

Monthly Energy Bulletin

TSKB Economic Research

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Further Announcements regarding Renewable Energy Resource Area (YEKA) for wind energy

Candidate offshore wind farm YEKAs have been determined. According to a statement from the Ministry of Energy and Natural Resources (MENR), four areas located off the coasts of Bandırma, Bozcaada, Gelibolu and Karabiga have been determined as potential offshore wind farm YEKA areas, and work is underway to determine them as YEKAs. Based on the determination of the areas of the declared YEKAs by the Ministry, the offshore wind farms will have areas of 1,111 square kilometres (km²) off the coast of Bandırma, 410 km² off the coast of Karabiga, 299 km² off the coast of Bozcaada and 75.6 km² off the coast of Gelibolu. These areas still have the status of potential YEKAs, with the total capacity of the offshore wind farms planned to be built in these areas not yet determined.

In the meantime, according to a list published by the MENR in the Official Gazette dated August 15, a total of 29 sites in 17 provinces have been declared as YEKAs based on terrestrial wind energy. The provinces where the declared fields are located include Adıyaman, Çankırı, Çorum, Elazığ, Giresun, Karaman, Kütahya, Malatya, Ordu, Samsun, Sivas, Tokat, Trabzon and Yozgat. The area of YEKAs located within the borders of the 33 provinces is approximately 1,300 km².

33.22
TWh

August Gross
Generation

2,251.0
TL/MWh

Average
MCP

5.0%

Daily average licensed electricity generation increased by 5.8% MoM and 5.0% YoY in August.

[Click](#) for details.

13.8%

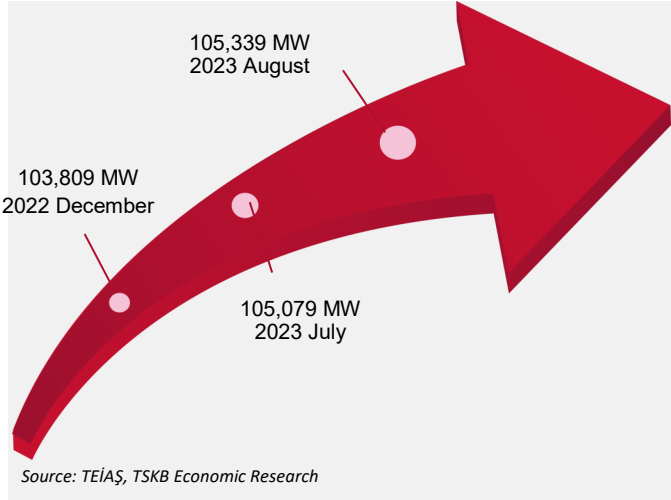
Market Clearing Price (MCP) increased by 13.8% MoM with a decrease of 26.6% YoY in August.

[Click](#) for details.

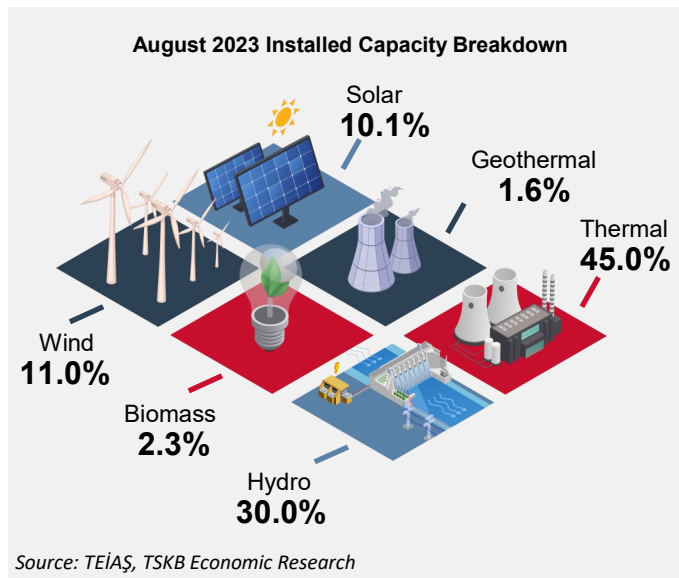


Installed Capacity Analysis

Türkiye's total installed generation capacity, which stood at 103,809 megawatts (MW) at the end of December 2022, reached 105,339 MW at the end of August 2023. A total net installed capacity of 259.6 MW was commissioned in August, of which 244.9 MW was provided from solar power plants. In the same period, there was an increase of 10.9 MW in the capacity of natural gas fired power plants, 4.8 MW in wind farms and 7.0 MW in renewable waste energy power plants. There was a net decrease of 8.0 MW in the capacity of domestic coal fired power plants in August.

