



January 2019

#8

Monthly Energy Bulletin

Can Hakyemez | hakyemez@tskb.com.tr
TSKB Economic Research



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Boron carbide to be produced in Turkey in the near future

The Minister of Energy and natural Resources, Fatih Dönmez, said that the use of daylight savings time in winter had resulted in savings of 1 to 2 billion Turkish liras, adding that Turkey would continue to use daylight savings time. He also added that the time school started may be adjusted in certain cities. Dönmez also commented on boron mines: "Boron is one of the most critical natural resources. We hold 73% of global boron reserves, and a 59% share of the global boron sales market. Last year, we broke our record in boron production with 2.42 million tonnes. We continue our

meetings on starting the production of boron carbide."

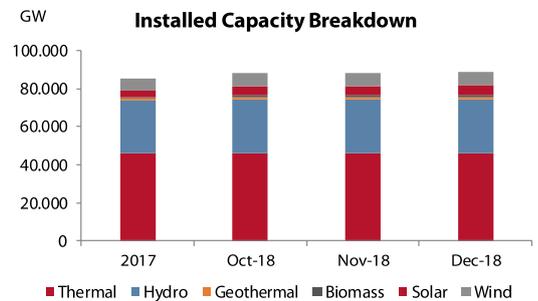
Dönmez stated that electricity transmission constituted 35% of total electricity costs and that the cost of electricity transmission depended on the size of the grid and the operation costs. Pointing out the necessity of energy efficiency awareness among citizens, Dönmez reported that US\$30 billion worth of recycling could be achieved through savings.

*Boron carbide (B4C) is known as the third hardest material after diamond and cubic boron nitride. It is referred to as "Black Diamond" in view of its extreme hardness.

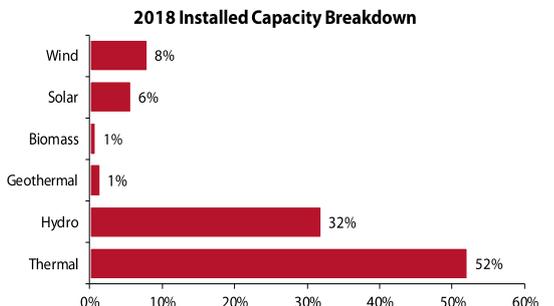
Installed Capacity Analysis

After reaching 85,200 megawatts (MW) at the end of 2017 and 88,347 MW at the end of November 2018, Turkey's total installed capacity increased to 88,551 MW at the end of 2018. A total increase of 3.9% was realized in 2018, with coal power plants and renewable power plants accounting for all of the increase. During this period, licensed and unlicensed solar power plants with a total installed capacity of 1,642 MW were commissioned while hydroelectric power plants with a total capacity of 1,018 MW were commissioned. A total reduction of 602 MW was recorded in total installed capacity of natural gas power plants, whereas coal power plants recorded an increase of 331 MW in their total installed capacity.

Turkey's total installed capacity increased by 204 MW in December when compared to previous month, with 56 MW of this increase due to wind power and 60 MW from the addition of solar power plants. 48% of the power plants which were in operation in December were renewable electricity generating power plants, with hydroelectric power plants accounting for 32% of the total installed renewables capacity and the total share of solar power and wind energy reaching 13.5% at the end of 2018, up from 11.7% at the end of 2017.



Source: Electricity Transmission Company (TEİAŞ), TSKB Economic Research



Source: TEİAŞ, TSKB Economic Research

Electricity Generation Analysis

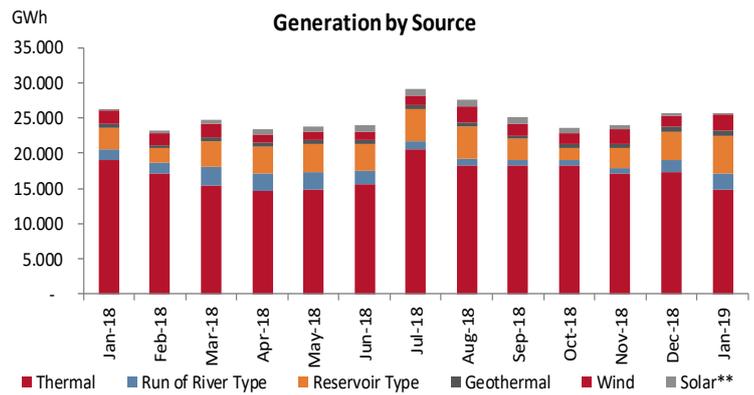
Approximately 370.72 terawatt-hours (TWh) was generated in 2018, while the total generation in January 2019 reached 25.81 TWh.

There was a 0.2% increase in total electricity generation in January 2019 compared to December 2018 and a 1.9% increase in total electricity generation in January 2019 when compared to the same month last year.

Thermal power plants, which had supplied 66.9% of the total electricity in December, generated 57.8% of the total electricity generated in the first month of 2019 with the increase in the electricity generation through hydro-electric power likely to have been the main reason for the 9.1-point decline. Accounting for 6.5% of electricity generation in December, wind provided 8.5% of the total electricity generated in January. Another noteworthy development was that hydro-electric power plants, which commanded a 22.6% share in December 2018, recorded an increase in their share of electricity generation to 29.6% in the first month of 2019.

