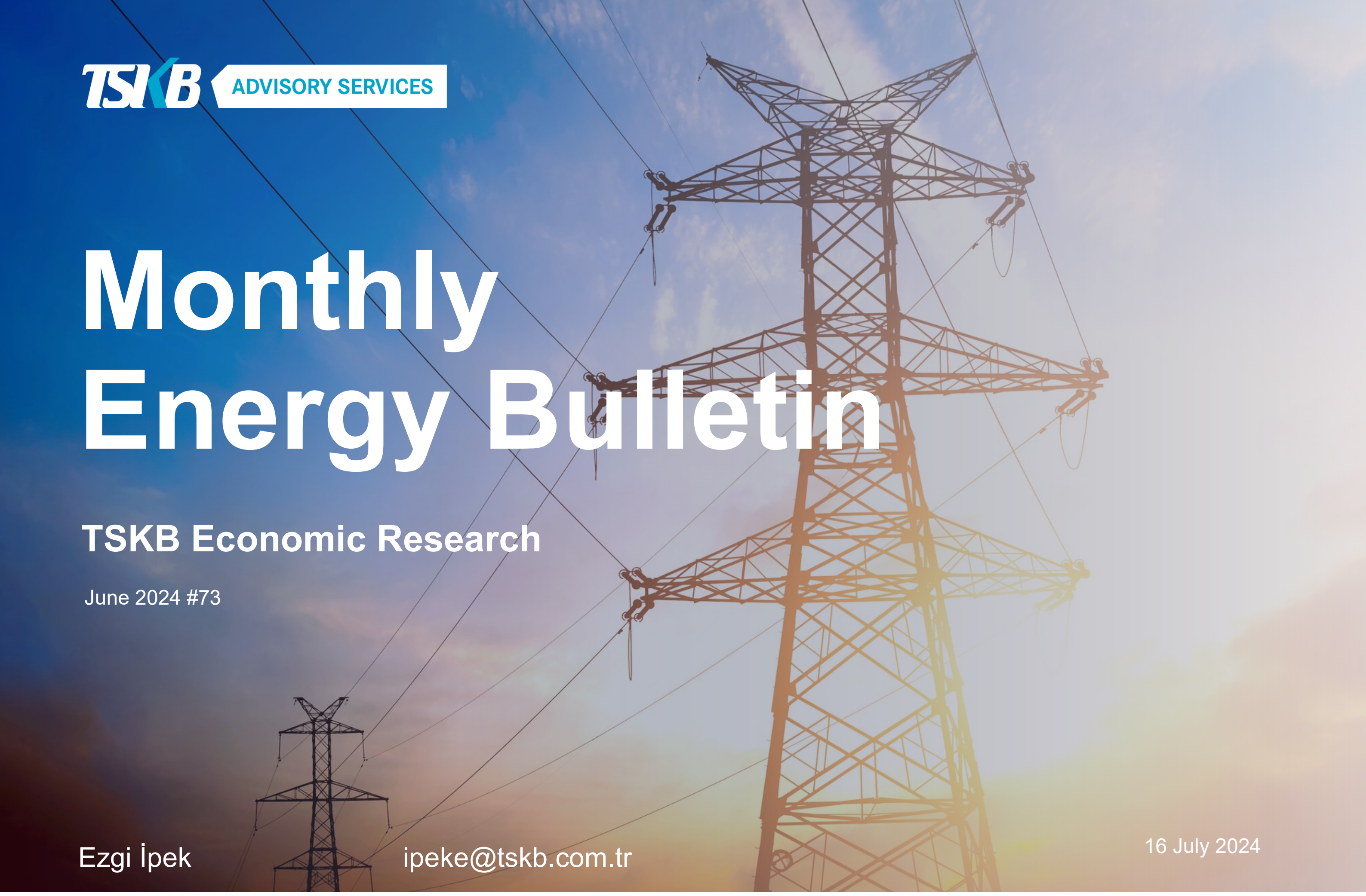

TSKB ADVISORY SERVICES

# Monthly Energy Bulletin

## TSKB Economic Research

June 2024 #73

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16 July 2024

### The International Energy Agency (IEA) expects global energy investments to exceed $3 trillion for the first time in 2024.

