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Monthly Energy Bulletin

TSKB Economic Research

April 2020 #23

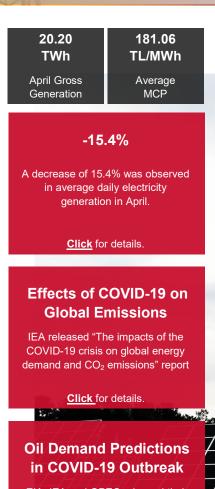
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Measures taken by EMRA during the COVID-19 pandemic

The Energy Market Regulatory Authority (EMRA) decided to extend the time period for unlicensed power plant connection agreements. According to the decision published in the Official Gazette, among the generation facilities set to be established within the scope of the Unlicensed Electricity Production Regulation in the Electricity Market, the agreements for real and legal persons whose connection agreement expires on or after 10 March 2020 has been extended for a period of 3 months, without any action required, to be valid from the expiration date and one only once.

EMRA also granted a 3-month extension to licensed projects that meet certain requirements. In this context, a three-month extension was granted for the deadline for completing the necessary information and documents within the scope of pre-license or license applications, the deadline for obligations determined within the scope of merger or division, the deadline regarding the obligations determined within the scope of pre-license and production license amendment procedures, the duration of the pre-construction period and the period of construction under the scope of the production license within the scope of the pre-license and the temporary delay period under the Temporary Article 15 of the Electricity Market License Regulation.

EMRA's Electricity Market Department reported that unlicensed production applications would continue to be received despite the COVID-19 outbreak, but that the commission meetings which carry out technical and document reviews would not be held until further notice. Following notification by EMRA, the commission meetings, where the projects are evaluated on a monthly basis in terms of paperwork and techniques, would be evaluated in order starting from the first month, and the applications will be finalized.

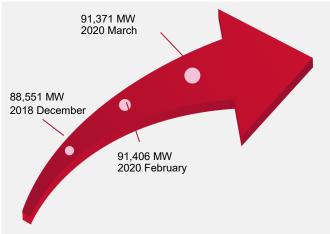


EIA, IEA and OPEC released their monthly reports that incudes oil demand forecasts

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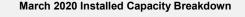
Installed Capacity Analysis

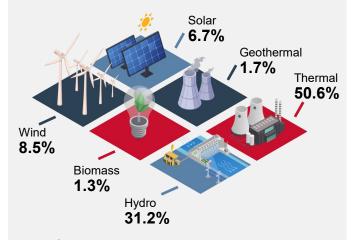
Turkey's total installed capacity, which had reached 91,267 megawatts (MW) at the end of 2019, edged up to 91,371 MW by the end of March 2020. During this period, wind farms with a total installed capacity of 115 MW were commissioned. The total installed capacity of licensed and unlicensed solar power plants and hydroelectric power plants increased by 46 MW and 34 MW, respectively. The total installed capacity of geothermal and coal power plants operating with domestic and imported coal. The total installed capacity of natural gas power plants decreased by 232 MW.



Source: TEİAŞ, TSKB Economic Research

Of all the power plants in operation during March, 49.4% were generating electricity from renewable sources, with hydroelectric power plants accounting for 31.2% of the total installed renewables capacity. Thus, the proportion of renewable sources remained above 49%. The combined share of wind farms and solar power plants increased to 15.2% by the end of March 2020.



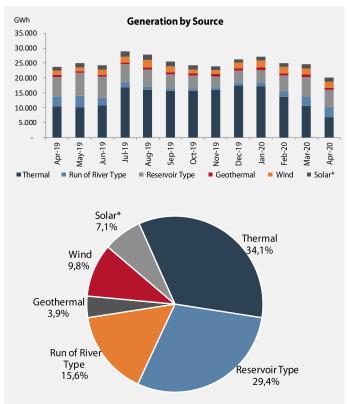


Source: TEİAŞ, TSKB Economic Research



Electricity Generation Analysis

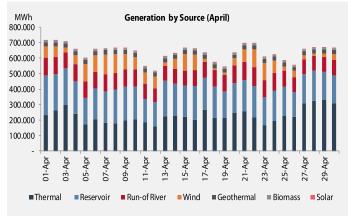
Approximately 24.7 terawatthours (TWh) of electricity was generated in March 2020, while total electricity generation in April 2020 decreased to 20.2 TWh, marking a fall of 15.4% in average daily electricity generation when compared to the previous month. Moreover, in April 2020, electricity generation decreased by 15.1% when compared to the same month of the previous year.



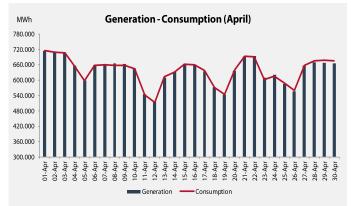
^{*}Since April unlicensed solar power plant generation data has not yet been released by TEİAŞ, the total energy generation by unlicensed solar power plants in April was accepted as same as the total generation of March 2020. Source: TEİAŞ, YTBS Daily Reports, TSKB Economic Research

Thermal power plants, which had supplied 43.3% of all of the electricity generated in March, accounted for 34.1% of the total electricity generated in April 2020, with the decrease in total electricity demand and the increase in the share of renewable energy resources in total electricity generation likely to have been the main reason for the 9.1-point decrease.

