

EPIAŞ

TURKISH ENERGY EXCHANGE
ANNUAL REPORT 2017





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ANNUAL REPORT 2017
01 JANUARY 2017 – 31 DECEMBER 2017

The present annual report was provided to the Meeting of Shareholders for approval as per the resolution taken by the Board of Directors of Turkish Energy Exchange in the board meeting No. 2018/3 of 02.03.2018.

► Presentation

Message of the Chairman	05
Message of the General Manager	07

► EPIAŞ General Information 09

EPIAŞ At a Glance	10
Vision and Mission	12
Corporate Principles	13
Subject of Activity of EPIAŞ	14
Field of Activity of EPIAŞ	14
Development Process of Energy Markets and EPIAŞ	20
Board of Directors	22
Committees Attached to the Board of Directors	26
Early Detection of Risk Committee	26
Audit and Compliance Committee	26
Market Monitoring Committee	26
Directors	28
Shareholder Structure of EPIAŞ	29
Organization Chart	30
Employee Profile	32

► Company Activities 33

Turkish Energy Sector Outlook for 2017	34
Market Activities	36
Strategy Development Activities	46

Organizations	47
International Activities	49
Audit and Market Surveillance Activities	52
Information Technologies Activities	52
Investments and Significant Acquisitions	55
Accounting and Finance Activities	56
Corporate Communication Activities	56
Training and Research Activities	58
Human Resources Activities	59
Legislation and Compliance Activities	59
Legal Activities	61

► Business Development and R&D Activities of the Company 63

► Financial Status 69

Balance Sheet	70
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► Assessments of Risks and Management Body 82

► Other Considerations 82



Fatih DÖNMEZ
Chairman

MESSAGE OF THE CHAIRMAN

As a central character in the development of energy trade in Turkey and concerning the goal of Turkey in becoming a regional energy trade hub, EPIAŞ has continued its activities as the market operator since 2015.

The founding purpose of EPIAŞ consist of operation of the energy market in an efficient and competitive way, formation of reference price addressing to the supply and demand changes and establishment and sustainability of a structure where the producers and consumers may meet transparently. Shareholder structure of EPIAŞ is a composition of production, transmission, distribution and trading players for a pluralist, participative, competitive and fair market.

EPIAŞ continues its activities for determining of reference price in the energy market in a transparent and reliable way and for access of all participants to the information equally and transparently. EPIAŞ provides service with Transparency Platform in order that the participants of the electricity market can conduct their market activities on basis of equal opportunity, prevention of information asymmetry among the market participants and have access to the information they need to give proper decisions in the activities they perform and in the trading they make in the wholesale electricity markets. Furthermore, by adding new products to the currently operating markets, it aims at making contribution to deepening the market in the forthcoming period, increasing trade and making the price more predictable.

Started its market operating activities initially with operation of the electricity market, EPIAŞ continues its operations concerning operation of natural gas market. And in 2017, as a result of intensive study process in cooperation with the Energy Market Regulatory Authority and Petroleum Pipeline Company (BOTAS), Natural Gas Organized Wholesale Regulation and Market Operating Procedures and Principles (PUE) were issued. Consequently, EPIAŞ is ready to reflect the trust, achievement and experience it has gained in the electricity market operation on the natural gas markets this time. EPIAŞ shall start operation of natural gas market in 2018.

With its own software, workforce and success, EPIAŞ is in fact a success story, inspiring not only for our region, but also for many developing countries. I sincerely thank our personnel, our biggest source of energy and success and co-author of this story in 2017.

EPIAŞ continues its operations in line with the policies and strategies set forth in the Certificate of National Energy Strategy. I am very pleased to present to the information of all our shareholders and stakeholders the EPIAŞ Annual Report for 2017 containing the projects, activities and operations in 2017.

Yours truly,

Fatih DÖNMEZ
Chairman



Mustafa KAYIRICI
Deputy General Manager

MESSAGE OF THE GENERAL MANAGER

As a socio-economic concept, energy takes place in all aspects of our life from industry to agriculture and from lighting to health and plays a key role with respect to comfort and trust, economic growth and development. Energy market has obvious importance in the healthier and more cost-effective planning of the energy, an irreplaceable and inevitable element of our life, from the production to the delivery to the end consumer.

In the framework of the market operating license granted by the Energy Market Regulatory Authority (EMRA) EPIAŞ has continued its operations since 2015 for establishment, development and operation of an active, transparent and reliable electricity market and for formation of a reliable reference price without any discrimination among the equal parties, and, accordingly, it carried out significant operations in its third anniversary year. It keeps on cooperative way its operations to provide user-friendly solutions in order to provide added value to the business activities of its business partners and to simplify their procedures.

Currently, EPIAŞ essentially operates the spot electricity markets. By means of regulations established by our Ministry and EMRA in 2017, all necessary operations have been completed with respect to the Natural Gas Permanent Trading Platform and the Natural Gas Organized Wholesale Market shall be opened for operation in 2018.

There are totally 1058 market participants registered with EPIAŞ at the end of 2017. And, in 2017, while the cleared volume was 123 TWh in the Day-ahead Market and 1.7 TWh in the Intraday Market, the trading volume was TRY41.47 billion in the Day-ahead Market and TRY576.7 million in the Intraday Market.

“Transparency Workshops” and “Transparency Platform” have significant places among the projects and studies performed to be an organization addressing to the market needs. EPIAŞ enhances its technological infrastructure continuously in accordance with the international

standards for all markets it operates and, in its capacity as R&D centre, continues to strengthen its technological infrastructure and improve service quality by means of investments it makes. Quality Management Systems, Information Security and Management System were established to further improve the processes in operations of the company.

In line with its goal to discover national and international potential of Turkey in the energy trading area and make the energy market of our country a competitive, liberal, stable and transparent “Energy Trading centre” integrated with all global energy markets by providing more attractive conditions for local and foreign investors, negotiations with the neighbouring countries go on to develop energy trading opportunities and, subsequently, consider assessments of market integration. While EPIAŞ became a member of the European Association of Energy Exchanges (EUROPEX) and World Association of Energy Exchanges (APEX) in 2016 following its establishment, it hosted the annually ordinary general assembly of EUROPEX held in 2017. Upon presidential selections made in 2017 to manage activities of the working groups of EUROPEX in 2018, EPIAŞ was elected to the presidency of the Environmental Markets Working Group of EUROPEX.

I deeply acknowledge and thank our colleagues, the most important asset of EPIAŞ, for their self-sacrificing actions to achieve its vision to make contribution for making Turkey a regional energy trading hub. I also want to express my acknowledgements and thanks to our Board Chairman and board of directors, all shareholders and market participants for their contributions to our company to achieve its current position, and I present the Annual Report 2017 to your kind information.

Yours truly,

Mustafa KAYIRICI
Deputy General Manager



EPIAŞ

General Information

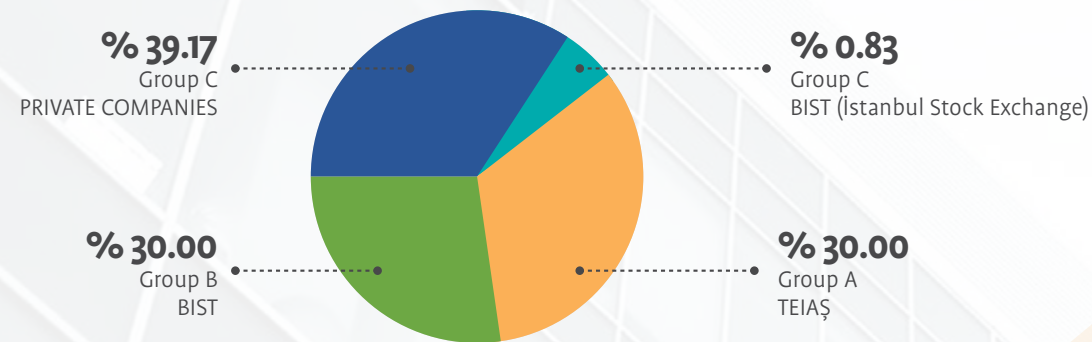
- EPIAŞ At a Glance • Mission and Vision • Corporate Principles
- Field of Activity of EPIAŞ
- Electricity Market Development Process and EPIAŞ • Board of Directors
- Committees Attached to the Board of Directors • Directors • Shareholder Structure of EPIAŞ
- Organization Chart • Employees Profile

EPIAŞ AT A GLANCE

Establishment:

EPIAŞ established in 18.03.2015.

Shareholder Structure of EPIAŞ:



Number of Employees:



Management Systems

- TS EN ISO 9001 Quality Management System
- TS ISO 10002 Customer Satisfaction Management System
- TS 18001 Occupational Health and Safety Management System
- TS ISO/IEC 27001 Information Safety Management System

A Member of

- EUROPEX
- APEX
- ENTSO-E

► Data on Turkey and EPIAŞ Electricity Market for 2017

- Market Quantity Distribution of Bilateral Contracts **67.7%**, Day-Ahead Market **27.5%**, Balancing Power Market **4.5%**, Intraday Market **0.4%**
- Market Participants Registered with EPIAŞ **1058**
- Average MCP of **TRY163.84/MWh**
- Day-Ahead Market (DAM) Cleared Volume: **123.32 TWh**
- Block Sales Cleared Rate **38%**; Hourly Sales Cleared Rate **62%**
- Block Purchase Cleared Rate **4%**; Hourly Purchase Cleared Rate **96%**
- DAM Trading Volume **TRY 41.47 Billion** (Sum of purchase-sale)
- Intraday Market (IM) Cleared Volume **1.72 TWh**
- Intraday Trading Volume **TRY576.7 million**

- Total Production **295.5 TWh**
- Total Consumption **294.9 TWh**
- Installed Capacity of the Power Plants Registered with EPIAŞ in Operation. **83.275 MW**
- Installed Capacity in Operation by Resource: Thermal **56.35%**, Hydraulic Resources **34.12%**, Wind **8.16%**, Geothermal **1.33%**, Solar **0.028%**

- Total Amount of Renewable Energy Resources (RER) **TRY15.34 Billion**, Average Unit Cost of Renewable Energy Resources Support Mechanism (RERSM) for Unit Draw Amount for 2017 **TRY34.04/MWh**

- Power of plants included in RERSM in operation: **18,934.58 MW**

- Approximate Coefficient of Loss for the Transmission System **2.07%**
- Correction Amount for Zero Balance (SBDT) **TRY1.23 Billion**
- Eligible Consumer Limit **2,400 kWh**
- Meters Registered with EPIAŞ **5 million 145 thousand**
- Number of Consumers Exercising Right of Eligible Consumer **4 million 706 thousand**

Mission And Vision

Our Mission

Operate the energy markets in an efficient, transparent and reliable way

Our Vision

To make contribution to ensure Turkey to become regional energy trading centre

Corporate Principles

Transparency

As one of the most inevitable factors in building trust in the energy markets, transparency constitutes the foundation to perform the market operating activities. This principle provides information open to and accessible by everybody as well as equality opportunity to all market participants in business sense.

Reliable

With its high technological infrastructure and advanced surveillance mechanisms, EPIAŞ is a market that imbue people with trust in the energy markets.

Liquidity

An important indicator of a successful market, the liquidity expresses high trading volumes and high market participation. EPIAŞ meet requirements to ensure formation of liquidity in the energy markets.

Equality

EPIAŞ guarantees energy trade with equal trading conditions for everybody. For this reason, it takes its position at an equal distance to all market participants and provides competitive market conditions and makes contribution to development of the energy markets.

Simplicity

EPIAŞ designs the processes required by the energy markets as simple as possible and establishes a facilitation market structure to promote the trade.

Development

EPIAŞ believes that success is a result of a process of intensive work an continuous improvement. Each step it takes consistently follows the previous one, contributing to development of the energy markets as a whole.

Cooperation

EPIAŞ develops the energy trade in a close cooperation with all interested market participants. Participatory approach is especially important for EPIAŞ. It sets up working groups to identify all market developments and requirements, holds discussion meetings or conducts surveys and emphasizes significance of cooperation with all stakeholders.

Subject of Activity of EPIAŞ

EPIAŞ was established on 18.03.2015 as per the provisions of the Electricity Market Law No. 6446 of 14.03.2013, and its primary objectives and scope of activity are:

- planning, establishment, development and operation of the energy markets indicated in the market operating licence to meet needs of them in a active, transparent and reliable way; and
- formation of a reliable reference price without discrimination among the equal parties.



Field of Activity of EPIAŞ

Liberality process in the electricity market started with the Electricity Market Law No. 4628 with a view to establishment of an electricity market basing on transparency, integrity and competition, allowing integration with the electricity markets of other countries. To this end, a great number of steps were taken in a planned way to build a more dynamic and powerful electricity market and significant advances were made with respect to a market model where the market participants assume active roles and monitor the market by means of best methods.

The first step f transformation of the electricity market from a single purchaser and a single seller model to a liberal and competitive model was taken on August 1, 2006 by switching to hourly settlement on the consumption part and to monthly settlement system with 3 periods on the production part and the financial settlement system covering 3-months period was launched on July 1, 2006. The next step was start of the operations of the Day-Ahead Planning system on December 1, 2009. These transition periods have great importance in the transformation of the electricity market to a more powerful and dynamic structure. It has provided valuable experience and insight to the parties which took role in the market transactions and activities previously for new Market operating Licence granted by the market models Turkish or-

ganized Wholesale Electricity Market model is a market of bilateral contracts which is balanced by Spot Market day ahead and by Balancing Power Market in real time. Establishment of Spot Market and Balancing Power Market ensures establishment of a competitive electricity market and promotion of the investments.

Balancing Mechanism is consisted of Day-Ahead Market and Intraday Market operated by EPIAŞ as market operator and the Balancing Power Market operated by TEİAŞ. Day-ahead market started operation on December 1, 2011 and the intraday market on July 1, 2015. Furthermore, settlement of the imbalances is made on hourly basis. EPIAŞ is a private company as per the electricity Market Law No. 6446 enacted by Turkish Grand National Assembly on March 14th, 2013 and published on the Official Journal No. 28603 on March 30, 2013 and it deals with operation of the Day-Ahead Market, Intraday Market as well as settlement of the Balancing Power Market operated by TEİAŞ and the Ancillary Services Markets.

Electricity Market Law governs operation of the organized wholesale electricity markets, settlement activities made in such markets and a new activity called "market operator" together with other financial transactions. These activities were previously executed by the Market Financial Settlement Centre (PMUM) in the body of TEİAŞ. EPIAŞ was established under the Energy Turkish Energy Market Regulatory Authority (EMRA) in the scope of the Electricity Market Law.

Primary activities of EPIAŞ is planning, formation, development and operation of the energy markets indicated in the market operating licence in an active, transparent and reliable way.

EPIAŞ sets reliable reference price without discrimination among the participants. And thus it guarantees an increased liquidity by higher number of market participants, range of products and trading transactions. The most noticeable indication that EPIAŞ especially focuses on transparency and liberal market is the rate of market participants., i.e. 40%, in the total market share among its shareholders.

While EPIAŞ operates the electricity markets as approved by the Ministry of Energy and Natural Resources (ETKB) and EMRA, it is also responsible for building new markets such as natural gas, oil, green certificate and carbon.

Fields of Activity of EPIAŞ:

- Day-ahead market transactions
- Intraday market transactions
- Settlement and financial transactions of the day-ahead, intraday and balancing power markets
- Settlement of Ancillary Services Market
- Operation of RERSM
- Invoicing (credit and debt notices for market participants)
- Eligible consumer transactions



Electricity Markets

EPIAŞ was established as a special legal person as per the Electricity Market Law No. 6446 of 14.03.2013, Article 11 and the provisions of the Regulation on Organization Structure and Working Principles of Turkish Energy Exchange, Electricity Market License Regulation and Balancing and Settlement Regulation upon completion of the registration procedures on March 18, 2015, and obtained Market Operating licence by the resolution No. 5741-2 of Augusts 20th, 2015 of EMRA and thus assumed task of market operating activities in the energy market which were previously performed by Market Financial Settlement Centre-TEİAŞ on September 1, 2015.

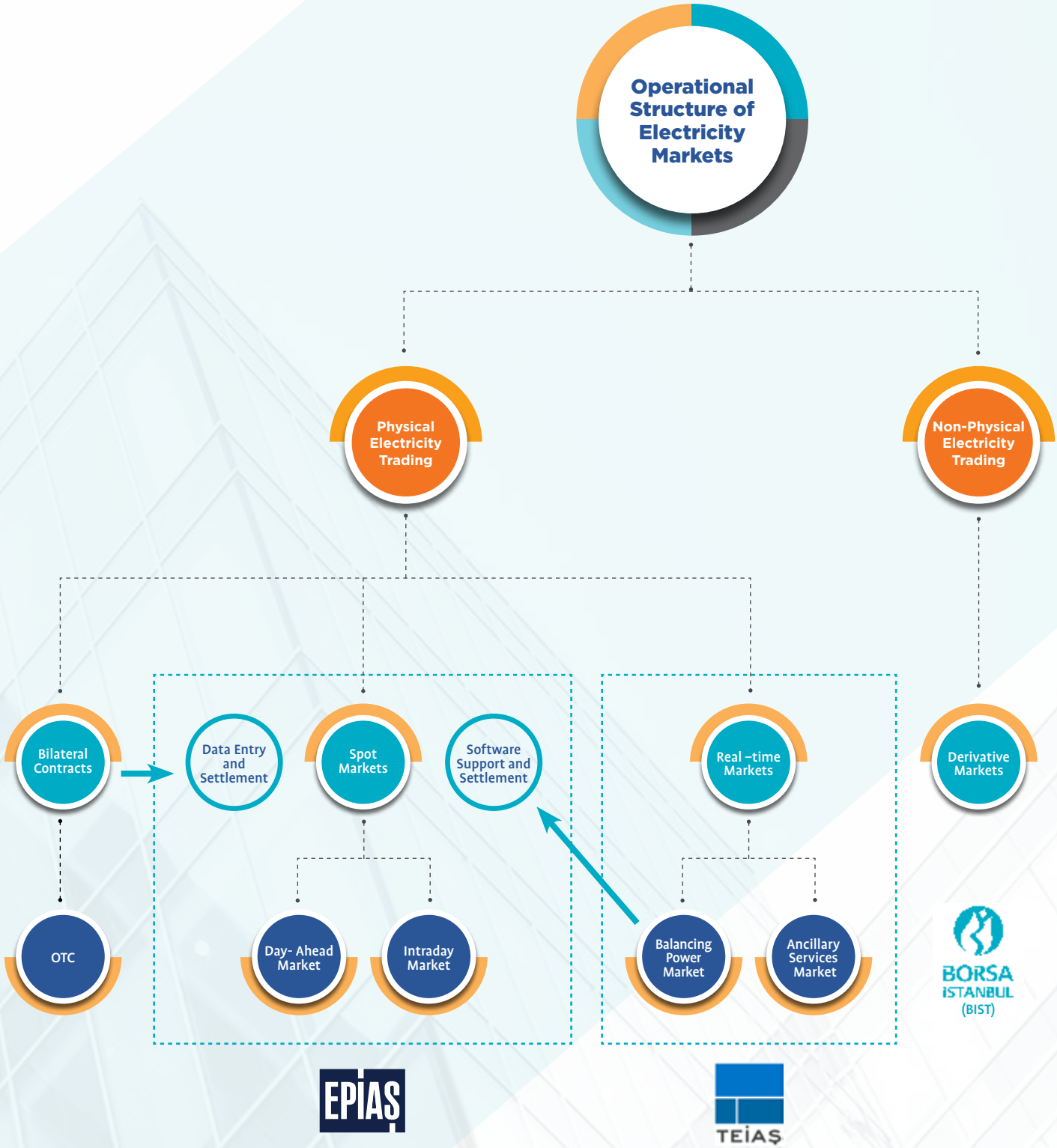
In the scope of market operating activity, EPIAŞ deals with operation of the organized wholesale electricity markets except for the markets operated by Borsa İstanbul anonim Şirketi (BIST) and TEİAŞ and with the financial settlement transactions of the activities performed in these markets and other financial transactions related to these activities.

It was established as an incorporated company subject to the special legal provisions as per the provisions of the Electricity Market Law and the provisions of the Turkish Commercial Code, except for those provisions concerning establishment and registration. Rights and liabilities granted to the company by law include studies for establishment of new markets in the organized wholesale electricity markets in its domain and presentation of such studies to the Energy Market Surveillance authority and, if deemed appropriate by the Ministry, entering as a party to the

international electricity markets set up or to be set up in future for operation of the organized wholesale electricity markets in its domain, being partner or member of international electricity market operating companies established for this purpose and determining market operation tariffs according to the procedures and principles specified by the EMRA and presentation of the same to the EMRA for approval. And the related legislative provisions have detailed and regulated rights and liabilities given by the Law to EPIAŞ.

Accordingly, as the Market Operator, EPIAŞ operates day-ahead and intraday markets; takes decisions for implementation of matters concerning operation of the markets; examines and finalizes any possible objection that may arise in the market transactions; declares purchase and sale amounts and market prices in line with the proposals made by the market participants; informs the related market participant about trading results, payment information, security information and other related data concerning the organized wholesale electricity markets; performs financial settlement transactions with respect to the organized wholesale electricity markets in its domain, and the organized wholesale electricity markets operated by TEİAŞ under the market operating license and imbalance calculations; calculates credit and debt amounts to be accrued and issues the related credit-debt notes; performs registration and eligible consumer transactions; publication of information about price formation and statistics about the operations performed without discrimination among the parties according to the principles of transparency and responsibility as part of its duty for publication of data.

Furthermore, It also has rights and liabilities to make proposals for development of solutions to support active development of the organized wholesale electricity markets; execute studies for development of new products to be traded in the said markets; draw up procedures and principles concerning the organized wholesale electricity markets operated; make studies for establishment of new organized wholesale energy market for market development; follow legislative modifications and proposed modifications in connection with its activities and make comments on them; monitor the related legislation in order to ensure effective operation of the organized wholesale electricity markets and formulate new proposals; ensure accessibility, sustainability, availability and back-up of the managed systems; acquire information technology systems to meet the changing requirements and upgrade them when require; conduct safety, audit and tests to guarantee safety of information systems and data.



Natural Gas Market

Although there is parallelism the liberalization process of the Turkish electricity and natural gas markets, it is clearly seen that the liberalization process in the natural gas markets progresses relatively slow compared to the electricity market. Regulations made and progress made in the liberalization of the electricity market is much more advanced compared to the natural gas markets. Attention is called to completely determine duties and responsibilities of the System and Market Operators for formation of the Natural gas Market. Additionally, basing on the fact that natural gas is purchased-soled on annual basis by means of bilateral contracts in Turkey, studies were started to establish an organized wholesale market where trading for shorter term may be carried out and daily prices may be set.

Formation of the Organized Natural Gas Wholesale Market shall also change the market dynamics. Especially, in order that Petroleum Pipeline Company (BOTAŞ) should not assume all imbalance responsibility, it will make sale not only to the end-users, but also to the wholesale companies under monthly, semi-annual, annual or longer contracts in the spot market by use of EPIAŞ platform or a separate platform established by EPIAŞ.

