



November 2019

#18

## Monthly Energy Bulletin

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TSKB Economic Research



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## Details on Mini Renewable Energy Resource Area (YEKA)-Solar Power Plants auctions announced

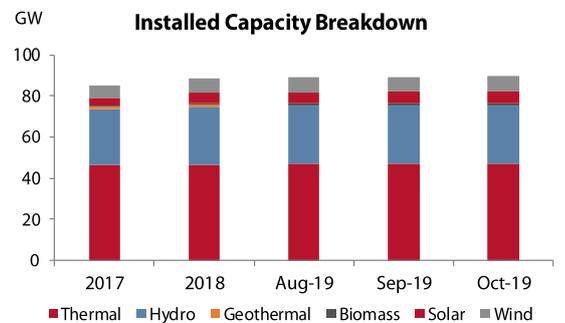
In the workshop held by the Ministry of Energy and Natural Resources (MENR) on mini YEKA Solar Power Plants, it was stated that 100 tenders with each having a capacity of 10 MW were planned to be held in 39 provinces. The duration of the contract is planned to be 15 years, and the duration of the associate's license is 24 months with a construction period of 22 months. A minimum efficiency requirement of 18% will be sought in the modules to be used in power plants with a license period of 30 years. The tenders are scheduled to take place in March and April 2020. The Deputy Minister of the Ministry of Energy and National Resources, Abdullah Tancan, said that the government would announce the competitions in December regarding the mini-YEKA Solar Power Plant and that work on the draft is currently ongoing. Tancan added, "After receiving views from the sector, we will also clarify the technical issues. We are planning to receive the offers in April 2020."

The YEKA solar power plant tender, held by the Ministry of Energy and Natural Resources on March 20, 2017, was won with an offer of 6.99 USD cents per kilowatt-hour. The rapid continuation of technological developments in the solar energy sector both in Turkey and in the world, the fall in production costs achieved by increasing the local content usage ratio is expected to be instrumental in reducing the ceiling price in the tender.

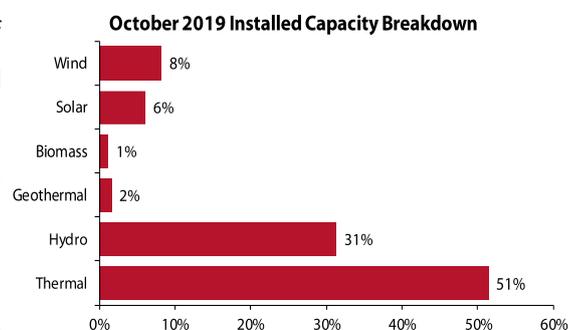
### Installed Capacity Analysis

After reaching 88,551 megawatts (MW) at the end of 2018, Turkey's total installed capacity had reached 91,071 MW by the end of October 2019. There was an increase in installed capacity when compared to the previous month. During this period, licensed and unlicensed wind farms with a total installed capacity of 114 MW were commissioned. There was an increase of 113 MW in the installed capacity of geothermal power plants and an increase of 80 MW in the capacity of renewable waste power plants, with an increase of 43 MW in the installed capacity of hydro-electric power and 5 MW for solar power plants. The total installed capacity of natural gas power plants increasing by a mere 2 MW, while there was no change in the installed capacity of coal power plants operating with domestic and imported coal.

Of all the power plants in operation during October, 48.6% were renewable electricity generating power plants, with hydro-electric power plants accounting for 31.5% of the total installed renewables capacity. Wind power and solar power plants, which had a 13.6% of total share in capacity at the end of 2018, saw their share increase to 14.2% by the end of October 2019.



Source: TEİAŞ, TSKB Economic Research



Source: TEİAŞ, TSKB Economic Research

## Electricity Generation Analysis

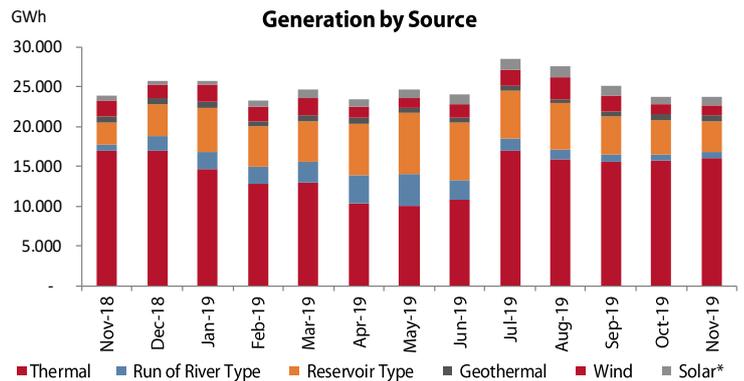
Approximately 23.74 terawatt-hours (TWh) of electricity was generated in October 2019, while total electricity generation in November reached 23.67 TWh. There was a decrease of 3% in average daily electricity generation in November 2019 when compared to October 2019.

Thermal power plants, which had supplied 66% of all electricity in October, generated 67.9% of the total electricity generated in November 2019, with the decrease in the electricity generation from hydroelectric power plants, both run-of-river and dam type, was likely to have been the main reason for the 1.9-point increase.

After accounting for 5.3% of electricity generated in October, wind provided 5.6% of the total electricity generated in November. Another noteworthy development was the increase in the share of renewable power plants in electricity generation, from an average of 31.6% in the first eleven months of 2018 to 44.7% for the same period in 2019, despite the decrease in the July-November period.

