Power - China

Key takeaways from power tariffs & reforms expert call with Ms Peng Peng

Industry Overview

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Equity
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We hosted an expert call with Ms Peng Peng, Secretary-General of China Renewable Energy Power Investment Alliance, to discuss the Chinese power market outlook.

Spot market penetration to further increase

Along with rising PV installation, Ms Peng expects spot market penetration will increase. While thermal power traded at 20%+ premium over benchmark tariff in 2022, solar and wind spot market tariffs traded at discounts to benchmark. Shandong had the largest discount of 39% as it has the largest PV installation. That said, Shandong saw spot valley tariff slightly increase YoY in 2023, as power users shifted their power consumption to valley period to save cost, which boosted demand and tariff. However, Ms Peng does not think Shandong's example can be applied nationwide, as different provinces have different power consumption structure. Shandong has many energy-intensive and chemical product manufacturers with higher incentive to save power cost.

Tariff for new projects may fall further

Many provinces, including Zhejiang, Liaoning, and Qinghai, have launched peak-valley tariff system, with daytime tariff at lower levels and nighttime at higher tariffs. Ms Peng thinks end-users tariff drop will also impact the upstream power generator as long-term contract for new projects will be signed at a lower tariff along with lower solar module costs. While power grids will avoid tariff increase, old projects' tariffs may be kept stable due to higher construction cost in early years. In large-scale bases, it is more common that renewable energy is bundled with thermal power to sell. Ms Peng believes power tariff adjustment does not limit PV installation, but will better allocate power output based on demand.

Demand flat YoY in 2024E; half to be distributed PV

Ms Peng expects China's PV installation to be flat YoY in 2024E at c200GW, among which half will be distributed PV project. Ms Peng believes grid capacity is not a constraint in the 14th FYP. Some provinces may be marked as red zone for further PV addition, but it may be due to insufficient transformer capacity instead of grid capacity issue. 9M23 PV installation came mostly from Central/Eastern China, among which 70% was distributed PV projects. Ms Peng believes future PV installation will also focused in those areas where local power consumption is strong. After more pumped storage projects be commissioned, power grid dispatching capability will further improve during the 15th FYP period.

Low energy storage utilization; Hydrogen competitive

Energy storage utilization is lower on the power output and power grid side but higher at power user side. Comparing to renewable energy storage, grids prefer utilizing energy storage in thermal power. Cost of electrochemical energy storage is still high and Ms Peng sees hydrogen will be competitive comparing to other energy storage method.

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