ADVISORY SERVICES

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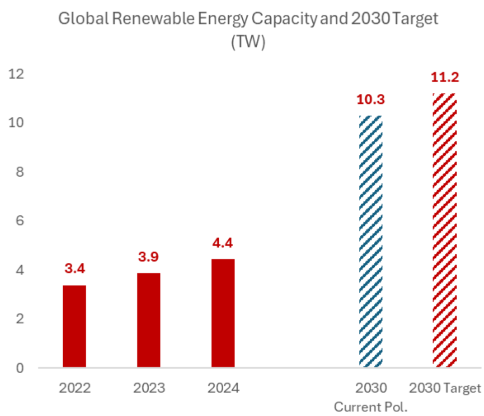
Global renewable energy capacity increases need to accelerate.

The world is lagging behind in global renewable energy installation and energy efficiency targets, according to the International Renewable Energy Agency's (IRENA) report, which examines the achievement of the goal of "tripling renewable energy capacity by 2030", set out in the COP28.

Despite an annual increase of 581.9 gigawatts (GW) in global renewable energy capacity in 2024, the report states that achieving the target will require the addition of 1,122 GW of capacity each year between 2025 and 2030, indicating a compound annual growth rate in capacity of 16.6%. IRENA underlines that if the annual growth rate of 14.4% recorded in 2024 is maintained in the coming period, 10.3 terawatts (TW) of renewable energy capacity will be installed by 2030, falling 0.9 TW short of the target.



Source: IRENA, TSKB Economic Research

According to source-based breakdowns, the report states that capacity increases in all other renewable energy technologies, except solar energy, are not sufficient. Accordingly, in order for the total renewable energy capacity to triple by 2030, the pace of growth in wind energy and hydroelectric capacity must at least triple compared to 2024.

Emphasizing that energy efficiency practices should also be stepped up, IRENA underlines the need for investment in order to achieve the targets, adding that a cumulative USD 29-30 trillion of investment should be made in renewable energy sources, grids, flexibility, energy efficiency and savings between 2025 and 2030. This would require a 2.3-fold increase compared to the investments made in 2024.

Three immediate actions are being highlighted in this vein; the integration of pre-COP30 renewable energy targets into national climate plans (NDCs), doubling the common NDC target to align with the global renewable energy target, and increasing annual renewable energy investments.

27.4 TWh	2,739.5 TL/MWh
October Gross Generation	Average MCP

12.2%

Daily average licensed electricity generation decreased by 12.0% MoM and by 1.6% YoY in October.

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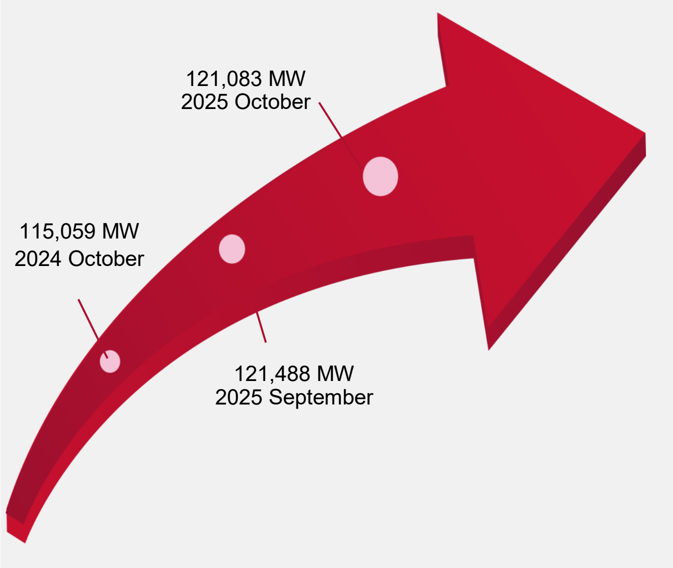
0.8%

Market Clearing Price (MCP) decreased by 0.8% MoM and by 4.0% YoY in October.

Click for details.

