

Monthly Energy Bulletin

TSKB Economic Research

February 2022 #45

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28 March 2022

First Climate Council held in Konya

The First Climate Council, held in Konya in between 21-25 February 2022, will serve as a guide in creating the National Green Financing Strategy, and developing a national green taxonomy legislation. The Minister for the Environment, Urbanization and Climate Change, Murat Kurum, issued a statement after the Climate Council was completed, where he said that a 217-point advisory jurisdiction had been accepted in a unanimous vote. Mr. Kurum said that the government was in scientific negotiations in the Climate Council related to “green development” and the “2053 net zero emission” goals, and national advisory jurisdiction.

In the council, Mr. Kurum said that the government had created brand new projections by reaching big decisions regarding combating climate change and green development, and had prepared the final declaration in accordance with these projections.

The outcomes of the Climate Council, which are planned to serve as a roadmap to boost the use of renewable energy, provide energy efficiency and reduce the use of fossil fuels, are expected to present a plan to extend the clean transportation network with alternative fuels and smart transportation systems. The final declaration is planned to serve as a framework document in developing climate-friendly smart agriculture technologies and efficient use of water.

25.30
TWh

February Gross
Generation

1,404.50
TL/MWh

Average
MCP

-0.8%

Daily average licensed electricity generation decreased by 0.8% MoM and increased by 4.7% YoY in January.

[Click](#) for details.

19.2%

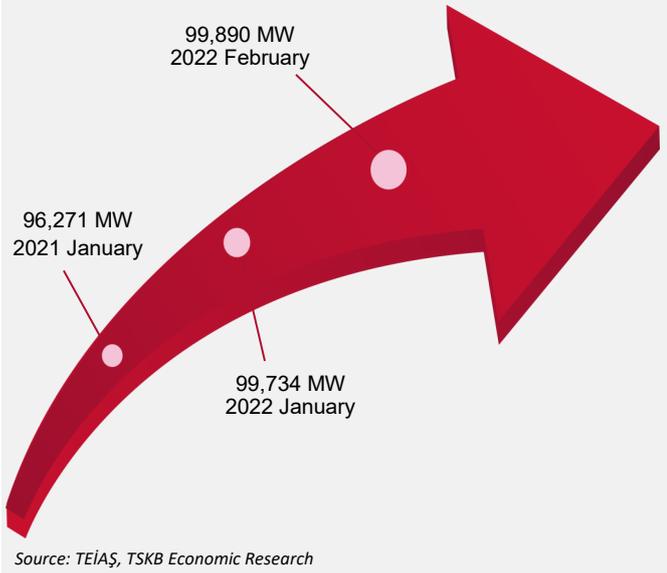
Market Clearing Price (MCP) increased by 389.6% YoY and 19.2% MoM in February.

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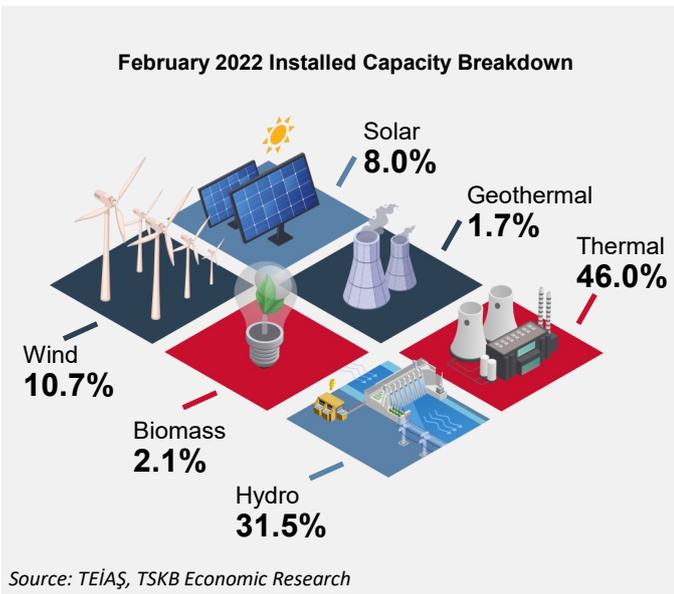


Installed Capacity Analysis

Turkey's total installed generation capacity, which had reached 96,271 megawatts (MW) by the end of January 2021, reached 99,890 MW by the end of February 2022. In February, 48.7 MW in new total net installed capacity of natural gas and mixed fuel power plants came on stream, in comparison with the previous month. There was an increase of 72.2 MW in the total net installed power capacity of solar power plants and an increase of 28.2 MW in the total net installed power capacity of wind farms over the month in February.

