

# Monthly Energy Bulletin

TSKB Economic Research

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## Renewable Energy Resource Field (YEKA) tenders were continued in June

The tender of the 10 fields within the scope of Wind Power Renewable Energy Resource Field - 3 (YEKA RES-3) contest, which will have a total generation capacity of 850 megawatts (MW) in wind power, was completed on 14 June.

Within the scope of the 10 tenders that were organized within YEKA RES-3 for a total 430 MW capacity, the weighted average price was determined as TL 521.50 per megawatt-hour (MWh). The lowest price offer in the tenders was submitted in the Karaman-Mersin region, of TL 408 /MWh for 70 MW of capacity, by Eksim Enerji A.Ş., while the highest price offer was submitted in the Van region, at TL 699/MWh for 30 MW of capacity by Betim Enerji Yatırım A.Ş.

The tenders for 12 GES projects to be installed in the Erzin and Viranşehir districts within the scope of the Solar Power Renewable Energy Resource Field - 4 (YEKA GES-4) were completed on 28 June. A total of 700 MW of capacity was allocated for 7 companies. The weighted average price in the tenders was TL 553.80 /MWh with the lowest price offer of TL 490 /MWh submitted for the Viranşehir-9 region for 50 MW capacity by Ral Enerji A.Ş. and the highest price offer submitted in the Erzin-1 region of TL 597 /MWh for 100 MW of capacity by Limak Yatırım Enerji Üretim A.Ş.

26.99  
TWh

June Gross  
Generation

2,230.7  
TL/MWh

Average  
MCP

10.1%

Daily average licensed electricity generation increased by 10.1% MoM and 0.3% YoY in June.

[Click](#) for details.

26.5%

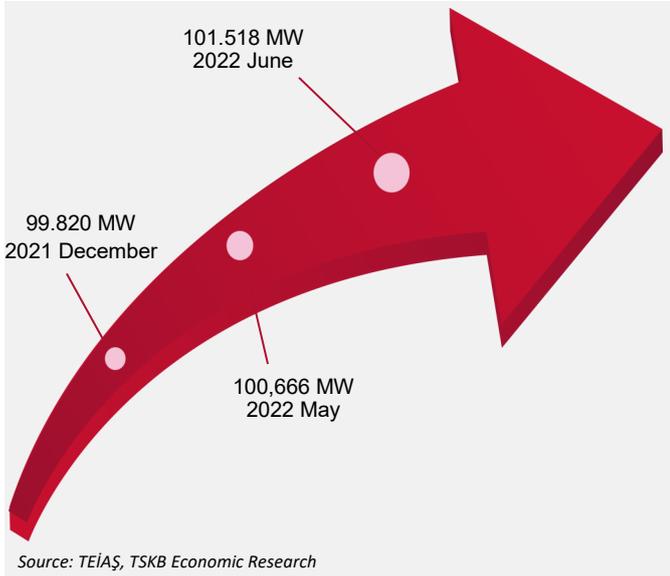
Market Clearing Price (MCP) increased by 454.9% YoY and by 26.5% MoM in June.

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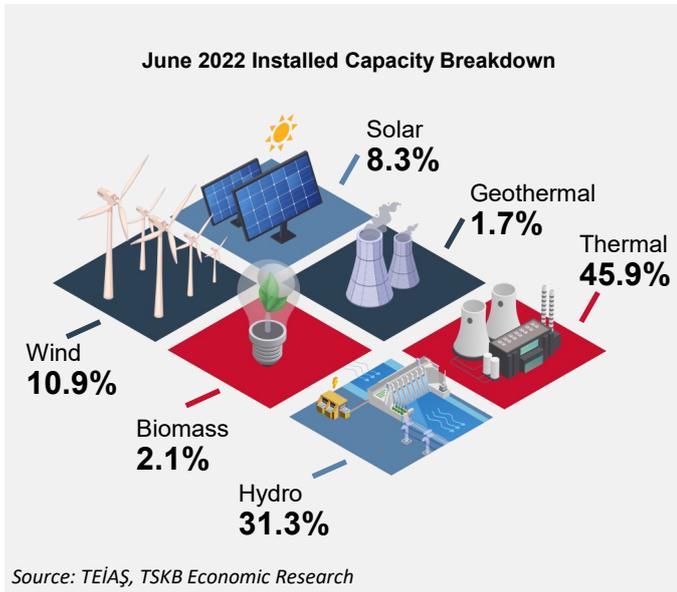


# Installed Capacity Analysis

Turkey's total installed power, which had reached 99,820 MW at the end of December 2021, reached 101,518 MW by the end of June 2022. The 660 MW increase in the installed capacity of imported coal power plants, in comparison with the previous month, was the biggest driver of the increase in June. In the same period, there was a 143.2 MW increase in the total net installed power of solar power plants and an increase of 45.2 MW in the total net installed capacity of wind power plants.