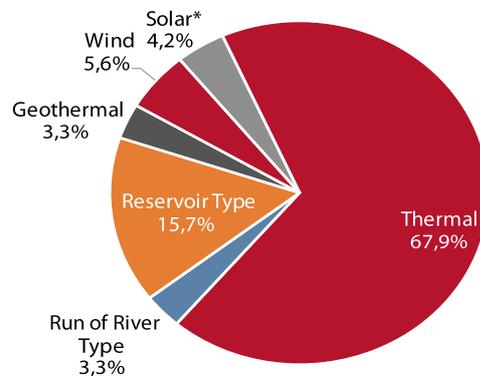
The average daily generation of licensed plants in November 2019 stood at 765,878 megawatt-hours (MWh). The highest electricity generation from licensed power plants was realized on Wednesday, November 27, at 835,496 MWh, with the lowest being on Sunday, November 3, at 646,442 MWh.

Daily consumption averaged 769,509 MWh in November 2019, peaking at 840,955 MWh on Wednesday, November 27, while the lowest electricity consumption, of 651,677 MWh, was recorded on Sunday, November 3.



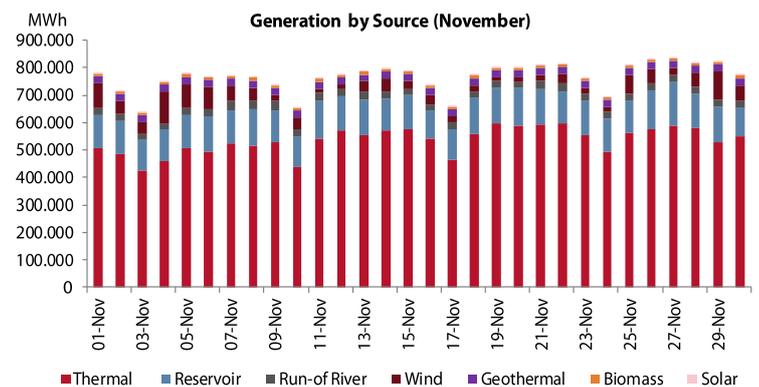
Source: TEİAŞ, YTBS Daily Reports, TSKB Economic Research

\*\*Since November unlicensed solar power plant generation data has not yet been released by TEİAŞ, the total energy generation by unlicensed solar power plants in November was accepted as same as the total generation of October 2019.

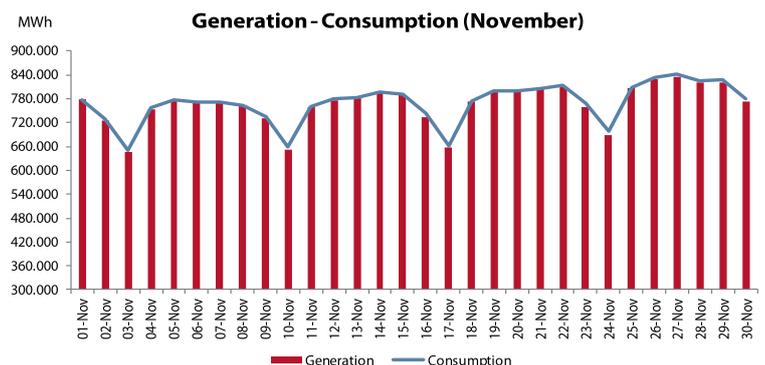


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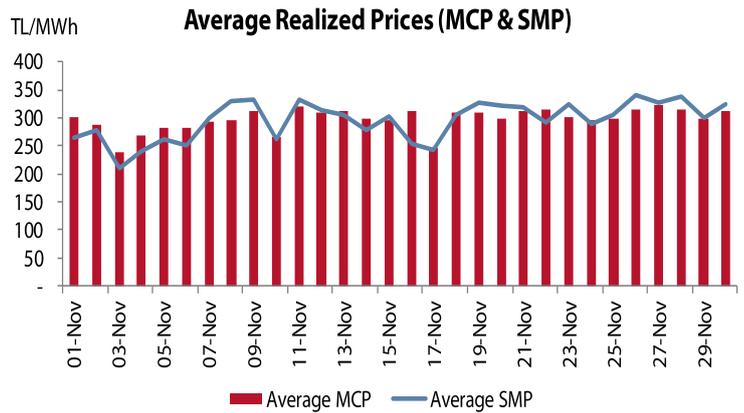
## Electricity Price Analysis

The average market-clearing prices (MCP) and system marginal price (SMP) fluctuated between TL 211/MWh and TL 342 /MWh in November 2019. In the same period, the average MCP stood at TL 297.87 /MWh, while the SMP averaged TL 296 /MWh. The lowest average MCP, of TL 239.69 /MWh, and the lowest average SMP, of TL 211.43 /MWh was recorded on Sunday, November 3.

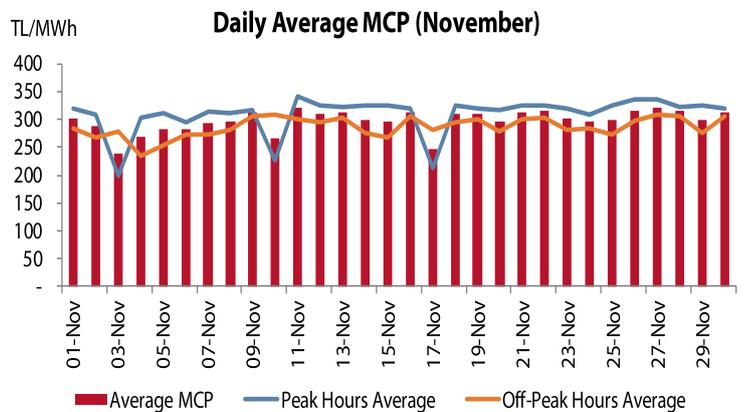
When compared to the October 2019 average, the average MCP for November 2019 was 2% higher.

The daily average MCP for November stood at TL 309.34 /MWh for peak hours (from 8AM to 8PM), 3.9% higher than the daily average value. The highest peak-hour average recorded was TL 342 /MWh on Monday, November 11, while the lowest peak-hour average was TL 199.99/MWh on Sunday, November 3.