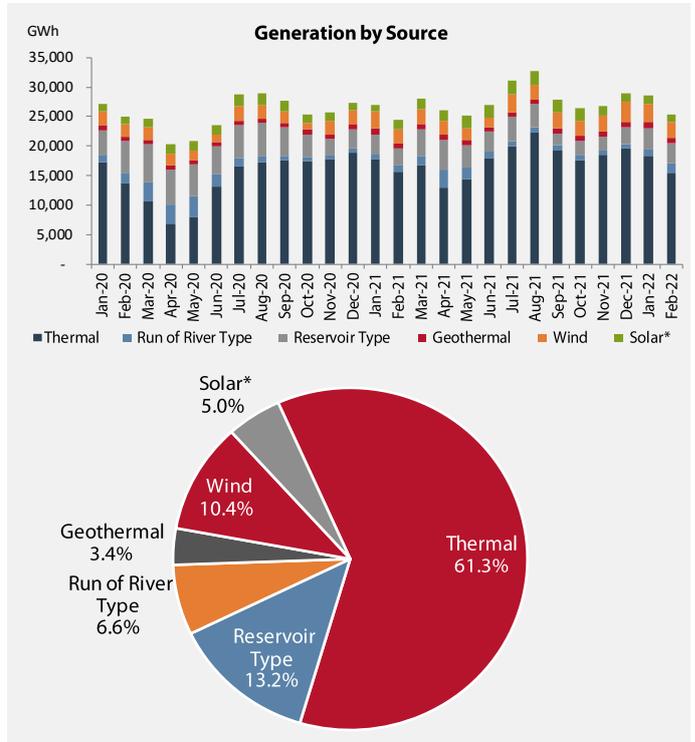


Power plants operating with renewable resources accounted for 54.0% of the capacity in operation in February. Hydroelectric power plants accounted for 31.5% of Turkey's total electricity installed capacity while the proportion of wind and solar power in Turkey's total installed power capacity was 18.7%.



Electricity Generation Analysis

Total electricity generation was approximately 28.52 terawatt-hours (TWh) in January, and 25.30 TWh in February, with a decrease of 0.8% in the daily average electricity generation in February when compared to its January level. Daily average electricity generation increased by 4.7% when compared to the same month of the previous year.

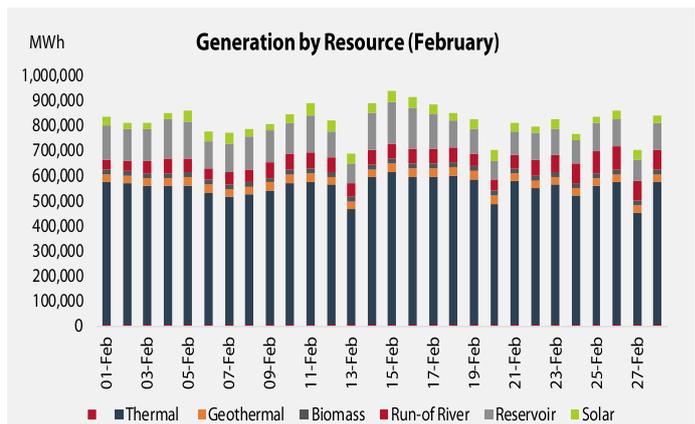


*Since February unlicensed solar power plant generation data has not yet been released by TEİAŞ, the average daily electricity generation by unlicensed solar power plants in February 2022 was accepted as same as the average daily electricity generation of January 2022.

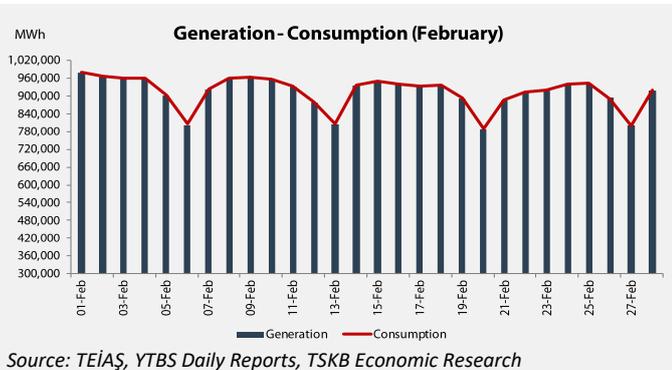
Source: TEİAŞ, YTBS Daily Reports, TSKB Economic Research

Thermal power plants provided 64.3% of Turkey's total electricity generation in January and 61.3% in February. Hydroelectric power plants, which accounted for 16.5% of Turkey's total generation in January, produced 19.9% of the country's total electricity in February. Electricity generated by wind energy decreased by 0.5% in February when compared to the previous month, reaching a 10.4% share of Turkey's total electricity generation.