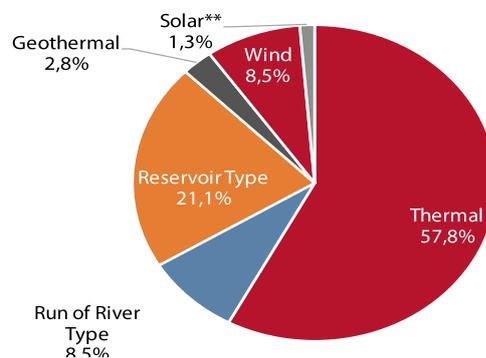
The average daily generation of licensed power plants in January 2019 stood at 821,841 megawatt-hours (MWh), marking a 0.2% increase compared to December. Electricity generation from licensed power plants peaked at 896,032 MWh on Tuesday, January 8, with the lowest level, of 681,421 MWh being recorded on Tuesday, January 1.

Daily consumption averaged 818,314 MWh in January, peaking at 892,253 MWh on Tuesday, January 8, with the lowest level of electricity consumption, of 678,415 MWh, recorded on Tuesday, January 1.



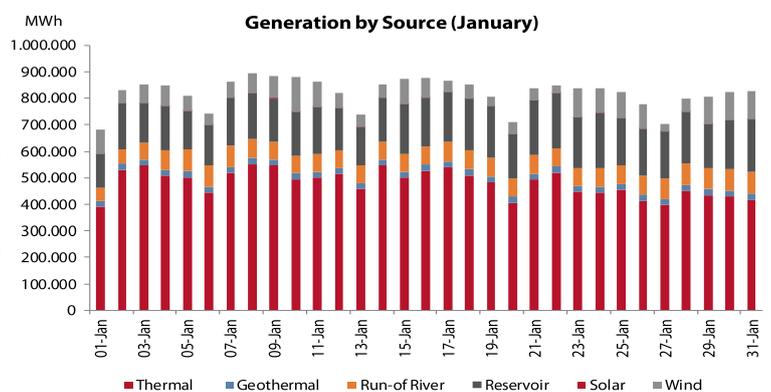
Source: TEİAŞ, YTBS Daily Reports, TSKB Economic Research

**Since January unlicensed solar power plant generation data has not yet been released by TEİAŞ, the total energy generation by unlicensed solar power plants in December was accepted as same as the total generation of December 2018.

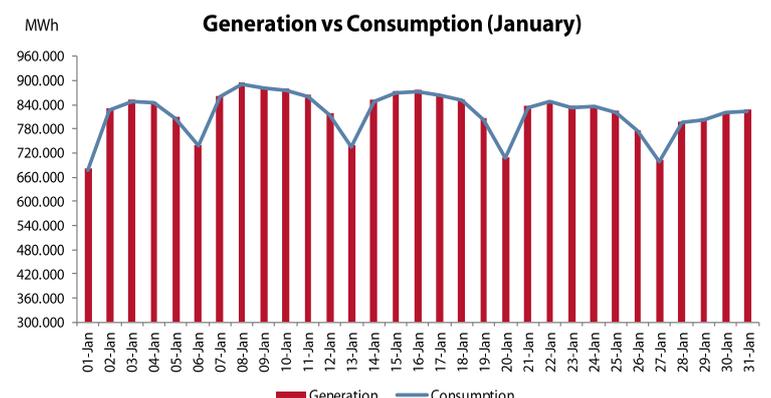


Source: TEİAŞ, YTBS Daily Reports, TSKB Economic Research

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Source: TEİAŞ, YTBS Daily Reports, TSKB Economic Research



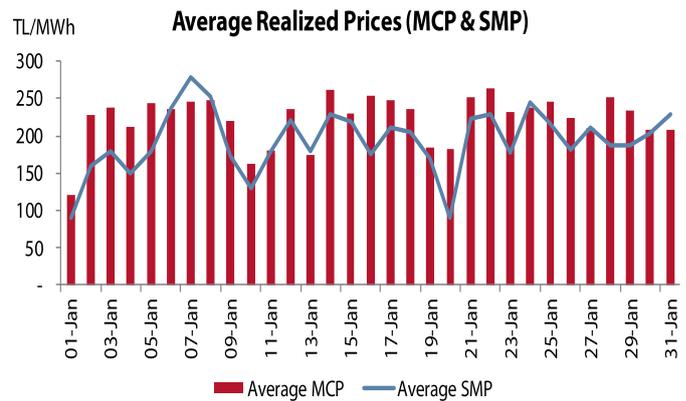
Source: TEİAŞ, YTBS Daily Reports, TSKB Economic Research

Electricity Price Analysis

The average market-clearing price (MCP) and system marginal price (SMP) fluctuated between TL89/MWh and TL280/MWh.

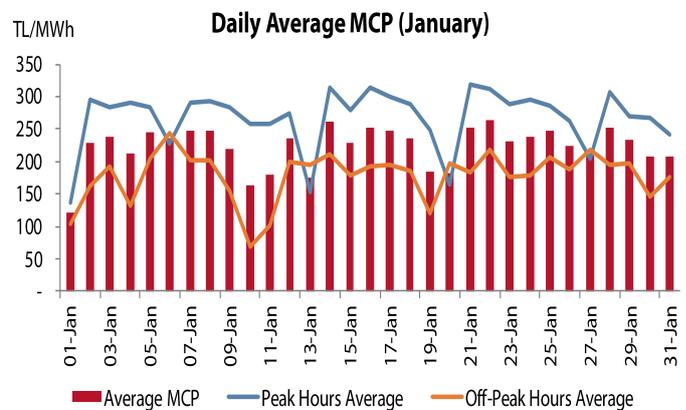
In January 2019, the average MCP stood at TL223.04/MWh, while the SMP averaged at TL193.55/MWh. The lowest average MCP, of TL121.02/MWh, was recorded on Tuesday, January 1, and the lowest average SMP stood at TL89.11/MWh on Sunday, January 20.