The average pricing in off-peak hours (from 8PM to 8AM) for the same period was calculated as TL 286.40 /MWh. The highest off-peak hour average was TL 308.94 /MWh on Sunday, November 10, with the lowest off-peak-hour average of TL 233.52 /MWh recorded on Monday, November 4.



Source: EXIST, TSKB Economic Research

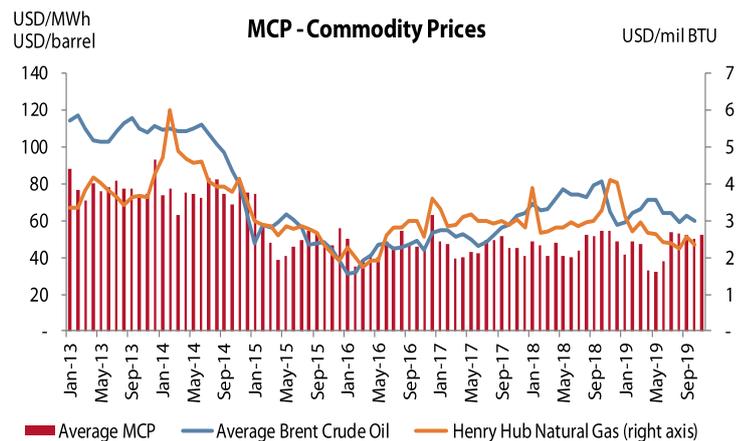


Source: EXIST, TSKB Economic Research

The annual average MCP in 2018 was USD 47.39 /MWh. In October 2019, the average MCP in October stood at USD 50.41 /MWh, while in November 2019 it was USD 51.97 /MWh.

The MCP increased by 3.1% in dollar terms in November when compared to October, mainly as a result of the increase in the TL-denominated MCP supported by the appreciation of the TL against the dollar.

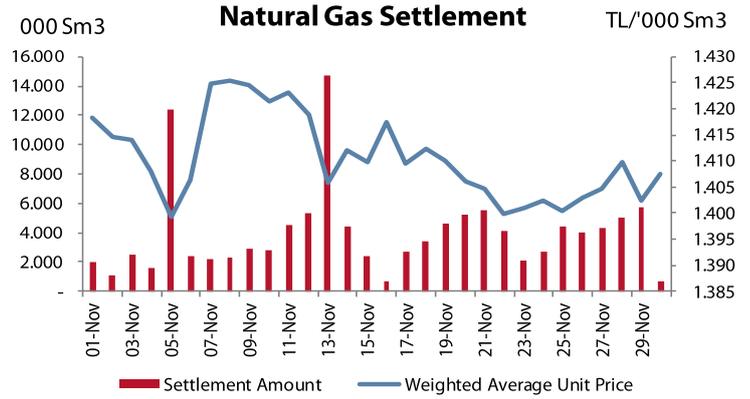
Brent crude oil prices exceeded USD 70 per barrel in April and May 2019, while in October 2019, the price of Brent oil declined to an average of USD 59.71 per barrel. The price of a barrel of Brent crude oil averaged USD 64.50 in the first ten months of 2019, while in October the price of Brent oil decreased by 5% compared to the previous month, to an average of USD 59.71 per barrel. The average price of Henry Hub natural gas was USD 2.33 / mBTU in October, while averaging USD 2.59 / mBTU in the first ten months of 2019.



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

## Natural Gas Settlements

According to natural gas coupling data published by the Organized Wholesale Natural Gas Market operated by EXIST, the daily average natural gas settlement was 118.57 million Sm<sup>3</sup> in November. On Wednesday, November 13, settlements for a total of 14.73 million Sm<sup>3</sup> of natural gas settlement were recorded, while on Saturday, November 16 settlements totaled 629,000 Sm<sup>3</sup>. In November, the weighted average settlement unit price was calculated as TL 1,409 per 1,000 Sm<sup>3</sup>.



Source: EXIST Natural Gas Platform, TSKB Economic Research

## Sector News

### Local News

- Industrial Development Bank of Turkey (TSKB) releases "Sector Overview: Energy" report.** The report, published in both Turkish and English, within TSKB Consultancy Services, reviews the sector's current situation and forecasts concerning the energy sector. (November 29, 2019)
- Energy Market Regulatory Authority (EMRA) publishes final Renewable Energy Sources (RES) list for 2020.** According to the list, 817 power plants with a total installed power of 21,860 megawatts (MW) will benefit from the mechanism, which was introduced in 2010 and was implemented in 2011. A total of 54 plants with a combined installed power of 1,538 MW will benefit from the uniform mechanism for the last time this year. (November 29, 2019)
- Technical support to be given to electricity generation investments from renewable sources.** Within the scope of "Renewable Energy and Energy Efficiency Technical Support Project for Municipalities and Universities" (YEVEDS), conducted by the Ministry of Energy and Natural Resources (ETKB) and financed by the European Union, technical support for renewable energy and energy efficiency investments will be provided. Municipalities, universities, institutes, research centers and technical high schools will be able to apply for the project. (November 29, 2019)
- Target set out to store at least 20% of Turkey's annual natural gas consumption by 2023.** Speaking at the opening of the Natural Gas Distribution Sector Meeting, Fatih Dönmez, the Minister of Energy and Natural Resources (MENR), stated that the expansion phases of the Silivri and Sultanhanı Lake Tuz Underground Natural Gas Storage Facilities were continuing. Dönmez stated, "our facilities will reach full capacity. Our goal is to build an infrastructure that can store at least 20% of our annual natural gas consumption by 2023". In the last 3 years, two storage and re-gasification terminals (FSRU) entered service and Turkey's liquefied natural gas (LNG) storage capacity has increased approximately 3.5-fold in the last 12 years to reach 118 million cubic meters. Dönmez noted, "Work continues on the construction of the Petroleum Pipeline Corporation Inc.'s (BOTAŞ) FSRU facility in Saros. Hopefully, with the completion of the facility and the capacity expansion of our other facilities, we will push this figure even higher." (November 28, 2019)
- Results of the Turkish Residential Energy Efficiency Financing Facility (TuREEFF) developed by the EBRD and supported by the Clean Technology Fund and EU announced.** According to the results, USD 350 million in funding was transferred to Garanti BBVA, Şekerbank, Türkiye İş Bankası and Yapı Kredi Bank over 5 years to be used by

individuals, construction companies and energy saving equipment dealers in Turkey. These funds were used by 2,800 people to purchase eco-friendly housing or to equip existing housing with energy-efficient technologies. Since 2015, TuREEFF investments have helped to save 29.3 GWh of energy per year, while preventing the release of 7,390 tonnes of carbon emissions. (November 27, 2019)

