

Monthly Energy Bulletin

TSKB Economic Research

October 2020 #29

Can Hakyemez

hakyemez@tskb.com.tr

16 November 2020

The amendment to the Law on Electricity Markets was passed by the commission. Under the amendment the following were stated:

- Prices of renewable energy resources, which had been in dollar terms, will be changed to Turkish liras. The extent and the duration of local contribution to electricity generation plants using renewable energy resources will be determined by the Presidential Decree, upon termination of the Renewable Energy Resources Support Mechanism (YEKDEM) on June 30th, 2021.
- In the competitions held prior to effective date of the code, companies which had received capacities with zero or lower prices, will be exempt of local contribution. This decree will apply to the winning bidders of wind power competitions held in 2017.
- The Organized Wholesale Natural Gas Market will be included in the Natural Gas Law.
- Unlicensed electricity generation plants which supply their excess electricity through distribution mechanisms will be able to charge for the electricity at the prices indicated in Table I for the next 10 years.
- Electricity generation plants based on renewable energy resources will receive discounts on costs of all rent, permission and servitude for a period of 10 years starting from the date of the license acquisition. The decree will also include companies which enter operation before December 31st, 2025.

25.61
TWh

October Gross
Generation

318.70
TRY/MWh

Average
MCP

5.84%

Licensed electricity generation in October falls by 7.36% MoM in September, while rising by 5.84% YoY.

[Click](#) for details.

9.29%

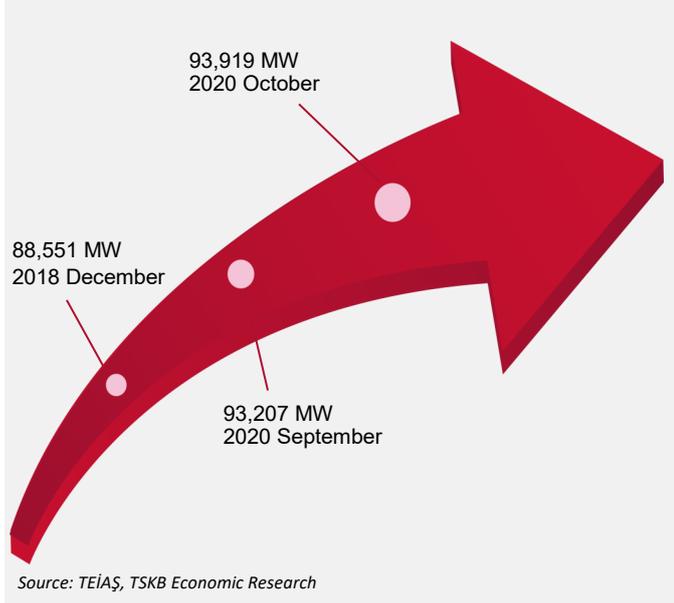
Market Clearing Price (MCP) increases by 3.41% MoM in October, and by 9.29% YoY.

[Click](#) for details.

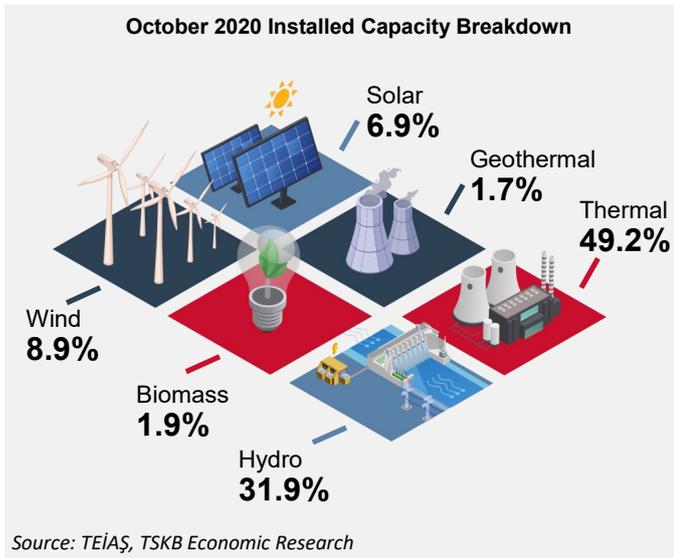


Installed Capacity Analysis

Turkey's total installed capacity, which had reached 91,267 megawatts (MW) at the end of 2019, reached 93,919 MW by the end of October 2020. In October, wind farms with a net total installed capacity of 253.1 MW were commissioned. The net total installed capacity of hydroelectric power plants increased by 126.2 MW, with the net total installed capacity of renewable waste power plants increasing by 152.9 MW .