Compared to the December average, the January MCP average was 13.5% lower, which can largely be put down to the decline in electricity generation from thermal power plants.



Source: EXIST, TSKB Economic Research

An analysis of December's daily average MCP reveals an average tariff of TL267.74/MWh for peak hours (from 8AM to 8 PM), 20% higher than the daily average value. The highest peak-hour average was recorded as TL318.76/MWh on Monday, January 21, whereas the lowest peak-hour average was calculated as TL137.4/MWh on Tuesday, January 1.



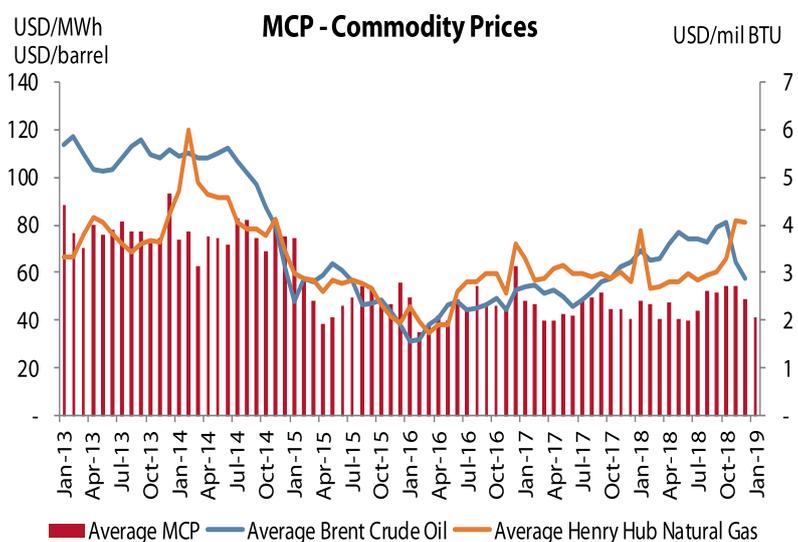
Source: EXIST, TSKB Economic Research

The average pricing in off-peak hours (from 8PM to 8AM) in the same period was calculated as TL178.34 TL/MWh. The highest off-peak hour average was recorded as TL244.76/MWh on Sunday, January 6, whereas the lowest off-peak-hour

average was TL68.25/MWh on Thursday, January 10. One noteworthy development was that the hourly MCP was set as TL0/MWh for a total of 24 hours in January. Between 3 AM and 5 AM on the morning of Friday, January 11, the hourly MCP increased to TL0.5/MWh, and these prices were the lowest hourly MCP level to be recorded in January.

The annual average market clearing price (MCP) in 2017 was USD45.02/MWh, while the average MCP in 2018 was calculated as USD47.39/MWh. The average MCP in the first month of 2019 was calculated as USD41.54/MWh. There was a 14.5% decline in the MCP prices in dollar terms in January, when compared to their December level, broadly in line with the 13.5% fall in the MCP in Turkish lira terms.

The average Brent crude oil price decreased to USD 57.36 /barrel in December, from USD64.75 /barrel in November. In the same period, the price of Henry Hub natural gas was USD4.04 /mBTU .

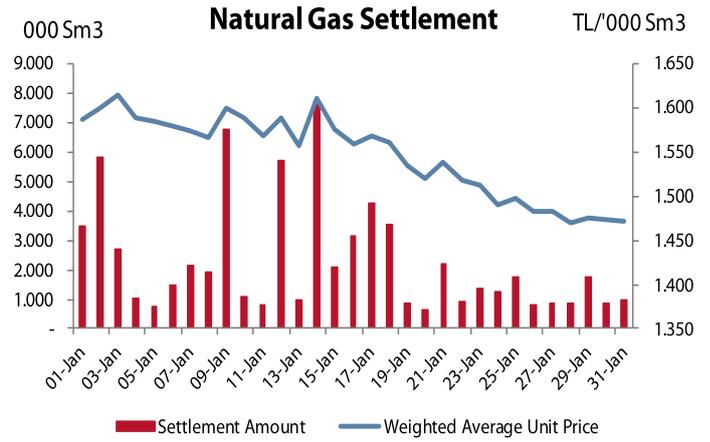


Source: EXIST, CBRT, International Energy Agency (IEA), TSKB Economic Research

Natural Gas Settlements

According to natural gas coupling data from the Organized Wholesale Natural Gas Market operated by EXIST since September 1, natural gas settlements totalled 68,505,000 Sm³.

On Sunday, January 20th settlements for a total of 657,000 Sm³ of natural gas settlement were recorded, while on Monday, January 14th settlements totalled 7,710,000 Sm³. In the same period, the weighted average of the settlement unit price was calculated to be TL1,570.65 per 1,000 Sm³.