Renewable energy power plants, which constituted an average share of 36.0% of generation in 2021, reached 38.7% of total generation in the second month of 2022. In the same period, dam-type hydroelectric power plants contributed to 13.2% to total generation, with solar power providing 5.0% of total generation.



Source: TEİAŞ, YTBS Daily Reports, TSKB Economic Research



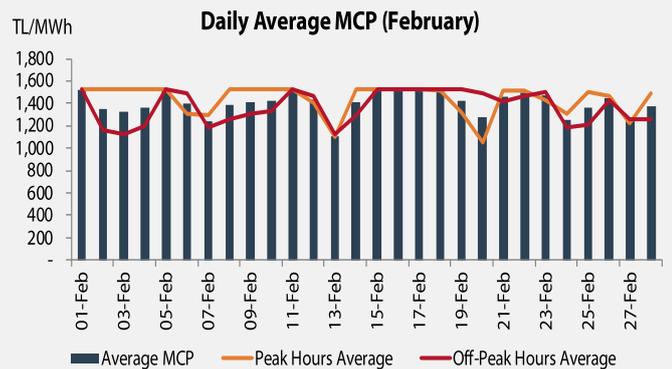
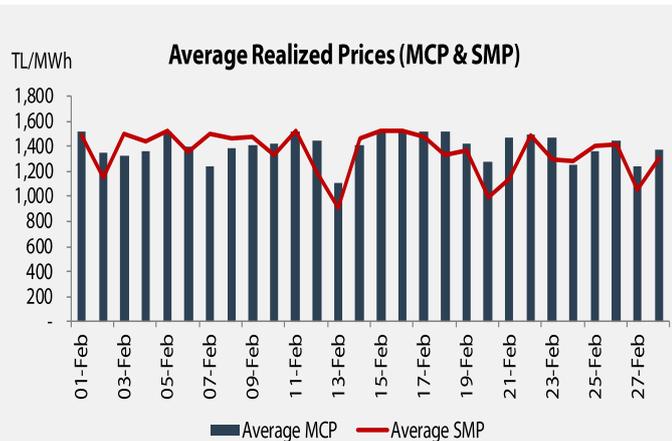
Daily electricity generation from licensed power plants averaged 914,834 megawatt-hours (MWh) in February. The highest generation from licensed power plants in February was recorded on Tuesday February 1st, at 980,891 MWh, and the lowest amount of generation from licensed power plants in February was recorded on Sunday February 20th, at 788,504 MWh.

Average electricity consumption in February averaged 913,524 MWh. The highest amount of consumption in the second month of the year was recorded on Tuesday February 1st, at 979,160 MWh, and the lowest electricity consumption, of 786,762 MWh, was recorded on Sunday February 20th.

Electricity Price Analysis

The daily average market clearing price (MCP) and system marginal price (SMP) varied between TL 900 TL/MWh and TL 1,524 /MWh in February. While the average MCP in February was TL 1,404,50 /MWh, the SMP averaged TL 1,354.81 /MWh. The lowest average MCP was realized on Sunday, February 13, at TL 1,110.55 /MWh while the lowest average SMP was recorded on the same day at TL 909.47 /MWh.

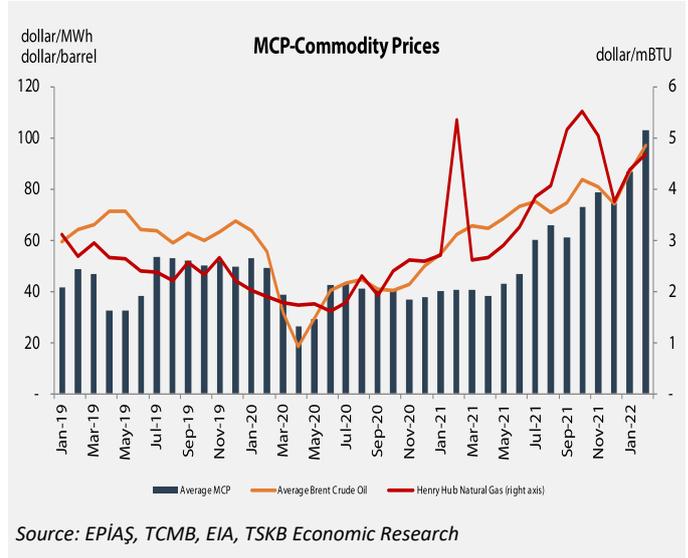
An analysis of the hourly data finds that the MCP over 361 hours in February was realized at TL 1,524 /MWh, which was the highest determined price.



