competition in the Turkish natural gas market.

Turkey's Gas Market Scheme as defined by Law No. 4646

A new draft Law amending the existing Natural Gas Market Law of 2001 was submitted to Parliament in August 2014. It is aimed at enhancing competition on the natural gas market and is expected to contribute to the process of its liberalization. However, the Law has never been discussed in the Parliament.

According to the draft, it is envisaged that BOTAS is unbundled into three different undertakings - transmission, trading and storage and LNG facilities. However, the draft Law does not envisage any longer privatisation alongside the restructuring of BOTAS. The Natural Gas Market Law of 2001 indeed envisages that BOTAS be restructured into three undertakings (import, storage, transmission) by 2009 and subsequently import and storage entities should have been privatised by 2011. However, this was not achieved. The draft also defines the operation of LNG terminals as a separate activity and not as a storage activity as in the current Natural Gas Market Law. Additionally, new provisions on security of supply, supplier of last resort, organized natural gas markets, transmission system operation and market operation are also envisaged by the draft.

The new draft legislation mainly covers the following;

- **BOTAS** shall be restructured - as it is foreseen in the existing Law - into three separate legal entities which are expected to deal with transmission activities, operation of LNG facilities and storage and other activities;
- **BOTAS** shall not execute new natural gas purchase agreements until its imports fall down to 20% of the national consumption; importing LNG is exempted;
- **BOTAS** shall not renew natural gas purchase agreements already expired. However upon a Decree of the Cabinet of Ministers it may enter into new natural gas purchase agreements in order to ensure security of natural gas supply or to export natural gas;
- Until the annual imports of natural gas by **BOTAS** fall down to 20% of annual consumption, in case of application for license in order to import from countries with which **BOTAS** has ongoing contracts with, 50% of the amount to be imported shall be deducted from the current obligations of **BOTAS**;
- **Istanbul Gas Distribution Company (IGDAS)** shall be privatized pursuant to the Law on Privatization Procedures;
- LNG terminal activity is separated from storage activities as a separate activity unlike in the existing law where LNG activity is defined as a storage activity;
- Account unbundling for distribution and supply activities is foreseen for the distribution companies;
- Security of supply provisions are improved and the role of

Source: Complied by the Energy Community Secretariat

Refer to the market schemes legends on page 52 for a more detailed description.
Ministry is further strengthened;

- Principles and procedures pertaining to the adoption of all tariffs are slightly amended.

- Eligible consumer definition is further extended, including user unions such as organised industrial zones, consumers who remain outside the distribution areas, CNG and LNG users.

- Import, wholesale and production companies shall not sell more than 20% of the forecast national natural gas consumption.

- Privatization of the gas distribution network with more than 5.5 million residential customers.

b. Legal Assessment

1. Authorisation and Licensing

Under the Natural Gas Market Law, licenses are granted by EMRA for at least ten and up to 30 years. EMRA grants the licenses according to pre-defined conditions laid down in the Natural Gas Market Law and the By-law on Licenses. Separate licenses are required for import (whereas different conditions apply to long-term LNG import, pipeline import and spot LNG import, transmission, storage, distribution, wholesale supply, CNG and export). There is no separate retail supply license. Eligible customers can be supplied by import companies, wholesale companies and CNG companies. Non-eligible customers can only be supplied by distribution companies.

The chart below shows the number of licenses granted by EMRA for each natural gas market activity by 2015.

### Natural Gas Market Licenses

<table>
<thead>
<tr>
<th>Activity</th>
<th>Import</th>
<th>Export</th>
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Source: EMRA

i. Production

Natural gas production is not a market activity for which licenses are required from the regulatory authority within the scope of the Natural Gas Market Law. However, production companies need to obtain an exploration and production license from the General Directorate of Petroleum Affairs of MENR. In any case, production companies that want to sell the gas they produce need to obtain a wholesale license from EMRA.

Production companies holding a wholesale license may sell gas to wholesale companies, import companies, distribution companies, and eligible consumers up to an amount of 20% of total national consumption forecast. Production undertakings holding an export license may also engage in export.

ii. Transmission

According to the Natural Gas Market Law, transmission is not a monopoly. Interested parties demonstrating the technical and economic capability can also apply for a transmission license. However, at the moment BOTAS is the only pipeline transmission license holder.

According to the Natural Gas Market Law, natural gas transmission can also be performed by CNG trucks. There are 19 licensed CNG transmission (CNG truck) companies which in 2013 transported 81.4 mcm.

The transit regime is regulated in Turkey by the Law Concerning the Transit of Petroleum through Pipelines which came into force in 2000. The term petroleum includes natural hydrocarbons in liquid or gas state (natural gas) which are found in or extracted from underground. MENR is the sole institution responsible for issuing certificates, petroleum right ownership, and their transfer and for the implementation of the Law. The Law requires also an intergovernmental agreement for the implementation of transit projects. The Natural Gas Market Law regulates the transit transmission tariffs according to procedures and principles different from those applicable to local transmission tariffs for the purposes of encouraging transit transmission of natural gas. Moreover the natural gas transmission activities are subject to a transmission license from EMRA.

iii. Storage

Underground storage facilities and LNG terminals are both considered storage facilities under the Law. Technical and economical capability must be demonstrated to EMRA for obtaining a storage license. The licensees also need to commit to contribute to safe and coordinated system operation in storage capacity management.

Currently, two LNG facilities and one underground storage facility are in operation. One of the two licensed LNG facilities is owned and operated by BOTAS, whereas the other one is owned and operated by a private company. The only opera-
ional underground storage facility is owned and operated by a state-owned company Türkiye Petrolleri Anonim Ortaklıği (TPAO). There is also one ongoing underground storage investment of BOTAS. Additionally, in April 2014, EMRA granted storage licenses to two private companies.

iv. Distribution

The Natural Gas Market Law requires that license tenders are to be held by EMRA for each new distribution zone. Distribution rights for cities and municipalities have to be awarded under a tender. Once a distributor wins a tender, it applies the unit service and depreciation charge as specified in the tender announcement. After this period (fixed to eight years), its prices and conditions are to be reviewed every year by EMRA. Distributors have to construct, operate and extend distribution equipment as specified in the license and tender documents. Once the license for a distribution area has been awarded, the selected operator has to allow the local government to participate in up to 20% of the company’s equity. The size of public participation, to be remunerated at the nominal share price, is to be determined by EMRA. Distribution companies may hold a license for no more than two cities within the country. However, with the revision of the Law, this number has been increased to 20 cities. After obtaining the license in a competitive tender, the distribution companies are required to gasify all regions in their respective territories within five years.

v. Wholesale Supply, Import and Export

Wholesale supply is subject to a license under the Natural Gas Market Law. Production companies can thus engage in selling natural gas only after obtaining a wholesale license from EMRA. Wholesale license holders can sell natural gas to eligible customers, other wholesale companies, import companies, export companies, distribution companies and CNG sales companies and two private companies which were granted storage licenses (one for LNG and one for underground storage) by EMRA in 2015.

There is, however, no obligation of obtaining a separate wholesale license for licensees holding an import license. Import companies may also buy natural gas from production companies (holding a wholesale license) and export gas by holding a separate export license. However, import licensees are obliged to comply with a sales limit imposed on wholesale companies (20% of national consumption forecast). In 2008, an import license for spot LNG was introduced in the Natural Gas Market Law as an expedited license. Holders of this license type do not have storage obligations and do not have to demonstrate guarantees and contracts as import companies are required to do.

As regards exports, technical and economic capability must be demonstrated to EMRA as a precondition for obtaining an export license. The export of natural gas can be performed via pipelines, LNG trucks or CNG transmission vehicles. Currently, the only active exporter via pipeline is BOTAS, exporting natural gas to Greece since 2007.
2. Unbundling

The Natural Gas Market Law requires unbundling of accounts between all market activities. Additionally, a legal entity engaging in wholesale of natural gas may not perform transmission or distribution activities within or out of the system (with the exception of BOTAS which is exempted by the Temporary Article 2 of the Natural Gas Market Law). Since import license holders are also bound by the limitations and provisions applicable to wholesale companies, import companies are also subject to legal unbundling.

The Natural Gas Market Law anticipated BOTAS to be restructured after 2009 and to establish separate legal entities for carrying out the activities of transmission, storage, import and trade. All of these new legal entities, except for the one performing the activity of transmission, were to be privatized within two years thereof. However, BOTAS is still a state-owned company, and the unbundling target was not achieved. As a result, BOTAS remained a vertically integrated company, with only its accounts being unbundled.

The Natural Gas Market Law also foresees legal unbundling of distribution companies from import and wholesale activities. On the other hand, the distribution companies are entitled to sell natural gas to eligible and non-eligible customers. However, the distribution tender process and the structure of the retail sale tariff for non-eligible customers prohibits distribution system operators from obtaining profit from retail sales of natural gas.

Moreover, the Natural Gas Market Law foresees the privatization of seven distribution companies that existed before 2001. One distribution company was privatized even before the enforcement of the Law, and five were privatized since then. The only distribution company that existed before 2001 and has not been privatized is the distribution company in Istanbul, the biggest one in terms of customers.

The Turkish approach to unbundling includes a rule whereby any company performing activities in the natural gas market may hold stakes in only one company performing activities in a field other than its own field of activity. This provision does not differentiate between market activities. However, gas companies may not directly or indirectly obtain a majority of the capital or commercial assets of, or exercise control over the legal entity they participate in. As an example, a transmission company may hold stakes in an import company; however, it may not acquire more than 50% of its capital, assets, and voting rights and cannot have more than 50% representation rights in either board of directors or supervisory board. In its own field of activity, a gas company may not establish a subsidiary and/or may not hold stakes in any company. The rights of BOTAS regarding its existing participations in different activities are preserved by the Natural Gas Market Law.

3. Third Party Access

Transmission system operators are obliged by the Law to provide third party access to their networks on a non-discriminatory, cost-reflective and transparent basis. The transmission tariffs are set by EMRA on an entry/exits basis. The tariffs consist of capacity and transmission service charges. BOTAS is obliged to publish entry/exit capacities each year. Transmission system operators must provide transmission services through standardized transportation and delivery contracts. The Transmission Network Code is developed by the system operator and approved by EMRA. It also contains trading rules within the transmission system such as trades in national balancing points, transfer points and end of the day trade.

Although still vertically integrated, BOTAS has to abide by the rules related to third party access, as it holds a transmission license. Its Network Code has been in force since 2004 and has been amended constantly since then. Under the Network Code, capacity allocations for the transmission network are made on entry/exit points on a yearly basis and pro rata. EMRA tasked BOTAS to prepare a detailed study regarding daily and monthly capacity allocation. A web-based system operated by the system operator, the Electronic Bulletin Board (EBB), ensures transparency of the network operations. All capacity reservations, trades and allocations are entered in this system.

Transmission license holders are also under an obligation to connect to the transmission network all system users within 12 months. Connection criteria are determined by EMRA. System users cannot choose the level of connection which depends on the location of the customer. If the customer is within the borders of the distribution region defined by EMRA, they have to connect to the distribution network.