Source: EXIST Natural Gas Platform, TSKB Economic Research

Sector News

Local News

- SOCAR's purchase of the EWE Turkey group.** Azerbaijan's state-owned oil company, SOCAR, purchased EWE Turkey Holding and its affiliates (Bursagaz, Kayserigaz, Enervis, EWE Energy and Millenicom). The purchase will be completed once the legal approvals have been obtained. SOCAR's president, Rövnag Abdullayev, said "Since 2013, we have sold 1.2 cubic meters of natural gas to Turkey annually, wholesale. We supply natural gas from Azerbaijan with our TANAP project. With the acquisition of EWE Turkey, we have taken a strategically and commercially important step in linking the production-transmission-distribution mechanism in Turkey. The synergy generated by this important step will add value to Turkish and Azerbaijani economies. We will continue to seek market opportunities." (January 31, 2019)
- Greenhouse gas emissions to be cut by 20 million tonnes thanks to Akkuyu Nuclear Power Plant.** Dr. Mehmet Türkmen, a research assistant at the Nuclear Energy Engineering Department at Hacettepe University, discussed the contributions of the Akkuyu Nuclear Power Plant to the efforts to tackle climate change. Türkmen stated that Akkuyu would meet 10% of Turkey's electricity demand and that Turkey would not be emitting the equivalent of 20 million tonnes of carbon dioxide, accounting for 4% of Turkey's total annual greenhouse gas emissions. (January 31, 2019)
- TurkAkım Pipeline to be activated by the end of 2019.** Russian President Vladimir Putin said that TurkAkım project was expected to be activated by the end of 2019 and the Akkuyu Nuclear Power Plant by 2023. (January 31, 2019)
- Application deadline for Renewable Energy Resource Zones Wind Power Plant-2 (YEKA RES-2) tender to be extended.** The final application date for the YEKA RES-2 tender was announced as 18 April 2019 in the Official Gazette. The final date for applications had previously been set at 7 March 2019. (January 30, 2019)
- Gasoline price cut by 17 kuruş.** The price of gasoline at the pump have been cut by 17 kuruş per litre. With this price adjustment, a litre of gasoline has become cheaper than a litre of diesel. (January 30, 2019)

- **Board of Petroleum Pipeline Cooperation (BOTAŞ) became the first institution to fully implement TS EN ISO 50001 Energy Management System into entire of its plants.** BOTAŞ initiated TS EN ISO 50001 Energy Management System as a pilot project in December 2017 and completed extending its context by December 2018 fully integrating the system into its managements and facilities. (January 30,2019)
- **Turkey stopped importing oil from Iran by November.** Turkey's crude oil import from Iran gradually decreased after USA had imposed sanctions on Iran in May 2018 and stopped completely in November. According to data released by the Energy Market Regulatory Authority (EMRA), Turkey covered its crude oil demand from Iraq, Kazakhstan, Russia, Kuwait, Nigeria, Saudi Arabia and Azerbaijan respectively. Turkey substituted most of the oil it had imported from Iran with Iraqi oil. (January 29, 2019)
- **Natural gas consumption projections for 2019 announced.** EMRA announced that it was expecting natural gas consumption of 52.133 billion cubic meters for 2019. (January 28, 2019)
- **EPIAŞ announces operating income ceiling as TL135.56 million.** Under EMRA's Decision No. 8392-1, the Market Operation Income Ceiling in electricity market was determined as TL130.84 million, and TL4.72 million in the natural gas market. (January 28, 2019)
- **Imported waste not to be used in electricity generation.** In line with the amendment to the Electricity Plant Projects Directory, imported waste will not be used in biomass energy plants. The Minister of Energy and Natural Resources released the Directive for the Amendment to the Electricity Plant Project Directory. The Certified Education Institution and Project Expert Certificate is to be repealed under the amendment, and the context of biomass energy plants will extended such that the usage of imported raw materials in these plants will be prohibited. (January 25, 2019)
- **Template version of electricity storage directory released.** The Energy Market Regulatory Authority (EMRA) presented the template of regulation on electricity storage activities to the public. According to EMRA's statement, the template of regulation will be available to the public until 8 February 2019. (24 January 2019)
- **Meetings underway on future of Karapınar YEKA-1 Solar Power Plant.** According to a report on Habertürk, the Kalyon-Hanwha Group, which had won the tender for the Karapınar Renewable Energy Resource Zone YEKA-1 Solar Power Plant, has decided against going further with the project. The parties had started negotiations on the future of the plant, located in the Konya-Karapınar Energy Specialized Industrial Zone, with a 1,000 MWs capacity. Kalyon is reported to be possibly involved with other initiatives in order to complete the project with another foreign partner. (January 24, 2019)
- **Emergency expropriation decisions for coal-fired power plants in Alpu, Eskişehir halted by the Council of State.** The "Emergency Expropriation" decision for the 1,100 MWs Alpu Coal-fired Power Plant, which was planned to be built in Eskişehir by the Electricity Generation Company, was halted by the Council of State after legal action was taken by the Eskişehir Tepebaşı Municipality. The tender for the privatization of the reserve area for the construction of a power plant in the licensed territory of Electricity Generation Company had been postponed on 5 occasions and the latest bidding date had been determined as 7 February 2019. (January 24, 2019)

