Monthly Energy Bulletin

TSKB Economic Research

September 2026 #100

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21 October 2026

Details of Türkiye's new energy architecture will be unveiled before COP31

According to statements from the Energy and Natural Resources Minister, Alparslan Bayraktar, the new energy architecture for Türkiye will be referred to as "Vision 2040," with the specifics of the architecture to be announced prior to COP31.

Minister Bayraktar, emphasized that the new energy architecture would be built around five core policy pillars: renewable energy, energy efficiency, nuclear energy, oil and natural gas, and minerals. More than USD 300 billion of investments are planned for the energy and mining sectors up to 2040 under this framework, with at least USD 30 billion being needed for the electricity transmission grid and at least USD 50 billion for the distribution grid by 2035.

He noted that electrification lies at the heart of the 2040 energy architecture, with a focus on electrifying various sectors such as buildings, industry, transport, agriculture and manufacturing. He also added that small modular reactors (SMRs) are expected to be commissioned from the early 2030s onward.

In this sense, "Vision 2040" could be considered to be shaped around the electrification emphasis, which is one of the main themes of the COP31. The COP31 Presidency had announced a target of raising the share of electricity in global final energy consumption to 35% by 2035. The "35-to-35 Global Electrification Commitment" has been introduced to achieve this with the pledge seeking to advance electrification while taking different national contexts and pathways into account. It highlights the importance of mobilizing clean electricity, storage, system flexibility, resilient grids, financing to support developing countries and strengthening international cooperation.

According to statements from the Minister for the Environment, Urbanization and Climate Change and COP31 President Murat Kurum, reaching the agreed-upon electrification target will require a ramping up of grid and storage investments, directing financing toward implementable projects and strengthening developing countries' access to finance.

31.3 TWh
September Gross Generation

2,742.4 TL/MWh
Average MCP

3.4%

Daily average electricity generation increased by 3.4% MoM and decreased by 12.0% YoY in September.

Click for details.

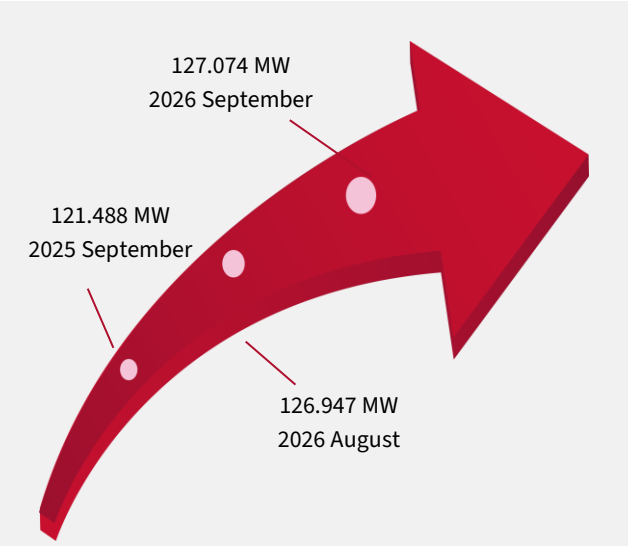
5.7%

Market Clearing Price (MCP) decreased by 5.7% MoM and increased by 0.1% YoY in September.

Click for details.

