

Monthly Energy Bulletin

TSKB Economic Research

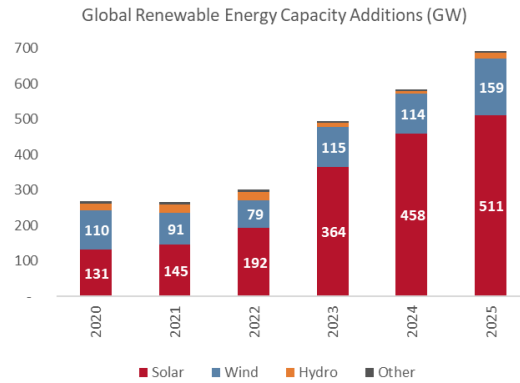
April 2026 #95

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21 May 2026

Global renewable energy capacity expands 15.5% in 2025 to reach 5,149 GW

According to the “Renewable Capacity Statistics 2026” report published by the International Renewable Energy Agency (IRENA), the 15.5% rise in global renewable energy capacity corresponds to an addition of 692 GW. Based on the source-by-source breakdown, solar power accounted for the highest share of total capacity in 2025, at 2,392 GW, while solar capacity grew by 27.2% YoY during this period, which translates into an increase of 511 GW.



Source: IRENA, TSKB Economic Research
 Other includes bioenergy, geothermal and marine energy.

While solar power led the capacity expansion, wind followed closely with a YoY expansion of 14% to reach 1,291 GW in 2025. Combined, the additions from solar and wind (692 GW) accounted for 96.8% of the total annual capacity growth. Notably, the share of solar and wind energy in capacity additions has continued to increase since 2020.

Hydroelectric power plants’ capacity worldwide grew by 1.4% per year, reaching 1,295 GW in 2025, an annual addition of about 18 GW. In contrast, the combined annual capacity growth of other renewable sources (bioenergy, geothermal and marine energy) was limited to roughly 4 GW.

IRENA also highlights the regional disparities in this capacity expansion. Based on regional data, Asia contributed 74.2% to the new capacity, with China alone accounting for an increase of 440.1 GW. Europe recorded 9% annual growth in renewable energy capacity with 7.4% growth in North America.

27.6 TWh	921 TL/MWh
April Gross Generation	Average MCP

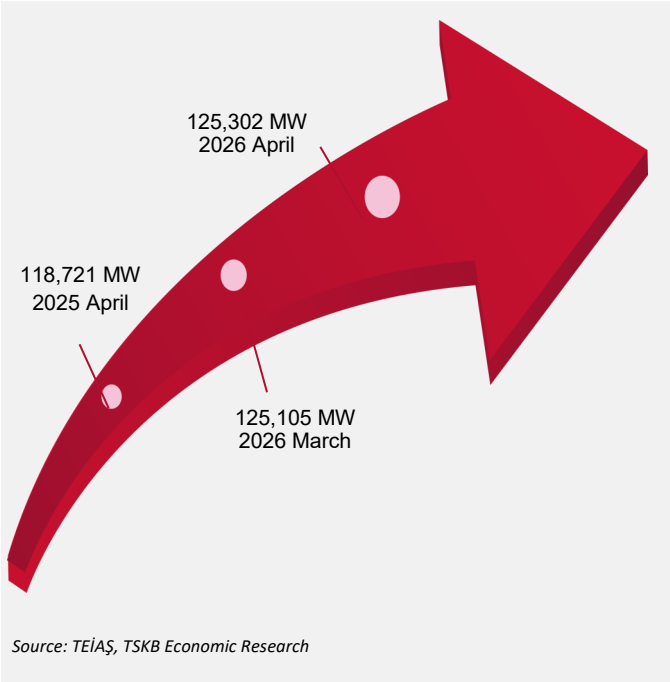
4.6%
 Daily average licensed electricity generation decreased by 4.6% MoM and increased by 1.2% YoY in April.
[Click for details.](#)

43.2%
 Market Clearing Price (MCP) decreased by 43.2% MoM and by 62.4% YoY in April.
[Click for details.](#)