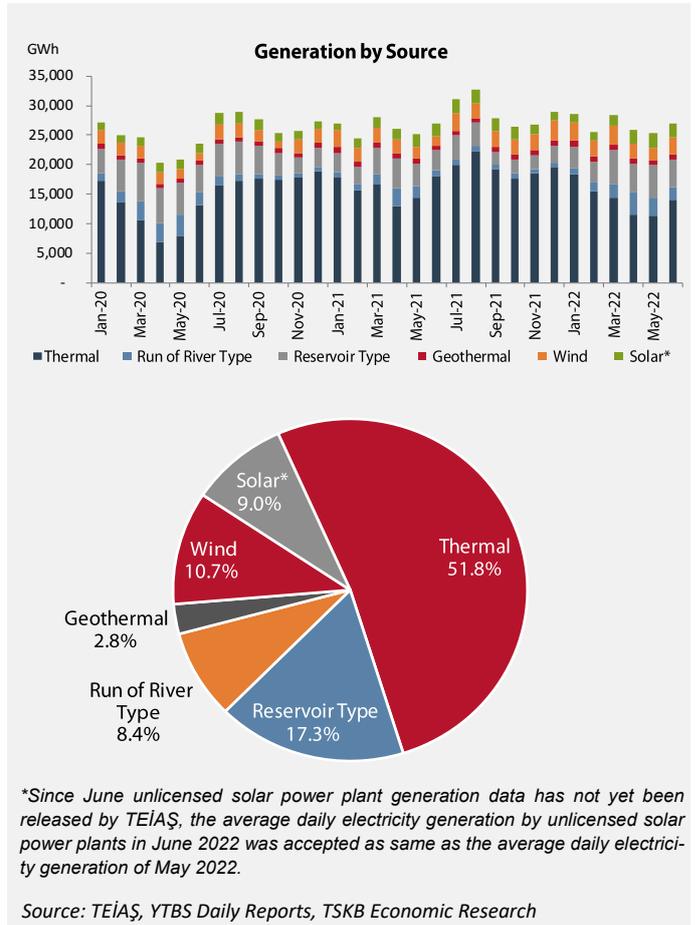


Power plants generating electricity via renewable sources accounted for 54.1% of the installed capacity of operating power plants in June, thus remaining above 54%. Hydroelectric power plants account for 31.3% of Turkey's total installed electricity power capacity while the share of wind and solar power plants in total installed power has reached 19.1%.