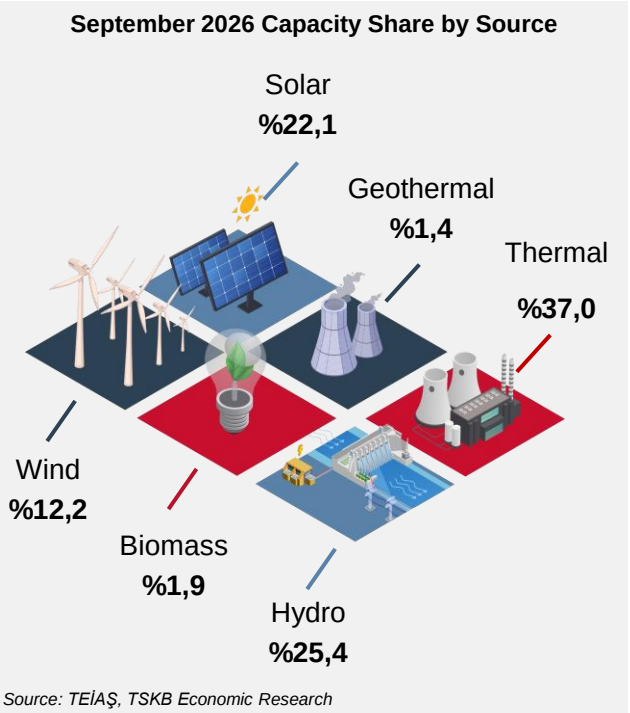
Installed Capacity Analysis

Türkiye's total installed capacity rose from 126,947 MW at the end of August 2026 to 127,074 MW in September 2026. In September, an additional 126.6 MW of net capacity was brought online compared with August. Of the newly commissioned capacity, 129.7 MW consisted of solar power plants with 0.4 MW from hydroelectric plants. Capacity from plants using renewable waste fell by 0.4 MW, while capacity from natural gas and multi-fuel fired plants declined by 1.9 MW. There was no change in the capacity of the remaining plants.



Source: TEİAŞ, TSKB Economic Research

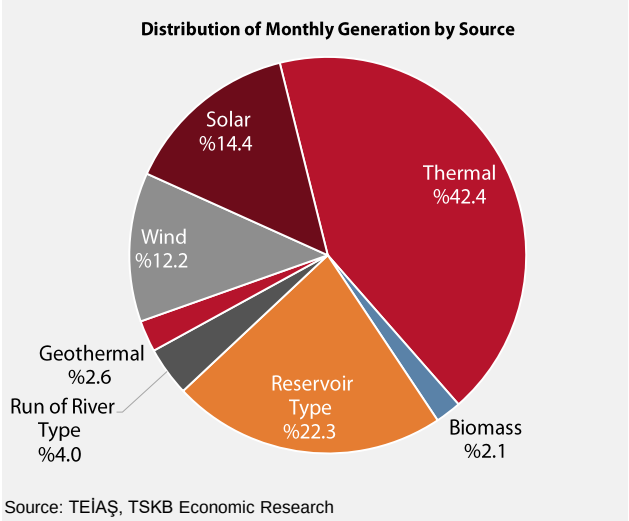
In September, power plants generating electricity from renewable sources accounted for 63% of the capacity in operation. Hydroelectric power plants represented 25.4% of Türkiye's total capacity, while solar power plants accounted for 22.1% of the total capacity, continuing to close the gap with hydroelectric generation.



Source: TEİAŞ, TSKB Economic Research

Generation-Consumption Analysis

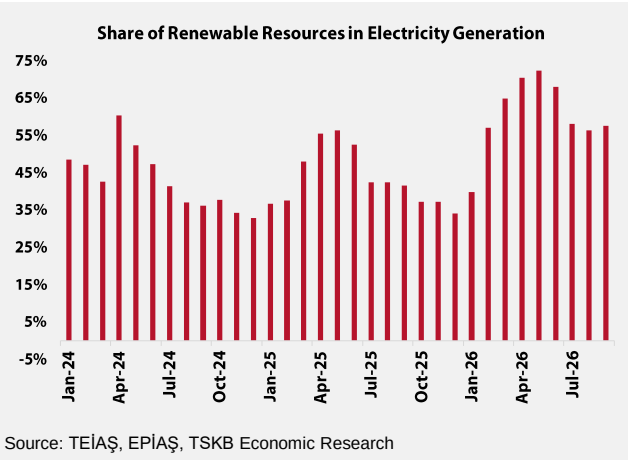
Total electricity generation fell from 36.7 TWh in August 2026 to 31.3 TWh in September 2026. Consequently, the average daily generation in September was 12% lower than in the preceding month, but 0.5% higher than in the same period of the previous year.



Source: TEİAŞ, TSKB Economic Research

Looking at the generation mix by source, hydroelectric power plants - which supplied 24.7% of total generation in august - produced 26.3% of the total electricity in september. In the same month, run-of-river hydroelectric power plants contributed about 4%, while wind power plants accounted for 12.2% of generation.

Geothermal power plants provided 2.1% of the total electricity generated. Reservoir-type hydroelectric power plants accounted for 22.3% of total generation, and solar power plants covered 14.4% of the total, placing solar as the second-largest renewable source of electricity.



Source: TEİAŞ, EPİAŞ, TSKB Economic Research

The share of electricity generated from renewable energy plants rose from 56.4% in August 2026 to 57.6% in September 2026.