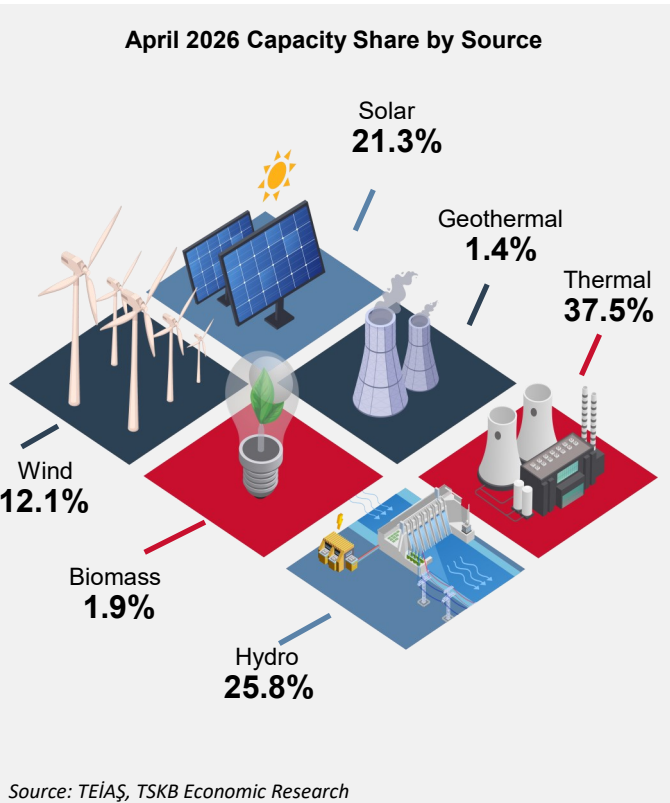


Installed Capacity Analysis

At the end of March 2026, Türkiye's total installed capacity stood at 125,105 MW, rising to 125,302 MW by April 2026. A net 196.9 MW of additional capacity was commissioned in April compared with March, with solar energy accounting for 169.4 MW of the newly commissioned capacity. Wind farms recorded a 22.6 MW increase in installed capacity followed by a 2.3 MW increase for hydroelectric capacity and a 1.6 MW increase in the capacity of natural gas and multi fuel plants.

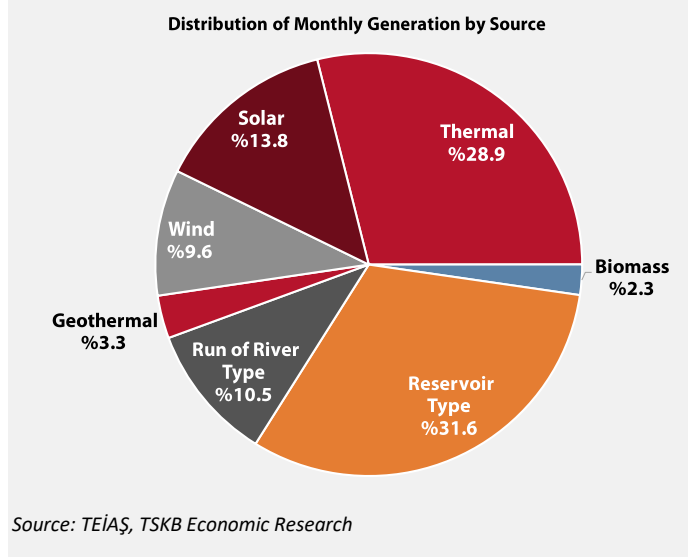


In April, 62.5% of the plants in operation generated electricity from renewable resources with hydroelectric plants comprising 25.8% of Türkiye's total installed capacity, while solar power plants accounted for 21.3% of the total capacity, continuing to close the gap with hydroelectric plants.

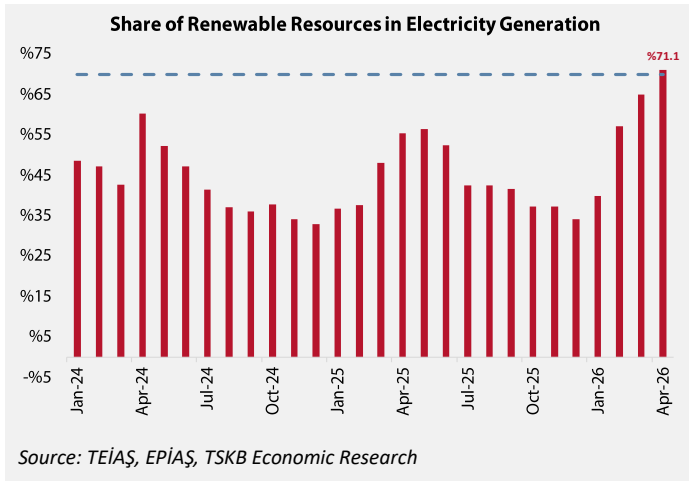


Generation-Consumption Analysis

Total electricity generation fell from about 30 terawatt hours (TWh) in March 2026 to 27.6 TWh in April 2026. Accordingly, average daily electricity generation in April decreased by 4.6% compared with the previous month, but increased by 1.2% when compared to the same period of the previous year.



