

Monthly Energy Bulletin

TSKB Economic Research

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25 May 2022

Announcement of YEKA GES-4 Erzin-Viranşehir contests announced

According to the Energy Market Regulatory Authority (EMRA) Board Decision published in the Official Gazette, the contests to be held in the Erzin district of the Hatay province and the Viranşehir district of the Şanlıurfa province within the scope of Renewable Energy Resource Areas contest for Solar Power Plants (YEKA GES-4) were excluded from the scope of the YEKA GES-4. In the new contest announced under the heading of YEKA GES-4 Erzin-Viranşehir, 12 solar power plants with a combined capacity of 700 megawatts (MW) will be installed. The ceiling price for the purchase of electricity in the contests was determined as 95 kuruş per kilowatthour (kWh). In the decision, it was stated that the deadline for applications in the contests would be 21 June 2022.

According to the decision, the electricity purchase period will continue until the first 23 gigawatthours (GWh) of electricity is generated, starting from the first acceptance date of the solar power plant for each MW of connection capacity is delivered to the transmission or distribution system or, if the right to sell to the free market is exercised, it will be from the end of the 48th month following the contract signing date, until the first 23 GWh of electricity is delivered to the transmission or distribution system.

25.50
TWh

April Gross
Generation

1,830.56
TL/MWh

Average
MCP

-5.1%

Daily average licensed electricity generation decreased by 10.6% MoM and 5.1% YoY in March.

[Click](#) for details.

9.6%

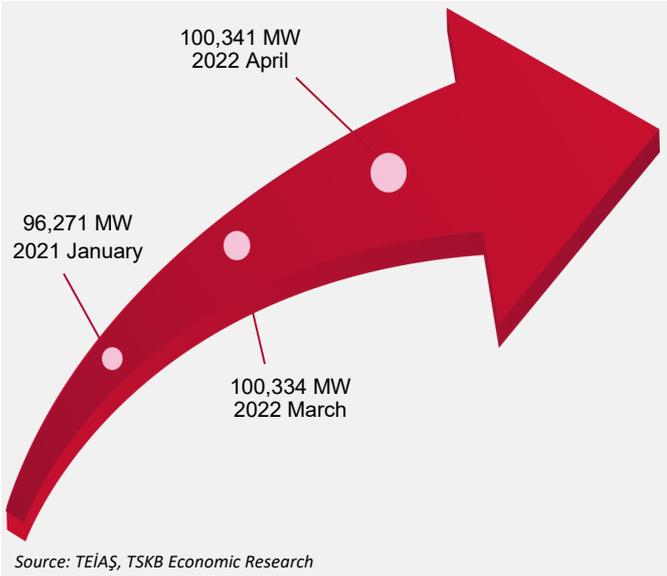
Market Clearing Price (MCP) increased by 486.4% YoY and 9.6% MoM in April.

[Click](#) for details.