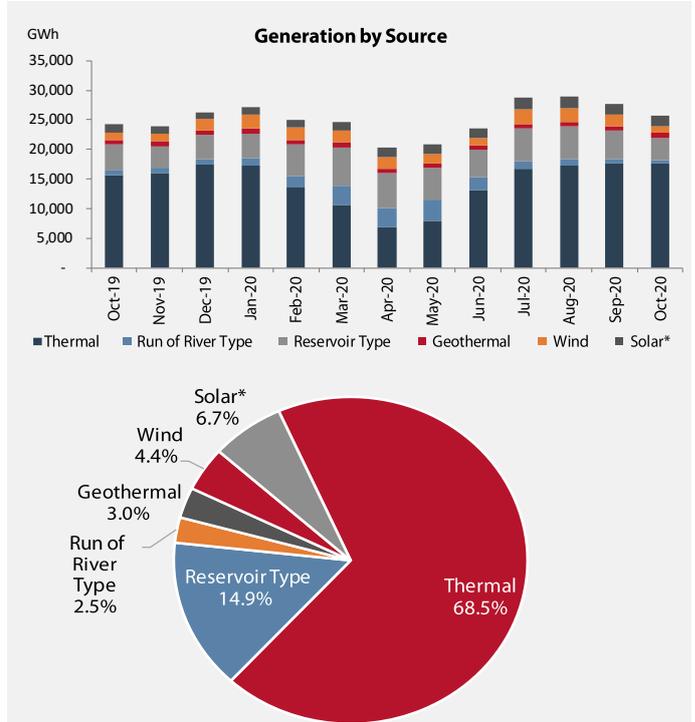


Of all the power plants in operation during October, 50.8% were generating electricity from renewable resources. Thus, the share of renewable power plants remained above 50%. Hydroelectric power plants accounted for 31.9% of Turkey's total installed capacity in October, while the combined share of wind and solar power plants amounted to 15.7%.



Electricity Generation Analysis

Approximately 27.64 terawatt hours (TWh) of electricity was generated in September 2020, while total electricity generation in October 2020 decreased to 25.61 TWh. Average daily electricity generation in October declined by 10.35% compared to September. On the other hand, electricity generation in October increased by 5.84% compared to the same month in the last year.

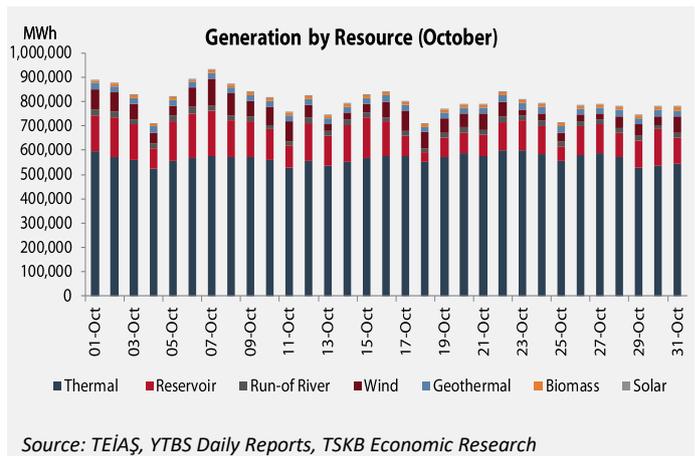


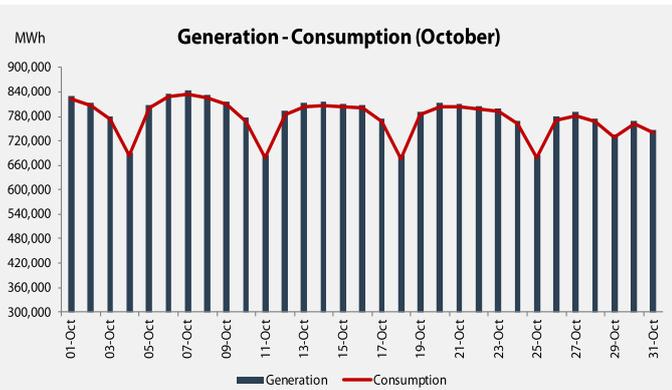
*Since October unlicensed solar power plant generation data has not yet been released by TEİAŞ, the total energy generation by unlicensed solar power plants in October was accepted as same as the total generation of September 2020.

