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Suspension of the Wholesale Electricity Market in Australia

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Japan issued an electricity supply shortage warning from June 27 through 30 for the area covered by TEPCO Power Grid as temperatures climbed sharply and sent demand soaring. As temperatures remained high on July 1 and the grid balancing capacity fell short in the area, OCCTO, the Organization for Cross-regional Coordination of Transmission Operators, issued an order to improve the supply-demand balance. Such power shortages are not unique to Japan; Australia has also had to suspend its wholesale electricity market due to a supply crunch. Perhaps surprisingly, fossil fuel prices are surging in Australia as well, pushing up the spot wholesale electricity price to above the threshold necessary for generators to remain profitable in the wholesale electricity market. This prompted the introduction of price capping from June 13 or 14, which turned the generators' margins negative and caused them to hold back supplies. In response, AEMO, the Australian Energy Market Operator, suspended market operations from June 15 through 24 and issued orders directly to the operators to keep the supply and demand in balance.

As renewable power generation increased mainly in the state of South Australia, and coal power output, traditionally the main generation capacity, declined and the wholesale electricity spot prices weakened, more and more coal power plants have been closed or suspended in the country. Australia does not have a day-ahead wholesale electricity spot market; instead, it has a real-time-type wholesale electricity market that calculates the wholesale spot prices based on the estimated current output and demand. Also, significant amounts of battery storage systems are being installed as the market structure makes it relatively easy to use batteries to profit from arbitrage trades on price differences with the wholesale spot price forecasts released by AEMO, but failing to become a major supply. The supply crunch occurred because price capping was introduced without regard to the soaring fuel prices when conventional energy supplies were already shrinking. The price cap was lifted on June 24 and the wholesale market resumed operations on the 25th, but spot electricity prices are rising once again reflecting the high fuel prices (mostly natural gas price). Australia's natural gas prices began to rise sharply around May and have been trading at levels similar to Europe's natural gas spot prices since mid-May. As such, Australia's wholesale spot electricity has also been trading in the range of mid 30

yen to high 40 yen per kWh, similar to Europe's wholesale electricity prices. Even though Australia is a natural gas exporter, the domestic natural gas price soared. This is presumably because Europe's LNG purchases increased rapidly, tightening the supply-demand balance of LNG transactions.

At the Business System Working Group of the Basic Policy Subcommittee on Electricity and Gas that met on June 22, METI received a comment that the construction of thermal power sources that have a relatively short time to market should be promoted and that the sources should be offered for capacity bidding to prevent an impending power supply-demand crunch. Accordingly, a proposal was raised to limit the scope of promotion to: (1) new build and replacement projects with a short time to market, and also set time limitations, and (2) LNG-fired thermal power which has relatively low emissions and is promising as grid-balancing capacity. As described earlier, the expansion of LNG purchases by Europe has already tightened the natural gas supply-demand balance in Australia, an LNG-exporting country, and this is likely to continue going forward. This may call for flexible operation of the bid system to include gas-fired thermal power plants that can also burn oil, like those that continued to be developed in the U.S. Northeast even in the 2000s. The decarbonisation readiness requirements—whose application to Britain's thermal power plants is being considered and which are similar to the capacity bidding proposals discussed this time—are also considering exempting the thermal power used for peak demand because of their short annual operational hours and small annual CO₂ emissions. The scope of regulations should be determined not only on how high or low a power source's CO₂ emission intensity is but also on its effectiveness.

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