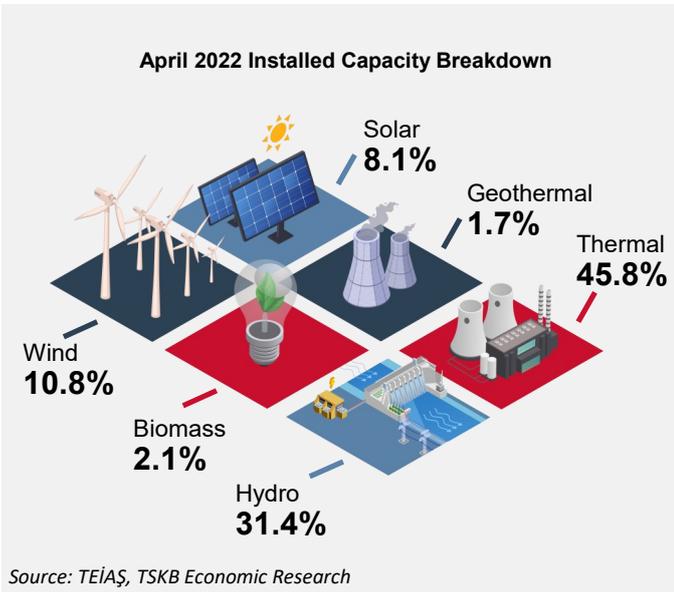


Installed Capacity Analysis

Turkey's total installed generation capacity, which had reached 96,271 megawatts (MW) by the end of January 2021, reached 100,341 MW by the end of April 2022. In April, the decline in the net capacity of natural gas and mixed fuel power plants was calculated as 154.2 MW compared to last month. There was an increase of 56 MW in the total net capacity of solar power plants and an increase of 39.8 MW in the total net capacity of hydroelectric power plants over the month in April.

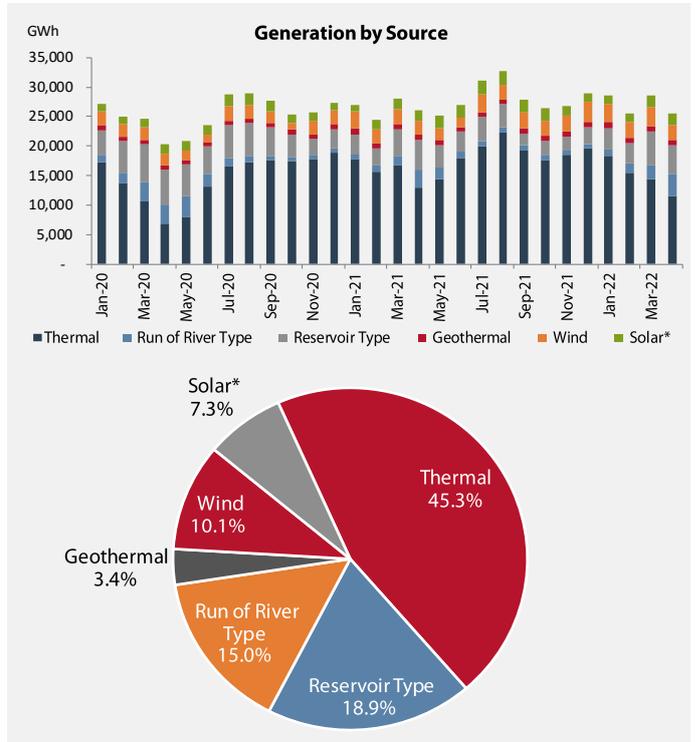


Power plants operating with renewable resources accounted for 54.2% of the capacity in operation in April. Hydroelectric power plants accounted for 31.4% of Turkey's total electricity installed capacity while the proportion of wind and solar power in Turkey's total installed power capacity was 18.9%.



Electricity Generation Analysis

Total electricity generation, having stood at approximately 28.5 terawatt-hours (TWh) in March, declined to 25.5 TWh in April, with average daily electricity generation in April declining by 5.1% when compared to March. When compared to the same period of the previous year, daily average electricity generation was down by 10.6%.