Source: TEİAŞ, YTBS Daily Reports, TSKB Economic Research

Thermal power plants, which had supplied 63.6% of all of the electricity generated in September, accounted for 68.5% of the total electricity generated in October 2020. This 4.9 percentage point increase can be attributed to the decline in electricity generated from wind farms and hydropower plants.

After accounting for 20.1% of electricity generated in September, hydroelectric power plants provided 17.4% of the total monthly electricity generated in October 2020. Renewable power plants, which had an average share of 44.5% in electricity generation throughout 2019, accounted for 31.5% of all electricity generated in September 2020, 3.8 percentage points below the share in the same period of 2019. In the same period, hydroelectric power plants with dams provided a 14.9% contribution to total generation and river type dams accounted for 2.5% of total generation.





Source: TEİAŞ, YTBS Daily Reports, TSKB Economic Research

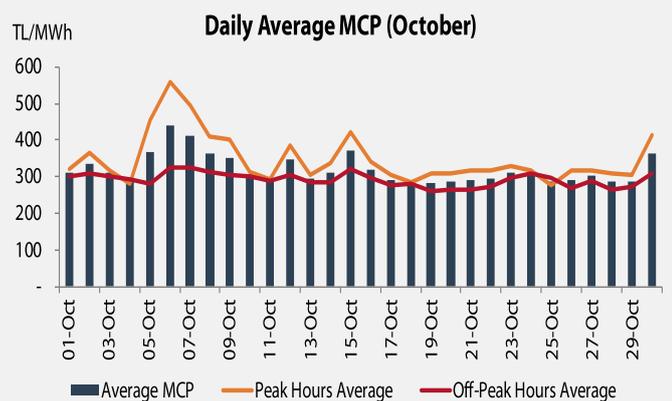
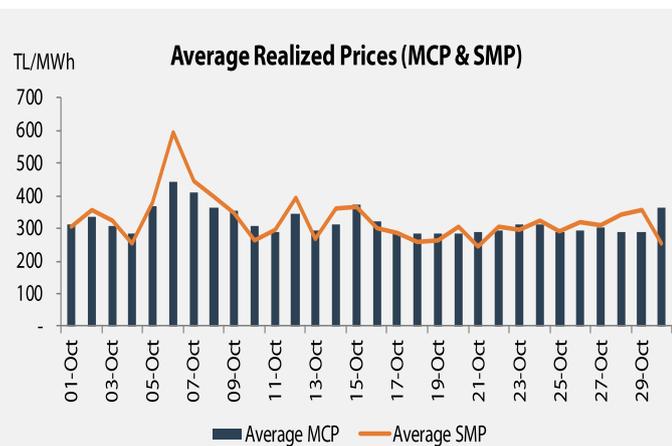
The average daily generation of licensed power plants in October 2020 stood at 783,643 MWh. The highest level of electricity generation from licensed power plants was realized on Wednesday, October 7th, at 843,117 MWh, with the lowest being on Sunday, October 18th, when 684,715 MWh of electricity was generated.

Daily electricity consumption averaged 775,725 MWh in October 2020, peaking at 835,198 MWh on Wednesday, October 7th, while the lowest level of electricity consumption, of 676,796 MWh, was recorded on Sunday, October 18th.

Electricity Price Analysis

The average MCP and system marginal price (SMP) fluctuated between TL 245 /MWh and TL 592 /MWh in October 2020. In the same period, the average MCP stood at TL 318.70 /MWh, while the SMP averaged TL 325.87 /MWh. The lowest average MCP, of TL 283.65 /MWh was recorded on Sunday, October 18th, and the lowest average SMP, of TL 246.31 /MWh was recorded on Wednesday, October 21st.

The average MCP in October 2020 increased by 3.41% when compared to the September average. The decrease in the share of renewable power plants in total electricity generation is thought to have been the main reasons for this increase.