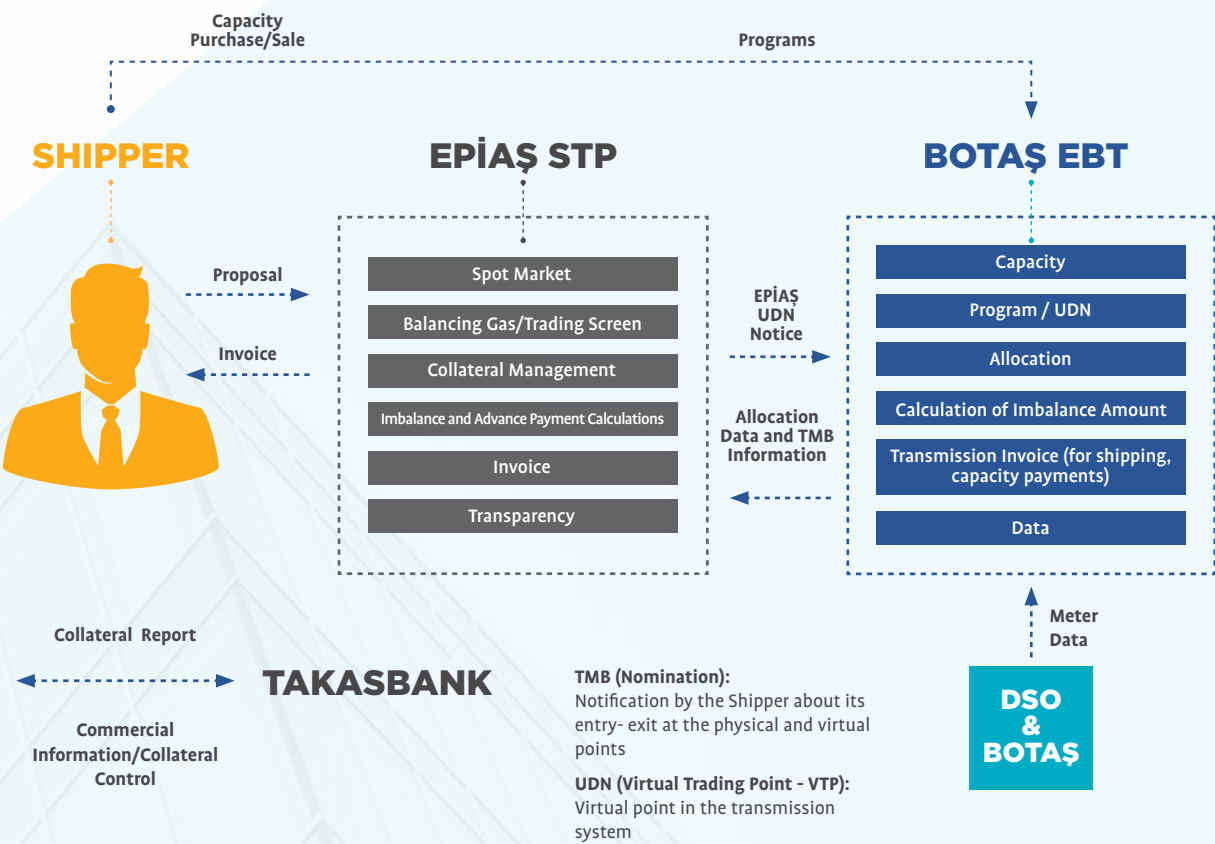
As it is in the European markets and Turkish electricity distribution sector, separation of the distribution and retail services and establishment of separate and independent companies shall contribute to development of the natural gas market. And it will also contribute to the development of

the market when the power plants generating electricity from natural gas, which are end-users in the natural gas and have no authorization to enter the market, are supplied with natural gas by the wholesale companies. If these implementations are carried out to ensure efficiency on the demand part of the distribution companies and power generation plants, which are important factors with respect to the imbalance in the transmission system, burden of BOTAŞ Ticaret to manage all imbalance in Turkey shall alleviate.

Upon active use of the Organized Natural Gas Wholesale Market by the said market players, each participant shall assume responsibility of its own supply quantity and imbalance.

If a competitively, efficiently, reliably and transparently organized natural gas market is achieved, then it will be possible to execute the supply-demand management in short- and medium-term in a well-planned way and to increase number of investors.

Roles in the Intended Natural Gas Market Model

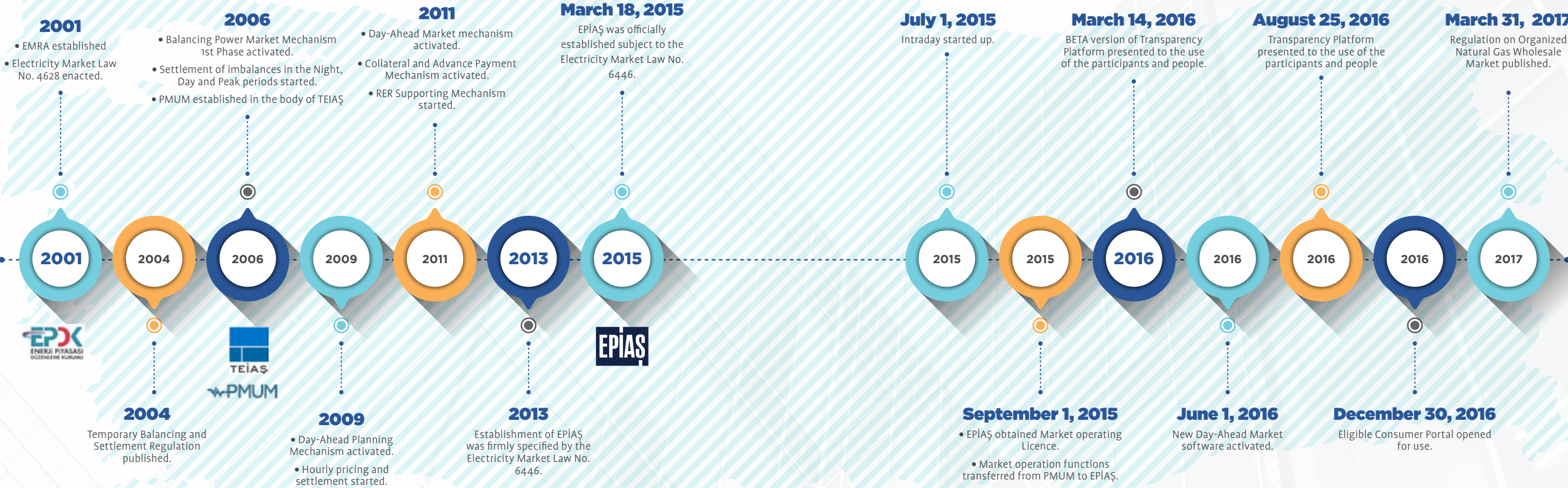


Other Markets

In the framework of its mission to operate the energy market in an active, transparent and reliable way and its vision to make Turkey a regional energy trading centre, EPIAŞ adopted and included in its goals the formation of new markets basing on other energy products together with peripheral policies.

In this context and according to its Strategic Plan Target 3.2, EPIAŞ started infrastructure operations for establishment of Emission Trading Mechanism, Voluntary Green and White Certificate Mechanisms.

Development Process of Energy Markets and EPIAŞ



Board of Directors

Representation and management of EPIAŞ is for responsibility of the Board of Directors elected by the Meeting of Shareholders as per the provisions of the Turkish Commercial Code and Articles of Association of the company. Board of Directors is consisted of maximum seven persons two of them to be elected from the candidates to be nominated by Group A shareholders, two from the candidates to be nominated by Group B shareholders and two from the candidates to be nominated by Group C shareholders and one shareholder meeting conditions set forth in the Articles of Association from the shareholders to be nominated by any shareholders.

Chairman is elected by the Meeting of Shareholders once in three years. Board of Directors elects minimum one vice chairman

among its members as per the Articles of Association to act in absence of the Chairman. The existing Board of Directors were elected in the Ordinary Meeting of Shareholders for 2015 held on March 22, 2016 to take office till the Ordinary Meeting of Shareholders to be held in 2019. Domains of the Chairman and Board of Directors were determined in the Articles of Association as per the Turkish Commercial Code. Board of Directors convened monthly, ie. 12 times in 2017.

Chairman and Board of Directors of EPIAŞ who took office in 2017 are shown in the following table.

Chairman and Board of Directors of EPIAŞ

Full Name	Title	Shares Group	Tenure
Fatih DÖNMEZ	Chairman	A	22.03.2016 / Still in office
Tahsin YAZAR	Vice Chairman	A	22.03.2016 / Still in office
Himmet KARADAĞ	Board Member	B	06.05.2016 / Still in office
Mustafa KARAHAN	Board Member	C	12.03.2015 / Still in office
Faruk BOSTANCI	Board Member	C	12.03.2015 / Still in office
Ömer DEMİRHAN	Board Member	B	01.08.2017 / Still in office
Talat ULUSSEVER	Vice Chairman	B	12.03.2015 - 20.07.2017



► **Fatih DÖNMEZ**
Chairman



► **Tahsin YAZAR**
Vice Chairman



► **Himmet KARADAĞ**
Board Member



► **Ömer DEMİRHAN**
Board Member



► **Faruk BOSTANCI**
Board Member



► **Mustafa KARAHAH**
Board Member

Committees Attached to the Board of Directors

1) Early Detection of Risk Committee

Early Detection of Risk Committee has been working since 06.11.2015 to perform the functions assigned to it in the EPIAŞ Articles of Association, article 9, paragraph seven, Regulation on EPIAŞ Organization Structure and Working Principles, articles 8 and 10 and Directive of RESK Functions and Working Principles.

In the operating year of 2017, the Committee was consisted of Mustafa KARAHAN, Himmet KARADAĞ and Ömer DEMİRHAN and headed by Mustafa KARAHAN. Secretariat of the committee was assumed by the Risk Management Directorate.

Convened six times in 2017, the Committee performed the following activities during the year in summary:

- It gained information about 6 risk reports which is issued by the Risk Management Directorate once in two months and included them in the agenda of the Board of Directors.
- EPIAŞ Business Continuity Report issued under coordination of Risk Management Directorate was presented by the Committee on Early Detection of Risk to the Board of Directors. The Policy was approved and put into effect on 22.01.2017.

2) Audit and Compliance Committee

Audit and Compliance Committee (DUK) has been working since 06.11.2015 to perform the functions assigned to it in the EPIAŞ Articles of Association, article 9, paragraph seven, Regulation on EPIAŞ Organization Structure and Working Principles, articles 8 and 9 and Directive of DUK Functions and Working Principles.

In the operating year of 2017, the Committee was consisted of Tahsin YAZAR, Mustafa KARAHAN and Faruk BOSTANCI and headed by Tahsin YAZAR. Secretariat of the Committee was assumed by the Internal Audit Directorate.

Convened five times in 2017, the committee performed the following activities during the year:

- Audit Plan for 2017 was considered and decided to be put into effect.
- Proposal for discharge of the company of KPMG Bağımsız Denetim ve Serbest Muhasebeci Mali Müşavirlik A.Ş. which performed external audit of EPIAŞ, and the proposal was presented to the Board of Directors.
- Information informed about internal audit and internal control operations performed in 2017 and they were duly considered.
- Independent audit report for 2016 was considered and presented to the Board of Directors.
- It presented its opinion to the Board of Directors with respect to making change in Directive of DUK Functions and Working Principles.
- DUK Annual Report for 2016 was presented to the Board of Directors.

3) Market Monitoring Committee

Fatih Yazıtış was appointed as Head of Market Monitoring Committee as determined by EMRA and decided by the Board of Directors of EPIAŞ in the board meeting of EPIAŞ held on 04/03/2017 pursuant to the Regulation on the Organization Structure and Operating Principles of Turkish Energy Exchange. Upon this assignment, activities, some of them described below, have been performed.

The Regulation on Organization Structure and Working Principles of Energy Market Operating Company, article 11 "Market Monitoring Committee", paragraph two, sub-

paragraph (c) provides "presentation of the monthly market monitoring action report about the market participants without any confidential information about them shall be presented to the Board of Directors and EMRA. The market monitoring ANNUAL REPORT was regularly drawn up each month as per this provision and presented to EPIAŞ Board of Directors and EMRA.

Recommendations were made to EPIAŞ General Directorate basing on the "The Regulation on Organization Structure and Working Principles of Turkish Energy Exchange, article 11 "Market Monitoring Committee", paragraph two, subparagraph (d) which provides "making recommendations to the General Manager with respect to things that may contribute to market developments."

Market Monitoring Regulation was issued and included in the agenda of EPIAŞ Board of Directors to forward to EMRA and these operations go on basing on the "The Regulation on Organization Structure and Working Principles of Turkish Energy Exchange, article 11 "Market Monitoring Committee", paragraph two, subparagraph (g) which provides "preparation of draft procedures and principles for execution of the market monitoring activities and presentation of the same to the Board of Directors to forward to EMRA."



Directors

Mustafa KAYIRICI
Director, Information
Technologies



Nezir AY
Deputy Director,
Market Operations



Ramis KULAK
Director, Finance and
Support Services
Internal Control and
Risk Management
Deputy Director



Avni ÇEBİ
Deputy Director, Strategy
Development



Muharrem ELİŞ
Legal Advisor



Shareholder Structure of EPIAŞ

In the funding phase, the shareholder structure of EPIAŞ was determined by EMRA basing on the Electricity Market Law No. 6446, article 11 and the company capital is TRY61,572,770. The company capital is divided to 61,572,770 shares with par value of TRY1 and these shares representing the capital fall into three groups, i.e. Group A shares of 18,471,831, Group B shares of 18,471,831 and Group C shares of 24,629,108. EPIAŞ took decision to issue registered share certificates to represent shares of the shareholders as per the Board Resolution No. 25 of 12.08.2015. Basing on this resolution, temporary share certificates were issued and delivered to the shareholders.

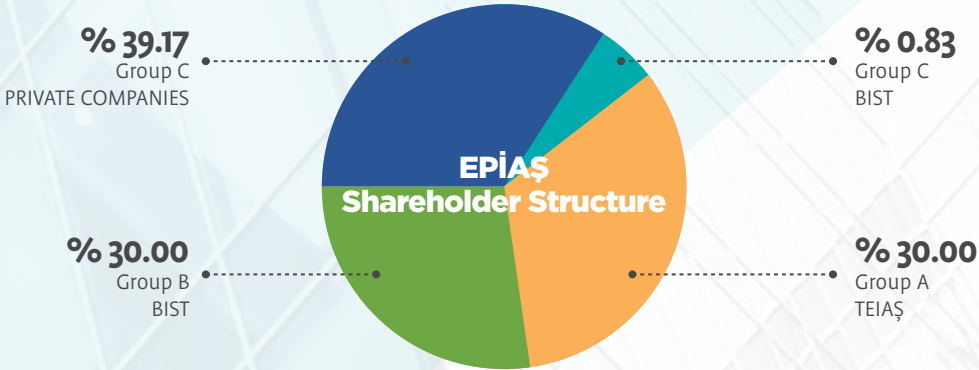
EPIAŞ has not acquired any shares for itself and it has no direct or indirect contribution and shares. Group A shares corresponding to 30% of the total shares are owned by TEİAŞ. And with respect to these shares, according to EPIAŞ Articles of Association, article 7 which reads "50% (fifty per cent) of Group A shares shall be transferred to the legal person to operate the national natural gas transmission system after separation of Petroleum Pipeline Company (BOTAS) provided it complies with the provisions of the regulation, half of the group A shares shall be transferred to BOTAS on a later date according to the ongoing studies. Group B shares corresponding to 30% of the total shares are owned by Borsa İstanbul A.Ş.

With respect to the shareholders of the Group C shares, which constitutes 40% of the total shares of EPIAŞ, the EPIAŞ Articles of Association, article 7, paragraph 3 reads "Group C shares may only be assigned among the legal persons having licence for supply in the electricity market and having production licence in connection with the production plants put in operation in this respect, legal person having licence for wholesale, import and export in the natural gas market and legal persons having licence for retail sale and Borsa İstanbul A.Ş.". 39,17% of the Group C shares are owned by the licensed companies mentioned in the provision and the remaining 0.83% is owned by Borsa İstanbul A.Ş. Shareholder structure of EPIAŞ did not change in 2017 and there are no preferential share as of 2017.

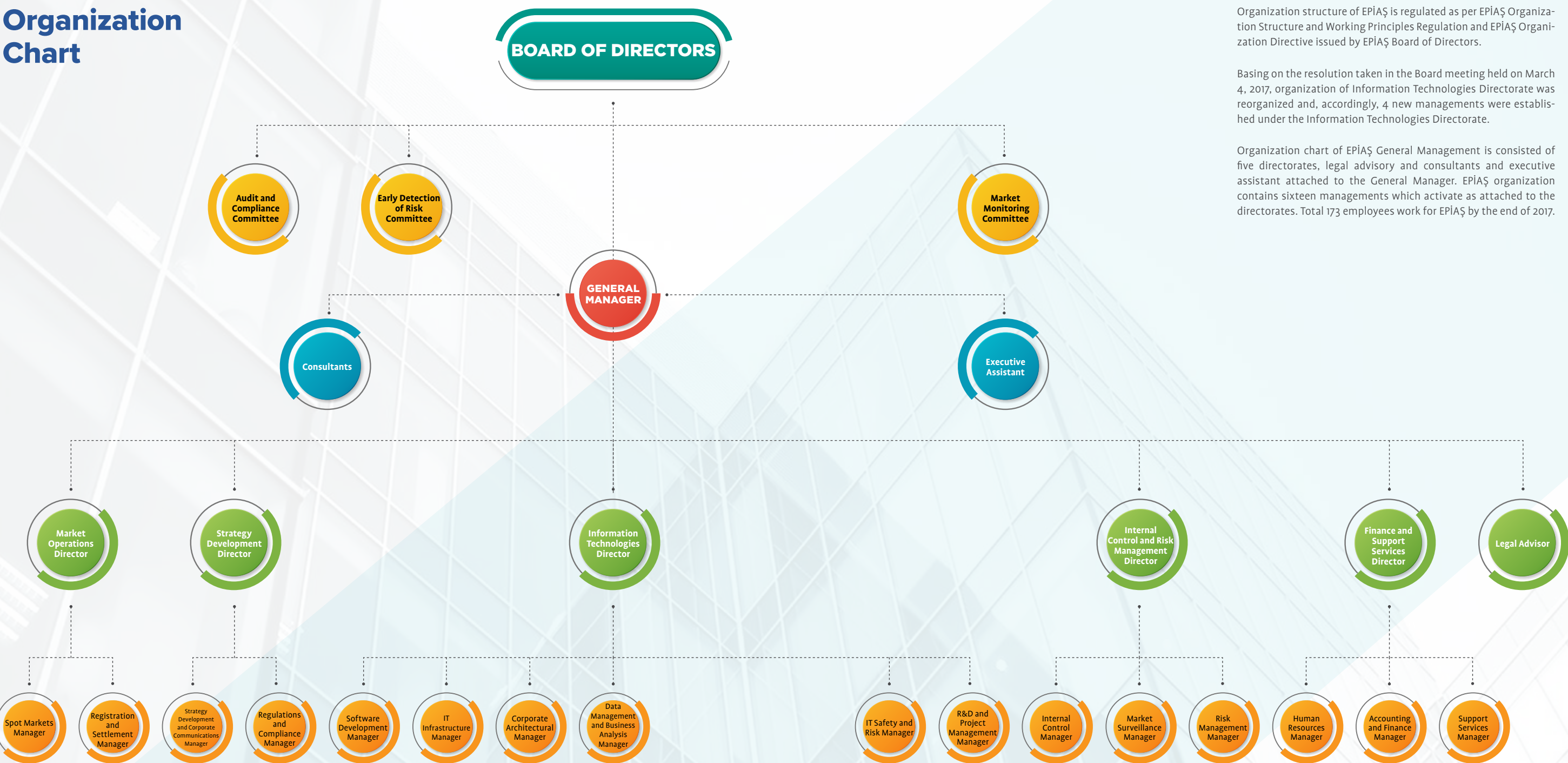
Distribution of Shareholders is given in the following table:

Shareholders	Group	Number of shares	Share Amountt	(%) Rate
Türkiye Elektrik İletim A.Ş. (TEİAŞ)	A	18.471.831	18.471.831	30.00
Borsa İstanbul A.Ş. (BİST)	B	18.471.831	18.471.831	30.00
Borsa İstanbul A.Ş. (BİST)	C	511.590	511.590	0.83
Market Participants	C	24.117.518	24.117.518	39.17
TOTAL		61.572.770	61.572.770	100

Shareholder structure as of 31.12.2017 is graphically shown below



Organization Chart



Organization structure of EPIAŞ is regulated as per EPIAŞ Organization Structure and Working Principles Regulation and EPIAŞ Organization Directive issued by EPIAŞ Board of Directors.

Basing on the resolution taken in the Board meeting held on March 4, 2017, organization of Information Technologies Directorate was reorganized and, accordingly, 4 new managements were established under the Information Technologies Directorate.

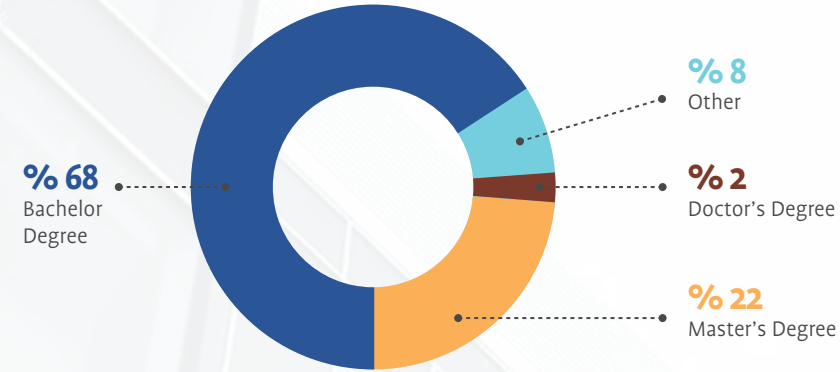
Organization chart of EPIAŞ General Management is consisted of five directorates, legal advisory and consultants and executive assistant attached to the General Manager. EPIAŞ organization contains sixteen managements which activate as attached to the directorates. Total 173 employees work for EPIAŞ by the end of 2017.

Employee Profile

Level of Education

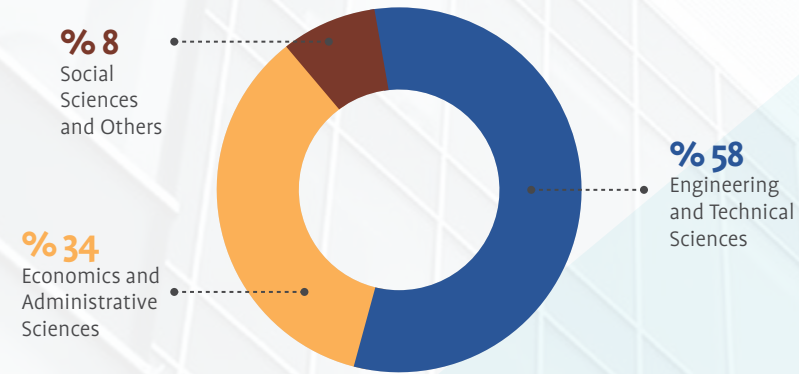
EPIAŞ employs the human resources it needs according to the norm staff specified by EPIAŞ Organization Directive as per the Labour Law No. 4857 and Social Insurances and Public Health Insurance Law No. 5510, article 4/a. Total 173 employees work for EPIAŞ by the end of 2017.

By the end of 2017, out of EPIAŞ employees, 68% were graduates, 22% master's degree and 2% doctorate's degree. 92% of EPIAŞ employees have graduate or post graduate degrees.



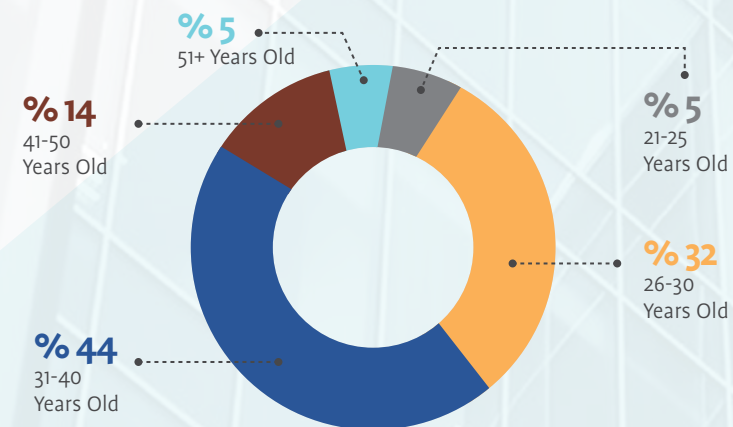
Departments Graduated

Out of EPIAŞ Employees, 58% graduated from faculties of engineering or technical sciences, 34% from faculties of economics and administrative sciences or other.



Age Range

By the end of 2017, out of EPIAŞ employees, 5% was in the age range of 21-25 years, 32% 26-30 years, 44% 31-40 years, 14% 41-50 years. Ratio of our employees 51 years old and above is 5% to the total number of employees in the company average age of the company employees is 34. Rate of female workers in the company is 23%.