In its "World Energy Investments 2024" report, the IEA stated that global fossil fuel investments had reached USD 1.09 trillion dollars as of the end of 2023, with USD 1.88 trillion invested in clean energy. Emphasizing that the amounted invested in clean energy was almost double the amount invested in fossil fuels, the report highlights the imbalance in investments, stating that developing countries other than China account for just 15% of global clean energy expenditures. Referring to the increase in investments in infrastructure, network and storage with the integration of renewable energy resources, oil and natural gas investments re expected to grow by 7% in 2024 to reach USD 570 billion according to the report, after a 9% increase in 2023. While the IEA cites the significant momentum in investment, it emphasizes that current investment trends will meet approximately two-thirds of the target of tripling renewable capacity by 2030, agreed at the COP28.

The financing needs for clean energy projects were discussed in the second of the "High Level Energy Transformation Dialogues" organized by the IEA ahead of the COP29. The meeting, attended by public and private sector representatives, focused on how the public and private sectors could support clean energy investments, which are expected to exceed USD 4 trillion by 2030 according to IEA projections. The report cites that borrowing costs and risks are preventing many projects, especially in developed countries, from accessing capital, highlighting the role of development finance institutions. However, it has been reported that the IEA Executive Director, Fatih Birol, has stated that developing countries needed USD 2 trillion in clean energy financing annually, adding that the IEA aimed to create a financing model in this context.

| 28.88 TWh | 2,095.2 TL/MWh |
|---|---|
| June Gross Generation | Average MCP |

**6.5%**

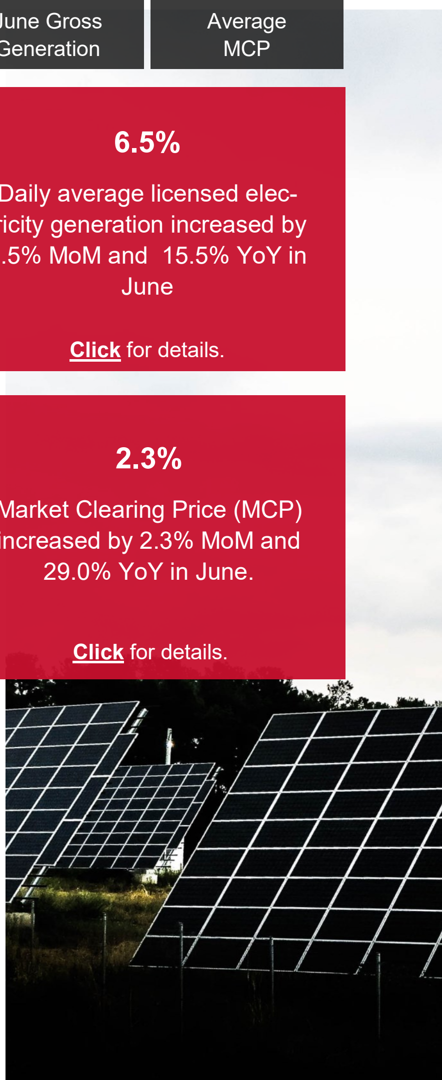
Daily average licensed electricity generation increased by 6.5% MoM and 15.5% YoY in June

**Click** for details.

**2.3%**

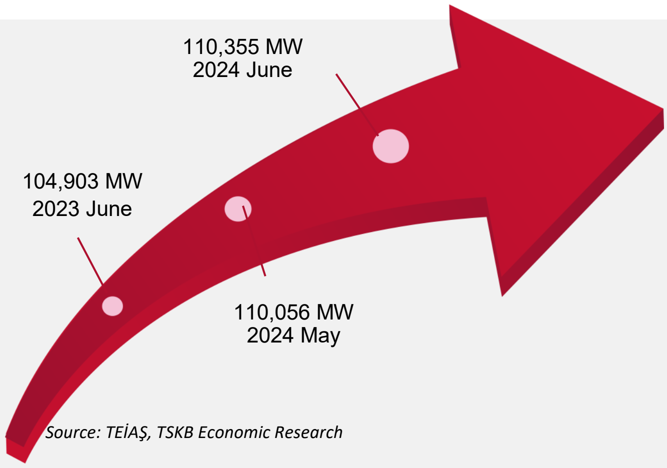
Market Clearing Price (MCP) increased by 2.3% MoM and 29.0% YoY in June.

