

Monthly Energy Bulletin

TSKB Economic Research

September 2020 #28

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Extension for Renewable Energy Resources Support Mechanism announced in Official Gazette

According to the announcement, power plants, which will enter operation between January 1 and June 30 2021, will be included in the Renewable Energy Resources Support Mechanism (YEKDEM) until December 31, 2030.

According to the Presidential Decree published on September 18, 2020 in the Official Gazette, pricing support for plants with the Renewable Energy Resources (YEK) document will continue until December 31, 2030.

Where mechanical and electro-mechanical equipment used in YEK documented plants has been locally procured, an additional five years of pricing support will be received.

YEKDEM guarantees to purchase electricity from wind farms and hydropower power plants at USD 73 per megawatt-hour (MWh), from geothermal plants at USD 105 per MWh and at a price of USD 133 per MWh from biogas and solar power plants .

27.83
TWh

September Gross
Generation

308.20
TRY/MWh

Average
MCP

-3.80%

Licensed electricity generation falls by 3.80% MoM in September, while rising by 8.93% YoY.

[Click](#) for details.

3.18%

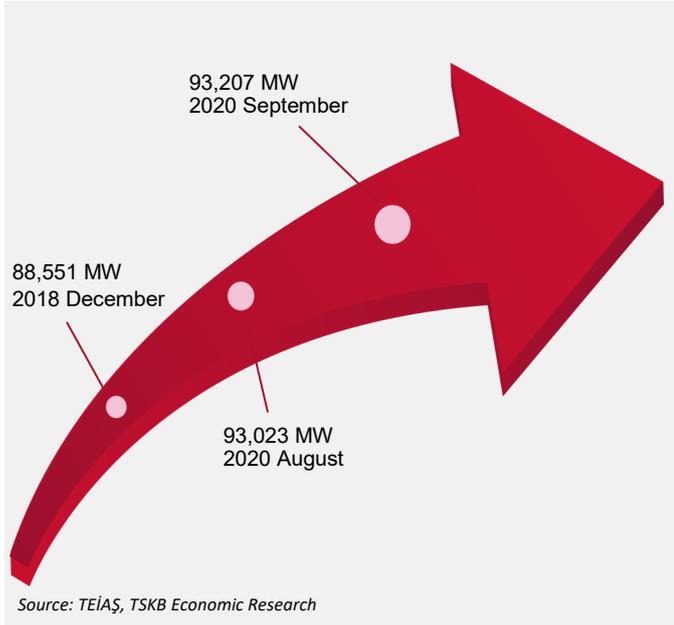
The Market Clearing Price (MCP) increases by 3.18% MoM in September, and by 3.46% YoY.

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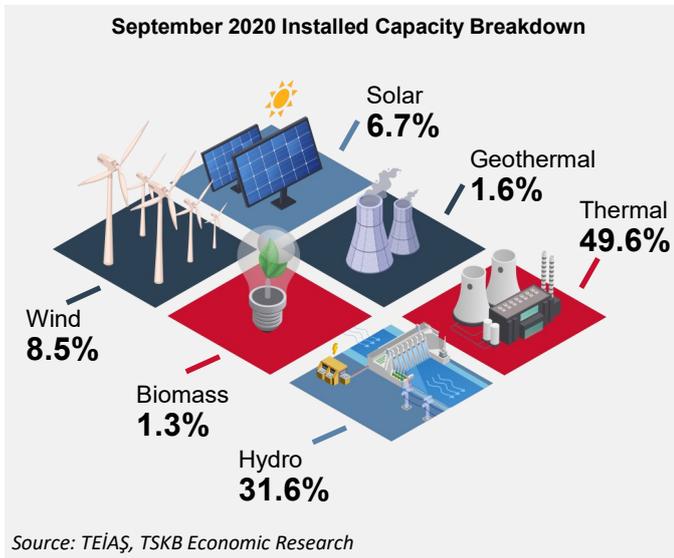


Installed Capacity Analysis

Turkey's total installed capacity, which had reached 91,267 megawatts (MW) at the end of 2019, reached to 93,207 MW by the end of September 2020. During this period, solar power plants with a total installed capacity of 66.4 MW were commissioned. The total installed capacity of natural gas power plants increased by 14.7 MW, with the total installed capacity of wind farms increasing by 64.4 MW.