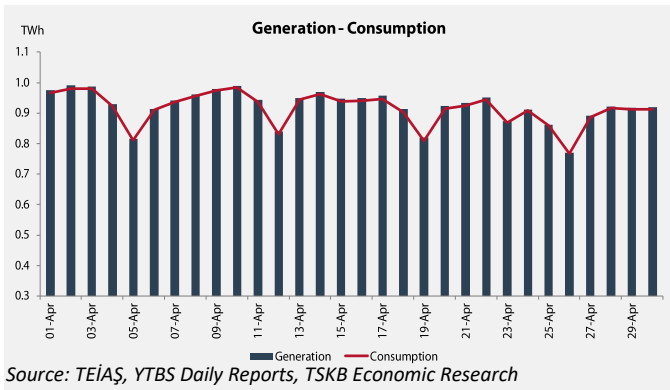
In a breakdown of the generation by source, hydroelectric plants, which accounted for 35.4% of total generation in March, generated 42.1% of the total electricity in April. Wind farms accounted for 9.6% of electricity generation during the same period with geothermal power plants providing a 3.3% contribution to total generation.



In the period under review, dam type hydroelectric plants contributed 31.6% to total generation, whereas solar plants provided 13.8% of the electricity, with solar being second largest source of renewable electricity.

The share of renewable energy plants in electricity generation rose from 65.7% in March 2026 to 71.5% in April 2026, the highest level seen since 2024. This was driven by the sustained high output of hydroelectric generation.

Thermal plants, which provided 35% of the electricity generated in March, accounted for 28.9% of total generation in April.



Daily electricity generation averaged 0.92 TWh in April with the month's highest generation recorded on Thursday, 2 April, at 0.99 TWh, and the lowest on Sunday, 26 April, at 0.77 TWh.

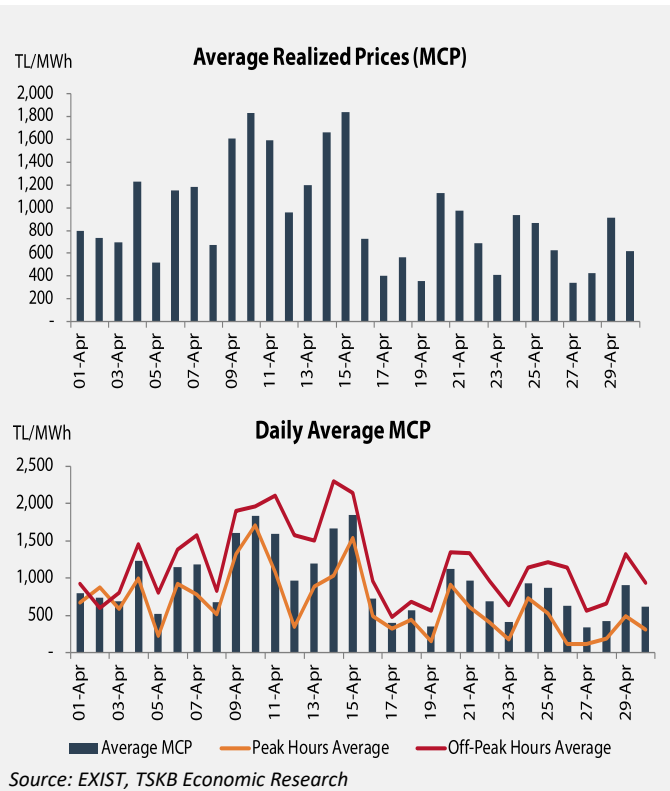
During April, daily electricity consumption averaged 0.91 TWh, peaking at 0.98 TWh on Friday, 10 April, with the lowest daily consumption, of 0.76 TWh, recorded on Sunday, 26 April.

Electricity Price Analysis

The daily average market clearing price (MCP) for electricity ranged from TL 340.5 /MWh to TL 1,840.6 /MWh in April, with an average daily MCP for the month of TL 921.1 /MWh. The highest daily average MCP of TL 1,840.6 /MWh was recorded on Wednesday, 15 April with the lowest, of TL 340.5 /MWh, recorded on Monday, 27 April.

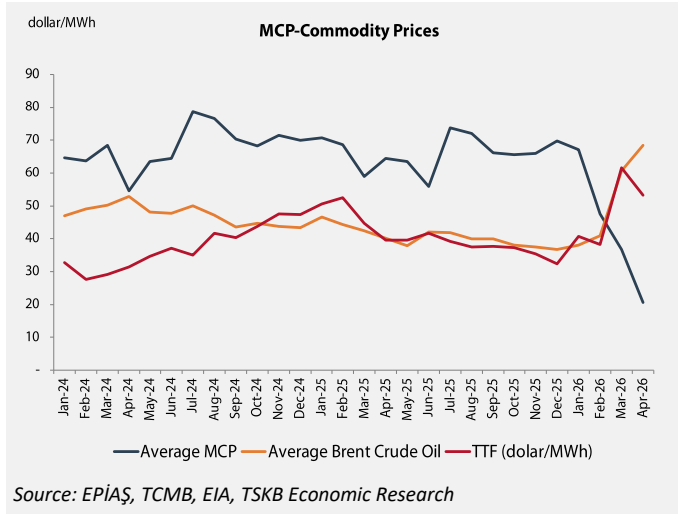
Based on hourly data, the MCP reached the maximum price limit of TL 4,500 /MWh for a total of 19 hours in April while falling to the minimum price of TL 0 /MWh for 95 hours.