After accounting for 38.9% of electricity generated in March, hydroelectric power plants provided 45.1% of the total electricity generated in April 2020. Another noteworthy development was that renewable power plants, which had an average share of 44.5% in electricity generation throughout 2019, accounted for 65.9% of all electricity generated in April 2020, an increase of 9.5-percentage points over the 56.4% share in the same period of 2019.



Source: TEİAŞ, YTBS Daily Reports, TSKB Economic Research



Source: TEİAŞ, YTBS Daily Reports, TSKB Economic Research

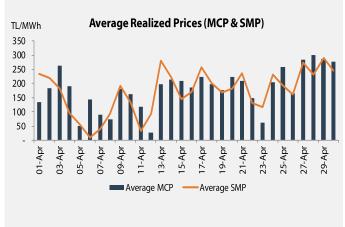
The average daily generation of licensed plants in April 2020 stood at 637,668 megawatthours (MWh). The highest level of electricity generation from licensed power plants was realized on Wednesday, April 1st, at 714,795 MWh, with the lowest being on Sunday, April 12th, at 512,842 MWh.

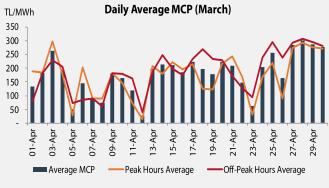
Daily consumption averaged 637,686 MWh in April 2020, peaking at 715,345 MWh on Wednesday, April 1st, while the lowest level of electricity consumption, of 512,842 MWh, recorded on Sunday, April 12th.

Electricity Price Analysis

The average market-clearing prices (MCP) and system marginal price (SMP) fluctuated between TL 8 /MWh and TL 300 /MWh in April 2020. In the same period, the average MCP stood at TL 181.16 /MWh, while the SMP averaged TL 170.33 /MWh. The lowest average MCP, of TL 26.54 /MWh was recorded on Sunday, April 12^{th} , and the lowest average SMP, of TL 8.57 /MWh was recorded on Monday, April 6^{th} .

The average MCP for April 2020 declined by 26.1% when compared to the March average. The decrease in electricity demand and increase in the share of renewable power plants in total electricity generation are thought to have been the main reasons for this decline.



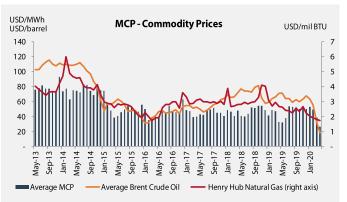


Source: EXIST, TSKB Economic Research

The daily average MCP for April stood at TL 172.96 /MWh for peak hours (from 8AM to 8PM), 4.5% lower than the daily average value. This indicates that the intensity of electricity consumption has shifted outside peak hours. The highest peak-hour average recorded was TL 297.14 /MWh on Friday, April 3rd, while the lowest peak-hour average was TL 12.99 /MWh, recorded on Sunday, April 12th.

Average pricing in off-peak hours (from 8PM to 8AM) for the same period stood at TL 189.36 /MWh. The highest off-peak hour average was TL 307.67 /MWh, recorded on Tuesday, April 28^{th} , with the lowest off-peak-hour average of TL 40.08 /MWh was recorded on Sunday, April 12t^h.

The annual average MCP in 2018 was USD 47.39 /MWh while the annual average MCP was USD 45.98 /MWh in 2019. The average MCP in April edged down to USD 26.57 /MWh, while the average MCP in first quarter was USD 47.11 /MWh. The MCP maintained its downward trend in 2020.



Source: EXIST, CBRT, EIA, TSKB Economic Research

The MCP decreased by 31.6% in dollar terms in April when compared to March, mainly as a result of the 26.1% decrease in the TL-denominated electricity price on the back of the depreciation of the lira against the dollar.

Brent crude oil prices averaged USD 18.38 per barrel in April, compared to USD 64.36 per barrel in 2019. Brent crude oil prices decreased by 42.6% in April when compared to the previous month. The average price of Henry Hub natural gas was USD 1.74 /mBTU in April, 2.8% lower than the USD 1.79 /mBTU average for March 2020. There was a significant decline in oil barrel prices in April due to the global spread of the COVID-19 pandemic, a decrease in demand and the filling of oil storage facilities. During the period, the May futures contract price of a barrel of West Texas Intermediate (WTI) oil dipped below zero for the first time in history. The WTI price, which stood at USD 60 per barrel at the end of 2019, continued its downward trend in 2020, falling to an average of USD 16.55 in April.



Impact of COVID-19 Outbreak on Global Emissions

The International Energy Agency (IEA) released its report "The impacts of the COVID-19 crisis on global energy demand and CO_2 emissions" on April 30.