**Click** for details.



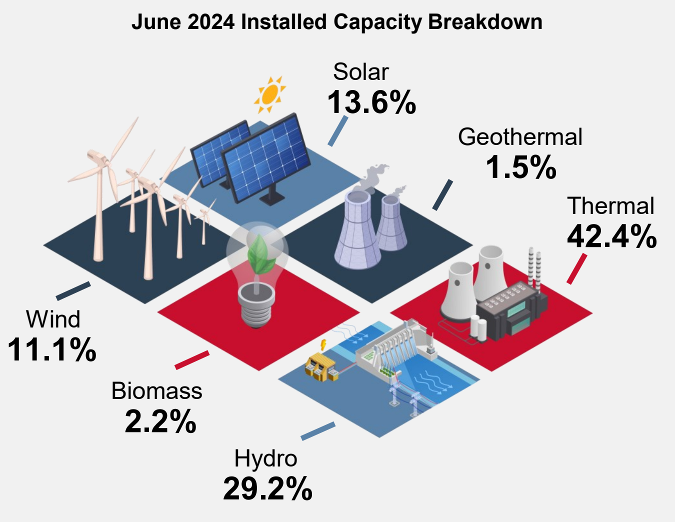
## Installed Capacity Analysis

Türkiye's total installed generation capacity increased from 110,056 megawatts (MW) at the end of May to 110,355 MW in June with a net addition of 298.8 MW in installed capacity commissioned in June compared to May, of which 184.6 MW was provided from solar power plants and 92.5 MW from wind power. In the same period, there was an increase of 2.4 MW in hydroelectric capacity and 20.4 MW in power plants using renewable waste when compared to the previous month. While the installed generation capacity of natural gas and multi-fuel fired power plants decreased by 1.3 MW, no change was observed in the installed capacity of power plants running from other sources.




*Source: TEİAŞ, TSKB Economic Research*

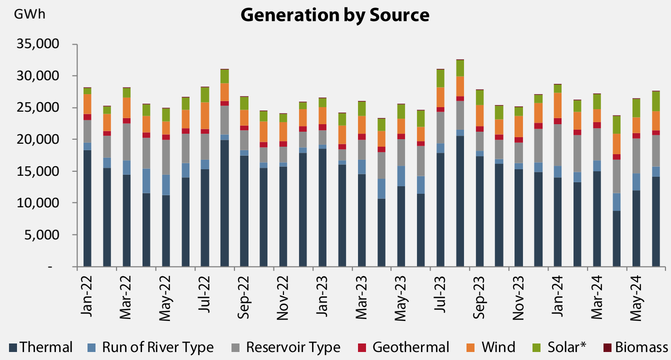
57.6% of the power plants in operation in June were generating electricity from renewable sources, thus maintaining the proportion of renewable resources in total generation capacity at over 55%, maintaining its increase. Hydroelectric power plants accounted for 29.2% of Türkiye's total electricity installed capacity while wind and solar power plants had a combined share of 24.7% in the total installed capacity.

