TSKB ADVISORY SERVICES

Monthly Energy Bulletin

TSKB Economic Research

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Ezgi İpek Koçlu ipeke@tskb.com.tr
Can Hakyemez hakyemezc@tskb.com.tr

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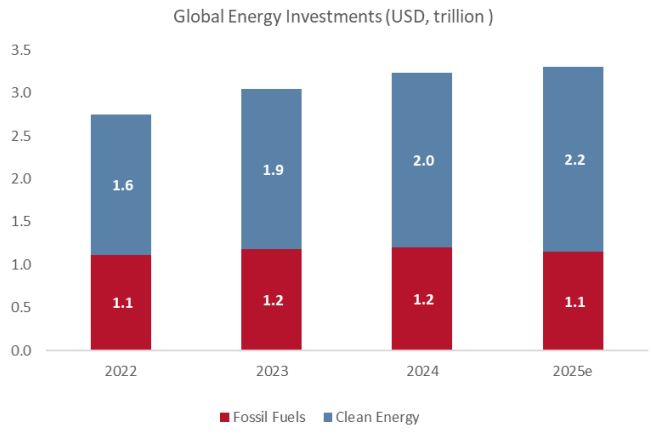
Global energy investments set to reach USD 3.3 trillion by 2025.

The International Energy Agency (IEA) has published its "Global Energy Investments 2025" report, providing updates on energy investments for 2024 and preliminary results for 2025. Accordingly, despite geopolitical tensions and economic uncertainties, global energy investments are expected to grow by 2% in 2025 compared to 2024 to reach USD 3.3 trillion with approximately USD 2.2 trillion of this amount being directed to clean energy technology investments such as renewable energy, grids and electrification, and USD 1.1 trillion being invested in fossil fuels.



Source: IEA, TSKB Economic Research

According to the report, investment trends are affected by demand for electricity from electric vehicles, data centers and Artificial Intelligence, while electricity sector investments are estimated to amount to USD 1.5 trillion in 2025.

Emphasizing the rising share of low-emission technologies in investments, the IEA expects investments in solar energy to reach USD 450 billion. Grid investments are on course to reach USD 400 billion, with the IEA warning this is not sufficient to meet energy demand and renewable energy installations.

While the report highlights regional differences in investments, it emphasizes that there are problems in the implementation of investments in energy infrastructure, especially in Africa. India and Brazil, on the other hand, stand out with their clean energy investments which have been stepped up in recent years.

While the IEA draws attention to the fact that renewable energy and efficiency investments are not in line with the COP28 targets, it emphasizes the need to reduce regional differences in investments and the need to mobilize international financing accordingly.

27.3 TWh	2,202.2 TL/MWh
June Gross Generation	Average MCP

0.8%

Daily average licensed electricity generation decreased by 0.8% MoM and by 4.9% YoY in June.

Click for details.

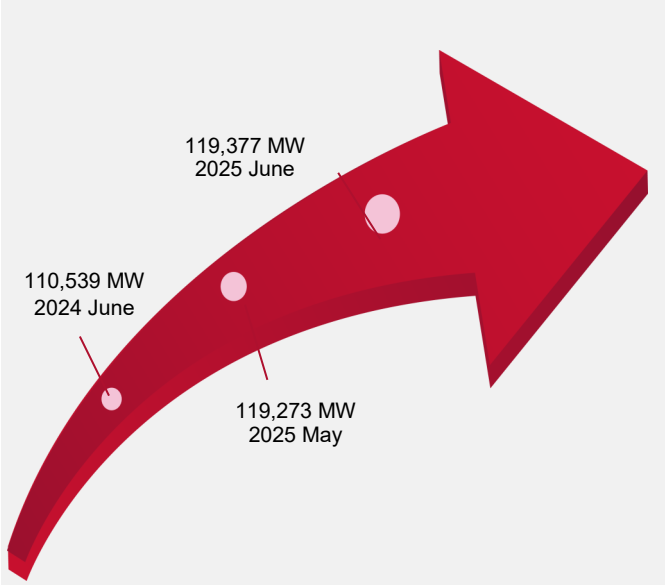
10.4%

Market Clearing Price (MCP) decreased by 10.4% MoM and increased by 5.1% YoY in June.

Click for details.