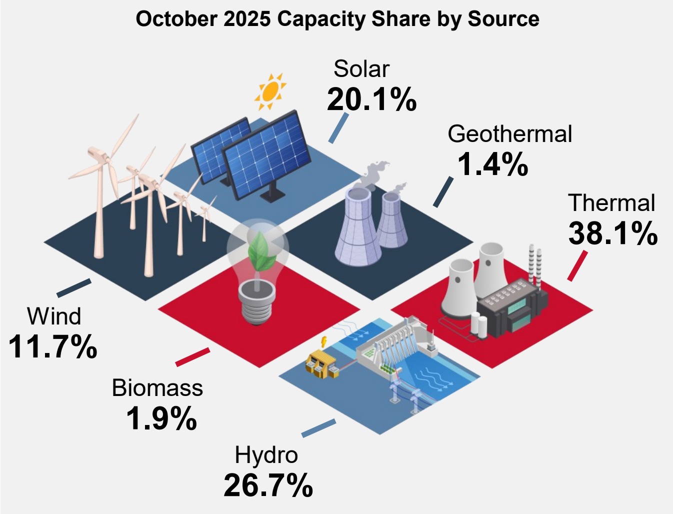
Installed Capacity Analysis

Türkiye's total installed capacity, which stood at 121,488 megawatts (MW) at the end of September 2025, decreased to 121,083 MW in October 2025. A total net of 404.6 MW in capacity was decommissioned compared to September, with decommissioning of natural gas and multi-fuel power plants with 495.4 MW of capacity. On the other hand, there was an increase of 90.9 MW in the installed capacity of solar power plants. There was no change in the installed capacity of other power plants.



Source: TEİAŞ, TSKB Economic Research

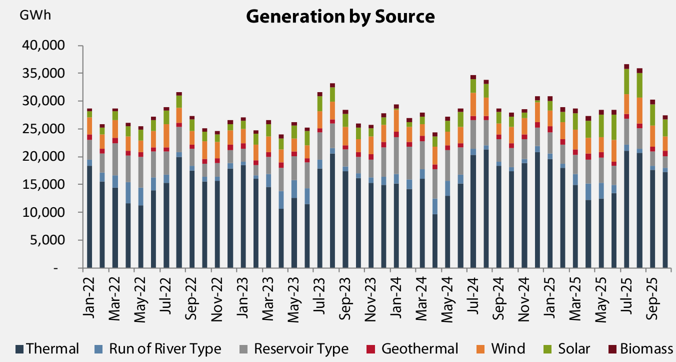
61.9% of the capacity in operation in October consisted of power plants generating electricity from renewable sources. Hydroelectric power plants constitute 26.7% of Türkiye's total electricity installed capacity, while the combined share of wind and solar power plants in total installed capacity exceeded the share of hydroelectric power plants, at 31.8%.

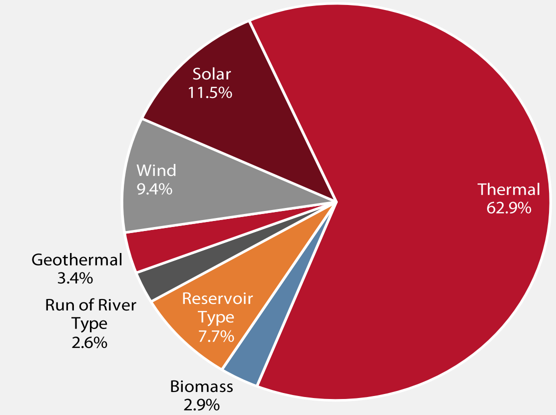


Source: TEİAŞ, TSKB Economic Research

Generation-Consumption Analysis

Total electricity generation decreased from approximately 30.2 terawatt-hours (TWh) in September 2025 to 27.4 TWh in October 2025, with average daily electricity generation in October decreasing by 12.2% compared to the previous month and by 1.6% compared to the same period of the previous year.