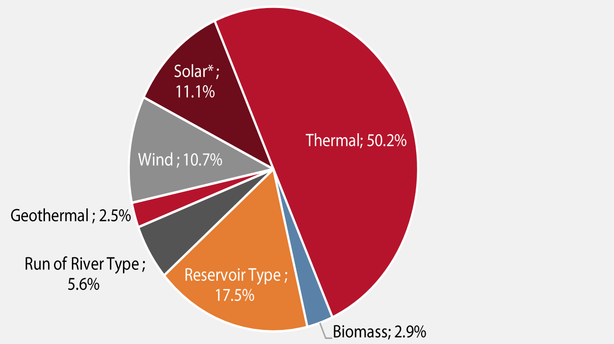



*Source: TEİAŞ, TSKB Economic Research*

## Generation-Consumption Analysis

Total electricity generation increased from approximately 27.10 Terawatt hours (TWh) in May 2024 to 28.88 TWh in June. Average daily electricity generation increased by 6.5% in June when compared to the previous month and by 14.5% compared to the same period of the previous year.



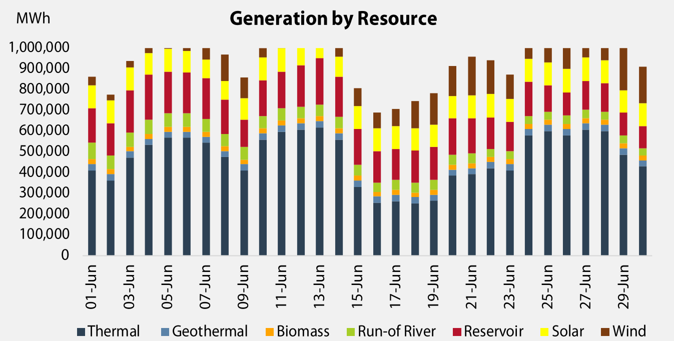




**Since figures for generation from unlicensed solar power plants for June have not yet been released by the TEİAŞ, total electricity generation from unlicensed solar power plants is calculated using the capacity factor of the same month of the previous year.*

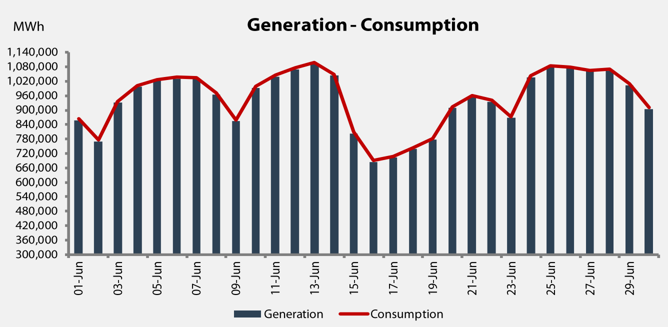
*Source: TEİAŞ, YTBS Daily Reports, TSKB Economic Research*

Thermal power plants provided 44.1% of electricity generated in May and 49.0% of the total electricity generation in June. Looking at the breakdown of generation by source, hydroelectric power plants produced 22.5% of the nation's electricity, down from 30.4% in the previous month. Wind accounted for 10.4% of total electricity generation with geothermal power plants providing 2.4% of the total.

The share of electricity generated by renewable power decreased from 53.2% in May 2024 to 48.5% in June 2024 with dam-type hydroelectric power plants contributing 17.1% of the total production during the month, while river-type hydroelectric power plants accounted for 5.4% of total generation. In addition, the proportion of electricity obtained from wind and solar power plants in total electricity generation stood at 23.6%. In June, among renewable energy plants, solar power plants were recorded as the second largest source of electricity generation after dam-type hydroelectric power plants, with a share of 13.2%.




*Source: TEİAŞ, YTBS Daily Reports, TSKB Economic Research*




*Source: TEİAŞ, YTBS Daily Reports, TSKB Economic Research*

In June, licensed power plants generated an average of 943,581 megawatt hours (MWh) of electricity per day. The highest level of generation from licensed power plants during the month was recorded on Thursday, June 13 at 1,093,279 MWh with the lowest on Sunday, June 16, at 684,615 MWh.