- **Turkish Statistical Institute announces its Thermal Power Plant Water, Wastewater and waste statistics for the year 2018.** Accordingly, in 2018, a total of 7.9 billion cubic meters of water was drawn by thermal power plants, 98.2% of which was from the sea and 1.8% from dams, rivers, wells and other sources. The water was used as coolant. (November 27, 2019)
- **MNG Holding building solar plant in Ukraine.** MNG holding's solar plant in Ukraine will cost TL 29 million. The 5-megawatt power plant, for which construction which will start in 2020, will employ 20 people initially. The project is expected to reach a capacity of 50 megawatts with a EUR 50 million budget in the coming years. (November 27, 2019)
- **Futures Electricity Market (VEP) to be commissioned on December 1, 2020.** The Energy Market Regulatory Authority (EMRA) Electricity Market Department Head Dr. Refik Tiryaki stated, "our efforts to create a long-term market, starting with the experience of the futures and options market (VIOP), will reach fruition with the decision of our board next week. VEP regulation will be finalized, followed by the completion of the software on December 1, 2020. I would like to reiterate that we care very much about the implementation of the VEP, which will operate on the basis of physical delivery. (November 2, 2019)
- **Polat Energy acquires all of Doruk and Poyraz Energy, and 50% stake in Doğal Energy.** It was announced that an application had been submitted to the Competition Board for the purchase of shares. (November 26, 2019)
- **MENR submits its budget for 2020 to the Turkish Parliamentary Plan and Budget Commission.** The Minister for Energy and Natural Resources, Fatih Dönmez, underlined that the mining sector targeted USD 10 billion in exports by 2023, adding that electricity consumption had increased by an average of 5.3% per year in the last 15 years. Dönmez stated that the Trans Adriatic Gas Pipeline Project, which forms the European leg of the Southern Gas Corridor, would be brought into commercial operation in 2020 and then start to supply 10 billion cubic meters of Azeri gas annually to Europe. Dönmez added that the government aimed to commission the first unit of the Akkuyu Nuclear Power Plant in 2023, while feasibility studies carried out by the Japanese party regarding the Sinop Nuclear Power Plant had been completed and that the feasibility report submitted was not approved by MENR on grounds of both the timetable and the cost. (November 25, 2019)
- **Number of buildings with an "Energy Identity Certificate" announced.** According to information obtained from the authorities of the Ministry of Environment and Urban Planning, the number of buildings holding an Energy Identity Certificate has reached 920,000, with 150,000 of these buildings being old and 770,000 having been constructed after 2011. (November 25, 2019)
- **EMRA sets out exceptions for 2020 for certain date regulations regarding capacity applications in the Natural Gas Market.** EMRA postponed the natural gas capacity reservation application date for December 2020 to 17 December. The date range for capacity reservation applications has been set at 15 November to 30 November, as stated in the Petroleum Pipeline Corporation Inc.'s (BOTAŞ) Network Operation Regulations. Where applications are approved, the applicant must sign the standard carriage contract (STS) within 7 days of the date that the applicant was invited to sign the STS. This period has also been limited to 4 days, specific to 2020 only. Another exception decision was taken

regarding the date of publication of information on capacities and idle capacities. The Network's Operating Regulations state that carriers must issue reserved capacities and idle capacities for the new gas year following the signing of the STS no later than December 15. This date has also been postponed to December 26 for 2020. (November 25, 2019)

- **Mehmet Acarla, CEO of Borusan EnBW Energy, cautions that although improvements in turbine technology will drive down costs, a price purchase guarantee of 5.2 USD cents per kilowatthour is necessary for new wind power plant investments.** In his statement to the Energy Journal (Enerji Günlüğü), Acarla noted that there was still a serious portfolio of renewable energy projects in Turkey that had not been brought into operation, adding that "A little predictability is needed for the project portfolio to come into play. The most important element here, too, is the post-2020 incentive mechanisms. What form will the new model take, how will it proceed... that needs to be clarified. According to new model, I think we can gain momentum in renewable energy again." (November 21, 2019)
- **EMRA President Mustafa Yilmaz warns that that everything in the energy sector is undergoing a major change and transformation, and market actors should transform themselves.** President Yilmaz spoke at the "The DEK-BP Energy Outlook" event, which is held by the World Energy Council the Turkish National Committee and BP Turkey. Yilmaz said that all the processes in the energy sector, from production to consumption, had undergone a very important change and transformation process, and that market actors should adapt to this transformation process. In his speech covering world energy statistics, Mustafa Yilmaz noted that the sustainability pressure on decision makers and practitioners had grown in parallel with increasing energy demand, and that the biggest problem in the current energy age was to respond to these needs at the same time. (November 20, 2019)
- **Project to generate electricity from solar energy at a Licensed Storage Facility, located in Giresun on the route of the Trans Anatolia Natural Gas Pipeline Project (TANAP), brought into service.** The project, which was realized with the Giresun Commodity Exchange (GTB) at a total cost of TL 3.95 million, was supported by TANAP with an amount TL 3.75 million. The roof-mounted solar power plant with an installed capacity of 600 kilowatts, to be completed in 14 months, is expected to meet 45% of the energy requirement of the licensed storage facility. (November 20, 2019)
- **Turkey's solar energy sector projected to generate USD 1.36 billion by 2028, with wind energy to generate USD 33.3 billion worth of industrial production.** The conference, entitled "The Social and Economic Benefits of Renewable Energy", hosted by the Sabanci University Istanbul Policy Center (IPC), was held. The first results of the study into the effects of renewable energy on employment, industrial development, air quality and energy supply security in Turkey were shared within the scope of the conference. According to the report prepared within the scope of the "Expanding the Benefits of Climate Change Mitigation through Capacity Building in Public Institutions (COBENEFITS) project, the increase of 15-25 GW in installed solar energy capacity over the next 10 years is expected to increase production by USD 6.8-11.3 billion. The expected value increase in wind energy for the additional installed power of 13.3-23.3 gigawatts is estimated to be US\$ 47.6- US\$ 83.5 billion in the stated period. (November 19, 2019)
- **MENR General Directorate of Mining and Petroleum Affairs to re-tender 320 mining sites where no applications were received in tenders.** According to the tender announcement published in the Official Gazette, the fields to be auctioned, the province, access number, license group, tender specifications, banners, coordinated dumps, areas and tender dates will be published on the site of the General Directorate and will be accessible for at least 15 days. The amount of collateral in the tenders to be carried out through both the closed bidding and auction method shall not be less than 20% of the bid price and the base tender price. (November 19, 2019)