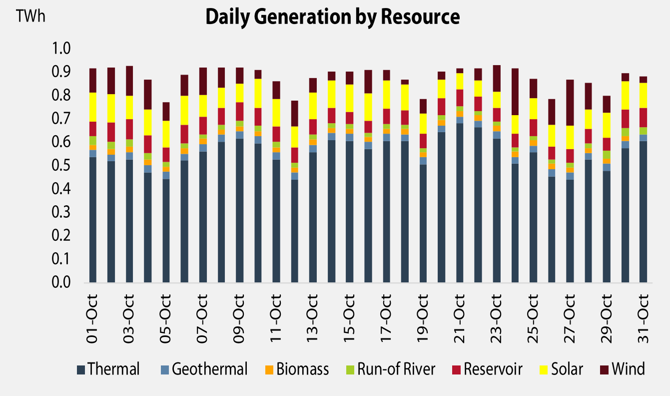




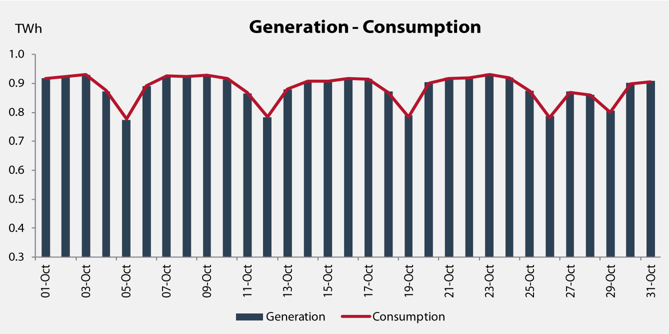
Source: TEİAŞ, YTBS Daily Reports, TSKB Economic Research

Thermal power plants, which provided 58.4% of the electricity generated in September, met 62.9% of the total electricity generation in October. Looking at the source-based breakdown, hydroelectric power plants generated 10.3% of all electricity generated during October, compared to 10.8% in the previous month. In the same period, the share of electricity generated from wind power stood at 9.4%, with geothermal power plants providing 3.4% of the total electricity.

The share of renewable energy plants in electricity generation declined from 38.8% in September to 34.5% in October. During the month, dam-type hydroelectric power plants contributed 7.7% to total generation, while solar power plants were the renewable source generating the most electricity, at 11.5% of total generation. The combined ratio of electricity obtained from wind and solar power in total electricity generation stood at 20.9%.



Source: TEİAŞ, YTBS Daily Reports, TSKB Economic Research



Source: TEİAŞ, YTBS Daily Reports, TSKB Economic Research

Daily electricity generation averaged 0.88 terawatt-hours (TWh) during October with the highest generation during the month recorded at 0.93 TWh on Thursday, October 23 and the lowest being 0.77 MWh on Sunday, October 5.

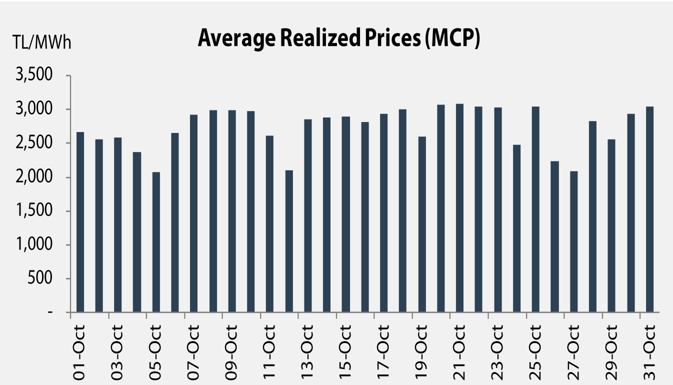
In the same period, daily electricity consumption averaged 0.88 TWh. The highest daily consumption was recorded as 0.93 TWh on Thursday, October 23, with the lowest electricity consumption recorded on Sunday, October 5, at 0.77 TWh.