An analysis of the daily MCP for April finds that the average price during peak hours (8AM-8PM) was 10.7% lower than the overall hourly average, at TL 1,447 /MWh. The maximum limit price of TL 4,500 /MWh was reached 19 times during peak hours, with the minimum price of TL 0 /MWh recorded for 93 peak hour intervals.



During off-peak hours (8PM-8AM), the average price was TL 1,793.2 /MWh. The ceiling price of TL 4,500 /MWh was observed for 33 off-peak hours, with the floor price of TL 0 /MWh recorded twice.

The average MCP fell from USD 36.6 /MWh to USD 20.4 /MWh in April, with the MCP being 68.2% lower than in the same period last year in dollar terms.



Average Commodity Prices

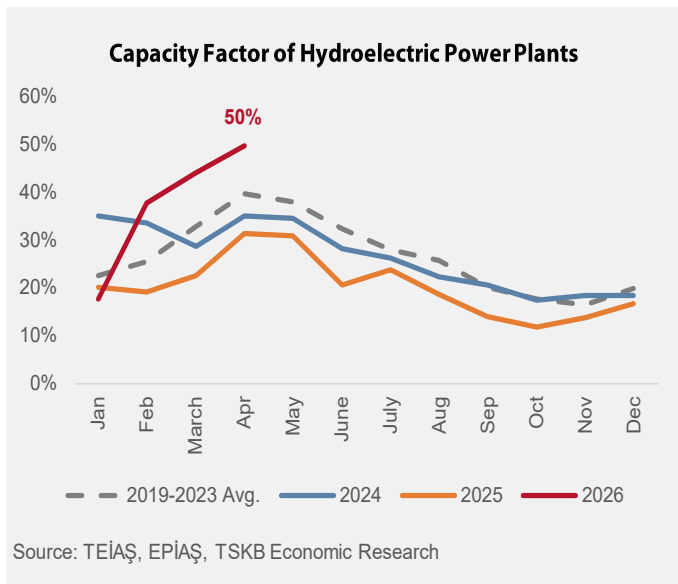
The Brent crude oil price rose by 12.9% from an average of USD 60.6 /MWh in March to USD 68.5 /MWh in April. This average price was 70.9% higher than in the same period of the previous year.

The TTF natural gas contract price, which averaged USD 61.6 /MWh in March, fell by 13.5% on a monthly basis in April to USD 53.2 /MWh. Compared with the same period last year, the TTF price was 34.6% higher.

Hydroelectric Capacity Factors

Due to the persistently high hydroelectric generation observed since February 2026, capacity factor of hydroelectric plants reached 50% in April 2026, far exceeding both the 2019-2023 averages and the levels recorded for the same period in 2024 and 2025.

In particular, when compared with the drier year of 2025, the continued high capacity factors in 2026 are striking.



2025 Electricity Outlook

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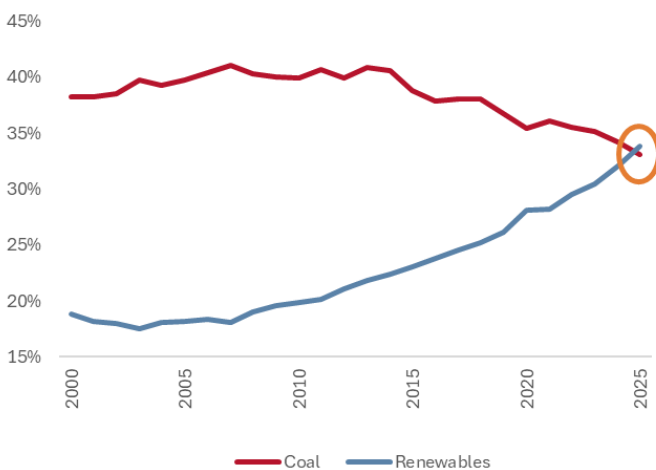


According to Ember Energy's "Global Electricity Review 2026" [report](#), the increase in low carbon electricity generation in 2025 was 887 TWh, outpacing the 849 TWh rise in demand for electricity. Among these sources, solar power alone accounted for 75% of the growth in net demand; when combined with wind energy, the two sources met 99% of the net increase in demand.

In 2025, electricity generated from solar power rose by 636 TWh to reach 2,787 TWh, representing a 30% increase over the previous year, with Ember Energy noting that this additional generation would be sufficient to cover liquefied natural gas (LNG) exports from the Strait of Hormuz in 2025. Wind ranked as the second main source of growth with an increase of 8.2% to 2,723 TWh. Hydroelectric generation remained in parallel with the previous year, at 4,450 TWh.

The share of all renewable resources combined recorded an increase to 33.8% of total electricity generation, overtaking coal, whose share fell to 33% for the first time.