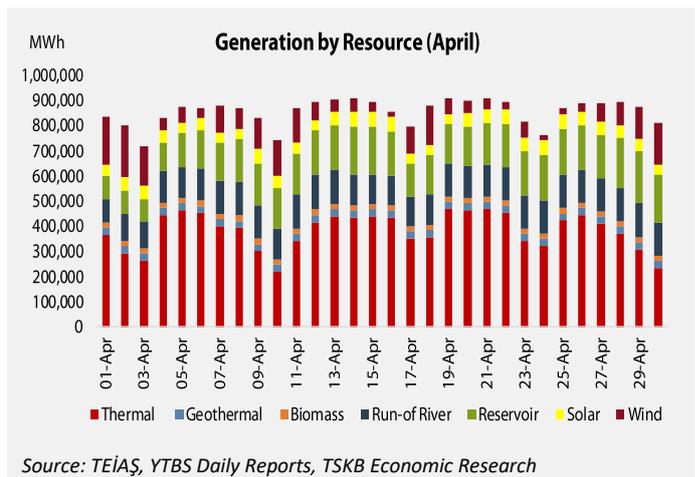


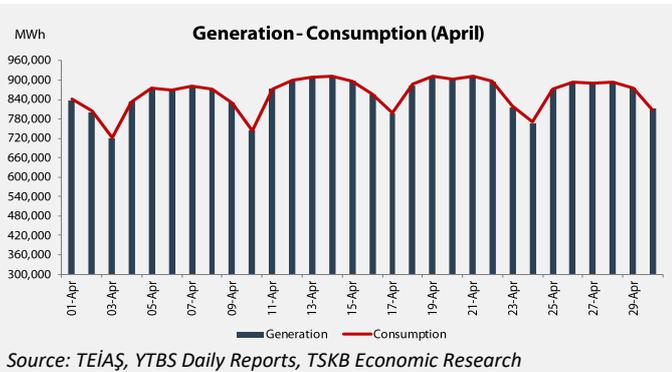
*Since April unlicensed solar power plant generation data has not yet been released by TEİAŞ, the average daily electricity generation by unlicensed solar power plants in April 2022 was accepted as same as the average daily electricity generation of March 2022.

Source: TEİAŞ, YTBS Daily Reports, TSKB Economic Research

Thermal power plants, which provided 50.6% of the electricity generated in March, accounted for 45.3% of total electricity generation in April. Hydroelectric power plants, which had a share of 28.2% in the previous month, generated 33.9% of the electricity generated in April. In April, the share of electricity generated by wind decreased by 1.1 percentage points compared to the previous month to 10.1%.

The share of renewable energy plants in electricity generation, which was 36.0% in 2021, stood at 54.7% in April 2022. In the same period, dam-type hydroelectric power plants contributed 18.9% to the total generation, while solar power plants accounted for 7.3% of the total generation.





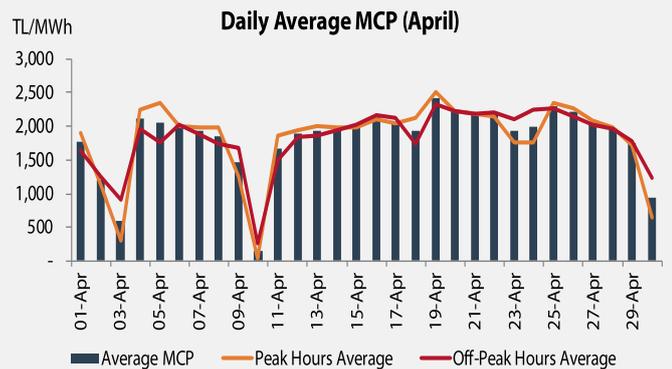
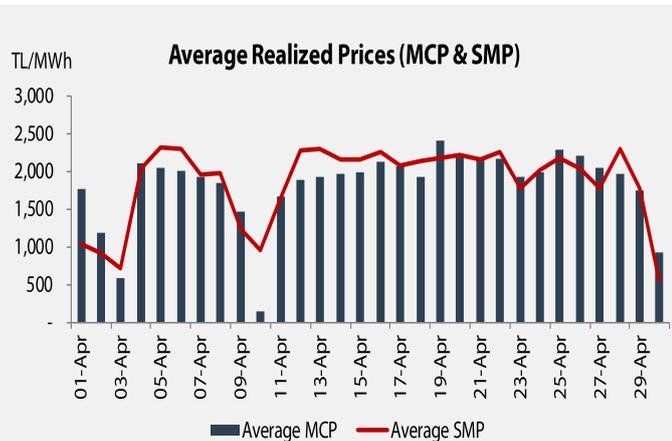
The average daily electricity production of licensed power plants in April was 857,712 MWh. While the highest generation realized from licensed power plants in April was 911,940 MWh on Thursday, April 21, the lowest generation realized from licensed power plants in the same period was on Sunday, April 3, with 721,786 MWh.

In the same period, daily electricity consumption averaged 858,672 MWh. The highest level of consumption in April was 912,312 MWh, recorded on Thursday, April 21, while the lowest electricity consumption was recorded on Sunday, April 3, at 723,439 MWh.

