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Increasing Storage Capacity and to Match Increased Energy Creation

▶McGuireWoods lawyers Brian Kelly, Michael Woodard and Emilie McNally discuss the economic and regulatory climate for renewable energy and how the Texas power grid failure, the pandemic and the Biden administration's energy priorities affect the outlook.

CCBJ: Texas experienced a historic widespread power outage in February when the grid was unable to keep up with the spike in demand. How might this crisis and its aftermath affect the market for renewable energy in Texas and elsewhere?

Brain Kelly: The near shutdown of the Texas energy grid during the period of February 13-19, 2021, was caused by a variety of factors. The Texas energy market was built to take on summer heat, not withstand intermittent periods of below freezing temperatures and precipitation events. Unlike generation facilities in the Mid-Atlantic or New England that are designed and equipped to manage operations during ice and snowstorms, Texas generation facilities are generally not built with what is commonly known as cold weather packages. While Texas-based generators were encouraged to winterize their units following a less intense winter storm in 2011, many did not elect to implement those winter weather upgrades.

Further, Texas simply did not have enough generation capacity available for dispatch at the time Winter Storm Uri impacted the state. Texas is an electricity-only market that expects its peak load to occur during the hot Texas summers. Consequently, while generators strive to be available for dispatch during May-September when pricing is generally at its annual peak, many system owners put less impact on its dispatch capabilities in the winter months, when pricing is generally lower due to increased supply caused by decreased demand. As a consequence, when Winter Storm Uri arrived, many generators were not capable of running because of previously scheduled maintenance issues and shutdown schedules. The lack of available generation caused the Public Utility Commission of Texas (PUCT) to order the Electric Reliability Council of Texas (ERCOT) to set all energy pricing at $9,000/MWh throughout the Texas market in a failed attempt to incent generation to deliver power to the ERCOT grid. However, generation failed to dispatch because of gas and grid constraints (e.g., physical constraints), not due to weak pricing signals.

This created a cascading event. Due to the lack of generation supply, load-shedding events were implemented by ERCOT in the form of rolling blackouts. These rolling blackouts initially impacted only commercial and industrial users, however included in this group were natural gas compression stations throughout Texas whose purpose was to keep natural gas flowing within the pipelines for use by both residential customers, but as well as natural gas-fired generation stations. When the compression stations lost power, the ability to transport natural gas was dramatically impacted, creating a scarcity of gas that significantly increased the reporting prices of gas. This shortage of gas also caused gas-fired generation to be shuttered, which further exacerbated the electricity shortage throughout Texas.

The lack of sufficient generation capacity reserve available for dispatch during periods of historical low usage across the state, combined with uncoordinated load shedding mitigation (shutting down power to gas compression stations) caused the entire TX grid to come to the precipice of a complete shutdown. The knock-on issues from the physical impacts of Winter Storm Uri will likely involve changes to market design to prevent such an occurrence from happening again.

While the desire for renewable generation in Texas remains strong, the aftermath of Winter Storm Uri will likely impact how all generation facilities will be financed in the future. For instance, financing institutions and developers will place greater scrutiny on force majeure clauses used in financing and revenue contracts to prevent a party from having uncapped real time market exposure to market pricing during a scarcity event similar to what occurred during Winter Storm Uri. Revenue contracts will likely move away from firm, fixed volume structures, where developers assume all weather and operational risk to generate and deliver a fixed volume of energy over a stated period, to more unit contingent structures, where the facility is only required to generate power as and when it is capable of operating.

President Biden has said he wants the U.S. to achieve net-zero emissions by 2050. How will his administration's energy priorities affect renewable energy development? What sectors are likely to benefit most from this policy shift?

Emilie McNally: The Biden administration's goal for the U.S. to achieve net-zero emissions by 2050 is obviously beneficial to U.S. renewable energy development. To meet this goal, the U.S will need to increase renewable generation capacity from the 1,100 gigawatts currently available to at least 3,000 gigawatts. This increased generation capacity is largely expected to come from solar and wind, including offshore wind, project development. Even if President Biden can't win support from Congress, his administration will still be able to advance renewable energy policies through executive orders and other, federally-focused projects and strategies (including the development of solar and wind projects on federal lands and waters) and will continue to lean on growing support from the private sector.

Offshore wind projects are key to the clean energy plans of Atlantic coast states, but they often are subject to greater delays. What are the keys to keeping these projects moving ahead in the near future?

Michael Woodard: Offshore wind projects are expected to play a significant role in the country's ability to achieve its climate goals. In addition to cutting greenhouse gas emissions, offshore wind projects are expected to create new supply chain opportunities and generate significant job growth. However, offshore wind projects are new to the U.S., are not easily designed and constructed, are heavily regulated and involve numerous public interest groups – all of which result in offshore wind projects being complicated and expensive.

