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## Regulatory Difficulties May Delay a Majority of US 2022 Solar & Wind Power Capacity Additions to 2023-2025

Stratas Advisors

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Global implementation of variable renewable energy (VRE) projects boomed in 2021 despite the multiple supply chain challenges arising from the pandemic-induced increase in material and commodity prices. In the US only, additions in wind and solar capacity saw a record-high after experiencing an increase of 17.3% compared to 2020, with cumulative installed capacity reaching 228 GW – over 19% of the US electricity mix. However, the extensive wind and solar project pipeline in the US is set to be more severely affected in the short term as the Ukraine crisis intensifies and trade relations with key equipment suppliers worsen – while legal uncertainty concerning the extension of federal tax credits reduces the attractiveness of renewable power investments.

The project pipeline for solar PV in the US shows over 55 GW coming online over the decade, yet only a third of all planned projects are currently under construction. In contrast, about half of the capacity of the solar pipeline is at very early stages of development – with 18% of planned capacity at more advanced phases. All projects, and particularly those at early stages of development, face a real risk of being delayed or even cancelled as the industry anticipates retroactive tariffs emerging from the ongoing investigation on the origin of solar cells manufactured in Southeast Asia – which today supplies over 80% of solar panels in the US.

While no new trade policies are currently expected to apply for wind turbine equipment, growth in the onshore segment will be hampered by the expiration of the federal production tax credit (PTC) in December 2021. Even if PTC extensions or new incentive schemes come into force during 2023, the onshore wind segment is expected to flag considerably over the next 2-3 years, showing a sharp drop in capacity additions after the growing trends experienced until 2020. Against the 8.3 GW initially planned for 2022, supply chain snags are likely to result in actual additions not exceeding 1 GW. However, as new incentives are phased in and global commodity prices stabilize, the onshore wind segment is expected to recover over 2024-2025, possibly returning to the previous exponential growth rates.

By comparison, natural gas will see a net growth of +4% over 2022-2030, with new gas-fired capacities experiencing delays as well as gas prices continue on the rise. Coal-fired capacity will be offset by increasing retirements, yet the latter will lag in the early forecast years as the current parallel crises are likely to pose difficulties for the timely replacement of

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coal generating units. While solar and wind capacity additions will plateau during 2022, projections show rapid growth and full market recovery by 2025 and thereafter. Either through state-level renewable portfolio standards (RPS) or through the adoption of the proposed federal clean energy standard (CES), demand for VRE will remain strong, eventually resulting in the return to declining cost trends for utility-scale solar PV and wind even where commodity prices remain moderate.

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