Global Share of Electricity Generated from Renewable Energy Sources and Coal



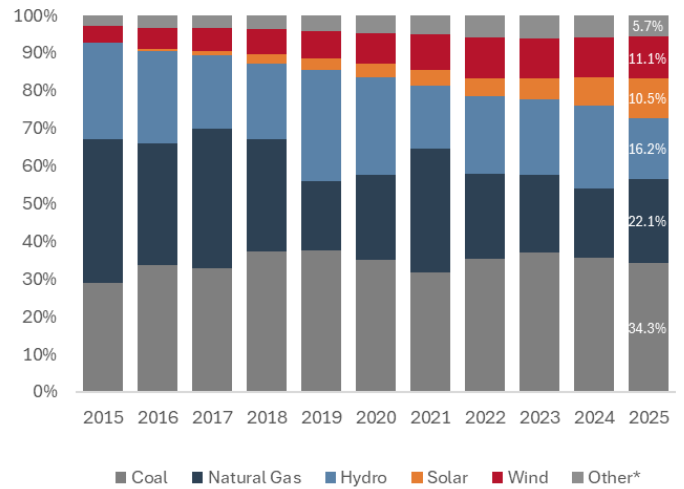
Source: Ember Energy, TSKB Economic Research

Fossil fuel electricity generation declined by 0.2% in 2025 with Ember Energy attributing this drop primarily to China and India, with coal based generation in China falling by 0.9%, driven by growth in clean energy capacity, while India's coal based generation fell by 3.3%, reflecting record increases in domestic solar and wind output.

According to Ember Energy's "Türkiye Electricity Review 2026" [report](#), the combined share of solar and wind in total electricity generation in Türkiye reached 22% in 2025 with

the combined share of these two sources surpassing that of hydroelectric plants (16.2%) for the first time.

Distribution of Türkiye's Electricity Generation by Source



Source: Ember Energy, TSKB Economic Research

*Other includes bioenergy, other fossil fuels and other renewable energy sources.

The report highlights that the rising share of wind and solar energy has reduced the weighting of natural gas in electricity generation. In the early 2000s, natural gas based generation accounted for more than 40% of total electricity generation, with this proportion falling to 38% in 2015 and further to 22% in 2025. Nonetheless, coal fired plants remained the largest single source of electricity in 2025 with a 34% share.

Ember Energy stresses that Türkiye must address several issues to meet its 2035 renewable energy targets, including solving grid capacity constraints, accelerating permitting processes, diversifying energy sources and enhancing grid flexibility through regional cooperation.

Türkiye's Long Term Climate Strategy [sets out](#) plans to increase the country's installed solar capacity to 77 GW and its wind capacity to 43 GW by 2035. As of April 2026, installed capacity stood at 22.8 GW for solar and 13.4 GW for wind.

The remarks from the Minister for Energy and Natural Resources, Alparslan Bayraktar, during COP31 that the renewable energy targets would be updated also draw attention.



Sector News

Local News

- **No LNG trade passing through the Persian Gulf or the Strait of Hormuz, according to Energy and Natural Resources Minister, Alparslan Bayraktar.** In a visual media interview the Minister noted that 10% of Türkiye's oil and oil product imports come through the Strait of Hormuz and emphasized that this share is tolerable. He highlighted the target for roughly 80-85% of the natural gas consumed in households to be supplied from the Sakarya Gas Field by 2028, underlining that the country had a current natural gas storage capacity of 6.3 bcm with a target of 15 bcm. He also pointed out that gas storage facilities were currently at 71-72% capacity, with the aim of increasing this to 100%.
- **Türkiye's comprehensive Critical Raw Materials Strategy to be published shortly.** The Minister stated that a detailed roadmap was being prepared based on the findings of the 2025 Critical and Strategic Minerals Report. He stressed that while possessing critical minerals is important, the ability to process them domestically is equally vital. The rare earth element deposit in Beylikova (Eskişehir) will serve as the cornerstone of the strategy, where the rare earth oxides required for permanent magnets in wind turbine generators and electric vehicle motors will be produced.
- **Energy crisis has revived the need for a new regional energy architecture, according to the Minister.** Emphasizing the necessity for new pipelines, Mr. Bayraktar outlined Türkiye's three proposals: (1) routing Turkmen natural gas to Türkiye and Europe via the Caspian Sea, (2) extending the Iraq-Türkiye pipeline all the way to Basra and (3) constructing a gas pipeline from Qatar to Türkiye. He argued that diversifying infrastructure projects could mitigate the impacts of the energy crisis.
- **Türkiye seeking to develop renewable energy technologies.** Speaking at a panel of the Antalya Diplomacy Forum, the Minister said Türkiye aimed to advance renewable energy technologies from the perspectives of fuel, the economy and technology, and to exploit wind and solar resources. He noted that Türkiye's energy vision placed the

country in a more resilient position in the face of crises and declared that the energy transition was inevitable. Mr. Bayraktar added that the negotiations could be opened to extend the existing natural gas import contract with Iran, which has a volume of 9.6 bcm. He also stated that Türkiye intended to achieve a Net Zero economy by 2050 and that the 2050 target could be advanced to 2035 if needed.