Company Activities

- Turkish Energy Sector Outlook for 2017 • Market Activities
- Strategy Development Activities • Organizations
- International Activities • Audit and Market Surveillance Activities
- Information Technologies Activities • Investments and Significant Acquisitions
- Accounting and Finance Activities • Corporate Communication Activities
- Training and Research Activities • Human Resources Activities
- Regulations and Compliance Activities • Legal Activities

Turkish Energy Sector Outlook for 2017

Some important developments for 2017 are listed below:

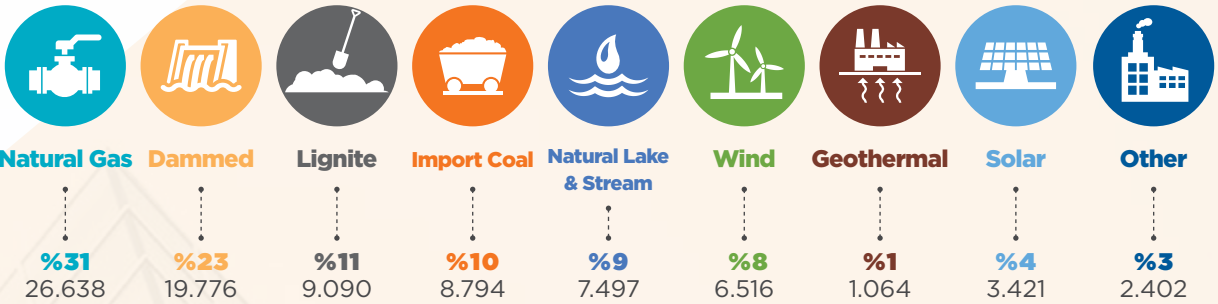
- MCP arithmetic mean for 2017 was calculated as TRY163.84/MWh by an increase of 16.53 compared to 2016.
- Turkish installed capacity reached to 85,200 MW by an increase by an increase of 7,411 MW.
- Annual production was 295,5 TWh by an increase of 8.4% and consumption was 294.9 by an increase of 6.3%.
- Highest MCP value in 2017 was TRY967.15/MWh as calculated on September 11th, Monday, 14:00.
- Trading was 123.32 TWh in the Day-ahead Market and 1.72 TWh in the Intraday Market.
- 41.8% of the Turkish electricity consumption was traded in the Day-Ahead Market.
- Of the annual market amount, 67.7% was through Bilateral Contracts, 27.5% Day-Ahead Market, 4.5% Balancing Power Market and 0.4% Intraday Market.
- When production rates are examined on resources basis, Natural Gas – LNG reached to 37% by an increase of 5% and Hydraulic resources dropped to 20% by a reduction of 5%.
- The highest hourly peak value was 47.062 on July 26th, Wednesday, 15:00; and the lowest instantaneous peak was 18,336 MW on June 26th, Monday, 06:00.
- According to the final listed issued by EMRA, while the installed capacity of the power plants that benefit from RERSM was 15,083 MW for 2016, it reached to 17,400 MW in 2017 by an increase of 2,317 MW.

Number of Power Plants by Resources in 2017

Type of Resource	Number of Power Plants (Licensed)
Natural Lake and Stream	510
Natural Gas	243
Wind	161
Dammed	117
Biomass	99
Multi Fuel Liquid + Natural Gas	47
Geothermal	40
Lignite	27
Multi Fuel Solid + Liquid	22
Import Coal	11
Other	19
Type of Resource	Number of Power Plants (Unlicensed)
Solar	3.613
Wind	46
Cogeneration	42
Biomass	23
Streams	1

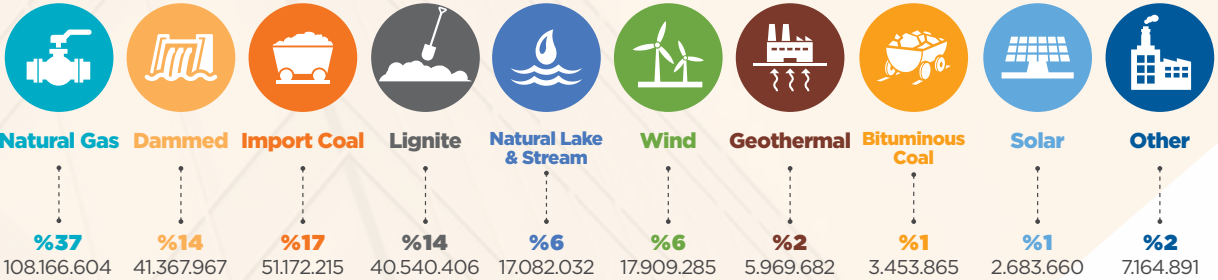
The data given in this page is obtained from Türkiye Elektrik İletim A.Ş. (TEİAŞ) and Load Dispatch Information System (YTBS)

Installed Capacity Resources Basis in 2017 (MW)



As of 01.01.2018, Turkey has total installed capacity of 85,200 MW of which 81,555 MW licensed and 3,645 MW is unlicensed. When comparison of 2016-2017 installed capacity is examined on resources basis, the type of resource showing increase in terms of installed capacity are Wind and Import Coal power plants.

Production Values on Resources Basis in 2017 (MWh)



When the production rate for the years 2016-2017 are compared on resources basis, while the production rate of Natural Gas resourced plants increased by 5%, the production of stream-resourced plant reduced by 1% and plant with Dam reduced by 4%.

The data given in this page is obtained from Türkiye Elektrik İletim A.Ş. (TEİAŞ) and Load Dispatch Information System (YTBS)

Market Activities

Day-Ahead and Intraday markets are operated by EPIAŞ in the scope of the market operations. Purchase and sale amounts formed in accordance with the quotations presented by the market participants and market clearing prices are declared and the cleared volumes are found by continuous trading method in the Intraday Market.

Language option of English was included in the software concerning Day-Ahead and Intraday market for convenience of the foreign users trading in the market. User manuals of both market software programs were prepared in Turkish and English and presented for use by the users. Furthermore, telephone service is provided to the market participants to provide 7/24 active and quick service. Objections related to the transactions made in both markets are examined and finalized. Screens of administrator and user limits were created in order to avoid of possible material mistakes that make occur during entry of wrong offers.

Development requests made by the market participants and required to be performed as per the regulation are quickly considered and put into action. Developments made and innovations created concerning the markets are described in the section “R&D and Business Development Activities of the Company”.

Data Publication Activities Concerning the Markets

In the scope of data publication activities, statistics regarding price formation and transactions made are published for transparency without discrimination among the parties. Furthermore, the in-

formation that the market participants may benefit are published in form of daily, weekly and annual reports. Monthly reports shall start to be published in 2018

Daily report, weekly report and annual report are drawn up by analysis of the market values of the previous trading day, previous week and previous year, respectively. The reports in question may be found in the section “Bulletins” in EPIAŞ website.

Assessment of Daily Price and Market Analysis Activities

Upon disclosure of the market clearing prices daily, the quotations offered by the participants to the Day-Ahead Market are compared with the prices of the previous day for examination and analysis purpose.

In addition to the Day-Ahead Market offers of the market participants, the actions in the Balancing Power Market are also examined.

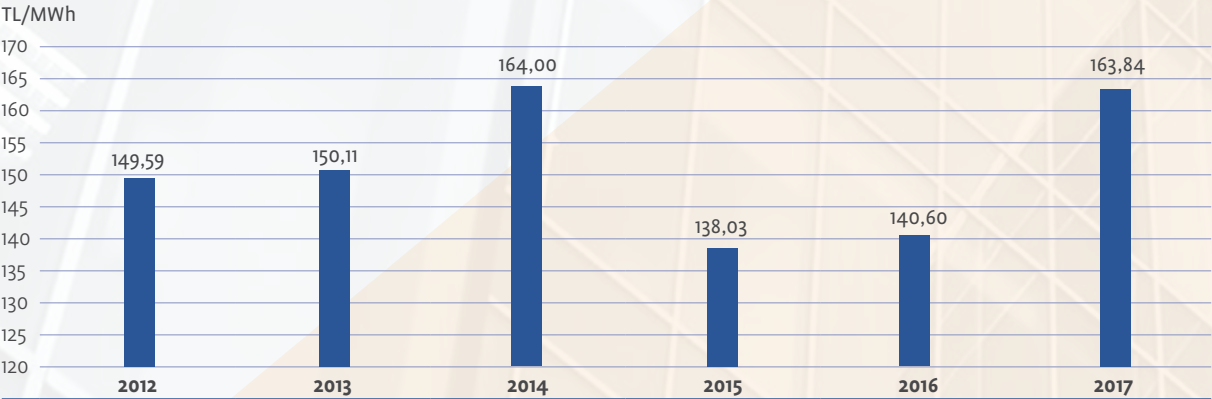
Cleared volumes realized under the Intraday Market contracts are analysed on participant basis and effect of the Intraday Market on the Balancing Power Market is examined.

In addition to the daily analyses, reasons of long-term price changes, effects of the regulatory changes and optimization algorithm are also analysed. Detailed reports concerning the matters described above are distributed internally and sent to the regulatory authorities.

Market Data

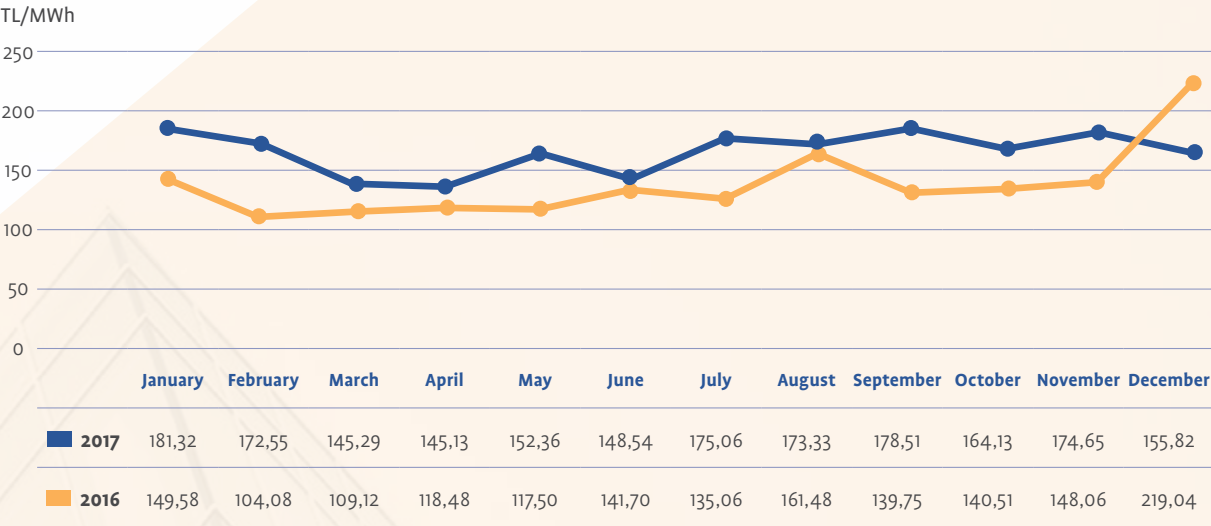
Day-Ahead Market Data

Annual Average Market Clearing Price



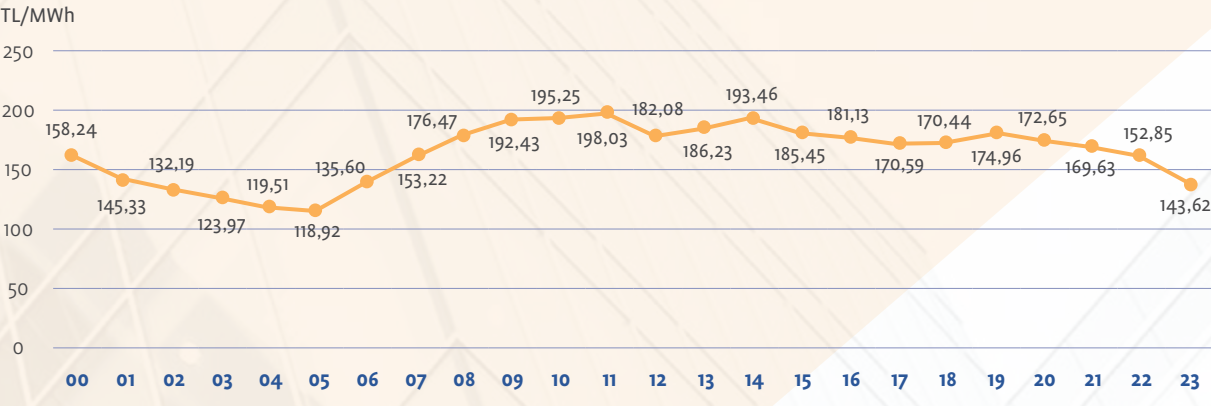
As described in the graphic above, annual average MCP in Day-Ahead Market in 2017 increased by 16,53% compared to the previous year, reaching up to TRY163.89/MWh.

Monthly Average Market Clearing Price for 2016-2017



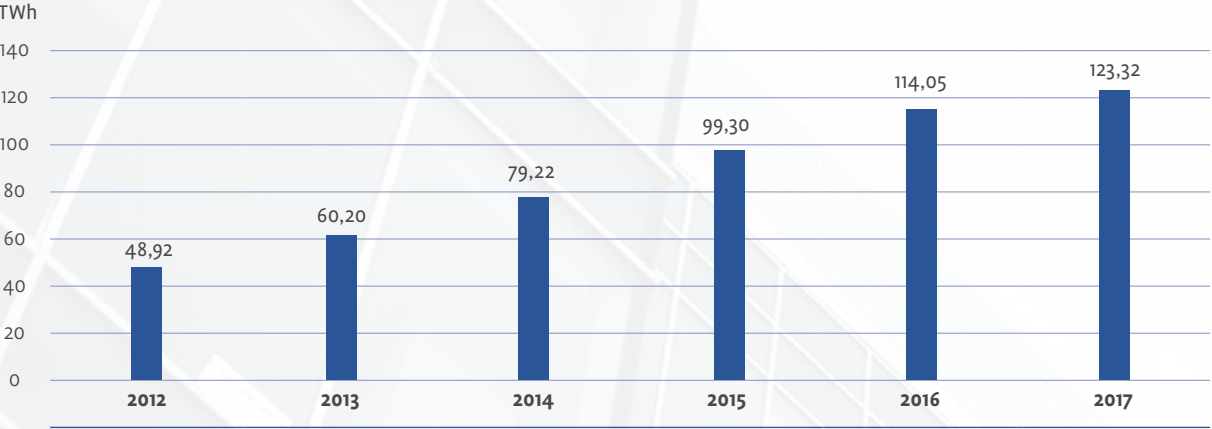
As shown in the graphic above, while the highest MCP value in the year 2017 was calculated as TRY967.15/MWh on September 11th, Monday, at 14:00, the lowest MCP value for 2017 was calculated as TRY1.04/MWh on January 1st, Monday, at 08:00.

Market Clearing Price Means on Hourly Basis



As shown in the graphic above, when MCP means on hourly basis are examined, we see the hour with the lowest MCP mean was 05:00 with TRY118.92/MWh; the hour with the highest MCP mean was 11:00 with TRY198.03/MWh. While MCP mean between the hours 08:00 – 21:00 was above the annual mean, MCP mean between the hours 00:00 – 07:00 and between 22:00 and 23:00 are below annual MCP mean.

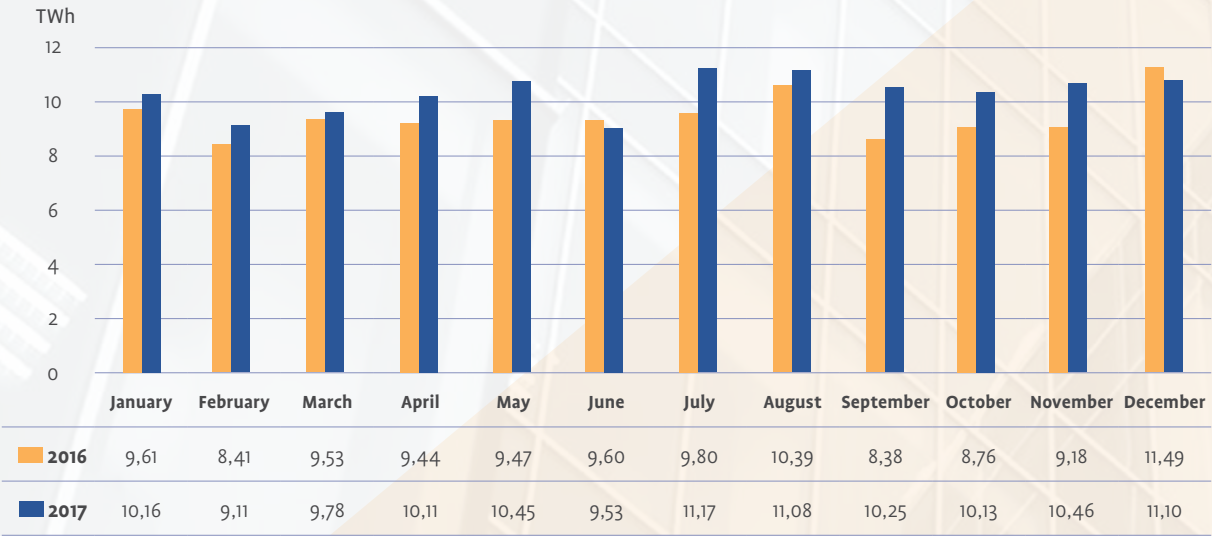
Day-Ahead Annual Clearing Volume



Clearing volume* of Day-Ahead market for the years 2012-2017 increase each year. The annual market clearing achieved in the day-ahead market for 2017 increased by 8.12% compared to the previous year, reaching to 123.32 TWh.

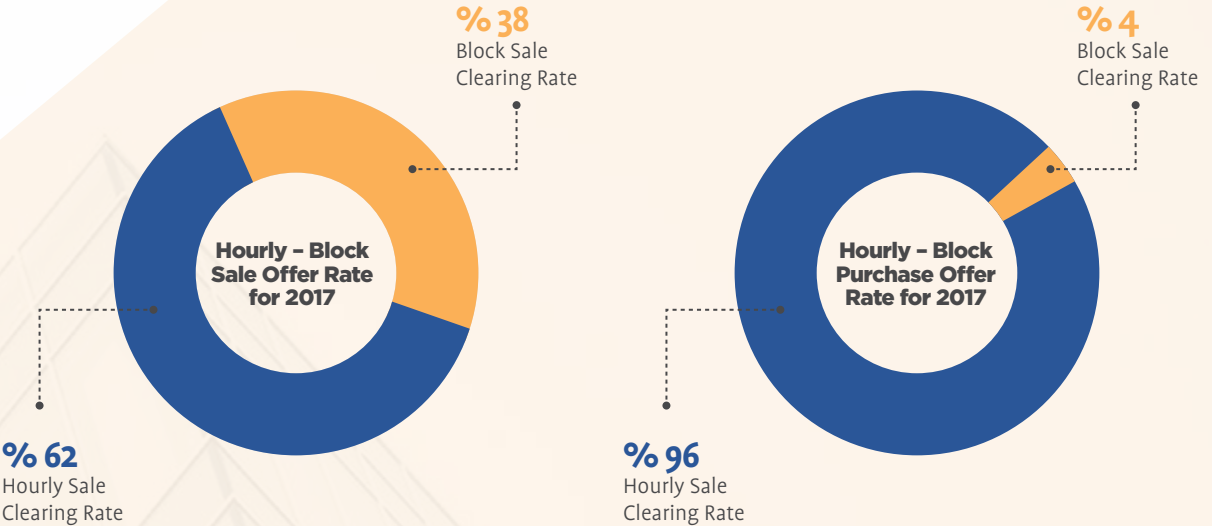
*The clearing volume given in this graphic expresses total sale amounts in the Day-Ahead Market.

Monthly Market Clearing for the years 2016 – 2017

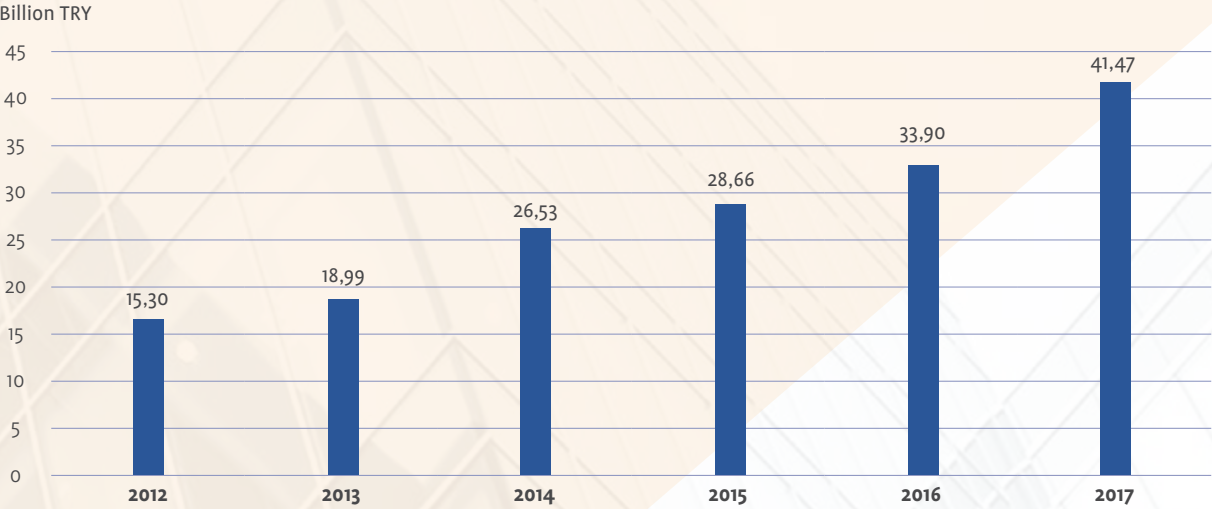


As shown in the graphic above, the lowest clearing volume in 2017 realized on January 2nd, Monday, at 02:00 with 8,370 MWh and the highest clearing volume on July 14th, Friday, at 14:00 with 20,680

Hourly – Block Offer Clearing Volume Rates



Annual Trading Volume of Day-Ahead Market



As shown in the graphic above, annual trading volume in the day-ahead market increased in 2017 by 22.34% compared to the previous year, reaching to TRY41.47 billion. The trading volume indicates sum of purchase and sale amounts.

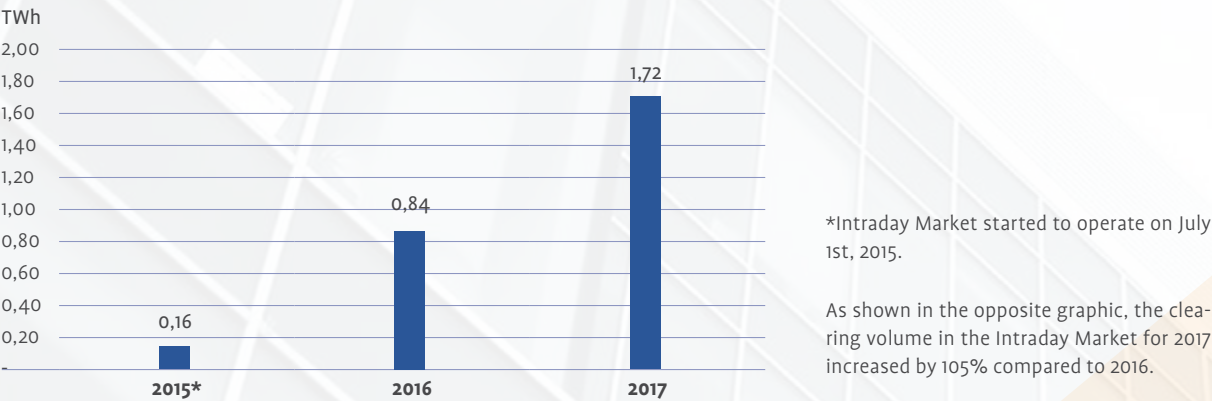
Number of Participants Offering in the Day-Ahead Market

Monthly 713 participants in average made offer in the Day-Ahead Market in 2017.