Access to the distribution networks is ensured according to model agreements published by EMRA and applied by the distribution companies. The distribution tariff consists of the unit purchase price of natural gas, unit service cost, depreciation costs of the distribution company and other factors to be determined by EMRA. However, special provisions apply for tendered distribution. During the first eight years after obtaining a distribution license (for an overall period of 30 years) as a result of a tender, the price for distributing natural gas is determined by the bidder. After those first eight years EMRA approves the distribution tariff under a price cap methodology. Distribution companies are also obliged to connect all customers upon request.

According to the Natural Gas Market Law, storage operators, either for underground storage or for LNG terminals, are also obliged to provide third party access. The Basic Usage Principles and Procedures of Marmara Ereglisi LNG Terminal and the Basic Usage Principles and Procedures of Aliaga LNG Terminal were approved by EMRA. They require capacity allocations for the relevant LNG terminals to be made on an annual basis under pro rata rules. The standard and ancillary services are rendered...
through Standardised LNG Terminal Service Contracts. The Basic Usage Principles and Procedures of Silivri Underground Storage Facility were approved by EMRA in 2012. However, 2.1 bcm/year of the total storage capacity is allocated to BOTAS, in accordance with an agreement concluded before the liberalisation with the state-owned TPAO. The rest of the storage capacity in this facility is open to third parties, capacity allocation is made yearly on a pro rata basis. The storage license holder renders services in accordance with the Storage Code and the Standard Storage Contracts.

The storage tariffs are not regulated and are determined between the parties. However, the Natural Gas Market Law empowers EMRA to determine the storage tariffs in case of lack of competition, which applies to storage in Turkey due to the limited storage capacity.

While third party access is the general rule under the Natural Gas Market Law, under exceptional circumstances defined in the Law and the relevant Network or Storage Codes, access can be refused. Grounds for refusal include insufficient capacity, public service obligations or serious economic and financial problems arising from existing contracts. System access cannot be rejected if the user requesting access undertakes the necessary expenses to eliminate the lack of capacity or connection. Disputes concerning third party access and connections are dealt with by EMRA.

Unlike Energy Community law, the Natural Gas Market Law does not contain any provision concerning exemption for new gas infrastructures such as interconnectors, LNG and storage facilities. Thus, all new infrastructures are bound to grant third party access.

Finally, contradictory provisions apply to transit of natural gas. In Turkey transportation of natural gas by domestic pipelines and transit pipelines are considered as two separate activities. On the one hand, the Law on Transit Passage of Oil via Pipelines No. 4586 from 2000 requires intergovernmental agreements on transit to be in place. The intergovernmental agreements address project specific concerns and issues between the countries concerned in accordance with the Law on Transit Passage of Oil via Pipelines No. 4586. Accordingly, access, tariff and other issues concerning transit pipelines are to be covered by intergovernmental agreements. MENR, which has a department responsible for transit petroleum pipelines, is in charge of negotiating the agreements concerning transnational oil and gas pipeline projects and providing necessary coordination among relevant State bodies/institutions to carry out all responsibilities of the State stemming from the project agreements. On the other hand, the Natural Gas Market Law does not define transit or transit supply as an activity but, in the context of determining system users, refers to the transit gas supplier as a system user. The Natural Gas Market Law also entitles EMRA to determine more favourable transit tariffs than other tariffs. However, they have never been developed. The Network Code for the transmission system is meant to be used by either import, wholesale or export companies. Under these circumstances, a system user holding both an import and an export license can actually perform cross-border trade. For instance, the first interconnector to enable gas export from Turkey from 2007, the Interconnector Turkey–Greece (ITGI), is regarded as an exit of the transmission system where export is performed. Consequently, BOTAS exports natural gas to Greece under its export license. This exit point can potentially serve any export licensee to export to Greece. Thus the Turkish system would correspond to an entry/exit system and does not differentiate between transmission and transit. In any event, there is no transit of gas via the national gas transmission system at the moment. However, under the new intergovernmental agreements such as the one covering the TANAP project, transit will be carried out by a separate pipeline, i.e. other than the national transmission system. Taking into account both the Natural Gas Market Law and the Transit Law No. 4586 from 2000, transit of natural gas will thus differ from transmission.

4. Market Opening, Eligible Customers and Price Regulation

Under the Natural Gas Market Law, eligibility is linked to either the total annual consumption or to different categories of customers further specified by the Law. Accordingly, companies purchasing natural gas for electricity generation, cogeneration facilities, user unions, and companies producing natural gas are deemed eligible irrespective of their annual natural gas consumption. Besides these, EMRA is entitled to determine an eligibility threshold annually until all customers become eligible. Currently there is no set date for the final removal of the eligibility limits. However, since December 2012 all customers except households became eligible to choose their supplier. Since then EMRA also gradually decreases the eligibility threshold for household customers on an annual basis. In December 2014, the eligibility threshold to be applied for the household customers in 2015 was set by EMRA at the volume of 75,000 cm/year. If eligible customers do not exercise their eligibility right, they can continue to be supplied by their incumbent distribution company.

A decision of EMRA from December 2012 prescribes the supplier switching procedure. According to this decision, 15 days after an eligible customer notifies signature of an agreement with a new supplier to the distribution company, the later has to sign the transportation and delivery service agreements with the new eligible customer. Model agreements published by EMRA in late 2013 for natural gas transportation and delivery services for distribution regions further provide transparency to the supplier switching process and improve the functioning of the retail market. Moreover, customer rights are detailed in EMRA’s secondary legislation. EMRA deals with customers’ complaints in the scope of those acts.

The final retail sale price of natural gas consists of the unit service, the depreciation charge and the natural gas purchase price that is “passed through” without giving any profit to the distribution company. This price dynamic is monitored by
EMRA. Distribution companies are also obliged to buy natural gas from the cheapest source and they are only entitled to buy a maximum of 50% of the gas from one source. However, under the current market conditions with 80% of the market dominated by BOTAS it is rather impossible to abide by this rule.

On the wholesale market, structural requirements affect market opening and the conditions for competition. While wholesale prices are determined freely by the parties since 2007, a wholesale company may not sell gas volumes exceeding 20% of the annual national consumption forecast. The same applies to imported gas volumes. Moreover, permits are required for each individual import contract. Import companies must also demonstrate to EMRA their technical and economical capability for import. They must submit guarantees regarding the source, reserves, and production facilities. Additionally, import companies have to show the capability to store an amount corresponding to 10% of the natural gas to be imported every year. Import companies are required to inform EMRA on any changes concerning terms of contract, extension of duration, envisaged annual and seasonal import amounts.

These limitations apply to new import sources. Different conditions apply to imports from countries with which BOTAS has existing contracts. In principle, no new gas purchase contracts can be executed by any import company for gas coming from countries which have already signed contracts with BOTAS until the expiration of these contracts. In the latter case, new import contracts can only be executed for the same amounts (with the exception of LNG imports). However, new gas import agreements can be concluded with the purpose of exportation or in case there is insufficient natural gas supply. Moreover, EMRA may give permission for import from countries other than those with which contracts have already been signed by BOTAS taking into consideration the establishment of a competitive environment in the market, the obligations arising from existing contracts and export connections. The table below shows the natural gas sale and purchase agreements signed by BOTAS.

**Table: Natural Gas Import Contracts by Country**

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* Shows the plateau period (billion Cm3/year).
*** In line with the Temporary Article 2 of the Natural Gas Market Law, natural gas sale and purchase agreement corresponding to 4 billion Cm3/year was transferred to Shell Enerji A.S., Avrasya Gaz A.S., Bosphorus Gaz Corporation A.S, Enerco Enerji Sanayi ve Ticaret A.S.

In July 2012, when a 6 bcm/year contract concluded by BOTAS with Gazprom expired, EMRA granted four companies national gas import licenses for the total of 6 bcm/year. These private companies started natural gas import as of 2013. Moreover, by a decision of EMRA, private companies were allowed to import natural gas from Iraq, a country with which BOTAS did not have import agreements. In September 2013, one company obtained an import license in order to import natural gas from Iraq.

By an amendment to the Natural Gas Market Law of July 2008, all restrictions for entering into LNG import transactions and limitations regarding the source country of LNG import have been lifted.

In order to decrease its dominance, the Natural Gas Market Law requires BOTAS to gradually transfer its import contracts until its market share decreases to 20% of the annual consumption (by 2009). However, only one contract release by BOTAS has been finalized, Russian Federation West (a contract about 8 bcm). In May 2011, BOTAS announced a tender for contract release for the contract with Russia on the Blue Stream pipeline. EMRA pre-qualified six companies and BOTAS held a tender which was, however, cancelled due to inconformity of the applications with the tender criteria. There have been no tenders after 2011.

5. Balancing

BOTAS, as a transmission license holder, is responsible for balancing the natural gas transmission network. According to the provisions of the Network Code, BOTAS can charge system users in imbalance a balancing penalty. On the other hand, BOTAS as a vertically integrated company, also supplies the balancing gas. The price of balancing gas in the transmission network is determined by BOTAS on a monthly basis. However, system users have the right to participate in end of the day trade with other system users in order to neutralize their imbalances. Only if not settled in that way, balancing gas is provided by BOTAS. In late 2013, EMRA started testing a new market-based
balancing regime for transmission. Virtual implementation in the form of a web module incorporated into the Electronic Bulletin Board (EBB) is carried out until the implementation is finalised by way of an amendment to the Network Code. Under the new balancing regime, all system users will bid for satisfying their balancing demands as declared by the system operator, and provide balancing services. The balancing price will thus be determined under free market conditions.

6. Customer Protection

The Natural Gas Market Law and the By-law on Distribution and Customer Services contain provisions concerning customer connections, agreements, complaints and invoices and lists conditions for termination of service and service agreements. Thus the standards to be fulfilled by the distribution companies are set by EMRA. Furthermore, customer complaints on transmission and distribution system operators’ decisions are also handled by EMRA. There are no provisions protecting vulnerable customers.

7. Security of Supply

The issues addressed by Regulation (EU) 994/2010 are not covered in primary legislation. Law No. 3154 from 1985 on Organization and Duties of the Ministry of Energy and Natural Resources contains some general provisions concerning the Ministry’s functions concerning energy security. The Ministry has general power and oversight concerning security of supply and coordination between the entities in the market as envisaged in Directive 2004/67/EC.

The Natural Gas Market Law also includes several provisions addressing security of supply. An obligation of 10% storage capacity of yearly imported gas is imposed on the import undertakings. Wholesale companies are required to procure and store natural gas for satisfying the seasonal and daily needs of their customers. In the event of a supply deficit, EMRA may give permission to enable additional imports. Finally, the Network Code approved by EMRA contains provisions concerning supply curtailment and emergency situations. Under these provisions electricity generation facilities with dual fuel capability are the first customers to be curtailed, followed by the remaining generation facilities and eventually industrial customers. Household customers are the last to be cut off from gas supply.

C. Concluding Remarks

The Turkish gas sector has been developing in parallel with the EU Member States’ markets since the market opening in 2002. There has been continuous progress in establishing a competitive market despite some bottlenecks and difficulties arising mainly from the monopolistic nature of BOTAS. In addition, certain provisions of the Natural Gas Market Law, such as the contract release process intended to reduce the share of BOTAS import contracts in national consumption to 20% by 2009 and the restructuring process of BOTAS, could not be fulfilled.

