

# Monthly Energy Bulletin

TSKB Economic Research

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## Natural Gas Discovery in Black Sea

On Friday, August 21, the Turkish President Recep Tayyip Erdoğan announced the discovery of 320 billion cubic meters of natural gas in the Black Sea. Erdoğan pointed that the natural gas research project had been carried out with national resources, adding: “As soon as the work on gas drilling and system establishment has been completed, we’ll be able to utilize these natural resources. Our aim is to provide natural gas for public use by 2023.”

The Minister of Energy and Natural Resources, Fatih Dönmez, said that the discovery of natural gas was expected to pave the way for a substantial reduction in imports of natural gas, and that natural gas would therefore be much more affordable. Mr. Sönmez also announced that two additional layers with a depth and length similar to the Tuna-1 gas well were observed, hence new reserves may be discovered.

Turkish Petroleum’s public announcement revealed that the sea floor in the region of the discovered reserves was 2,117 meters. It was also stated that Turkish Petroleum and OTC were the sole partners involved in the project. Drilling operations at 3,250 meters length continue in the well and the target for depth is capped at 4,525 meters.

According to Turkish Petroleum’s statement, more reserves may be found at greater depths with similar findings of the two wells neighboring to those proven by geological models of Tuna-1 well.

28.97  
TWh

August Gross  
Generation

298.70  
TRY/MWh

Average  
MCP

**0.73%**

Electricity generation increased by 0.73% in August 2020, when compared to the previous month, and by 3.45% compared to the same month of the previous year.

[Click](#) for details.

**0.79%**

The MCP increased by 0.79% when compared to the previous month, while increasing by 0.13% compared to the same month of the previous year.

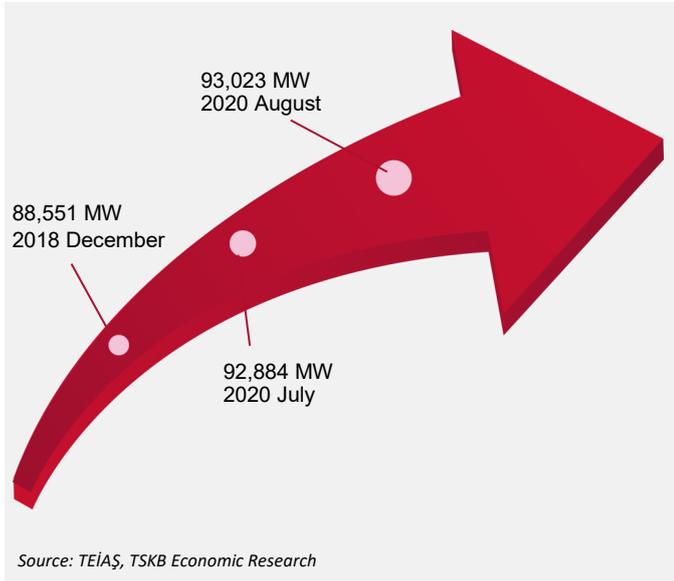
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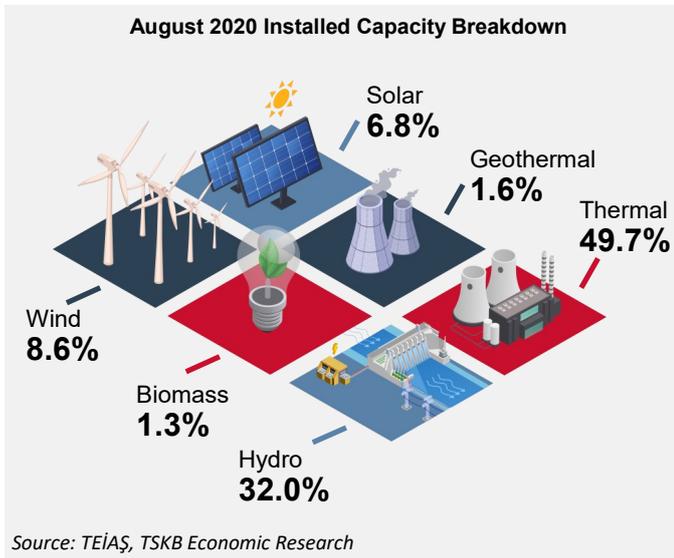
# Installed Capacity Analysis

Turkey's total installed capacity, which had reached 91,267 megawatts (MW) at the end of 2019, reached 93,023 MW by the end of August 2020. During this period, hydroelectric power plants with a total installed capacity of 62.6 MW were commissioned.