Thermal power plants, which provided 43.6% of the generated electricity in august, accounted for 42.4% of total generation in september.

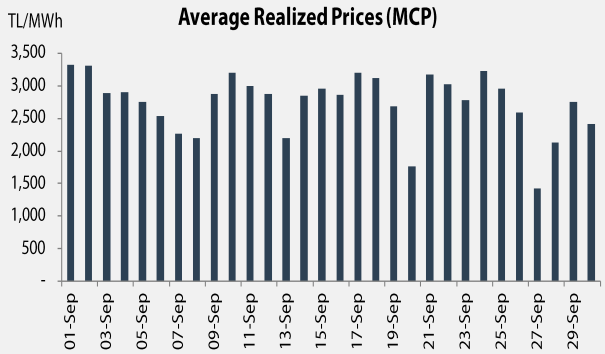
The average daily electricity generation stood at 1.04 TWh in September with the highest generation recorded during the month, of 1.15 TWh, being realized on Wednesday, 2 September while the lowest generation of 0.86 TWh was recorded on Sunday, 27 September.

During the same period, daily electricity consumption averaged 1.02 TWh with the highest consumption of 1.13 TWh recorded on Wednesday, 2 September and the lowest, of 0.84 TWh, on Sunday, 27 September.

Electricity Price Analysis

During September, the daily average market-clearing price (MCP) fluctuated between TL 1,424.2 /MWh and TL 3,328.1/MWh. The average daily MCP for the month was TL 2,742.4/MWh. The highest daily average MCP, of TL 3,328.1 /MWh, was recorded on Tuesday, 1 September, while the lowest daily average MCP, of TL 1,424.2 /MWh, occurred on Sunday, 27 September.

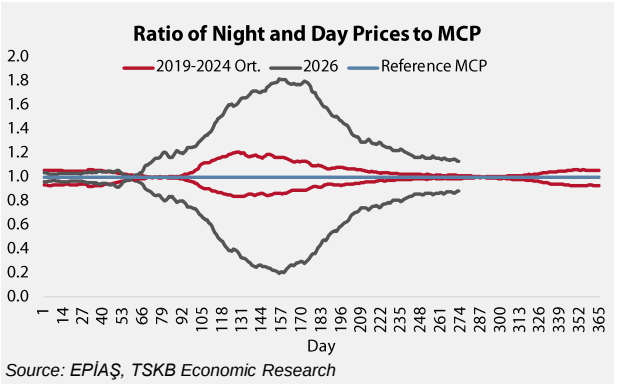
According to hourly data, the MCP hit the legally defined maximum price cap of TL 4,500 /MWh for a total of seven hours in September. During the same period the hourly minimum price of TL 0 /MWh was observed for four hours. The average MCP in August was USD 60.2/MWh, while in September it remained at a normal level of USD 56.4/MWh.



Source: EPİAŞ, TSKB Economic Research

Separately calculating the average MCP values recorded during daytime (6AM-6PM) and night-time (7PM-5AM) and then comparing each to the overall daily MCP provides an insight into how price formation diverges between the two parts of the day.

Based on this analysis, the gap between daytime and night-time MCPs widened progressively during the february-may period, remaining above the 2019-2024 averages. Since june, the has gap narrowed, but in september it again diverged slightly from the historical averages.

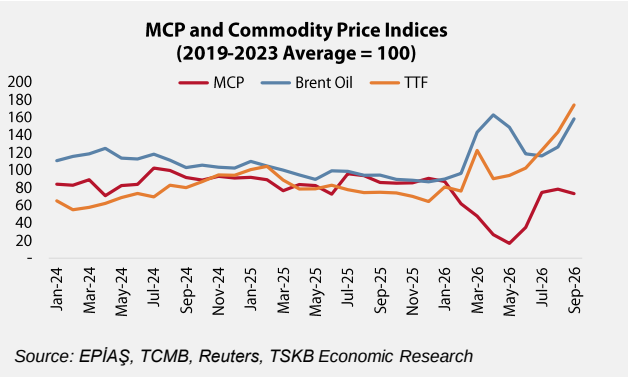


Source: EPİAŞ, TSKB Economic Research

Average Commodity Prices

Brent crude oil prices, which had averaged USD 91 per barrel in August, rose 25.3% month-on-month in September to reach USD 114 per barrel. The average TTF natural-gas contract price increased by 21.5% month-on-month from USD 72 /MWh in August to USD 87.5 /MWh in September.