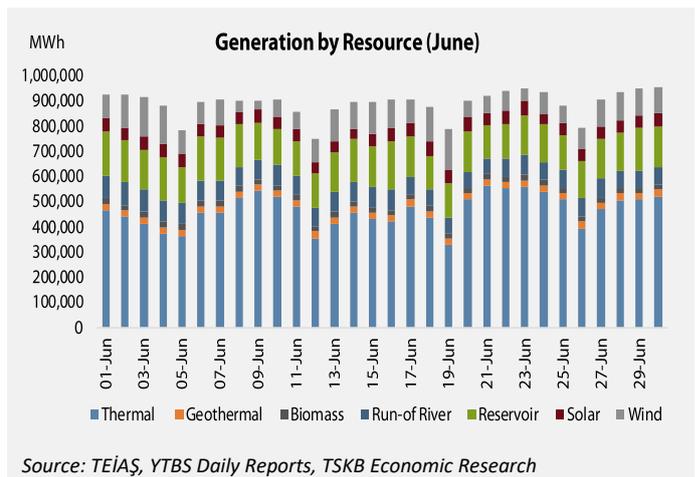
# Electricity Generation Analysis

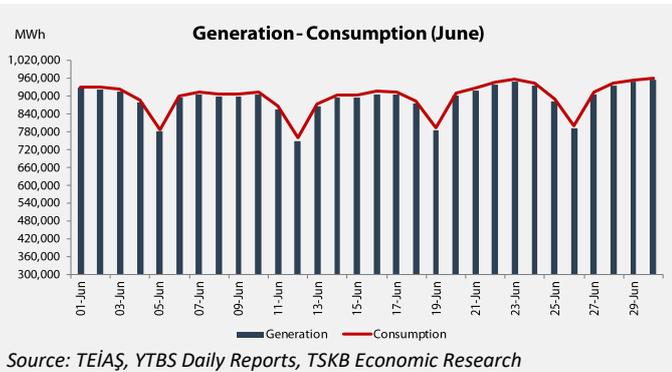
Total electricity generation stood at approximately 25.34 terawatt-hours (TWh) in May and 26.99 TWh in June. Daily average electricity generation in June increased by 10.1% when compared to May and by 0.3% when compared to the same month of the previous year.



Thermal power plants provided 44.4% of electricity generation in May and 51.8% in June. Hydroelectric power plants, which accounted for 33.1% of generation in May, generated 27.5% of the total electricity generated in June. In the same period, the share of the electricity generated by wind increased by 2.5 percentage points to reach 10.7%.

The average share of the renewable energy power plants in electricity generation was 36.0% in 2021, and was realized at 48.2% in June 2022. In the same period, dam-type hydroelectric power plants provided a 17.3% contribution to total generation, while run-of-the-river hydroelectric power plants provided 8.4% of the total generation.





Source: TEİAŞ, YTBS Daily Reports, TSKB Economic Research

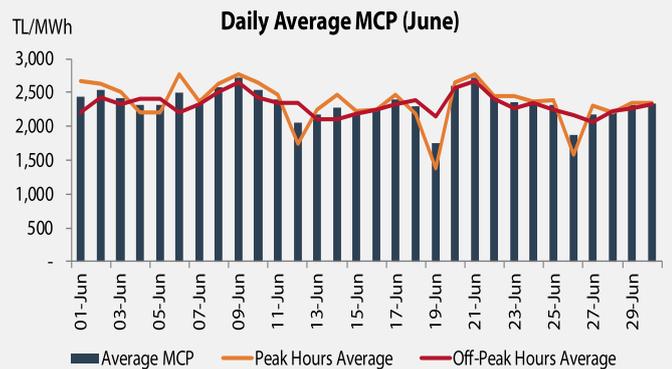
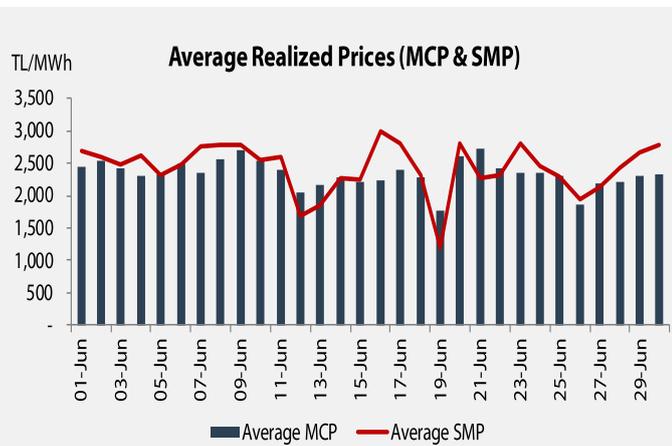
The daily average electricity generation of licensed power plants in June was realized as 891,890 MWh. The highest generation from licensed power plants in June was recorded as 954,781 MWh on Thursday, June 30<sup>th</sup> and the lowest generation in the same period was 749,813 MWh on Sunday, June 12<sup>th</sup>.

In the same period, daily average electricity consumption was 899,547 MWh. The highest consumption was 962,615 MWh on Thursday, June 30<sup>th</sup> and the lowest daily consumption was recorded on Sunday, June 12<sup>th</sup> at 762,261 MWh.

## Electricity Price Analysis

During June, the daily average market clearing price (MCP) and system marginal price (SMP) were realized between TL 1,200 /MWh and TL 3,000 /MWh. The average MCP in June was TL 2,370.70 /MWh, and the average SMP in the same period was TL 2,186.60 /MWh. The lowest daily average MCP was TL 1,761.70 /MWh on Sunday, June 19<sup>th</sup> while the lowest SMP was TL 1,207.60 /MWh on the same day.