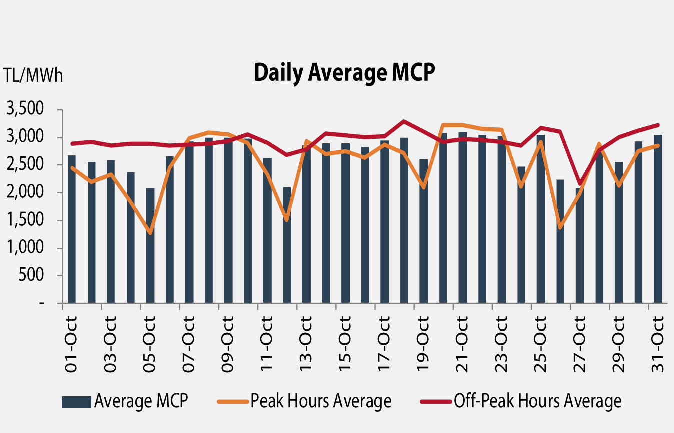
Electricity Price Analysis

In October, the daily average market clearing price (MCP) fluctuated between TL 2,076.7 /MWh and TL 3,090.1 TL/ MWh. The average daily MCP for October was TL 2,739.5 /MWh with the highest daily average MCP being recorded on Tuesday, October 21 at TL 3,090.1 / MWh and the lowest average MCP of TL 2,076.7 /MWh recorded on Sunday, October 5.

Looking at the hourly data, the MCP was at its maximum limit of TL 3,400 /MWh for a total of 148 hours in October. The hourly minimum price, of TL 0 /MWh was recorded for 1 hour.

When it comes to the daily MCP levels in October, the peak hours average (between 8AM-8PM) was 7.2% lower than the average for all hours, being recorded at TL 2,543.2 /MWh. The maximum limit price of TL 3,400 /MWh was recorded 96 times during peak hours, with the lowest (TL 0 /MWh) recorded for one hour during peak hours.

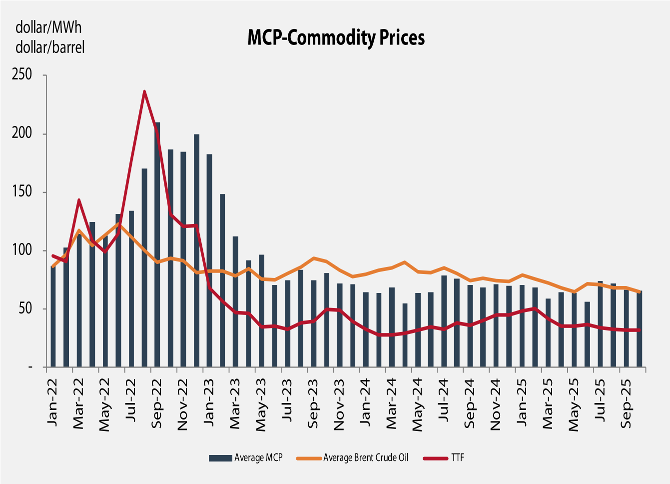




Source: EXIST, TSKB Economic Research

In the same period, the average off-peak (8PM-8AM) rate was TL 2,935.8 /MWh. During off-peak hours, the maximum limit of TL 3,400 /MWh was realized for 52 hours, with the lowest rate during off -peak hours of TL 1,400 /MWh recorded just once.

In USD terms, the average MCP decreased from USD 66.1 /MWh in September to USD 65.5 /MWh in October, marking a fall of 4% compared to the same period of the previous year.



Source: EPİAŞ, TCMB, EIA, TSKB Economic Research

Average Commodity Prices

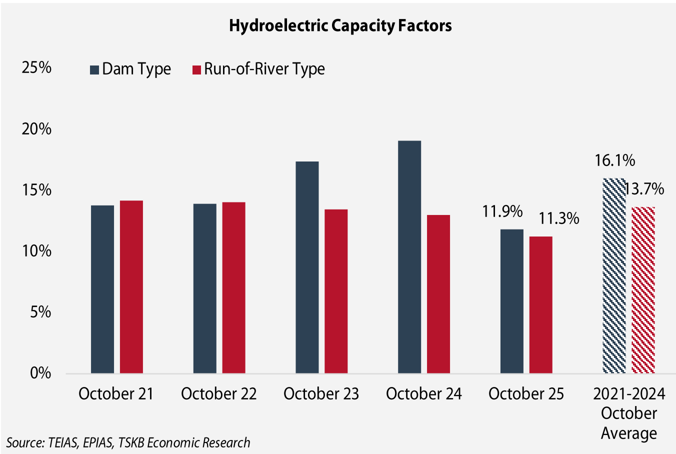
The Brent crude oil price decreased by 5.2% from an average of USD 68/ barrel in September to USD 64.5 /barrel, marking a fall of 15.3% compared to the same period of the previous year.