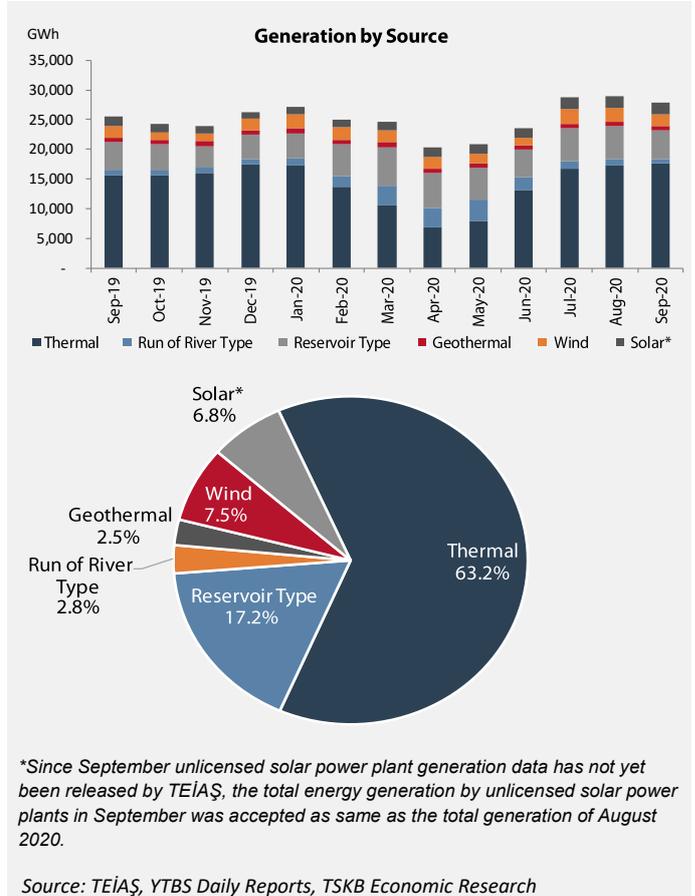


Of all the power plants in operation during September, 50.4% were generating electricity from renewable resources. Thus, the share of renewable power plants remained above 50%. Hydroelectric power plants accounted for 31.6% of Turkey's total installed capacity in September, while the combined share of wind and solar power plants amounted to 15.2%.



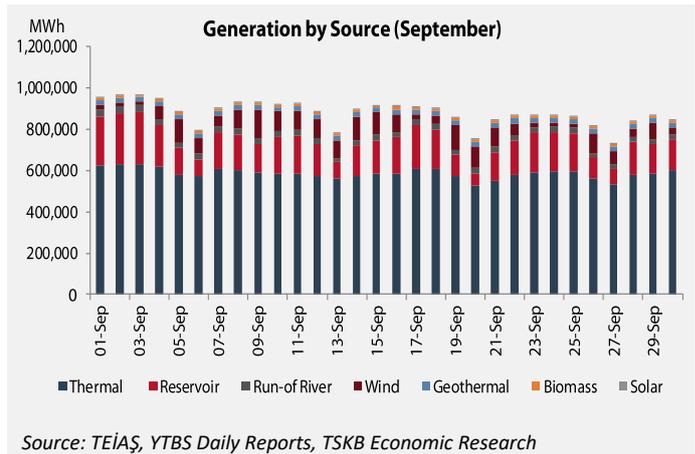
Electricity Generation Analysis

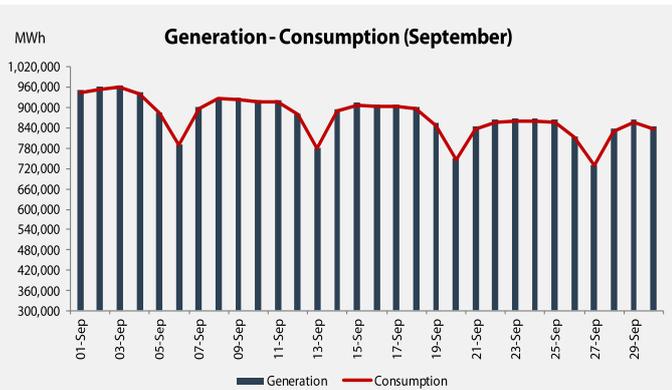
Approximately 28.93 terawatt-hours (TWh) of electricity was generated in August 2020, while total electricity generation in September 2020 decreased to 27.83 TWh. Average daily electricity generation in September declined by 0.60% compared to August. On the other hand, electricity generation in September increased by 8.93% compared to the same month in the last year.