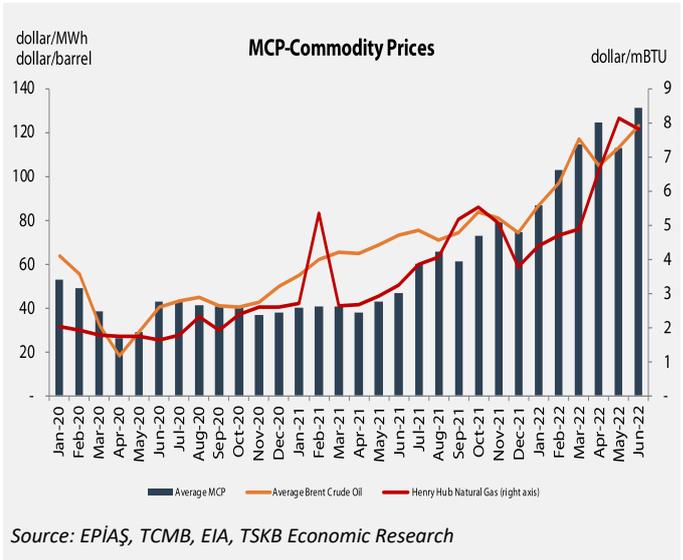
An examination of the hourly data finds that the MCP was realized at the determined maximum price limit of TL 3,200 /MWh for 7 hours, with the SMP at its limit for 100 hours. In the same period, the SMP was TL 0 /MWh for one hour.



Source: EXIST, TSKB Economic Research

An analysis of the daily MCP in June finds that the average peak-hours rate (between 8AM and 8PM) reached TL 2,357.80 /MWh with a very limited increase in the daily average value. While the maximum price limit of TL 3,200 /MWh was recorded for one hour in the peak hours, the minimum price in peak hours was realized on Sunday, June 19<sup>th</sup>, at TL 500 /MWh.

In the same period, the average off-peak (between 8PM and 8AM) tariff was TL 2,322.40 /MWh. The maximum price limit of TL 3,200 /MWh was realized for a total of six hours in the off-peak period with the lowest tariff of TL 1,250 /MWh recorded on Sunday, June 19<sup>th</sup>.



Source: EPİAŞ, TCMB, EIA, TSKB Economic Research

The MCP, which averaged USD 112.60 /MWh in May, increased to USD 131.30 /MWh in June. When compared to the previous period, the MCP was 181.2% higher in USD terms.

### Average Commodity Prices

While the price of Brent crude oil averaged USD 113.30 per barrel in May, it increased by 8.5% in June to reach an average of USD 123 per barrel in the month, standing 68.1% higher than in the same period of the previous year.

The average contract price of Henry Hub natural gas, which was USD 8.10 /mBtu in May, decreased by 3.9% on a monthly basis to average USD 7.80 /mBtu in June – marking a 139.9% increase when compared to the previous year.





## Sector News

### Local News

- **SHURA expects energy transformation investments to accelerate on a global scale.** In the "Financing the Energy Transition in Turkey within the Context of the Green New Deal" report published by the SHURA Energy Transformation Center, action and policy recommendations were shared for Turkey's energy transformation finance. In the work, while emphasis was placed on the fact that the Turkish economy's need for structural transformation matched the agenda of the Green New Deal, it also underlined that the opportunities that the Green New Deal created internationally, particularly the European Green Deal, would pave the way for a quick and comprehensible leap in Turkey's energy transformation journey, despite the funding constraints. (30 June 2022)

- **Maximum price limit raised in the Day-Ahead Market and Balancing Power Market.** According to a statement made by Enerji Piyasaları İşletme A.Ş. (EPIAŞ), the maximum price applied in the Day-Ahead Market and Balancing Power Market has been raised from TL 3,200 to TL 3,750 per MWh. The previous update on the maximum price limit was actualized on May 28<sup>th</sup>. (30 June 2022)

- **President Recep Tayyip Erdoğan announces discovery of high quality oil in Adana.** In a speech, President Erdoğan remarked that high quality oil with a reserve value of USD 1 billion had been found in Adana and added that eight more boreholes would be opened in the same field. He continued his speech by adding that there would be investments for the production of rare elements and that a production facility would be built in Eskişehir to process 200 tonnes of ore in the first phase. Once the facility reaches its full capacity, it will process 500,000 tonnes of ore. (29 June 2022)