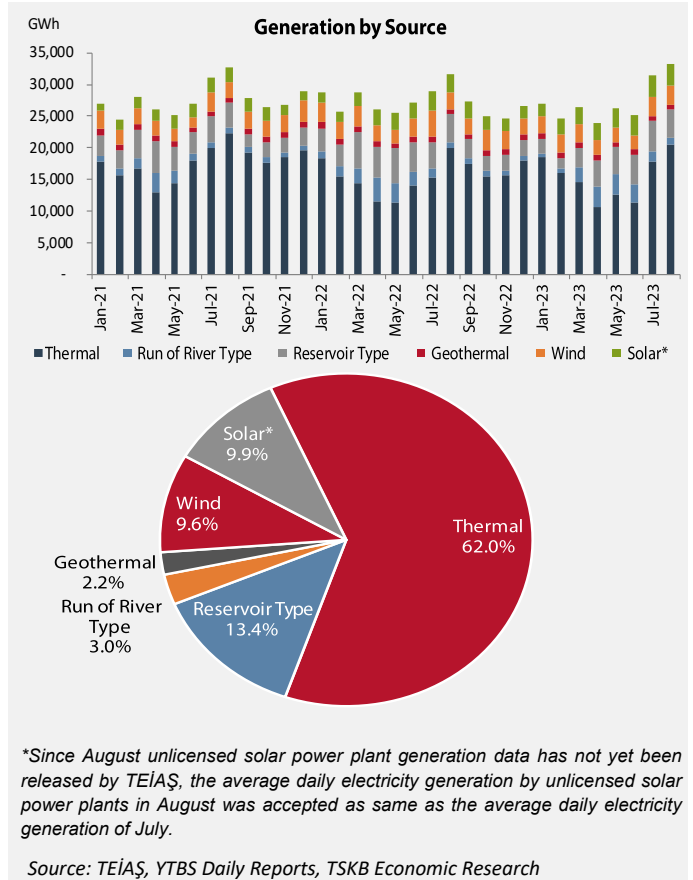


Of the power plants in operation in August, 55% (by capacity) were power plants generating electricity from renewable resources, marking a slight increase compared to previous months. Hydroelectric power plants constituted 30.0% of Türkiye's total electricity installed generation capacity, with wind and solar capacity accounting for 21.1% of the total installed generation capacity.



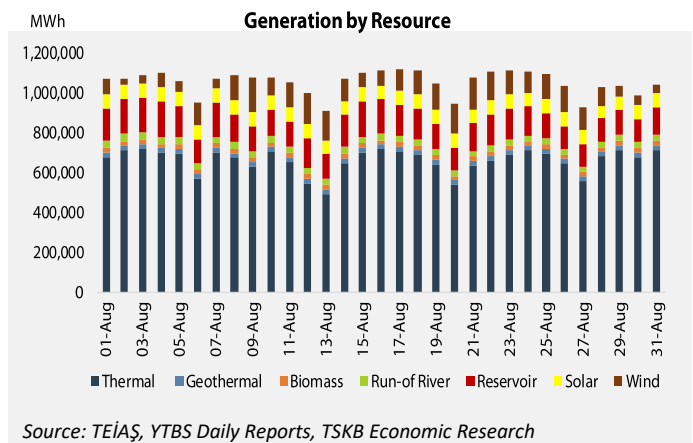
Generation-Consumption Analysis

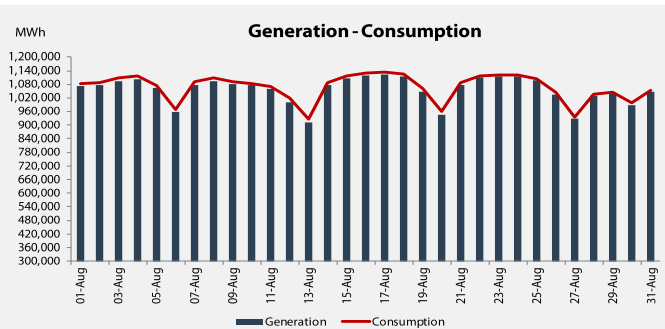
Total electricity generation increased from 31.4 terawatt-hours (TWh) in July to 33.2 TWh in August, while the average daily electricity generation in the month was 5.0% higher than in the same month of the previous year, and 5.8% higher than in the previous month.



Thermal power plants provided 56.8% of the electricity generated in July and 62.0% of the total electricity generated in August. In terms of the breakdown by source, the share of electricity provided by hydroelectric power plants decreased from 20.7% in July to 16.3% in August, while the share of electricity generated by wind decreased by 0.1 percentage point to 9.6%. Geothermal power plants provided 2.2% of the total electricity generated.