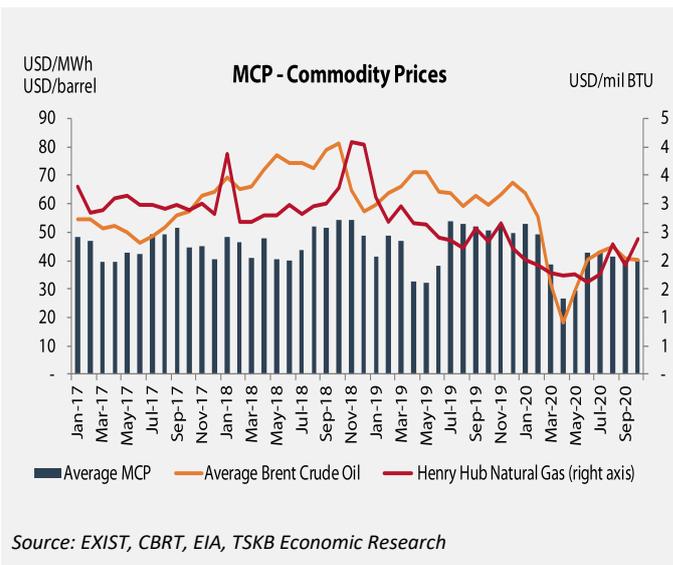


Source: EXIST, TSKB Economic Research

The daily average MCP for September stood at TL 346.06 /MWh for peak hours (from 8AM to 8PM), 8.6% higher than the daily average value. The highest peak-hour average recorded was TL 556.47 /MWh on Tuesday, October 6th, while the lowest peak-hour average was TL 277.38 /MWh, recorded on Sunday, October 25th.

Average pricing in off-peak hours (from 8PM to 8AM) for the same period stood at TL 291.35 /MWh while the highest off-peak hour average was TL 325.16 /MWh, recorded on Wednesday, October 7th, with the lowest off-peak-hour average of TL 260.36 /MWh recorded on Monday, October 19th.

The MCP, which had averaged USD 45.98 /MWh over 2019, averaged USD 40.60 /MWh in the first nine months of 2020 while the average MCP in October stood USD 40.48 /MWh. MCP prices declined by approximately 1.4% in dollar terms in October compared to their September level. In dollar terms, MCP prices are 19.7% lower than in the same period last year.



Source: EXIST, CBRT, EIA, TSKB Economic Research

Having averaged USD 64.36 per barrel in 2019, Brent crude oil prices averaged USD 40.19 per barrel in October, continuing to converge with their pre-COVID-19 levels. Brent crude oil prices declined by 1.8% in October when compared to the previous month, while also hovering 32.7% below their level in the same period of the previous year.

The average price of Henry Hub natural gas was USD 2.39 /mBTU in October, 24.5% higher than the USD 1.95 /mBTU average for September 2020. Average natural gas prices declined by 2.6% in October 2020 compared to the same month a year ago.





Sector News

Local News

- **Akenerji targeting hybrid energy plant.** The General Manager of Akenerji, Serhan Gencer, spoke to the Enerji Günlüğü publication stating that the company planned to install a solar power plant on top of the Burç Bendi and hydro power plant in Adiyaman and the Erzin Natural Gas Plant located in Hatay. (October 31, 2020)

- **Energy Market Regulatory Authority (EMRA) releases Natural Gas Market Report for August 2020.** According to the report, natural gas imports increased by 6.5% compared to the same month in 2019. Natural gas consumption of power plants increased by 45% compared to the same period last year. (October 30, 2020)

- **EMRA releases monthly electricity and oil markets sector reports.** According to the Electricity Market Sector Report, licensed electricity generation in August reached 27.6 TWh, increasing by 4.2% compared to the same month last year. 26.7% of licensed electricity generation was provided by natural gas plants, 24.3% by hydro-electric power plants, 22% from power plants using imported coal and 11.5% from power plants using local coal. According to the Oil Markets Sector Reports, total oil imports declined by 29.8% in August to 2.95 million tonnes. Crude oil imports reached 1.88 million tonnes, a decline of 38.3%. Iraq was the biggest supplier of crude oil to Turkey (692,100 tonnes), followed by Russia (619,800 tonnes). (October 28, 2020)

- **20% of natural gas demand planned to be kept in storage by 2023.** The Minister of Energy and Natural Resources, Fatih Dönmez, stated that Turkey would attain a natural gas storage capacity of 11 billion cubic meters by 2023 and therefore be able to store 20% of its annual natural gas demand. Dönmez

also announced that work on the Salt Lake Underground Storage Extension project would commence in 2023 and that natural gas extracted from the Black Sea would be stored under the Salt Lake (October 28, 2020).