The total installed capacity of natural gas power plants increased by 6.1 MW, with the total installed capacity of wind farms increasing by 47.2 MW.

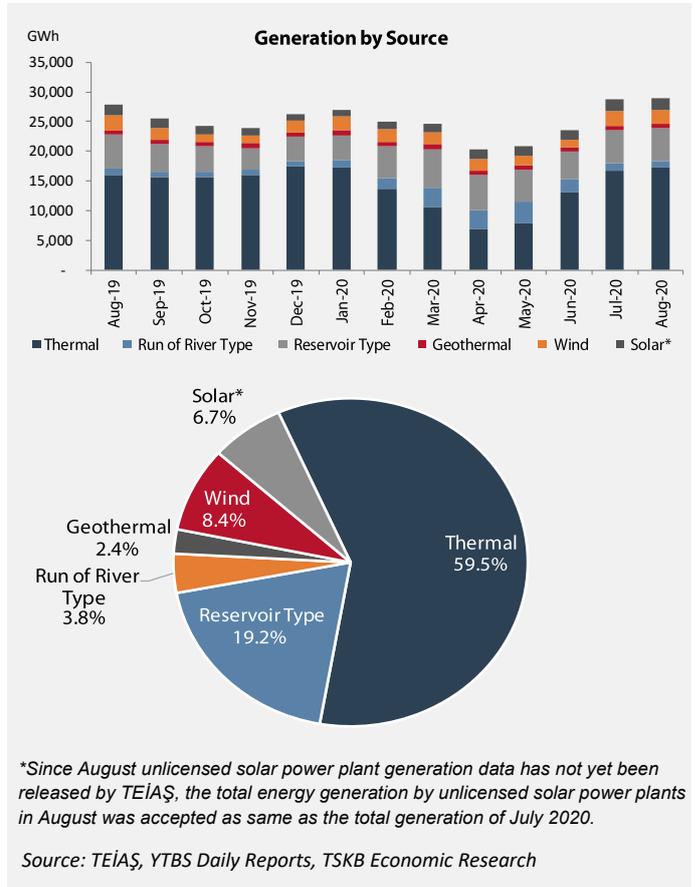


Of all the power plants in operation during August, 50.3% were generating electricity from renewable resources. Thus, the share of renewable power plants rose to above 50%. Hydroelectric power plants accounted for 32% of Turkey's total installed capacity in August, while the combined share of wind and solar power plants amounted to 15.4%.



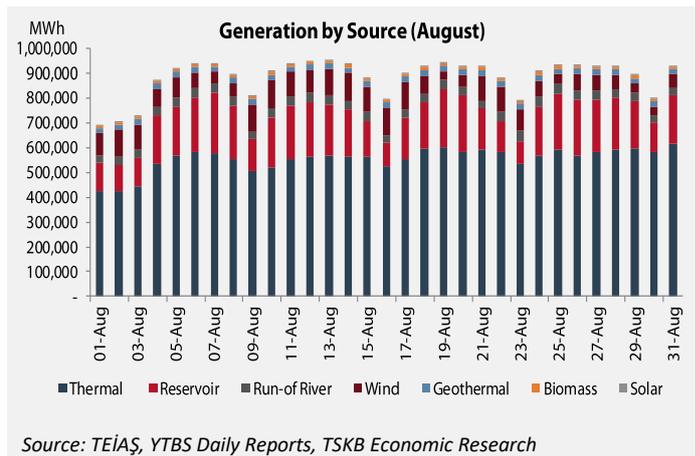
# Electricity Generation Analysis

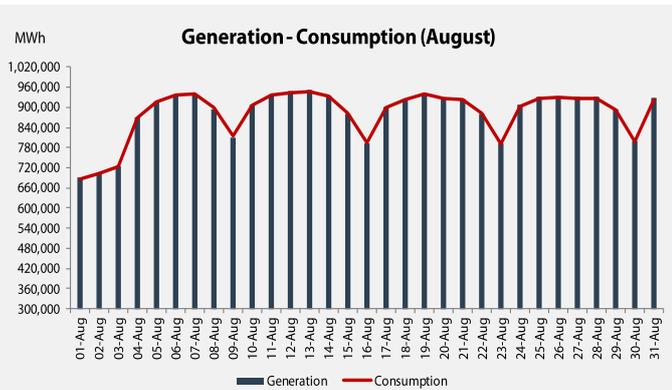
Approximately 28.77 terawatt hours (TWh) of electricity was generated in August 2020, while total electricity generation in August 2020 increased to 28.98 TWh, marking an increase of 0.7% in average daily electricity generation when compared to the previous month. Moreover, in August 2020, electricity generation increased by 4.3% when compared to the same month of the previous year.