The TTF natural gas contract price also decreased by 0.5% on a monthly basis from an average of USD 32.1 /MWh in September to USD 31.9 /MWh in October. The TTF price was down 20.9% compared to the same period of the previous year.

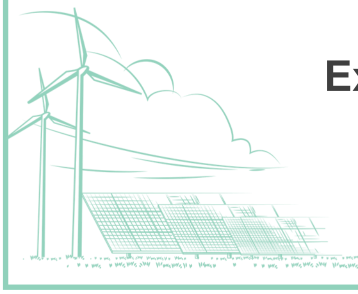
Hydroelectric Capacity Factors

The capacity factors for dam-type and run-of-river type hydroelectric power plants stood at 11.9% and 11.3%, respectively in October 2025. When compared to October 2024, the October 2025 levels mark a decrease of 7.2 percentage points for dam-type power plants and a decrease of 1.7 percentage points for run-of-river power plants. Comparing with the months of October over the last 5 years, October in 2024 marked the highest capacity factor for dam-type power plants (19.1%) with the highest capacity factor for run-of-river type plants recorded in October 2022, at 14.2%.

Dam-type hydro-electric power plants were operating at a capacity factor 4.2 percentage points lower than the average for the months of October between 2021-2024, while run-of-river type power plants were operating at a rate 2.4 percentage points below the average.



Source: TEIAS, EPIAS, TSKB Economic Research



Expectation of a Ramping up of Renewable Energy Capacity

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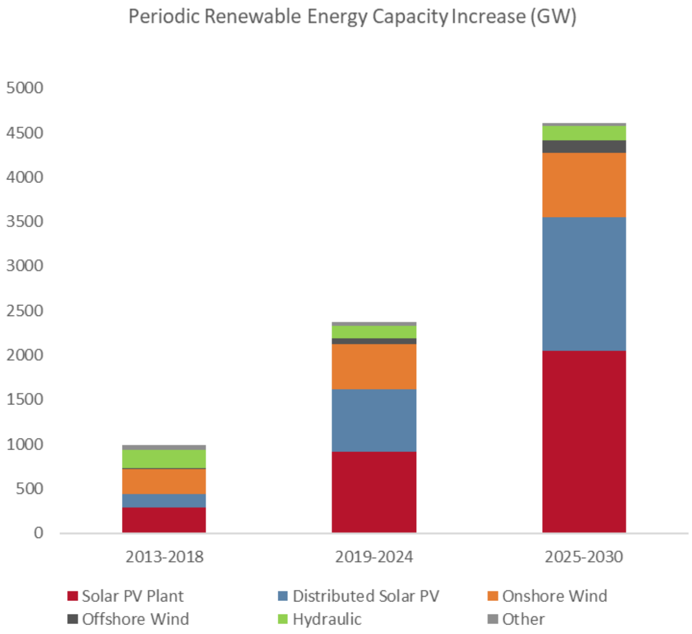
The International Energy Agency (IEA) has published its report entitled "Renewable 2025". Drawing a picture of the outlook for 2025, the IEA points to the strong momentum in renewable energy. Stating that the main source of this rise in renewable energy is solar power plants, the report predicts that global renewable energy capacity will double by 2030, increasing by 4,600 GW. The IEA also refers to the challenges of renewable energy, highlighting the problems of integration into the grids and supply chain risks.

The expected increase of 4,600 GW in the 2025-2030 period is approximately double the increase seen in the previous 5-year period. The report compares the 2019-2024 period and the 2013-2018 period, noting that the amount of new renewable energy capacity coming on stream has consistently doubled, at least, in each 5-year period. After an additional 992 GW of renewable energy capacity in the 2013-2018 period, a total of 2,372 GW was added in the last five-year period, with the addition expected to reach 4,600 GW in the next 5-year period. An examination of the increases by source shows how much solar power is leading the increase, accounting for 68.3% of the total additional capacity in the 2019-2024 period compared to 44.2% of the total capacity increase in the 2013-2018 period. This proportion is expected to reach 77% in the coming period.

