News : Russia-Ukraine war continues to challenge global power markets: S&P Global analyst

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- A record 390 GW of **renewables** to be added globally in 2023
- Even with IRA, 173 GW **natural gas** projects needed for stability

The impacts of the **Russia** -**Ukraine** war continue to cause challenges for energy markets across the globe, with **US** decarbonization goals expected to take longer than planned, a power expert with S&P Global Commodity Insights said April 18.

The war shifted the focus to energy security more than on the **energy transition** , said Xizhou Zhou, S&P Global's vice president and managing director for **global power** and **renewables** , said at the Platts **Global Power** Markets Conference in Las Vegas. Even so, the **global power** generation fleet added a record 365 GW of **wind** , **solar** and battery storage in 2022 and is expected to have another record year, with another with roughly 390 GW added in 2023, Zhou said.

"So, when **we** look at the new numbers, **we** don't see a slow down in the clean energy business," he said.

In **North America** , the generation fleet is about 75% conventional fuels, such as **natural gas** , **nuclear** and **hydro** , Zhou said, **Renewables** have grown from 8% of the fleet several years ago to about 26% of the fleet today, while globally 98% of additions have been carbon-free resources, he added.

Changing grid

The power system was built over 100 years ago for conventional resources, but over then next 20 to 30 years most of the additions will be in clean energy resources, Zhou said.

"This is going to change the way **we** operate the system," Zhou said. "New projects tilted to **renewables** ."

While there are some **natural gas** units being built, the majority of new builds are **wind** , **solar** and battery storage, he said. However, the current battery systems are not sufficient. Even with the **US** Inflation Reduction Act**,** Zhou expects 173 GW of new **natural gas** projects will be needed for stability.

Challenges

The Biden administration's net-zero goal by 2035 is a big challenge, Zhou said. And the audience at the **Global Power** Markets conference agreed, with 55% of those responding to a poll expecting the goal won't be reached until after 2050.

The global supply chain has created challenges to building the clean energy resources required to meet net-zero goals. The cost of **solar** fell 80% from 2010 to 2020, while **wind** costs fell 60%, but those costs climbed in 2020 due to supply chain issues and have remained high since, Zhou said. Globally,10,000 GW of **renewables** need to be added in the next 10 years.

Grid interconnection queues have become a major bottleneck for **renewable** project development across the **US** , Zhou said, adding there is 1,400 GW of projects currently siting in queues. The **US Federal Energy Regulatory Commission** 's proposed interconnection reforms provide hope for growing **renewable** project backlog. Proposed rule changes like the "first ready, first served cluster studies are supported by nearly everyone involved, while others such as penalties for study delays have mixed reaction, he said.

The "missing money" problem is also causing challenges to decarbonization plans, Zhou said about how **renewable** additions are pulling down wholesale **power prices** , which is greatly lowering energy revenues for developers.

"This is an issue **we** 'll have to address as **we** add more **renewables** ," he said. "It's almost like **renewables** are at their own peril."

It will require change by policy makers and grid designers, Zhou said.

Offshore wind

The **US** has a huge ambition when it comes to offshore **wind** goals, which could be hindered by supply chain bottlenecks.

"For offshore **wind** , **we** need huge ships to install," Zhou said, adding ships have to get bigger to handle to handle the size of the offshore **wind** equipment. Demand for large vessels to install offshore **wind** equipment will double and triple. "**We** 'll probably start to have a ship shortage by 2027."

The federal offshore **wind** targets include 30 GW by 2030 and 15 GW of floating offshore **wind** power capacity by 2035. There are currently 40 GW of offshore **wind** in various stages of development, according to the **US** Department of Energy.

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