- **"Renewable Energy Finance Summit" held in Istanbul.** Speaking at the summit organized by the Solar Energy Investors Association (GÜYAD), the Deputy Minister of Energy and Natural Resources, Abdullah Tançan, said that the government planned to announce the Renewable Energy Resource Areas (YEKA) competitions in December. EMRA President Mustafa Yılmaz stated, "We have changed Turkey's energy investment culture, and in parallel with this, we need to change the financing culture. We need to build new models. While we support YEKDEM, it should not be the only model. Studies should be carried out into new financing models." (November 18, 2019)
- **First phase of work is completed on TurkStream, which will carry Russian natural gas to Turkey and Europe through Turkey.** The Minister of Energy and Natural Resources, Fatih Dönmez, stated that the work on both TurkStream -1 and TurkStream-2 would be completed by the end of this year. Fatih Dönmez also stated that the TurkStream project was also important for Europe's energy security, adding, "We will contribute to the energy supply security of Central Europe in this sense, especially in the Balkans." (November 18, 2019)
- **Aksa Generator establishes a joint venture with the Japan-based Mitsubishi based in the Asia Pacific to produce high-tech generators.** The newly established company will produce generators using Mitsubishi engines and will generate an additional USD 100 million annually. (November 15, 2019)
- **1 megawatt (MW) solar power plant to be installed at the location of the Malatya Wastewater Treatment Plant, meeting one-fifth of the plant's electricity needs.** Backed by an EU grant to build the Solar Power Plant (SPP), The General Directorate of Malatya Water and Sewerage Administration (MASKI), is projected to start generating electricity next year, reducing electricity expenses by around TL 40 million per year. (November 15, 2019)
- **Number of eligible electricity consumers stands at 278,000 in October.** Subscribers with annual electricity consumption of 1,600 kilowatt-hours or more are defined as eligible consumers in the system. The number of eligible consumers, which had stood at around 130,000 in February, reached 278,000 in October as a result of the agreement with retail electricity supply companies of eligible consumers seeking to purchase electricity at more affordable rates due to the increase in electricity tariffs. (November 14, 2019)
- **Almost all of the increase in electricity production to come from solar energy and wind by 2040.** According to the World Energy Outlook Report 2019 (WEO 2019) published by the International Energy Agency (IEA), demand for electricity will increase by more than any other energy source over the next two decades. Wind and solar power will play a leading role in meeting electricity demand, which will more than double. Offshore wind power plants, which are expected to attract USD 1 trillion of investment by 2040, will have the largest share in this increase as the technology develops, prices fall and experience grows. Although the wind and solar energy sectors are undergoing rapid development, the largest share in renewable energy will be hydroelectric power plants (15%), with nuclear power plants having an 8% share. (November 14, 2019)
- **Horizon 2020 program open to applications in the environmental field.** According to the statement published by the TÜBİTAK International Cooperation Department, applications for the Horizon 2020 program for the environment, resource efficiency and raw materials and to tackle climate change were opened on 12 November 2019. Within this scope, carbonization, climate change adaptation, impact and services, climate change, biodiversity and ecosystem services, climate change information deficits, the cyclical economy, and research and innovation projects on priority issues such as raw materials, innovative cities will be supported. The total budget of the project is stated as EUR 376

million. (November 14, 2019)