The report mentions the effects of the COVID-19 pandemic on carbon dioxide (CO_2) emissions. The studies in the report indicate that global CO_2 emissions in the first quarter of 2020 were 5% lower

than in the first quarter of 2019. It was stated that the biggest factors in this decrease were the 8% de-

2

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cline in coal emissions, 4.5% decrease in oil emissions and 2.3% decrease in natural gas emissions. On a country basis, it was stated that there was a decrease of 8% in China, 8% in the European Union and 9% in the USA. It is stated that the mild weather prevailing during the period also played a part in this, as well as the COVID-19 pandemic.

It is estimated that the decrease in global CO2 emissions will increase in the following three quarters as well. According to the

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report, global CO_2 emissions are expected to decline to 30.6 gigatons (Gt) in 2020 - about 8% lower than their 2019 level, and the lowest value since 2010. It is underlined that this decrease is more than six times the 0.4 Gt record fall recorded after the 2009 financial crisis.



Source: International Energy Agency (IEA)

Oil Demand Predictions in COVID-19 Outbreak

The impact of the COVID-19 outbreak in China, which has been declared a pandemic by the World Health Organization (WHO), on the oil markets is becoming clearer day by day. There has been demand-side pressure in the oil markets due to the sharp slowdown and even halting of industry, services and trade activities in many countries. The severity and uncertainty of the plunge in demand has been a discussed at length in a number of publications by various institutions such as the International

Energy Agency (IEA), the U.S. Energy Information Administration (EIA) and the Organization of the Petroleum Exporting Countries (OPEC).

EIA, IEA and OPEC publish global oil demand and price forecasts for 2020, as well as evaluations of current developments, in their monthly oil industry reports. Although these institutions have generally had broadly similar expectations over the months, their expectations regarding the severity of the impact differs. For example, in the March reports, the IEA and OPEC expected a decrease in annual demand for 2020, while the EIA revised its expectation downward, but did not anticipate a decrease in oil demand. In the reports published in April, however, as the effects of the COVID-19 outbreak took hold, all institutions were predicting a decrease in oil demand in 2020, although to varying extents.

During this pandemic, the predictability of the sector and oil prices will depend to a significant degree on whether OPEC and non

-OPEC countries agree to supply cuts, and if so, the degree of the cut they agree on. However, although problems on the supply side have been resolved (or appear to be resolved), the negative impact of COVID-19 on demand should not be overlooked. In a bid to resolve this problem, which the industry faces on both the supply and demand side, the measures to be taken to limit the spread of COVID-19, the course of COVID-19 and its impact on economic activity will all have an important bearing on the oil sector, as in all sectors. In addition to the developments in the markets, the publications from these institutions will be followed closely in the coming period, and will shed light on the sector.

Second

oil shock

Emre YANIK - Associate TSKB Economic Research



Financial

crisis

Global Oil Demand Growth Forecast for 2020 (million barrels / day) 1,3 1,2 1,2 2 1,0 0,8 1,0 0.4 0 -1,1 -0,9 -2 -4 -5.2 -6 -6,91 -8 EIA IEA OPEC -10 Apr-20 Jan-20 Feb-20 Mar-20



Local News

- Energy Market Regulatory Authority (EMRA) opens Term Natural Gas Market Operating Procedures and Principles prepared by Energy Exchange Istanbul (EXIST-EPIAŞ) for feedback. The draft regulating the transactions to be made with monthly, quarterly and annual contracts was accepted with EMRA's Board decision dated April 30, 2020 and opened for feedback. The draft was opened for a period of 45 days until June 15, 2020. (April 30, 2020)

- State share payments of oil exploration and production companies postponed for 3 months. The Ministry of Energy and Natural Resources (MENR) announced the measures and support to be taken for the oil exploration and production sector in order to contribute to increasing energy supply security and reducing foreign dependence on energy resources. In addition, it was announced that the duration of fulfilling the obligations arising from the research and operating licenses of the companies had been delayed for 6 months. (April 30, 2020)

- Aytemiz Akaryakıt Dağıtım takes over all shares in Doel Elektrik Enerjisi Toptan Satış A.Ş. According to the announcement made on the Public Disclosure Platform, the transfer took place at a price of TL 20.9 million. (April 30, 2020)

- COVID-19 outbreak predominantly affects electricity and power generation sectors in the area of pricing. The reports examining the sectoral effects of the COVID-19 outbreak prepared by Deloitte state that developments in the oil markets bring risks and opportunities for Turkey. The report also states that there is no security or supply risk in electricity generation and natural gas supply. According to the reports, the outbreak has predominantly affected the oil, electricity and power generation sectors in the area of pricing. (April 29, 2020) - Turkey's liquefied natural gas (LNG) imports up by 13.25% in 2019. According to a report published by the International Gas Union (IGU), LNG imports in Turkey in 2019 reached a total of 9.4 million tonnes. Turkey purchased the most LNG from Algeria (3.45 million tonnes) in 2019, followed by Nigeria and Qatar (1.8 million tonnes each). (April 29, 2020)