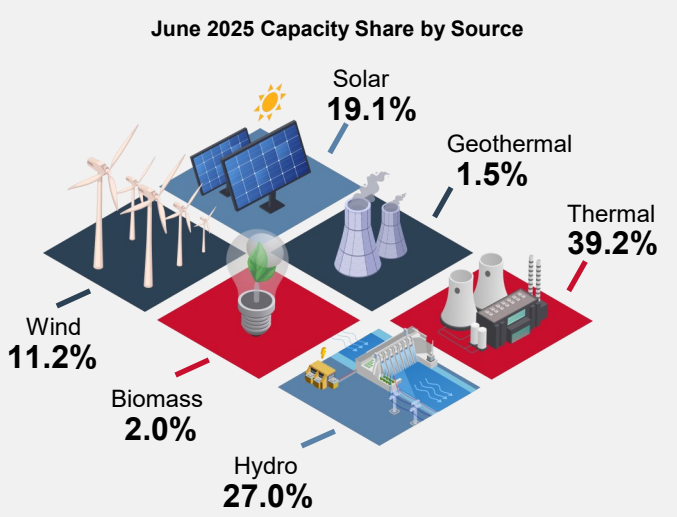
Installed Capacity Analysis

Türkiye's total installed generation capacity increased from 119,273 megawatts (MW) at the end of May 2025 to 119,377 MW in June 2025 with a total of 103.7 MW of net installed capacity commissioned in June. Solar power plants accounted for all of this installed capacity. There was no change in the installed capacity of other power plant types.



Source: TEİAŞ, TSKB Economic Research

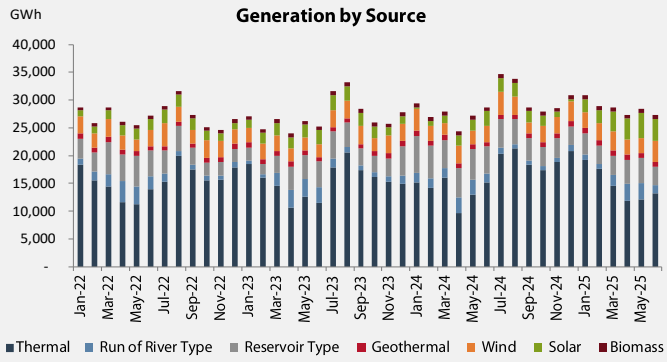
60.8% of the capacity in operation in June consisted of power plants generating electricity from renewable sources. Hydroelectric power plants accounted for 27% of Türkiye's total installed electricity capacity, with wind and solar power plants having a 30.3% share of total installed capacity, exceeding the share of hydroelectric power plants.

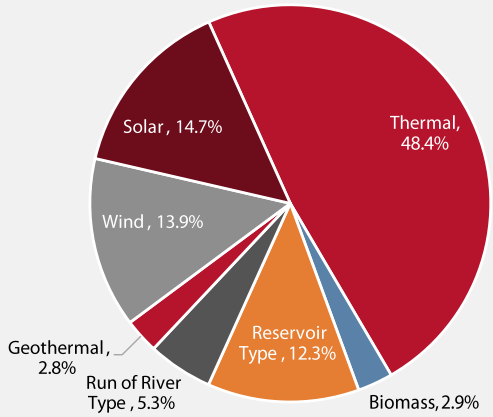


Source: TEİAŞ, TSKB Economic Research

Generation-Consumption Analysis

Total electricity generation stood at 27.3 terawatthours (TWh) in June 2025, compared to approximately 28.4 TWh in May 2025. However, average daily electricity generation in June decreased by 0.8% compared to the previous month with a fall of 4.9% compared to the same period of the previous year.