- **Call for oil and natural gas expeditions from Minister of Energy and Natural Resources, Fatih Dönmez.** In his letter sent to the Energy Conference hosted by IICEC, Mr. Dönmez pointed that today's oil production could double in case of electrification of all transportation and invited the business community to invest in Turkey's oil and natural gas expedition sector. Remarking on the efforts towards enhancing Turkey's energy trade, Minister Dönmez said the following: "We implemented the organized wholesale natural gas market this year. Forward physical contracts will be implemented in 2019. As the number of contracts increases, the market depth will also increase. Our goal for both the electricity and natural gas markets is to let market participants manage their own risks and provide a market deep enough for the participants to link their expectations with the tools of the market." (December 21, 2018)
- **Financial stability required for a competitive energy ecosystem.** During her speech at the opening ceremony of the conference hosted by the IICEC, Güler Sabancı, the chair of the Executive Board of Sabancı Holding, pointed out the importance of efforts for last source supply tariffs in electricity markets when it comes to assuring the competition. Sabancı indicated that transformative technologies had started to provide opportunities for the sector, but warned there was a very important condition for the sector to operate efficiently and create more value for all shareholders; "This condition is financial sustainability. In order to maintain financial sustainability, the sector's capital structure should be re-assessed and restructured." Sabancı said importance was given to cooperation between academia and industry in energy, just as in other sectors, adding; "We care about women's role in the energy sector. In this framework, one important area of collaboration is between the IICEC and the Gender and Women's Studies Center of Excellence (SU Gender). This platform, which is also supported by the IEA, aims to support women working in the energy sector on a global scale." (December 21, 2018)
- **Joint petrochemicals investment by Socar and British Petroleum (BP).** The Azeri government owned oil company, SOCAR, entered negotiations with BP to reach cooperation in building and operating a petrochemical complex in Turkey. SOCAR Turkey and BP announced that they had signed a Framework Agreement in order to assess their opportunities for business cooperation aimed at building and operating a petrochemical complex in Turkey to global standards. The plant is expected to produce 1.25 million tonnes of purified terephthalic acid (PTA), 840,000 tonnes of P-Xylene (PX) and 340,000 tonnes of benzene, and is planned to be constructed in Aliğa. The design of an integrated system will enable the usage of raw materials provided by the adjacent STAR Refinery and Petkim, both of which belong to SOCAR Turkey. If BP and Socar decide to begin work on the plant shortly, the plant will enter operations in 2023. (December 21, 2018)
- **Volume of gas supply through Trans-Anatolian Natural Gas Pipeline (TANAP) to reach 1 billion cubic meters.** The Azeri government owned energy company, SOCAR, announced that it had transferred 750 million cubic meters of natural gas to Turkey through the TANAP. (December 20, 2018)
- **Wholesale price of electricity will be 20.48 krş/kWh.** EMRA determined the average wholesale price of electricity to be 20.48 krş/kWh, effective as of 2019. The average wholesale price of electricity was 17.10 krş/kWh in 2018. (December 19, 2018)

- Details on help with electricity costs for citizens on social support.** The Minister of Energy and Natural Resources, Fatih Dönmez, stated that 10 million citizens would receive support through regulations regarding government support on monthly electricity consumption of up to 150 kWh. Dönmez said that three different teams from the Ministry of Finance, the Ministry for Families, Work and Social Services and the Ministry of Energy and Natural Resources were working on the support package, stating that teams from three ministries had gathered and were right now working on grouping. The electricity support plan would be 75 kWh monthly for houses with two or more households, 100 kWh for houses with 3 or more households, 125 kWh for houses with 4 or more households and 150 kWh for houses with 5 or more households. The start of the support programme will depend on the decision of the Ministry for Families, Work and Social Services. Mr Dönmez said that work was continuing apace on the project and that the Ministry of Families, Work and Social Services would shortly announce how such support would be distributed. He said 2.5 million houses with 10 million households would benefit from the support.” (January 24, 2019)
- World Bank’s Board of Executive Directors approves USD 252 million credit and USD 2 million donation from Global Environment Fund to Turkey’s Irrigation Modernization Project.** According to the statement from the World Bank, the project aims to improve irrigation delivery through rehabilitation and modernization of distribution infrastructure, increase farmers’ access to water and strengthen the capacity of irrigation unions. Initiated by the Ministry of Treasury and Finance and implemented by the Directorate General for State Hydraulic Works, the project involves USD 249 million of financing for the modernization of irrigation systems in Atabey, Ereğli-İvriz, Alaşehir and Uzunlu regions, as well as USD 3 million for the management of the project. The Global Environment Fund donation will be allocated to innovation and corporate support work. The Irrigation Modernization Project was financed by Financing from the International Bank for Reconstruction and Development Investment Project with a 10.5 year repayment schedule, with no repayments in the first 5 years. (January 24, 2019)
- Second drilling vessel to arrive on February 15.** The Deepsea Metro 1 drilling vessel, purchased by Turkish Petroleum in order to explore oil and natural gas off the shores of Cyprus and Turkey, is expected to arrive Turkey on 15 February 2019. (January 23, 2019)
- 500 million Turkish liras of investment into transmission line of Akkuyu Nuclear Power Plant.** Six transmission lines to be constructed for the Akkuyu Nuclear Power Plant are to be tendered this year. The lines are determined as the Mersin, Seydişehir Transformer Station, the Ermenek Hydroelectric Power Plant, the Konya 4 Transformer Station, the Manavgat Transformer Station and the Konya Ereğli Transformer Station. The transmission lines will carry 400 kilovolts (January 21, 2019)
- Value-added tax exemption for energy plants.** The Grand National Assembly of Turkey approved an amendment proposal to the value-added tax and special consumption tax law. Under the new omnibus law passed by the assembly, renewable and other energy plants were exempted from value added tax. Currency interest will be included in the tax assessment, along with delay interest, price differences, interest rate, premium and other incomes. (January 18, 2019)