- **Unlicensed production facilities that cannot enter operation within given timeframe may request extension of the connection agreement.** EMRA stated that it may be possible to request an extension to the connection period for unlicensed production facilities that cannot enter into operation within the period given by Law No. 7186. The applications to be made in this context must be carried out to the network operator with the information-documents supporting the reasons in the petition along with the explaining the reasons for the production facility not to enter the business within the period given by the Law No. 7186 and/or the connection agreement period. (November 13, 2019)
- **European Union (EU) to provide TL 1 million grant to Zorlu Energy's geothermal project.** The SUCCEED project aims to reduce carbon emissions from geothermal power plants and reduce them to zero in the long term and to apply back-pressure technology to a new reservoir. According to the statement issued by the company, the project is aimed at reducing carbon emissions to zero in conjunction with work carried out with the UK, Iceland, the Netherlands and Italy. METU will be the local stakeholder in this project. (November 13, 2019)
- **Akenerji announces signing of contract with Yapı Kredi to restructure USD 854 million loan.** In a statement, a contract was signed to restructure the loan in TL and dollar terms with a term of 5 years and 13 years, including a one-and-a-half-year principal grace period. (November 12, 2019)
- **Funding of USD 200 million approved within scope of World Bank's "Energy Efficiency in Public Buildings in Turkey" project.** According to the resolution approved by the board of directors on November 5, 2019, USD 150 million will be provided by the International Bank for Reconstruction and Development and USD 50 million by the Clean Energy Fund, according to a statement on the World Bank's website. (November 11, 2019)
- **Deputy Minister of Ministry of Energy and Natural Resources, Abdullah Tancan, speaks at 12<sup>th</sup> International Energy Congress and Fair.** Pointing out that Turkey's energy demand had grown at the same rate in parallel with its economic growth and population growth, Tancan said, "According to the Ministry's projections, demand for energy demand will continue to grow. Looking at economic developments, considering other developments that will affect demand, we have prepared a 20-year demand projection." Tancan also stated that technologies that support supply security, such as energy storage, would offer new opportunities for Turkey, which seeks to deploy its domestic and renewable capacity to the maximum. (November 8, 2019)
- **Minister for Energy and Natural Resources, Fatih Dönmez, issues remarks after speech at the opening of the 12<sup>th</sup> International Energy Congress and Fair.** Fatih Dönmez said that Turkey was continuing its drilling operation in the Mediterranean. Dönmez added that the Yavuz drilling vessel had started drilling in the Güzelyurt area a few weeks ago, while the Fatih drilling vessel had also finished drilling in Finike and had returned to the Taşucu Port in Mersin for supplies. After a few weeks of replenishment and renovation work, it will start drilling again at the location we have taken from the Turkish Republic of Northern Cyprus (TRNC) as soon as possible." (November 7, 2019)
- **YEKA wind turbine factory, which is being established in Izmir, to be ready for production at the end of this month.** The Siemens-Gamesa consortium, which won the wind YEKA tender, is close to completing work on the EUR 70 million wind turbine plant in Aliğa, Izmir. The Senior Manager (CEO) of Siemens-Gamesa, Ebru Çiçekliyurt, announced that consortium had completed the construction of the first turbine factory of the YEKA project in the İzmir Aliğa Organized Industrial Zone and would start production at the end of November. (November 7, 2019)
- **Record broken in electricity generated from hydroelectric power plants (HEPP).** The Minister for Agriculture and

Forestry, Bekir Pakdemirli, stated that the amount of electricity generated in the HEPPs commissioned by the General Directorate of State Hydraulic Works (DSI) and the private sector had reached 79.3 billion kilowatthours in the first 10 months of this year, already exceeding the 67.2 billion kilowatthours generated in the full year of 2016, the previous record for annual output. Pakdemirli added that with the investments carried out in the first 10 months of this year, the 79.3 billion kilowatthours of electricity generated had contributed TL 19.8 billion to the country's economy. (November 7, 2019)

- **Minister of Energy and Natural Resources, Fatih Dönmez, states that government has achieved its short term target of obtaining two thirds of electricity production from domestic and renewable resources, as announced in the National Energy and Mining Policy.** Fatih Dönmez stated that the share of electricity generated from domestic and renewable energy had increased to 64% in the first 10 months of this year, adding that 46% of this amount came from renewable energy. He also said there was a move from the build-operate-transfer model in the wind energy sector to a fully integrated model where even wind energy technology would be produced with domestic resources. (November 6, 2019)
- **EMRA President Mustafa Yılmaz speaks at the 8<sup>th</sup> Turkish Wind Energy Congress (TÜREK 2019).** Yılmaz said in his speech that EMRA will receive applications for wind power plants totaling 2,000 megawatts in capacity in April 2020, and that EMRA would continue to provide ease of installation for wind power plants in Turkey to all stakeholders in the energy sector. (November 6, 2019)
- **Turkey Petroleum Corporation (TPAO) moves to expand in remainder of the field in Adiyaman oil license limits.** The Anatolian Agency reported the decision taken by the General Directorate of Mining and Petroleum Affairs at the Ministry of Energy and Natural Resources was published in the Official Journal today. Accordingly, the decision was taken to add 969 hectares of land to the area in question. (November 4, 2019)
- **Army Assistance Agency (OYAK) announces the start of negotiations with Demirören Holding for fuel oil and autogas distribution companies.** According to the statement, OYAK is sitting at the table for purchase of Demirören Holding's companies, which are TOTAL Oil Turkey and Moil, which are operating with approximately 900 stations, and initiated the comprehensive review process (due diligence). (November 4, 2019)
- **Gama Holding sells its investment in Ireland, one of its operations abroad.** Gama has transferred its 40% stake in Tynagh Energy, based in the Galway region, to the Prague-based EGH Group. In addition to the share of Czech company Gama, it also acquired a 40% stake in the US based GE Energy Financial, a 40% partner in Tynagh Energy. The remaining 20% stake remained with Mountside Partners, owned by the Irish businessman, Bran Keogh. (November 4, 2019)
- **Nine of the bidders who applied in the tender process for the North Marmara Natural Gas Storage Extension (Phase III) project receive preliminary qualification.** In a statement issued by the Pipeline Petroleum Transportation Inc. (BOTAS), it was stated that the Northern Marmara Natural Gas Storage Extension (PHASE III) project submitted on 16 June 2017 for the evaluation of the prequalification applications had been concluded. The bidders include the Çalık Energy-Saipem Partnership, the Tekfen-Sapura Partnership, Rönesans Holding, the Gama-ACS Partnership and the Kolin-Kalyon-Chengda-Honghua Partnership. (November 4, 2019)
- **Ministry of industry and Technology announces projects which qualify for investment incentive certificates in September.** According to the list published in the Official Gazette, 48 energy investment incentive certificates were issued in September out of a total of 522 projects, 121 energy project certificates were issued and one project incentive

certificate was cancelled. In the mining sector, 7 projects received incentive certificates. In the energy sector, Boylam Energy was the project with the highest amount of investment among the projects receiving an incentive certificate (TL 853 million), for a 138 MW (megawatt) wind power plant to be built in Çanakkale. (November 1, 2019)