Thermal power plants, which had supplied 57.8% of all of the electricity generated in July, accounted for 59.5% of the total electricity generated in August 2020. This 1.7 percentage point increase can be attributed to the decline in electricity generated from wind power plants and the decline in the share of electricity generated from renewable plants due to the increase in demand.

After accounting for 24% of electricity generated in July, hydroelectric power plants provided 23.1% of the total monthly electricity generated in July 2020. Renewable power plants, which had an average share of 44.5% in electricity generation throughout 2019, accounted for 40.5% of all electricity generated in August 2020, 2.1 percentage points below the share in the same period of 2019. In the same period, wind power plants provided a 8.4% contribution to total generation.





Source: TEÍAS, YTBS Daily Reports, TSKB Economic Research

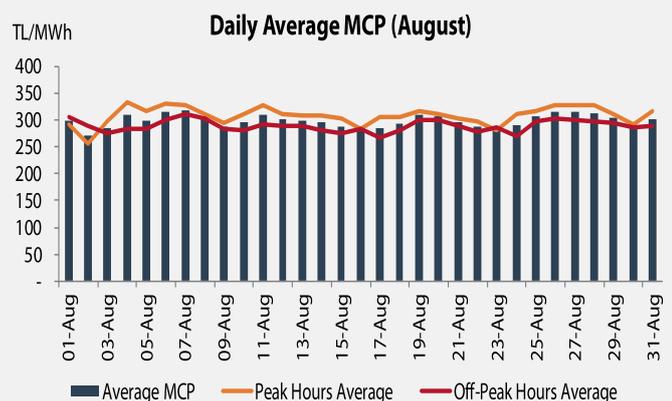
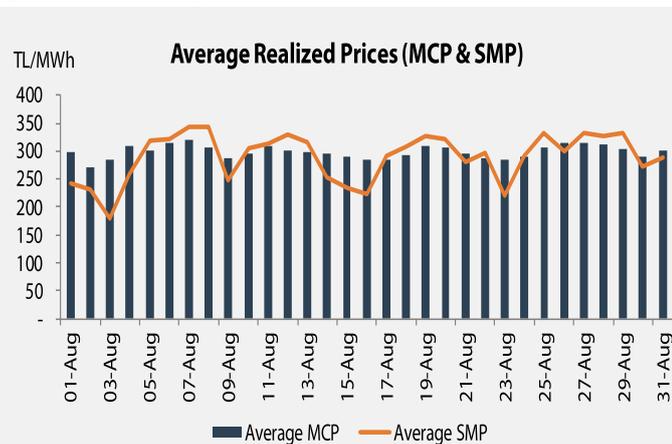
The average daily generation of licensed plants in August 2020 stood at 883,971 Megawatt-hours (MWh). The highest level of electricity generation from licensed power plants was realized on Thursday, August 13<sup>th</sup>, at 951,148 MWh, with the lowest being on Saturday, August 1<sup>st</sup>, at 691,171 MWh.

Daily consumption averaged 882,456 MWh in August 2020, peaking at 948,121 MWh on Thursday, August 13<sup>th</sup>, while the lowest level of electricity consumption, of 687,515 MWh, was recorded on Saturday, August 1<sup>st</sup>.

## Electricity Price Analysis

The average market-clearing prices (MCP) and system marginal price (SMP) fluctuated between TL 175 /MWh and TL 345 /MWh in August 2020. In the same period, the average MCP stood at TL 298.70 /MWh, while the SMP averaged TL 289.52 /MWh. The lowest average MCP, of TL 271.46 /MWh was recorded on Sunday, August 2<sup>nd</sup>, and the lowest average SMP, of TL 178.60 /MWh was recorded on Monday, August 3<sup>rd</sup>.

The average MCP for August 2020 increased by 0.79% when compared to the July average. The increase in electricity demand and decrease in the share of renewable power plants in total electricity generation are thought to have been the main reasons for this decline.