Electricity Price Analysis

In April, the daily average market clearing price (MCP) and system marginal price (SMP) fluctuated between TL 155 /MWh and TL 2,420 /MWh. The MCP averaged TL 1,830.55 /MWh in April while the SMP averaged TL 1,859.71 /MWh in the same period. The lowest MCP was recorded as TL 155.91 /MWh on Sunday, April 10, while the lowest average SMP was TL 552.45 /MWh on Saturday, April 30.

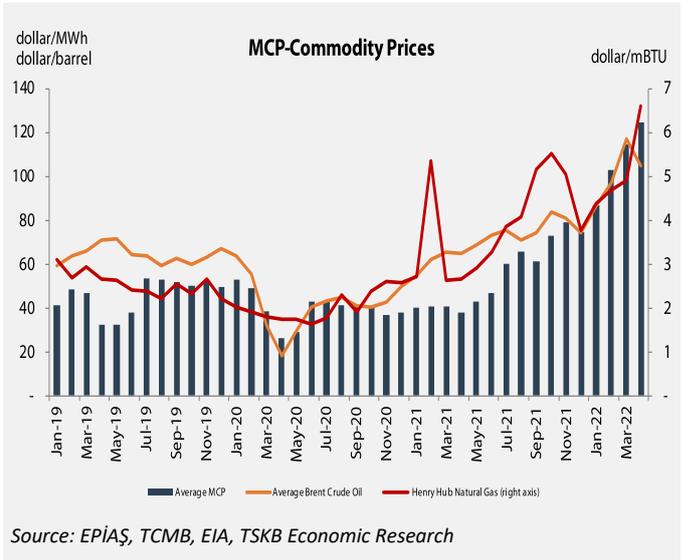
In terms of the hourly data are analyzed, the highest determined MCP was recorded for 83 hours and the SMP was recorded for 213 hours in April at a price of TL 2,500 /MWh. The MCP stood at zero for 5 hours and the SMP was at zero for 31 hours during April.



Source: EXIST, TSKB Economic Research

An analysis of the daily MCP for April finds the peak hours average (8AM-8PM) to be 0.2% lower than the daily average value at TL 1,827.66 /MWh. While the highest peak hours average of TL 2,500.00 /MWh was not recorded during the month, the lowest peak hours average of TL 44.18 /MWh was realized on Sunday, April 10.

In the same period, the off-peak average (between 8PM and 8AM) was TL 1,833.45 /MWh. The highest average for non-peak hours was TL 2,500.00 /MWh, while lowest non-peak average was recorded as TL 267.64 /MWh on Sunday, April 10.



The average SMP, which had stood at USD 114.51/MWh in March, increased to USD 124.44/MWh in April. Compared to the same period of the previous year, the dollar-based SMP was 225.7% higher.

Average Commodity Prices

The price of a barrel of Brent crude oil, which averaged USD 117.25 in March, decreased by 10.8% on the month to USD 104.58 in April. This realized average price was 61.4% higher than the same period of the previous year.

The Henry Hub natural gas contract price, which averaged USD 4.90/mbtu in March, increased by 34.7% on a monthly basis to average USD 6.60/mbtu in April. The April 2022 level is 148.1% higher than in the same period of the previous year.





Sector News

Local News

- **Yatağan Thermal Power Plant to be converted into a hybrid power plant.** According to a report in the Dünya Newspaper, a solar power plant consisting of three components with a total installed capacity of 85 MW will be installed at Yatağan Thermal Power Plant. A total of 185,000 solar panels will be used in solar power plant with a cost of approximately TL 1.1 billion. It is predicted that 223 million kWh of electricity will be generated from the addition of the solar power plant. (25 April 2022)

- **Deutsche Bank to provide EUR 1 billion loan to Boru Hatları ve Petrol Taşıma A.Ş. (BOTAŞ).** According to reports in the print media, BOTAŞ has reached the final stage in its negotiations to obtain a EUR 1 billion loan from Deutsche Bank for the purchase of Liquefied Natural Gas (LNG) from the USA and European countries. It is possible that the loan will have a maturity of 5 years and will double in size. (April 21, 2022)