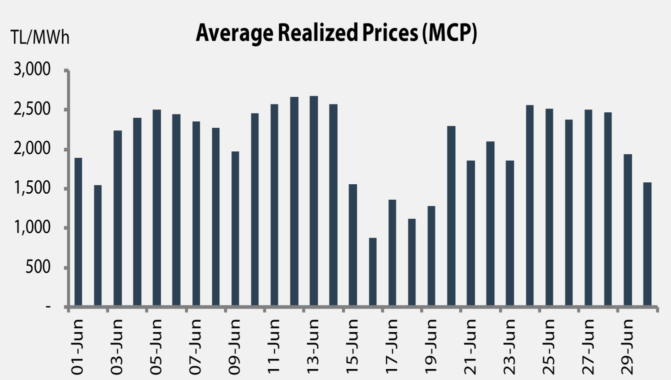
During the same period, daily electricity consumption averaged 948,826 MWh with the highest consumption recorded on Thursday, June 13, at 1,098,678 MWh and the lowest on Sunday, June 16, at 689,859 MWh.

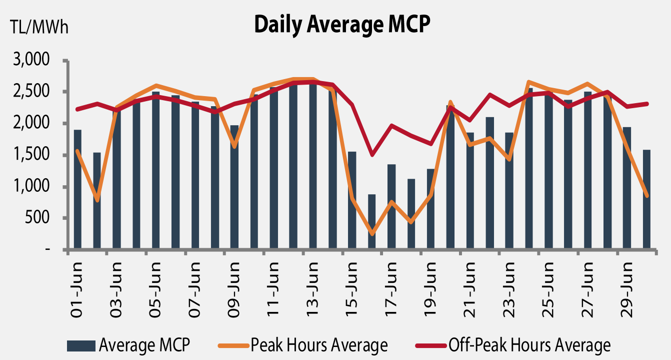
# Electricity Price Analysis

The daily average market clearing price (MCP) fluctuated between TL 875 and TL 2,700 per MWh in June with an average daily MCP of TL 2,095.20/MWh in June. The highest daily average MCP value was recorded on Thursday, June 13, at TL 2,678.20/MWh and the lowest daily average MCP was recorded on Sunday, June 16, at TL 877.20/MWh.

Looking at the hourly data, the MCP reached its determined maximum limit of TL 2,700/MWh for a total of 131 hours in June while the minimum hourly electricity price of TL 14.04 /MWh was recorded between 11AM and 12PM on Sunday, June 16.

The peak hours average MCP (between 8AM and 8PM) was 9.0% below the average for all hours to be recorded at TL 1,906.90/MWh. The maximum limit price of TL 2,700/MWh was recorded 58 times during peak hours, while lowest price during peak hours of TL 14.04/MWh was only recorded for 1 hour.

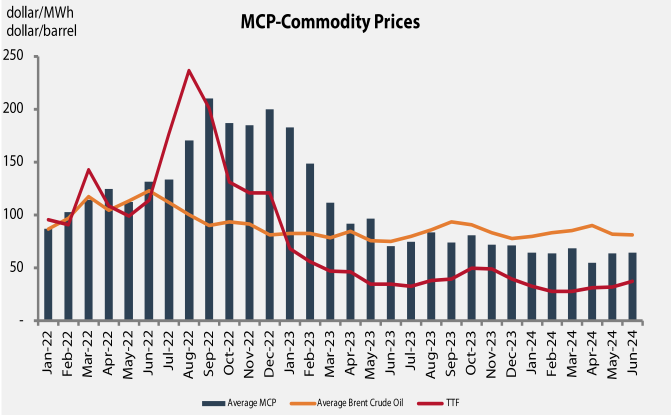



*Source: EXIST, TSKB Economic Research*

In the same period, the average off-peak hours tariff (between 8PM and 8AM) was TL 2,283.50/MWh. The maximum limit of TL 2,700/MWh was realized for 73 hours during off-peak hours while the lowest price of TL 200/MWh in off-peak hours was recorded between 7AM and 8AM on Thursday, June 16.

The MCP average increased from USD 63.50/MWh in May to USD 64.40/MWh in June, while still being 8.3% lower when compared to the same period of the previous year.