The share of renewable energy plants in electricity generation, which averaged 42.7% in 2022, edged down to 38.0% in August 2023. During the relevant period, dam-type hydroelectric power plants contributed 13.4% to total electricity generation, while river-type hydroelectric power plants met 3.0% of the total generation. The proportion of electricity obtained from wind and solar energy stood at 19.5%.





Source: TEİAŞ, YTBS Daily Reports, TSKB Economic Research

Daily electricity generation from licensed power plants averaged 1,071,752 MWh in August, with the maximum generation from licensed power plants during the month being 1,124,601 MWh, recorded on Thursday, August 17, while the lowest generation from licensed power plants in the same period was 911,723 MWh, recorded on Sunday, August 13.

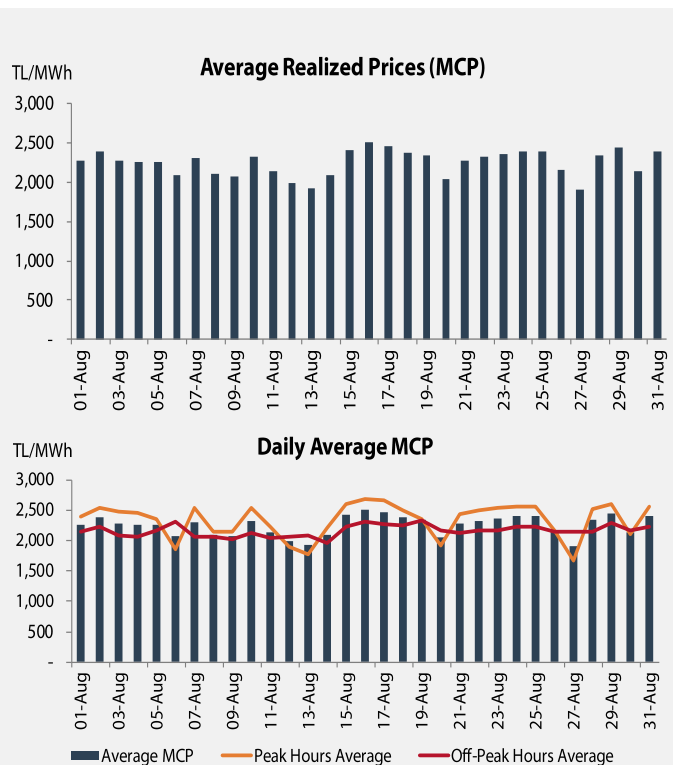
In the same period, daily electricity consumption averaged 1,068,111 MWh with the month's highest consumption recorded on Thursday, August 17, at 1,134,625 MWh, with the lowest electricity consumption of 927,916 MWh recorded on Sunday, August 13.

Electricity Price Analysis

The daily average market clearing price (MCP) varied between TL 1,900-2,505 /MWh in August while the daily PTF averaged TL 2,251.0 /MWh. The highest daily average MCP was recorded on Wednesday, August 16, at TL 2,502.7 /MWh, while the lowest daily average MCP was recorded on Sunday, August 27, at TL 1,902.3 /MWh.

In terms of the hourly data, the MCP was realized at its maximum price limit of TL 2,700.0 /MWh for a total of 94 hours in August. The minimum hourly electricity price of TL 1,000.0 /MWh was recorded at 08:00 on Sunday, August 13.

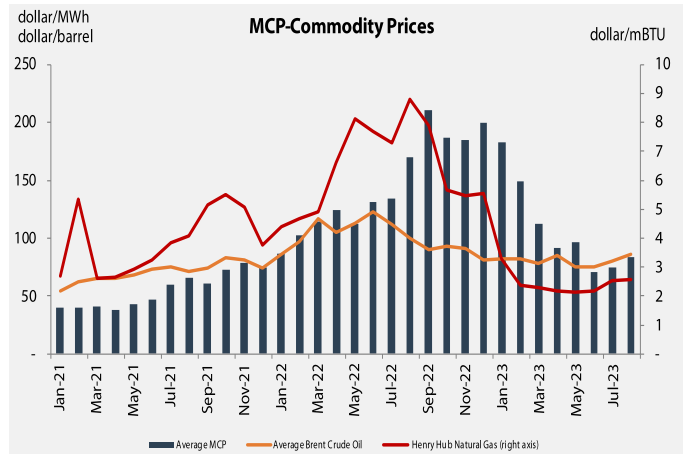
Looking at the daily MCP for the month of August, the peak hours average (between 8AM and 8PM) was 3.9% higher than the overall average, at TL 2,339.4 /MWh. The maximum limit price of TL 2,700.0 /MWh was recorded for 63 hours during peak hours, with the lowest price of TL 1,000.0 /MWh recorded for one hour during peak hours.