Since the beginning of the liberalization of the Turkish natural gas market in 2002, important steps have been taken with regard to transition from a monopolistic sector to a competitive natural gas market. Since then, legislation aiming at creating a level playing field for all the market participants has been adopted and a natural gas market with multiple players has been established with several license holders engaging in various market activities, import and export, transmission, storage, wholesale, distribution and CNG activities. Significant investments have been made by both transmission and distribution companies and non-discriminatory third party access has been ensured to the natural gas transmission network, the natural gas underground storage facilities and the LNG terminals.

Within this framework several other important steps that have been achieved under the Natural Gas Market Law could be summarised as follows;

- All secondary legislation has been completed in public consultation in 2002 and the market was opened to competition that year;
- A Transmission Network Code has been in force since 1 September 2004. Principles and procedures pertaining to third party access are set out in the Network Code. Capacity allocation is made under an entry/exit system on a yearly basis;
- An Electronic Bulletin Board (EBB) has been established by BOTAS;
- Principles and procedures related to price and tariff regulation have been determined and published for all natural gas activities;
- The tariffs based on the entry/exit system for the transmission network are being published annually;
- The distribution companies which belonged to BOTAS were privatized and the involvement of BOTAS in distribution activities has been abolished;
- The distribution tendering procedure has been completed by EMRA for 70 out of 81 cities since market liberalization. The new distribution licensees are private investors;
- A gas release programme was achieved for the transfer of 4 bcm to private companies;
- The contract for Russian gas for 6 bcm which was terminated in 2011 has been successfully transferred to private companies;
- The eligibility threshold has been gradually decreased by EMRA and all consumers other than households became eligible in 2013.

Through these basic achievements Turkey has made important
progress in aligning its gas legislation with the EU gas acquis.

The Natural Gas Market Law and relevant secondary legislation broadly correspond to the main provisions of Directive 2003/55/EC, such as authorisation by way of licensing according to pre-defined, non-discriminatory conditions, legal unbundling of transmission activities from other energy activities, approval of regulated tariffs and third party access rules to networks, LNG and storage facilities by EMRA, diminishing eligibility limits (though not yet finalised) and settlement of disputes by EMRA. The fact that the distribution company is responsible for both network operation and retail sale of natural gas is not in line with the acquis.

Compliance with Directive 2009/73/EC regarding rules concerning unbundling of transmission operators, rules on designating a distribution system operator, combined operator, monitoring reports on security of supply, protection of vulnerable customers, exemptions concerning new infrastructure is not achieved yet as these issues are not covered in the Natural Gas Market Law. Furthermore, the regime for transit of natural gas differs from the regime for transmission of natural gas which is not in line with the acquis.

The Draft Amendment of the Natural Gas Market Law No. 4646 was sent to the Parliament in August 2014. The Law covers the import, transmission, distribution, storage, marketing, trade and export of natural gas and the rights and obligations of all real and legal persons relating to these activities.

In conclusion, natural gas market liberalisation in Turkey lags behind electricity market liberalisation. Overall, although the Natural Gas Market Law was enacted even before Directive 2003/55/EC, the main key elements, inter alia unbundling of activities including account unbundling, prohibition of cross-subsidies, transparency, non-discrimination, market opening, eligibility threshold, third party access and public service obligations, have been taken into account in legislation. However, the majority of these objectives have not been achieved. Moreover, efforts for closer alignment with Directive 2009/73/EC will be necessary.
The Turkish National Regulatory Authority, EMRA, was established in 2001 by the Electricity Market Law No. 4628. Still in the same year, the name of the authority was changed to Energy Market Regulatory Authority by the Natural Gas Market Law No. 4646 under which the authority also assumed responsibilities concerning the natural gas market. In the coming years, EMRA assumed competences also within the scopes of the Petroleum Market Law No. 5015 and the LPG Market Law No. 5307. Powers and tasks of EMRA regarding renewable energy resources are also included in the Renewable Energy Law No. 5346 introduced in 2005. In 2013, the Law No. 4628 became the Law on Organization and Duties of Energy Market Regulatory Authority and the new Electricity Market Law No. 6446 was adopted. As a result of these developments, EMRA’s organisation and competences are mainly defined by Law No. 4628 and the other laws governing the respective energy sectors.

EMRA is the sole regulator responsible for the entire country. The Turkish Competition Authority and the Capital Markets Board have jurisdictional powers over the energy sectors regarding competition and capital market issues.

The decision-making body of EMRA is the EMRA Board. The Board is composed of nine Board members including one Chairman and one Vice-Chairman. They are appointed by the Council of Ministers for six years without a prior public selection procedure. The appointment criteria for the Board members are defined in the Law No. 4628. Their term of office can be renewed by the Council of Ministers. A limit for the number of term renewals does not exist. Board members cannot be dismissed from office unless the circumstances in the Law are met. These relate to criminal conviction, long-term illness and no longer meeting the conditions for being a Government official. A rotation scheme for the Board members does not exist.

EMRA’s number of employees amounted to 436 by the end of 2013. Although the right to take a decision on employing expert personnel lies with EMRA, staff to be appointed either have to pass a general Government officials exam or be transferred from another Government institution.

EMRA’s independence is granted by law. It includes decision-making powers subject only to judicial review of the decisions. Decisions regulating the market are published in the ‘Official Journal’ and on the website of EMRA. However, Decree No. 649 adopted in 2011 allows the competent ministers to monitor and inspect the activities of independent regulatory authorities, including EMRA. This power has not been exercised so far.

The regulatory fees applied to the licensees (fixed license fee, annual license fee, license amendment fees, administrative fines, publication revenues) are approved by EMRA. They form the regulator’s budget, thus ensuring EMRA’s financial independence. In principle, it is expected that EMRA’s revenues will cover all of its expenses. Excess revenues are transferred to the Ministry of Finance to be incorporated in the general State budget. EMRA’s forecasted Annual Budget is approved by the Parliament and published in the ‘Official Journal’.

The employees’ salaries are determined by the Decree No. 666 of 2011. It provides for the salary levels to be benchmarked against the salaries of equivalent Government officials.

Board members cannot work or acquire shares in public or private companies engaging in the electricity, natural gas, liquefied petroleum gas (LPG) and petroleum markets. They are also not allowed to directly or indirectly have relations that might provide additional income with these companies. These conditions continue to apply for a period of two years after the end of their position as a Board member.

The rules governing the decision-making process of EMRA are determined by Law No. 4628 as well as separate secondary legislation issued by EMRA. When issuing secondary legislation and long-term programmes, EMRA has to initiate a public consultation.

EMRA has the obligation to publish an Annual Report which is sent to MENR for information purposes. Based on the Law No. 4628, the Prime Ministry High Supervision Board has the right to audit the regulator. Also the High Court of Audit audits the expenditures of EMRA. Additionally, being a State authority, the State Supervision Board has the right to inspect EMRA’s activities if deemed necessary.

In line with the relevant market laws (Electricity, Natural Gas, Petroleum and LPG), EMRA regulates the respective energy sectors by issuing secondary legislation and licenses, monitors the activities (covering conformity with the legislation and collecting market data), investigates the market participants’ compliance, gives orders and issues legally binding decisions and penalties to
the licensees. Moreover, EMRA settles disputes between market participants and between consumers and market participants.

The competences of EMRA include the power to approve or fix distribution and transmission tariffs for access and use of the electricity and natural gas systems. Tariffs are set taking into account the investment plans and their fulfilment undertaken by the system operator. EMRA also has the competences to regulate cross-border capacity allocation and balancing regimes in line with the relevant secondary legislation.

EMRA has the right to open investigations on market participants’ compliance with the relevant legislation in all energy markets it regulates. If non-compliance persists after EMRA’s written warning, EMRA is entitled to issue administrative fines and double the fines in case of repetition of the infringement. In the event that the license holders do not abide by law, EMRA may impose penalties either in the form of a monetary fine or the cancellation of the license. The amount of penalties is categorised according to the offence. In the Electricity Market Law, penalties range from 500,000 to 1,000,000 TRY according to the category of infringement, while in the Natural Gas Market Law the penalties are in the range between 350,000 and 600,000 TRY. According to the Petroleum Market Law, penalties in the range between 350,000 and 1,000,000 TRY can be imposed. In case of repetition of the infringement within a certain period of time the fine can be doubled. The amounts of penalties in the Market Laws are reviewed each year by the Ministry of Finance.

e. Concluding Remarks

EMRA is the single authority for regulating the energy sector of Turkey equipped with country-wide regulatory competences in the gas and electricity sector as required by the Third Energy Package.

Although the term of office of Board members is set for a period of 6 years and thereby in conformity with the Third Package, neither a limitation on term renewal nor a rotation scheme as required by the Third Package is in place. Commissioners are appointed by the Council of Ministers without public announcement of vacancies or involvement of a committee of neutral experts for short-listing of candidates.

EMRA takes finally binding decisions autonomously and independently. This is supported by a legal prohibition for top management to execute political functions, to have interest in regulated utilities or have an employment relationship inside the energy sector. Sanction mechanisms (dismissal) are in place in case of non-compliance. However, a Law adopted in 2011 allows the competent minister to monitor and inspect the activities of EMRA. Even though until now this provision has not been used, maintaining it in force may encroach on EMRA’s independence.

EMRA is by law set up as an institution legally distinct and functionally independent from any other public entity. The establishment of EMRA is solely based on legislation, meaning that it cannot be liquidated by an act of another public institution. The dismissal of Commissioners is by law limited to cases of conflict of interest or carrying out of a criminal act and thereby uncritical in terms of potential political intervention.

EMRA has autonomy in defining its annual Work Programme as well as in setting up and using its Annual Budget. EMRA provides accountability regarding its activities by presenting its Annual Report but does not face the need for approval of its Annual Report or even sanctions in case of dissenting opinions.

Management is in principle independent in relation to staff appointments and organisation of the EMRA’s internal structure. However the appointment of staff requires passing a civil servant exam. Based on this, staff salaries are set on a level comparable to the salaries of civil servants and not to those of the regulated industry.
a. Sector Overview

As one of the largest markets in the region, Turkey is dependent on foreign resources and imports for more than 90% of its crude oil and refined petroleum products consumption. The main countries from which Turkey imports are Iran, Russia, Iraq, Saudi Arabia, Kazakhstan and Nigeria. Surrounded by oil rich countries, Turkey acts as an energy bridge to major markets in Europe due to its geostrategic position.

Upstream and downstream oil markets are governed by different laws and are regulated by different institutions. The Petroleum Law No. 6491 governs the upstream market for which the General Directorate of Petroleum Affairs is the responsible institution. The Petroleum Market Law No. 5015 governs the downstream market for which EMRA is in charge.

1. Upstream

According to the Petroleum Law, companies are required to obtain a license from the General Directorate of Petroleum Affairs in order to engage in exploration and production of petroleum and natural gas. In 2014, 45 licensed companies operated on 81 offshore and 143 onshore blocks. These companies drilled 100 wells for production and 89 wells for exploration. By the end of 2014, remaining recoverable reserves were 377.7 million barrels of oil and 3.9 bcm of natural gas.