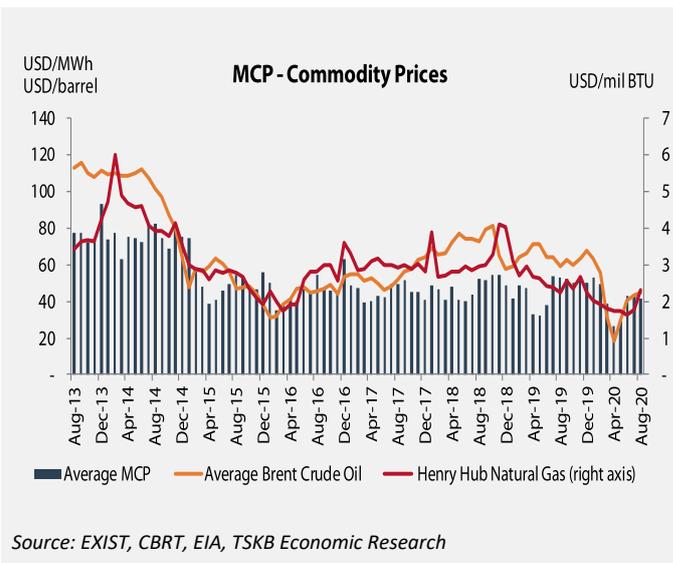


Source: EXIST, TSKB Economic Research

The daily average MCP for June stood at TL 308.30 /MWh for peak hours (from 8AM to 8PM), 3.2% higher than the daily average value. The highest peak-hour average recorded was TL 333.37 /MWh on Tuesday, August 4<sup>th</sup>, while the lowest peak-hour average was TL 254.82 /MWh, recorded on Sunday, August 2<sup>nd</sup>.

Average pricing in off-peak hours (from 8PM to 8AM) for the same period stood at TL 289.10 /MWh. The highest off-peak hour average was TL 310.51 /MWh, recorded on Friday, August 7<sup>th</sup>, with the lowest off-peak-hour average of TL 266.19 /MWh recorded on Monday, August 17<sup>th</sup>.

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 August edged down to USD 41.19 /MWh, while the average MCP in first seven months of the year was USD 40.45 /MWh. MCP prices declined by approximately 4.8% in dollar terms in August when compared to the value recorded in July.



Source: EXIST, CBRT, EIA, TSKB Economic Research

Brent crude oil prices averaged USD 44.74 per barrel in August as they continued to converge towards their pre-COVID-19 levels. Brent crude oil prices averaged USD 64.36 per barrel in 2019. Brent crude oil prices increased by 3.5% in August when compared to the previous month, while also 24.2% lower than their level at the same period of the previous year. The average Henry Hub natural gas price was USD 2.30 /mBTU in August, 29.9% higher than the USD 1.77 /mBTU average for July 2020.





## Sector News

### Local News

- **The State Hydraulic Works (DSİ) aims to attain 50 million cubic meters in water storage capacity by installing 100 underground reservoirs.** Under the DSİ's new action plan, 100 underground reservoirs are planned in a number of locations including İzmir, Aydın, Mardin, Ankara, Konya, Çankırı, Malatya, Elazığ, Edirne, Tekirdağ, Bartın and Balıkesir. The underground reservoir projects are aimed at providing drinking water for 600,000 people with the water stored in reservoirs located in these cities. This is equivalent to the volume of water needed to irrigate 800,000 decares of farmland. Hence, the project will contribute TL 60 million to annual net agricultural income. (August 31, 2020)

- **Turkish Wind Energy Association (TÜREB) releases wind power statistics for the first half of 2020.** According to the report, the total installed capacity of Turkey's wind farms reached to 8,288 MW in the first half of 2020, marking an increase of 232 MW. Hence, wind power accounted for 8.52% of the total electricity generated in the first half of 2020. The report added that work was ongoing for the installation of 53 new wind farms with a total installed capacity of 2,451.05 MW. (August 31, 2020)

- **Privatization tender for Ahiköy I and Ahiköy II Hydroelectric Power Plants (HPP) finalized.** The highest bidder of the tender was Ergezen Yapı Ticaret Inc., with a bid of TL 11.3 million. The total installed capacity of Ahiköy I and Ahiköy II hydro-electric power plants is 4.2 megawatts. (August 28, 2020)