- **Aselsan ve Elektrik Üretim A.Ş. (EÜAŞ) to cooperate to**

**develop wind farm with local resources.** The capacity of the first local wind power plant, which will be built in the same area as Turkey's first wind farm, the Alaçatı Rüzgâr Enerji Santrali (ARES) in 2024, will be 4 MW. (24 June 2022)

- **USD 125 billion planned to be invested in electricity distribution over 2021-2025 period.** In a speech at the Electricity Distribution Companies Sector Evaluation Meeting, the Minister for Energy and Natural Resources, Fatih Dönmez, stated that TL 74.3 billion would be invested in electricity distribution investments between 2016-2020, adding that this figure had been determined as TL 124 billion for the Fourth Application Period covering years between 2021-2025. Mr. Dönmez said that a total of TL 20 billion in investment had been realized and that TL 3.21 billion of the TL 3.24 billion budget for 2021 had been allocated to planned maintenance. In addition, Mr. Dönmez pledged that USD 2 billion would be invested in the network for distribution production and renewable energy technologies until 2030, with USD 1 billion to be allocated to electric vehicle charging points and network infrastructure. (17 June 2022)

- **First phase of Black Sea natural gas extraction to provide 10 million cubic meters (mcm) of natural gas per day.** In a speech, Recep Tayyip Erdoğan stated that the natural gas from the Black Sea would start to be used in homes in the first quarter of 2023, adding that in the first phase, 10 mcm transferred. In addition, President Erdoğan said that production of the Sakarya Gas Field would peak in 2026. The amount of 10 mcm per day referred to represents approximately 5% of average consumption. (14 June 2022)

- **Tuz Gölü Natural Gas Storage Facility's storage capacity set to reach 15 billion cubic meters (bcm).** Burhan Özcan, the General Manager of Boru Hatları ile Petrol Taşıma A.Ş. (BOTAŞ), made a statement where he stated that a geologically rich structure had been detected that will be able to increase

the storage capacity of the Tuz Gölü Natural Gas Storage Facility to 15 bcm. While Mr. Özcan reiterated that BOTAŞ was aiming to increase the capacity of the Tuz Gölü Natural Gas Storage Facility to 5.4 bcm in 2023, he also added that a second fixed investment would not be needed to increase the capacity to 15 bcm. (8 June 2022)

**- Two factories to be built to provide half of Turkey's lithium production.** In a speech at the Eurasia R&D Innovation and Technology Summit and Exhibition, the Minister for Energy and Natural Resources, Fatih Dönmez, remarked that the lithium carbonate produced by liquid boron waste in Eskişehir Kırka had successfully passed all tests and its production optimization was being made in the pilot facility. Mr. Dönmez added that the foundations of the two new factories, which will produce 500 tonnes per year, will be laid in 2022, and the production from the facilities will provide half of Turkey's lithium production. (03 June 2022)

**- Electricity tariffs increased.** According to the electricity tariff list for June which has been approved by the Energy Market Regulation Authority, the residential tariff has been increased by 15% and the tariff for industry and commercial buildings by 25%. Accordingly, the tariff for residential use in the first category is 129.0639 kuruş per kWh and tariff for the upper category is 192.7977 kuruş/kWh. The tariff for commercial building subscribers placed in the first category has been determined as 208.9154 kuruş/kWh and the tariffs in the upper category have been determined as 278.0099 kuruş/kWh. On the other hand, the green tariff has been increased to 268.2821 kuruş/kWh (1 June 2022)

**- Natural gas prices for June raised.** According to the tariff table for June published by BOTAŞ, the unit price of natural gas for residential use has been increased by 16%, while tariffs for generation have been raised by 30% and tariffs for electricity uses other than generation have been raised by 10%. Thus, the tariff to be applied for residential and industrial consumers have reached TL 3,264 and TL 10,416 for 1,000 cubic meters of natural gas, respectively. The price of the natural gas has been determined at TL 12,500 per 1,000 cubic meters for electricity production facilities. (01 June 2022)

## News From Abroad

**- Calls to lower energy consumption made in France.** According to the shared notice published by three energy companies operating in France (Total Energies, EDF and Engie), there are serious problems in the European energy system, including in France, and that it was now imperative that energy consumption was reduced. The notice mentioned the effects of climate and the drought on hydro-electric energy production, while adding that every consumer should limit their consumption of electricity, natural gas and petroleum products. (27 June 2022)