The major market participant in the upstream segment is the state-owned company TPAO with a 71% share in the crude oil production and 50% share in the natural gas production of Turkey.

2. Downstream

Under the Petroleum Market Law, refining, transmission, distribution, bunker delivery, retailing and storage are considered market activities.

The prices are monitored by EMRA for cost-reflectivity. Based on the Petroleum Market Law, EMRA has the power to set a price ceiling to be observed by the market participants.

By the end of 2014, the total size of oil traded on the market was 30.3 million tonnes of which around 4.8 million tonnes were exported through distribution and bunker delivery companies.

Crude Oil and Natural Gas Production 2010 - 2014

<table>
<thead>
<tr>
<th>Years</th>
<th>Crude Oil Production (million barrels)</th>
<th>TPAO Crude Oil Production (million barrels)</th>
<th>Natural Gas Production (mcm)</th>
<th>TPAO Natural Gas Production (mcm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>17.3</td>
<td>12.7</td>
<td>726</td>
<td>260.7</td>
</tr>
<tr>
<td>2011</td>
<td>16.4</td>
<td>12.1</td>
<td>793.4</td>
<td>317.7</td>
</tr>
<tr>
<td>2012</td>
<td>16.2</td>
<td>11.6</td>
<td>664.4</td>
<td>339.7</td>
</tr>
<tr>
<td>2013</td>
<td>16.6</td>
<td>12.3</td>
<td>561.5</td>
<td>307.6</td>
</tr>
<tr>
<td>2014</td>
<td>17.1</td>
<td>12.1</td>
<td>502.1</td>
<td>251.8</td>
</tr>
</tbody>
</table>

Refinery Output by Product 2012 - 2014

<table>
<thead>
<tr>
<th>Product (in tonnes)</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gasoline</td>
<td>4,368,690</td>
<td>4,368,690</td>
<td>3,948,274</td>
</tr>
<tr>
<td>Diesel</td>
<td>7,795,214</td>
<td>7,636,794</td>
<td>6,077,434</td>
</tr>
<tr>
<td>Fuel Oil</td>
<td>1,074,784</td>
<td>800,572</td>
<td>809,226</td>
</tr>
<tr>
<td>Others</td>
<td>8,876,926</td>
<td>8,803,650</td>
<td>9,254,084</td>
</tr>
<tr>
<td>Total</td>
<td>22,115,614</td>
<td>21,548,319</td>
<td>20,089,018</td>
</tr>
</tbody>
</table>

Source: GDPA Annual Reports

Source: EMRA Petroleum Market Report 2014
There are four refineries in operation in Turkey, owned by TÜPRAS. Two other refineries are in the project engineering phase. The output of the refineries in operation is given in the table on page 34.

Currently, there are 82 active distributors in the petroleum market. Total sales volume of these distributors was 19 million tonnes in 2013. The sales volume of the first 10 companies amounts to 83.7% of the market. The sales volume of these companies is given in the table below.

<table>
<thead>
<tr>
<th>Company</th>
<th>Sales Volume (tonnes)</th>
</tr>
</thead>
<tbody>
<tr>
<td>OMV Petrol Ofisi Anonim Sirketi</td>
<td>4,837,085</td>
</tr>
<tr>
<td>Opet Petrolcülük Anonim Sirketi</td>
<td>3,453,618</td>
</tr>
<tr>
<td>Shell &amp; Tursas Petrol Anonim Sirketi</td>
<td>3,466,096</td>
</tr>
<tr>
<td>BP Petrolleri Anonim Sirketi</td>
<td>1,775,522</td>
</tr>
<tr>
<td>Total Oil Türkiye Anonim Sirketi</td>
<td>1,057,748</td>
</tr>
<tr>
<td>Tp Petrol Dagıtım Anonim Sirketi</td>
<td>873,079</td>
</tr>
<tr>
<td>Lukoil Eurasia Petrol Anonim Sirketi</td>
<td>503,402</td>
</tr>
<tr>
<td>Aytemiz Akaryakit Dagıtım Anonim Sirketi</td>
<td>383,400</td>
</tr>
<tr>
<td>Milan Petrol Sanayi ve Ticaret Anonim Sirketi</td>
<td>319,070</td>
</tr>
<tr>
<td>Altınbaş Petrol ve Ticaret Anonim Sirketi</td>
<td>319,108</td>
</tr>
<tr>
<td>Others</td>
<td>2,945,981</td>
</tr>
</tbody>
</table>

Source: EMRA Petroleum Market Report 2014

Retailing of petroleum products is done via petroleum stations where the licensees have exclusive dealership agreements with distribution companies. Based on a Decision of the Competition Authority (further details about which are provided in the competition section of this Report), these agreements are signed for a period of maximum five years. There are 12,992 licensees authorized as petroleum stations.

There are 61 bunker delivery companies that are authorized to supply marine vehicles and airplanes. These companies delivered 1.38 million tonnes of refined petroleum products in 2014.

By the end of 2014 there were 108 storage licensees with a total storage capacity of 4.9 million tonnes.

3. Oil Stockholding Policy

Turkey meets its stockholding obligation under the International Energy Agency (IEA) by placing a minimum stockholding obligation on the industry. According to the Petroleum Market Law and the LPG Market Law, the country should hold oil stocks equivalent to at least 90 days of its net imports. Refineries, fuel distribution and LPG distribution companies are obliged to hold product stocks equivalent to at least 20 days based on the average daily sales of the previous year, while eligible customers consuming more than 20,000 tonnes annually are required to hold stocks for 15 days consumption of each type of liquid fuel.

EMRA conducts regular on-site audits of randomly selected facilities twice a year to monitor the physical availability and quality of compulsory stocks. In cases of failure to comply with stock obligations in terms of quality, quantity and location of oil products, companies can be obliged to pay fines, and, in case of serious infringement, the license of the company may be withdrawn.

Turkish emergency oil stocks are mainly held by TÜPRAS. Since Turkish legislation does not allow emergency oil reserves to be held abroad, Turkey does not have bilateral agreements nor ticket arrangements with other countries. All emergency oil stocks are held in the country.

The Turkish Government does not provide financial support for building compulsory industry stocks. All refineries, distributors and eligible consumers have to fund the operational costs themselves for meeting the emergency requirements. These costs are passed on to final customers through market prices. Around 20% of the total oil stocks are held in the form of crude oil.

4. Storage Capacity

Total storage capacity of oil and refined petroleum products distributed per category of licensee by the end of 2013 is presented in the pie chart below.

Source: EMRA Petroleum Market Report 2014
add 3.2 mcm of storage capacity, while the Samsun-Ceyhan oil pipeline project needs 14 oil tanks which amount to 2.1 mcm. Total storage capacity of the country will be expanded to over 13.7 mcm with completion of those new refineries.

5. Transit

Similarly as in the gas sector, transportation of oil by domestic and transit pipelines are considered as two separate activities in Turkey. Transit pipeline projects are developed and realized via intergovernmental agreements between the countries concerned, which address project specific issues, in accordance with the Law on Transit Passage of Oil via Pipelines No. 4586.

A project for the transportation of crude oil produced mainly in the Azeri-Chirag-Guneshli (ACG) offshore fields of Azerbaijan, the Baku-Tbilisi-Ceyhan (BTC) crude oil pipeline is operated under the sponsorship of a group of petroleum companies, collectively BTC Co., formerly known as MEP Participants. BTC Co. is led by BP Exploration (Caspian Sea) Ltd. Other shareholders include SOCAR, Chevron, Statoil BTC Caspian AS, TPAO, ENI, Total, INPEX, ConocoPhillips, and ONGC Videsh Limited. An intergovernmental agreement among Azerbaijan, Georgia and Turkey and the host government agreements between the governments of these countries and shareholders of BTC Co. constitute the legal framework of the project.

Since 4 June 2006, the BTC pipeline has been operating commercially. The first oil from ACG reached Ceyhan marine terminal on 28 May 2006 and the first tanker was commercially commissioned on 4 June 2006. Furthermore, Kazakh and Turkmen oil have been transported through the BTC pipeline since 2008 depending on available spare capacity. The pipeline route is from the Sangachal terminal in Baku, Azerbaijan via Georgia to the Turkish Mediterranean coast at Ceyhan where all pumped crude oil via pipelines are stored and delivered to world markets by vessels. The total length of the pipeline is 1,760 km and the original capacity was 1 million barrels per day.

The BTC pipeline has a capacity of 50 million tonnes of crude oil per year and is expected to remain operational for 40 years with possible extensions of two subsequent 10 year periods.

Regarding the Iraq-Turkey Crude Oil Pipeline, on 19 September 2010 an amendment to the Crude Oil Pipeline Agreement dated 27 August 1973 and related protocols and agreements were signed and the duration of these agreements extended for 15 plus 5 years. This pipeline which has been in operation since 1976 was constructed for the transportation of the crude oil, extracted from Kirkuk and other parts of Iraq, to the Ceyhan terminal. The pipeline system consists of two parallel lines of 641 and 656 km in Turkish territory, with 40 and 46 inches of pipe diameter, and the annual transportation capacity is 70.9 million barrels of oil. The total capacity of the pipeline is not used due to the fact that the central Government is unable to provide sufficient crude oil to the system because of the political instability in Iraq.

6. Decision-making Structure and Stock Drawdown

EMRA is responsible for issuing regulations regarding the inspection of the stock holding requirements of refineries and fuel and LPG distribution companies. The Petroleum Market Law No. 5015 stipulates the tasks of the Council of Ministers. These include; determination of the number of days for the identification of the national oil stock requirement, management of the obligations regarding oil stocks, management of service procurement and taking the necessary measures for stocks and stockholding, deciding on sales in case of exceptional circumstances, and determination of principles and procedures of the Oil Stock Commission guiding the Council of Ministers. EMRA is also entitled to regulate the mix of petroleum products in stock.

b. Concluding Remarks

Turkey is well advanced in terms of energy security and planning for supply interruptions and it has developed detailed plans for such purposes. This is owed to Turkish membership in the IEA.

Oil has been one of the main energy sources in Turkey, accounting for 27% of the country’s total primary energy supply in 2012. Turkey meets its 90-day stockholding obligation as required by the IEA by placing a minimum stockholding obligation on the oil industry.

Moreover, with minor legislative changes Turkey would comply with the new EU acquis on oil stocks, Directive 2009/119/EC. In order to be fully aligned, Turkey has to hold more than 90 days of net imports or 61 days of inland consumption, and should include additional 10% of stocking obligations for oil which is deemed inaccessible because it is held at the bottom of the tanks.
6 Renewable Energy

a. Sector Overview


With its favourable geography, Turkey has a high potential for producing energy from renewable sources. Hydropower development in particular is seen as a major target in the energy policy of the country. The 2009 ‘Electricity Market and Supply Security Strategy Paper’ includes an indicative target of 30% of renewable energy in the electricity generation by 2023, while reducing the share of natural gas in electricity production to 30%. According to the energy balance of MENR, renewable energy accounted for around 10% of the primary energy supply in 2014.