Thermal power plants, which had supplied 59.5% of all of the electricity generated in August, accounted for 63.2% of the total electricity generated in September 2020. This 3.7 percentage point increase can be attributed to the decline in electricity generated from wind farms and hydropower plants.

After accounting for 23.1% of electricity generated in August, hydroelectric power plants provided 20% of the total monthly electricity generated in September 2020. Renewable power plants, which had an average share of 44.5% in electricity generation throughout 2019, accounted for 36.8% of all electricity generated in September 2020, 3.2 percentage points below the share in the same period of 2019. In the same period, hydro-electric power plants with dams provided a 17.2% contribution to total generation and river type dams accounted for 2.8% of total generation.





Source: TEİAŞ, YTBS Daily Reports, TSKB Economic Research

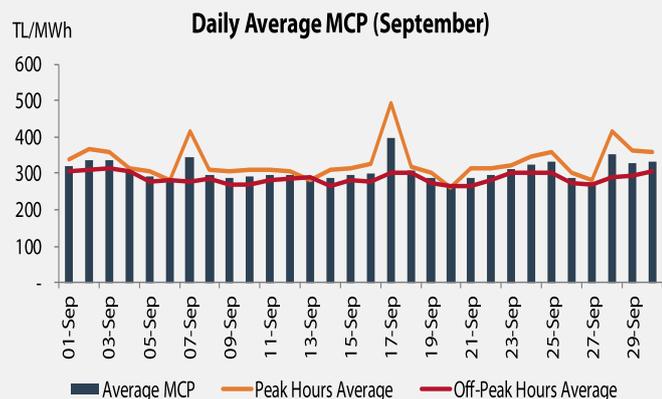
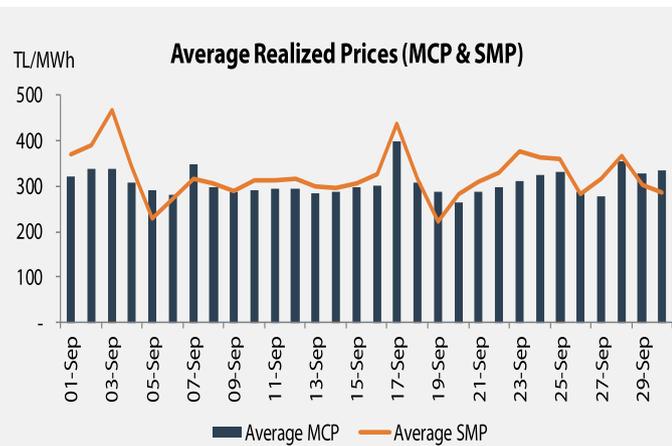
The average daily generation of licensed plants in September 2020 stood at 877,140 MWh. The highest level of electricity generation from licensed power plants was realized on Thursday, September 3rd, at 966,971 MWh, with the lowest being on Saturday, September 27th, when 731,375 MWh was generated.

Daily consumption averaged 871,613 MWh in September 2020, peaking at 960,214 MWh on Thursday, September 3rd, while the lowest level of electricity consumption, of 730,676 MWh, was recorded on Sunday, September 27th.

Electricity Price Analysis

The average MCP and system marginal price (SMP) fluctuated between TL 220 /MWh and TL 470 /MWh in September 2020. In the same period, the average MCP stood at TL 308.20 /MWh, while the SMP averaged TL 323.42 /MWh. The lowest average MCP, of TL 263.33 /MWh was recorded on Sunday, September 20th, and the lowest average SMP, of TL 221.73 /MWh was recorded on Saturday, September 19th.

The average MCP in September 2020 increased by 3.18% when compared to the August 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.