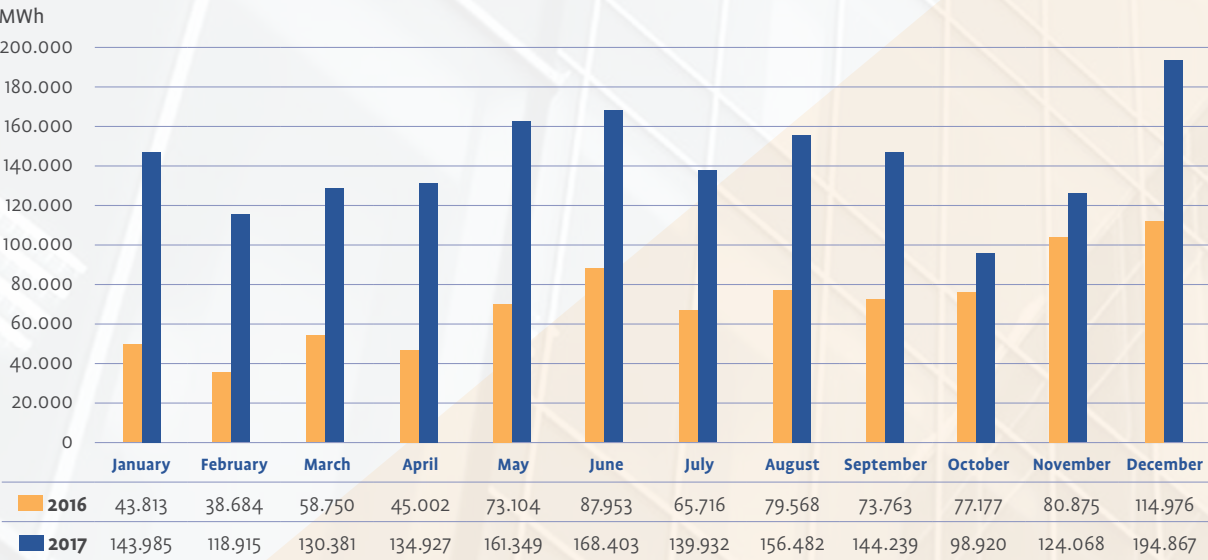
January	February	March	April	May	June	July	August	September	October	November	December
687	693	699	707	713	736	729	711	707	713	726	728

Data on Intraday Market

Annual Clearing Volume in the Intraday Market

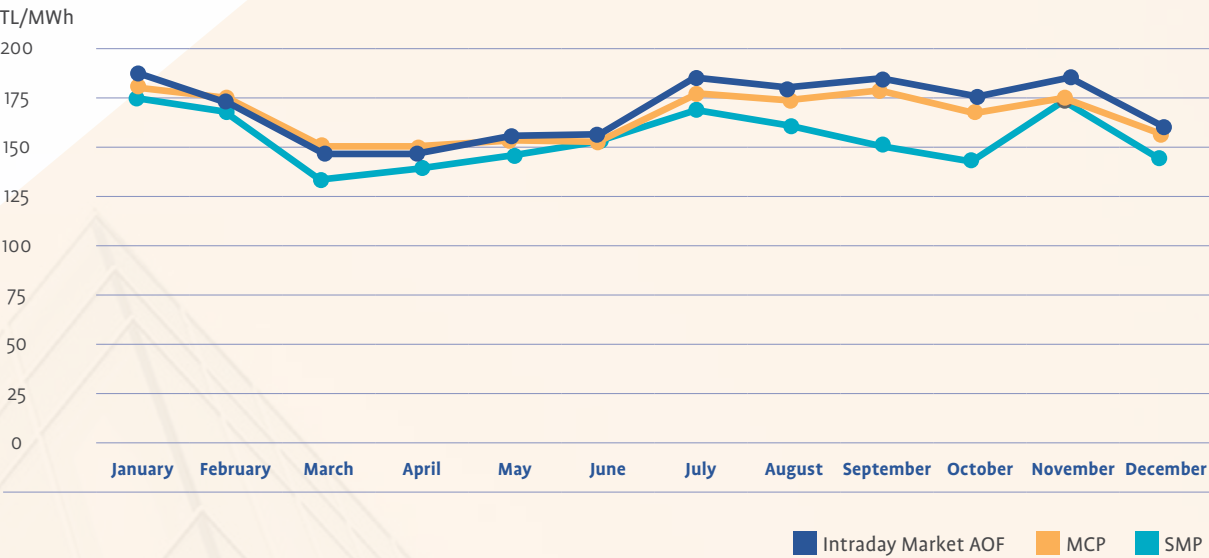


Monthly Clearing Volume in Intraday Market for the years 2016 - 2017

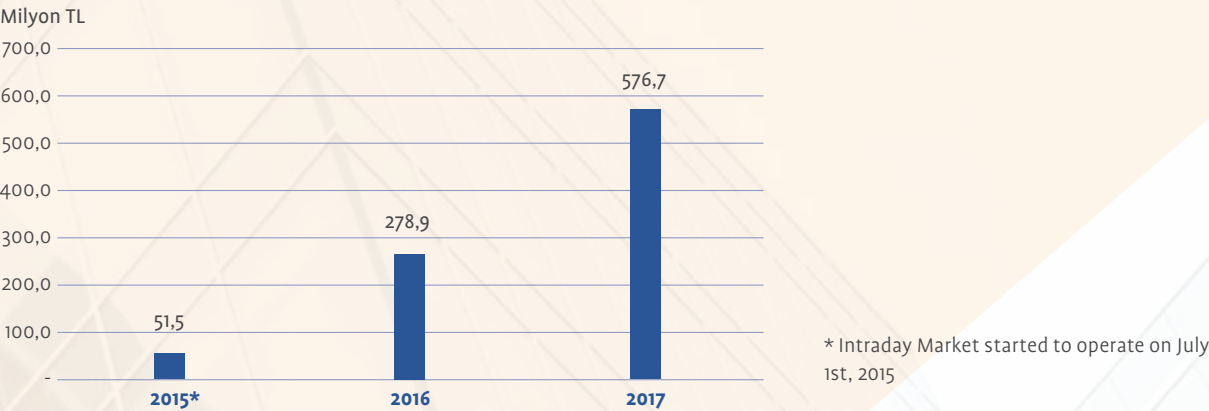


As shown in the graphic above, the highest daily clearing volume in 2017 was on September 4th, Monday, with 11.740 MWh and the highest hourly clearing volume was on December 10th, Sunday, at 14:00 with 1.377 MWh.

Monthly intraday Market Weighted Average Price- –MCP-SMP values



Annual Trading Volume in the Intraday Market

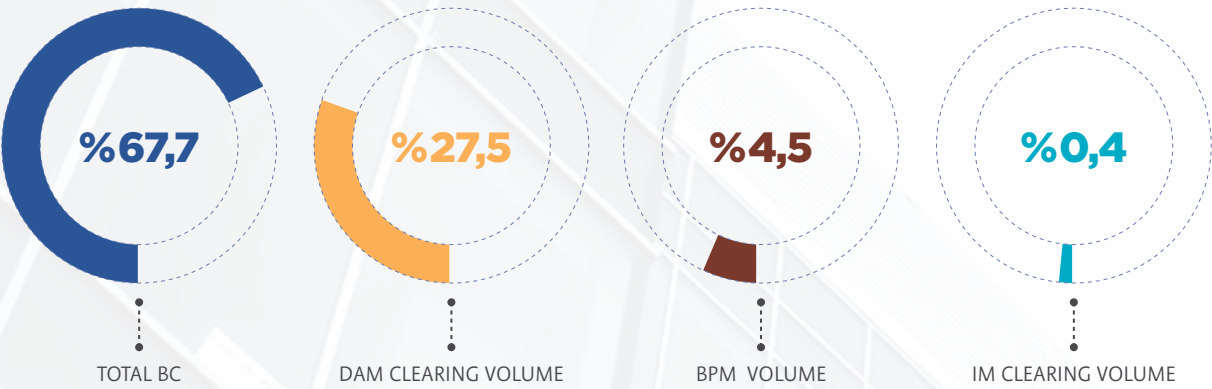


Number of Participants Offering in the Intraday Market

In 2017, number of participants offering in the Intraday Market was monthly 243 in average.

January	February	March	April	May	June	July	August	September	October	November	December
221	212	232	242	246	259	257	241	234	253	251	272

Distribution of Annual Market Amount



TOTAL BC: means sum of the amounts of the bilateral contracts made for purchase or sale.
DAM Clearing Volume: means clearing volume for sale in the Day-Ahead Market.
IM Clearing Volume: means clearing volume for purchase in the Intraday Market.
BPM Volume: means sum of YAL and YAT instructions fulfilled.

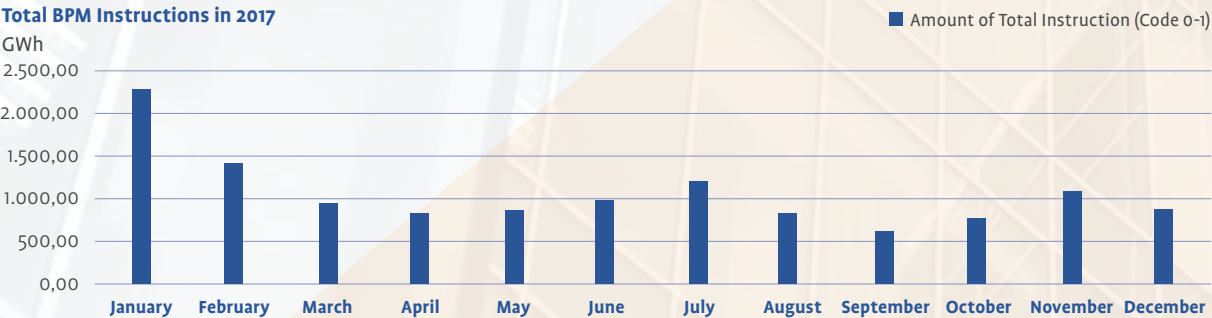
Settlement and Registration

Settlement activities contain settlement of Day-Ahead Market, Intraday Market, Balancing Power Market and energy imbalances as well as RERSM settlement notices. It is essential that EPIAŞ should not make profit/loss as a result of activities performed in the markets it operates. In principle, when making settlement operations, these operations should be made in a quick, reliable and transparent way and in accordance with the applicable regulations.

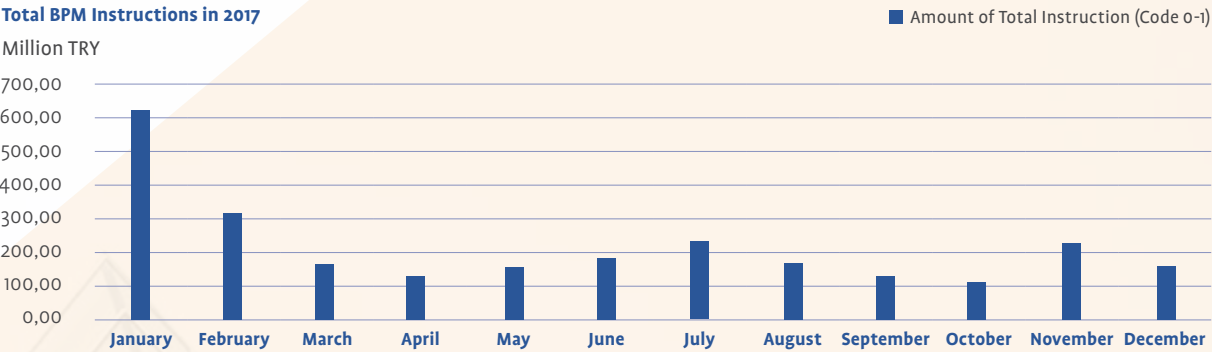
Settlements of the Day-Ahead Market and Intraday Market are made on the system purchase and system sale amounts and then published. Daily notices of the credit and debt advance of the participants and distribution of the amount of difference are performed. In addition to the settlement activities, minimum collateral, impair collateral, Day-ahead Market collateral, Intraday Market collateral

and risk collateral required to be made available by the market participant are calculated and published and necessary sanctions as per the applicable regulations are implemented.

In the context of the Balancing Power Market, fixed amounts of load cycling and load shedding are calculated by the end of the month on basis of the offers made in the previous day by the participants in the body of company. Furthermore, credit and debt amounts of the market participants are calculated monthly on basis of the fixed amounts of instructions and offer prices in the Balancing Power Market. And non-delivery costs of the instructions are calculated and published.

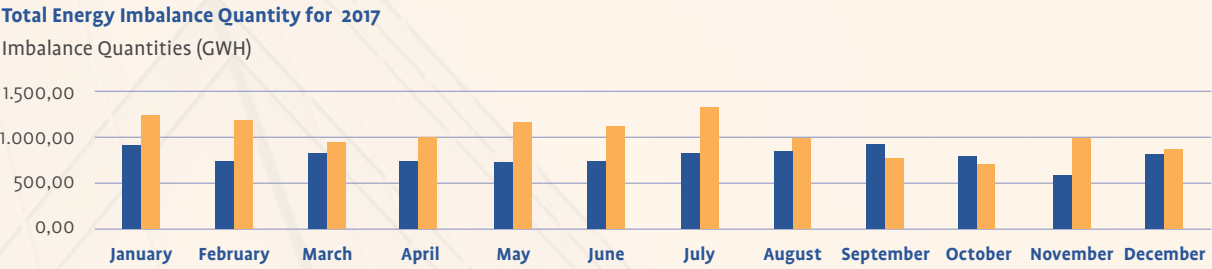


The graphic above shows the fixed load cycling and load shedding (codes 0 and 1) instructions given in the Balancing Power Market. Financial graphic showing monetary value corresponding to the fixed load cycling and load shedding activities with their settlement transactions fulfilled in the Balancing Power Market is given in the next page.

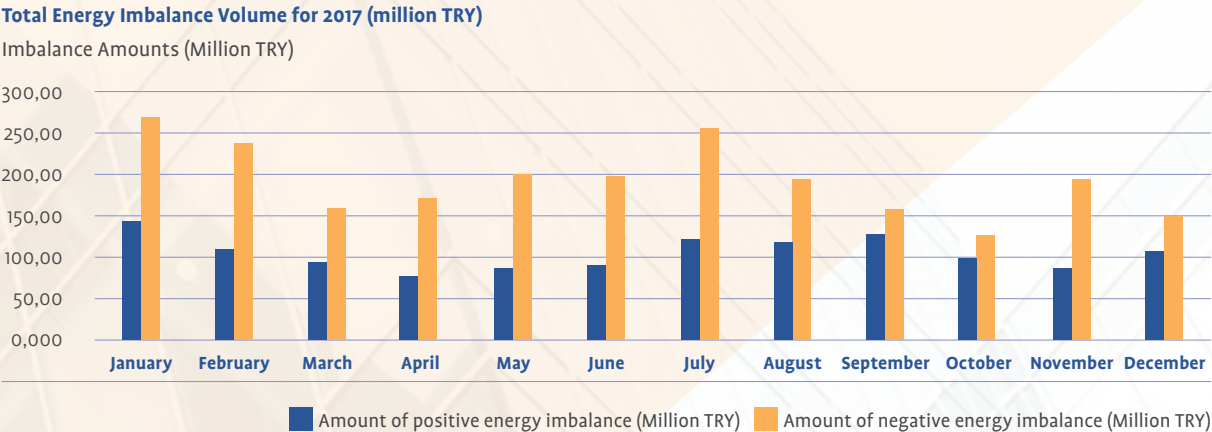


Monthly distribution of the total cost volume generated in the Balancing Power Market is shown in the graphic above. Furthermore, energy imbalance amounts of the market participants are also calculated monthly and reflected on the market participants.

And the quantity and amount of energy imbalance settled in 2017 are given in the graphic below.



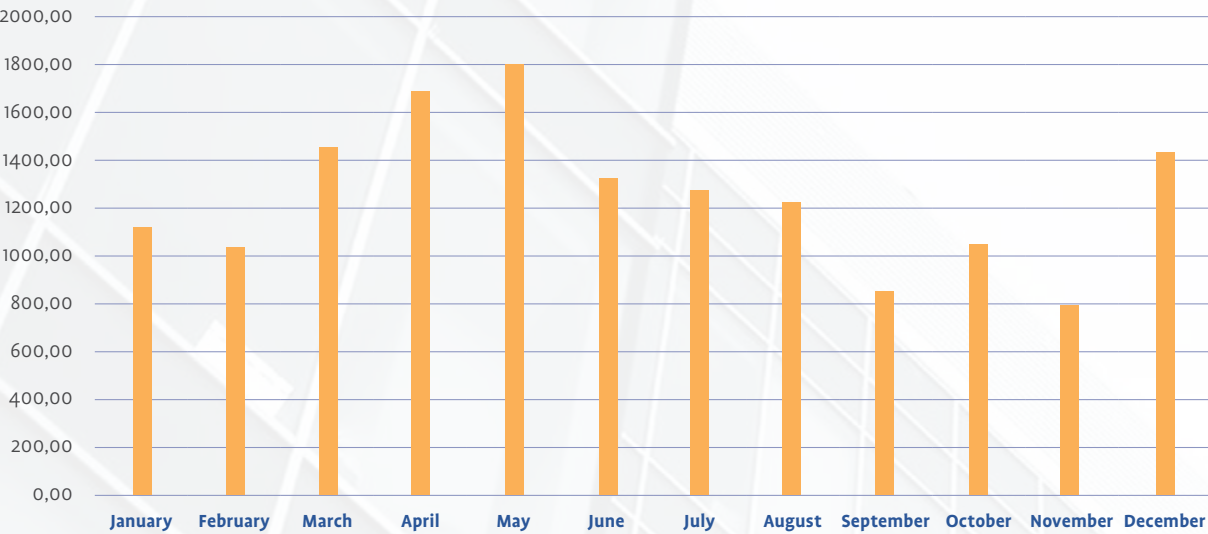
In 2017, the highest imbalance was in January, and the lowest imbalance was in October.



Monthly distribution of the monetary volume of the imbalances occurred in 2017 is shown in the graphic above. Settlement of the monthly RERSM are indicated under RERSM credit and debt items.

Amount Paid to RERSM in 2017

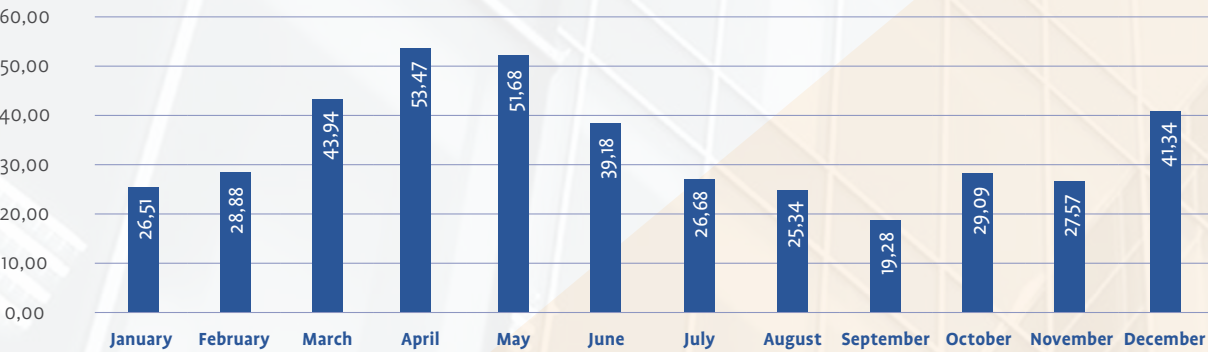
YEKTOB (Million TRY)



Changes in the total amounts paid to the RERSM participants are shown in the graphic above. Monthly average unit cost per MWh as a result of RERSM credit and debt has been reflected on the market participants.

RERSM Unit Cost in 2017

RERSM Cost (TL/MWh)



Monthly average unit costs per MWh reflected on the market participants after RERSM settlement are shown in the graphic above. The highest RER cost per MWh is in April, and the lowest one is in September.

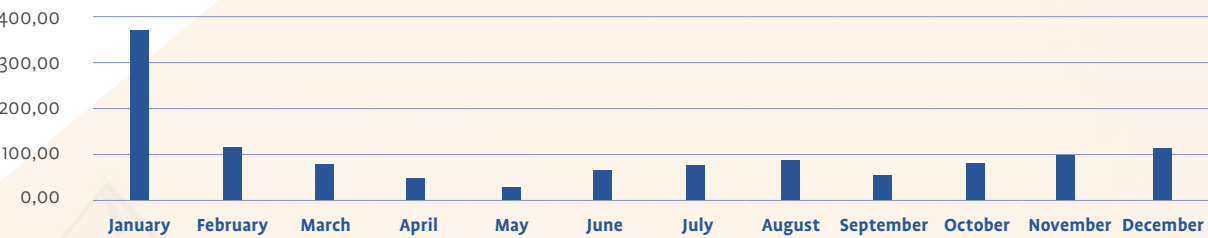
Amount of difference as a result of settlement of Day-Ahead Market is calculated and distributed to the participants.

Retrospective Correction Items (GDDK) were calculated monthly and informed to the market participants.

Zero balance correction item found as a result of Balancing Power Market energy imbalances and manual GDDKs has been monthly reflected on the market participants at the rate of draw quantity subject to the settlement.

Total Zero Balance Correction Amount for 2017

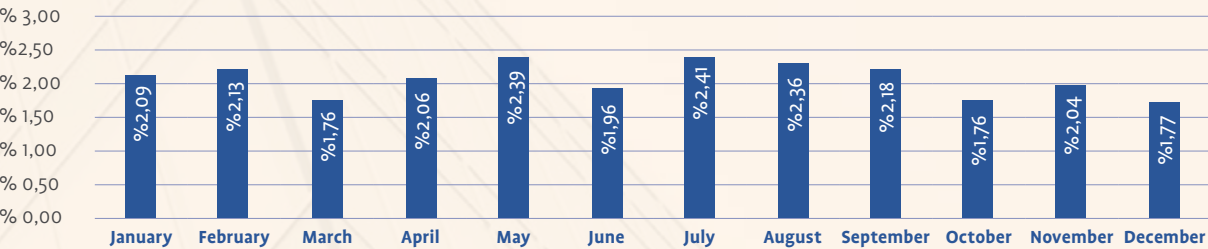
SBDK (Million TRY)



Zero balance correction amount found as a result of energy imbalances and manual GDDK in the Balancing Power Market which was monthly reflected on the market participants at the rate of draw quantity subject to settlement is reflected only on TEİAŞ as of 2016. Changes in the zero balance correction item in 2017 are shown on monthly basis in the graphic above. Furthermore, Transmission System Loss Coefficients (İSKK) for 2017 were calculated and the rates for these coefficients are shown in the following table.

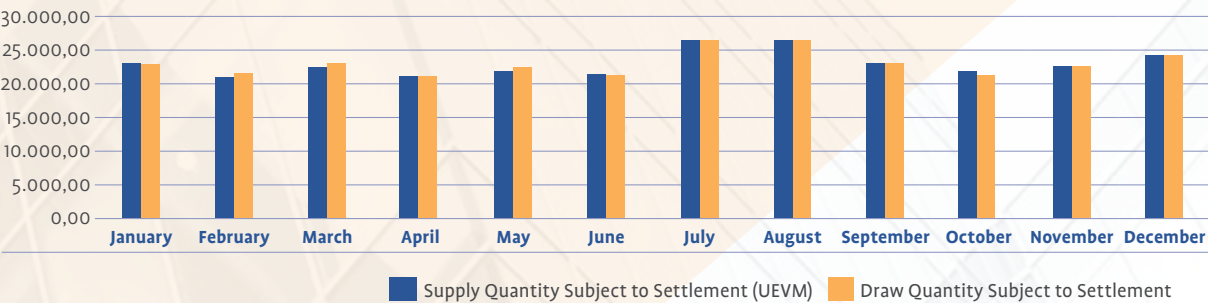
Transmission System Loss Coefficients for 2017

İSKK Rate



Monthly Supply – Draw Quantities for 2017

UEVM – UEÇM (GWh)



The table above shows changes in the supply-draw quantities subject to settlement in 2017. Legal entity registration procedures for the licensed market participants, plant approvals, participation agreements and eligible consumer transactions are performed.

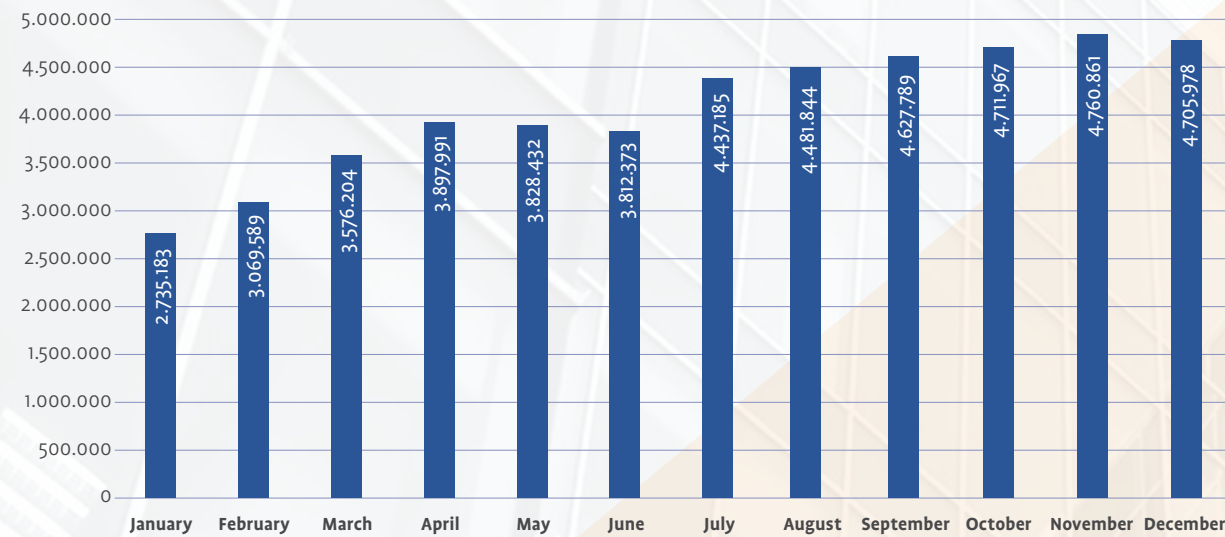
Number of the existing participants on license basis is shown in the following table.