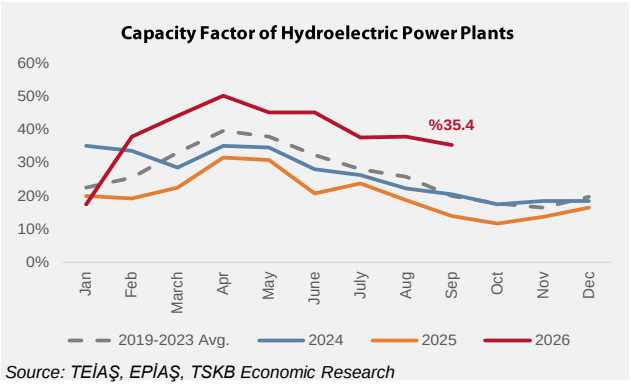
Indexing the three series—MCP, Brent crude and TTF gas—so that their 2019-2023 averages equal 100, it is noted that oil and gas prices have both risen and moved closer to each other. The MCP index, despite its recent upward movement, remains below the levels of the indexed Brent and TTF values.



Source: EPİAŞ, TCMB, Reuters, TSKB Economic Research

Hydroelectric Capacity Factors

The capacity factor of hydroelectric power plants stood at 35.4% in September 2026, reflecting the impact of the unusually high hydroelectric generation that has persisted since February 2026. This level is above the averages for 2019-2023 as well as being above the corresponding periods in 2024 and 2025. The continued high capacity factors in 2026 are particularly striking when compared with the much drier year of 2025.



Source: TEİAŞ, EPİAŞ, TSKB Economic Research

Electrification on the Road to COP31

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International Energy Age agency (IEA) has released its electrification report for COP31. The report stresses that the impact of electricity on the economy, competition and energy security is becoming increasingly evident, and highlights the role of electrification in mitigating the effects of climate change.

According to the report, the annual rate of growth of global electricity demand exceeded 3% during the 2015-2025 period, driven by cooling systems, household appliances, electric vehicles, digital services and artificial intelligence. In this context, electricity has met energy needs across a wide range of sectors with its share of total final energy demand reaching 23.4% in 2025. The COP31 target is to raise this share to 35% by 2035.

IEA points out regional and sectoral differences in the path towards this target. Buildings are the most prominent sector with the share of electricity in total final energy consumption in buildings increasing from 24.5% in 2000 to 40% in 2025, driven largely by the rapid growth in electric household appliances and air-conditioning.

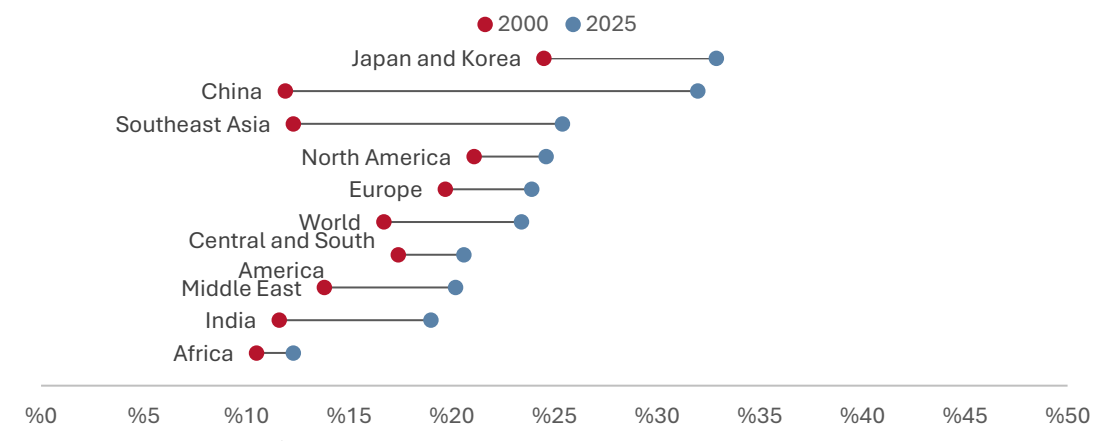
In the industrial sector, the share of electricity has been accelerating since 2010, while the need for progress in transport has been highlighted. Despite rising sales of electric vehicles, the share of electricity in transport was still limited at just 2% in 2025. Consequently, electrification of long-distance aviation and shipping, together with road transport, is identified as a major future requirement.