- **Share of renewable energy resources in electricity generation to decline.** In the 2021 Presidential Annual Program, the share of renewable resources in electricity generation is expected to decline by 1.1 points to 42.8% in 2020. This share is estimated to fall to 41% by 2021 (October 28, 2020)

- **EMRA releases decision on last resource supply tariffs in Official Gazette.** The board did not change its decision on the coefficients and the quantity of consumption in 2021. Accordingly, residential consumers will be charged 50 million kWh per year, whereas other consumers will be charged 7 million kWh per year in 2021. In addition, the coefficient of costs and profit margins which had been set as 1.0938 as of January 1st 2019 will remain unchanged as of January 1st 2021. (September 27, 2020)

- **Gebze Dilovası Natural Gas Cycle Plant of Electricity Production Inc. to be privatized.** According to the Presidential Decree published in the Official Gazette, the privatization process will be completed by 2025. (September 26, 2020)

- **British American Tobacco (BAT) receives I-REC's green electricity certificate for its factory located in Samsun.** According to the company's statement, the company received I-REC green electricity certificate from Borusan EnBW for its electricity consumption in 2020. BAT also reached agreement with Borusan for the green electricity certificate on its 9.1 million kWh of electricity consumption in 2021. (September 26, 2020)

- **Green certificate market planned to be rolled out in June 2021.** Under the Renewable Energy Resources Guarantee system and market, electricity generated from renewable resources will be guaranteed with a certificate. With this new system, each megawatt hour of electricity generated from renewable resources will be certified. EPIAŞ will issue the YEK-G certificate in an electronic format upon requests from consumers. These certificates can be traded freely. (October 21, 2020)

- **Minister of Energy and Natural Resources, Fatih Dönmez, shares thoughts on natural gas discovery in Black Sea region.** Dönmez said that 40 wells would have to be sunk in the Sakarya gas region in order to extract natural gas with natural gas extraction to commence in 2023. The Minister, Fatih Dönmez, reported that pre-drilling seismic examinations of a 2,000 square kilometre area of the natural gas zone in Sakarya, which has a total area of 10,700 square kilometres, had been completed. Seismic examinations of the rest of the field will be completed in the first half of 2021. (October 20, 2020)

- **ENKA not given approval for its floating storage regasification unit (FSRU) in Aliğa.** Habertürk reported that EMRA had rejected ENKA's application for an FSRU license in Aliğa on the grounds of the existence of another plant near the region. (October 20, 2020)

- **Quantity of natural gas discovered in Black Sea region updated.** President Recep Tayyip Erdoğan stated that 85 bcm of natural gas had been added to the Tuna-1 well with 320 bcm of gas reserves, located out to sea off Zonguldak. Erdoğan also indicated the government planned to supply natural gas from the 45 bcm reserves by 2023. (October 19, 2023)

- **Energy Markets Management Inc. and TAKASBANK sign Electricity Futures Market Management Protocol.** (October 15, 2020)

- **Lithium production capacity to reach 500 tonnes.** In his statement at the Eti Mining Technological Development Center, the Minister for Energy and Natural Resources, Fatih Dönmez, said the following: "With our new plant under construction, we will produce lithium in Turkey for the first time. Turkey imports 1,200 tonnes of lithium each year. The pilot project will have a 10 tonne production capacity, but the Kırka plant will reach approximately 500 tonnes." Dönmez also announced on his Twitter account that bore-based lithium production will commence by the end of the year. (October 13, 2020)

- **Renewable Energy Resource Zones (YEKA) competitions adjourned.** According to the statement published in the Official Gazette, the Ministry of Energy and Natural Resources (ETKB) renewed application dates as 18-21 January 2021. (October 8, 2020)

- **Day-ahead spot electricity market prices and maximum limits set.** According to the decision published in the Official Gazette, the next-day spot electricity market price limit will be set as twice the 12-month weighted average of the prices quoted in the 12-month period covering 2 months prior to the current month. This limit had been set at TRY 600 per MWh during the Jan 1st-Mar 31st, 2020 period. The lower price limit in the next-day electricity market is set at 0 lira. (October 7, 2020)

- **EMRA releases Amendment to Law on Storage Obligations in the Official Gazette.** According to the decision, sup-

pliers selling local natural gas to distribution companies and consumers will be exempt of natural gas storage obligation. In addition, companies holding a wholesale license will be required to store at least 80% of the amount of natural gas sold. (October 5, 2020)

- **Çalık Energy wins tender for license of Cap des Biches Combined Cycle Plant.** The project will constitute Senegal's first and biggest combined cycle plant with a generation capacity of 300 MW. (October 5, 2020)