- **Licensing operations will be held by the distributors in the Liquefied Petroleum Gas (LPG) market.** Energy Market Regulatory Authority released Amendment to Liquefied Petroleum Gas Market Licensing Law. According to the amendment, distributor companies in LPG market are made responsible for online licensing operations and some articles are restored in a way that operations were enabled online. In addition, duties and authorizations of Directorate General for Liquefied Petroleum Gas Market were extended. Decrees on payments in advance for licensing application fee procedures were also repealed. Any licensing, license amendment and license extension fees will now be paid in advance together with the application. (January 18, 2019)
- **Local coal production totalled 101.57 million tonnes in 2018.** In his social media post, the Minister of Energy and Natural Resources, Fatih Dönmez, indicated that state's local coal production totaled 53.35 million tonnes with private coal production reaching 48.22 million tonnes. After the release of this news, the Minister of the Treasury and Finance, Berat Albayrak, announced that Turkey had achieved the goal of producing 100 million tonnes of coal in 2018. (January 17, 2019)
- **TL 156.5 billion invested by General Directorate of State Hydraulic Works (DSİ) in the past 16 years.** In his statement, the General Manager of DSİ Mevlüt Aydın assessed the activities and future goals of the State Hydraulic Works. Aydın said that the DSİ had constructed dams, ponds, irrigation facilities, drinking water treatment facilities and hydro-electric power plants, especially in the last 16 years, had rehabilitated streams and had provided water for the use of citizens. Aydın also added that 8,301 plants had been brought into operating between 2003 and 2018. Further, Aydın commented that the DSİ aimed to expand the area under irrigation from 4.8 million hectares currently to 6.64 million hectares in 2019. Stating that trunk filling works were continuing in Yusufeli, which will be the highest dam in Turkey, Aydın said that the installed capacity of the facility was 558 MW and that once completed, it would add TL 600 million to the nation's economy. Construction of the dam is at the stage of building the concrete arch, which has currently reached a height of 60 meters in". Aydın added that the construction of the Ilisu Dam in the Dicle Basin was approaching its final stages, adding that the Ilisu Dam and Hydroelectric Power Plant project was second biggest dam in Turkey in terms of volume of the filling reservoir and the fourth biggest hydroelectric power plant with its 1200 MW installed capacity. (January 16, 2019)
- **Çine Hydroelectric Power Plant was privatized.** The transfer of operating rights for the Çine Hydroelectric Power Plant, which belonged to Electricity Generation Corporation, was approved by Presidential Order. According to the order, the operation rights of the Çine Hydroelectric Power Plant were transferred to the İş-Kaya company, which had submitted the highest bid of TL120,500,000. (January 16, 2019)
- **Projects financed by TSKB bring about 2.4 million tonne reduction in carbon emissions.** The General Manager of TSKB, Suat İnce, who also sits on the board of directors of the Energy Efficiency Association, pointed out the importance of raising energy efficiency awareness, particularly among industrial companies. In his speech on Energy Efficiency Week, Suat İnce said the following: "Without a doubt, ensuring efficiency in real sector's energy consumption, without compromising on quality, brings huge potential both for the economy and environment. At TSKB, we take on a heavy responsibility on this issue and gain 4.7 million gigacalories of energy to our country through our investments in energy efficiency. These investments also bear importance in the transformation to a low carbon economy. With our financing for more than 80 projects so far, we have managed to decrease our country's carbon emissions by 2.4 million tonnes annually. When we take into account that 68% of our credit portfolio consists of renewable energy, environmental and sustainability projects, our contribution to annual carbon reductions reaches 12 million tonnes. (January 14, 2019)

