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Beijing forges ahead on renewables

China's build, build, build approach risks renewable curtailment

According to an analysis of over 30 separate provincial plans, **China** will install up to 874 GW of wind and solar generation by 2025. At that rate it will pass its 2030 target of 1,200 GW of installed renewables capacity.

At this stage, China's poorly coordinated approach to its energy transition – emphasising build-out above all else – risks significant energy wastage. Currently, about five percent of renewable energy projects in China are equipped with storage, compared to around 15 percent in the **US**. Long distance transmission infrastructure is another gap, whilst interprovincial green trading remains largely inchoate. The result is high rates of renewables curtailment. In June, nearly 12 percent of power generated by wind turbines in Inner Mongolia, and 10 percent of solar power in Qinghai was curtailed. (Curtailed energy is not despatched, usually because of inadequate infrastructure.)

Beijing is obviously aware of this problem. Across the next 30 years, it will build US$300 billion worth of power lines to transmit energy between provinces. China's macro planner, the NDRC, also plans to install 30 GW of non-hydropower energy storage by 2025, up from the approximate 3GW available at the end of 2021. Paramount leader **Xi Jinping** pointedly emphasised the need for more a more systematic approach to energy planning at the recent 20th Party Congress. How this translates into policy, particularly at the provincial and local level, remains to be seen.

Cost of living pressures stymie Japan's carbon tax rollout

Rising energy costs undermine the country's decarbonisation efforts

Japan has pushed back carbon tax reforms for the second time. Last week, it announced a delay to the rollout of its 'carbon emissions surcharge', set to help cover the debt-servicing costs of the government's US$142 billion green transformation bonds. The government aims to use the bonds to finance the country's carbon-neutrality efforts. Electricity prices in Japan have risen due to a weak yen and the war in **Ukraine**. Last month, wholesale spot prices reached a 9-month high of US$0.36 per kilowatt hour. In this context, policymakers have been reluctant to impose higher costs on households and industrial consumers. Instead, Prime Minister **Fumio Kishida** has proposed a combination of an electricity bill surcharge and emissions trading market – currently in the trial phase.

Whilst the cost of living has undoubtedly gone up, inflation in Japan remains relatively stable at 2.5 percent. This is very mild compared to other major economies such as the **US** and **Europe**, which are currently experiencing inflation levels of around 8 percent and 11 percent, respectively. With a target to reduce emissions by 46 percent by 2030, trade-offs between emissions abatement and cost-of-living will likely remain front of mind for policymakers.

Mixed messages continue in Germany's approach to China

Sharp internal difference within the ruling coalition limits the government's ability to adopt a consistent approach

Earlier this month, the **German** government blocked the sale of two chip manufacturing companies to Chinese investors. Berlin specifically blocked the sale of Elmos Semiconductor SE's wafer facility to Silex Microsystems AB, a **Swedish** subsidiary of China's Sai MicroElectronics Inc. The deal was worth approximately US$85 million and included a supply agreement for wafer manufacturing assets until at least 2027. The government also blocked the proposed takeover of ERS Electronic by an unknown buyer.

The blocking of the chip investments comes amid continued disagreement within **Germany**'s ruling coalition over current and future **China** policy. Last month, and before his visit to China, German **Chancellor Olaf Scholz** rammed through approval of Cosco's acquisition of a stake in the Hamburg container terminal, Germany's largest port. The Greens, led by Economy Minister Robert Habeck and Foreign Minister Annalena Baerbock have taken a much more sceptical approach to inbound Chinese investment. This scepticism also applies to the perceived overdependence on China for imports of raw materials and renewable components, as well as for German exports. Germany is currently in the midst of drafting a new China strategy. How Germany's internal debates ultimately play out will have a crucial bearing on Europe's future posture towards China.

US grid operators lean on demand response to curb power outages

Major reform required to mitigate further disruption

Amid insufficient generation capacity and extreme temperatures, grid operators in California and Texas are relying on voluntary demand response to avoid blackouts. Operators are offering gift cards and power bill credits to consumers and industrial customers in exchange for electricity usage curbs during periods of peak demand. Demand response is not new. However, its need and prevalence have markedly increased in recent times. In California for example, the number of calls for consumers to conserve energy has risen from two per year in 2012, to 11 so far this year.

There are concerns that demand response is prone to being gamed and manipulated. For some companies it is currently more profitable to reduce power than it is to continue with their usual practices. For example, in July, Riot Blockchain received more money in power credits (US$9.5 million) than it had in net bitcoin sales (US$5.6 million). This could potentially remove incentives to switch towards more energy efficient operations.

Any transition to a more sophisticated demand response system with automatic compensation will take years and require significant reform to current regulations. Both California and Texas have reform programmes underway, however both are in their infancy. This naturally raises the risk of further supply disruptions in the interim.