Source: EXIST, TSKB Economic Research

An analysis of the daily MCP for February finds that the peak hours average (between 8AM and 8PM) was 2.4% higher than the daily average value, at TL 1,438.85 /MWh. The highest peak hours average of TL 1,524.00 /MWh was recorded for 8 days during the month. The lowest peak hours average of TL 1,056.26 TL/MWh, was recorded on Sunday, February 20.

In the same period the off-peak average (between 8PM and 8AM) was TL 1,370.15 /MWh. The highest off-peak hours average was recorded for 8 days at TL 1,524.00 /MWh; and the lowest off-peak average was recorded as TL 1,121.55 /MWh, on Sunday, February 13.



The MCP, which averaged USD 86.98 /MWh in January, averaged USD 102.93 /MWh in February. The USD based MCP was 154.2% higher when compared to the same period of the previous year.

Average Commodity Prices

Brent crude, which was USD 86.51/bbl in January, reached USD 97.13/bbl in February, marking a monthly increase of 12.3%. The average crude oil price in February was 56.0% higher than the price in the same month of the previous year.

The contract price of Henry Hub natural gas, which averaged USD 4.38 USD/mBTU in January reached USD 4.69 /mBTU in February - a monthly 7.1% increase, but 12.3% lower than when to the same period of the previous year.





Sector News

Local News

- **The burden of subsidy in electricity to be covered by Elektrik Üretim A.Ş. (EÜAŞ).** EÜAŞ will cover the burden of selling electricity to residential customers at a lower rate through the incremental tariff. Thus, the balance sheet loss for EÜAŞ will be accepted as a duty loss, and reimbursed by the Treasury. (28 February 2022)

- **Electricity procurements of assigned supply companies determined.** According to the decision taken by the Energy Market Regulation Authority (EMRA) published in the Official Gazette, assigned supply companies will be required to procure 50% - 90% of the electricity they obtain for consumers within the final resources procurement from EÜAŞ throughout the remainder of the fourth tariff application period. (28 February 2022)

- **New incentives provided for the unlicensed solar and wind power investments.** According to a statement from the Ministry of Industry and Technology, with the Presidential Decree published in the Official Gazette, investments for the generation of electricity through solar and wind energy will benefit from the support, at least in the 4th Region, on the condition that are limited to unlicensed activity and contract power in the connection agreement. The investors will benefit from the procurements for the 5th and 6th regions, depending on where the investment is located. (25 February 2022)

- **Turkey ranked 4th in Europe in terms of wind power capacity in 2021, with 1.4 gigawatts (GW) of capacity.** According to the "Europe's Wind Power Statistics for 2021 and Outlook for 2022-2026" report prepared by WindEurope, Europe had 236 GW of wind capacity as of the end of 2021. A total of 17 GW in new capacity was installed in 2021, with the highest installation of wind capacity realized in the UK, followed by

Sweden and Germany and Turkey ranking 4th with 1.4 GW of new capacity added. (25 February 2022)

- **New Renewable Energy Resource Field (YEKA) with 3,050 MW capacity to be realized in 2022.** In the announcement by the Minister for Energy and Natural Resources, Fatih Dönmez, 2,200 MW of the new capacity will be in the form of solar power and 850 MW will be wind power in the YEKA tenders planned to be held in 2022. (23 February 2022)

- **Underground natural gas storage capacity targeted to reach 10 billion cubic meters (bcm) in 2023.** The Minister for Energy and Natural Resources, Fatih Dönmez, stated that the total capacity of these two facilities would reach 10 bcm in 2023 with the completion of work to increase the capacity of the Silivri and Salt Lake underground natural gas storage facilities. Mr. Dönmez said that with these increases, 20% of the total annual consumption would be stored in the underground storage facilities, and the Saros Liquefied natural gas Terminal, construction of which is in progress, would enter operation in 2022. (21 February 2022)