- **Cancellation of Solar Power Plants Renewable Energy Resource Zones (GES YEKA)-2 tender.** The competition for the Viranşehir, Erzin and Bor GES YEKA projects and their interconnection capacities, which was announced on 5 October 2018, was canceled by the Ministry of Energy and Natural Resources. Operation rights for the connection capacities of the Şanlıurfa-Viranşehir (500 MW), the Hatay-Erzin (200 MW) and Niğde-Bor (300 MW) and the designated areas in the respective YEKAs were to be tendered on 31 January 2019 to be assigned for the next 30 years. The reasons for the cancellation of the tenders are yet to be announced. (January 14, 2019)
- **First Geothermal Specialization Greenhouse Areas to be built in Sarayköy.** The chairman of the Geothermal Power Plants Investors Association (JESDER) Ali Kindap said that the association planned 3 Geothermal Specialization Greenhouse Areas in Denizli, Manisa and Aydın aimed to be used for heating and that the first of these would be built in the Sarayköy province of Denizli. Kindap stated that infrastructure work on the greenhouse, which would be heated with waste water coming from Zorlu Energy's geothermal power plant, had been completed. Greenhouses will be constructed this year in the Sarayköy Geothermal Specialization Greenhouse Area, which covers a total area of 650 decares. The Carbon dioxide emissions from the geothermal power will also be used in these greenhouses. JESDER reported that it would start collaborating with the Ministry of Energy and Natural Resources and related governmental institutions on building Geothermal Greenhouse Area on a 1,347 decares area of land in the Alaşehir province of Manisa. Aydın also reported that construction work was continuing on a Geothermal Specialization Greenhouse Area located on 650 decares of land in the Efeler province of Aydın. (January 14, 2019)
- **Record high level of daily natural gas consumption.** The Minister of Energy and Natural Resources, Fatih Dönmez, announced that Turkey had consumed 245 million cubic meters of natural gas on January 8, an all-time high, and that all of the demand was met continuously. In his statement on his Twitter account, Dönmez pointed to cold weather as the reason for the record-level increase in demand for natural gas and added that daily gas flows into the system had increased to 310 million cubic meters with LNG, FSRU and storage projects aimed at security of natural gas supply. Pointing to the adequacy of the infrastructure to cover daily consumption Dönmez said that the government continued working on increasing daily gas flow to 400 million cubic meters and that with its efforts, Turkey would not only be able to meet its natural gas demand but also supply excess natural gas, despite lacking significant natural resources. (January 10, 2018)
- **Context of Electricity Market Capacity Mechanism attenuated.** The Energy Market Regulatory Authority (EMRA) changed Electricity Market Capacity Mechanism Directory. Capacity payments to the electricity generation plants included in the capacity mechanism will be determined by their unit fixed costs and total installed capacity based on resources. With this change, EMRA abolished the "variable cost" from calculations. In addition, an age limit for plants operated with foreign resources, which would not be included in the capacity mechanism, was determined as "13 and older". (January 9, 2019)
- **Goal of distribution sector is continuous electricity with quality.** Speaking at the Annual Assessment Meeting held by Ministry of Energy and Natural Resources and Association of Distribution System Operators (ELDER), Serhat Çeçen, the Chairman of the Executive Board of ELDER said that the association aimed to achieve uninterrupted electricity supply by 2020 in Turkey. The Deputy Minister of Energy and Natural Resources, Abdullah Tancan, pointed to the necessity of maximizing customer satisfaction in 2019. The meeting also involved talks on certain issues like customer satisfaction, assessment of investments in 2018, investment goals for 2019, service quality and auditing. (January 8, 2019)

- **8 GW goal for wind power capacity in 2019.** The chairman of the Turkish Wind Energy Association Mustafa Serdar Ataseven stated that the total installed capacity for wind power would be 8,000 megawatts by the end of 2019, in the case of the announcement of the capacity increases awaited by the sectors. Ataseven reported that companies had sped up work on the projects ahead of the scheduled end of the Renewable Energy Resources Support Mechanism (YEKDEM) by the end of 2020. Despite increased financial costs due to economic turbulences in 2018, Ataseven believed that projects would catch up with 2020. (January 7, 2019)
- **BOTAŞ changes tariff, resulting in expensive gas bills in big housing estates.** According to the new tariff, big housing estates which consume more than 300,000 cubic meters of natural gas annually, will pay 89 kuruş per cubic meter, excluding tax. BOTAŞ announced the decision on their website: “The Price of natural gas for housing estates with an annual consumption of natural gas exceeding 300,001 cubic meters will be equal to the price paid by other subscribers.” (January 3, 2019)
- **New electricity tariff announced by EMRA in the Official Gazette.** According to the new tariff, electricity prices for households were cut by 10%. The price of a kWh of electricity was cut to 28 kuruş, excluding tax and transmission costs. Subscribers with smart meters will be charged a “triple time tariff”. These subscribers will be considered to be using the night time tariff between 10 PM and 6AM. The night time tariff was discounted by 25% and determined to be 12.5 kuruş per kWh, excluding tax and transmission costs. Subscribers will pay 48 kuruş per “peak hour” kWh between 5 PM and 10 PM and 28 kuruş per kWh between 6AM and 5PM. (January 2, 2019)

News from Abroad

- **China calls for cooperation in tackling climate change.** In his speech at the meeting on “Impact of Climate Change on International Peace and Security” China's Permanent Representative to the United Nations, Ma Zhaoxu, pointed out the responsibilities of countries to strengthen international dialogue and cooperation in order to tackle climate change while preserving a multilateral mechanism. Zhaoxu also argued that the capacity to combat climate change should be increased through funds and technical support extended to developing countries. (January 30, 2019)
- **China increases renewable energy generation in 2018.** The National Energy Administration of China (NEA) announced that the country's total renewable energy generation capacity had reached 728 giga-watts - an increase of 12% compared to 2017. According to the NEA, China added 20.59 GW of wind power capacity and 44.3 GW of solar power capacity into its national grid. (January 30, 2019)
- **Germany to shut down all coal-fired power plants by 2038.** In Germany, country with the highest consumption of coal in Europe, the Coal Commission - which is comprised of governmental institutions, the private sector and non-governmental organizations - will gradually phase out coal consumption by between 2035 and 2038. The deadline may be revised as 2035 in 2032. The decision could be interpreted as a gradual shutdown in coal-fired power plants, which currently have a capacity of 44 GW. (January 29, 2019)
- **France to transform coal-fired power plants into biomass plants.** France's Ministry of Energy announced the government would consider biomass incineration, on the basis of security of energy supply, in the 1.2 GW capacity Cordemais coal-fired power plant, owned by the French government and public energy company, EDF. The Government also reported that it was assessing biofuel usage in the Le Havre coal-fired plant and that it would announce its final decision in the autumn. Macron's government plans to shut down electricity generation of the remaining coal-fired power plants by 2020, as part of efforts to prevent carbon emissions and global warming. (January 29, 2019)