Source: EXIST, TSKB Economic Research

In the same period, the average off-peak hours price (between 8PM and 8AM) stood at TL 2,162.6 /MWh. The off-peak price stood at the maximum limit of TL 2,700.0 /MWh for 31 hours with the lowest price of TL 1,300.0 /MWh during off-peak hours recorded on Saturday, August 12 and Sunday, August 13.

The average MCP rose from USD 74.7 /MWh in July to USD 83.4/ MWh in August, with the MCP being 51% lower than in the same period of the previous year in dollar terms.



Source: EPİAŞ, TCMB, EIA, TSKB Economic Research

Average Commodity Prices

The price of Brent crude, which averaged USD 80.1 /bbl in July, rose to USD 86.1 /bbl in August, marking an increase of 7.4% on a monthly basis but still 14.3% lower than in the same period of the previous year.

The Henry Hub natural gas contract price, which averaged USD 2.6 / mbtu in July, increased by 1.3% on a monthly basis, though still remaining 70.7% lower than in the same period of the previous year.





Sector News

Local News

- **The President of the Energy Markets Regulatory Authority (EMRA), Mustafa Yılmaz, issued some statements regarding unlicensed electricity generation.** The statements note that with the steps taken, it has become easier for consumers to meet their self-consumption by generating electricity from solar energy, adding that consumers generating electricity this way can earn income by selling electricity to the system in proportion to the electricity they consume. He added that this way, real consumers, rather than those who do not consume electricity, are guaranteed to buy capacity. He underlined that in the last year, unlicensed capacity allocations were provided for more than 14,000 production facilities with over 12,000 MW in installed capacity, and in this process, around USD 10 billion in unlicensed electricity investments were reflected on the field. (August 28, 2023)

- **Skywell to establish an energy storage facility.** Electric car manufacturer Skywell is reportedly preparing to establish a battery factory in Türkiye. In addition to its battery development and production factory plan, the Chinese company also aims to invest in an energy storage system with the facility planned to be established in the first quarter of 2024. (August 24, 2023)

Natural gas agreement signed with Hungary. Based on the agreement signed between the Hungarian public natural gas trading company, MVM CEENergy and Boru ile Petrol Taşıma A.Ş. (BOTAŞ), MVM CEENergy will purchase natural gas from BOTAŞ. BOTAŞ announced in a statement that this is the first agreement to export natural gas through pipelines to a European country which does not border Türkiye, adding that the agreement targeted securing Europe's energy supply security.

According to the information provided by Hungary, under the agreement a total of 300 million cubic meters (mcm) of natural gas is planned to be purchased from BOTAŞ on an annual basis. This follows the agreement for BOTAŞ to sell natural gas to Bulgaria in January. Within the scope of the agreement, Bulgaria will receive up to 1.5 billion cubic meters (bcm) of natural gas per year from BOTAŞ over 13 years. (August 22, 2023)

- **Natural gas planned to be delivered to 1,000 settlements by the end of 2026.** In his statement, EMRA President Mustafa Yılmaz noted that the service quality would be increased with measures regarding natural gas distribution market licenses with natural gas to be delivered to 1,000 settlements, districts and towns by the end of 2026. (August 21, 2023)

- **EMRA raises active electricity energy wholesale tariff.** In accordance with the decision taken by EMRA published in the Official Gazette, the sales price by Elektrik Üretim A.Ş. to assigned supply companies was determined as TL 1,100 /MWh, while the tariff for technical and non-technical lost energy sales to distribution companies was determined as TL 1,000 /MWh. In addition, the decision was taken to apply a TL 3,800 /MWh tariff in sales to distribution companies within the scope of general lighting. (August 18, 2023)

- **Renewable Energy Resources Support Mechanism (YEKDEM) prices announced for August.** While the prices announced on a resource basis ranged between TL 132.56 and TL 252.62 /MWh in electricity prices, the highest unit purchase price was assigned to hydroelectric production facilities based on geothermal energy and pumped storage. There was an 11% increase in support prices compared to the previous month. (8 August 2023)