- **Minimum 5% "renewable energy" condition to be set for the buildings.** In the "Regulation on Effecting Changes In the Energy Performance in Buildings" prepared by the Ministry of the Environment, Urbanization and Climate Change and published in the Official Gazette, a requirement has been imposed for the construction of buildings with a construction area of 5,000 cubic meters or more to be built as "Building with Almost Zero Energy (NSEB)", in 2023 and 2024. This size stipulation will be reduced to 2,000 cubic meters by 2025. According to the published regulations, the NSEBs, which are defined as the buildings which have a high energy performance and a certain rate of renewable energy usage, must hold an energy rating of class B or above in the Energy Identity Document, while at the same time, 5% of its primary energy need should be provided

by renewable energy in 2023 and 2024, rising to 10% by 2025. (21 February 2022)

- **Natural gas applications to be made for districts with populations of 15,000 or above.** According to an EMRA board decision published in the Official Gazette, BOTAŞ, which had previously submitted an application to deliver natural gas to districts with a central population of at least 20,000, will apply for a list of the districts with a population 15,000 and above from related institution and organizations, and will table an application to EMRA within 15 days starting upon receiving the necessary population data. (21 February 2022)

- **Capacities and connection regions revised in YEKA contests.** With the correction notice published in the Official Gazette related to the wind farms, the amount which had been determined as 2,000 MW has been revised to 850 MW and the number of connection regions, which had been determined as 42, has been reduced to 20. In addition, the total capacity of YEKA GES-5 solar power plants has been revised from 1,500 MW to 1200 MW, and the number of connection regions decreased from 23 to 18, with the number of contests reduced from 76 to 66. (14 February 2022)

- **Renewable energy power plants not included in YEKDEM to be eligible for benefit from local component contribution.** According to the EMRA's decision published in the Official Gazette, if local components are in use in the facilities which are not included in Renewable Energy Resources Support Mechanism (YEKDEM) and which started to operate after 30 June 2021, the local component support price will be paid to the related person, by taking the amount of base delivery to the settlement related to settlement period of the facility into consideration. (10 February 2022)

- **"Turkey's Final Declaration on the Path towards Green Development" announced.** The declaration articles announced in the "Turkey's path to Green Development" themed consultation meeting included the following articles; preparation for a Climate Law to be completed in 6 months, İller Bankası to transfer TL 37 billion in funds to climate-friendly projects being carried out by municipalities and Emlak Participation bank to widen support for environmentally friendly dwellings and vehicles. While the feedback rate reached 22.4% within the context Zero Waste Project, this rate is expected to rise to 30% in 2022 and 35% in 2023. While the Deposit Management System is aimed to be expanded, energy savings amounting to 10% of Istanbul's annual energy consumption are expected to be achieved if system support is provided. While residential heating expenses are expected to decrease by 30% with the realization of the waste heat potential of thermal power plants, the minimum energy performance requirement for new buildings will be increased from C to B from 2023. One of the goals is to reduce the amount of water used in sinks by 25% by limiting the flow of tap water. Besides, the proportion of protected areas is targeted to reach 13.8% in 2022 and 17% in 2023, in line with the Organization for Economic Cooperation and Development (OECD) average. Within the scope of the declaration, the goal for youth employment has been doubled to 50,000 people. (7 February 2022)

- **Ministry of Energy and Natural Resources announces 59 fields in 32 provinces in YEKA framework based on solar power.** The Ministry's decision in relation to the subject was published in the Official Gazette. The announced YEKA fields are located in Adıyaman, Ağrı, Aksaray, Antalya, Batman, Bayburt, Bilecik, Bingöl, Bitlis, Burdur, Bursa, Çankırı, Çorum, Elâzığ, Erzurum, Eskişehir, Gaziantep, Hakkâri, Iğdır,

Kahramanmaraş, Kars, Kırşehir, Kilis, Malatya, Mardin, Muş, Nevşehir, Osmaniye, Şırnak, Uşak, Van and Yozgat. (4 February 2022)