- EMRA determines 2020 Electricity Market Index (EPE_{sayac}) as 180.06. In its statement, EMRA stated the following; "With the decision dated 13 July 2017, and numbered 7185, the unit prices to be used in the calculation of the meter investment amount to be undertaken by electricity distribution companies and the update methodology of the said prices have been accepted and the unit decision of the Board Decision No. 7185 with the decision numbered 7791 dated April 12, 2018. It has been revised in the formulation used in updating prices. With the Presidential Approval dated 28 April 2020 and numbered 19078 within the scope of the Board Decision No. 7185, the EPE_{sayaç} shall be set as 180.06 for the year 2020." The index had been set at 161.12 in 2019. (April 29, 2020)

- Turkey Electricity Transmission Company (TEİAŞ) determines 6th period income tariff parameters validity date. According to the Board Decision in the Official Gazette, EMRA has determined the sixth implementation period for January 1, 2021 to December 31, 2023 (inclusive) in which the parameters that will form the basis for TEİAŞ's income / tariff regulations will be valid. (April 27, 2020)

- "Zero Waste Department" and "Climate Change Department" to be established in metropolitan municipalities, and "Climate Change Branch Directorate" and "Zero Waste Branch Directorate" to be established in provincial and **district municipalities.** The Minister for the Environment and Urbanization, Murat Kurum, stated that the decision-making processes of local governments will be accelerated and that all environmental projects would be more efficient under the roof of "Zero Waste". (April 22, 2020)

- Decrease in air pollution in 29 metropolitan cities. It was reported by the Anadolu Agency that Ministry of Environment and Urban air quality measurement stations in 29 municipalities in Turkey found a 32% decrease in particulate matter (PM10) air pollution. The sharpest reduction in air pollution in metropolitan cities was in Kahramanmaraş, followed by Şanlıurfa, Hatay, Van, Erzurum and Eskişehir. Since March 16, air pollution has decreased by 11% in Istanbul, 27% in Ankara, 37% in Bursa, 28% in Antalya and 46% in Adana. (April 22, 2020)

- 2.9% YoY reduction in crude oil volumes carried by pipeline passing through Turkey in March. The Petroleum Pipeline Corporation (BOTAŞ) announced that the amount of crude oil carried by the four pipelines passing through Turkey was 41,969,000 barrels in March 2020, marking a decline of 2.9%. In the same month of 2019, 43,229,000 barrels of oil were transported through these lines. According to data released by BOTAŞ, the Baku-Tbilisi-Ceyhan (BTC) pipeline carried 19,609,000 barrels, the Iraq-Turkey pipeline carried 16,923,000 barrels, with the Ceyhan-Kırıkkale pipeline carrying 3,326,000 barrels and the Batman-Dörtyol pipeline carrying 2,111,000 barrels. (April 22, 2020)

- The Ministry of Industry and Technology publishes list of projects entitled to investment incentive certificate in February 2020, with Communiqué published in the Official Gazette. While 671 projects were entitled to receive investment incentive certificates within the scope of the Communiqué, the total investment amount of the projects receiving investment incentive certificates was TL 12.6 billion. In February 2020, 28 energy investment incentive certificates were issued, while 4 incentive certificates were canceled. In addition, while completing visas for investment incentive certificates of 54 projects in the energy sector, the incentive certificates of four projects were canceled. Eight projects were also found to be entitled to incentive certificates in the mining sector. (April 22, 2020)

- Regulation on Amendment to the Electricity Market Balancing and Settlement Regulation published in the Official Gazette. According to the amendment, the payments to be made to the creditor market participants by the Operator for three months from the effective date of the amendment, regardless of the date and order of the invoice, will be made according to the ratio of all amounts collected from the market participants to the net receivable amounts. The Board will be authorized to extend the duration of this application by up to six months. (April 21, 2020)

- Application submitted to resume production at Kangal Thermal Power Plant. According to the statement, the deficiencies in the power plant had been eliminated and an application was submitted to the Ministry of Environment and Urbanization to start production. The statement added that "The construction of the normal flue gas treatment plant of Kangal Thermal Power Plant will take 24-30 months; while this process continues, although the operating cost of operation is very high, the installation of the Dry Sorbent Injection System, which is a different facility, has been completed in the plant ." (April 20, 2020) - EMRA updates estimated Renewable Energy Resources Support Mechanism (YEKDEM) cost per unit of energy supplied for April 2020. For the month of April 2020, EMRA has doubled the cost estimate to TL 228.12 /MWh. EMRA announced its monthly YEKDEM cost estimates for 2020 in December 2019. During this period, the estimate for the April 2020 period was announced as TL110.66 /MWh, while this amount was increased to TL 121 /MWh at its meeting on 20 March 2020. (April 20, 2020)