- **Decision against calling for demand for natural gas in 2020 published in the Official Gazette.** EMRA has decided against issuing annual calls for demand for the 2020 gas year regarding the calls to be made within the scope of the Principles and Procedures for Determining the Amount of Imports and Application Method of Spot Pipe Gas. The decision is based on the uncertainties regarding the transmission network, the Malkoçlar Entry Point and the Kiyıköy Entry Point, and that TANAP Seyitgazi Entry Point's Maximum Detachable Capacity value will be changed within the gas year. (November 1, 2019)
- **Sixth Sustainable Finance Forum held at Borsa Istanbul under the main theme of "Mobilizing Growth with Social and Environmental Goals: New Generation Financing Tools".** The Chairman of the Business Council for Sustainable Development Turkey (BCSD Turkey), Ebru Dildar Edin, stated that the volume of sustainable loans had reached USD 94 billion in the space of 2 years, noting that BCSD Turkey therefore had an enormous opportunity to raise the funds needed for sustainable development in Turkey. (November 1, 2019)
- **Turkey Electricity Transmission Co. (TEİAŞ) publishes "list of Plants that will Benefit from the Capacity Mechanism in 2020".** According to the list, a total of 42 plants will receive support in 2020 under the capacity mechanism. Of these, 20 will be coal, 14 will be natural gas and 8 will be hydroelectric power plants. (November 1, 2019)
- **Minister for Energy and Natural Resources, Fatih Dönmez, states that local production condition will go on tender specifications in order to support energy technology and equipment.** Emphasizing the importance of innovative thinking and a qualified workforce, Fatih Dönmez said that the world was moving towards an order in which the smarter will survive, not the more productive. He underlined that the government had added certain amounts of domestic production material to the tender specifications in order to support domestic production in energy technology and equipment, adding, "we want to support production, to open up new R&D and production areas for our SMEs and to encourage cooperation between industry and academia by seeking the condition of domestic production in energy technologies. (November 1, 2019)
- **Mehmet Ali Akben, Chairman of the Banking Regulation and Supervision Agency, stated that TL 189.4 billion of cash loans had been extended by the banking sector to the energy sector as of September 2019.** Akben added that 40% of this amount had been used to finance renewable energy projects. (November 1, 2019)

## News From Abroad

- **European Parliament (EP) declares a 'climate emergency'.** The majority of MEPs in the European Parliament voted in Strasbourg to declare an "environmental and climate emergency" across the European Union due to the effects of climate change. In this context, the European Union (EU) Commission and member states vowed to be more active in preventing climate change. Under the bill, the EP sets out a target of reducing carbon dioxide emissions by 55% instead of 40% by 2030, when compared to the 1990 level. The EU also plans to reach its "Climate Neutral" target by 2050 at the latest. (November 29, 2019)
- **Russia could raise oil production quotas.** At a meeting between the Organization of Petroleum Exporting Countries (OPEC) and some oil-producing countries in Vienna on December 5-6, the Russian Energy Minister Aleksandr Novak said

quotas in the production cut-off agreement could be raised. (November 28, 2019)

- **Trina Solar develops new solar cell with 23.22% efficiency.** China's Trina Solar Limited, a provider of smart solar solutions, announced that the technology research group at the State Key PV Science and Technology Laboratory in China had developed a high-efficiency solar cell. The semi-monocrystalline N-type dual-sided I-TOPCon solar cell set a new world record in total area efficiency with energy efficiency of 23.22%, according to the statement. (November 28, 2019)
- **South Korean LG Chem investing USD 2.3 billion in preliminary work to build a battery factory in Indonesia.** Indonesia's Minister of Industry, Agus Gumiwang Kartasasmita, said that the investment could be established in Surabaya, the country's second largest city. LG Chem will also conduct research into electric vehicles, especially electric motorcycles, in Kartasasmita in Indonesia. The plant will produce battery cells and battery modules as well as recycling waste batteries. (November 26, 2019)
- **Decline in clean energy investments in developing countries.** According to Bloomberg New Energy Finance (BNEF) survey covering in 104 emerging markets, investments in wind, solar and other energy projects last year fell from USD 169 billion to USD 133 billion last year. China's clean energy investment amount last year decreased from 122 billion dollars compared to the previous year to 86 billion dollars. The study noted a move towards renewable energy in developing countries, while adding that the pace of this activity was not enough to limit carbon dioxide emissions or the effects of climate change. (November 26, 2019)
- **Initial public offering (IPO) of Saudi Arabian state-owned oil company Aramco attracts USD 19.47 billion (73 billion Saudi Arabian Riyal) in first 5 days.** Samba Financial Group, one of 3 institutions that Aramco has prioritized in brokering its IPO, stated that 1.8 million retail investors had so far requested Riyal 14 billion for Aramco's shares. Corporate demand reached Riyal 58.4 billion. The demand-selection process for the Aramco IPO will continue until November 28 for individual investors and December 4 for institutional investors. (November 25, 2019)
- **BMW to use Samsung batteries in its electric vehicles.** BMW has signed a EUR 2.9 billion deal with South Korean Samsung SDI to supply battery cells to its electric vehicles. BMW also increased order volume to CATL, China's largest battery maker. The order to CATL was increased from EUR 4 billion to EUR 7.3 billion. (November 22, 2019)
- **Climate Change Resilience Index, calculating resilience of the world's 82 largest economies to climate change, prepared by The Economist Intelligence Unit (EIU).** Based on current trends, it is predicted that rising temperatures will reduce global GDP by 3% by 2050. Accordingly, global GDP, which would be projected to reach USD 258 trillion by 2050 without the impact of climate change, will remain at USD 250 trillion with increasing temperatures. According to the analysis, which states that each country will be directly damaged due to climate change, it is revealed that developing countries in general are at greater risk than developed countries. (November 21, 2019)
- **Natural gas reserves of 286 billion cubic meters determined within the scope of exploration studies carried out by Norwegian Equinor and Canadian Valeura companies in Muratlı district of Tekirdağ.** It was stated that the reserve in question would meet Turkey's natural gas needs for a period of 5 years. (November 21, 2019)
- **Iran steps up natural gas production at its Southern Pars Gas Field.** Iran's largest natural gas field began operating with two natural gas platforms in South Pars increasing their production capacity to 56 million cubic meters per day. (November 14, 2019)