There are several keys to making these projects viable projects in the future. One of the primary keys is investment in infrastructure. To construct offshore wind facilities, many of our nation's ports will need to be upgraded to accommodate the ships, equipment and other components necessary to construct these facilities. In addition, investment in the supply chain that supports this industry is important. Offshore wind projects require investment in turbines, towers/foundations, underwater cables, ships, etc. – many of which are currently being imported from abroad. Another important key where the U.S. government can play a role is streamlining the regulatory and permitting process. Currently, the regulatory and permitting scheme for these projects not only slows down the advancement of offshore wind projects, but it also significantly increases the costs. One of the most important keys to advancing the offshore wind industry is to start building. The technology is getting better and cheaper with time, and as more projects are built, the more experienced and efficient we will become in designing, developing and constructing offshore wind projects.

As coal-fired power plants are retired, what opportunities are there to redevelop those sites as renewable energy facilities? What obstacles must be overcome?

Kelly: Coal generation facilities are increasingly being mothballed, retired and decommissioned across the country. While the shutdown of coal has benefits from an environmental perspective, the energy and resiliency benefits brought by these baseload generation facilities need to be partially offset by additional generation development. Part of that solution can be repurposing former coal generation sites to be development sites for renewable generation. However, this conversion comes with a combination of benefits and additional concerns that must be considered by developers and financing parties. These are a few notable factors to be considered:

- Capacity Rights. One of the primary benefits of using a former coal site for solar development is access to grid infrastructure and related capacity. Having an interconnection facility in place and an entity with available capacity can expedite a project's interconnection agreement approval process significantly. However, any developer looking to take advantage of a coal facility's generation capacity must make sure it strictly adheres to all transfer requirements imposed by a utility to a grid operator. For instance, in PJM, capacity rights may only be transferred within one year after the original facility retires and/or deactivates its units, and such transfer much be done in a manner that is consistent with the PJM rules in order to be recognized by the grid operator. If done correctly, the transfer of the capacity rights can save a developer a significant amount of time and money.

- Decommissioning Concerns. Initially, any renewable developer will need to confirm, or otherwise assume, that all of the coal facility's asset retirement obligations (AROs) have been satisfied or otherwise waived by the appropriate governmental entities. These AROs may be required by applicable law, may be embedded in a certificate of public convenience and necessity (CPCN) that originally authorized the construction and operation of the generation facility, or otherwise included in subsequent documentation such as consent decrees. Regardless of the source, a developer should confirm that all AROs have been identified, addressed or otherwise mitigated.

- Environmental Issues. Both developers and financing parties must have a comprehensive understanding of the likelihood of long-term environmental liabilities located at the site to be developed. If a Phase I environmental site assessment detects or identifies any environmental liabilities, those will likely need to be remediated, or at least identified and mitigated, prior to obtaining any third-party financing. While financing parties are growing increasingly comfortable with projects located on sites with environmental history, those projects will undergo significant diligence by third-party investors (including tax equity investors). In those instances, developers are well advised to be forthcoming with the reports and have plans to remediate the portion of the site impacted by the environmental liability or otherwise have a mitigation plan (which may be a proposed remediation plan, an indemnity from a credit-worthy counterparty, or a combination) to assuage the concerns of equity sponsors and debt financing.

- Assumption of Legacy Assets and Obligations. Another material item to consider is the assumption of legacy assets and real property obligations that likely burden the property. Legacy permits, easements and other rights of way will need to be terminated or amended to allow the generation facility to have an unobstructed access to the site. Likewise, wastewater processing facilities, outfalls from wastewater and stormwater discharge, and the related permitting schemes will need to be modified

or otherwise terminated. All of these actions will involve necessary communication and obtaining the necessary consents from regulators, and may even involve public comment periods. It is imperative to identify these types of issues as early as possible so this process does not slow down the overall project timeline.

How has the COVID-19 pandemic impacted development of renewable energy projects?

Woodard: Of all the industries impacted by COVID-19, the renewable energy industry has not been hit as hard as others have. However, the industry has not been spared completely. One of the biggest impacts on the industry has been delays – development and construction schedule delays. The production delays across the supply chain for renewables has been a serious threat to renewable projects across the U.S. Many developers have been confronted with force majeure claims from their equipment providers and have incurred significant costs in obtaining replacement equipment and parts. To compound the increase in costs associated with schedule delays, many renewables projects were in jeopardy of missing key dates and continuity requirements that are necessary to satisfy safe harbors to qualify for certain tax credits. To address this, in May 2020, the IRS issued extension relief for these projects. Another major impact COVID-19 has had on renewable energy projects is the impact on its investors. Tax credit investors monetize tax credits generated by these projects by offsetting net income. As net income of many investors dropped in 2020 due to COVID-19, the pool of tax credit investors decreased and many renewable energy developers have found it difficult to raise tax equity. The uncertainty of the pandemic has only made financing these projects more difficult. As a result, there is a strong movement in the industry urging the U.S. government to postpose the phase-out of certain tax credit timelines.

Despite the delays and the impacts on the tax equity market, the renewable energy industry has continually proven its resilience – and as we face the hopeful light at the end of the COVID-19 tunnel, many developers are confident in the future of this industry. ■

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