- **BOTAŞ to invest in 15 MW of solar and wind energy.** According to a report from the Anadolu Agency, an 8 MW solar power plant for the Tuz Gölü (Salt Lake) Underground Storage Facilities and various pumping stations is planned to be commissioned by the end of 2022 within the scope of the BOTAŞ European Union Instrument for Pre-Accession Assistance (IPA) program. In addition, a 4.2 MW wind farm will be commissioned in June at the Silivri Operations Directorate while a solar power plant is planned to be established to meet the electricity needs of the Doğubayazıt Compressor Station from renewable sources. (April 21, 2022)

- **Deadline extended for applications for wind energy based Renewable Energy Resource Area (YEKA RES-3) contests.** According to the announcement published in the Official Gazette, the new application date for the YEKA RES-3 contests

has been determined as 31 May, 2022. In the contests, for which the deadline for applications has now been postponed for the third time, 850 MW of capacity will be provided in 20 different regions. (April 20, 2022)

- **Zonguldak Sakarya Gas Field included in scope of project-based state aid.** According to the Presidential Decree published in the Official Gazette, the total fixed investment amount planned for the Sakarya Gas Field is determined as TL 145.2 billion, with the field expected to create 1,018 jobs. The field is announced as offering natural gas production capacity of 14 billion cubic meters (bcm) per year. While the duration of the investment was determined as 11 years, the Ministry of Industry and Technology has allowed an additional extension of half of this period to be granted. (April 20, 2022)

- **Initial ceiling price increased in YEKA RES-3.** According to the announcement in the Official Gazette, with the amendment made in the article titled "electrical energy purchase ceiling price purchase period" in the YEKA RES-3 contest, the initial ceiling price for each competition was raised from 45 cents to 95 cents per kWh. With the correction announcement, the amount of the letter of guarantee to be given for the 10-year term and partially convertible electrical installed power in MW) has been increased from TL 1 million to TL 2 million. (April 14, 2022)

- **Energy Market Regulatory Authority (EMRA) updates Renewable Energy Resources Support Mechanism (YEKDEM) cost forecast.** According to the Board decision published in the Official Gazette, the unit cost projection for the YEKDEM varies from between TL -284 /MWh and TL -588 /MWh per MWh between March and December. It was predicted that the lowest unit cost would be TL -588.83 /MWh in May. (4 April 2022)

- **Industrial electricity tariff raised by 20%.** Based on the EMRA tariff table published in the Official Gazette, the electricity rate per kWh for low voltage industrial subscribers has risen from 191.77 kuruş to 230.10 kuruş per kWh. In the tariff for residential subscribers using a low level of electricity, the price per kWh of electricity has been raised from 112.41 kuruş to 112.43 kuruş, and from 167.83 kuruş to 167.85 kuruş for the high level. In addition, the price of electricity per kWh increased from 167.43 cents to 167.45 cents for business subscribers in the first tier, and from 222.70 cents to 222.73 cents in the upper tier. (4 April 2022)

News From Abroad

- **New coal power plant capacity under construction or being planned falls by 13%.** According to the report entitled "Rise and Fall 2022: Global Tracking of Coal Power Plants" published by the Global Energy Monitor, coal power plant capacity under construction and at the planning stage in 2021 decreased by 13% to 457 GW. This figure stood at 525 GW in 2020. The report stated that coal power plants with a capacity of 45 GW were commissioned in the world in the same period with 26.8 GW of capacity being decommissioned. However, the report pointed out that coal power plants with a capacity of 10.6 GW which had been planned to be built in Turkey in 2021 had been cancelled. (27 April 2022)

- **International Energy Agency (IEA) revises its oil demand forecast downwards.** In its "Oil Market Report" for April, the IEA reduced its global oil demand forecast by 260,000 barrels per day when compared to its previous month's forecast, bringing the oil demand forecast for 2022 down to 99.4 million barrels per day. (April 14, 2022)

- **Renewable energy still advantageous in Europe, despite rising cost.** Firms are turning to green energy to reduce emissions and hedge against rising fossil fuel prices, according to Bloomberg. Renewable energy prices in Europe are on the rise due to rising demand and the rising costs of wind turbines and solar panels. Despite an 8.7% increase in the first quarter of 2022, the rising cost of coal and natural gas still leave renewable energy resources in a preferable position in terms of cost. (April 14, 2022)