Period	Distribution	Retail in Charge	Transmission	OSB Production	Wholesale	Production	Grand Total
January 2017	21	42	1	-	152	749	965
February 2017	21	42	1	-	149	754	967
March 2017	21	42	1	1	148	762	975
April 2017	21	42	1	1	149	765	979
May 2017	21	63	1	1	150	772	1.008
June 2017	21	63	1	1	152	772	1.010
July 2017	21	63	1	1	154	773	1.013
August 2017	21	63	1	1	155	780	1.021
September 2017	21	63	1	1	156	783	1.025
October 2017	21	63	1	1	156	800	1.042
November 2017	21	63	1	1	156	814	1.056
December 2017	21	63	1	1	153	819	1.058

Number of Eligible Consumer (ST) Traded is shown below.

Number of Eligible Consumer (ST) Traded

Number of ST Meters



Strategy Development Activities

EPIAŞ Strategy Plan for 2016-2020, an important part of EPIAŞ strategy development studies, was prepared in form of a road map on macro level in accordance with the long-term expectations and requirements of the sector by taking into consideration the strategic priorities of our Company as well. It is desired to make contribution to the development of the energy markets by using the company resources more efficiently in line with the objectives established in EPIAŞ Strategic Plan. While the Strategic Plan guides for achievement of the corporate targets of our company, it also reflects our approval for the next five years with respect to development of the energy markets.

The Strategic Plan is regularly monitored and considered, and updated annually. Progress reports are drawn up concerning six-month period in connection with the targets set in the Strategic Plan and presented to the General Manager.

Organizations

EPIAŞ 2nd Ordinary Meeting of Shareholders

The second Meeting of Shareholders of Turkish Energy Exchange was held on 24.03.2017 in Istanbul. In the 2nd Ordinary Meeting of Shareholders, Presentation of the operations

in 2016 was made by Fatih Dönmez, Chairman of the Company. In the meeting, annual ANNUAL REPORT of the Board, auditor's report and financial statements as well as assignment of Himmet Karadağ for the vacant position due to resignation in the board of directors in 2016 pursuant to the Chairman of the Company. In the meeting, annual ANNUAL REPORT of the Board, auditor's report and financial statements as well as assignment of Himmet Karadağ for the vacant position due

to resignation in the board of directors in 2016 pursuant to the Turkish Commercial Code, article 363 and Articles of Association, article 8 were presented for approval. After discussion and approval of the proposal of the Board of Directors concerning profit distribution for 2016, the independent audit organization proposed for the accounting year 2017 to conduct independent audit activity as per the provisions of the Turkish Commercial Code was approved



Transparency Workshop

The third of the Transparency Workshop which is organized each year by EPIAŞ in accordance with the resolution No. 5629/17 taken by EMRA was made on 30.10.2017 in Istanbul, attended by 115 persons. The workshop was held by participation of the authorized officers of the related public organizations and agencies, representatives of private companies and associations and broadcasted live on our website to make it possible for the concerned people who did not participate the workshop to watch the workshop.

In the workshop, sessions were held under the headings “Market Monitoring Legislation” ad “Data Quality and Quality”. In the session Market Monitoring Legislation, the matters of definition of the market monitoring concepts (business secret, manipulation, etc.), determination of sanctions, determination of the monitoring limits by type of participants, determination of notices to be made in connection with monitoring in detail, definition of the sanction mechanism were discussed. And, in the session Data Quality and Quantity, the matters discussed include identification of the organizations which publish duplicated data and of the inconsistencies among the duplicated data, measures to be taken for data reduplication, consideration of the existing data list (data required to be included or excluded), and development of Energy Inventory system as well as proposed solutions. In the 2nd session, the data set published by EMRA basing on the resolution of the Authority was discussed individually and updates and changes to be made in the data were identified in cooperation of the concerned organizations and companies. And the results of the Workshop were compiled as “Transparency Report for 2017” in form of data proposals and presented to EMRA.



International Activities

EUROPEX (Association of European Energy Exchanges)

Euopex performs operations for support and development of the exchange-based wholesale, electricity, gas and environmental markets by communicating with the agencies of European Union and other organizations in Europe related to the electricity, gas and environmental markets. Taking an active role in a number of matters which may affect European Energy Markets, particularly in the European Commission, ACER, ESMA, European Parliamentary and European Council, EUROPEX performs its activities by means of four working groups on “Electricity Markets”, “Gas Markets”, “Environmental Markets”, Financial Markets, Integrity and Transparency”. Four persons from our company participate in each of these groups in order to closely follow the developments.

In line with the decision taken in the General Assembly of EUROPEX in 2016, the General Assembly of EUROPEX for 2017 was hosted by EPIAŞ in Istanbul.

In 2017, presidency elections were made to manage activities of the Europex working groups for the period of 2018 – 2019. As a result of the elections, Derya ERBAY, Unit Manager for Regulatory Affairs in our company, was elected as the president of the Working Group on Environmental Markets of EUROPEX, which incorporates the most important energy and environmental product exchanges.



APEX (Association of Power Exchanges)

APEX is a global association and consists of the leading energy exchanges worldwide, regulatory authorities, system and market operators which operates to develop competitive electricity markets on global basis, ensuring share of information and experience among the members effectively by means of conferences it has organized since 2003.

Meeting the membership criteria established by APEX of “being a party operating as energy exchange for the electricity and natural gas markets” and “being a party that manages trading of financial instruments concerning Electricity and Gas trading”, EPIAŞ ‘ membership application dated September 08th, 2016 was approved in the Board meeting of APEX held on September 13th, 2016. APEX conference for 2017, where EPIAŞ was among the sponsors of it, was held on October 24th-26th in Brussels.

On the first day of the conference, which continued for 3 days in total, the Board Meeting of APEX was held, and on the second and first days, 7 panels were organized under the headings of “Risk Management in the Markets and Operations”, “Incentives Applicable for Transmission investments to Provide Reliable and Effective Electricity Networks”, “Effect of the Energy Market Integrations”, “Discrete Energy Resources, Network Operations and Global Effects”, “Role of the Market Operators and Status of Renewable Energy”, “Market Governance, Stakeholder Process and Business Models” and “European Markets”.



In addition to the communication it has built with APEX, EUROPEX and CPPA-G, EPIAŞ also continues its contacts with the Independent Bulgarian Energy Exchange – IBEX), Bulgarian Energy and Water Regulatory Commission (EWRC) and Jordan and Sudan Ministries of Electricity and Water Affairs.



Pakistan Market Operator (CPPA-G, Central Power Purchasing Authority)

As a result of negotiations between Pakistan Market Operator and EPIAŞ for one year, a training was organized by EPIAŞ particularly for the authorized officers of Pakistan to share its experience in the energy market.

While experts from the Ministry of Energy and Natural Resources (ETKB) have made contributions by talking about the existing status and experience in connection with

regulatory and macro strategies during this training which included historical development an process transformation of the Turkish energy markets, the experts from the Energy Market Regulatory Authority (EMRA), Türkiye Elektrik İletim Anonim Şirketi (TEİAŞ), Türkiye Elektrik Ticaret ve Taahhüt Anonim Şirketi (TETAŞ) and EPIAŞ also communicated about their own responsibilities in the fields of regulation, system operation, trade and market operation.

After 5-day training programs held in the EPIAŞ's office in Istanbul, a "Memorandum of Understanding" was signed between

EPIAŞ and CPPA-G. Under this Memorandum, experience of Turkey in the energy sector and EPIAŞ's experience in the energy markets shall be shared with the Pakistan Market Operator, CPPA-G.



Audit and Market Surveillance Activities

Activities of the company were audited on a risk-based approach by referring to good practices for international internal audit standards and information technologies management in order to provide the stakeholders with an independent and objective assurance serves and, in this respect, to evaluate and develop efficiency of the risk management, control and governance process. As a requirement of the risk-oriented audit approach, the fields that can be audited were evaluated in accordance with the specified set of criteria, and the processes deemed to have priority were included in the audit plan and the audit activities were performed in this respect. In addition, preparation studies were made for the internal control procedures and thus the internal inspection activities were performed by giving priority to the process considered to be critical for activities of the company.

Surveillance and coordination of the independent audit activities conducted with the company were achieved, aiming at creating proper conditions for an effective and efficient audit. Information about the internal control and internal audit activities performed were communicated in the Audit and Compliance Committee, which convened five times during the year. Findings given in the reports as well as recommendations concerning the findings were shared with the concerned units, making contribution to development of the processes and activities of the Company.

Market surveillance activities are performed in order to establish a transparent and sustainable market surveillance system, trustful for the company and market participants and in accordance with the international standards and practices.

In this context, security system that assures receivables of the participants trading in the market is monitored daily and performance of the collateral system is measured by means of the specified performance criteria and reporting is made to the concerned units. In the operating period, proposed solutions were shared basing on the results gained, and support was provided for studies to improve and develop the collateral system.

The Monthly Market Report, which is shared with the concerned units of the company during the operating year, contains detailed general market data, collateral status of the participants, analysis of the collateral system as well as detailed data on the transactions made through Bilateral Contracts, Day-Ahead Market (DAM), Intraday Market (IM), Balancing Power Market (BPM) and Derivatives Market (VIOP). And Daily Market Report was also prepared in order to daily monitor the transactions made by the market participants.

It is intended that studies are made in the subsequent period in cooperation with the stakeholders in order to formulate and deve-

lop an integrated market surveillance system for all markets where energy trading is performed. Studies are planned for development of market surveillance system, necessary change in the regulations and system infrastructure for the markets intended to be opened under EPIAŞ.

Activities of Information Technologies

Information Technologies and Infrastructure Works

After movement of the Disaster Recovery Centre (DRC) to a “Tier 3” certificated Data Centre at the end of 2016, the primary Data Centre located at TEIAŞ Bahçelievler was also successfully moved to a “Tier 3” certificated Data Centre in Istanbul after a planned interruption of 4 hours. Taking this opportunity, DRY tests were completed by operating all systems via DRC for two weeks before movement.

Together with movement of the data centre, necessary infrastructure was built and applications were deployed for monitoring all system and applications 7/24 internally and externally.

And necessary server and database infrastructure, storage units and back-up software were also purchased in 2017 for collection, processing, storage and back-up of large-scale data.

For Operational Information Technologies Security, DDOS product and firewall rules were made stricter, and server and end-user solutions / services were purchased and installed against zero-day attacks.

Data Management and Work Analysis Works

Installation Works for Corporate Data Warehouse

Works for installation of data warehouse were started in order to keep the market operation applications of EPIAŞ and other business unit application systems of different structure in the warehouse as a decision support system. Upon installation of the corporate Data Warehouse, the reporting and data analysis requirements now performed via the market operations database systems shall be performed via data warehouse. A service in accordance with a security role model shall be assured by presenting different and discrete data from a single media with high performance and data consistency. This system, supported by business intelligence application tools, shall ensure fulfilment of the reporting and data analysis requirements and analysis of the current status end prospective analytical studies.

Business Analysis Works

Under the Project of Organized Natural Gas Wholesale Market (Continuous Trading Platform), the analytical studies are planned in 5 different phases and the analytical studies concerning Registration Procedures, Settlement and Advance Procedures and Market Transactions completed. And the analytical works for the Collateral Transactions and Reporting are about to end.

Having obtained the operating licence of the Balancing Power Market and Ancillary Services Markets, TEIAŞ started improvement of TEIAŞ Market Management System (TPYS). In this context, integration is required between the market systems of EPIAŞ and TEIAŞ. And analytical studies for this requirement were completed. Furthermore, in accordance with the modified Regulation on Electricity Market Ancillary Services, necessary analytical studies for development of the Ancillary Services Settlement Modules were completed.

Analytical studies of EPAIS Identity Management System Application through completed and the system was made live; and in this way all applications already developed or to be developed by EPIAŞ shall perform the user management operations, role/authorization descriptions, updates and in-app limit management.

For the current Management System of Local Day-Ahead Market, Intraday Market, Balancing Power Market, Consumer Management System, Transparency and Report Portal platforms, requests of business analysis for modification and addition of new features were fulfilled.

Software Development Works

Our software development projects, completed and ongoing in 2017, are described below.

Completed Projects

• Settlement Technical Analysis

Now there is no document related to the Settlement module which runs on PLSQL procedures. In this respect, technical analysis documents and resulting analysis of the settlement workflow were prepared to incorporate in the corporate memory and put in operation in May 2017. In this way, the knowledge background for the Settlement was circulated internally in the company.

• EPIAŞ Identity Management System (EKYS)

With the developed system, other systems already developed or to be developed by EPIAŞ (DAM, IM, Registration, BPM (Balancing Power Market), Natural Gas, Eligible Consumer) perform their user management operations, role/authorization descriptions, application definitions, updates and if any, restrictions via EKYS. Activated

in June 2017, EKYS is designed to be integrated with each application.

• DGPYS Regulations and Requests

Currently acting as heart of EPIAŞ systems, DGPYS perform monthly settlement operations of TRY3.9 billion (VAT included) in average. In this context, works have continued to fulfill the requests made by the business units for more proper operation of DGPYS system and for correction of errors during 2017.

*Details of the works concerning TYS Project are given in the section Business Development and R&D Activities

Ongoing Projects

• EPIAŞ – TEIAŞ TPYS Integration Project

Balancing Power Market and Ancillary Services Modules that TEIAŞ MYTM has previously used via EPIAŞ system are designed by TEIAŞ and incorporated in their body under TPYS project. It is an application project for data exchange between EPIAŞ and TEIAŞ as the data generated from this application are used in the operations of IPIAS and the data in the market systems of EPIAŞ are required by TPYS.

• Application Performance Monitoring, Phase I

The environment is intended to be extended to other applications apart from TYPs project which is specified as pilot on AppDynamics on the monitoring tool designed as platform where the application performance metrics are followed. With regular monitoring, it is intended to solve any identified performance problems or suspicious alarms that may indicate performance problems, and to implement a continuous improvement cycle.

• Service Centralization

On this platform, intended to be used as central web service management tool, Transparency Platform web services provide service as pilot. And works shall be designed to allow other web services provided by EPIAŞ to the market to provide service via this platform.

• DUY Updates

In the framework of modifications in DUY regulation which shall enter into effect in February 2018, fines shall be calculated for those that make incomplete or wrong KGÜP notification. Furthermore, calculation of Retrospective Correction Item is reduced from 3 months to monthly period and the settlement module should be regulated accordingly. To this end, developments shall be made on part of DGPYS and Settlement.

Corporate Architectural Works

- Technical consideration and purchase of Cisco Switchboard, Registration Module, Video IP Telephone and videoconferencing system;
- Technical Consideration and Purchase of Corporate Laptop and cell phone;
- Preparation of Stroge TGA and its Technical Specifications;
- Preparation of Server (Blade) TGA and its Technical Specifications;
- Preparation of TGA of BT Service Management Product and its Technical Specifications;
- Preparation of CMMI Level 3 TGA;
- Preparation and purchase of TGA of BT Service Management Product and organization of related trainings;
- Modelling network (MPLS, ISP, DDOS, IPS, Firewall, Switch, VLAN), collateral (APT, Antivirus, Central Password Management, Security Event Management) data centre (Cabinet, Physical Server, Storage, San, LoadBalancer, Virtual Server, CPU, Memory) and Database (Exadata, DB, DB Instance, Deployment Instance) topologies.
- Preparation of the natural gas work data dictionary (Registration and Market Transactions) was completed for the modules whose analysis was completed.

ISO 27001 Information Collateral Management System

EPIAŞ is liable to operate in accordance with TS ISO/IEC 27001 pursuant to Art. 32 of the Electricity Market Licence Regulation. In order to fulfill this liability, ISO 27001 Information Security Management System Compliance Project was launched. Negotiations were made with all units under the project and the asset inventory in the scope of information collateral was created, valuation and classification of the identified assets were made and risk analyses were conducted together with the project team and risk actions were established according to the identified risks.

Policies, procedures instructions and similar documents related to the Information Collateral Management System were created, presented for approval and entered into effect.

Internal audits were conducted, management review meeting made and, eventually, after certification audit conducted at the end of November, Turkish Standards Institute granted certification on December 14, 2017 indicating that our company operates in accordance with ISO 27001 Information Collateral Management Standard.



Investments and Significant Acquisitions

Among the investment items, R&D investments increased compared to the previous years. Greater part of the investments made in 2017 is consisted of R&D investments.

Investments made by the company in the accounting pear of 2017 are given in the following table in comparison with the previous accounting year.

Investment (TRY)	2016	2017
Fixtures Investments	4.845.090	3.921.288
IT Investments	4.617.980	3.792.133
Other Investments	227.110	129.155
Software Investments	849.497	1.492.517
IT Investments	803.597	1.479.348
Accounting Software License and Software	39.100	13.170
Other Software	6.800	-
Licence Investments	774.544	1.906.837
IT Investments	765.000	1898.356
Market Operation License	-	-
Licenses	9.544	8.481
R&D Investments	1.806.665	10.381.605
Other Investments	1.806.665	10.381.605
Special Cost Investments	54.297	186.354
IT Investments	-	183.263
Other Investments	54.297	3.092
TOTAL	8.330.093	17.888.601

- Fixtures Investments amount to TRY3,921,288 in 2017 of which TRY3,792,133 is for IT investments and the remaining TRY129,155 for other investments.
- Software Investments amount to TRY1,492,517 in 2017 of which TRY1,479,348 is for IT investments and the remaining TRY13,170 is for Accounting Software Licence and Software.
- Licence Investments amount to TRY1,906,837 in 2017 of which TRY1,898,356 is for IT investments and the remaining TRY8,481 for other licences.
- R&D Investments amount to TRY10,381,605.
- Special Cost Investments amount to TRY186,354 of which TRY183,263 is for IT investments and the remaining amount is for other investments.

Accounting and Finance Activities

Accounting system infrastructure necessary for performance of the accounting operations in an effective and efficient way was built in line with the strategic goals of EPIAŞ as per the provisions of the applicable regulations. Security and functionality of the system is continuously controlled and, if required, updated.

After obtained the market operating licence on 01.09.2015, EPIAŞ has continued to perform financial settlement of its operations in the markets as well as other financial operations related to its activities pursuant to the Electricity Market Law No. 6446 and Electricity Market Balancing Settlement Regulation.

As a result of monthly settlements made concerning the electricity market transactions, EPIAŞ issued 10,532 invoices amounting to TRY41.175.064.488,32 (VAT excluded) in 2017. 10,193 invoices amounting to TRY41.082.144.715,35 (VAT excluded) issued by the market participants were received and recognized.

Daily advance collections and payments are made in connection with the transactions in the Intraday Market and Day-Ahead Market and total advance amount collected and paid between 01.01.2017 and 31.12.2017 is TRY18.187.996.122,71.

Procedures of acceptance, maintenance, return and compensation of the letters of guarantees provided by the market participants to our company in connection with the market operation activity are performed. In this context:

- While there were 649 letters of guarantee amounting to TRY633.212.230,24 on hand as of 31.12.2016, the number reached to 696 with total amount of TRY703.485.882,49 as of 31.12.2017. It increased by 7% in number and by 11% in amount.

- While 199 letters of guarantee in total amount of TRY586.029.774,96 were returned in 2017, there was an entry of 246 letters of guarantee in total amount of TRY656.303.427,21 in the same year. Finally, totally 445 letters of guarantee amounting to TRY1.242.333.202,17 were processed in 2017.

Assignment, control and payment procedures are performed with respect to assignment of the receivables arising with our company as per the contracts made by the market participants with the financial organizations (contract for assignment of receivables). In this context, while there were 380 contracts for assignment of receivables in total amount of TRY208.396.874,757 defined with the system of Settlement and Custody Bank by the end of 2016, it reached to 423 in number and to TRY249.235.225.365,94 in amount.

The accounting infrastructure and system established in 2015 both for general accounting and registration of the transactions in the electricity market without problem and protection of the market participants against any harm was further improved and developed in 2017 just like 2016. In this context:

- Applications of e-Invoice, e-Archive, e-Declaration, e-Book and e-Notice are used among e-Transformation applications of the Ministry of Finance.

- With the integrated accounting program, BA-BS and current account settlement forms of the companies are automatically sent to e-mail addresses of the Market Participants.

- Fund Management Directive is issued for cash management of the Company is performed on risk-distribution basis and institutionally.

- “Collective Payment System” (TOS) started to be used via the data processing infrastructure of the banks to make payments faster and more effectively.

- For planning management of the company funds effectively and efficiently, the budget of EPIAŞ prepared in 2017 has been carefully followed within the budget discipline. Budget realizations are reported by three-month periods and presented to the knowledge of the Board of Directors.

- After the revenue cap for the market operation fees for 2018 was determined by EMRA, the budget for 2018 was prepared basing on the budget realizations in 2017.

- Accounting infrastructure was revised and necessary adjustments were made in the integrated accounting software we use to assure successful operation of the system.

Corporate Communication Activities

Corporate Communication Activities continued in 2017 for promotion of our company nationally and internationally and communication with the media in order to reinforce its corporate image and prestige in accordance with our vision. In this line, activities, events and sponsorships were carried out for interior and exterior target groups.

In the scope of the corporate communication activities, content management of the corporate website and social media channels was routinely performed within 2017. And, accordingly, the works concerning EPIAŞ were posted in our corporate website www.epias.com.tr, www.epias.com.tr/en/ and through Twitter and Linked-in accounts of EPIAŞ, @borsaenerjiTR, @borsaenerjiEN, and relationship management and supervision was performed.

News made available to us by the contract agency for media monitoring are compiled in a certain format and daily news release is prepared and shared each day by e-mail internally. Furthermore, announcements and news reports are prepared for the events and shared with the concerned parties. Totally 1356 news about EPIAŞ took place in the local and national media between the dates of 01.01.2017 and 31.12.2016.

Preparation works for “Practical Training on use of corporate Language for Correspondence and Use of Outlook” were performed. For raising motivation events such as boat tour, fast-breaking meal and bowling tournament were organized internally.

Process for registration transactions with respect to EPIAŞ trademarks for the classes 9, 35, 41 and 42 were followed with the Turkish Patent Institute for our company and Trademark Registration Certificates were received.

Design and implementation of all items in the Corporate Identity Manual was completed. Conventional media and social media channels were effectively used to reinforce image of effective, transparent and reliable energy exchange. Advertising plans were formulated, contents and designs prepared and below the line advertising, direct mailing, promotion products, brochures, roll up as well as brochures and printed materials for advertising of EPIAŞ activities were prepared.

In the events hosted and attended as sponsor by EPIAŞ, all preparations are performed by the Corporate Communication Unit. Sponsorship and organization of and preparation of the booths for 2nd meeting of Shareholders, Spot Markets Training, ISTRADE 2017, EUROPEX General Assembly, 2nd R&D Innovation Summit and Exhibition, 3rd Transparent Workshop, INGAS 2017, Turkish Energy Summit, 3rd International Applied Economics and Finance Conference and APEX 2017 the Corporate Communication Unit are among the events and organizations performed by Corporate Communication Unit in 2017.

Furthermore, procedures of EUROPEX and APEX membership are also performed by the Corporate Communication Unit.



Training and Research Activities

EPIAŞ makes research quality studies to make contribution to the development of energy markets, particularly the electricity and natural gas markets. In these studies, the academic literature together with examples from the developed and developing countries are also examined. While the research reports make contribution to formation of new products and markets, they aim at improving the existing products and markets as well.

Off-company trainings are organized to meet training needs of the market participants and sector stakeholders with respect to the activities of EPIAŞ. In this context, three Spot Markets Trainings were organized for the market participants in April, September and December.

In the framework of studies for establishment of new organized wholesale energy market in line with the market development, the company attended at the meetings organized by the Ministry of Environment and Urban Planning where compliance of the market-based carbon pricing mechanism, particularly emission trade system, with Turkey has been discussed. Furthermore, in this context, studies were started for formation of voluntary green certificate market in Turkey; research activities were performed for corporate capacity building with attendance at the related workshops and meetings in this respect.