- Electricity generation starts at IIIsu Dam and Hydroelectric Power Plant (HPP). The Anadolu Agency reported that the IIIsu Dam and HPP, which is the 4th largest in Turkey with an installed capacity of 1,200 MW, built under the Southeastern Anatolia Project (GAP) will start electricity generation in May. (April 20, 2020)

- Construction of Bulgarian route of the TurkStream natural gas pipeline to be delayed due to the COVID-19 outbreak. The Ihlas News Agency reported that the Bulgarian Prime Minister, Boyko Borisov, had instructed foreign workers working on the project to gradually enter quarantine, so there could be a delay in work. Borisov announced that new pipes were being brought to the country by train and vehicle every day, and that 300 kilometers of pipes had been brought so far. (April 17, 2020)

- Production continues at full capacity in STAR Refinery. Anar Mammadov, the head of the SOCAR Turkey refinery and petrochemical business unit, said that the sharp decline in product demand had been reflected in capacity utilization, but that the STAR Refinery had continued production at full capacity thanks to its integrated operation with Petkim. Mammadov said that the Star Refinery, which has an annual production capacity of 1.6 million tonnes of jet fuel, was currently converting almost all of that capacity to diesel. (April 17, 2020)

- Amendment to Organized Industrial Zones (OSB) Implementing Regulation enters force with publication in Official Gazette. With the amendment made, the regulation regarding the sale of land in foreign currency in OSBs was abolished and the parcel allocation fee was determined as the upper limit in calculating the price to be paid in the land cancellations and returns. As part of the efforts to reduce bureaucracy and simplify legislation, since land registry and cadastral information are in the public archive, deed submission will no longer be required in requests for the establishment of a special OSB. According to the new arrangement, the floor area of the facilities that will be installed on the ground in electrical and electricity-based production facilities, roof and facade applications in terms of static and architectural aspects or if additional capacity is needed, will not exceed 25% of the parcel area.



In addition, in line with the demands coming from the recycling sector, the decision was taken to permit the establishment of recycling and disposal facilities in the OSB provided that it was in the technical infrastructure area of the OSB and that an OSB enterprising committee or general assembly decision had been taken. (April 16, 2020)

- Receivables from electricity consumption to be structured. According to the draft submitted to Parliament, Turkey Electricity Distribution Inc.'s (TEDAŞ) receivables arising from electricity consumption (receivables which have been transferred to TEDAŞ during the privatization process) will be structured. (April 15, 2020)

- Çetin Dam and HPP starts electricity generation. In the statement made by the company, it was announced that Çetin Dam and HPP, which has a total installed power of 420 MW, located on the Botan River within the boundaries of Siirt's Şirvan and Pervari districts, started electricity generation with 2 units accepted by the Ministry. Work on building the HPP started in July 2017. The other two units are scheduled to start generating electricity in May. (April 14, 2020)

- EMRA grants production licenses to 8 companies in the electricity market, but also terminates licenses of 5 companies. According to the list published in the Official Gazette, EMRA issued mineral oil licenses to 3 companies, a bunker delivery license to one company and a liquefied natural gas distributor license to two companies. (April 14, 2020)

- Surveillance application introduced for solar panel imports. With the Communiqué on Implementation of Surveillance in Imports published in the Official Gazette dated April 14, 2020, it was reported that a surveillance application for the import of photovoltaic modules and panels had been initiated. According to the communiqué numbered 2020/5 published by the Ministry of Commerce, the unit customs value for photovoltaic modules was set at \$ 25 per kilogram. The communiqué will enter effect 30 days later. (April 14, 2020)

- Repair work on the Turkish Republic of Northern Cyprus (KKTC) Water Supply Project scheduled to be completed in the summer. According to the statement made by the Ministry of Agriculture and Forestry, the project, which was commissioned in 2015, found a malfunction in the sea crossing of the transmission line in January. The contract for construction of the work will be signed in May, with the supply of pipes and fittings for the fault. (April 13, 2020)

- Chinese Gezhouba Group invests in Pumped HEPP plant in Isparta. Construction of the 1,000 MW pump storage hydro-



electric power plant for Lake Eğirdir, in cooperation with KAF Teknik Yapı and General Electric (GE), is scheduled to begin in January 2022. Marwan Al Roub, the Senior Manager in GE hydroelectric Department Turkey and the Middle East, stated that the Chinese Gezhouba Group and KAF Teknik Yapı had signed a USD 1.5 billion engineering, supply and construction contract. He also added that 4 250-megawatt private bidirectional GE turbines and equipment would be used in the power plant. (April 10, 2020)

- Change made to Turkey Water Institutes job description. According to the Presidential Decree published in the Official Gazette, the Turkey Water Institute will follow international and scientific developments in the field of water. The institution will be responsible for organizing, implementing or contributing to national and international seminars, symposia, courses, conferences and similar activities and theoretical or applied education and training programs for purposes such as the production and sharing of information on water and the training of specialists in this field. The institute will also be responsible for the organizing, implementing and contributing to education and training programs. The Institute will also publish periodical and indefinite publications in Turkish or foreign languages on matters falling within its mandate. (April 9, 2020)