**- International Energy Agency (IEA) President Fatih Birol warns that it is not possible to solve the energy crisis in a short period.** In a conference hosted by the Sabancı University İstanbul International Energy and Climate Center (IIECC) under the title of "The Role of Energy Security, Clean Energy and Finance", the president of the IEA, Fatih Birol, remarked that there was a global energy crisis, adding that ways of commerce would be changed, new energy partnerships would come to the agenda, some partnerships would end and new technologies would unexpectedly gain momentum in the coming period. The IEA President highlighted that European coun-

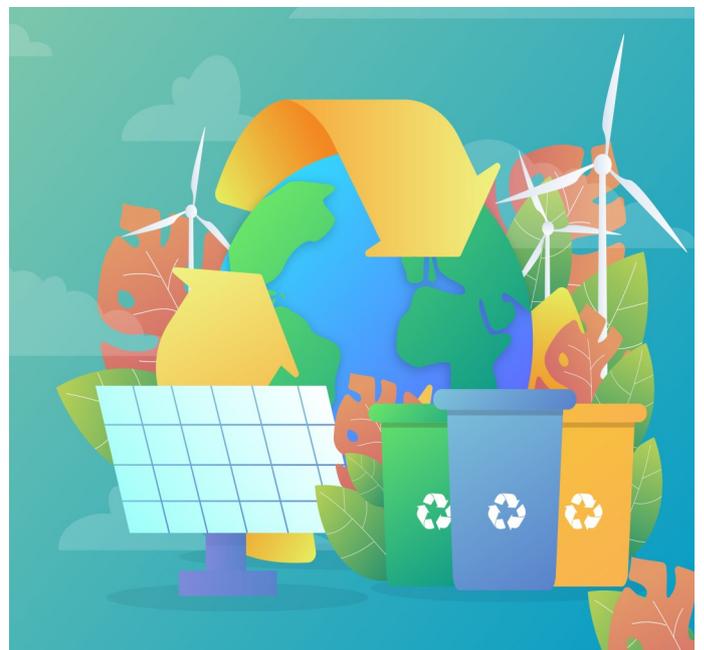
tries would have to implement plans to limit natural gas distribution to be applied in an emergency if Russia cut natural gas exports completely. He also warned that the steps Europe takes to improve energy efficiency, to find new natural gas resources and to increase the use of coal power plants would not be entirely sufficient. He added that growth of up to 12% had been seen in clean energy investments in 2021. (24 June 2022)

**- Germany raises risk level in its national natural gas emergency plan to the second stage.** While the heightened alarm lets the state impose a law to enable the increased energy costs faced by energy companies to be reflected to homes and businesses, some coal-fired plants have been reactivated to reduce natural gas consumption. It is foreseen that state control will be given in the country to take the natural gas risk level to the third stage. (24 June 2022)

**- Clean energy investments expected to account for 58% of total energy investments in 2022.** According to the "World's Energy Investments 2022" report prepared by the IEA, while global energy investments are expected to reach USD 2.4 trillion in 2022, up 8% compared to the previous year, USD 1.4 trillion of these investments will be directed to clean energy projects. This report states that the greatest growth in energy investments will be in the electricity sector, indicating that clean energy, the network and storage projects will constitute 80% of the investments in the electricity sector. In addition, the report underlined that the coal supply, which has increased by 10% led by the developing economies in Asia during 2021, may record similar growth in 2022, too. (23 June 2022)

**- IEA's President Fatih Birol warns that Europe has to be ready for Russia's natural gas to be cut off.** In an interview with the Financial Times, Fatih Birol warned the governments have to activate all precautions to reduce demand, adding that it would be crucial to keep nuclear power plants working. While pointing out that Russia's move to decrease the flow of natural gas in the Nord Stream-1 to 60% would prevent European countries from filling their storage facilities, he added that Europe needed to be prepared in case Russia cut off its natural gas supplies. (23 June 2022)