Present and Targeted Renewable Energy Capacities in 2013

<table>
<thead>
<tr>
<th>Renewable energy sources</th>
<th>In operation at end of 2014 (MW)</th>
<th>In development (MW)</th>
<th>Target in 2023</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydropower</td>
<td>23,544</td>
<td>9,400</td>
<td>34,000</td>
</tr>
<tr>
<td>Wind</td>
<td>3,630</td>
<td>6,013,8</td>
<td>20,000</td>
</tr>
<tr>
<td>Solar</td>
<td>40.2</td>
<td>N/A</td>
<td>5,000</td>
</tr>
<tr>
<td>Geothermal</td>
<td>404.9</td>
<td>327.9</td>
<td>1,000</td>
</tr>
<tr>
<td>Biomass</td>
<td>208</td>
<td>31.4</td>
<td>1,000</td>
</tr>
</tbody>
</table>

Sources: Ministry of Energy and Natural Resources, EMRA, General Directorate of Renewable Energy, others

Another major milestone is the National Renewable Energy Action Plan (NREAP) published in December 2014. As a candidate country for EU membership, Turkey has prepared the NREAP as proof of its commitment to its renewable energy targets conforming to Directive 2009/28/EC. The document contains an analysis of the current situation and obstacles to the development of renewable energy, the targets for its development, actions that need to be taken to achieve these targets as well as an impact analysis.

Two State institutions, MENR and EMRA, are responsible for the promotion of renewable energy. Primary legislation covering the support and utilization of renewables in Turkey is the Law on Utilisation of Renewable Energy in Electricity Generation No. 5346 from 2005. The Law defines renewable sources as hydro, wind, solar, geothermal, biomass, biogas, wave, stream and tidal energy. Amendments made in 2010 brought significant improvements including categorising the renewable energy support scheme according to the source and providing additional feed-in tariffs for use of domestically manufactured equipment. Law No. 5346 also covers provisions on, inter alia, prioritising renewable energy licensees’ connection applications. An amendment to the Law of January 2011 introduced a renewable energy support scheme (YEKDEM).

Feed-in Tariffs for Renewable Energy

<table>
<thead>
<tr>
<th>Type of Plant</th>
<th>Feed-in Tariffs ($cent/kWh)</th>
<th>Additional rate from domestically manufactured equipment usage ($cent/kWh)</th>
<th>Max Feed-in Tariffs ($cent/kWh)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydro</td>
<td>7.3</td>
<td>2.3</td>
<td>9.6</td>
</tr>
<tr>
<td>Wind</td>
<td>7.3</td>
<td>3.7</td>
<td>11</td>
</tr>
<tr>
<td>Geothermal</td>
<td>10.5</td>
<td>2.7</td>
<td>13.2</td>
</tr>
<tr>
<td>Biomass</td>
<td>13.3</td>
<td>5.6</td>
<td>18.9</td>
</tr>
<tr>
<td>Solar PV</td>
<td>13.3</td>
<td>6.7</td>
<td>20</td>
</tr>
<tr>
<td>Solar CHP</td>
<td>13.3</td>
<td>9.2</td>
<td>22.5</td>
</tr>
</tbody>
</table>

Source: Law on Utilisation of Renewable Energy in Electricity Generation No. 5346

Additionally to the feed-in tariff, there is a domestic equipment component (local content requirement) to incentivize manufacturing of renewable equipment in the country. The domestic equipment component consists of an optional additional feed-in tariff. The base feed-in tariff and the domestic equipment component can be combined in order to increase the feasibility...
of projects. Renewable energy generation licensees have the option to choose either to generate electricity and sell it on the market or to benefit from the feed-in tariff. The option has to be declared to EMRA in October each year. During the year it is not possible to opt-in or opt-out. The total feed-in revenue to be received by the generators choosing the feed-in tariff are accumulated in a cost pool and then allocated to all suppliers proportionally to the size of their consumption portfolio. This scheme grants generators a guaranteed tariff for 10 years starting from the operation of the facility.

The connection to the grid is made by way of a bidding procedure for solar and wind licensed projects. The available connection regions and points are published by TEIAS, the transmission system operator, until 1 April each year. The grid capacity announced for wind projects is 2,000 MW for 2016. According to the Law on Utilisation of Renewable Energy in Electricity Generation, renewable energy licensees’ connection applications and dispatch are prioritised. A guarantee of origin concept, which would ensure provision of the share of energy from renewable sources in the electricity mix to the end-customers, has not been introduced but MENR is conducting studies on this issue.

Aside from licensed renewable generation, the former Electricity Market Law No. 4628 originally provided the possibility to operate small scale renewable facilities on a non-licensed scheme. The major goal of this incentive was to promote distributed generation. The limit for this non-licensed generation was 200 kW installed capacity at the initial enactment of the Law. The Electricity Market Law increased this limit to a maximum of 1 MW.

The administrative procedures regarding the supporting authorisation, permitting and licensing is stated in the Electricity Market Law No. 6446 and the Law on Utilisation of Renewable Energy in Electricity Generation. Accordingly, a pre-licensing period is granted to investors in order to obtain the necessary authorisation regarding the land and the electricity resource. The Law No. 5346 also includes provisions regarding the use of land in State ownership in coordination with the related Ministries and Treasury.

i. Hydropower Potential and Current Status

Hydroelectricity is seen as the primary renewable energy resource in Turkey. MENR, the Directorate of Renewable Energy and related institutions have analysed the energy potential of the country. Theoretical, technical and economical hydropower potential in Turkey was announced to be 433 TWh/year, 216 TWh/year and 140 TWh/year respectively.

By the end of 2014, total installed capacity of hydro generation was 23.6 GW and the number of hydro power plants in operation was 521. In 2014, only 40.4 TWh of energy was produced due to a dry season. This generation volume corresponded to 16.1% of total electricity generation compared with 23%, which was the average for the last 10 years, indicating a high impact of climate conditions on hydro availability.

Other than the hydro power plants already in operation, by the end of 2014 there were 318 plants under construction, which corresponds to an additional 9.4 GW of capacity.

ii. Wind Power Potential and Current Status

Electricity generation from wind has the second highest potential. Turkey is still at the initial stages of wind energy development. The studies undertaken by the General Directorate of Renewable Energy resulted in a wind energy potential map (REPA), which geographically presents the wind speed distribution and a forecasted capacity factor. The map shows higher potential in the Aegean, Marmara and Eastern Mediterranean coasts. The results also indicate that there is 48 GW of wind energy capacity potential assuming a wind speed of 7.5 m/s and higher.

By the end of 2014, there were 90 wind power plants in operation with a total installed capacity of 3,630 MW. There are additionally 183 licensed wind power plants, either in construction or project phase, which corresponds to 6,013.8 MW.

TEIAS has announced that another round of pre-license applications will be accepted in 2015, which corresponds to a total capacity of 3,000 MW. These applications will be collected by EMRA and, according to the regional capacities announced by the transmission system operator, the power plant projects will then be selected. Preliminary licenses are expected to be given in early 2016. By the end of this process, the sum of all licensed capacity shall correspond to 30% of the potential.

iii. Solar Power and Heat Potential and Current Status

The Directorate of Renewable Energy has also prepared a solar potential map (GEPA) for Turkey. The results show that due to the country’s geographic location, the average solar radiation corresponds to 2,737 hours/year with an average of 1,527 kWh/m²/year.

Turkey is taking initial steps to introduce solar technologies for power generation. The use of solar thermal technologies for the purpose of water heating is already widespread. In 2013, total energy generated by these collectors was 795 ktoe, where 518 ktoe was used for domestic and 277 ktoe for industrial purposes.

By the end of 2014, there were 112 solar PV plants with a total installed capacity of 40.2 MW, including one concentrated solar power (CSP) tower of 5 MW.

In 2013, TEIAS announced available solar connection capacity for its electrical substations as amounting to 600 MW and accepted applications in June 2015. The evaluations are still
ongoing and the next step will be performing the pre-licensing procedure with EMRA.

iv. Geothermal Potential and Current Status

The main legislation governing geothermal energy is the Geothermal Law No. 5686 adopted in 2007. The studies of the General Directorate of Mineral Research and Exploration indicate that the geothermal energy potential of Turkey is 31.5 GW. By the end of 2013, the General Directorate of Mineral Research and Exploration has already drilled 576 wells and discovered a potential of 4,900 MW. Theoretically, the potential of electricity generation from geothermal energy is announced to be 2,000 MW.

By the end of 2014, there were 15 operational geothermal power plants corresponding to a total installed capacity of 405 MW. An additional 13 facilities are licensed and under construction corresponding to 327.9 MW.

v. Biomass Potential and Current Status

Turkey is also deemed to have a very high potential in biomass. Recent analyses done by the General Directorate of Renewable Energy indicate a potential of biomass of 8.6 mtoe with an additional 1.5 mtoe as biogas. By the end of 2014 there were 44 operational power plants with a capacity of 208 MW. Additionally, there were 10 licensed biomass power plants with a capacity corresponding to 31.4 MW.

Biomass used for heating purposes is not regulated and not commercially incentivised. However, Turkey’s energy balance in 2013 shows that 2707 ktoe of wood and 203 ktoe of biogas was utilised in primary energy supply.

2. Renewable Energy in Transport

In September 2011, EMRA made an amendment to the Communiqué regarding Technical Regulations Concerning Diesel Types. Accordingly, diesel types to be circulated in the market were required to have at least 1% fatty acid methyl esters (FAME) produced from domestic agricultural content by January 2014. This content had to be increased to 2% by January 2015 and to 3% by January 2016.

Another Communiqué regarding Addition of Ethanol to Gasoline was published on 7 July 2012. Accordingly, gasoline to be circulated in the market was required to have at least 2% ethanol produced from domestic agricultural content by January 2013. This content had to be increased to 3% by January 2014. However on 25 June 2013, EMRA abolished the addition of FAME to diesel fuels. Thus, in practical terms, only targets set up by 2014 related to ethanol remained in force. There are no provisions promoting production from waste and lignocelluloses materials.

b. Legal Assessment

The existing legal framework for the promotion of energy from renewable sources focuses only on electricity and marginally on transport. An indicative target of 30% of renewable energy by 2023 was established by the ‘Electricity Market and Security of Supply Strategy’ published by MENR in 2009 and MENR’s ‘Strategic Plan 2015 – 2019’.

MENR has developed – with the support of the European Bank for Reconstruction and Development (EBRD) – Turkey’s first NREAP in line with the EU’s Renewable Energy Directive in February 2015. The objective is to add 34 GW of hydropower, 20 GW of wind energy, 5 GW of solar energy, 1 GW of geothermal and 1 GW of biomass (61 GW in total) by 2023. The country also aims to have 10% of its transport sector needs met by renewable energy. To achieve this goal Turkey must increase its non-hydro renewables output about sevenfold in less than ten years. The Action Plan developed with the EBRD is the guiding document for MENR to meet these targets.

The introduction of a support scheme based on feed-in tariffs or optionally on feed-in premiums has given a boost to renewable energy production since its adoption in 2011. In relation to the operation of the grids for renewable energy, priority dispatch was introduced in the Law on Utilisation of Renewable Energy in Electricity Generation.

Sustainability criteria and a certification scheme for biofuels and bioliquids, as stipulated in Directive 2009/28/EC, have not been introduced in the legislation.

c. Concluding Remarks

Driven by an increasing energy demand and a significant potential in renewable energy, Turkey has undertaken steps to promote renewable energy and reduce reliance on imported energy. Moreover, the Electricity Market Law supports the utilisation of renewable sources further, mainly for electricity generation.