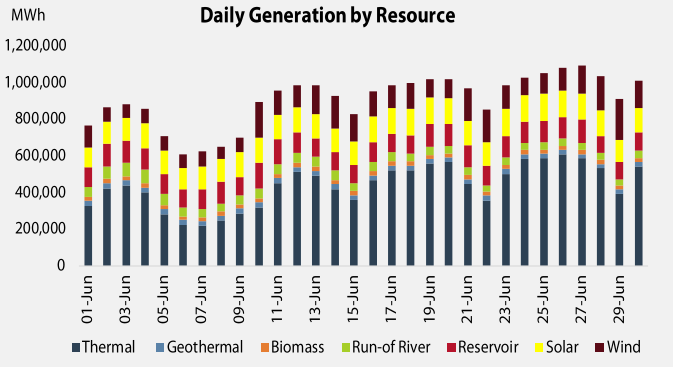




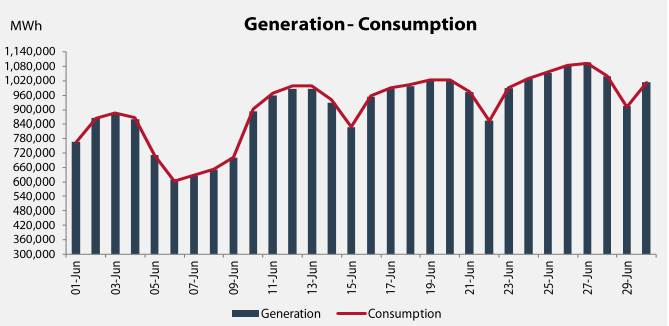
Source: TEİAŞ, YTBS Daily Reports, TSKB Economic Research

Thermal power plants, which provided 42.7% of the electricity generated in May, accounted for a 48.4% share of the total electricity generation in June. Examining the source-based breakdown of electricity generation, hydroelectric power plants, which had a share of 26% of generation in the previous month, produced 17.6% of the total electricity in June. In the same period, the share of electricity generated from the wind stood at 13.9%, while geothermal power plants provided 2.8% of the total electricity produced.

The share of electricity generated by renewable energy plants decreased from 54.8% in May 2025 to 49.1% in June 2025. Dam-type hydroelectric power plants contributed 12.3% of total power generation, while solar energy was the renewable source producing the most electricity, meeting 14.7% of total generation. The proportion of electricity generated by wind and solar power in total electricity generation stood at 28.7%.



Source: TEİAŞ, YTBS Daily Reports, TSKB Economic Research



Source: TEİAŞ, YTBS Daily Reports, TSKB Economic Research

On average, 909,911 megawatthours (MWh) of electricity were generated per day in June with the highest electricity generation during the month being recorded on Friday, June 27 (1,097,308 MWh) and the lowest on Friday, June 6 (609,717 MWh).

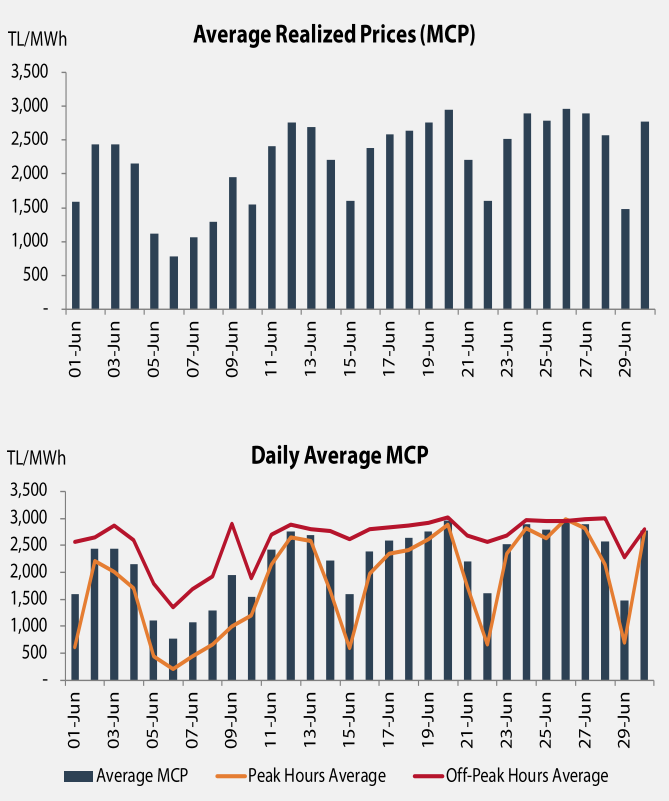
Daily electricity consumption averaged 912,430 MWh during June with the highest consumption on Friday, June 27 (1,093,954 MWh) and the lowest electricity consumption on Friday, June 6 (603,354 MWh).

Electricity Price Analysis

The daily average market clearing price (MCP) ranged between TL 780 /MWh and TL 2,964.1 /MWh in June, with a daily average MCP of TL 2,202.2 /MWh during the month. The highest daily average MCP value was recorded on Thursday, June 26 at TL 2,964.1 /MWh and the lowest daily average MCP was TL 779 /MWh on Friday, June 6.