- **OYAK completes acquisition of Milangaz.** Milangaz, which produces of auto-LPG, liquefied petroleum gas and wholesale gas will operate under OYAK with its five sea terminals, 19 cannister filling plants, more than 550 auto-LPG stations and

around 1,200 liquefied petroleum gas stations. (August 26, 2020)

- **Tüpraş signs long term cooperation agreement with Emerald Industrial Innovation Fund.** Tüpraş stated that the cooperation with the international entrepreneurial capital fund will enable access to new technology firms operating abroad. (August 26, 2020)

- **Solid fuel statistics for June released.** According to data released by Turkstat, lignite coal was the solid fuel with the highest production and delivery. Total marketable production of lignite stood at 5.04 million tonnes, with total deliveries of ignite amounting to 5.38 million tonnes. 85.9% of the lignite was delivered to thermal power plants with 9.4% of the lignite delivered to industry (apart from the iron and steel industry). (25 August 2020)

- **Turkey's total oil imports down 11.6% YoY in June.** According to the June 2020 Petroleum Market Report released by the Energy Market Regulatory Authority (EMRA), Turkey's total oil imports reached 2.79 million tonnes. Crude oil, which accounts for the highest share of petroleum imports, declined by 22% to 1.65 million tonnes. Total diesel imports, on the other hand, increased by 20.9% to 907,000 tonnes in June. In the same period, sales of diesel fuel derivatives increased by 8.9%, while imports of gasoline derivatives declined by 4.5% (August 25, 2020)

- **Zorlu Natural Gas Distribution Trade Inc. to be acquired by Zorlu Energy Distribution Inc.** According to the company's statement on the Public Disclosure Platform, Zorlu Energy Distribution Inc. will buy all of the shares in Zorlu Natural Gas Distribution Trade Inc. for TL 208.5 million. (August 24, 2020)

- **Renewable energy power plants in Turkey receive 4.1 billion liras of support in July.** Plants operating under the Renewable Energy Resources support Mechanism (YEKDEM) generated 6.3 million MWh of electricity with TL 1.2 billion of support were allocated to unlicensed electricity generation plants. (August 20, 2020)

- **Applications for YEKDEM to be accepted until November 2<sup>nd</sup>.** According to a statement from EMRA, companies with generation licenses seeking YEKDEM support in 2021 may apply electronically until November 2, 2020. (August 18, 2020)

- **Oteko Group ends operations in Turkey.** The Russian energy company Oteko applied to the Competition Authority for the transfer of shares of Petgaz Inc. to BDY Group Investment Inc. Once the acquisition is completed, the Russian company will no longer maintain any significant operations in Turkey. (August 18, 2020)

- **Right to Clean Air Platform releases “Dark Report 2020: Air Pollution and Health Impacts”.** According to the report, air pollution in 2019 in 98% of the 51 cities in Turkey with adequate data exceeded the threshold determined by the World Health Organization (WHO). In 2019, the cities with the highest number of deaths due to air pollution were İstanbul (3,761 deaths), İzmir (2,075) and Manisa (1,680). The cities with the best air quality were Ardahan, Tunceli, Rize, Artvin and Bitlis where air pollution was recorded at the lowest level for three years in a row. (August 14, 2020)

- **Hybrid solar power plant with 76 MW of installed capacity to be established in Bingöl.** The plant will support the Aşağı Kaleköy reservoir and hydro-electric power plant built by Kalehan Genç Energy in Bingöl. The project will be the first solar power plant with only one stage of installation, and the inverters will be provided by FIMER, an Italian photovoltaic manufacturer. (August 10, 2020)

- **Income from YEKDEM to be calculated under a new formula.** According to the amendment released in the Official Gazette, unlicensed power plants will receive the net generation amount reported to the Market Operator, instead of the net generation amount calculated after the settlement. The amendment will enter effect from August 1, 2020. (August 7, 2020)

- **Roadmap meeting held for installation of electric vehicle charging stations.** According to news reported by the Anadolu Agency, the Minister of Energy and Natural Resources, Fatih Dönmez, the Minister of Industry and Technology, Mustafa Varank, the Minister for the Environment and Urbanization, Murat Kurum, and the President of EMRA, Mustafa Yılmaz, joined the meeting. The Ministry of Energy and Natural Resources announced that it was estimated that between 1 million and 2.5 million electric vehicles would be on the roads by 2030, with 250,000 public charging stations expected to be commissioned for these vehicles. (August 4, 2020)