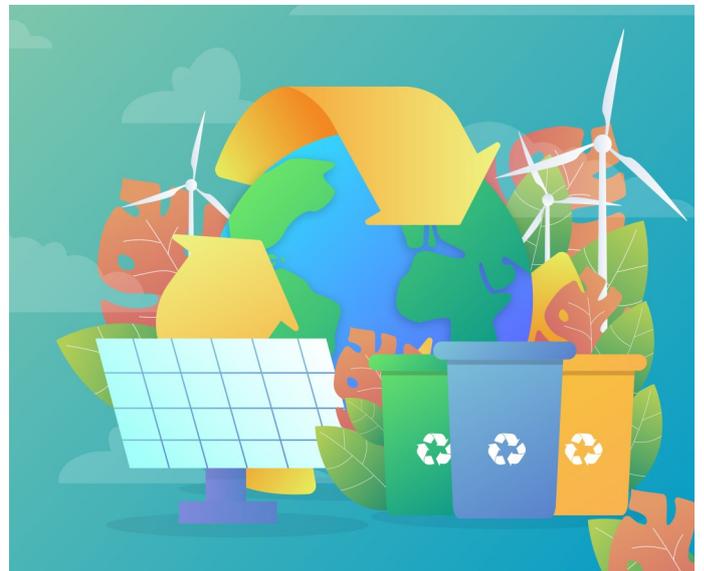
- **Incremental tariff to be based on the payments of electricity selling of unlicensed electricity producers.** According to the Energy Market Regulatory Authority's decision published in the Official Gazette, the gradual tariff will be based on the surplus electricity cost that will be paid to the producers without making any distinction based on whether or not producers are free consumers or whether the netting process is carried out on an hourly or monthly basis. (4 February 2022)

- **BOTAŞ raises natural gas tariff for electricity producers by 14%.** According to the February's tariff table published by BOTAŞ, the sales price to be applied for residential consumers for natural gas distribution by BOTAŞ has remained stable at TL 1,860 per 1,000 cubic meters of natural gas. In the tariff for industrial subscribers, the price for each 1,000 cubic meters of natural gas was set at TL 6,300 per 1,000 cubic meters. The tariff for electricity production was raised by 14% to TL 6,300 per 1,000 cubic meters. (1 February 2022)

News From Abroad

- **Methane emissions produced by the energy sector now 70% higher than official numbers published by governments.** According to the "Global Methane Followers 2022" report published by the International Energy Agency (IEA), the energy sector is responsible for 40% of methane emissions caused by human activity. The report remarked that methane emissions caused by the energy sector had increased a just under 5% in 2021, adding that the level reached in 2021 was lower than the 2019 level. The report, which marked that global methane emissions were 70% higher than the announced official numbers, underlined the need for developed monitoring efforts in order to reduce greenhouse gas emissions, and for stronger policy activities. (24 February 2022)

- **Global oil demand estimated to reach 100.6 million barrels per day in 2022.** According to the Oil Market Report which is published by the International Energy Agency on a monthly basis, global oil demand, which was estimated at 97.4 million barrels/day in 2021, is expected to reach 100.6 million barrels/day in 2022, with an increase of 3.2 million barrels/day. The report, which remarked that global oil supply had increased to 98.7 million barrels per day in January, suggested that daily oil demand could increase by 6.3 million barrels in 2022. (14 February 2022)



- OPEC expects global oil demand of 100.80 million barrels in 2022. In the February edition of the oil market report published by The Organization of The Petroleum Exporting Countries (OPEC), global oil demand will increase by 4.15 million barrels per day in 2022 when compared with the previous year to reach 100.8 million barrels per day. This January report set out a projected oil demand of 100.79 million barrels per day. (11 February 2022)

- France to increase its nuclear and solar energy production capacity. France's President, Emmanuel Macron, declared that France would build six nuclear power plants and an additional eight solar plant power plant projects. President Macron said that the construction of the first nuclear power plant would get under way in 2028 and enter service in 2035, adding that France was aiming to increase its solar energy capacity ten-fold by 2050. (11 February 2022)

- Air pollution in Middle East and North Africa bringing an annual cost of approximately USD 141 Billion per year. According to a report published by The World Bank, air pollution in the Middle East and North Africa has resulted in people living in these regions to suffer illness for 60 days during their entire lives, with 270,000 premature deaths in 2019. In addition, the economic cost of the air pollution, plastics in the sea and the shore erosion is equal to more than 3% of the gross national product (GDP) in some regions. The report, which remarked that a move towards green investment was of crucial importance for the Middle East and North Africa in a world gradually moving away from fossil fuels gradually in order to achieve the goal of net zero emissions, cited the need to inform shareholders on how to cope with air pollution, providing incentives, strengthening institutions and undertaking investments to reduce emissions. (9 February 2022)

- IEA expecting a limited increase in demand for natural gas. In the "Natural Gas Market Report", which is published by IEA each quarter, the IEA set out its projection that global demand for natural gas, which increased by 4.7% in 2021, will rise by 0.9% in 2022. It is estimated that the natural gas demand will grow by 5.1% in Asia and 1.1% in North America, and decrease by 4.5% in Europe. Europe accounts for 12.7% of global natural gas consumption. (1 February 2022)





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