- **Spot electricity market price cap raised from TL 3,400 /MWh to TL 4,500 /MWh.** EPIAŞ's decision, which was effective from 4 April 2026, increased the ceiling price for the day-ahead and balancing power markets, while the floor price of TL 0 /MWh remained unchanged.
- **Electricity and natural gas tariffs increased, from April 2026 onwards.** According to the Energy Market Regulatory Authority (EMRA), final retail electricity prices rose by 25% for residential customers and by 5.8% for medium voltage connected industrial customers. Petroleum Pipeline Company (BOTAŞ) announced that final natural gas sales prices had increased by an average of 25% for residential consumers, 18.6% for industrial consumers and 19.4% for power plant customers. In addition, a tiered pricing scheme was introduced for residential natural gas users.
- **EMRA's regulation to introduce hourly net metering for unlicensed generation facilities published in the Official Gazette.** The rule sets an annual generation ceiling for unlicensed electricity generation plants and allows them to install integrated storage units, subject to certain restrictions. The amendment also brings industrial zones within the scope of unlicensed electricity generation.
- **EMRA revises 2026 YEKDEM unit-cost forecasts. From April 2026 onward, the unit-cost for YEKDEM was revised upward for April and May and downward for the remainder of the year.** The YEKDEM unit-cost reflects the per MWh incentive paid to YEKDEM eligible plants and is used in tariff calculations. Changes in the unit-cost are driven by market conditions, expected output from renewable plants, the weather, demand for electricity and the geographical distribution of YEKDEM facilities.

- EMRA releases “Electricity Market Sector Report” and the “Natural Gas Market Sector Report” for February 2026.

Electricity consumption fell 1.6% YoY to 27.8 TWh in February (from 28.2 TWh in January). Billed electricity consumption increased 0.6% YoY to 23.3 TWh while natural gas consumption decreased 10.3% YoY to 6.8 bcm, with 59.4% of the gas being used by households. Natural gas imports fell 19.3% from its February 2025 level to 6.5 bcm.

- Ministry of Energy and Natural Resources announces 26 candidate renewable energy (YEKA) sites in 15 provinces.

All candidate YEKA sites are intended for solar energy projects.

- Memorandum of understanding signed between Turkish Petroleum Corporation (TPAO) and TotalEnergies on potential international cooperation in hydrocarbon exploration activities.

- CW Energy signs USD 750 million letter of intent with a U.S. company for the sale of solar panels, related components and aluminium frames. According to CW Energy's PDP filing, the project is slated for completion by 2030; shipments corresponding to 5% of the total volume are to be scheduled after the first payment in 2026.

- International Energy Agency (IEA) Executive Director Fatih Birol reportedly recommending the building of a new oil pipeline linking Iraq's Basra oil fields with Türkiye's Ceyhan oil terminal. Mr. Birol argues that the Basra-Ceyhan pipeline would shift export flows away from the Strait of Hormuz and enhance regional supply security.

International News

- World Bank, International Monetary Fund (IMF) and IEA decide on the creation of a joint coordination group to address the effects of the war in the Middle East.

According to the statement from the institutions, the group's purpose is to monitor war developments, harmonize analysis and support policy makers. It will assess the impact of the war on energy markets, trade flows, inflation trends and supply chain disruptions in a coordinated manner and also provide targeted policy advice, potential financing, risk mitigation tools and mobilization of relevant stakeholders.

- Demand for magnetic rare-earth elements (REE) doubles since 2015 due to electrification, electric vehicle uptake and the spread of new energy technologies. IEA's "Rare-Earth Elements" report projects a further one third increase in demand by 2030. Automation, robotics and digital technologies are also driving growth, while concentration in supply chains has been raising security concerns. The 2024 data indicates that China accounts for 60% of global magnetic REE mining and 91% of its refining. IEA estimates that diversified REE supply chains will require roughly USD 60 billion of investment over the next 10 years, while highlighting the importance of recycling in curbing environmental impacts.

- Energy policies at the heart of national and economic security, according to IEA “Energy Policy Outlook 2026”.

With supply chain disruptions, geopolitical tensions and extreme heat creating energy security concerns, countries are intensifying their efforts to diversify energy sources and suppliers, with renewables, nuclear, efficiency and performance regulations taking center stage. Policies are also addressing supply chain risk mitigation. IEA notes that governments' energy related expenditures in 2025 had doubled since 2019 to reach USD 405 billion, and are expected to remain high through 2030.