In addition to the power from the sun, wind energy should not be ignored. Wind has provided a significant contribution to new capacity over the last 10 years. Additional wind capacity, which stood at approximately 300 GW in the 2013-2018 period, increased to 565 GW in the 2019-2024 period with an increase of 872 GW predicted in the next 5 years.



* Other includes bioenergy, geothermal, concentrated solar and wave.
Source: IEA, TSKB Economic Research

Highlighting the importance of solar energy over the last 10 years and also for the next 5 years, the IEA cites low costs, shorter permit processes and the motivation to reduce electricity bills due to high electricity prices as key factors driving the growth in solar energy, while also noting the increased use of photovoltaic distributed solar systems and storage facilities in recent years.

Despite this, there is still a long way to go to meet the target for 11,000 GW of new capacity and therefore "tripling the capacity of renewable energy sources" set out in the COP28 in Dubai in 2023. Reaching this capacity will rely not only on investing in renewable energy plants and facilities, but also in networks.

In this context, decisions taken at the COP30, which will start in mid-November in Brazil, will be decisive.

Sector News

Local News

- No increase in electricity and natural gas tariffs. The Minister of Energy and Natural Resources, Alparslan Bayraktar, stated that there would be no increase in electricity and natural gas tariffs as we enter winter, and underlined that American liquefied natural gas (LNG) would become one of Türkiye's most competitive natural gas sources, especially after 2027, LNG agreements entered into in September. Mr. Bayraktar announced on social media that the first of two new drilling ships that joined the energy fleet in July arrived in Türkiye. In addition, he stated that at a meeting held with Dongfang Electric Corporation, one of China's manufacturers in the field of wind energy technology, discussions turned to plans to establish a wind turbine production facility with a capacity of 2,000 megawatts in a USD 250 million investment in Türkiye.

- Türkiye "could earn USD 5 billion a year" with energy efficiency efforts. In his statements, President Recep Tayyip Erdoğan stated that projects had been carried out to increase energy efficiency since 2002, and that there was the potential to earn USD 5 billion annually with the most effective use of energy efficiency.

- Signing of the first phase loan agreement of "Transformation of the Electricity Transmission System Project", to be carried out by the Turkish Electricity Transmission Corporation (TEİAŞ) with the financing of the World Bank. The first phase loan agreement of USD 750 million is aimed at increasing the capacity of the transmission network, providing digitalization in network management and accelerating the integration of renewable energy sources into the system.

- Minister of Energy and Natural Resources, Alparslan Bayraktar states that Türkiye needs pumped storage power plants. Mr. Bayraktar emphasized that Türkiye had demonstrated its hydroelectric potential and noted that the government was working on pumped storage power plants. However, he added that Türkiye needs several thousand megawatts of pumped storage power plants in the coming period.

- Electricity generation from renewables surpasses coal in first half of 2025. According to the mid-year updates of Ember Energy's Global Electricity Report, electricity generation from renewable energy sources increased by 7.7% to 5,072 TWh in the first half of 2025, while generation from coal decreased by 31 TWh to 4,896 TWh. Strong increases in solar and wind generation played a role in renewable electricity generation, while solar electricity generation increased by 31% and wind electricity generation increased by 7.7%. With these increases, the share of renewable energy sources in global electricity generation increased from 32.7% to 34.3%.

- The Turkish Energy, Nuclear and Mineral Research Agency (TENMAK) issues two calls to support technological projects in solar and wind. According to the statement issued by the Minister of Energy and Natural Resources, Alparslan Bayraktar, on social media, the government will support collaboration between the public sector, academia and industry cooperation with the calls, each of which has a budget of TL 150 million, with the aim of developing high value-added energy technologies.

- At least USD 8.7 billion to be spent over the next four years within the scope of the new incentive system and capacity mechanism announced for domestic coal power plants, according to Ember Energy's study. In its study, Ember Energy emphasized that Türkiye's incentive price of USD 75 per megawatt-hour for domestic coal is 36% higher than the average electricity generation costs of domestic coal power plants and 12% higher than the annual average electricity sales price of the power plants. However, the study underlines that this amount is 53% higher than the five-year budget allocated for the renewal of the grid, which presents an obstacle to new power plant investments due to limited capacity. In this vein, the study highlights that the budget allocated by Türkiye for coal incentives may be allocated to the renewal of the network and the establishment of new substations.