We subscribed sector-related periodicals for raising internal knowledge and awareness about the sector, and the reference books and academic articles requested to build an internal library were included in the company inventory.



Human Resources Activities

Vacant positions were identified for human resources purpose and 35 new employees were hired for such positions in 2017.

By the resolution taken in the Board meeting held on March 4th, 2017, structure of the Information Technologies Directorate was reorganized to contain 6 managers and 16 unit managers in order to create a modern organization to meet the developing requirements, increase work efficiency, contribute to the principles of separation of powers and comply with the requirements of ISO 27001 certificate. Furthermore, current status analysis was made to discuss the organization structure of EPIAŞ as a whole and the results were reported to the Board of Directors.

Disciplinary Directive was drawn up and entered into effect for maintenance of a peaceful working environment in the company. The Disciplinary Directive regulates procedures and principles concerning disciplinary actions to be taken against those employees of the company who fail to fulfill the duties imposed on them and disobey things deemed mandatory or to things prohibited by as per the internal regulation and other related regulations or behave contrary to the dignity and honour of the work.

Training Management Directive was drawn up and put into effect for regulation of the procedures and principles for determination, planning and fulfilment of the trainings required for improvement of the personal and professional competencies of the company employees. In the scope of the Training Management Directive, trainings were organized for the employees as required by the legal regulations and, furthermore, the employees were sent to the national and international trainings programs, seminars and conference to get up to date with the developments related to the business subject of EPIAŞ in international area and to support their personal and professional developments. And an internal trainer inventory was created in order to meet the trainings to be organized through the internal resources as far as possible.

For measurement of the individual performance of the employees in 2017, Directive on Performance Assessments for 2017 was drawn up and entered into effect. Performance of the employees in 2017 was assessed in terms of their competence level.

In order to plan internal career movements and determine whether personal characteristics of the employees comply with the work they do, individual strengths test was conducted for all employees and the results were reported to the Board of Directors.

The projects concerning assessment of periodical performance of the employees on basis of targets and competencies, clarification of career opportunities provided to the employees in the company and making career plans, critical positions and formulation of succession systems in connection with them and incorporation of all training events to be required by the employees during their career

progress in future in the body of an academy were made ready to present to the Board of Directors for consideration.

Legislation and Compliance Activities

As per the Electricity Market Licence Regulation, article 32 "Rights and liabilities of the Market Operating Licence", paragraph three, subparagraph (h) which reads "it is liable to provide EMRA with the certificates of compliance to be granted by a certification agency accredited with the Turkish Accreditation Institute within twenty-four months from the issue date of licence to prove compliance with the standards TS EN ISO 9001, TS ISO 10002 and TS 18001", the activities for compliance with the said standards were conducted in the scope of Legislation and Compliance and the certificates of "ISO 9001 Quality Management System", "ISO 10002 Customer Satisfaction Management System" and "OHSAS 18001 Occupational Health and Safety Management System" were obtained and reported by the Company's letter No. E.1226 of 18.07.2017 to the Energy Market Regulatory Authority in the scope of Market Operating Licence procedures.

In the scope of market operating procedures, regulatory studies were made in coordination with the related units in connection with the Electricity Market Balancing and Settlement Regulation and Regulation on Certification and Support of the Renewable Energy Resources by taking into consideration the requirements and requests of the market, and our requests for modifications were notified to EMRA in form of comments. And our opinion and comments were also presented to EMRA by official letter with respect to the draft modifications of Electricity Market Balancing and Settlement Regulation, Electricity Market Licence Regulation, Consumer Services Regulation, Unlicensed Electricity Production Regulation, Electricity Production Plants Acceptance Regulation, Procedures and Principles of Collateral, Procedures and Principles of Offers in Day-Ahead Market and other regulations which were posted in the website of EMRA for public opinion.

In addition, referring to the resolution No. 7042-5 of 20/04/2017 taken by the Energy Market Regulatory authority on Making Modifications in the Structure of the Offers in the Day-Ahead Market and Procedures and Principles for Evaluation of the Offers published in the Official Journal No. 30051 of 28/04/2017, the Block and Flexible Offers Procedure that our Company is liable to issue was revised by the consent No. E.405 of 03/05/2017 of the General Manager. Furthermore, the Draft Modification of Collateral Calculation Procedure that our company is liable to draw up as per the Temporary article 33 of the Regulation on Making Modification in the Electricity Market Balancing and Settlement Regulation published in the Official Journal No. 29725 of 28/05/2016 was posted in the website of our company on November 8th, 2017 and via the Market Management System to the opinion of the market participants, and studies concerning the said procedure continue.

As per the company's Articles of Association, article 3, paragraph two, subparagraph (a) which reads "making studies for establishment of new organized wholesale energy markets for development of the market and reporting them to the Energy Market Regulatory Authority", the negotiations related to the Regulation on Organized Natural Gas Wholesale Market as the first of the existing regulatory studies for establishment of Natural Gas Market were made with EMRA and the said Regulation was published in the Official Journal No. 30024 of 31/03/2017.

Furthermore, the Procedures and Principles for Operation of Organized Natural Gas Wholesale Market which was prepared as part of Market Operation activities of our company with respect to Natural Gas Market was approved by the Energy Market Regulatory authority by Resolution No. 7293-7 in its meeting held on 21/09/2007 and published in the Official Journal No. 30189 of 23/09/2017.



Legal Activities

Legal Consultancy is liable to provide legal consultancy service to the Board of Directors, General Manager and internal units of EPIAŞ; represent EPIAŞ before all levels of judicial and administrative authorities, follow up intellectual-industrial property rights of EPIAŞ and respond to the letters written by judicial authorities as third parties.

In 2017, number of legal actions to which EPIAŞ is a party is 47, including legal actions assumed from TEİAŞ as per the applicable regulation. Number of execution proceedings is 32, which were opened as a legal remedy to collect overdue receivables which should be collected in the name of the market participants due to the market operation activities of EPIAŞ. Currently there is no legal action or execution proceedings instituted against EPIAŞ which may adversely affect financial position and activities of EPIAŞ.

Legal Consultancy examined legal aspects of 74 contracts to which EPIAŞ is a party. 45 legal opinions were drawn up on various matters for the internal units of EPIAŞ. Furthermore, legal applications made by the judicial and administrative authorities and individuals, over 200 in number, were duly evaluated and considered.

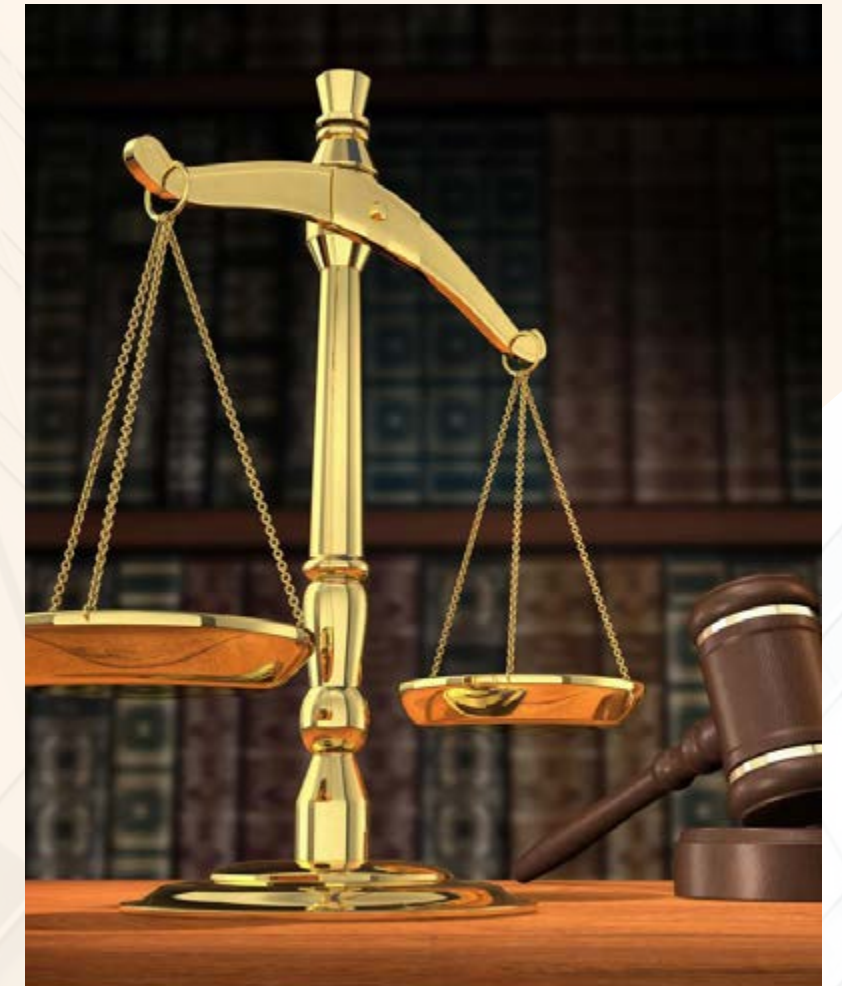
Secretariat function in the Board meetings of EPIAŞ was performed by the Legal Consultancy in 2017.

Preparation and execution of the EPIAŞ 2nd Ordinary Meeting of Shareholder of March 24th, 2017 were carried out by the Legal Consultancy. It also pursued publication and promulgation of the resolutions taken in the Meeting of Shareholders in the Trade Registry Gazette.

And it presented its legal opinion and recommendations concerning the Procedures and Principles of the Organized Natural Gas Wholesale Market, already in the process of establishment, in accordance with the applicable regulation of the Natural Gas Market.

It has drawn up internal directive on representation and binding power concerning the company as well as the list of authorized signatures.

There were no administrative or judicial sanctions against EPIAŞ and Board of Directors for any action contrary to the application regulations in 2017.





Business Development and R&D Activities of the Company



- Native Day-Ahead Market Software - Second Phase Studies
- Natural Gas Market Development Activities
- Operations of R&D Centre • ENTSO-E Operations
- Transparency Platform • Consumer Management System (TYS)
- Establishment of EPIAŞ Academy and Human Resources Management Activities
- Environmental Markets

Native Day-Ahead Market Software – Second Phase Studies

Market clearing prices has been calculated with software and optimization infrastructure basing on modern technology and information and developed by EPIAŞ’s own sources since delivery date of June 1st, 2016.

As it is equipped with a user-friendly interface and designed and developed completely by means of local resources, the Day-Ahead Market software is flexible and open to further development and the second phase of the software for “development of new types of offer” started in 2017.

The studies in question aim at developing new types of offer which better meet the technical requirements of the market participants which make purchase and sale offers.

In the scope of studies, the types of offer used in the major electricity market in Europe were examined. Comments were sought from the industrial sector on the developments to be made and, subsequently, two phases were designed where the phase one concerns reduction of the minimum term f block offer and increase of the number of associated blocks in short-term, and the phase two is about profile and flexible types of block offers. Reduction of the minimum term of block offer (reduction to 3 hours) and increase of the number of associated blocks (making association among maximum 6 bloc offers) were already achieved as the goals of the short-term efforts.

In the current position, analytical and design studies concerning development of profile and flexible block offers were completed; all screens in the Day-Ahead Market software to be affected and change were identified; offer entry, display, result notice, other notices, web services and all necessary business rules were formulated; software developments for optimization algorithm in connection with the block and flexible offers were completed and the stress and performance tests were conducted. Rules that may be required to be changed in the software due to the sectoral needs have been identified parametrically and the software developments are scheduled to complete in 2018.

Natural Gas Market Development Activities

In 2017, very important developments have occurred in the energy sector, particularly natural gas market. Huge investments were made on infrastructure of the natural gas transmission system for supply security. Very significant steps were taken such as capacity expansion of the existing LNG terminals, commissioning of 2 new FSRU units and commissioning of Salt Lake Storage plant in addition to Silivri-Değirmenköy Warehouse. Furthermore, the ongoing projects include capacity expansion of pipe gas as well as TANAP and Turkish Current, and they are expected to be commissioned in near future.

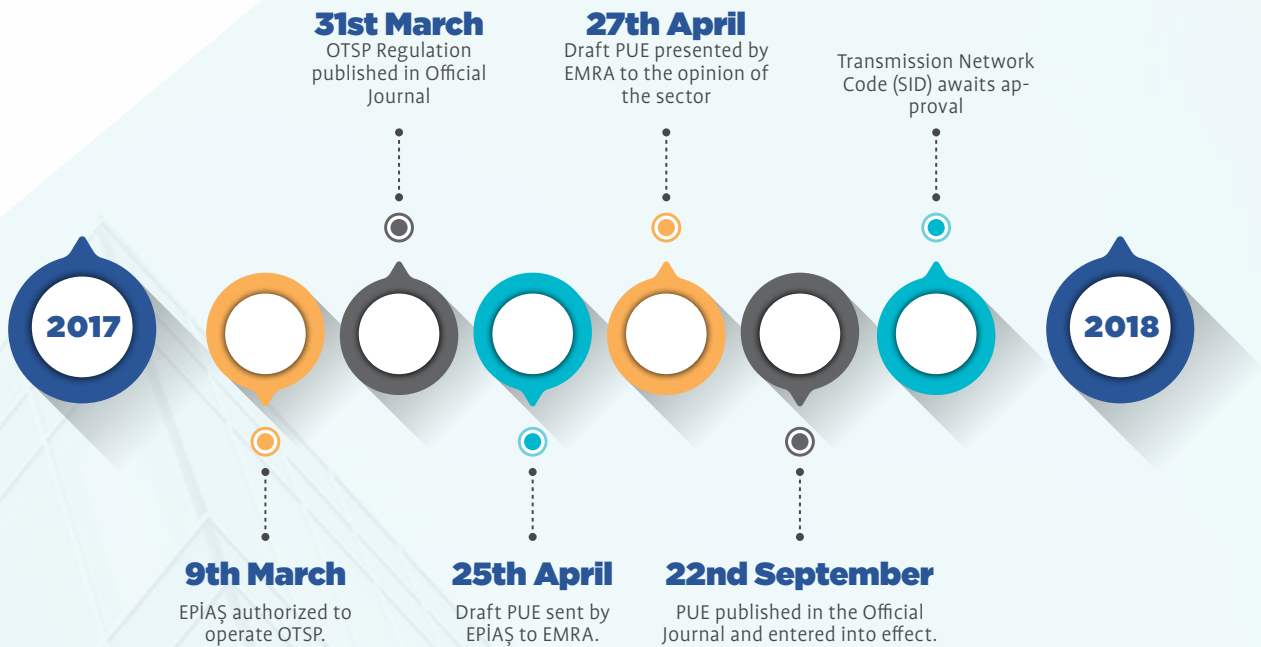
On the part of natural gas market and in accordance with its goal to become an energy centre, operations continue at a fast pace under leadership of EMRA, EPIAŞ as Market Operator and Petroleum Pipeline Company (BOTAS).

Under the project Gas Trading Platform that EMRA conducted together with the consultancy firm Accenture in the scope of IPA funds, which started in 2016 and continued in 2017, we attended at the intensive training programs attended by the personnel of ETKB, EMRA and Petroleum Pipeline Company (BOTAS). Interactive communication has been achieve among the attendants which have been trained with respect to the experience gained by the consultancy firm during development of the natural gas markets in Europe as well as market operation methods, etc.

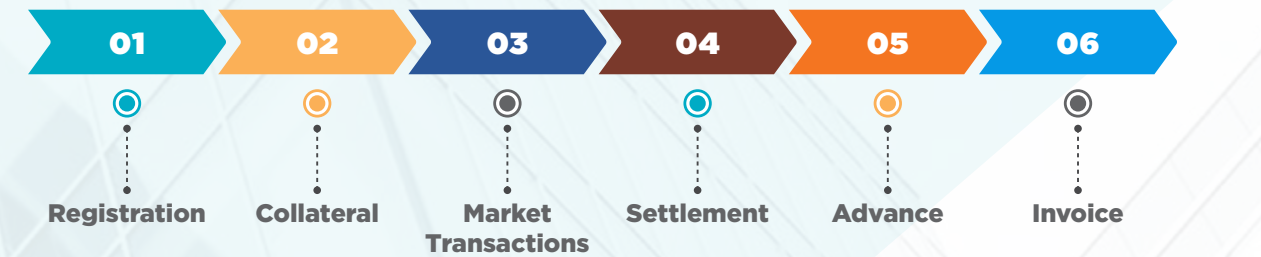
Current agenda and developments of the energy sector and the fairs, symposiums, panels, summits and similar national and international events were closely followed for share of information and experience and effective participation has been achieved by making speeches and presentations.

Periodical meetings were made with the EMRA Natural Gas Departments and commission set up in the body of Petroleum Pipeline Company (BOTAS) concerning OTSP during the year. In addition, many meetings and workshops were also made with the representatives of private companies which will assume an important role in the new market to be established. The representatives of the industrial sector were informed about the developments and the criticism, opinions and recommendations of the industrial sector were secured for contribution to the process. As a result of these meetings:

- a) In the meeting of EMRA on 09.03.2017, operating licence was granted to EPIAŞ for operation of the Organize Natural Gas Markets.
- b) Regulation on the Organized Natural Gas Wholesale Market (OTSP) approved by EMRA was published in the Official Journal on 31.03.2017.
- c) Draft PUE (Market Operation Procedures and Principles), formulated as a result of regular negotiations among the representatives of EMRA, Petroleum Pipeline Company (BOTAS) and private companies was sent to EMRA on 25.04.2017.
- d) The draft PUE was presented by EMRA to the opinion of the sector on 27.04.2017.
- e) PUE was published in the Official Journal and entered into effect on 22.09.2017.



For the Continuous Trading Platform (STP) to be used for market operation, studies have been started since January 2017 together with the Project Team created by participation of all units in the body of EPIAŞ.



Upon establishment of the Organized Natural Gas Wholesale Market, contributions have been made to the draft studies for making Transmission Network Functioning Regulations (SID) of Petroleum Pipeline Company (BOTAS) market-based in accordance with the applicable Meetings were made with the Settlement and Custody Bank, which will manage collateral and clearing transactions of the spot market to be established in connection with necessary improvements of the infrastructure, and the integration points were identified and road map was created.

Presentation, training and briefings were made to the units in the body of EPIAŞ on “Functioning of the existing Natural Gas Market in Turkey”, “Processes and Management of STP Being Established”, and “Expectations from Natural Gas Market”.

Studies of R&D Centre

Entitled as 273th R&D Centre in Turkey on 26.09.2016, EPIAŞ R&D Centre continues its result-oriented studies not only on theoretical basis, but also for practical results for national benefit as set forth in the Strategic plan set forth by the Ministry of Energy and Natural Resources.

In line with this approach, the objective is to increase number of R&D project of strategic significance for the energy sector and create mechanisms to promote efforts of private sector and cooperation of private-public sectors. Furthermore, it is planned that public-university-industry coordination be achieved under this roof and R&D studies be monitored and managed. The focal point of this objective is that R&D studies should not remain at the research and development level only, but they should be commercialized and put into practice. The activities performed in 2017 are listed below.

TUBITAK funded TRY1.223.266,98 for the project “Development of Solution Method for Clearing Problem in the Grid Capacity Restricted Day-Ahead Electricity Market” and, furthermore, academic consultancy service has been taken from TOBB ETU under the project.

The second public-sponsored project application “Actor-Based Adaptive Discrete Natural Gas Continuous Trading System with Elastic Error Tolerance” was also entitled to get fund of TRY857,100. Under this project, consultancy service was taken from Özyeğin University.

In the matter of “Energy Efficiency”, another project application under TUBITAK Priority Areas Funding Program has also passed through the initial evaluation.

Two patent applications were made in order to protect the intellectual property rights arising from R&D studies.

1- An Optimization Module for Day-Ahead Market Management System Software

2- Aggregation and Backward Selection Process Prior to the Optimization Process in the Day-Ahead Market System.

- Studies for building infrastructure of the project and execution of the project plan were completed by means of resource and time planning.

- Feasibility studies were completed to build incubator centre and identify matters to be supported and it awaits approval by the board of directors.

And the process after the establishment include:

- Selection of the firms to work at the incubation centre and identification and evaluation of the projects to be undertaken by the firms

- Provision of technological support to the firms to perform works at the innovation and incubation centre for the energy sector.



ENTSO-E Operations

A coding chart has been developed under the coordination of European Network of Transmission System operators for Electricity (ENTSO-E) to facilitate cross-border energy trading, identify the related transmission system equipment (line, transformer and substation) an parties (measuring point, market participant, eligible consumers, group in charge of balance and its stakeholders) in an effective and reliable way.

Authorization to assign Energy Identification Number (EIC) to the market participants has belonged to Türkiye Elektrik İletim A.Ş. till the first quarter of 2016. After establishment of our company, this authorization was transferred to EIPAS by an official agreement and our company has been authorized as Local Issuing Office before ENTSO-E.

Coding operations with respect to market participants and transmission system equipment still go on. Furthermore, data requested by “ENTSO-E transparency platform” are currently provided. In the physical meetings of ENTSO-E which are held two times in a year, solution of the arising problems are dealt, necessary improvements are discussed and six-month evaluations are made.

Transparency Platform

We continue development operations of the Transparency Platform which started in 2016. Data to be obtained from EIGM, Petroleum Pipeline Company (BOTAS), TEİAŞ, Petroleum Pipeline Company (BOTAS) and DSI have been determined by resolution of EMRA. In this context, relate requests have been made to the data owner organizations in 2017 and agreement has been reached as a result of negotiations. Technical operations for data transmission are scheduled to complete in 2018 together with posting of data about Natural Gas and water for energy dams on the Transparency Platform.

recommendations and requests about the platform. In this context, daily requests are considered and replied as soon as possible and, if required, improvements and updates are carried out. In this line, improvement and development studies continue without interruption.

In the Transparency Platform, there are currently fifty-seven report screens and fifty web services in total under five menu headings and it provided service to 211,249 users from 90 countries with 1.9 million of page views in 2017. One of the big steps taken by EPIAŞ in terms of market transparency, the Transparency Platform continues to provide service for posting all market-related data from a single centre, quickly, reliably, continuously and healthily.

Our Transparency Principles

Fair Market Environment
Predictability
Reliability
Sustainability
Easy Accessibility
Equal Opportunity
Data Quality
Prevention of data asymmetry

Consumer Management System (TYS)

Under the project TYS Portal – e-State, “EPIAŞ Eligible Consumer Portal” was developed as per the Article-30/C and commissioned in January 2017. End-consumers can view in the portal their information about the consumption points, index and additional consumption records and request information recorded by the suppliers during the eligible consumer request process. Portal user verification is made via e-State and it is also possible to have access to the portal via e-State services list.

Phase I of the Consumer Management System (TYS) was commissioned in July 2017. Change of the existing eligible consumer supplier and requests for new eligible consumer registration were used to be performed via the physical information in PYS. Upon inclusion of the subscriber information for the measuring points in the system, the existing Measuring Point request and Supplier change process has been developed to include subscription information to allow matching the measuring point-subscription.

Establishment of EPIAŞ Academy and Human Resources Management Activities

For current education of the human resource to be required in future, maintenance of the competencies of the existing employees and achievement of individual improvement as well as organizational improvement in accordance with the vision and strategies of the company, EPIAŞ Academy is scheduled to operate from 2018 on to gather and manage all training/improvement activities under a single roof. In addition to the training activities for the company employees, EPIAŞ Academy shall also organize training events, seminars and symposiums for the employees of the energy companies and other related organizations and agencies with a view to making contribution to development of the human resources in the energy sector. One of the first activities of EPIAŞ Academy in 2018 shall be to prepare on-the-job training program for new graduates of computer engineering departments who are eligible to work in the software department of our company and include the candidates in the three-month technical training and practical application process.

Furthermore, in order that the careers of the existing employees in the company

are planned and managed in such a way to meet needs of the company in the best way and to take advantage of the qualities of the employees in the most appropriate way, a modern career management application suitable for needs of the company is scheduled to be implemented in 2018. In the scope of career management applications, a succession system shall also take place to organize career and development plans of the employees that may take office at the critical position afterwards for continuous and problem-free performance of the company operations independent of individuals. In order to achieve high corporate performance in our company, the performance management system for measuring contribution of the employees to the business results and their achievement levels is scheduled to be put into place in 2018.

Environmental Markets

In the elections made in the Great Assembly of Europex in 2017, Derya Erbay, Regulatory unit manager working in the Strategy Development Directorate in our company was elected as the Working Group Head for "Environmental Markets Working Group" and assumed the Head position for the period of 2018-2019. Studies performed for activities of Environmental Markets Working Group of Europex as well as studies of the Environmental Markets Working Group set up in the body of EPIAŞ for examination of the applicability of market-based methods in supporting the renewable energy resources and creation of road map continue in a coordinated way. In this respect, Green Certificate, White Certificate and Emission Trading Systems are examined to understand their interaction for achievement of the targets of the renewable energy policy.