*Source: EPİAŞ, TCMB, EIA, TSKB Economic Research*

### Average Commodity Prices

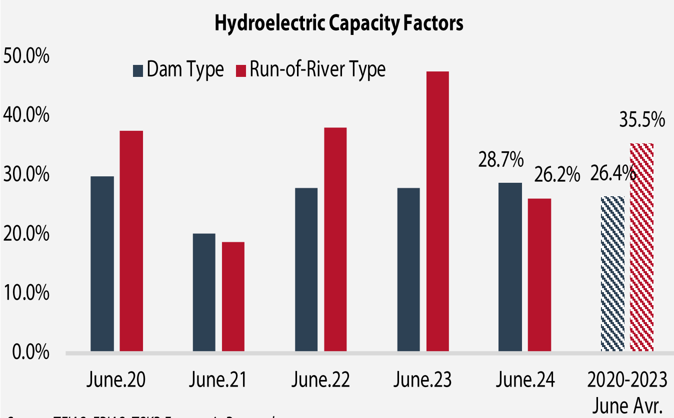
The price of Brent oil fell from an average of USD 81.90/bbl in May to USD 81.10/bbl in June, marking a fall of 0.9% on a monthly basis while remaining 8.4% higher than in the same period of the previous year.

The TTF natural gas contract price, which averaged USD 32.20/MWh on average in May, increased by 15.7% on a monthly basis to reach USD 37.20/MWh, standing 14.8% higher than in the same period of the previous year.

### Hydroelectric Capacity Factors

Dam-type and run-of-river type hydroelectric power plants operated at 28.7% and 26.2% capacity, respectively in June. When compared to June 2023, the capacity factor of dam-based hydroelectric power plants increased by 0.9 percentage points while the capacity factor for run-of-river plants was down by 21.4 percentage points. In a comparison with the months of June over the last 5 years, the highest value of dam power plants in June 2024 was 1.1% lower than June 2020, while the highest value for river type power plants was observed in June 2023.

It was observed that the capacity factors of dam power plants were 2.3 percentage points below the average of 2020-2023 June, and the capacity factors of river type power plants were 9.3 percentage points below the average.




*Source: TEIAS, EPIAS, TSKB Economic Research*

# Sector News

## Local News

**- Energy Market Regulatory Authority (EMRA) raises cost forecast for Renewable Energy Resources Support Mechanism (YEKDEM) determined for May-December 2024.** Accordingly, the average cost under the YEKDEM for the period of May-December 2024 was raised by 59.9% compared to the forecast published in January 2024, to reach TL433.30/MWh.

**- Reports that unlicensed electricity generating plants will be combined with unlicensed generation facilities to become large production facilities.** While aggregation is defined as an electricity market activity with the amendment made to the electricity market legislation, the aim is to ensure security for network users and carry out processes such as market registration, guarantees, reconciliation, payment and sanctions more efficiently for the market operator.

**- Natural gas supply agreement between Türkiye and Azerbaijan Gas Supply Company for daily supply of 7 million m3 per day, which was to expire this year, extended until the end of 2030.** In addition, four further agreements regarding natural gas delivery and exchange were signed with SOCAR. With these agreements, Azerbaijani natural gas will be transported to Europe and Nakhchivan through Türkiye, and Turkmen natural gas will be delivered to Türkiye.

**- Ministry of Energy and Natural Resources (MENR) opens Renewable Energy Integration Investment Plan (REIP) draft study to the views of sector stakeholders.** Prepared within the scope of the Clean Technology Fund (CTF), the REIP aims to support Türkiye's goals of increasing the use of renewable energy by 2035, grid integration of these resources and ensuring system flexibility. In the first stage of the plan, which has two main components, Turkish Electricity Transmission Inc. (TEİAŞ) stands out as the beneficiary with a loan of USD 1.54 billion for the transformation of the energy transmission system. In the second stage, the involvement of the private sector is sought with a loan request of USD 330 million to focus on infrastructure including system flexibility, balancing, battery storage and digitalization of the power distribution network. Additionally, according to the plan, the Turkish government requests a loan of USD 903 million to be used for hydroelectric storage and hydroelectric energy efficiency technical assistance.