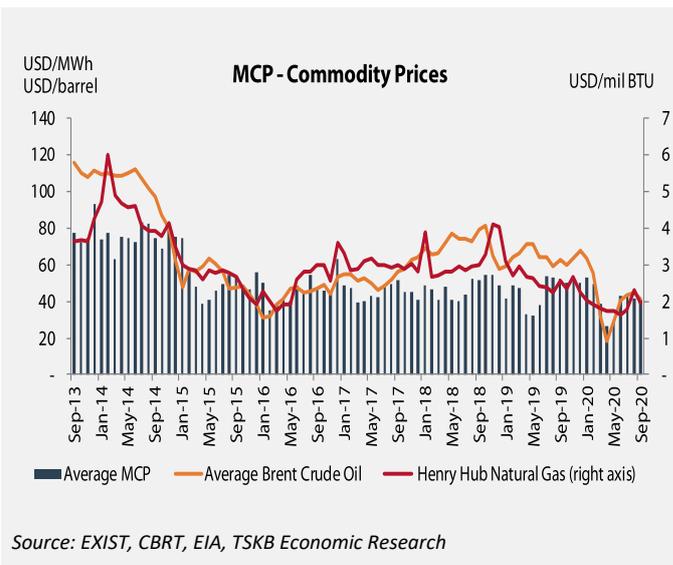


Source: EXIST, TSKB Economic Research

The daily average MCP for September stood at TL 329.86 /MWh for peak hours (from 8AM to 8PM), 7.0% higher than the daily average value. The highest peak-hour average recorded was TL 493.58 /MWh on Thursday, September 17th, while the lowest peak-hour average was TL 260.02 /MWh, recorded on Sunday, September 20th.

Average pricing in off-peak hours (from 8PM to 8AM) for the same period stood at TL 286.55 /MWh while the highest off-peak hour average was TL 314.38 /MWh, recorded on Thursday, September 3rd, with the lowest off-peak-hour average of TL 264.94 /MWh recorded on Monday, September 14th.

The MCP, which had averaged USD 45.98 /MWh over 2019, averaged USD 40.55 /MWh in the first eight months of 2020 while the average MCP in September stood USD 41.05 /MWh. MCP prices declined by approximately 0.3% in dollar terms in September compared to their August level. In dollar terms, MCP prices are 21.3% 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 40.97 per barrel in September, continuing to converge with their pre-COVID-19 levels. Brent crude oil prices declined by 8.4% in September when compared to the previous month, while also hovering 34.8% below their level in the same period of the previous year. The average price of Henry Hub natural gas was USD 1.95 /mBTU in September, 15.4% lower than the USD 2.30 /mBTU average for August 2020. Average natural gas prices declined by 24% in September 2020 compared to the same month a year ago.





Sector News

Local News

- **Karapınar Renewable Energy Resource Zone Solar Power Plant (YEKA GES-1) granted access to national grid.** The first stage of 3.43 MW plant was connected to the national grid and started to generate electricity. The power plant has a total installed capacity of 1,000 MW. Kalyon Holding had won the YEKA GES-1 competition in 2017 with a bid of USD 69.9 per MWh for the next 15 years. (September 29, 2020)

- **Energy Market Regulatory Authority (EMRA) released “Electrical Market Sector Report” for July.** According to the report, licensed electricity generation in July decreased to 27.46 million MWh marking a 0.4% decline compared to the same period last year. 25.2% of total licensed electricity was generated by hydropower plants, whereas 24.1% was generated by natural gas plants. Imported coal and lignite plants constituted 21.9% and 12.4% of total electricity generation respectively. (September 28, 2020)

- **EMRA released “Natural Gas Market Sector Report” for July.** Turkey’s natural gas imports were reported as 3.1 billion cubic meters (bcm) marking a 4.5% decline compared to the same period last year. Azerbaijan provided highest volume of natural gas to Turkey in this period, followed by Russia and Iran. Turkey’s natural gas consumption declined 0.2% YoY to 2.8 bcm. The volume of natural gas consumed by power plants rose 7.9% YoY to 1.12 bcm. In July, households’ natural gas consumption rose by 6.5%. (September 28, 2020)

- **EMRA released “Oil Market Sector Report” for July.** Turkey’s total oil imports in July stood at 4.35 million tonnes marking a 6.1% increase compared to the same month last year. In this period, Iraq supplied the largest volume of crude oil imports, followed by Russia and Nigeria. In July, Turkey’s petroleum product sales were realized at 2.96 million tonnes, an in-

crease of 4.4%. (September 28, 2020)

- **First reactor of Akkuyu Nuclear Power Plant (NPP) to enter operation in 2023.** In his interview with Anadolu Agency, the Minister for Energy and Natural Resources, Fatih Dönmez, stated that work on the Akkuyu NPP was proceeding rapidly and steadily. Dönmez also said that first reactor would enter operation in 2023 and the second reactor in 2024, while the licensing process was still continuing for the third reactor. (September 25, 2020)