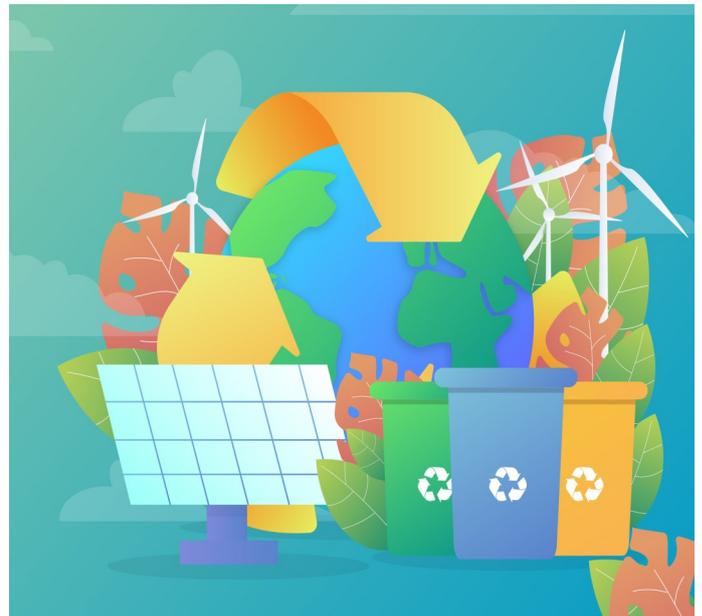
- **Petroleum Pipeline Company (BOTAŞ) announces natural gas prices to take effect from October.** Electricity generation and natural gas prices were left unchanged in October. The wholesale price of natural gas for electricity generation was set at TRY 1.4 per cubic meter. (September 1, 2020)

- **First hybrid solar power plant project given approval from Environmental Impact Evaluation.** The solar power plant which will co-operate with the Aşağı Kaleköy Dam of Kalehan Genç Energy Üretim Inc. were approved in the Environmental Impact Evaluation. According to the information summarized in the report, the project, which has an installed capacity of 75.6 MW, is expected to generate 131.2 GWh of electricity. The total investment to the project is projected to reach USD 35.6 million. (September 1, 2020)

- **EMRA changes electricity prices.** Under the decree published in the Official Gazette, the price of electricity consumed in the residential, industrial and commercial sectors increased by 5.75%. The new prices will be effective for 3 months. (October 1, 2020)

News From Abroad

- **International Energy Agency (IEA) releases "Electrical Systems in Transition" report.** According to the report, electricity which currently constitutes 20% global energy demand will overtake oil to be the biggest energy resource by 2040. The increasing importance of renewable energy resources in electricity generation will be critical for emission mitigation, the report suggests. It is also pointed out that share of wind and solar power in global electricity generation will rise to 45%, while the share of total renewable energy resources in global electricity generation will reach 70%. (October 28, 2020)



- **European Union reaches partial agreement in Climate Law.** Environmental Ministers of European Union member states have agreed upon the binding nature of the carbon neutrality goal by 2050. Aside from the goals set for 2050, member states have not yet reached an agreement over greenhouse gas emission mitigation goals for 2030. (October 26, 2020)

- **World Bank releases Commodity Markets Outlook report.** The report suggests that metals and agricultural commodities have recovered from the effects of the pandemic, whereas energy prices are expected remain below their pre-pandemic levels despite the recent limited recovery. Low oil demand is expected to remain a likely scenario during 2021 and beyond, according to the report. Hence, the pandemic constitutes a primary risk to price forecasts. The energy commodity prices index, comprised of oil, natural gas and coal prices, is expected to decline by 32.7% this year compared to last year and non-energy prices are projected to rise by 1.1% in the same period. The report forecasts that the energy commodity price index will increase by 9.3% in 2021, while non-energy prices will rise by 1.7% in the same period. (October 23, 2020)

- **IEA publishes World Energy Outlook 2020 report.** According to the report, only renewable energy resources will record a growing presence in the composition of global electricity generation. Global electricity demand is expected to rise by 20% in 2023 with renewable energy sufficient to cover 80% of increase in demand. Demand for oil, on the other hand, will remain below 100 million barrels per day, with an 8% decline with projected declines in demand of 7% for coal, 3% for natural gas and 2% for electricity. The report suggests that energy investments will decline 18%, while global carbon emissions will decrease by 7%. The Chairman of the IEA, Fatih Birol, shared his views on the findings of the report: "Global energy demand is expected to experience a significant decline. Data as of September 2020 points to a decline of 5%, the deepest decline in the history of the energy markets. Among all types of fuel, oil has been the most affected by COVID-19, given the impact on the transportation and aviation sectors. Renewable

energy, on the other hand, has been the least affected energy resource." (October 14, 2020)