- **European Union (EU) urges European Investment Bank (EIB) to stop funding fossil fuel projects.** Following a meeting in Brussels, EU finance ministers expressed their view that the EIB should stop funding fossil fuel projects such as oil, natural gas and coal. (November 13, 2019)
- **International Energy Agency (IEA) publishes World Energy Outlook 2019 report.** The report states that the growth in global oil demand is expected to slow down by 2025 with the improvement of fuel efficiency and intensification of electricity use, but that demand is unlikely to peak in the next 20 years. Estimating that global oil demand will increase by 1 million barrels per day by 2025, the IEA predicted that demand growth will decrease to 100,000 barrels per day in the 2030s. He predicted that the demand, which was 97 million barrels / day in 2018, would be 106 million barrels / day in 2040. Estimating that the oil price would be around USD 90 / barrel in 2030, the IEA expects the price of oil to be USD 103 / barrel in 2040. (November 13, 2019)
- **Saudi Arabian national oil company Saudi Aramco's share pricing to be set on November 17-28 for individual investors and November 17-December 4 for corporate investors.** According to Saudi Aramco's guidance, 0.5% of Aramco's shares will be offered to individual investors in its initial public offering (IPO), scheduled for December 11. The Saudi government will not be able to sell its Aramco shares for 12 months after the IPO and will not be able to supply new Aramco shares to the market for 6 months. It is also stated that Aramco shares will be sold in Tadawul only in Saudi Arabian Riyal terms. The final IPO price will be announced on December 5. (November 12, 2019)
- **Concentration of carbon dioxide in the atmosphere reaches 408.53 parts per million (ppm) in October.** Carbon Dioxide concentrations rose 58.53 ppm above 350 ppm, the reliable limit, with a rise of 2.53 ppm over the same period last year. The increase in the value above 350 ppm means that the reliable limit for climate change has been exceeded. (November 11, 2019)
- **New oil reserves discovered in Iran.** According to Iranian state television news, Iranian President Hassan Rouhani has announced the discovery of new oil reserves, which will increase the country's existing oil reserves by about a third. The Iran Oil Company's oil exploration unit, located in an area of 2,400 square kilometers in an oil basin at a depth of 80 meters, discovered 53 billion barrels of new oil reserves. (November 11, 2019)
- **United States initiates withdrawal process by applying for official departure from the Paris Climate Agreement.** US Secretary of State Mike Pompeo announced that the US had formally applied to withdraw from the Paris Climate Agreement. Pompeo stated that, " President Donald Trump has decided to withdraw from the Paris Climate Agreement because of the burden it has placed on the American people, taxpayers and their jobs" (November 7, 2019)
- **Organization of Petroleum Exporting Countries (OPEC) publishes its World Oil Outlook Report.** According to the report, global energy demand in the world will increase by 1% on average annually to reach 357.5 million barrels of oil per day by 2040, with the share of fossil fuels in global energy exceeding 75%. Petroleum will have the largest share, accounting for 28.2% of fossil fuels, followed by natural gas (25.2%) and coal (21.5%). The share of renewable energy resources in energy demand is projected to be 19% by 2040 with nuclear energy having a 6.1% share. The highest increase in global oil demand on a sectoral basis will be in road transport. OPEC projects that that use of petroleum products on the roads will be 47.3 million barrels per day in 2040. This will be followed by sectors such as aviation, industry and petrochemicals. (November 6, 2019)
- **International Energy Agency (IEA) releases its energy efficiency 2019 report.** According to the report, the global pace of energy efficiency is slowing down, which has tremendous potential to boost economic growth and prevent

greenhouse gas emissions. The progress achieved in energy intensity, an important indicator of the energy use of global economies, slipped to just 1.2% in 2018, its lowest since the 2000s. In this context, the IEA stressed that the improvement in global energy intensity needed to gain pace and reach at least 3% per year in order to achieve climate change targets. Thanks to developments in energy efficiency since the 2000s, Turkey has also been involved in the 30 IEA member countries, with savings in energy consumption exceeding USD 600 billion as of last year. (November 5, 2019)

- **Saudi Arabian Capital Markets Board approves public offering of Saudi Aramco.** In a written statement issued by the Authority, the request for a public offering was accepted. The report, which includes comprehensive information about the company's financial statements, activities and management for those seeking to invest in the Company, will also be published before the start of the IPO. The shares are expected to be traded in December. (November 4, 2019)
- **Only three countries on course to meet the EU 2030 emissions target.** The European Environment Agency stated that it appeared only Portugal, Sweden and Greece could meet the EU's 2030 greenhouse gas emissions target. The European Environment Agency says the EU is close to its goal of bringing greenhouse gas emissions to 40% below the 1990s level by 2030, but serious work was still needed to achieve the target. (November 4, 2019)
- **OPEC oil production sinks to its lowest in the last 10 years.** OPEC crude oil production fell to 28.49 million barrels per day on average last month, the lowest level in the last 10 years. Last month, Saudi Arabia, the largest producer of OPEC and the world's largest exporter of crude oil, also saw a sharp drop in production. The country's crude oil production fell to 8.6 million barrels per day last month, its lowest since May 2007. The drop on September 14 was due to the attack on two plants owned by Saudi Arabia's national oil company, Saudi Aramco, as well as the decline in production from other member states. (November 1, 2019)



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