Regionally, China, Japan and Korea lead the transition, along with Southeast Asia, followed by North America and Europe. When compared the 2000-2025 period, China increased the share of electricity in its total final energy consumption by 8.4 percentage points, to 32%. This share was followed by Southeast Asia (up 13.1 pp), Japan (up 8.4 pp), South Korea (up 7.4 pp) and India. The region showing the smallest increase is Africa, where electricity accounted for 12.3% of total final energy consumption in 2025.

As electricity use grows, the diversity of generation sources becomes increasingly important. The report notes that the share of clean energy sources in electricity generation rose from 33% in 2015 to 42% in 2025. About 70% of this increase is attributable to renewable energy and nuclear power. However, the IEA stresses that, under the scenario in which the COP31 goal of 35% is achieved, global electricity generation would need to increase by more than 15,000 TWh, roughly double current production. Reliable, affordable low-emission generation must therefore be complemented by expanded grid capacity, digital competence, storage and flexibility.

Finally, IEA has underlined that upward pressure on energy prices caused by the ongoing uncertainty surrounding the tensions between the U.S. and Iran tension further underscores the importance of electrification. This situation creates an opportunity for the COP31 presidency's 2035 target to become a focal point for countries and to translate into concrete policy actions.

Share of Electricity in Total Final Energy Consumption



Source: IEA, TSKB Economic Research

Sector News

Local News

- Energy Market Regulatory Authority (EPDK) publishes "Electricity Market Sector Report" and "Natural Gas Market Sector Report" for July 2026. According to the reports, billed electricity consumption in July rose 1.4% year-on-year to 27.6 TWh, with the industrial sector accounting for 36.1% of the total. Electricity consumption in June had stood at 24.1 TWh. In the same month, natural gas consumption fell 25.1% year-on-year to 2.6 billion cubic meters (bcm). Natural gas imports decreased 21.7% compared to July 2025, to 3.9 bcm. The EPDK also set the transmission-service surcharge that will apply from 2027 at 0.7% of TEİAŞ's transmission tariff.

- Turkish Nuclear Energy Corp. (TÜNAŞ) signs project-based agreement with the United States Trade and Development Agency (USTDA). Under the agreement, US companies will submit the designs of SMRs and fourth-generation reactors for technical, economic and regulatory feasibility studies on their possible deployment in Türkiye.

- Domestic production of thorium compounds being pursued. The Turkish Energy, Nuclear and Mining Research Institute (TENMAK) signed a memorandum of understanding with Copenhagen Atomics to enable the use of thorium—Türkiye's native nuclear-fuel raw material—in innovative technologies. At the signing ceremony, Energy and Natural Resources Minister, Alparslan Bayraktar, stated that thorium is abundant in Türkiye and that, should the technology materialize, the country would no longer depend on imports for this fuel.

- Çan2 Thermic Inc. signs 20-year operating and production contract for an oil field in Venezuela. According to the company's filing on the Public Disclosure Platform (KAP), an investment of USD 381.7 million will be undertaken to develop the field and increase production. The plan is to raise daily output from 400 barrel per day (bpd) to 9,865 bpd. The firm also announced that 70% of the capital raised through a recent paid-in capital increase would be allocated to renewable-energy projects, primarily solar power. However, the filing notes that "the low ceiling price applied in the electricity market limits hourly profit margins" and "periodic energy-supply surpluses" will lead the company to channel part of those funds into the oil-field investment.

- Sabancı Holding becomes electrification partner of COP31. Through this strategic partnership, Sabancı Holding aims to highlight the role of electrification in achieving climate goals and to place the importance of electrification—for energy security, economic competitiveness, industrial transformation and sustainable development—on the global agenda.

- **Enerjisa Enerji obtains USD 207 million from the European Bank for Reconstruction and Development (EBRD) for electricity-distribution investments**. The 7-year loan will be used to develop and modernise the distribution networks in Enerjisa's three regions – Başkent, AYEDAŞ and Toroslar.