- **Turkish Statistical Institute (TÜİK) released electricity and natural gas price statistics.** The price of electricity per kilowatt-hour (kWh) increased by 32.3% for domestic use in the first 6 months of 2020 compared to the same period last year, averaging to 71.2 kuruş. The price of natural gas per cubic meter consumed domestically averaged 182.6 kuruş in the first 6 months of 2020, increasing by 34.7% YoY. In the same period, the price of electricity for industrial use averaged 58.6 kuruş per kWh, a 21.8% YoY increase, while the price of natural gas averaged 189 kuruş per cubic meter, an increase of 13.2%. (September 24, 2020)

- **Pre-license applications for wind power postponed.** According to a statement released in the Official Gazette, pre-license applications for 2,000 MW of wind power capacity have been delayed until further notice. (September 23, 2020)

- **Decline of 6.2% in volumes of crude oil transferred through underground pipelines in Turkey in August.** According to data released by the Petroleum Pipeline Company (BOTAŞ), pipelines passing through Turkey’s territory transferred 38.93 million barrels of crude oil in August. (September 23, 2020)

- **Aksa Elektrik to provide green energy.** According to a statement from the company, trade businesses and industrial corporations acquiring electricity from Aksa Elektrik will receive an International Renewable Energy Certificate which will certify renewable sources of electricity generation. (September 20, 2020)

- **Enerjisa Üretim signs EUR 650 million credit agreement on sustainability with 7 banks.** Enerjisa will be entitled to funding from the Sustainability Credit Mechanism, with a volume of over 1.5 trillion dollars as of August. The banks involved in the credit agreement include Akbank, Garanti BBVA, İş Bank, HSBC, ING, TEB and İşbank AG. (September 22, 2020)

- **Charging stations to be compulsory.** The Minister for the Environment and Urbanism, Murat Kurum, said that the new law on car parking management would require that there is one a place for one electric vehicle per 50 parking places. Kurum also stated that each car park would be required to have charging stations by law. Petrol stations will also be required to have electrical vehicle charging stations throughout the country. (September 21, 2020)

- **Time extension for YEKDEM announced.** According to the amendment released in the Official Gazette, power plants which will start operation between January 1, 2021 and June 30, 2021 will be included in the current YEKDEM until December 31, 2030. (September 18, 2020)

- **Capacity mechanism applications for 2021 commenced.** According to the announcement made by Türkiye Elektrik İletim A.Ş. (TEİAŞ), applications for power plants to be included in the capacity mechanism will be open until September 15, 2020. (September 17, 2020)

- **Environmental Impact Assessment report for Sinop Nuclear Power Plant approved.** The total cost of the project, which will be located in İnceburun and have four reactors, was estimated to be USD 20 billion. According to the report, construction work for the plant will commence in 2021 and the plant will enter operation in 2031. (September 15, 2020)

- **Petrol Ofisi signs agreement with Chevron Brands on license, production, distribution and marketing of fuel oils.** Texaco fuel oils will be produced and sold by Petrol Ofisi starting in 2021. (September 8, 2020)

- **Natural Gas Futures Market to start trading in 2021.** EMRA finalized its preparations for a natural gas futures market where natural gas would be bought and sold under future contracts. The President of EMRA, Mustafa Yılmaz, remarked that the market would enable participants to buy and sell domestic natural gas prior to its supply in 2023. Hence, the price of Black Sea natural gas would affect the overall price of natural gas even before its extraction. (September 7, 2020)

News From Abroad

- **Global oil demand expected to decline in 2020.** Mohammad Barkindo, the Secretary General of the Organization of Petroleum Exporting Countries (OPEC) stated in his presentation at the G20 Ministers of Energy Summit that global oil demand was expected to decline by 9.5 million barrels per day. Barkindo also stated that oil stocks were expected to decline and to be below the average of the last 5 years in the first quarter of 2021. (September 29, 2020)

- **China aims to be carbon neutral by 2060.** In his speech at the United Nations General Summit, the President of China, Xi Jinping, said that China would first reach its carbon emissions limit by 2030 and then gradually decrease its emissions until 2060 to the point of being carbon neutral. (September 24, 2020)

- **Eastern Mediterranean Natural Gas Forum established.** Six countries - Egypt, Israel, Greece, Cyprus, Italy and Jordan - have formed an international alliance to encourage the extraction and export of natural gas in the Eastern Mediterranean region. (September 23, 2020)