**- SHURA Energy Transformation Center publishes its report titled "Equitable Transformation and Regional Employment: Türkiye's Policy Options".** The report aims to develop policy recommendations by measuring the regional risks that the transformation in the coal sector and the sectors within the scope of the Carbon Border Regulation Mechanism will create on employment. According to the report, approximately 35,000 people are employed in sectors that will undergo transformation and are at risk of becoming unemployed, while in the worst case scenario, as many as 124,000 jobs would be at risk. While SHURA emphasizes that the effects of the transformation on employment require a regional approach, considering the differences in economic activity diversity and the demographic outlook, it highlights policy recommendations such as the skill transformation and increasing employment by diversifying regional economic activities.

# Foreign News

**- IEA publishes report entitled “COP28 Triple Renewable Capacity Commitment”.** The report notes that only 14 out of the 194 countries to submit a National Contribution Declaration (NDC) includes a renewable energy capacity target for 2030. According to the report, the total of the 2030 capacity targets across all NDCs is approximately 1,300 gigawatts (GW), constituting a mere 12% of the 11,000 GW capacity required to meet the target of tripling renewable capacity by 2030 drawn up at the end of COP28. The IEA’s report emphasized that the current targets of the countries were not compatible with the COP28, adding that according to current policies, global renewable capacity would reach 8,000 GW by 2030 - 30% below the 11,000 GW target.

**- The Organization of the Petroleum Exporting Countries (OPEC) maintained its 2024 forecast for oil demand growth at 2,200 barrels per day.** According to the Monthly Oil Market Report for June published by OPEC, the daily oil demand forecast for 2024 is unchanged at 104.46 million barrels per day.

**- IEA publishes 2024 Oil Report.** Reflecting that the growth in global oil demand had slowed down, the report predicts that the demand will increase by 3.2 million barrels per day between 2023 and 2030. According to the report, global oil demand is expected to stabilize after reaching 105.6 million barrels per day in 2029, with China and India having a significant impact on the rise in demand. Demand is also set to fall sharply in developed economies. In addition, the IEA, which published the June Oil Market Report, pared back its forecast for the increase in total oil demand for 2024 by 100,000 barrels per day when compared to its May estimate, and now expects total oil demand of 960,000 barrels per day.

**- US Energy Information Administration (EIA) publishes Short-Term Energy Outlook Report for June.** According to the report, which Organization of Petroleum Exporting Countries and Allies (OPEC+) are expected to loosen their voluntary cuts in the third quarter of 2024. The EIA has revised its 2024 Brent oil price forecast by 4.1% compared to its previous forecast, to USD 84 per barrel.

**- Energy Institute publishes its 2024 World Energy Statistical Review.** According to the report, while total primary energy consumption increased by 2% in 2023, the share of renewable energy resources in total primary energy consumption reached 14.6%. The Energy Institute stated that energy-related global greenhouse gas emissions increased by 2.1% compared to 2022 to exceed 40 gigatons of carbon dioxide (Gt $CO_2$) for the first time, while emphasizing that the share of fossil fuels in primary energy consumption had fallen by 0.4% to 81.5%.

**- Ren21 publishes 2024 Energy Supply Report within the scope of the "Renewable Energy Resources 2024 Global Status Report".** According to the report, renewable energy sources met 30% of global electricity production in 2023. While investments in renewable energy and related technologies increased by 70%, the share of photovoltaic solar panels and batteries stood out in the investments. Ren21 stated that countries were neglecting the conversion of heat and fuels, which provide approximately 78% of the world's energy. Additionally, the report highlighted that inequalities between regions, energy carriers and investments, inadequate policy integration and delays in infrastructure development holding up the energy transition.

**- European Council announces that the European Union has given official written notification to withdraw from Energy Charter Agreement.** The notification, which it states as the last official step, is aimed at preventing the EU from leaving the Energy Charter Agreement at the end of 1 year and preventing energy companies producing fossil fuels from suing governments due to policies that harm their investments and harm efforts to tackle climate change.

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