- **Energy agreement signed with Saudi Arabia.** The Minister of Energy and Natural Resources, Alparslan Bayraktar, stated that there was no financial clarity in the agreement, but added that Saudi Arabia was interested in a renewable energy project with a capacity of 4-5 gigawatts (GW) in Türkiye. In addition, Mr. Bayraktar stated that Türkiye aims to generate electricity from the first reactor at Akkuyu Nuclear Power Plant in 2024, added that the Turkish government was in negotiation with Russia and South Korea regarding the construction of a second nuclear power plant. Mr. Bayraktar added that while Türkiye needs 1 million barrels of oil per day, there was a target is to produce 200,000 barrels of crude oil per day with the commissioning of the Gabar oil field at full capacity. (01 August 2023)

Foreign News

- **A new report published by the International Renewable Energy Agency (IRENA) has revealed that renewable electricity generation has delivered significant improvements in competitiveness over the past year.** The report stated that despite the increased cost of equipment such as photovoltaic solar modules and solar turbines, the jump in prices of fossil fuels provided a significant gain in pricing competition in favor of renewable electricity generation. According to calculations based on global averages, photovoltaic solar panels were 29% cheaper than the cheapest fossil fuel option in 2022, with this rate reaching 52% for onshore wind power plants. As of last year, offshore wind power plants remained 17% more expensive than the cheapest fossil fuel option. (August 31, 2023)

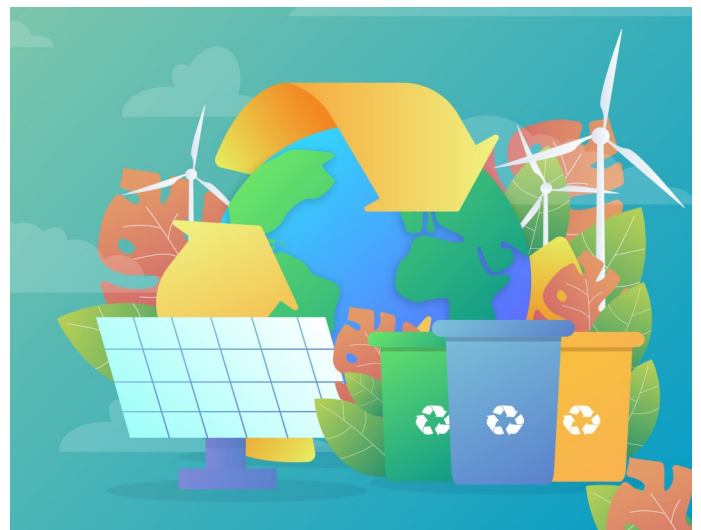
- **Electricity demand in the EU down by 5% annually in the first half of 2023, with electricity generation from fossil fuels falling by 17%.** According to the report published by Ember, the decrease in demand for electricity was a result of high gas and energy prices, with the decrease in industrial production and the emergency measures taken during the winter months playing a role in this decrease. In May, coal accounted for less than 10% of the EU's energy generation for the first time. The report found that the growth in wind (13%) and solar (5%) generation continued in the first half of the year. (August 31, 2023)

Natural gas storage ratio in Europe reaches 88.9%. In his press conference, European Commission Spokesperson Stefan de Keersmaecker stated that member states aimed for storage facilities to be at least 90% full by November 1 and that the capacity rate now stands at 88.9%. He added that was aware of the importance of the obligation of member states to fill their storage facilities, while stating that the process of filling storage facilities was continuing. The total natural gas storage capacity of member states stands at 110 bcm, corresponding to an average of 29% of annual consumption. (August 18, 2023)

- **US Energy Information Administration (EIA) raises its oil price forecast.** According to its "Short-Term Energy Outlook" report for August, the EIA projects an average Brent crude oil price of USD 83 per barrel (/bbl), an increase of 4.1% compared to its projection carried out in the previous month. Stating that Saudi Arabia's voluntary production cut was partly behind the increased forecast, the EIA also raised its forecast for oil prices in 2024 from USD 84 /bbl to USD 86 /bbl. (9 August 2023)

- **Saudi Arabia and Russia to maintain their oil cuts in September.** An official speaking to the Saudi Arabian news agency, SPA, reportedly announced that Saudi Arabia would maintain its voluntary supply cut of 1 million barrels per day in September, while Russian Deputy Prime Minister Alexandr Novak stated that Russia would extend its cut in oil exports to 300,000 barrels per day in September. (4 August 2023)

- **Extreme heat forces Egyptians to decide to work from home for one day.** Following the decision to call a public holiday in Iran due to the extreme heat, the Egyptian government announced a package of measures, including 1 day of compulsory working from home, to reduce the load on the electricity grid and ensure the continuity of the electricity supply and to protect the manufacturing sector. According to the package, all civil servants, except those required to provide face-to-face service in the public sector, were to work from home on Sundays from August 6. (3 August 2023)





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