- **United Kingdom plans to initiate carbon emissions tax across the country.** According to a report in The Times, the Chancellor of the Exchequer, Rishi Sunak plans to implement a new carbon emissions tax once Brexit is completed after a successful transition period. (October 12, 2020)

- **Organization of Petroleum Exporting Countries (OPEC) release 2020 Global Oil Outlook report.** The report includes mid-term and long-term projections up to 2045 for the global economy, oil and energy demand and supply. According to the projections, global primary energy demand, which had been 289 million barrels of oil equivalent per day in 2019, will reach 361 million barrels of oil equivalent per day in 2045. The share of oil in global energy demand, which had stood at 31% in 2019, is expected to decline to 27% by 2045, followed by Natural gas (25% share) and coal (20%). Solar, wind and geothermal energy resources are expected to continue to record the highest growth, with demand for these renewable resources reaching 25 million barrels of oil equivalent per day, notching up 6.6% annual growth on average. (October 9, 2020)

- **US Energy Information Agency (EIA) releases October 2020 Short Term Energy Outlook.** According to the report, the price of Brent crude oil is forecasted at USD 42.34 per barrel in the last quarter of the year. This forecast is 4% lower than the previous forecast. The EIA also forecasts an average crude oil price of USD 47.07 per barrel in 2021. The report also forecasts daily average crude oil production of 11.2 million barrels in the U.S. in 2020, declining to 11.09 million barrels per day next year.

- **European Parliament agree on 60% reduction in carbon emissions by 2030.** This is a revision from the current goal of a 40% fall in emissions by 2030 compared to 1990 levels. The President of the European Commission, Ursula von Der Leyen, had suggested a 55% reduction in carbon emissions by 2030 as part of the European Green Deal agenda. (October 8, 2020)





Economic Research

ekonomikarastirmalar@tskb.com.tr

MECLİSİ MEBUSAN CAD.

NO:81 FİNDIKLI İSTANBUL 34427, TÜRKİYE

T: +90 (212) 334 50 50 F: +90 (212) 334 52 34

This document was produced by Türkiye Sınai Kalkınma Bankası A.S. (“Industrial Development Bank of Turkey”) (“TSKB”) solely for information purposes and for the use of registered broker or dealer, whether the registered broker or dealer is acting as principal for its own account or as agent for others, or a bank acting in a broker or dealer capacity as permitted by U.S.A. law. This document shall not to be reproduced under any circumstances and is not to be copied or made available to any person other than the recipient. It is produced and distributed in the Republic of Turkey. This document does not constitute an offer of, or an invitation by or on behalf of TSKB or any other company to any person, to buy or sell any security. The information contained herein has been obtained from published information and other sources which TSKB considers to be reliable. No liability or responsibility whatsoever is accepted by TSKB for the accuracy or completeness of any such information. All estimates, expressions of opinion and other subjective judgments contained herein are made as of the date of this document. TSKB may, from time to time, have a long or short position in any of the securities mentioned herein and may buy or sell those securities or options thereon either on their own account or on behalf of their clients. TSKB may, to the extent permitted by law, act upon or use the above material or the conclusions stated above or the research or analysis on which they are based before the material is published to recipients and from time to time provide investment banking, investment management or other services for or solicit to seek to obtain investment banking, or other securities business from, any entity referred to in this document.

Any customer wishing to effect transactions in any securities referred to herein or options thereon should do so only by contacting a representative of TSKB.

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise, without the prior consent of Türkiye Sınai Kalkınma Bankası A.S.

This document does not constitute an offer to sell, or an invitation to subscribe for or purchase, any of the offer shares in any jurisdiction to any person to whom it is unlawful to make such an offer or solicitation in such jurisdiction. The distribution of this document in certain jurisdictions may be restricted by law. Persons into whose possession this document comes are required by TSKB and the managers to inform themselves about and to observe any such restrictions. No person has been authorized to give any information or to make any representation except as contained in this publication.

In making an investment decision investors must rely on their own examination of the Company and the terms of the offering including the merits and risk involved.