Looking at the hourly MCP readings in June, the maximum level of TL 3,400 /MWh was recorded for a total of 27 hours with the hourly minimum of zero recorded for 27 hours.

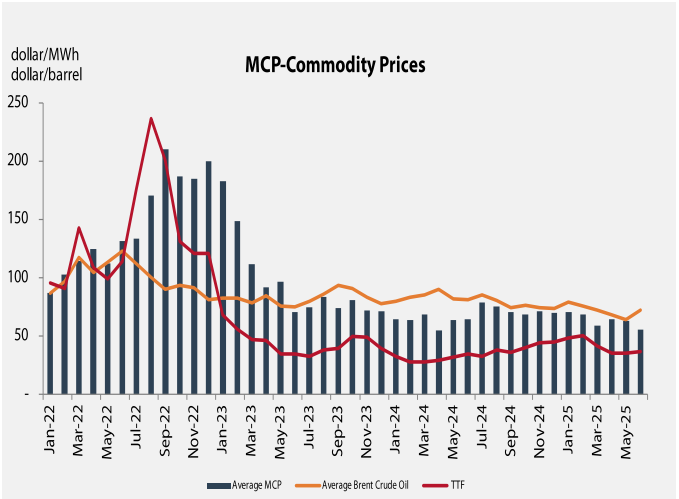
The average peak rate MCP (between 8AM and 8PM) was actually 18.4% lower the average for all hours, to be recorded at TL 1,796.2 /MWh. The maximum limit price of TL 3,400 /MWh was recorded eight times during peak hours with the lowest price of zero recorded for 27 hours during peak hours.



Source: EXIST, TSKB Economic Research

In the same period, the average of off-peak price (between 8PM and 8AM) was TL 2,608.3 /MWh. The maximum limit price of TL 3,400 /MWh was realized over a period of 19 hours during off-peak hours, with the lowest price of TL 50 /MWh recorded between 7-8AM on Saturday, June 7.

In USD terms, the MCP decreased from USD 63.4 /MWh in May to an average of USD 55.9 /MWh in June, marking a decline of 13.3% compared to the same period of the previous year.



Source: EPİAŞ, TCMB, EIA, TSKB Economic Research

Average Commodity Prices

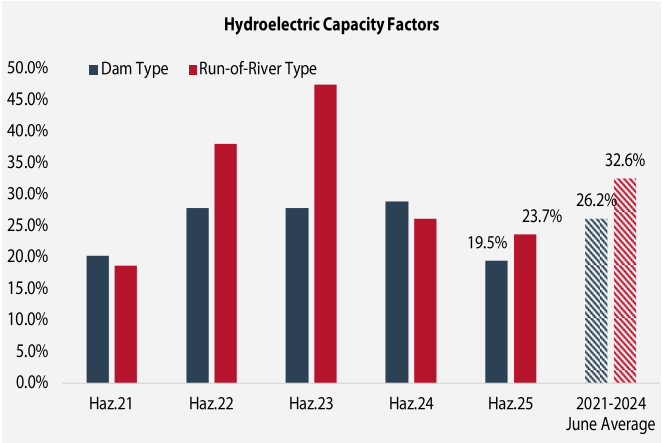
The price of a barrel of Brent crude oil, which averaged of USD 64.5, increased by 12.2% on a month-on-month basis to USD 72.3, although still 10.9% lower than in the same period of the previous year.

The TTF natural gas contract price, which averaged USD 35.4 /MWh in June, increased by 3.3% month-on-month to USD 36.6 /MWh in June. The TTF price was 6% higher than in the same period of the previous year.

Hydroelectric Capacity Factors

The capacity factors in June were 19.5% for dam-type hydroelectric power plants (down 9.4 percentage points compared to June 2024) and 23.7% for run-of-river type hydroelectric power plants (down 2.5 percentage points). Looking at the month of June over the last 5 years, June 2024 saw the highest capacity factor for dam-type power plants, of 28.9%, with run-of-river type power plants recording their highest capacity factor of 47.6% in June 2023.

In June 2025, the capacity factor of dam-type power plants was 6.7 percentage points lower than June average between 2021-2024, while the capacity factor for run-of-river type power plants was 8.9 percentage points below the average.