## News From Abroad

- **Valaris files bankruptcy following plunge in oil prices coupled with contraction in energy sector due to slump in energy demand amid COVID-19 pandemic.** Valaris, the biggest offshore drilling company with its fleet of 16 drilling ships and 74 open sea drills, filed for bankruptcy following its failure to pay back interest payments. The London based company, which was established with the merger of Ensco and Rowan, is

reported to have USD 7 billion of debt. Valaris's key rivals, Noble, with USD 4.3 billion of debt, Transocean and Chesapeake have also filed for bankruptcy. (August 20, 2020)

- **Global oil supply increases by 2.5 million barrels per day compared to the previous month, reaching 90 million barrels per day.** The monthly oil market report released by the International Energy Agency (IEA) revealed that global crude oil production of Organization of Petroleum Exporting Countries (OPEC) reached 23.75 million barrels, an increase of 1.2 million barrels per day compared to the previous month. Oil production of non-OPEC countries reached 61.2 million barrels, an increase of 1.24 million barrels per day. The report estimates global oil demand of 91.9 million barrels per day for 2020, marking a decrease of 8.1 million barrels per day. The IEA cited the contraction in the aviation sector due to the COVID-19 pandemic as the reason for the decline in oil supply. (August 14, 2020)

- **Crude oil production of OPEC increased in July.** According to OPEC's July oil market report, daily crude oil production increased by 980,000 barrels per day in July compared to the previous month to reach 23.17 million barrels per day. Global oil supply reached 88.75 million barrels per day, an increase of 1.29 million barrels per day. In the same period, oil production from non-OPEC countries reached 65.58 million barrels per day, an increase of 310,000 barrels per day. Among OPEC members, Saudi Arabia recorded the highest increase in daily oil production, to 8.41 million barrels per day, up 866,000 barrels per day. Saudi Arabia was followed by the United Arab Emirates, Kuwait and Iraq. The report estimates that global oil demand will stand at 90.63 million barrels per day in 2020, marking a 9.09% of decline, corresponding to 9.06 million barrels. The report also estimates that daily global oil demand of 97.63 million barrels for the next year, marking an increase of 7 million barrels per day, and a 7.72% increase compared to the previous year before. (August 13, 2020)

- **USA Energy Information Agency (EIA) revised its oil price forecasts upward for 2020.** In the “August 2020 Short Term Energy Outlook Report”, EIA forecasted price of Brent crude oil to be 41.4 dollars per barrel. Same forecast was 40.5 dollars in July 2020 report. The price of crude oil is expected to reach 49.5 dollars next year. (August 13, 2020)



- **Offshore wind capacity on a faster increase.** According to the Global Offshore Wind Energy report, released by the Global Wind Energy Council (GWEC), total installed capacity in wind power amounted to 29.1 GW in 2019 with an increase of 6.1 GW compared to the year before. Hence, the world's total installed capacity of wind power has increased at an annual average growth rate of 24% since 2013. The report estimates that total installed capacity of wind power will increase by 6.6 GW in 2020 despite the negative impact of the COVID-19 pandemic. The GWEC expects 234 GW of installed capacity to come onstream over the next 10 years and 1,400 GW to come onstream over the next 30 years (August 12, 2020).

- **EIA raises its forecasts for global oil demand in 2020.** In its "Short Term Energy Outlook Report", the EIA revised its forecasts for global oil demand in 2020 up by 7 million barrels per day. Global oil demand in 2020 is expected to be 93.1 million barrels per day in 2020, a decline of 8.1 million barrels per day compared to the previous year. Daily global oil demand is forecasted to increase by 7 million barrels in 2021. (August 12, 2020)

- **Russia records 34.8% YoY fall in oil export revenues in January-June period when compared to the same period last year.** According to data released by the Federal Customs Service of Russia, oil export volumes declined by 2.6% in the first 6 months of 2020, compared to the same period in 2019, to amount to 125 million tonnes. In the same period, income from Russian oil exports declined to USD 39 billion, marking a fall of 34.8% (August 11, 2020)

- **Microsoft to operate under a new system with zero waste, as part of its long term commitment to ensure environmental sustainability by 2030.** As part of its environmental sustainability strategies summarized under four pillars of "carbon-water-ecosystem-waste", the company will reportedly install Microsoft Circular Centers where servers and hardware will be reused and recycled. Microsoft Circular Centers aims to increase the reuse of servers and hardware by 90% by 2050. (August 10, 2020)





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