Besides the general target of 30% of electricity generated from renewable resources by 2023 and 10% in transport, there are some targets and policies that are defined in the Renewable Energy Action Plan for the energy used for heating and cooling from renewable sources.

The extension of the renewable energy support mechanism beyond 2015, which was initially set for power plants starting operation not later than the end of 2015, is a positive development. According to a decision of the Council of Ministers from December 2013, its duration has been extended until 31 December 2020. In addition, adaptation of the Renewable Energy Action Plan is another important development for the enhancement of the renewable energy sources particularly in the transport sector.
One of the major milestones has been the promotion of small scale renewable energy power plants through the non-licensed generation scheme.

Turkey is very well advanced in terms of alignment with Directive 2009/28/EC on Promotion of the Use of Energy from Renewable Sources. Nevertheless, administrative procedures have to be streamlined and simplified. Coordination among institutions should increase to support investments in renewable energy. Publication of investor guides for different renewable technologies and creation of a one-stop-shop at least for small projects would create a more conducive investment framework.
7 Energy Efficiency

Energy Efficiency Action Plan (EEAP)*

<table>
<thead>
<tr>
<th>Period covered by EEAP</th>
<th>NA - drafting phase</th>
</tr>
</thead>
<tbody>
<tr>
<td>Key institution(s) in charge</td>
<td>Ministry of Energy and Natural Resources</td>
</tr>
</tbody>
</table>

Main data and energy efficiency indicators**

<table>
<thead>
<tr>
<th></th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total primary energy supply (TPES)</td>
<td>ktoe</td>
<td>105,272</td>
<td>112,212</td>
<td>116,897</td>
</tr>
<tr>
<td>Energy intensity (TPES/GDP)</td>
<td>toe / 1,000 USD</td>
<td>0.19</td>
<td>0.18</td>
<td>0.19</td>
</tr>
<tr>
<td>TPES/Population</td>
<td>toel/capita</td>
<td>1.44</td>
<td>1.52</td>
<td>1.56</td>
</tr>
<tr>
<td>Total final energy consumption (TFEC)</td>
<td>ktoe</td>
<td>77,750</td>
<td>81,666</td>
<td>87,326</td>
</tr>
</tbody>
</table>

2010 2011 2012 2013

Share of TFEC by sector

<table>
<thead>
<tr>
<th>Sector</th>
<th>%</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residential</td>
<td>29%</td>
<td>29%</td>
<td>24%</td>
<td>24%</td>
<td></td>
</tr>
<tr>
<td>Services</td>
<td>7%</td>
<td>8%</td>
<td>12%</td>
<td>12%</td>
<td></td>
</tr>
<tr>
<td>Industry</td>
<td>29%</td>
<td>31%</td>
<td>30%</td>
<td>28%</td>
<td></td>
</tr>
<tr>
<td>Transport</td>
<td>19%</td>
<td>18%</td>
<td>20%</td>
<td>22%</td>
<td></td>
</tr>
<tr>
<td>Others</td>
<td>6%</td>
<td>7%</td>
<td>6%</td>
<td>5%</td>
<td></td>
</tr>
<tr>
<td>Non-energy use</td>
<td>9%</td>
<td>8%</td>
<td>8%</td>
<td>8%</td>
<td></td>
</tr>
</tbody>
</table>

Source: International Energy Agency

a. Sector Overview

One of the main indicators of energy efficiency, the level of energy intensity, has remained constant in the last years in Turkey. In 2013, final energy consumption was 88.7 mtoe, of which industrial consumption was 29.1 mtoe, corresponding to a share of 33% of final energy consumption. Energy consumption in transport was 22.8 mtoe (26%), household and services 31.4 mtoe (35%), while other consumption amounted to 5.4 mtoe (6%).

The Energy Efficiency Law No. 5627 of 2007 is the primary legislation governing the energy efficiency policy in Turkey. The Law aims at improving effectiveness in energy consumption, decreasing the burden of energy cost on the economy and increasing energy efficiency in utilising energy resources and energy. The Law is supported by secondary legislation covering regulation of energy efficiency related services and ESCOs, energy audits, energy efficiency projects and voluntary agreement schemes. However, the major milestone is the ‘Energy Efficiency Strategy Paper’ published in 2012, which is the initiator of the energy efficiency actions in Turkey. The Strategy Paper contains seven strategy targets;

- Reduction of energy losses and energy intensity in the industry and services sectors;
- Reduction of energy consumption and carbon emissions of buildings and increasing the development of sustainable buildings utilising renewable energy sources;
- Market circulation of energy efficient products;
- Improvement of the energy efficiency in electricity generation, transmission and distribution, reduction of energy losses and detrimental environmental emissions;
- Reduction of fossil fuel consumption of motor vehicles, increase of utilisation of public transportation in road, naval and railway transport and prevention of unnecessary fuel consumption in local transportation;
- Effective and efficient utilisation of energy in the public sector;
- Improvement of organisational capabilities, cooperation, advanced technology use, public awareness and development of financial resources other than public means.

This Strategy Paper was developed with a target of decreasing energy intensity by 20% in reference to 2011 levels. There is a general provision stating that monitoring and evaluation of its execution will be undertaken by commissions and committees which will be developed by the General Directorate of Renewable Energy in coordination with public and private institutions and non-governmental organisations. Accordingly, energy intensity statistics are prepared by the General Directorate of Renewable Energy and published in coordination with the Turkish Statistical Institute.

The graph on the next page shows the energy intensity for the years 2000 to 2013 with reference year 2000.
Another major milestone was the NREAP published in December 2014. The document includes a specific item that foresees the development of a National Energy Efficiency Action Plan (NEEAP) in order to comply with the Energy Efficiency Directive 2012/27/EU. The NEEAP has been prepared and sent to the responsible Ministries for comments.

Unlike in other energy related policies, four ministries, namely Ministry of Energy and Natural Resources, Ministry of Transport, Maritime Affairs and Communication, Ministry of Science, Industry and Technology and Ministry of Environment and Urbanization have competence either for the enactment of secondary legislation or for the implementation of the strategies.

The Ministry of Science, Industry and Technology has published several communiqués (secondary legislation) to transpose the Framework Labelling Directive 2010/30/EU and the Eco-design Directive 2009/125/EC.

One major step for increasing energy efficiency for non-industrial users was the enactment of the By-law on Energy Performance of Buildings by the Ministry of Environment and Urbanization in 2008, transposing Directive 2002/91/EC. The target is to complete certification of all buildings in Turkey by 2017. Currently more than 260,000 energy performance certificates have been issued.

Energy efficiency policies are supported through different incentive schemes. The primary incentive scheme is the Efficiency Improvement Project that supports eligible users (industrial users consuming min. 1000 toe/year energy) for 30% of the project with a maximum of 1 million TRY. The second scheme is the Voluntary Agreements Support Programme, where industrial users of energy agreeing to reduce 10% of their energy intensity within three years are awarded with 20% of their energy expenditures. In addition, investments projects in industrial facilities with annual energy consumption of more than 500 toe that provide a minimum 20% energy savings over maximum 5 years can benefit from the State’s ‘Fifth Region Incentives’ programme designed to support investments in underdeveloped (mostly Eastern and South Eastern) provinces. Currently there are 37 ESCO companies in Turkey. These companies are either providing services to the industry, the building sector or both.

b. Legal Assessment

Although harmonisation with the EU framework on energy efficiency in buildings and labelling is being undertaken, the Energy Efficiency Law and related legislation are not yet fully aligned with the energy efficiency acquis, especially the Energy Services Directive 2006/32/EC or the Energy Efficiency Directive 2012/27/EU.


The ‘Energy Efficiency Strategy Paper’ contains an indicative target for reducing energy intensity of Turkey by 20% till 2023 with reference to 2011 levels. In order to incentivise energy efficiency and to provide for the implementation of new energy efficiency developments, the National Energy Efficiency Action Plan is foreseen to be established, as is indicated in the Renewable Energy Action Plan. Although the schedule for the development of the Energy Efficiency Action Plan is not yet set, the General Directorate of Renewable Energy was tasked with its development. The Plan is currently being developed and a draft version was submitted for comments to the relevant stakeholders.

As regards promotion of the exemplary role of the public sector, the ‘Energy Efficiency Strategy Paper’ imposes stricter requirements on the public sector. The public sector shall reduce annual energy consumption in its facilities and buildings by 10% till 2015 and 20% by 2023 with reference to 2011 levels, as indicated in the document ‘Effective and Efficient Utilisation of Energy in Public Sector’. It is moreover required that the public...
procurement policy excludes goods and services that do not satisfy minimum efficiency criteria set by MENR.

The By-law on Improving Energy Efficiency for the Utilisation of Energy and Energy Resources was published in 2011. It defines the principles for the authorisation of institutions and private sector companies for energy efficiency related services, energy management practices, responsibilities of energy managers and energy management units, certification of energy efficiency trainings, audits and projects, voluntary agreements, provision of demand side management, improvement in the energy efficiency of electricity generation, transmission, distribution and consumption. The authorisation and certification is done by the General Directorate of Renewable Energy. This By-law obliges industrial customers with an annual consumption of more than 5000 toe and commercial buildings with an area of more than 20,000 m² to conduct energy audits. These audits are to be conducted every four years. Additionally, this By-law tasks the General Directorate for Renewable Energy to conduct energy audits every ten years for public buildings with an area of more than 10,000 m² or consumption of more than 250 toe.


Turkey had started the transposition of the energy labelling acquis for household appliances in line with Directive 92/75/EEC and continued harmonisation with recast Directive 2010/30/EU and delegated regulations. The Ministry of Science, Industry and Technology (previously Ministry of Industry and Trade) is the main legislative body, and labelling is regulated with the Framework Labelling Directive on Indication by Labelling and Standard Product Information of the Consumption of Energy and Other Resources by Energy-Related Products adopted in 2011. The Turkish legislation is partially aligned with the acquis on labelling through the corresponding legislation for labelling of appliances;

- Communiqué on Energy Labelling of Household Refrigerating Appliances (22/06/2012);
- Communiqué on Energy Labelling of Air Conditioners (24/12/2013);
- Communiqué on Energy Labelling of Household Electrical Lamps and Luminaries (14/02/2015);
- Communiqué on Energy Labelling of Household Washing Machines (22/06/2012);
- Communiqué on Energy Labelling of Household Dishwashers (22/06/2012);
- Communiqué on Energy Labelling of Household Tumble Driers (15/05/2013);
- Communiqué on Energy Labelling of Domestic Electric Ovens and Range Hoods (14/01/2015);
- Communiqué on Energy Labelling of Televisions (22/06/2012);
- Communiqué on Energy Labelling of Vacuum Cleaners (14/01/2015);

For further promotion of energy efficient products, Turkey had commenced the transposition of Eco-design acquis by transposing the Framework Directive 2009/125/EC in October 2010 by the Ministry of Science, Industry and Technology. Presently, it has adopted the following Eco-design Regulations for energy-related products;

- Communiqué on Eco-design Requirements for Standby and Off Mode Electric Power Consumption of Electrical and Electronic Household and Office Equipment (27/08/2011);
- Communiqué on Eco-design Requirements for Simple Set-top Boxes (27/08/2011);
- Communiqué on Eco-design Requirements for Non-directional Household Lamps (27/08/2011);
- Communiqué on Eco-design Requirements for No-load Condition Electric Power Consumption and Average Active Efficiency of External Power Supplies (27/08/2011);
- Communiqué on Eco-design Requirements for Glandless Standalone Circulators and Glandless Circulators Integrated in Products (23/09/2011);
- Communiqué on Eco-design Requirements for Televisions (23/09/2011);
- Communiqué on Eco-design Requirements for Household Refrigerating Appliances (23/09/2011);
- Communiqué on Eco-design Requirements for Household Washing Machines (23/09/2011);
- Communiqué on Eco-design Requirements for Household Dishwashers (23/09/2011);
- Communiqué on Eco-design Requirements for Electric Motors (07/02/2012);
- Communiqué on Eco-design Requirements for Air Conditioners and Comfort Fans (19/07/2013);
- Communiqué on Eco-design Requirements for Household Tumble Driers (17/07/2013);
• Communiqué on eco-design Requirements for Directional Lamps, Light Emitting Diodes Lamps and Related Equipment (13/02/2015);
• Communiqué on Eco-design Requirements for Computers and Computer Servers (13/02/2015);
• Communiqué on Eco-design Requirements for Vacuum Cleaners (14/01/2015);
• Communiqué on Eco-design Requirements for Domestic Ovens, Hobs and Range Hoods (14/01/2015).