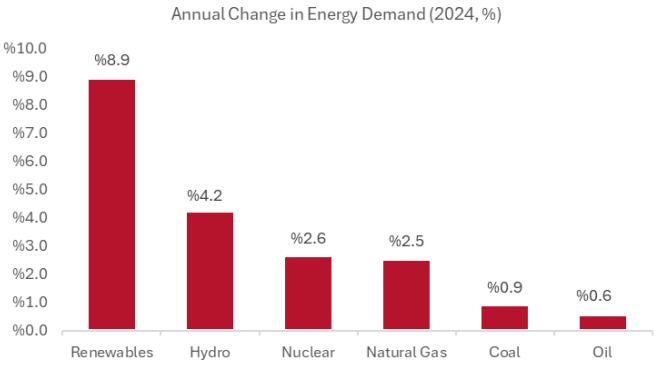
Source: TEIAS, EPIAS, TSKB Economic Research

Rise of Renewables in Global Energy Demand in 2024

Can Hakyemez hakyemezc@tskb.com.tr

The Energy Institute (EI) published its Statistical Review of World Energy for 2024. According to the figures, global energy demand increased by 2.1% year-on-year to 592.2 exajules (EJ) in 2024. Considering that 2024 was a leap year in the annual increase, the adjusted year-on-year increase was 1.8%. Delving into the detail, 2024 stood out with an increase in consumption of all resources.

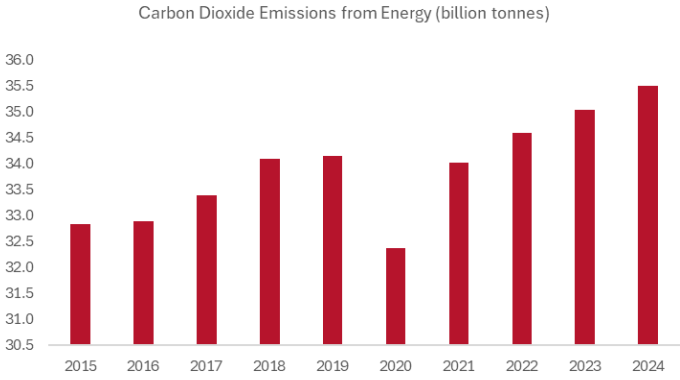
When the annual changes correcting for 2024 being a leap year are examined, the steepest increase is was in renewable energy resources, where there was 8.9% growth. Renewable energy resources were followed by hydroelectric energy, where there was an increase of 4.2%, while nuclear energy, which can be treated as a clean energy resource, recorded an increase of 2.6%. Fossil fuels, on the other hand, demonstrated a relatively modest increase, with the steepest increase being seen in natural gas consumption, at 2.5% in 2024, while consumption of coal and oil continued their increase after the Covid-19 pandemic, rising by 0.9% and 0.6%, respectively.



Source: EI, TSKB Economic Research

Although the rises in renewable energy and hydroelectric generation stood out in 2024, they could not prevent an increase in fossil fuels. While there has indeed been a trend towards renewable sources, using renewable resources in greater quantities and including them in the energy mix, we cannot meet the increase in demand in energy solely from renewable energy sources. Therefore, the increase in natural gas and, albeit to a more limited extent, in coal and oil continues. This has brought energy-related carbon emissions to a new record level; according to the data, energy-related carbon emissions reached a record level of 35.5 billion tonnes in 2024, up 1.3% compared to the previous year.

Looking at regional developments, total demand for energy increased by 0.4% in North America and by 0.7% in Europe compared to 2023. In the Asia Pacific Region, which is responsible for 47% of total global energy demand, demand grew by 2.6%. With this year-on-year increase, the Asia Pacific Region accounted for 68% of the growth in total global energy demand in 2024. Of course, once again the usual suspects stand out: China and India.



Kaynak: EI, TSKB Ekonomik Araştırmalar

The increase in total energy demand in these two countries accounted for 75.6% of the increase in demand for energy in the region in 2024 and 49.4% of the increase in global energy demand.

In addition, China alone accounted for 56% of the increase in total renewable energy demand.

Against this backdrop, the data indicates that the increase in demand for renewable energy is not sufficient, meaning that countries need to work harder to reach net zero. Although renewable energy sources are gaining prominence, the increasing demand for fossil fuels is preventing emissions from decreasing.