- Change made in the General Directorate of Mining and Petroleum Affairs' (MAPEG) job description. According to the Presidential Decision published in the Official Gazette, the MAPEG will carry out the necessary work and procedures to coordinate with the relevant institutions within the scope of the Mines Employees Compulsory Personal Accident Insurance. The MAPEG will prepare the fuel resource catalogue for the state of war and mobilization and will carry out activities related to the allocation of fuel. (April 9, 2020)

- Naturelgaz, a subsidiary of Global Yatırım Holding, applies to competition authority to buy SOCAR LNG, a subsidiary of the Azerbaijan state-owned company, SOCAR. If the deal is completed, Naturelgaz, one of Turkey's main transport natural gas and compressed natural gas (CNG) distributors, will have increased the number of cities in which it can sell CNG from 49 to 59 with this acquisition, while expanding its LNG activities. (April 9, 2020)

- Enough water in Turkey's reservoirs, with no water shortage expected, according to Agriculture and Forestry Minister, Bekir Pakdemirli. The cumulative rainfall average across Turkey was 1.7% lower than the long-term average between 1 October 2019-6 April 2020, but there is enough water in the reservoirs, according to Bekir Pakdemirli. Pakdemirli reported that the reservoirs were 53.8% full in a total of 360 storage facilities, 98 of which are in operation, 125 of which are for drinking water, 125 for energy and others for irrigation purposes, and that the amount of water available in these reservoirs was 140.3 billion cubic meters. Pakdemirli stated that there was a 14% decrease in the volume of tap water in the reservoirs in Istanbul, Ankara, Izmir and Bursa compared to last year, but that this would not cause any major issues. (April 8, 2020)

- Aksa Şanlıurfa Natural Gas Combined Cycle Power Plant (NGCCPP) enters production. According to the statement made to the Public Disclosure Platform, TEİAŞ approved the application to bring the Şanlıurfa NGCCPP back into production. The Şanlıurfa NGCCPP, with an installed capacity of 147 MW, started electricity generation on 6 April 2020. (April 7, 2020)

- Plastic bag production up by 25%. Yavuz Eroğlu, President of the Turkish Plastic Industrialists Research and Development Education Foundation (PAGEV), said that measures to protect against the epidemic had increased the production of singleuse plastic products and bags in particular. Eroğlu also said "The production of bags in our facilities has increased by 25% in the last month. In some product groups this increase is much greater". (April 7, 2020)

- BOTAŞ determines natural gas tariff for April. As for electricity, there was no increase in natural gas tariffs in April. According to the tariff, natural gas prices were kept constant at TL 251 TL per 1,000 m³ for residential use, TL 1,550 in industry and TL1,600 in electricity generation. The sales price of those with low consumption in the commercial was determined as TL1,251 and those with high consumption was determined as TL1,555. (April 1, 2020)

- Turkey's greenhouse gas emissions down by 0.5% in 2018, with energy generation accounting for 72% of the total. According to the Greenhouse Gas Emissions Statistics for the 1990-2018 period, released by TurkStat, Turkey's total greenhouse gas emissions in 2018 decreased by 0.5% compared to the previous year, to 520.9 million tonnes of CO_2 equivalent. Energy-related emissions constituted the biggest share in CO_2 emissions with a 72% share of the total. Total greenhouse gas emissions per capita decreased slightly in 2018 compared to the previous year. Total greenhouse gas emission per capita, which were the equivalent to 4 tonnes of CO_2 in 1990, were calculated as 6.5 tonnes of CO_2 equivalent in 2017 and 6.4 tons of CO_2 equivalent in 2018. (April 1, 2020)



News From Abroad

- Citigroup cuts support for coal. In its "Environmental and Social Policy Framework" report, Citigroup announced that it would gradually cut its support to the coal industry to help the economy become purified from fossil fuels. According to the announcement, Citigroup will end its brokerage and consultancy services offered to coal companies by 2025 and completely end its support to the coal industry in 2030. (30 April 2020)

- USA extends exemption on sanctions to Iraq for energy imports from Iran until May 26. According to the statement made by the USA Department of State, Iraq's electricity and gas imports from Iran, which are within the scope of the first sanction package launched on August 7, 2018, were extended until May 26, 2020. Iraq imports one third of its electricity needs from Iran. Iraq aims to reduce energy dependency on Iran by 75%. (28 April 2020)

- Saudi Aramco starts oil production cut ahead of schedule. According to Bloomberg, Saudi Aramco production has started to lower its production from 12 million barrels a day to its target of 8.5 million barrels a day. Saudi Arabia is the fourth country to have started production cuts following Kuwait, Algeria and Nigeria. (28 April 2020)