- **U.S. Energy Information Administration (EIA) lowers its oil price forecast.** In its "Short Term Energy Outlook" report, the EIA lowered its projections for 2022 average rent and West Texas type crudes to USD 103.37 per barrel (/bbl) and USD 97.96 /bbl respectively. These figures had stood at USD 105.92 /bbl and USD 101.17 /bbl in March report. The report also projects average oil prices of USD 92.57 /bbl for Brent crude and USD 88.57 /bbl for West Texas type crude in 2023. The report projected that global oil consumption would average 99.8 million barrels per day this year, an increase of approximately 2.4 million barrels compared to the previous year, rising to 101.7 million barrels per day in 2023. (April 13, 2022)

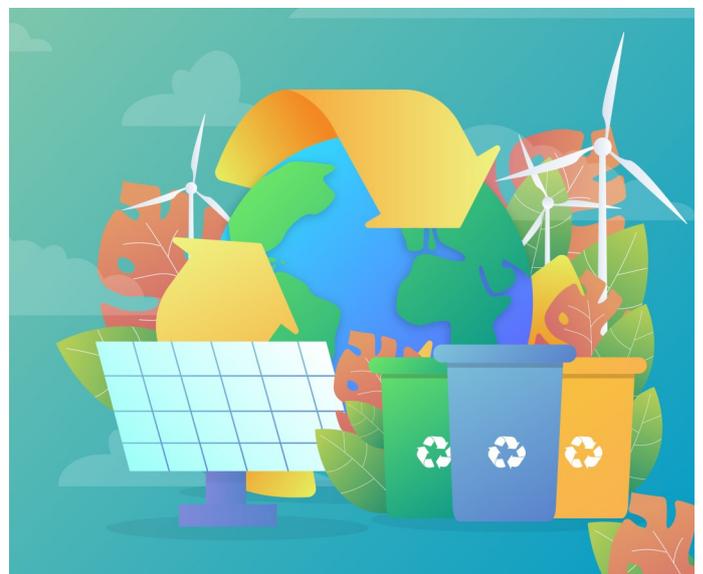
- **Organization of Petroleum Exporting Countries (OPEC) revises global oil demand downwards.** According to OPEC's "Monthly Oil Market Report", global oil demand will reach 100.5 million barrels per day in 2022, an increase of 3.7 million barrels per day compared to the previous year. OPEC had projected demand growth of 4.2 million barrels per day in its report last month. (April 13, 2022)

- **Egypt and European Union (EU) reach agreement to strengthen cooperation on natural gas and green hydrogen.** In a joint statement released by Egypt and the EU Com-

mission, it was stated that cooperation in the field of LNG and green hydrogen supply would be enhanced and with the Mediterranean Green Hydrogen Partnership, which includes hydrogen trade between Europe, Africa and Gulf countries. However, Frans Timmermans, the EU Commissioner responsible for combating climate change, stated that the EU, which is seeking an alternative to oil and natural gas purchases from Russia, could review the targets set for renewable energy. (April 11, 2022)

- **12% growth in global wind power capacity.** According to the "Global Wind Report 2021" published by the Global Wind Energy Council, global wind power capacity rose by 12% to 837 GW in 2021. Reflecting that the 93.6 GW of new capacity added in 2021 was the second highest incremental addition when compared to other years, the report pointed out that capacity additions should quadruple by 2030 to meet the 2050 net-zero and 1.5°C targets. The report also cited Turkey as one of the top four countries in the world in offshore wind power plant capacity. (6 April 2022)

- **IEA countries agree to use some of their emergency oil reserves.** According to a statement issued by the IEA on April 1, IEA member countries will release some of their emergency oil reserves, which stand at 1.5 billion barrels, for use. The amount will be determined next week. The 31 member countries of the IEA agreed in March to open a total of 62.7 million barrels of emergency oil reserves. (4 April 2022)





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