The process of further aligning the national rules with the remaining acquis on labelling and eco-design is ongoing.


Along with general provisions in the By-law on Improving Energy Efficiency for the Utilisation of Energy and Energy Resources, the By-law on Energy Performance of Buildings of 2008 is the main piece of secondary legislation covering the provisions of the outdated Directive 2002/91/EU. It is not fully aligned with the new requirements of recast Directive 2010/31/EU, which is under the responsibility of the Ministry of Environment and Urbanisation.

The By-law on Energy Performance of Buildings aims at determining the calculation principles of energy requirements of buildings, categorisation according to primary energy demand and carbon emissions, minimum energy performance requirements of new or renovated buildings. According to this regulation, all new buildings are required to have energy identification documents (energy performance certificate), whereas the existing buildings are exempted for 10 years.

Concluding Remarks

Turkey’s energy efficiency policies and legislation are progressing towards the implementation of the energy efficiency acquis of the Energy Community as well as eco-design requirements including the initial phase of implementation of Directive 2012/27/EU.

Even though energy efficiency legislation and the ‘Energy Efficiency Strategy Paper’ in particular set important goals for Turkey, a great number of public stakeholders are involved in the process of achieving such targets, which may result in coordination difficulties. The coordination role and the capacity of MENR should be strengthened in order to facilitate the alignment of Turkish energy efficiency legislation with the Energy Efficiency Directive. Short-term action plans with priorities, intermediate milestones, and monitoring and evaluation methods to implement properly the ‘Energy Efficiency Strategy Paper’ would also have a positive effect. Furthermore, additional efforts are necessary in order to strengthen the capacity of the newly established General Directorate, possibly by establishing a dedicated agency with a clear coordination function, as in many EU Member States and most of the Contracting Parties of the Energy Community.

In order to increase compliance with the EU acquis, the preparation of the National Energy Efficiency Action Plan, which is expected to be adopted by the end of 2015, with measurable, visible and effective sector targets is important. Furthermore, the ESCO market should be further supported both from a legislative and a financial aspect to boost energy efficiency projects.

Finally, further action has to be taken for the adoption of the remaining EU Regulations for promotion of energy efficiency products, aligned with Labelling Directive 2010/31/EU and Eco-design Directive 2009/125/EC.
8 Environment and Climate Change

a. Sector Overview

Environment and climate change are two of the main topics where a harmonisation process with EU law is being undertaken with the combined efforts of Ministries, Government agencies, municipalities and financial institutions. Governance processes during policy making are considered to be of utmost importance given the effects of these policies on the macro-economic situation.

In the framework of the accession negotiations with the EU, the environmental chapter was opened on 21 December 2009 during an intergovernmental conference held in Brussels.

b. Legal Assessment

The following paragraphs summarise the harmonisation of the Turkish legislation with the relevant Energy Community environmental acquis, namely the Large Combustion Plants (2001/80/EC), Environmental Impact Assessment (85/337/EEC) and Sulphur in Fuels (1999/32/EC) Directives.

1. Environmental Impact Assessment Directive

The Ministry of Environment and Urbanisation published the By-law on Environmental Impact Assessment in November 2014 in order to further harmonise national legislation with Directive 2011/92/EU. In the course of 2013, horizontal legislation on environment was also amended to support this harmonisation. However, transboundary consultations have not been fully aligned with the acquis yet. The alignment of the relevant legislation is still in progress in order to improve public participation and to facilitate the resolution of ongoing disputes regarding investments with significant impacts on the environment.

2. Sulphur in Fuels Directive

In the framework of reducing the sulphur content of liquid fuels, the Council of Ministers published the By-law on Reduction of Sulphur Content in Certain Types of Fuels in 2009 to harmonise Turkish legislation with the Directive. According to this By-law, starting from 1 January 2012, the sulphur content of heavy fuel oil to be used on Turkish territory has been limited to 1% and placing all fuel oil types on the market with a sulphur content of more than 1% has been forbidden. Furthermore, the sulphur content of marine fuels has also been limited.

3. Large Combustion Plants Directive

The Ministry of Environment and Urbanisation published the By-law on Control of the Industry Induced Air Pollution on 3 July 2009. The By-law was amended six times with the aim of harmonising it with the Large Combustion Plants Directive. The By-law aims to oversee the emissions of industrial facilities and electricity generation plants and sets emission limit values for emissions into the air from plants using solid, liquid and gaseous fuels. These limits are in compliance with the SO\textsubscript{2}, NO\textsubscript{x} and dust emission limits specified in the Directive. However, under the amendments to the By-law in December 2014, existing plants are exempted from meeting these limit values until 31 December 2019.

c. Climate Change

Regarding climate change policies, Turkey's position has been different from the other countries in the framework of the United Nations Framework Convention on Climate Change (UNFCCC). It also became a party to the UNFCCC as an Annex I country in accordance with its developing country status. Additionally, as a means of providing financial support, Turkey was also listed as an Annex II country. However in 2001, after extensive discussions, Turkey's request of deletion from both Annexes was partially accepted and Turkey was removed from Annex II but remained in Annex I.

In 2009, Turkey also became a party to the Kyoto Protocol. However, since Turkey was not a party to the UNFCCC when the Kyoto Protocol entered into force, Turkey was not listed as an Annex B country, thus no greenhouse gas emission reduction obligation was set for Turkey.

As a result of the above and taking into account that Turkey does not participate in the EU Emissions Trading Scheme, Turkey's renewable energy market is detached from both EU and Kyoto mechanisms. However, there are over 100 voluntary carbon emission market projects corresponding to a total emission reduction capacity of over 8 million tonnes of CO\textsubscript{2} equivalent.

The Ministry of Environment and Urbanisation published the By-law on Control of Greenhouse Gas Emissions in April 2012. The By-law provides for monitoring greenhouse gas emissions of electricity generation, cement, steel, ceramic and glass industries at facility level. In this framework, at least half of the emissions will be covered and reported. The Ministry amended this Act in May 2014 and published a Communiqué regarding the monitoring and reporting of greenhouse gas emissions. Accordingly, the first emission reports will be presented to the Ministry by April 2016.
d. Concluding Remarks

In general, Turkey is progressing well with the transposition of the environmental acquis covered by the Energy Community Treaty. Turkey is particularly well advanced with the transposition of the Sulphur in Fuels Directive. With regard to the Large Combustion Plants Directive the extension of the implementation deadline for existing plants should remain an exemption. In environmental impact assessment, Turkey could focus on full transposition of provisions related to public participation.
9 Competition and State Aid

a. Sector Overview

Competition law in Turkey is governed by the 1994 Law on the Protection of Competition No. 4054. By virtue of this Law the Turkish Competition Authority (TCA) was established to carry out the functions laid down in the Law. The TCA became operational in October 1997 and enjoys administrative and financial independence as a public body with legal personality.

The Competition Board is the decision-making body of the authority. It is composed of seven members. The Council of Ministers appoints the members from a shortlist of two candidates per position, nominated by the Ministry of Customs and Trade, the Ministry of Development, the Turkish Union of Chambers and Commodity Exchanges, and the Supreme Court of Appeals and Council of State. The term of office for all Board members is six years and they can be reappointed again. One third of the members of the Board are renewed every two years.

The term of office of any member of the Board cannot be terminated due to any reason prior to the completion of their term unless, by decision of the Board, they are found to have lost the qualifications required for their appointment.

The authority is independent in carrying out its tasks. However, the Decree Law No. 649 of 2011 allows the competent ministers (Ministry of Customs and Trade) to monitor and inspect the activities of the relevant independent regulatory authorities, including the TCA. Until now this provision has not been exercised.

The TCA can impose fines directly on market participants for violations of the competition provisions. Fines can be up to 10% of annual gross revenues of the undertaking concerned.

b. Legal Assessment

1. Legal Framework

The Law on the Protection of Competition is applicable to all natural or legal persons who are defined as undertakings in the Law as “natural and legal persons who produce, market and sell goods or services in the market, and units which can decide independently and do constitute an economic whole.” Even though there is no provision corresponding to Article 106 TFEU, the Law is applicable to public undertakings and undertakings entrusted with special or exclusive rights. The Law applies to all agreements, decisions and concerted practices which actually or potentially affect competition within Turkey. The Law also prohibits abuse of a dominant position. Dominance is defined in the Law in line with Article 102 of the Treaty on Functioning of the European Union (TFEU). The Law also has provisions regulating exemptions, mergers and acquisitions, negative clearance, notification, and termination of infringements. It also provides for judicial review of the decisions of the TCA.

The TCA also has powers in privatisation processes such as distribution and generation assets of the State, as set out in the Communiqué on the Procedures and Principles to Be Pursued in Pre-Notifications and Authorization Applications to Be Filed with the Competition Authority in Order for Acquisitions via Privatization to Become Legally Valid No. 2013/2.

Additionally, the Electricity Market Law and the Natural Gas Market Law contain several provisions regarding market share limits, control and acquisitions of shares, etc. which vest the authority to review mergers and acquisitions in EMRA. Since market participants in the energy market are licensees of EMRA, both EMRA’s and the TCA’s independent approvals are necessary for mergers and acquisitions. Each of them competent within the scope of its own legislation, the TCA and EMRA do not cooperate when assessing mergers and acquisitions. It is theoretically possible that a merger could be approved by one and rejected by the other.

The Electricity Market Law and the Natural Gas Market Law also include limits preventing market participants to attain a dominant position, namely:

- A limit of 20% of the forecasted national consumption for imported natural gas and wholesale in the natural gas market;
- A generation limit of 20% of previous year’s generation for generation licensees and sales limit of 20% of previous year’s electricity consumption for supply licensees in the electricity market;
- A sales limit of 45% of the annual consumption for distribution licensees in the petroleum market.