- China extends electric vehicle incentives, scheduled to end in 2020, by two years. According to a statement by the Ministry of Finance of the People's Republic of China, support for purchased vehicles for use in areas such as public transportation, public service and car rental will not be reduced in 2020. In 2021 and 2022, it will decrease by 10-20% compared to 2019 levels for support. In the purchases, which will be made by individuals and companies, a reduction will be made by 2020 and the amount of support applied will be reduced by 10% in 2020, 20% in 2021 and 30% in 2022 compared to 2019, effective from July 22, 2020. (27 April 2020)

- "Global Renewables Outlook: Energy Transformation 2050" report published by International Renewable Energy Agency (IRENA). According to the report, renewable sources of power, including solar power and wind, can meet 86% of energy demand. By 2050, the transformation in energy is expected to increase the gross domestic product by 2.5% and employment by 0.2% on a global scale. The report states that savings related to health, subsidies and climate could cumulatively be worth as much as USD 160 trillion over a 30-year period. (24 April 2020)

- EIA releases weekly oil stocks data. According to EIA data, commercial crude oil stocks in the country increased by 15 million barrels in the week of April 11-17, to 518.6 million barrels. During the related period, gasoline stocks in the USA rose by 0.4% to 263.2 million barrels. The country's gasoline stocks had increased by 4.9 million barrels in the previous week. (24 April 2020)

- World Bank publishes "The Commodity Market Outlook April 2020" Report with the title "Effects of COVID-19 on Commodities". With the effect of the COVID-19 epidemic, the World Bank predicted that the commodity prices of energy generated by oil, natural gas and coal would decrease by 40.3%, while non-energy commodity prices would decrease by 5.1% compared to the previous year. The price of metals and minerals is expected to decrease by 13.2% compared to the previous year, and the price of precious metals is expected to increase by 13.2%. In the report, which suggests a recovery in commodity prices in 2021, it is estimated that energy commodity prices will increase by 18.9% and non-energy commodity prices will increase by 2.5% in 2021. The report emphasizes that the outlook for commodity markets is somewhat unclear, adding that this uncertainty will depend on the duration of the pandemic, its severity and how quickly measures are taken to tackle the pandemic, and when it is eliminated. (24 April 2020)

- IEA set out suggestions to eliminate the volatility in oil prices and to stabilize the markets. IEA President Dr. Fatih Birol's recommendations on his Twitter account include the implementation of the cut-off decision made by oil producers as soon as possible and even to cut more, making countries' strategic oil reserves ready for use to prevent excess supply and some measures taken by financial institutions to prevent irregular market conditions. (22 April 2020)

- Saudi Aramco, announced to its customers that it would supply 8.5 million barrels of crude oil per day from May. Saudi Arabia is expected to reduce its daily production by 2.5 million barrels in May and June, compared to its previous daily production level of 11 million barrels per day, based on the decision taken by the OPEC and some non-OPEC crude oil producer countries on April 12 to cut production. OPEC and some non-OPEC crude oil producer countries announced that they had decided to reduce their crude oil production by 9.7 million barrels per day from May 1 to June 30. OPEC noted that the amount of daily crude oil production cuts would be 7.7 million barrels for the six months covering 1 July-31 December, and 5.8 million barrels in the period 1 January 2021-30 April 2022. (20 April 2020)

- Global oil production increased in March. According to the 'Petroleum Market' report published by OPEC, global oil production in March increased by 620,000 barrels per day compared to February and reached 99.86 million barrels per day. Production increased by 910,000 barrels per day in March compared to March of 2019. Crude oil production in OPEC countries in March increased by 821,000 barrels per day compared to the previous month to reach 28.612 million barrels per day. OPEC's share in total global oil supply was recorded as 28.7%. (17 April 2020)

- IEA expecting a decline in oil demand. According to the "Petroleum Market Report" published every month by the IEA, oil demand will decrease to 26 million barrels a day in April. According to the data, global oil demand is expected to decrease by 9.3 million barrels per day in 2020, while the demand is expected to be below 23.1 million barrels per day in the second quarter of 2020. After the publication of the report, IEA President Dr. Fatih Birol spoke in a press conference and said that in a few years, we would look back at 2020 as one of the worst years in oil history, and might refer to this month as "Black April". Referring to the decline which the IMF announced the previous day, he added that it could be claimed that the COVID-19 outbreak will have taken one year from global economic growth and almost 10 years from the oil industry growth. (16 April 2020)

- Natural gas production in Azerbaijan up by 10% in first quarter of 2020. SOCAR announced that the country's natural gas production had reached 10 billion cubic meters in January-March period. In the same period, the production of natural gas from the fields operated by SOCAR stood at 1.8 billion cubic meters. According to a statement by SOCAR, the country's oil production was 9.3 million tonnes in the first quarter of 2020. (16 April 2020) - Siemens Gamesa resumes turbine production in Spain. The company resumed wind turbine equipment production, which had been suspended for two weeks due to the COVID-19 outbreak. (15 April 2020)