- Rönesans Enerji signs USD 40 million financing agreement with the Industrial and Commercial Bank of China (ICBC). The funds are earmarked for expanding the company's renewable-energy portfolio (wind, solar, hydro-electric and battery-storage projects).

- Efor Holding secures financing for EUR 44.5 million of renewable energy investments under an Euler Hermes guarantee. The financing was concluded with Germany's Oldenburgische Landesbank AG (OLB).

- Astor Enerji secures TRY 351.1 million contract awarded by TEİAŞ through a public tender. The contract will implement a mobile hybrid-module solution on Türkiye's transmission system – a first-of-its-kind application. In addition, Astor signed a separate USD 97.9 million supply agreement with a U.S. firm for three power transformers that will be delivered to Ukraine.

- Girişim Elektrik signs construction contract for a solar-power plant, a transformer sub-station and a transmission line in Bosnia-Herzegovina. The deal is valued at EUR 26.8 million (approximately TRY 1.5 billion) and will be financed by the EBRD.

- Yeo Teknoloji enters contract for a 250 MWh battery-energy-storage system (BESS) with the Azerbaijani power-grid operator. The agreement, worth USD 58.6 million, covers engineering, procurement, construction, commissioning, as well as the high-voltage sub-station and grid-integration works.

- Girişim Elektrik announces USD 73.9 million contract for the construction of a solar-power plant in Mardin, Türkiye.

International News

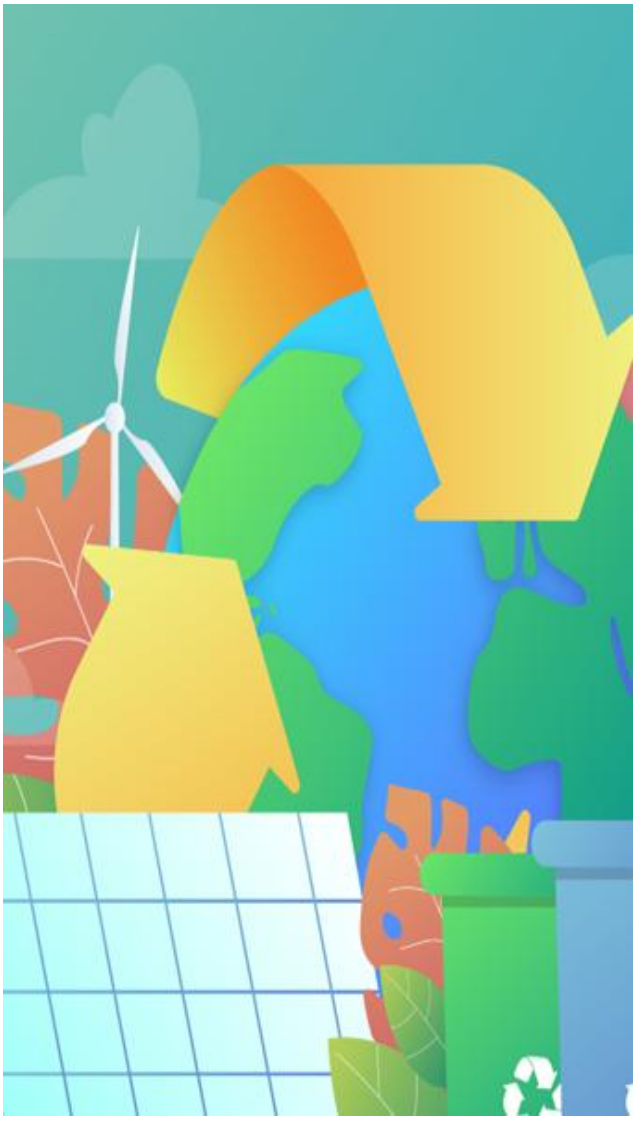
- IEA warns that global coal demand will increase. According to IEA's "Coal 2026 Mid-Year Update" report, global coal demand, which was recorded at 8.84 billion tonnes in 2025, is projected to rise by 1.2% in 2026 to 8.94 billion tonnes. The increase is attributed in part to the conflict in the Middle East and to weather-related factors. The report notes that developments in the Strait of Hormuz – which affects the liquefied natural gas (LNG) trade – will shape the direction of global coal demand in 2027. If natural-gas prices fall below the 2026 level, the report suggests that a 0.4% year-on-year decline in coal demand could occur in 2027.