Green Certificate: referring to the principle of "obligation to disclose electricity energy production resource" as specified in the Directive No. 2009/28/EC, draft studies have been completed to establish voluntary Green Certificate System as a basis for identification of the electricity energy produced from renewable resources in Turkey. In the

framework of the road map created in the scope of EPIAŞ Strategic Plan for 2016-2020, various operations were executed in 2017 to raise awareness and identify stakeholders prior to performance of the infrastructure operations in 2018. In this context, Green Certificate Trading System Workshop was organized under the TAİEX AB Expert Project, and the studies made on voluntary basis were communicated in the Closing Conference on Evaluation of Compliance of the Market-Based Emission Reduction Mechanisms to Turkey in the scope of the Preparation for Carbon Markets Project sponsored by the World Bank to raise awareness among the policy makers, organizations and sector-related societies. In the presentation made in the Renewable Energy and Energy Efficiency Certificates Workshop organized by the Renewable Energy General Directorate, Ministry of Energy and Natural Resources and in the round table sessions, the Green Certificate System on voluntary basis was introduced to the participants of the electricity market and views have been exchanged with the participants on the matters such as organization of regulations, system design, corporate structure and trade rules. In the scope of the infrastructure studies scheduled to be made in 2018, coordination shall be maintained with

group format and meetings and workshops shall continue in this respect.

White Certificate: with respect to the White Certificate System which aims energy efficiency on a market-based approach, studies are made to support renewable energy resources and its interaction with other political tools. Meetings and studies are made with the related stakeholders for start of actions described in the scope of National Energy Efficiency Action Plan (2017-2023) published in the Official Journal No. 30289 of 02/01/2018 and entered into effect.

Emission Trade: Studies were started for accumulation of knowledge about Emission Trading System in line with the responsibility of EPIAŞ for operation of possible emission market to be established in the scope of market operation activities. The related studies are performed by accumulation of knowledge about Emission Trading System and examination of examples and experience. We participate in the Preparation for Carbon Markets Partnership Program sponsored by the World Bank to develop corporate capacity and the systems of European Energy exchange for award of emission allocation contracts.



Financial Status



Balance sheet and income statements of EPIAŞ for 2016 and 2017, including Electricity Market Transactions are given below:

Summarized Balance Sheet (TRY)	31.12.2016	31.12.2017
Current Assetst	2.491.303.905	1.574.354.384
Fixed Assetst	25.746.950	39.144.633
Total Assetst	2.517.050.855	1.613.499.017
Short Term Foreign Liabilities	2.425.944.888	1.487.925.707
Long Term Foreign Liabilities	0	0
Equity	91.105.967	125.573.310
Total Liabilities	2.517.050.855	1.613.499.017
Summarized Income Statement (TRY)	2016	2017
Net Sales	32.976.405.394	41.168.719.116
Gross Sale Profit or Loss	65.067.622	69.455.711
Operating Profit	36.509.891	36.318.325
Ordinary Profit or Loss	42.210.063	47.023.713
Current Profit or Loss	42.048.972	47.088.329
Current Tax and Legal Liabilities	6.805.086	7.377.100
Net Current Profit	35.243.886	39.711.229

EPIAŞ acts as purchaser against the sellers trading in the electricity market, and acts as seller against the purchasers. In this context, the financial statements also include the amounts from the electricity market transactions. These transactions are shown equal in the asset – liability parts of the balance sheet and payables-receivables side of the income statement. In order to indicate actual financial status of EPIAŞ, the summarized financial statements for 2016-2017 made free of amounts related to the market transactions are given below.

Summarized Balance Sheet(TRY)	31.12.2016	31.12.2017
Current Assets	73.810.714	105.857.637
Fixed Assets	25.746.950	39.144.633
Total Assets	99.557.672	145.002.270
Short Term Foreign Liabilities	8.451.705	19.428.960
Long Term Foreign Liabilities	0	0
Equity	91.105.967	125.573.310
Total Liabilities	99.557.672	145.002.270
Summarized Income Statement (TRY)	2016	2017
Net Sales	82.690.552	83.983.867
Gross Sale Profit or Loss	65.067.622	69.455.711
Operating Profit	36.509.891	36.318.325
Ordinary Profit or Loss	42.210.063	47.023.713
Current Profit or Loss	42.048.972	47.088.329
Current Tax and Legal Liabilities	6.805.086	7.377.100
Net Current Profit	35.243.886	39.711.229

Please find below our financial structure ratios calculated basing on the financial statements prepared by elimination of the amounts related to the market transactions.

Financial Structure Ratios	2016	2017
Leverage Ratio (Short and Long Foreign Liabilities / Total Assets)	0,08	0,13
Equity / Assets Ratio	0,92	0,87
Equity / Foreign Liabilities Ratio	10,78	6,46
Profitability Ratios		
Net Profit / Equity Ratio	0,39	0,32
Operating Profit / Net Sale Revenue Ratio	0,44	0,43
Liquidity Ratios		
Current Ratio (Current Assets /Short Term Liabilities)	8,73	5,45
Cash Ratio (Liquid Assets + Securities / Short Term Liabilities)	7,55	5,06

Financial Structure Ratios

Leverage Ratio (Sum of Short and Long Term Foreign Liabilities / Assets): Showing to what extent the assets are financed by foreign liabilities, this ratio is considered acceptable when it is below 0.5. If it is above 0.5, it signifies that the organization is financed in a risky way and this ratio was calculated as 0.13 for EPIAŞ by the end of 2017. Consequently, it is considered that the assets are partly financed by short term foreign liabilities and this rate is a quiet good level for the company.

Equity / Total Assets Ratio: Showing what percentage of the operating resources is provided by the owners of the organization, this ratio is preferred to be high. This rate was 0.87 by the end of 2017. It indicates that EPIAŞ's capital is strong and the assets are almost financed by the equity.

Equity / Foreign Liabilities Ratio: Showing financial independency, this rate is desired to be above 1. EPIAŞ has no long term foreign liabilities. Our company finance its operations predominantly by equity and partly by short term foreign liabilities. Ratio of the company's equity to foreign liabilities reached to 6.46 by the end of 2017.

Profitability Ratios

Net Profit / Equity Ratio: Showing relationship between the company's equity capital and net profit, this rate was 0.32 by the end of 2017. Equity capital efficiency of EPIAŞ is considered to be at satisfactory level.

Operating Profit / Net Sale Revenue Ratio: (Calculated on basis of net revenue amount including net revenues, but made free of the electricity market transactions): This rate shows to what extent an organization makes profit from its operations and a high value is in favour of the organization. It is expressed as the profitability after the operating costs of the organization is met by the operating profit ratio. This rate was 0.43 by the end of 2017 and more than half of the cash obtained from the operating profit has been used for the operating costs of the company.

Liquidity Ratios

Current Ratio (Current Assets /Short Term Liabilities): Current ratio of 2 has been generally acceptable by taking into consideration the possibilities of price rise and depreciation of the current assets. If this ratio is a little below this value, it shows insufficient net working capital. The

current ratio was 5.45 by the end of 2017. It shows that the current assets can easily finance the short term foreign liabilities.

Cash Ratio (Liquid Assets + Securities / Short Term Liabilities): Assuming that the inventories of the organization are not sold out and the receivables cannot be collected, it shows ability of the organization to pay its short term liabilities. Cash ratio measures to what extent the present liquid values can meet the short term liabilities. Although it varies from one industrial sector to another, a ratio above 0.2 is generally considered acceptable. Cash ratio of EPIAŞ was 5.06 by the end of 2017, indicating that the liquid assets of the company can meet its short term liabilities.

Our company has no risk concerning collection of receivables because the collaterals are received and the receivables which cannot be collected are collected from other market participants pursuant to the Energy Market Balancing and Settlement Regulation. Furthermore, as it is same for the advances, the receivables and inventory turnover ratios of the company have no significance.



Turkish Energy Exchange – Balance Sheet as of 31.12.2017 (TRY)

ASSETS	31.12.2016	31.12.2017
I-CURRENT ASSETS	2.491.303.905	1.574.354.384
A-LIQUID ASSETS	80.357.991	124.364.391
1-Cash	0	0
2-Bank	80.357.991	124.364.391
a-Settlement and Custody Bank	16.578.916	26.060.302
b-Other Banks	63.779.075	98.304.089
B-MARKETABLE SECURITIES		
C-TRADE RECEIVABLES	74	3.319.082
1-Trade Receivables from Market Activities	74	3.318.143
2-Other Trade Receivables	0	939
3-Deposits and Guarantees Given	0	0
D-OTHER RECEIVABLES	21.494	39.130
E-INVENTORIES	2.400.915.762	1.439.118.659
1-Order Advances Given for Market Activities	2.400.914.201	1.439.118.303
2-Other Advances Given for Purchase Orders	1.562	356
F-COST OF LONG TERM CONSTRUCTION CONTRACTS		
G-SHORT TERM PREPAID EXPENSES AND ACCRUED INCOME	10.004.141	7.187.454
H-OTHER CURRENT ASSETS	4.442	325.669
II-FIXED ASSETS	25.746.950	39.144.633
A-TRADE RECEIVABLES	25.950	25.950
B-OTHER RECEIVABLES		
C-FINANCIAL FIXED ASSETS		
D-TANGIBLE FIXED ASSETS	8.502.613	8.656.214
1-Fixtures	13.136.497	17.056.823
2-Accumulated Depreciations (-)	4.633.884	8.400.608
E-INTANGIBLE FIXED ASSETS	16.867.043	28.543.010
1-Rights	16.299.288	18.206.125
2-Research & Development Costs	1.806.665	12.188.270
3-Special Costs	277.269	463.623
4-Other Intangible Fixed Assets	1.231.962	2.724.479
5-Accumulated Depreciations (-)	2.748.140	5.039.486
6-Advances Given	0	0
F-ASSET SUBJECT TO AMORTIZATION	0	0
G-INCOME RELATING TO FUTURE PERIODS AND EXPENSE ACCRUALS	351.344	1.919.459
H-OTHER FIXED ASSETS		
TOTAL ASSETS	2.517.050.855	1.613.499.017

Turkish Energy Exchange – Balance Sheet as of 31.12.2017 (TRY)

LIABILITIES	31.12.2016	31.12.2017
III-SHORT TERM FOREIGN LIABILITIES	2.425.944.888	1.487.925.707
A-FINANCIAL PAYABLES	0	0
B-TRADE PAYABLES	35.400.526	38.543.531
1-Trade Payables from the Market Activities	33.163.723	29.301.553
2-Other Trade Payables	2.236.803	9.241.978
3-Bonded Debts	0	0
C-OTHER PAYABLES	1.977.681	4.205.579
D-ADVANCES RECEIVED	2.384.329.460	1.439.121.830
1-Advances Receipt for Purchase Orders Related to Market Activities	2.384.329.460	1.439.118.290
2-Other Advances Received for Purchase Orders	0	3.540
E-COST OF LONG TERM CONSTRUCTION CONTRACTS		
F-TAX AND OTHER LIABILITIES PAYABLE	4.237.081	3.586.209
G-PROVISIONS FOR LIABILITES AND COSTS	0	0
H-SHORT TERM DEFERRED INCOME AND ACCRUED EXPENSES	140	2.468.559
I-OTHER SHORT TERM FOREIGN LIABILITIES	0	0
IV-LONG TERM FOREIGN LIABILITIES	0	0
A-FINANCIAL PAYABLES		
B-TRADE PAYABLES		
C-OTHER PAYABLES		
D-ADVANCES RECEIVED		
E-PROVISIONS FOR LIABILITES AND COSTS		
F-SHORT TERM DEFERRED INCOME AND ACCRUED EXPENSES		
G-OTHER LONG TERM FOREIGN LIABILITIES		
V-SHAREHOLDERS EQUITY	91.105.967	125.573.310
A-PAID-IN CAPITAL	61.572.770	61.572.770
B-CAPITAL RESERVES	615.397	615.397
C-PROFIT RESERVES	0	23.689.520
D-RETAINED EARNINGS	0	0
E-ACCUMULATED LOSS (-)	6.326.086	15.606
F-CURRENT PROFIT (LOSS)	35.243.886	39.711.229
TOTAL LIABILITIES	2.517.050.855	1.613.499.017

While total assets and liabilities was TRY 2,517,050,855 as of 31.12.2016, it reduced to TRY 1,613,499,017 in the balance sheet of 31.12.2017. Main reason of this change is the reduction in the order advance given and order advance received in connection with the electricity market transactions. In other words, the natural gas crisis experienced in December 2016 caused a dramatic rise in the market clearing price in the Day-Ahead market and in the weighted average price in the Intraday market. And it also caused rise of the amount of transactions in the markets and, consequently, a significant increase in the accounts where the advance transactions are followed. This situation caused total assets and liabilities in the balance sheet for 2016 to be higher than total assets and liabilities in the balance sheet for 2017.

Of the assets side of the balance sheet:

- Of the Liquid Assets in amount of TRY 124,364,391, TRY 98,304,089 is consisted of the amounts in the company's bank accounts and the remaining TRY 26.060,302 is the balance with the Settlement and Custody Bank (Takasbank) related to the market transactions. Of the cash deposited with other banks, TRY 96.106,327 is kept at the time deposit accounts and TRY 2.197,762 at the demand deposit account to use for payments to be made on the next day.

- Of the Trade Receivables in amount of TRY 3,319,082, TRY 3,318,143 is consisted of the balance of the electricity market transactions. As per the Balancing and Settlement Regulation, Article 132, when the invoicing is made for the advance and imbalance transactions in connection with the market, it is made so basing on the period subject to settlement. However, when the payments for the transactions made at the end of the period coincide with weekend, such payments are made in the beginning of the next month and the date of collection is registered. As a result, the amount of receivables calculated is collected in the next month. And the amount of TRY939 in the item Other trade receivables is from the reflective accounts for the stamp duty arising from the purchase contracts.

- The amount of TRY 39,130 in the item Other Receivables is from the minimum living allowance for December 2017.

- Of TRY 1.439.118,659 in the item Inventories, TRY 1.439.118,303 is consisted of the advance for purchase order given to the market participants in consideration of the transactions in the Intraday Market and Day-Ahead Market made in December 2017, and the amount of TRY356 is the advance

for purchase order given for the operating expenditures.

- Of the total amount of TRY 7.187,454 in the item Short-term prepaid expenses and accrued income, TRY 6.873,006 is the market operating fee accrued for December 2017. As the settlement for December 2017 is made in January 2018, income accrual is made basing on the periodicity concept of the accounting. And the remaining TRY 314,448 is accrued limited interest of the time deposit account not due yet.

- Of the amount of TRY 325,669 in the item Other Current Assets, TRY316,085 is consisted of VAT carried forward and the amount of TRY9,583 is consisted of work advances made to the personnel.

- The amount of TRY 25,950 in the Trade Receivables is the rent security given to Borsa İstanbul A.Ş.

- Tangible Fixed Assets is TRY 17.056,823; and the accumulated depreciation set aside for these assets is TRY8.400,608 and the net asset amount is TRY 8.656,214.

- Intangible Fixed Assets is TRY 33,582,496; and the accumulated depreciation set aside for these assets is TRY 5.039,486 and the net asset amount is TRY 28,543,010.

- The amount of TRY 1.919,459 in the item Long-term prepaid expenses and accrued income is consisted of insurance, subscriptions, IT maintenance and repairs, licence renewal costs, etc.

Of the liabilities side of the balance sheet:

- Trade Payables is TRY 38.543,531 and 29.301,553 of which consists of the electricity market debts not due yet. And the

amount of 9.241,978 in the item Other Trade Payables are debts made for use in the company's operations which are not due yet.

- The amount of TRY 4.205,579 in the item Other Payables is consisted of the personnel wages, bonuses, other costs and attorney's fees for the legal cases won.

- Of the amount TRY 1.439.121,830 in the item Advances for Purchase Order Received, TRY 1.439.118,290 is consisted of the advances for purchase order received from the market participants in consideration of the electricity market transactions made in December.

- The amount of TRY 3,586,209 in the item Taxes and Other Liabilities Payable is consisted of 4th Period corporate advance tax, income tax for December 2017, stamp duty, value added tax, tax paid for withholding and insurance premium accruals for the months of November and December 2017.

- Of the amount TRY 2.468,559 in the item Short-term deferred income and accrued expenses, TRY2.403,420 is the amount of fine collected as per RERDM Regulation, article 27 from the market participant found out to have benefited from RERDM in 2017 although it was not eligible for it and the amount payable to the market participants in January 2018. And the amount of TRY 64,900 stems from an invoice that a market participant, declared bankrupt by adjudication, failed to issue at the date of balance sheet.

- Total equity reached to TRY 125,573,310 after profit generated in 2017.

Income Statement: Please find below the income statement of IPEAS for the period of 01.01.2017 – 31.12.2017, including the electricity transactions.

	Previous Period	Current Period
A- GROSS SALES	32.984.421.028	41.177.175.006
1- Domestic Sales	32.983.231.131	41.175.818.487
a-Income From the Market Operating Activity	32.901.730.476	41.093.191.140
b-Income from Market Operating Fee	81.272.155	82.476.041
c- Other Domestic Income	228.500	151.306
2- Other Income	1.189.897	1.356.520
B- SALES DEDUCTIONS (-)	8.015.634	8.455.890
a-Sales Return	699.157	0
b-Other Deductions	7.316.476	8.455.890
NET SALES	32.976.405.394	41.168.719.116
C- COST OF SALES (-)	32.911.337.773	41.099.263.405
a-Costs from the Market Operating Activity	32.893.728.297	41.084.613.295
b-Other Service Cost	17.609.475	14.650.110
GROSS SALE PROFIT OR LOSS	65.067.622	69.455.711
D- OPERATING COSTS (-)	28.557.731	33.137.386
OPERATING PROFIT / LOSS	36.509.891	36.318.325
E- OTHER ORDINARY OPERATING INCOME AND PROFITS	12.092.255	14.223.308
F- OTHER ORDINARY OPERATING INCOME AND LOSS (-)	6.392.083	3.517.919
G- FINANCING COSTS (-)	0	0
ORDINARY PROFIT OR LOSS	42.210.063	47.023.713
H- EXTRAORDINARY INCOME AND PROFITS	58.707	65.554
J- EXTRAORDINARY COST AND LOSS (-)	219.797	938
CURRENT PROFIT OR LOSS	42.048.972	47.088.329
K- PROVISIONS FOR CURRENT PROFIT, TAX AND OTHER LEGAL (LIABILITIES (-)	6.805.086	7.377.100
CURRENT NET PROFIT / LOSS	35.243.886	39.711.229

Of the items in the Income Statement:

• Of the Domestic Sales, TRY41.177,175,006 is the income from the market operating activity; TRY82.476,041 marketing operating fee and TRY15,306 Day-Ahead Market training income. When this amount is compared with that of 2016, we see an increase in the domestic sales due to the increase of transaction volume in megawatt and unit electricity prices in 2017.

• The amount of TRY 1.356,520 in the Other Income is consisted of the discount incentives as per the law No. 6111 and 5510 discount income for the lunch vouchers.

• The amount of TRY 8.455,890 in the item Sales Deductions is the deduction of unpaid receivable allowance (to prevent duplicate income). Compared to 2016, the increase in the unpaid receivables in 2017 caused increase of this amount. TRY41,084,613,295 of the Sales Cost is the cost related to the market operating activity and TRY 14,650,110 is the personnel cost not covered by the administrative costs.

• The amount of TRY33.137,386 in the Operating Cost is consisted of the wages of the

personnel, board of directors and committee, maintenance and repair, subcontractor, outsourced services and benefits, depreciations, leases, contribution fee, court fees, special communication tax and other operating costs in the scope of administrative costs.

• Of the TRY 14.223,308 in the Ordinary Income and Profit from Other Activities, TRY 10.204,973 is interest and TRY3,990,373 is exchange profit (exchange valuation profit for the swap deposit transactions made most recently in January 2017) and TRY27,961 is collections from execution proceedings.

• The amount of TRY 3.517,919 in the item Ordinary Cost and Loss from Other Activities is exchange loss (for swap deposit transactions most recently made in January 2017).

• Greater part of TRY 65,554 in the Extraordinary Income and Profit comes from the discount income of lunch vouchers.

The amount of TRY938 in the Extraordinary Income and Loss is from the negative differences from rounding.

As a result, total assets of our company is TRY 1.613.499,017 as shown in the balance sheet of 31.12.2017. Total assets amount to TRY 145.002,270, except for amounts from the electricity market transactions and this amount was largely met by the equities. Our company gained pre-tax profit of TRY 47,088,329 in 2017. And the amount of equity reached to TRY 125.573,310 by the end of the year.

EPIAŞ was established in 2015 with a capital of TRY 61.572,770, and its total equity reached to TRY 91.105,967 in 2016 and to TRY 125.573,310 in 2017 as a result of net profits it gained from its activities in the years of 2016 and 2017. Consequently, it may never be said that the capital of EPIAŞ is without provision or it is deeply in debt.

Financial Status Statement for Enerji Market Operating Company as of December 31st, 2017

Currency: Unless otherwise stated, the amounts are expressed in Turkish Lira ("TRY").

ASSETS	December 31st, 2017	December 31st, 2016
Current assets		
Cash and cash equivalents	98.659.350	63.820.522
Trade receivables	6.873.946	6.772.044
- Trade receivables from related parties	1.123.002	1.128.229
- Trade receivables from unrelated parties	5.750.944	5.643.815
Other receivables	39.131	21.495
- Other receivable from unrelated parties	39.131	21.495
Prepaid costs	1.520.469	3.211.257
Other current assets	316.086	0
Total Current Assetst	107.408.982	73.825.318
Fixed assets		
Other receivables	25.950	25.950
- Other receivables from related parties	25.950	25.950
Tangible fixed assets	10.902.800	9.420.972
Intangible fixed assets	20.088.878	8.716.375
- Other intangible fixed assets	20.088.878	8.716.375
Prepaid costs	408.929	351.344
Deferred tax asset	1.832.410	1.799.667
Total Fixed Assets	33.258.967	20.314.308
Total Assets	140.667.949	94.139.626

LIABILITIES**Short term liabilities**

Trade payables	11.627.668	2.256.739
- Trade payables to the related parties	560.012	16.301
- Trade payables to the unrelated parties	11.067.656	2.240.438
Liabilities under benefits extended to the employees	5.266.035	2.763.019
Other payables	102.752	49.096
- Other payables to the related parties	40.805	45.635
- Other payables to the unrelated parties	61.947	3.461
Tax liability for the current profit	466.189	951.341
Short term provisions	1.846.882	1.439.833
- Short term provisions extended to the employees	1.131.212	1.059.065
- Other short term provisions	715.670	380.768
Other short term liabilities	1.966.314	2.431.502

Total Short Term Liabilities	21.275.840	9.891.530
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Long term liabilities

Long term provisions	505.212	340.797
- Long term provisions for benefits extended to the employees	505.212	340.797

Total Long Term Liabilities	505.212	340.797
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Total Liabilities	21.781.052	10.232.327
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EQUITY**Equity owned by the principal**

Paid-in capital	61.572.770	61.572.770
Other reserves	615.397	615.397
Restricted reserves set aside from profit	1.662.415	0
Retained profits (loss)	14.812.831	(8.881.995)
Current net profit	40.223.484	30.601.127

Total Equity	118.886.897	83.907.299
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Total Equity and Liabilities	140.667.949	94.139.626
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Profit or Loss and Other Comprehensive Income Statement for Turkish Energy Exchange as of December 31st, 2017

(Currency: Unless otherwise stated, the amounts are expressed in Turkish Lira ("TRY")).