- **Gazprom to invest TL 8.1 billion into TurkStream.** The Russian public energy company, Gazprom, plans to allocate 102 billion rubles (approximately TL 8.1 billion) into the TurkStream Natural Gas Pipeline project in its 2019 budget. (January 28, 2019)
- **EU members approved investment support of EUR 800 million into the energy infrastructure projects with cross-border benefits.** The European Commission announced that member countries had approved financial support for 14 projects aimed at increasing energy security. According to the decision, member states will allocate EUR 800 million from EU funds into electricity, smart grid, transmission and natural gas projects. (January 25, 2019)
- **Director of International Energy Agency (IEA) Fatih Birol says agency will closely watch US shale oil production this year.** Fatih Birol commented on energy markets in the World Economic Forum (WEF) in Davos and said that they expected energy to be on the focus of this year. Birol said that political and business leaders would discuss many topics on energy, from geothermal to global economy conditions, oil and natural gas markets, renewable energy, carbon capture utilization and storage (CCUS), hydrogen and climate change. "In 2019, we will pay special attention to US shale oil", he said while discussing the oil markets. Speaking to CNBC, Birol said that shale oil in the US would have long-term impacts on the oil, gas and energy markets in the US and put pressure on oil prices. (January 23, 2019)
- **Cost of extreme weather conditions reached USD 225 billion in 2018.** AON released a report on the cost of extreme weather. According to the report, tropical cyclones caused the most damage. Hurricanes Michael and Florence in the USA, Jebi and Trami hurricanes in Japan and the Mangkhut typhoon in Philippines, Hong Kong and China and the Rumbia typhoon in China were counted as among the weather events causing the most damage. Weather in 2017 and 2018 combined resulted in USD 653 billion worth of damage and USD 237 billion of costs, resulting in record-high damage.
- **Japan completes first oil imports from Iran after sanctions.** According to a report from the Tasnim News Agency, Japan's Fuji Oil Company imported oil from Iran for the first time after the USA imposed sanctions. Representatives of the Fuji Oil Company reported that the VLCC Kisogawa tanker, loaded with 2 million barrels of oil, had left Hark Oil Terminal in the Persian Gulf. Washington had exempted 8 countries, including Japan, from sanctions on Iranian oil. (January 22, 2019)
- **100 billion cubic meters of natural gas produced in Shah Deniz natural gas reserve.** According to data released by the Azerbaijan Office of British Petroleum (BP), 100 billion cubic meters of natural gas and 196 million barrels of condensate were extracted from the Shah Deniz reserve, which had entered operation in 15 December 2006. Natural gas generated from the Shah Deniz reserve was transferred to both Azerbaijan and Georgia and Turkey through the South Caucasus Pipeline. Encompassing a 860- square kilometer area, the Shah Deniz - one of the largest gas reserves in the world - has more than 1 trillion cubic meters of natural gas and 2 billion barrels of condensate in its reserves. (January 22, 2019)
- **Hitachi halts USD 28 billion project.** The Japanese company Hitachi halted its nuclear power plant project in the UK, due to uncertainties over Brexit I thought they quoted other reasons. The Horizon Nuclear Power Plant, which was planned to be built in Anglesey, Wales at a cost of 3 trillion Japanese Yen (approximately USD 28 billion), was projected to cover 6% of the UK's total energy demand. The statement from Hitachi included the following: "It is quite apparent that time is needed to work on the financial structure of the plants construction and operation." (18 January 2019)

- **Saudi Arabia reports possible cut in oil production.** Saudi Arabia's Minister of Energy, Halid Abdulaziz el-Falih signalled that OPEC members may cut daily oil production in the event of an economic slowdown. Referring to the decision to cut daily oil production in December, El-Falih commented: "We (OPEC countries) meet and monitor the markets regularly. We may cut oil production down by more than 1.2 million barrels, if necessary." (January 16, 2019)
- **Russian oil exports hit record high in 2018.** Russian natural gas exports reached 225 billion cubic meters, increasing by 20 billion cubic meters since last year. According to a statement from Aleksandr Novak, the Minister of Energy, gas exports through pipelines increased by 4.1% in 2018, whereas liquefied natural gas exports increased by 70%. Most of the increase in exports was due to the capacity increase in the "Yamal SPG", LNG plant. (January 14, 2019)
- **Russia increases natural gas production by 4.9% and oil production by 1.6%.** According to official figures, oil production in Russia totalled 555.84 million tonnes in 2018. Natural gas production totaled 725.17 billion cubic meters while oil production was recorded at 48.44 million tonnes, an increase of 4.5% in December 2018 when compared to December 2017. Natural gas production stood at 67.04 billion cubic meters, up by 4.6% YoY in December compared to the same month last year. (January 8, 2018)
- **Germany constructs its first Floating Storage Regasification Unit (FSRU).** Uniper SE and Mitsui O.S.K. Lines have reached an agreement to build an FSRU at the Wilhelmshaven plant in Germany. According to the agreement, Uniper will be the project developer. The country's First FSRU will have a capacity of 10 billion cubic meters for export and 263,000 cubic meters of LNG storage capacity. The plant is expected to enter operation by the second half of 2022. (January 2, 2019)



Economic Research
research@tskb.com.tr

MECLİSİ MEBUSAN CAD. NO 81
FINDIKLI İSTANBUL 34427, TÜRKİYE
P: +90 (212) 334 50 50 F: +90 (212) 334 52 34

In order to access TSKB Economic Research products please use the QR code below:



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