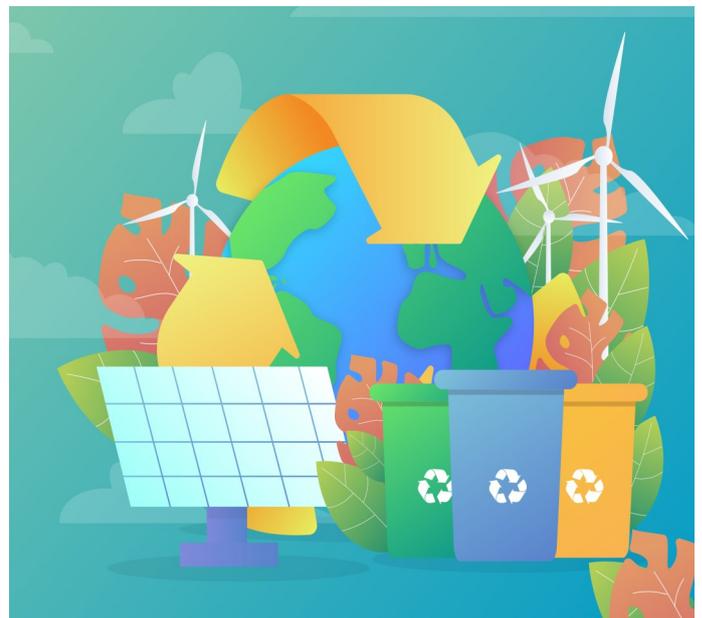
- **Volkswagen issued first green bond.** The company raised EUR 9.5 billion in the first round of two Eurobond issuances with maturities of 8 and 12 years, but limited the issuance by EUR 2 billion. The funds raised from the Eurobond issuances will be invested in electric vehicle projects and cover the cost of charging stations. (September 22, 2020)

- **Saudi companies considering the establishment of a petrochemicals firm.** The Saudi Industrial Investment Group and National Petrochemical Co started merger negotiations to establish a company with USD 11 billion of capital. The negotiations are reported to be at a very early stage, with no agreement reached so far. (September 18, 2020)

- **BP Energy Outlook 2020 projecting rise of up to 25% in global energy demand by 2050.** All three scenarios set out in the report predict that demand for oil will decline in the next 30 years. Demand for renewable energy, which grew by 5% in 2018, is expected to grow with a 20% increase expected by 2050. (September 18, 2020)

- **Organization of the Petroleum Exporting Countries (OPEC) and OPEC+ maintain oil production cut.** According to the decision taken in the OPEC and non-OPEC Ministerial Meeting, the cut in oil production of 7.7 million barrels per day will remain in place until the end of the year. The next meeting will be held on October 19, 2020. (September 18, 2020)

- **Google claims net zero carbon footprint.** The company had become carbon neutral in 2007. Google's CEO, Sundar Pichai, said that Google had neutralized its historical carbon emissions and added that all datahouses and offices were planned to operate with zero carbon energy by 2030.



- **Eni discovers 113 billion cubic meter natural gas reserve near Egypt.** According to a statement from Eni, a new reserve was discovered in the Nidoco NW-1 well, operated under the alliance of BP and the Egyptian oil sector. (September 17, 2020)

- **International Energy Agency (IEA) releases “Monthly Oil Market Report” for August.** According to the report, global oil supply stood at 91.7 million barrels per day, marking an increase of 1.1 million barrels per day compared to the month before. Global oil demand is expected to decline by 8.4 million barrels per day on average compared to the last year. The IEA maintained its oil demand forecast for 2021 at 97.1 million barrels per day. (September 16, 2020)

- **IEA warns that decline in global emissions will not be permanent.** The Energy Technology Perspectives 2020 report, released by the IEA, stated that global carbon emissions in the energy sector were expected to decline by 8% compared to their 2019 level due to the COVID-19 quarantine measures, while cautioning that the decline was not expected to continue. The report called for structural changes in order to prevent a global climate crisis and achieve the zero emissions goals, while pointing out that work should be stepped up on clean energy technology investments. The IEA also declared that annual renewable energy capacity should reach 4 times its 2019 level. (September 14, 2020)

- **US Commodity Futures Trading Commission (CTCF) released Managing Climate Risk in the U.S. Financial System report.** The report states that climate risks could weaken the production capacities of the economy, which would hamper the creation of jobs, income and opportunities. The report also suggests that the climate crisis poses a great risk to the stability of the U.S. financial system as well as the sustainability of American economy. (September 10, 2020)





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