Sector News

Local News

- Turkish Electricity Transmission Corporation (TEİAŞ) announces capacity mechanism payment list for April. Accordingly, TEİAŞ will complete a total capacity payment of TL 2.01 billion to 32 power generation plants for April. Within the scope of the capacity mechanism, the Gebze Natural Gas Combined Cycle Power Plant will receive the highest payment for April, at TL 170 million.

- Tensions between Israel and Iran not expected to cause any problems in Türkiye's energy supply and security according to statements from the Minister of Energy and Natural Resources, Alparslan Bayraktar. Mr. Bayraktar stated that Türkiye had no natural gas supply shortage related to the tensions. Emphasizing that there have been no oil purchases from Iran since 2019, Mr Bayraktar added that there is a supply of crude oil coming to Türkiye using the Strait of Hormuz through Iraq, and that there may be a need for substitution if the Strait of Hormuz is closed to traffic.

- Türkiye in a position to increase its installed solar capacity to 30 gigawatts (GW) with the addition of 8 GW of hybrid solar power plants to its wind and hydroelectric power plants. In its new study, Ember Climate emphasized that hybrid power plants could be used to eliminate grid connection capacity constraints. The study highlights that between February 2024 and April 2025, 65% of applications for transmission-level grid connections for unlicensed solar power plants in Türkiye had been rejected due to connection constraints. However, according to the current market conditions, Türkiye has the potential for 8 GW in hybrid solar energy generation. The study underlined that solar energy could become Türkiye's biggest source of energy if this capacity, which does not need new network investments because it uses the same transmission lines as the power plants current in operation, is commissioned.

- Communiqué on Implementation of the Decision on State Support in Investments published in the Official Gazette. Accordingly, support for electricity generation investments based on solar energy is contingent on the solar panels being produced from domestically produced cells, starting from the ingot slicing stage or before, and the solar panel carrier construction systems being produced domestically. Similarly, in electricity generation investments based on wind energy, the blades and towers of the wind turbines must be produced domestically. It is stated that this condition is not required for wind energy-based electricity generation investments which have received a preliminary license or license as a result of the Renewable Energy Resource Area (YEKA) tenders held before the Communiqué came into force. However, in order to issue an incentive certificate for investments in the operation of charging stations for electric vehicles and electronic devices, each unit must have a minimum 120 kilowatt fast charging capacity.

- Minister of Energy and Natural Resources, Alparslan Bayraktar, announces that Saudi energy company, ACWA Power, will invest up to 5 GW in renewable energy in Türkiye. Mr. Bayraktar stated that in the first stage of the investment, two separate solar power plants each with a capacity of 1 GW will be established in Sivas and Karaman, with the legal processes of the investment continuing.

- Unit costs for Renewable Energy Support Mechanism (YEKDEM) revised upwards for July and beyond. According to the decision taken by the Energy Market Regulatory Authority (EMRA) published in the Official Gazette, it is predicted that YEKDEM unit costs will vary between TL 258.58 and TL 414.90 per MWh between July and December. Accordingly, the unit cost in the YEKDEM, previously predicted to average TL 262.30 /MWh for the same period, was increased by 17.1% to TL 307.2 /MWh.

- Ministry of Energy and Natural Resources announces first YEKA announcement based on floating solar energy. According to the announcement, the candidate YEKA region was determined as the Demirköprü Dam on the Gediz River in Manisa.

- EMRA publishes "Electricity Market Sector Report" and "Natural Gas Market Sector Report" for April. Accordingly, electricity consumption in April increased by 11.7% compared to the same month of the previous year to reach 27.1 TWh. Electricity consumption was 28.0 TWh in March. Meanwhile, billed electricity consumption in April increased by 1.4% year-

on-year to 22.4 TWh. According to the "Natural Gas Market Sector Report", which is one of the other reports published, total natural gas consumption increased by 26.9% in April compared to the same month of the previous year to reach 5.18 billion cubic meters (bcm), while 45.8% of the natural gas consumed was used by residential customers. Natural gas imports increased by 68.5% compared to April 2024 to 4.06 bcm.

Foreign News

- Meta announced that it had entered a nuclear energy deal to support its Artificial Intelligence operations. According to the 20-year agreement signed with Constellation Energy, Meta's Clinton Clean Energy Center will be supplied with approximately 1.1 GW of nuclear energy from 2027.