**- Qatar expanding its natural gas field.** According to an announcement made by the Qatar Energy Company, after an-



ouncements from the Italian ENI and French Total companies, within the scope of the agreement made with ConocoPhillips from USA, it is expanding its natural gas field. In the announcement, it is stated that the project's cost is USD 28.75 billion and the Qatar Energy Company would have a 70% share in the project with ConocoPhillips having a 25% share. This project is aimed at increasing increase Qatar's liquified natural gas production capacity to 126 million tonnes in 2027, from the current level of 77 million tonnes. (21 June 2022)

- **USA planning to put a price limit on Russian oil.** The Treasury Secretary, Janet Yellen said that the US, along with Canada and other allies, conducting negotiations to put a limit on Russia's oil prices in a bid to limit Russia's energy revenue. Ms. Yellen claimed the price limits would limit Russia's revenue and ensure more oil supply would be available in the global market. (21 June 2022)

- **Germany decides to ramp up generation from coal fueled power plants.** In the written announcement made by Germany's Economy Ministry, coal power plants will have to be used more instead of natural gas fired plants in order to reduce natural gas consumption. The Ministry added that the country's electricity generation capacity will be increased by 10 gigawatt (GW) when necessary by reactivating coal power plants. In his announcement, Germany's Economy Minister Robert Habeck underlined that the existing natural gas would have to be directed to the storage facilities. In addition, a mechanism to encourage a decrease in natural gas usage will be initiated. (20 June 2022)

- **Solar and wind resources now providing more than 10% of the global electricity.** According to "2022 Renewable Energy Global Situation Report" published by REN21, with the effect of the record increase in the global electricity production, the electricity produced by the solar and wind energy resources have now exceeded 10% of total electricity generation for the first time. In addition, the recovery in global energy demand actualized in 2021, which includes transportation, heating, and agriculture, as well as the electricity sector, has been met mostly by coal and natural gas, leading to a 6% increase in CO2 emissions. Despite supply chain disruption, transportation delays, and increasing prices for wind and solar energy components, 314GW of additional capacity was provided for renewable energy capacity in 2021, and total renewable energy capacity reached 3,146 GW. (16 June 2022)

- **Revenue from fossil fuels now being shifted to clean energy, according to President of the IEA, Fatih Birol.** The IEA's President Fatih Birol said there were three new trends in Europe – the increased in the importance given to renewable energy, states taking legally binding decisions on energy efficiency for the first time, and a return to nuclear power. The IEA's President reflected that the IEA expects the oil industry to return a profit of USD 4 trillion thus year, with a significant share of this amount to be spent on clean energy investments. (15 June 2022)

- **European Union (EU) to enter energy agreement with Israel and Egypt.** In a press conference the EU Commission President Ursula von der Leyen stated that the EU would enter an agreement to bring more natural gas from Israel and Egypt to Europe. While Commission President Ursula von der Leyen said a natural gas pipeline would be installed from Israel to Egypt and the natural gas that will be liquified in Egypt will be transported to Europe, she also underlined that there is a necessity to cooperate to provide environmentally friendly green energy. (15 June 2022)

- **Global oil production decreased in May.** According to the "Monthly Oil Market Report" published by the Organization for Petroleum Exporting Countries (OPEC), global daily oil production decreased to approximately 98.75 million barrels in May, a fall of 150,000 barrels compared to the previous month. Oil production increased by 60,000 barrels per day in Saudi Arabia in the last month, by 31,000 barrels per day in the United Arab Emirates and by 27,000 barrels per day in Kuwait. Oil production also decreased by 186,000 barrels per day in Libya and 45,000 barrels per day in Nigeria. OPEC maintained its forecast for global oil demand at 100.29 million barrels per day for 2022. (15 June 2022)

- **France brings off-shore wind farm on stream.** French energy provider EDF announced that the wind farms located off-shore near Saint-Nazaire have started to generate electricity. In addition, according to the announcement, 53 more off-shore wind farms are planned in addition to the 27 active wind farms, by April. (13 June 2022)

- **US Energy Information Administration raises projection for crude oil prices.** In June's "Short-term Energy Outlook" report of published by the EIA, the Brent Crude Oil price is set to average USD 107.37 per barrel, comparing with USD 103.35 in the May report. The price for West Texas Intermediate (WTI) crude is now projected to average USD 102.47 per barrel this year, after having been projected to average USD 98.20 per barrel in the May report. The price for per barrel of Brent crude is expected to average USD 97.24 per barrel in 2023 with and WTI type crude expected to average USD 93.24 per barrel. (9 June 2022)





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