- Energy Market Regulatory Authority (EMRA) publishes "Electricity Market Sector Report" and "Natural Gas Market Sector Report" for August. Accordingly, electricity consumption in August increased by 4.3% compared to the same month of the previous year to reach 35.2 TWh. Electricity consumption was 36.2 TWh in July. However, billed electricity consumption in August increased by 3.9% year-on-year to 28.7 TWh. According to the "Natural Gas Market Sector Report", total natural gas consumption in August increased by 2.0% compared to the same month of the previous year and reached 3.5 billion cubic meters (bcm), while 50% of the natural gas consumed was used by the conversion/cycle sector. Imports of natural gas increased by 3.3% compared to August 2024, to amount to 4.0 bcm.

- Sustainability-linked loan agreement signed between the International Finance Corporation (IFC) and Enerjisa Enerji, aimed at strengthening critical infrastructure damaged in the February 2023 earthquakes. The financing package, which will be offered in TL equivalent for a total of USD 340 million, is being provided by the Asian Infrastructure Investment Bank (AIIB), the Dutch Entrepreneurial Development Bank (FMO) and the Green for Growth Fund (GCF) together with the IFC. The financing is aimed at modernizing the electricity distribution network built and operated by Enerjisa Enerji and to facilitate the integration of renewable energy. The company's electric vehicle infrastructure will also be developed.

- Last resource supply tariff (SKTT) for the residential consumer group updated to 4,000 kilowatt-hours (kWh) per year for 2026. The new tariff determined by the EMRA published in the Official Gazette will enter effect from January 1, 2026. SKTT was previously determined as 5,000 kWh per year for the residential group.

- Electricity had highest share in the source breakdown of final energy consumption of the industrial sector, with a share of 28.6% in 2024. According to the "Industrial Sector Final Energy Consumption Statistics for 2024" published by TurkStat, electricity was followed by natural gas with a 23.6% share and solid fossil fuels with a 22.6% share. Total final energy consumption in the sector reached 1,717.4 petajoules in 2024, an increase of 3.3% compared to the previous year, while the production of other non-metallic mineral products accounted for the largest share in the final energy consumption of the sub-sector with a share of 28.8%. This was followed by the basic metal industry with a share of 22.7% and the manufacturing of food products, with a 10.9% share.

Foreign News

- Organization of the Petroleum Exporting Countries and its Allies (OPEC+) to increase oil production by 137,000 barrels per day in November. The decision was taken by Saudi Arabia, Russia, Iraq, the United Arab Emirates, Kuwait, Kazakhstan, Algeria and Oman.

- OPEC leaves its oil demand growth forecast for 2025 and 2026 unchanged. According to OPEC's Monthly Oil Market Report for October, global oil demand is projected to grow by 1.3 million barrels per day in 2025 and 1.4 million barrels per day in 2026.

- Apple plans to build renewable energy plants in Europe with a total capacity of 650 MW. Th company aims to invest more than USD 600 million in large-scale solar and wind power plants to be established in Greece, Italy, Latvia, Poland and Romania.

- European Union (EU) to impose a complete ban on natural gas imports from Russia as of January 1, 2028. The draft regulation adopted by the European Council provides a transition period for existing contracts and prohibits the conclusion of new import contracts from January 1, 2026. It states that existing short-term contracts may continue until June 17, 2026 and existing long-term contracts may continue until January 1, 2028. The regulation also simplifies customs obligations for natural gas imported from countries other than Russia.

- Growth in global natural gas demand projected to slow from 2.4% in 2024 to below 1% in 2025. According to the "Natural Gas 2025" report published by the IEA, this will be the lowest rate of growth observed since 2022. Weak demand in Asia will have played a role in the slower rate of growth in natural gas demand. However, export capacity of 300 billion cubic meters of LNG is expected to be added by 2030, driven by expansions in the USA and Qatar. While the IEA emphasizes that this increase in LNG supply will play a key role in supply security and affordable natural gas, it states that long-term LNG agreements, in particular, constitute an effective risk-sharing mechanism between sellers and buyers.

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