	2017	2016
Profit or loss part		
Proceeds	82.476.041	81.272.154
Cost of sales (-)	(14.792.504)	(18.366.428)
Gross Profit	67.683.537	62.905.726
Administrative costs (-)	(23.592.673)	(30.485.372)
Research and development costs (-)	(8.755.057)	(1.442.901)
Other income from primary operations	11.682.323	2.335.497
Other costs from primary operations (-)	(276.065)	(191.264)
Operations Profit / (Loss)	46.742.065	33.121.686
Income from investment operations	74	0
Investment operations (costs)	0	(145.893)
Operating Profit / (Loss) Before Financing Cost	46.742.139	46.742.139
Financing costs	825.702	4.847.350
Pre-tax Profit from Ongoing Operations	47.567.841	37.823.143
Tax Income / (Cost) for Ongoing Operations	(7.344.357)	(7.222.016)
Current tax cost	(7.377.100)	(6.805.086)
Deferred tax income/(cost)	32.743	(416.930)
Current Profit / (Loss)	40.223.484	30.601.127
Other Comprehensive Income / (Cost)	0	0
Total Comprehensive Income / (Cost)	40.223.484	30.601.127

Our company keeps and records accounting records as per the Turkish Commercial Code, the General Communique on Accounting System Procedure established by the Ministry of Finance and other tax regulations. Financial reports are generated according to the Turkish Accounting Standards and Turkish Financial Reporting Standards. Balance sheet profit is calculated differently in both statements due to the differences between the Uniform Chart of Accounts (TDHP) and Turkish Accounting Standards (TMS) with respect to valuation, particularly provisions set aside, depreciation procedures and calculation differences.

While net profit is TRY 40.223,484 in the Profit/Loss Statement of our company prepared as per TMS for the period 01/01/2017 – 31/12/2017, it is TRY39,711,229 in the Income Statement prepared as per the Tax Procedural Law (VKU). It is seen that the difference between the Income

Statement prepared and as per VUK, and the Profit/Loss Statement prepared as per the provisions of TMS stem from differences between these two standards for valuation and calculation in connection with:

- Provisions for provisions
- Provisions for severance pay
- Provisions for legal cases
- Depreciation cost
- Time deposit income
- Recognition of research expenses as cost
- Deferred tax, and other matters.



Risks and Management Review

As per the Risk Management Police Directive, article 9, paragraph which entered into effect upon approval on 23.02.2016, reading “a risk report is issue one in each two weeks considering the risk status and, if any, indicating dangers and remedies and then presented to the Committee”; 6 (six) Risk Reports were prepared in the operating period of 2017 by the Risk Management Directorate and presented to the Committee on Early Detection of Risk.

EPIAŞ Risk Report is prepared to cover risks of all units of our company. In addition to the risk considerations concerning the units, the Risk Report also includes periodical statics for monitoring information safety risks, ongoing project, business continuity studies and operational cases carried out in the reporting period. In addition, studies go on with respect to permanent improvement and development of the Risk Report.

EPIAŞ Business Continuity Policy, prepared under the coordination of Risk Management Directorate, was approved by the Board of Directors on 22.01.2017 and EPIAŞ Business Continuity Plan and its annexes were approved by the General Manager on 20.10.2017 and thus both entered into effect. Furthermore, the critical business processes were determined together with the business units and recovery scenarios were prepared to ensure continuity of the critical processes with minimum loss as soon as possible in case such operations of such processes are interrupted/fail. As per the provision “minimum 1 (one) extraordinary drill to be performed” set forth in EPIAŞ Business Continuity Policy, critical processes of our company were tested at EPIAŞ Extraordinary Operations Centre (ODOM). Extraordinary Drill Risk Report for 2017 was issued for the said drill and shared with the Upper Management.

Additionally, support has been given to comply with ISO 9001 Quality Management System and ISO 27001 Information Safety Management System and obtain necessary certificates to this effect. Furthermore, ISO 22301 Business Continuity Management System is scheduled to be tested in 2019 to have a strong corporate structure in compliance with the international norms and establish and develop a governance model as per the national and international standards as set forth in the Strategic Plan for 2016-2020 with respect to the business continuity.

Other Considerations

Benefits Extended to the Top Level Executives

It was resolved in the Ordinary Meeting of Shareholders for 2015 held on March 22nd, 2016, a wage to times that of the monthly net wage determined for the Board of Directors of the State Economic Enterprises be paid to the board of directors of EPIAŞ and bonuses given to them corresponding to their net monthly wages in such number and at such times when such payments are made to the company personnel and that such payment be increased by 10% for the heads of the committees set up under the Board of Directors and for Deputy chairman and by 25% for the Chairman and, furthermore, Board of Directors be granted with other social and financial benefits in addition to their monthly wage payable to the company executives and all taxes and deductions from such payments be met by the company.

Wage payable to and bonuses and social benefits to be provided to the General Manager, Directors and Legal Advisor which are considered top level executives are determined by the Board of Directors.

In 2017, a net amount of TRY2.173.696,28 has been paid to Board of Directors, General Manager, Directors and Legal Advisor of EPIAŞ in form of remuneration, wage and bonus, allowance and social benefits.

Grant

There is no grant in kind in the accounting period of 2017. A grant of TRY15,000 (fifteen thousand) in cash was made to Istanbul Sebahattin Zaim University.

Dividend

There is no privilege with respect to dividend; and the dividend for 2016 and subsequent years is made in accordance with the provisions of Turkish Commercial Code, tax regulations and company's articles of Association, Article 15, which reads, “From the net current profit, (a) a legal reserve fund of 5% is set aside until it reaches to one fifth of the paid-in capital; (b) and a first dividend is set aside at 5% (five per cent) of the remaining paid-in capital; (c)and the remaining profit after such reservations is distributed partly or completely or set aside as extraordinary reserve fund.”

In the company's 2016 Ordinary Meeting of Shareholders on 24.03.2017, it was resolved to distribute dividend in amount of TRY5.242.886.00. Basing on the resolution, the Board of Directors resolved that the dividend is distributed as of 18.05.2017. In accordance with this resolution, the dividends were paid to the respective accounts of the shareholders.

And it was resolved that a dividend of TRY5.243.886,00 be distributed to the shareholders as a result of resolution taken in the Ordinary Meeting of Shareholders for 2016 held on 24.03.2017 as proposed by the resolution No. 9 of the Board of Directors taken in the Board Meeting No. 2017/3 of 04.03.2017.

Shareholder	Share Percentage	Amount of Dividend
Group A	30,00	TRY1.573.165,80
Group B	30,00	TRY1.573.165,80
Group C	40,00	TRY2.097.554,40
Total	100,00	TRY5.243.886,00





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**CONVENIENCE TRANSLATION INTO ENGLISH OF THE INDEPENDENT
AUDITOR'S REPORT RELATED TO ANNUAL REPORT ORIGINALLY ISSUED IN
TURKISH**

To the Board of Directors of Enerji Piyasaları İşletme Anonim Şirketi

Opinion

We have audited the accompanying annual report of Enerji Piyasaları İşletme Anonim Şirketi Anonim Şirketi ("The Company"), for the period 1 January 2017 to 31 December 2017.

In our opinion, the financial information included in the annual report and the analysis of the Board of Directors about the financial position of the Company are consistent, in all material respects, with the audited complete set of financial statements and information obtained during the audit and provides a fair presentation.

Basis for Opinion

We conducted our audit in accordance with the Standards on Auditing which is a component of the Turkish Auditing Standards ("TAS") issued by the Public Oversight, Accounting and Auditing Standards Authority ("POA") ("Standards on Auditing issued by POA"). Our responsibilities under those standards are further described in the Auditor's Responsibilities for the Annual Report section of our report. We declare that we are independent of the Group in accordance with the Code of Ethics for Auditors issued by POA (POA's Code of Ethics) and the ethical requirements in the regulations issued by POA that are relevant to audit of financial statements, and we have fulfilled our other ethical responsibilities in accordance with the POA's Code of Ethics and regulations. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Auditor's Opinion on Complete Set of Financial Statements

We have expressed an unmodified opinion on the complete set of financial statements of the Company for the period 1 January 2017 to 31 December 2017 on 21 February 2018.

KPMG Bağımsız Denetim ve Serbest Muhasebeci Mali Müşavirlik A.Ş.
is a Turkish corporation and a member firm of the KPMG network of independent
member firms affiliated with KPMG International Cooperative, a Swiss entity.



Board of Directors' Responsibility for the Annual Report

In accordance with the Articles 514 and 516 of the Turkish Commercial Code Numbered. 6102 ("TCC"), the Group's management is responsible for the following regarding the annual report:

- The Company management prepares its annual report within the first three months following the date of statement of financial position and submits it to the general meeting.
- The Company's management prepares its annual report in such a way that it presents accurately, completely, directly, true and fairly the flow of annual operations and financial position of the Company. In this report, the financial position of the Company is assessed in accordance with the Company's financial statements. The annual report shall also clearly state the details about the Company's development and risks that might be encountered. The assessment of the board of directors on these matters is included in the report.
- The annual report also includes:

- Significant events after the reporting period,
- The Company's research and development activities.
- Employee benefits such as wages, premiums and bonuses paid to board members and key management personnel, appropriations, travel, accommodation and representation expenses, cash and cash facilities, insurance and similar guarantees.

When preparing the annual report, the board of directors also consider the related regulations issued by the Ministry of Customs and Trade and related institutions.

Auditor's Responsibility for the Audit of the Annual Report

Our objective is to express an opinion on whether the financial information included in the annual report and analysis of the Board of Directors in relation to the financial position of the Company are consistent with the audited financial statements of the Company and the information obtained during the audit and give a true and fair view and form a report that include this opinion in accordance with the TCC.

We conducted our audit in accordance with Standards on Auditing issued by POA. Those standards are required that compliance with ethical requirements and planning of audit to obtain reasonable assurance on whether the financial information included in the annual report and analysis of the Board of Directors for the financial position of the Company are consistent with the financial statements and the information obtained during the audit and provides a fair presentation.

KPMG Bağımsız Denetim ve Serbest Muhasebeci Mali Müşavirlik A.Ş.
A member firm of KPMG International Cooperative


Rüben Kaya Selamet
Partner
2 March 2018
İstanbul, Türkiye

GLOSSARY

APEX (Association of Power Exchanges): A global association consisted of the leading energy exchanges, regulatory authorities as well as system and market operators worldwide in order to develop competitive electricity markets. EPIAŞ became a member of this association on the date of September 13th, 2018.

Block Offer: means active electricity energy purchase/sale offers in the Day-Ahead Market which are valid for multiple successive hours of the next delivery date, containing information about average price and quantity of the timeframe it covers.

Borsa Istanbul (BIST): Capital Market Law No. 6362 was published in the Official Gazette and entered into effect on December 30th, 2012. Primary objectives and field of business of Borsa Istanbul are to “ensure that the capital market instruments, exchange and precious metals and other contracts, documents and valuable things deemed proper by the Capital Market Board in an easily and reliable way under free competitive conditions in an transparent, active, competitive, honest and stable environment and bring together the purchase and sale orders concerning them in such a way to finalize them or facilitate gathering of such orders and formulate, establish and develop markets, platforms, systems and other organized markets to determine and announce the generated prices, manage and/or operate them and other exchanges or markets of the exchanges and perform other works set forth in the articles of association pursuant to the provisions of the law and related regulations. A 30% shareholder of EPIAŞ, Borsa Istanbul provides Basis and Load Electricity Futures Contracts.

Petroleum Pipeline Company (BOTAS). An enterprise of the Turkish Ministry of Energy and Natural Resources, Petroleum Pipeline Company (BOTAS) was established on 15.08.1974 referring to the Decree No. 7/7871. It is a State Economic Enterprise in status of joint stock company established in accordance with the special legal provisions. In addition to oil transportation by means of pipelines, , Petroleum Pipeline Company (BOTAS) also engages with transportation, distribution, import, storage, marketing, trading and export of natural gas.

Balancing Power Market (BPM): An organized wholesale electricity market which is operated by the System Operator where the reserve capacity obtained by change of output power that can be performed in 15 minutes for real-time balancing supply and demand is purchased and sold by the System Operator.

EIC: means energy identification coding system used in all member countries of ENTSO-E with its procedures and principles de-

termined by ENTSO-E (European Network of Transmission System operators for Electricity) and posted in the official website of the organization. Energy Identification code (EIC) is given in a wide range from the market participants to the Transmission System equipment having certain criteria. It is a unique code and specific to the organization to which it is assigned. EPIAŞ is registered as local code provider on May 17, 2016.

Available Capacity (EAK): Means maximum active power capacity that an electricity power plant may supply to the System Operator at a unit time.

General Management of Energy Affairs (EIGM): One of the General Managements attached to the Central Organization of the Ministry of Energy and Natural Resources. EIGM is liable to keep inventory of the energy resources and facilities; make necessary plans to meet all energy needs of Turkey; ensure production of energy resources and energy in such quantity and quality in accordance with the plans and programs, take and causes to take necessary measures for transportation and distribution.

Energy Market Regulatory Authority (EMRA): EMRA was established in 2001 to regulate the electricity markets pursuant to the law No. 4628. The Authority defines the operations for which the legal persons in the energy market are authorized as well as rights and liabilities arising from such operations, and it is an independent governmental agency which is responsible to grant licences certificated by it; ensure execution of the existing contracts in the scope of the transfer of operating right in accordance with the provisions of the Law; monitor market performance; the performance standards and establish, set, modify and cause to implement and supervise regulations regarding distribution and customer services; determine the pricing principles as well as pricing principles to be applied for electricity sale to the ineligible consumers by taking into consideration the requirements of the market; implement formulas concerning required adjustments in these prices; supervise the formulas and ensure the market acts as specified in the law.

ENTSO-E (European Network of Transmission System Operators for Electricity): As an international non-profit organization, it is established, as set forth in the European Union Cross-Border Electricity Trading By-Laws No. 714/2009, to complete integration in the integral electricity market in the European Union, improve cross-border electricity trading; maintain cooperation among all Transmission System Operators to manage and operate in a coordinated way European electricity transmission network in an optimum way.

Flexible offer: means offers made for hourly active electricity energy sale applicable for the next delivery date, irrespective of a certain hour, in the Day-Ahead Market.

EUROPEX (Association of European Energy Exchanges): It is an association with 26 members, incorporating the most important energy and environmental product exchanges in Europe. EUROPEX provides consultancy service about significant matters such as sharing market information, determining and implementing the market rules and establishment of healthy communication with the organizations such as ENTSO-E and ENTSO-G and produces and presents to the members of the association written resources for the targets. Assuming an active role in a number of matters that may affect the European Energy Markets, particularly European Commission, ACER, ESMA, European Parliament and European Council, EUROPEX continues its operations through four workshops on “Electricity Markets”, “Gas Markets”, “Financial Markets, Integrity and Transparency” and “Environmental Markets”. EPIAŞ was unanimously registered as a member in the great assembly of EUROPEX held in May 2016.

FSRU (Floating Storage Regasification Unit): It is storage and regasification terminal for floating LNG (liquefied natural gas). Floating LNG terminal has a different character than the land LNG terminals. Storage and regasification service for the liquefied natural gas imported by vessels is provided by “Floating Storage and Regasification Unit” (FSRU) which will render service fasted to the port in vessel format. FSRU is capable to convert the natural gas in liquid format in its tanks to the gas form by using the existing vaporizer on it.

Retrospective Correction Items (GDDK): It is correction made by the Market operator in the calculations of energy amount and price upon finalization of the objectives made to the Market Operator by the market participants in connection with the settlement notices or invoices. Upon such correction, the payment required to be made to the market participant(s) or the payment required to be made by the market participant(s) takes place in the retrospective correction item. This item is determined in such a way to assess effect of the error correction on all participants by making operations of all imbalance settlement for the invoice period subject to such correction.

Intraday Market (IM): It is the organized wholesale electricity market where electricity energy trading is continuously performed till the closing time. It is an organized wholesale market which unlike the Day-Ahead Market, allows the market participant to reduce the energy imbalances caused by unpredictable changes in the produ-

ction/consumption quantity by means of trading up to 90 minutes prior to the physical delivery time.

Intraday Market Weighted Average Price (IMWAP): It means weighted price average related to the quantity as calculated by using the clearing volume and clearing price found as a result of clearings occurred for a certain time in the Intraday Market.

Intraday Market Clearing Volume: It means the volume resulting from performance of a trade transaction by matching a purchase offer made in the Intraday Market with a better priced sale offer or with an equal sale offer or by matching a sale offer with a better priced purchase offer or with an equal purchase offer.

Intraday Market Trading Volume: It expresses total financial value of energy matched for a certain time in the Intraday Market.

Day-Ahead Market (DAM): It is wholesale electricity market established for trading of electricity energy on settlement period basis to be delivered the day after the date on which electricity trading is made. Settlement period is an hour and the hourly formed prices are considered as wholesale electricity reference price.

Day-Ahead Market Trading Volume: It expresses total financial value of the energy matched for a certain time in the Intraday Market.

Bilateral Contract: They are commercial agreements executed between the licensed legal persons in accordance with the special legal provisions for purchase-sale of electricity energy, which are not subject to approval by EMRA. Quantities of bilateral contracts should be notified by the participants to EPIAŞ.

Principles of Transmission Network Functioning Regulations (SID): It expresses implementation principles which govern relations between the transmission company and shippers with respect to the transmission service. In accordance with the Natural Gas Market Law No. 4646 and regulations basing on this Law, it specifies certain rights and liabilities of the related parties with respect to transportation of natural gas by means of transmission network in accordance with economic, efficient and reliable operating principles without any discrimination among the parties.

Final Daily Production Program (KGÜP): It is a plan containing production or consumption values which the party responsible for the balance to which the supply-draw unit subject to a settlement is attached anticipates to carry out the next day and notifies the system operator in the beginning of the balancing power market in accordance with its liabilities and result of the day-ahead balancing.

GLOSSARY

LNG (Liquefied Natural Gas): Natural gas that has been converted to a liquid state by cooling to below -163°C at atmospheric pressure by elimination of pollutants in the process natural gas. When one unit/volume of LNG is vaporized, a natural gas of 600 unit/volume is obtained LGN is a liquid, odourless, colourless and non-toxic.

Optimization Model: A model calculating in such a way to give the highest value of the daily total excess by taking into consideration the price and quantities offered in the Day-Ahead Market.

Organized Wholesale Electricity Markets: It expresses electric market such as the markets operated by Borsa İstanbul Anonim Şirketi and balancing power market and ancillary services market and operated by Türkiye Elektrik İletim Anonim Şirketi where the electricity energy, capacity or retail trading is performed and the standardized electricity contracts and derivatives basing on electricity energy and/or capacity as instrument of the day-ahead market, intraday market and capital market which are organized and operated by an intermediary legal person having market operating licence.

Organized Natural Gas Wholesale Market (OTSP): It expresses market to be operated by the market operator, which allows spot trading of the natural gas in accordance with the applicable regulations. OTSP is scheduled to be actively operated by EPIAŞ in 2018.

Market Operating Procedures and Principles (PUE): It expresses procedures and principles for operation of the organized natural gas wholesale market. It includes procedures and principles regarding the rights and liabilities of the EPIAŞ as Market Operator, ,Petroleum Pipeline Company (BOTAS) as system operator and of the market participants with respect to the organized natural gas wholesale market as well as settlement of the credits and debts resulting from the transactions made in the organized natural gas wholesale market and the resulting imbalances thy create in the transmission system and method of cash clearing and collateral to be given by the central settlement organization.

Market Operating Fee: The income which EPIAŞ needs in connection with the services it provides as single provider by means of its market operating activities is met by the market participants as Market Operating Fee. EPIAŞ may not force the market participants to purchase any service apart from the market operation. The market operating fee is distributed among the market participants consisting of legal persons such as the owner of production licence, owner of supply licence, owner of OSB production licence, owner of distribution license and owner of transmission license as they participate in the balancing system and/or they supply electricity energy to the system and/or draws electricity energy from the system due to their energy deficit and/or surplus.

Market Participant: It expresses legal persons who have any type of licence defined in the Licence Regulation and who are registered with EPIAŞ.

Market Clearing Price (MCP): It means hourly electricity purchase-sale price determined for a certain time in the Day-Ahead Market.

Market Settlement Quantity: It means hourly electricity purchase-sale quantity determined for a certain time in the Day-Ahead Market.

Hourly Offer: It means hourly active electricity energy purchase/sale offers for each hour of the next delivery day in the Day-Ahead Market.

Eligible Consumer (ST): It expresses real or legal person who is entitled to select its supplier because it has consumption above the electricity energy quantity specified by the Energy Market Regulatory authority or it is directly connected to the transmission system or has status of a legal person of organized industry. The limit for being an eligibleconsumer is determined as 2000 kWh/year for 2018.

Non-Eligible Consumer: It expresses real or legal person that may purchase electricity energy and/or capacity only from the supplier company in charge in its region.

System Marginal Price (SMP): It expresses the Balancing Power Market price corresponding to the net instruction volume which is determined by taking into account all instructions given for a certain time in the balancing power market.

Spot Market: It is the market where purchase or sale of a product is made in short term at the price determined on the date of transaction and where there is liability of physical delivery. Spot markets are supplementary for the bilateral contract. The spot markets operated by EPIAŞ in the energy market are Day-Ahead Market and Intraday Market.

Continuous Trading Platform (CTP): It expresses the trading platform of the Organized Natural Gas Wholesale Market established by EPIAŞ which is operated in electronic media.

Settlement and Custody Bank: Settlement and Custody Bank essentially provides its members with settlement, central counterpart and banking services to its members in the Turkish capital markets under the ‘central settlement’ and ‘banking’ licences it has. Takasbank has been commissioned as central settlement bank which is used by the Market Operator (EPIAŞ) and market participants in order that the collateral mechanism is operated in the Electricity Market and payments are made timely and properly and cash flow in the market is maintained continuously.

TANAP: Objective of Trans Anatolian Natural Gas Pipeline Project (TANAP) is transportation of the natural gas produced at Şah Deni 2 Gas Site, Caspian Sea, Azerbaijan and at other sites located at south of the Caspian Sea first to Turkey and then to Europe.

Turkish Electricity Transmission Company (TEİAŞ): It is System Operator responsible to conduct electricity transmission operations in accordance with the transmission licence granted by the Energy Market Regulatory Authority. TEİAŞ is responsible for operation of Balancing Power Market (DGN) and Ancillary Services Markets in the energy markets. TEİAŞ owns 30% of the shares of EPIAŞ, the Market Operator.

TEİAŞ Market Management System (TPYS): A software developed by TEİAŞ containing data entries with respect to “TEİAŞ Market Management System (TPYS)”, Available Capacity (EAK), Final Daily Production Program (KGÜP), Balancing Power Market (BPM) offer transactions, Failure-Maintenance notices and Ancillary Services Module, allowing the market participants to make transactions in connection with them.

Turkish Electricity Trading and Contracting Corporation (TETAŞ): A State Economic Enterprise limited to its responsibility and capital and engages with electricity trading and contracting activities. TETAŞ also purchases electricity energy in such a way to meet the high cost purchase liabilities from the private sector plants under contracts of Build-Operate, Operate-Transfer and Transfer of Operating Right in order to perform wholesale of the electricity at an acceptable price in the market. Under the bilateral contracts, it sells on wholesale basis to the Responsible Supplier Companies.

Consumer Management System (TYS): The Consumer Management System is a holistic process management structure regarding the switching process management operated by EPIAŞ according to regulations. This system embraces the management of eligible customer database, switching process and switching problems processes, notification of eligible customer registries, index registries and switching results to all stakeholders.

Settlement: It expresses calculation of the credit and debt amounts arising from the balancing mechanism and/or energy imbalance and preparation of the related credit-debt notices. Settlement covers calculation of credit and debt amounts arising from the day-ahead market, intraday market, balancing power market and energy imbalance. Settlement operations are conducted by EPIAŞ.

Derivatives Market (VIOP): Derivatives Market was established on December 21st, 2012 where derivatives and futures contracts traded in Borsa İstanbul are purchased and sold. It fulfills liability to purchase or sell electricity in such quantity and of such quality as standardized in the Basis Load Electricity Futures Contract at a future date at the price agreed today. There is no liability of physical delivery in the trading carried out in this market.

Ancillary Services: It means services which are provided by the related legal persons connected to the transmission or distribution system for reliable operation of the transmission or distribution system and supply of the electricity under the required quality conditions as detailed in the related regulation. (These services include services such as Recovery of the Failed System, Hot Reserve, Reactive Power/capacity and Reactive Energy, Frequency Control, etc.). Ancillary services market in Turkey is operated by TEİAŞ as system operator.

Renewable Energy Resources Support Mechanism (RERSM): It means the supporting mechanism containing principles and procedures in connection with prices, terms and payments to be made to the benefit of the legal persons having production licence and engaging with production activity basing on renewable energy resources or legal persons performing unlicensed production in accordance with the Regulation on Certification and Support of Renewable Energy Resources.

RERSM participant: It means each licensed production plant or responsible supply companies subject to RERSM.

EPIAŞ

"Enerjinin Buluşma Noktası"

ENERJİ PİYASALARI İŞLETME A.Ş.
2016 YILI FAALİYET RAPORU

EXIST
ENERGY EXCHANGE ISTANBUL



TURKISH ENERGY EXCHANGE

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