- Global oil supply falls by 10.1 million bpd to 97 million bpd in March. IEA's April oil-market report attributes the drop to ongoing attacks on Middle East energy infrastructure and restrictions on tanker transits through the Strait of Hormuz, creating one of the largest supply disruptions on record. The war has also curtailed demand; IEA now expects oil demand to decline by 80,000 bpd in 2026, whereas its previous forecast had projected a rise of 730,000 bpd.

- IEA stresses that AI-energy relationship is developing rapidly.

In its "Energy and Artificial Intelligence: Key Questions" report, IEA stated that large technology firms' capital expenditures for data centers exceeded USD 400 billion in 2025 and are forecast to expand by 75% in 2026. During the same period, electricity demand from data centers rose by 17% to 485 TWh, and is projected to reach 950 TWh by 2030. IEA highlights the need to overcome bottlenecks in energy equipment, chip production and limited grid connections, and proposes three guiding principles; proactive project and investment management approaches that promote grid flexibility and the removal of barriers to the adoption of AI in the energy sector.

- European Union (EU) introduces new “AccelerateEU” action plan to tackle higher energy costs caused by the Middle East war and to further cut fossil fuel dependence.

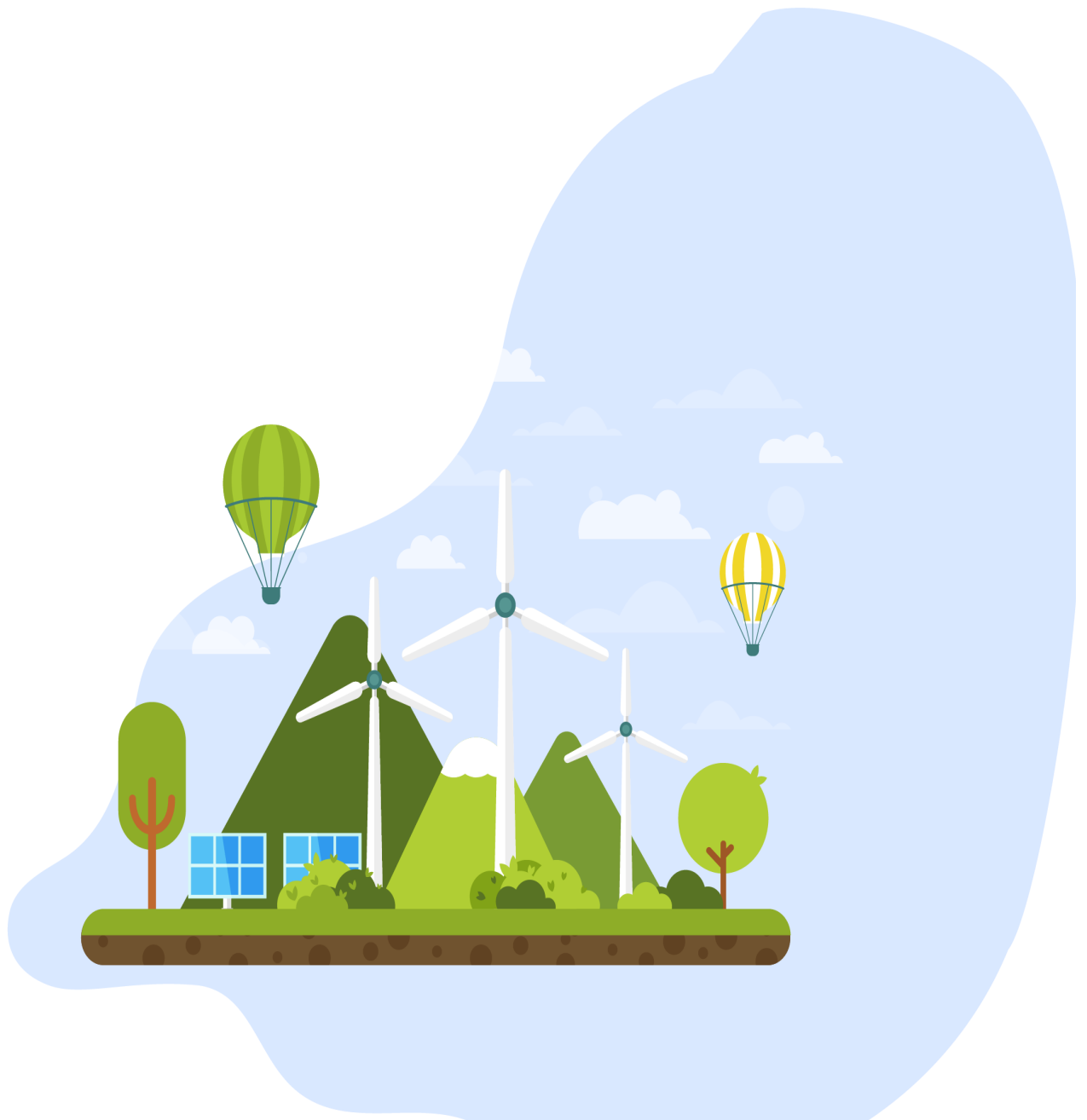
The plan aims to provide urgent assistance to consumers affected by price spikes and to accelerate the transition to clean, safe and affordable energy. Its five pillar areas are tighter EU coordination, protection of consumers and businesses, the expansion of domestic clean energy, strengthening of the EU energy system and increased investment.