In January 2015, EMRA and the TCA signed an agreement on cooperation.

2. Competition and State Aid Activities in the Energy Sectors

i. Competition Law

A petroleum sector inquiry published in 2008 was the first sector inquiry initiated by the TCA. The inquiry provided an
overview regarding the relationships among the undertakings in the petroleum sector. The inquiry revealed the oligopolistic structure of the petroleum market.

In May 2008, the Council of State (the highest Administrative Court in Turkey in charge of judicial review of the TCA’s decisions) quashed the TCA’s decision in Total-Akdag, a case concerning vendor agreements. According to the Council of State, the length of the agreement is to be deemed perpetual or longer than five years and is thus not compliant with the block exemption. In 2011, the TCA adopted a new decision changing its policy regarding usage rights and lease rights within the agreements between distribution companies and vendors, amounting to a limitation of the agreements’ duration to five years. The TCA’s decision became a milestone for the petroleum sector, and a good number of vendors had to change their agreements and distribution companies. This paved the way for small distribution companies to gain market share.

There have been several complaints dealt with by the TCA against BOTAS, the vertically integrated state-owned natural gas undertaking. In 2008 the TCA found that BOTAS, holding a dominant position in the natural gas supply market, was selling natural gas below cost. Instead of opening an investigation, the TCA decided to monitor the prices of BOTAS. In 2010 a preliminary investigation was undertaken by the TCA regarding BOTAS for abuse of its dominant position in the natural gas market through predatory pricing. Once again, the TCA did not find it necessary to open an investigation against BOTAS. Instead it decided to prepare an in-depth natural gas sector inquiry. In July 2012, the TCA published the Natural Gas Sector Inquiry. In its conclusions, the TCA proposed that a provision on supplier of last resort and exemptions on third party access should be included in the gas market legislation. It furthermore suggested that BOTAS’s sales activities with the exception of so-called BO and BOT sales should be immediately legally unbundled. On the other hand, the report concluded that ownership unbundling of BOTAS is not suitable for Turkey, whereas legal/functional unbundling of BOTAS’s transmission activities would be more adequate. By 2018 BOTAS should be restructured.

In this electricity market, the opinions of the TCA on the privatisation of TEDAS’s distribution assets in the 21 distribution zones were important. A Communiqué of the TCA lays down the principles and procedures to be followed during privatisation. In addition, the TCA’s Communiqué on Mergers and Acquisitions also applies to the privatisation processes. The TCA declared that it will not approve acquisitions leading to a market share above 30%.

In January 2015, the TCA published a Sector Inquiry on Electricity Wholesale and Retail Markets. It outlines the major changes in the electricity market after the privatisation and entry into force of the new Electricity Market Law No. 6446 of 2013. As in the cases of petroleum and natural gas markets, no concrete investigations and cases were opened as a result of this sector inquiry in the electricity sector.

ii. State Aid Law

Reviewing State aid is an obligation of Turkey under the Turkey-EU Customs Union Decision of 1995. The Law on the Monitoring and Control of State Aid No. 6015 was adopted only in October 2010. By virtue of this Law, the Board of Monitoring and Control of State Aid was founded. The Board is assigned with reviewing, monitoring and inspecting State aid in accordance with the agreements between Turkey and the EU. The Board is composed of six members and a general manager of State aid. These members are representatives from the Ministry of Finance, Ministry of Industry and Trade, Ministry of Development, Treasury, Ministry of Economy and the TCA.

Law No. 6015 lays down the application and evaluation procedures for State aid. Accordingly, the Board can conclude that State aid is not compliant and can order withdrawal of granted State aid. The decisions of the board are subject to judicial review.

An amendment to Law No. 6015 of 2014 (Law No. 6518) requires Government authorities to enter data on State aid granted into a central State aid information system. However, the adoption of the implementing legislation for this Law was postponed until 31 December 2015 by the Council of Ministers. No activity applying State aid legislation to the energy sector has taken place so far.

c. Concluding Remarks

The Energy Community competition and State aid rules are properly reflected in Turkish legislation. Enforcement institutions have also been established. However, unlike the TCA which is already well established in the institutional framework of Turkey, the authority entrusted with enforcement of State aid rules still needs to initiate activities.

Moreover, despite the fact that TCA is active in the energy sectors, its activities are focused on performing sector inquiries. In the future, the TCA could use those analyses in order to initiate follow up actions in the energy sectors.
10 Statistics

a. Sector Overview

The Turkish Statistical Institute (TUIK) is responsible for official statistics based on Statistics Law No. 5429 of 2005. TUIK as a public legal body reports to the Prime Minister. The Statistics Law ensures the institute’s independence regarding the selection of data sources, statistical methods and processes, the method and timing of dissemination and statistical privacy.

The energy statistics disseminated by TUIK can be classified into six groups, namely: sectoral energy consumption statistics, solid fuel statistics, residential energy consumption, electricity statistics, periodical electricity generation and distribution statistics, and electricity and gas price statistics.

Sectoral energy statistics cover the identification of Turkish energy consumption characteristics, analysis of energy consumption according to resources and utilisation and data collection to provide for energy balance tables. These data are collected through surveys either based on web or through interviews.

Solid fuel statistics are prepared in order to meet national and international data requirements regarding the consumption of coal and coal products. These data are also collected through surveys either based on web or through interviews.

Residential energy consumption statistics aim at collecting information about geographical distribution and characteristics of residential consumption. The collection method is direct surveys.

Electricity statistics include information about consumption of electrical energy, generation and generation capacity. Statistics are collected through the transmission system operator TEIAS and the distribution system operator TEDAS.

Monthly and annual electricity generation and distribution statistics encompass collection of generation and distribution data for the aim of creating databases to be utilised for national income studies and international comparison.

Electricity and gas price statistics are utilised to identify end-user prices for industrial and residential customers. In the natural gas market, data are collected from the state-owned natural gas vertically integrated company BOTAS and EMRA. In the electricity market, data are collected from the wholesale company TETAS, TEDAS and privatised distribution companies.

In addition to the statistical framework mentioned above, in the electricity market licensees are obliged to give information to EMRA based on the Electricity Market Law No. 6446. Under this Law, EMRA collects market information and prepares annual reports. The same applies to the natural gas market where the power of the authority stems from the Natural Gas Market Law No. 4646. Finally, the Petroleum Market Law No. 5015 gives the same power to EMRA regarding oil. Annual reports are prepared accordingly.

Annual statistics are:

- Sectoral energy consumption statistics coordinated by TUIK;
- Energy consumption in the manufacturing industry coordinated by MENR;
- Structural status and energy consumption of buildings coordinated by MENR;
- Energy density and energy efficiency indexes coordinated by MENR;
- Upstream oil statistics coordinated by MENR;
- Upstream natural gas statistics coordinated by MENR;
- Natural gas market statistics coordinated by EMRA;
- Electricity distribution and consumption statistics coordinated by MENR;
- Energy balance statistics coordinated by MENR.

Biannual statistics are the electricity and natural gas statistics coordinated by TETAS, TEDAS and EMRA.

Monthly statistics are:

- Short-term coal statistics coordinated by MENR;
- Petroleum market statistics coordinated by EMRA;
- LPG market statistics coordinated by EMRA;
- Electricity generation and transmission statistics coordinated by MENR;
- Short-term gas statistics.
b. Legal Assessment

TUIK is the responsible authority for the collection and dissemination of energy statistics. However, the Council of Ministers Decision on Official Statistics Programme No. 2006/11446 also identifies the statistics collected and disseminated by Government authorities listed in the Decision as official statistics. From this perspective, the acquis would cover all the parties officially designated in this Decision.

1. Regulation (EC) 1099/2008

i. Annual Statistics

Annual statistics regarding solid fossil fuels and manufactured gas data, natural gas, electricity and heat oil and petroleum products are collected and disseminated in line with Regulation (EC) 1099/2008 and its Annex B. These data include supply, transformation and consumption, imports and exports.

Annual statistics on renewable energy and energy from waste are collected and disseminated partially in compliance with Annex B of Regulation (EC) 1099/2008. These data include supply, transformation and consumption of renewable energy and energy from waste, biofuel production capacities and solar collector surface areas. The import and export data of biogasoline, biodiesel and bio jet kerosene are missing.

ii. Monthly Statistics

In compliance with Annex C of Regulation (EC) 1099/2008, monthly statistics regarding solid fossil fuels, electricity, oil and petroleum products and natural gas are collected and disseminated. These data cover supply, import and export. The statistics are collected under the coordination of TUIK and MENR according to Decision No. 2006/11446. The above mentioned statistics are in compliance with Annex A of the Regulation.

2. Directive 2008/92/EC

Natural gas and electricity price statistics are compliant also with Directive 2008/92/EC. These statistics cover electricity and natural gas charged to industrial end-customers and households classified according to the consumption bands specified in the Directive.

c. Concluding remarks

Turkey is well advanced in the harmonisation and implementation of the statistics legislation part of the Energy Community acquis.
Glossary

Abbreviations

- ACG: Azeri-Chirag-Guneshli offshore fields
- BTC: Baku-Tbilisi-Ceyhan crude oil pipeline
- CNG: compressed natural gas
- CSP: concentrated solar power
- EBB: Electronic Bulletin Board
- EBRD: European Bank for Reconstruction and Development
- EC: European Community
- EEAPs: Energy Efficiency Action Plans
- EMRA: Energy Market Regulatory Authority
- ETSO-E: European Network of Transmission System Operators for Electricity
- ESCO: Energy Service Companies
- EU: European Union
- FAME: fatty acid methyl esters
- IEA: International Energy Agency
- ITG: Turkey-Greece Interconnector
- LNG: liquefied natural gas
- LPG: liquefied petroleum gas
- MENR: Ministry of Energy and Natural Resources
- NEEAP: National Energy Efficiency Action Plan
- NREAP: National Renewable Energy Action Plan
- OECD: Organisation for Economic Co-operation and Development
- PV: photovoltaic
- SEE CAO: Coordination Auction Office in South East Europe
- TANAP: Trans Anatolian Natural Gas Pipeline
- TAP: Trans Adriatic Pipeline
- TFEU: Treaty on the Functioning of the European Union
- UNFCCC: United Nations Framework Convention on Climate Change

Measurement units

- kV: kilovolt
- kW: kilowatt
- MW: megawatt
- MVA: megavolt-amper
- GW: gigawatt
- TW: terawatt
- kWh: kilowatt hour
- MWh: megawatt hour
- GWh: gigawatt hour
- TWh: terawatt hour
- t: tonne (metric ton)
- toe: tonnes of oil equivalent
- mtoe: million tonnes of oil equivalent
- kt: kilotonne
- m: meter
- km: kilometer
- cm: cubic meter
- mcm: million cubic meter
- bcm: billion cubic meter
- Kr: kurus, 100 kurus = 1TRY
- TRY: Turkish lira

Energy Market Scheme Legends

[Diagram of the energy market scheme legends with various entities and their roles, including DSO (Distribution system operator), TSO (Transmission system operator), SSO (Storage system operator), P (Producer), S (Supplier), and different types of market operations and obligations.]