- European Investment Bank (EIB) to grant EUR 40 million to Finland's nuclear-energy company Steady Energy for SMR project. This will be the EIB's first loan dedicated to SMRs. The financing is intended to enable the deployment of SMRs that will supply heat to district-heating networks in the project region

- USA based nuclear-energy venture Kairos Power receives approval to start construction of two test reactors. In October, Kairos Power signed an agreement to supply 500 MW of electricity to Google data centers beginning in 2030; the recent approval clears the way for the two pilot reactors to be built.

- USA and Italy sign memorandum of understanding (MoU) on critical minerals. The MoU aims to deepen cooperation in the critical-minerals sector and to diversify supply-chain sources for these strategic materials.

- Italy approves plan to resume electricity generation from nuclear power. Italy shut down all its nuclear power plants in 1990. Under the new plan, the government will be empowered within a year to issue regulations covering sustainable nuclear power, waste management and nuclear-fusion research, effectively paving the way for a revival of nuclear electricity generation in the country.



From More Renewable Based Generation to More Flexible System

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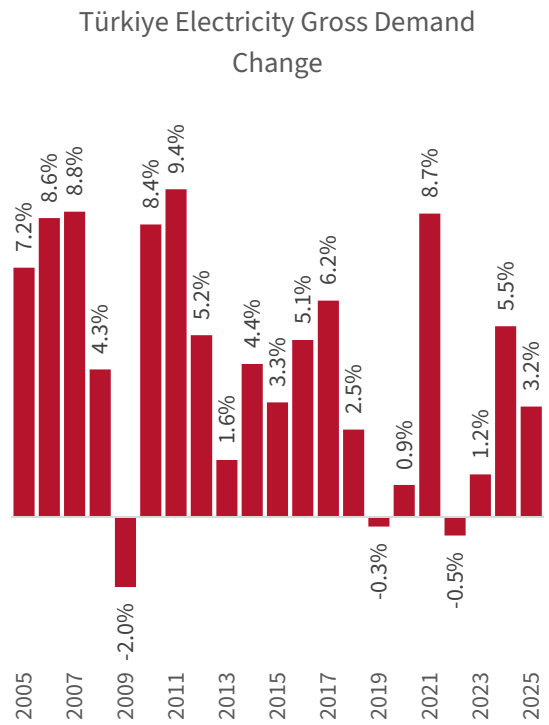
The share of the electricity sector in Türkiye's energy transition is growing steadily. IEA's September-2026 "Türkiye 2026 Energy Policy Review" also highlighted that the forthcoming energy story will be shaped to a large extent by the power system. However, in the next chapter of that story the question will not only be "how much renewable capacity will we add?" but also "how will we integrate the added capacity into the system?"

Electricity demand in Türkiye grew by an average of around 4.5% per year over the 2005-2025 period. According to the IEA, this is the fastest rate of growth among member countries. Moreover, driven by industrial and household consumption, demand is expected to continue rising until 2035.

When new end-uses such as electric vehicles, data centers and industrial electrification are taken into account, electricity is no longer a sub-category of the energy system but the heart of the transformation.



Source: TEİAŞ, TSKB Economic Research

On the supply side, a major shift is already under way. The share of renewable sources in electricity generation reached 43% in 2025, and the National Energy Plan envisions that this will rise to 55% by 2035. Solar capacity is expected to triple by 2035 with wind capacity projected to follow a similar trajectory. The inclusion of nuclear power will also diversify Türkiye's electricity generation portfolio.

Nevertheless, capacity expansion alone will not be sufficient. As the share of solar and wind in the energy mix increases, new grid and modernization investments, electricity storage, demand-side participation, digital solutions and inter-connection capacity will together shape the next chapter of the power system. Türkiye's plan to expand both distribution and transmission networks and to commission an additional 7,500 MW of BESS capacity by 2035 is therefore critical.

Consequently, the new threshold in Türkiye's power transition may be the shift from "more capacity" to "a more flexible system," which could alter the investment pathway.

In addition to generation assets, strengthening the grid, electricity storage, digitalization and financing demand-side flexibility will become increasingly important. From the perspective of development and investment banks, the emerging financing niche lies precisely here: financing a power system that can use renewable electricity at the right time, in the right place, and with reliability—beyond merely adding more renewable-based generation.

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