- World Bank and International Atomic Energy Agency (IAEA) sign agreement to support the safe and responsible use of nuclear energy in developing countries. According to the agreement, the World Bank and IAEA will work together in three key areas: building knowledge in the field of nuclear energy, extending the life of existing nuclear power plants, and accelerating the development of small modular reactors.

- Organization of Petroleum Exporting Countries (OPEC) leaves its global oil demand growth forecast for 2025 unchanged at 1.3 million barrels per day (bpd). The most recent Monthly Oil Market Report for June published by OPEC left the forecast for growth in oil demand unchanged compared to the previous report, at 1.3 bpd in 2026.

- IEA publishes its June Oil Market Report and 2025 Oil Report. According to the 2025 Oil Report, increasing geopolitical risks and trade tensions are causing uncertainties in oil markets. The IEA projects that global demand for oil with exhibit stable growth by around 2.5 bpd each year between 2024 and 2030, reaching 105.5 bpd by the end of 2030. Accordingly, although oil market forecasts are similar to the previous year, the report draws attention to the changes in oil consumption in China and the USA. According to the June report, global oil demand is expected to increase by 720,000 barrels per day in 2025. The IEA has lowered its global oil demand forecast by 20,000 barrels per day compared to the previous month, with weak deliveries from the USA and China in the second quarter playing a role in this decrease. Demand is expected to grow by 740,000 barrels per day in 2026 due to economic conditions and clean energy technologies.

- World Economic Forum (WEF) publishes its report on "Promoting an Effective Energy Transition 2025". The report presents the results of the "Energy Transition Index (ETI)" prepared by the WEF for energy transition performance. Accordingly, the ETI, which is calculated based on safety, equality and sustainability, increased by 1.1% year-on-year in 2024, twice the average rate of growth over the last three years. Among the three main determinants of the index, equity rebounded strongly due to moderate energy prices and subsidy reforms, while sustainability maintains its steady upward trend. However, the stagnation in energy security due to limited diversity, high import dependency, and inflexible power systems also stand out. A comparison of the ETI scores of 118 countries places Sweden, Finland and Denmark in the top three with strong infrastructure, diverse low-carbon energy systems and long-term policy stability. The WEF emphasizes that China achieved the highest increase in rank among countries, from 17th to 12th, with its innovation capacity and investments in clean energy. The U.S., on the other hand, ranks 17th with developments in energy security and sustainability, while Türkiye is ranked in 50th place.

- International Renewable Energy Agency (IRENA) publishes its report entitled "Regional Energy Transition Outlook: the European Union (EU)". According to the report, the EU, which plays an important role in mitigating the effects of climate change, needs to closely monitor the security of energy supply. IRENA highlights that the EU's renewable energy capacity has the potential to triple by 2030, quadruple by 2040 and quintuple by 2050 compared to 2021. IRENA highlights the need for effective energy planning and coordination in implementation for the EU to achieve its goals. In addition, it emphasizes that renewable energy technology investments should increase to meet the targets. The report also highlights the need to protect power grids from risks, especially climate events, accelerate resiliency solutions and encourage competitive innovation in storage.

- IEA publishes "Energy Progress Report 2025", which assesses the 7th Sustainable Development Goal: affordable and clean energy. The report states that the rate of global access to electricity, which stood at 87% in 2010, increased to 92% in 2023, with Asia standing out in this increase. However, while there is a need for acceleration in order to achieve universal access by 2030, the need for acceleration is highlighted, especially in Sub-Saharan African countries. In addition, the IEA emphasizes the importance of increasing the use of renewable energy and improving energy efficiency for all countries, while drawing attention to regional inequalities. The IEA underlines that in order to achieve the development goals, more investment, new policies and radical changes in long-term planned energy production, distribution and consumption are required.

- European Commission adopts a state aid framework to support member states' development of clean energy, industrial decarbonisation and clean technology. The aid framework planned under the Clean Industry Treaty addresses five main issues: the expansion of renewable energy and low-carbon fuels, temporary electricity price reduction for energy-intensive users, the decarbonization of existing product facilities, the development of clean technology production capacity, and the de-risk of investments in clean energy.

Economic Research
ekonomikarastirmalar@tskb.com.tr

MECLİSİ MEBUSAN CAD.
NO:81 FINDIKLI İSTANBUL 34427, TÜRKİYE
T: +90 (212) 334 50 50 F: +90 (212) 334 52 34