- Novatek's liquified natural gas (LNG) sales down by 28.4% in the first quarter of 2020. The Russia-based Novatek announced that natural gas production had increased by 2.2% in the first three months of 2020, compared to the same period of 2019, to reach 19.1 billion cubic meters. Novatek stated that the natural gas sales decreased by 6.8%, while LNG sales decreased by 28.4%. Novatek sold 2.45 billion cubic meters of LNG to international markets in the first quarter of 2020. (14 April 2020)

- EIA expects shale oil production to fall by 194,000 barrels per day in the USA. The EIA estimates that production was 8.7 million barrels per day in April. Production is expected to decrease by 183,000 barrels per day to 8.53 million barrels per day in May. (14 April 2020)

- Europe's largest solar power plant starts generating electricity. Iberdrola SA announced that it had commissioned the 500 MW Nunez de Balboa Solar Power Plant in Spain's Extremadura Autonomous Region in cooperation with the local company Ecoenergías del Guadiana. The electricity generated in the power plant is expected to meet the electricity needs of approximately a quarter of a million people. The plant will also prevent the release of 215,000 tonnes of CO₂ per year. Iberdrola plans to establish 2,000 MW of solar and wind power generation capacity in the Extremadura Autonomous Region by 2022. (13 April 2020)

- EIA publishes its "Short Term Energy Outlook" report. The report predicted that crude oil production in the USA would decline until the first quarter of 2021 and decrease by 1.8 million barrels per day from its 2019 peak to 11 million barrels per day. In the statement it stated that "The private sector and the free market will direct this production shortage." (9 April 2020)

- Volkswagen to produce a fast charging station for electric vehicles. In a statement made by Volkswagen, it was noted that Volkswagen AG and Shanghai DU-POWER New Energy Technical Co. Ltd. had established a joint venture to produce flexible fast charging stations in China. It was also reported that the joint venture, established with a 50% equal partnership structure, would be based in Shanghai and start production in the second half of 2020. (9 April 2020)



- European Union imports 108 billion cubic meters of LNG in 2019. According to the European Commission's natural gas market report, LNG accounted for a 27% share of total gas imports, while the share of LNG in total gas consumption was 22%. In the last quarter of 2019, LNG imports increased by 42% compared to the same period of 2018. According to the data in the report, 25% of the LNG was imported from the USA. (8 April 2020)

- IRENA published the "Renewable Capacity Statistics 2020" report. According to the report, installed renewable energy capacity worldwide increased by 176 GW last year, reaching a total of 2,537 GW. With the implementation of the right policies, wind and solar investments accounted for approximately 90% of the additional installed capacity, while the cost of solar and wind technologies decreased worldwide. An additional 98 GW of capacity in solar energy and 60 GW in wind energy were commissioned. In addition, there was an additional capacity increase of 12 GW in hydroelectric power plants, 6 GW in biomass power plants and 0.7 GW in geothermal power plants. (8 April 2020)

- Saudi Aramco, postpones oil price sale announcement for the first time in history. Saudi Aramco had always announced its crude oil sales price, which is accepted as a benchmark, by the 5th of each month. Due to the disputes over COVID-19 and oil supply, the price announcement was postponed until April 9th. It was previously announced that the OPEC+ meeting planned on April 6th had been postponed until April 9th in order to give "more time to all manufacturers, including OPEC+ and others." (7 April 2020)

- Installed capacity of wind power plants worldwide expected to increase by 355 GW in the 2020-2024 period. According to figures in the "2019 Global Wind Report" pub-

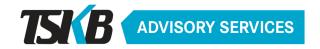
lished by the Global Wind Energy Council (GWEC), wind farms with a total of 60.4 GW in capacity entered operation in 2019. As of the end of 2019, the total installed power capacity of the wind farms had exceeded 651 GW, while an increase of 355 GW is expected in the total installed power of the wind farms in the 2020-2024 period. (6 April 2020)

- No change in Russia's daily oil production. According to data released by the Ministry of Energy, Russia's daily oil production remained unchanged in March compared to February, totaling 11.29 million barrels. A total of 47.76 million tonnes of oil was extracted in March. The Russian Energy Minister Alexander Novak said in a statement that Russia had no plans to increase oil production in an environment where markets were facing excess supply. (3 April 2020)

- British Petroleum (BP) reduces 2020 spending plan by 25%. In a statement on April 1, BP said it had reduced its 2020 spending plan by 25% and would reduce shale oil and gas production in the USA due to the recent collapse in oil prices, which were caused by the COVID-19 outbreak. The Londonbased company said that it planned to spend USD 12 billion in 2020. (2 April 2020)

- Moody's, the international credit rating agency, reported that the credit ratings of Shell, BP, Total and Equinor, which are the world's largest oil and natural gas producers, had been put on negative watch. According to the statement made by Moody's, BP's credit rating was confirmed as "A1", Shell's as "Aa2", Equinor's as "Aa2" and Total's as "Aa3", while the companies' credit rating watch had been changed from stable to negative. The statement added that the fall in oil and natural gas prices would affect companies' financial profiles in 2020. (2 April 2020)





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