- **USA and EU sign memorandum of understanding on a strategic partnership for critical minerals.** The “EU-US Critical Minerals Action Plan” will deepen cooperation on critical raw materials, enhancing supply chain resilience and diversification against geopolitical and economic risks. The MoU covers the entire value chain, from the exploration, extraction, processing and refining to recycling, and sets out joint work on trade policies and related instruments.

- **US-Iran conflict causes temporary disruption to short term natural gas market outlook, with 20% loss of global LNG supply.** IEA’s Q2 2026 natural gas sector report notes that this loss has triggered sharp price volatility. Attacks on oil and gas infrastructure in the war zone have reduced availability of LNG and also affected the medium term LNG outlook. IEA underlines the need for continued investment in gas supply chains and calls for closer international cooperation to bolster global gas supply security.

- **United Arab Emirates (UAE) announces its withdrawal from OPEC and OPEC+ with from 1 May onwards.** The decision follows a comprehensive review of the country’s production policy, capacity and long term strategic and economic vision. After exiting, the UAE will maintain its responsible behavior by gradually introducing additional production in line with demand and market conditions. Media reports link the move to long standing disputes over production quotas. According to data from the Energy Institute, OPEC members accounted for 34% of the global oil production of 97 million bpd in 2024, while the UAE’s share among OPEC members stood at 12.2%.



The Age of Electricity: 2025

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Since 2024, IEA has repeatedly emphasized that we are already living in the “age of electricity.” As demand for electricity - the main input for the global economy - continues to rise, the importance of electricity becomes increasingly critical. IEA’s April 2026 “Global Energy Review 2026” [report](#) formally registers that we are now in this electricity age.

The report states that global electricity demand, which grew 4.4% in 2024, is expected to expand by roughly 3% in 2025 - still above the 2.8% average recorded for the 2014-2024 period. IEA points out that the growth in global electricity demand will be 2.3 times higher the growth in total energy demand, highlighting electric-vehicle (EV) demand and the expansion of data centers as the principal drivers of this growth.

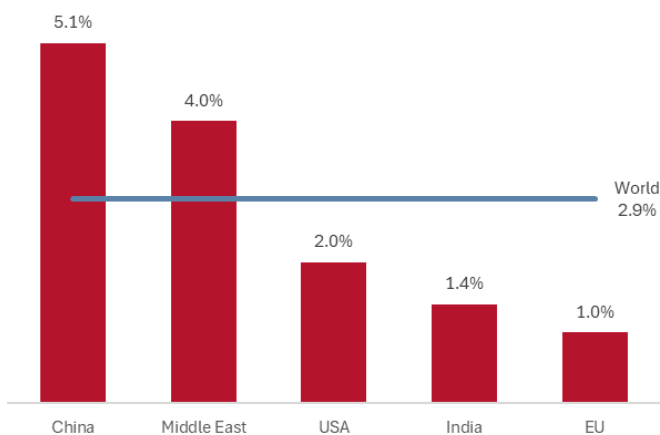
Regional differences are striking. China accounted for 58% of the increase in electricity demand in 2025. After growth rates of 6.6% (2023) and 7% (2024), the pace slowed, but a 5.1% rise still lifted China’s share of global electricity demand by six percentage points. In the United States, the increase has been slower: after a 2.8% rise in 2024, demand is projected to edge up by a mere 2% in 2025. The EU recorded a modest 1% increase, which the report attributes mainly to heating and cooling needs in buildings. India records the sharpest slowdown among major economies, where demand grew by more than 6% in 2024 but just 1.4% in 2025.

On a sectoral basis, 45% of the overall electricity demand growth has been derived from the building sector with the rise driven by climate control equipment, heat pumps and other household appliances, as well as the surge in data center activity. In addition, the report notes 20% annual growth for EVs, which is a major contributor to the rise in global electricity demand.

When it comes to the subject of how the rise in demand will be met, IEA reports that global electricity generation grew by 9.6% in 2024 and 8.5% in 2025 with approximately 69% of this additional generation supplied by solar power plants. In 2025, electricity from fossil fuel plants declined, while generation from renewable sources and nuclear exceeded the net increase in total electricity generation.



Electricity Demand Increase in 2025 (%)



All of this highlights continuing relevance of the “age of electricity” and the ongoing transformation of energy systems. As the share of renewable energy sources in the electricity mix continues to expand, grid investment and storage technology issues stand out, with an integrated approach to these technologies becoming ever more essential.

Source: IEA, TSKB Economic Research



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