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May 14th, 2020

Mr. Robert B. Litterman
Chairman
Climate-Related Market Risk Subcommittee
Commodity Futures Trading Commission
1155 21st Street, N.W.
Washington, D.C. 20581

Re: CFTC Response: Identifying challenges or impediments to evaluating and managing climate-related financial and market risks

For renewables generators, there are two fundamental challenges in managing risk:

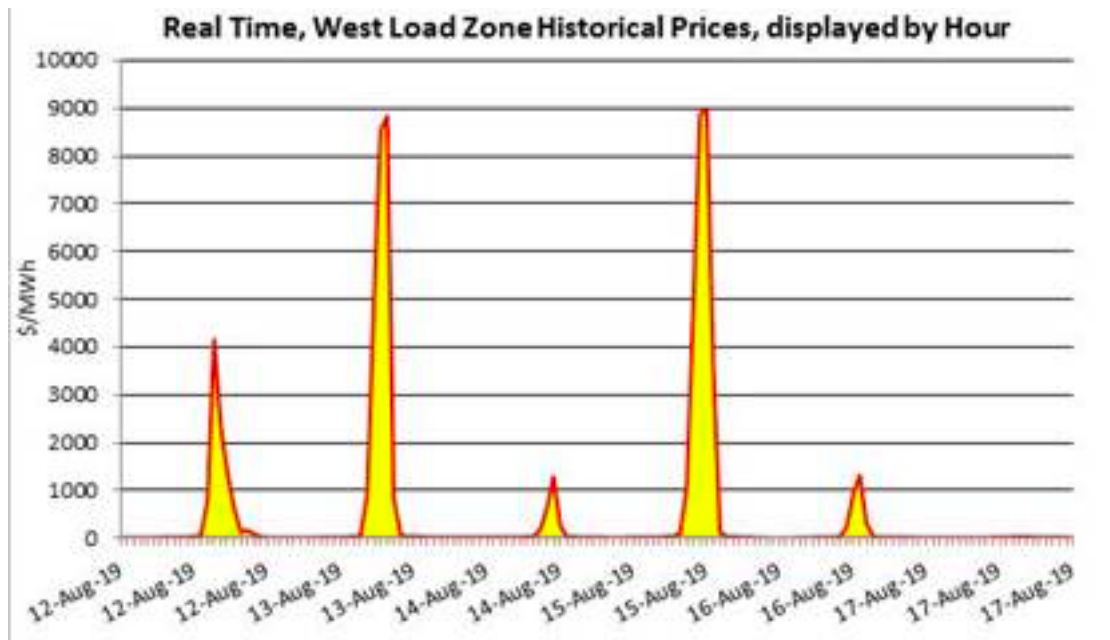
1. The ability to accurately forecast a number of variables including market demand for electricity, prices and the amount of electricity generated by their facility.
2. How to match available hedging tools in the market to adequately manage volumes and price risk, once identified.

Shifting demand patterns, new renewable generation, and extreme weather events are disrupting business as usual. All grid market players need to adapt to the new energy reality as quickly as possible, or we will likely see many more blackouts and bankruptcies. There have been emerging technologies to materially improve the ability of generators to measure the risks that they face, such as the data intelligence which Amperon provides to their clients. For those clients who leverage this innovative technology, their insight into the risks they face enables them to more precisely anticipate the volatility in prices and demand. The next challenge is what to do about it.

Because electricity market prices are extremely volatile, there is a challenge for smaller market participants — renewable generators certainly, but also retail electric providers, and many industrials — to effectively manage. Hedging solutions available to smaller market participants are prohibitively expensive and lack the granularity to provide effective risk management.

“Wind and sun are highly variable resources, and a lack of short term energy markets means renewable generators are leaving money on the table, and are more challenging to finance. Current projections call for 12,000 megawatts to 15,000 megawatts of new wind and 18,000 megawatts to 20,000 megawatts of new solar in each year from 2023 to 2030.”

- “How Much US Electricity will come from Renewables in 2030?”, Motley Fool



Volatility is greater in the intra-day, and short dated markets where there are few instruments to mitigate risk. Greater volatility results in higher prices to end-use customers. It is also the case that the inability to effectively hedge makes it more difficult for renewable generation to receive funding. Renewables generators sell long term PPAs (normally ~10 years), but do not often hedge their operational capacity even one day in advance.

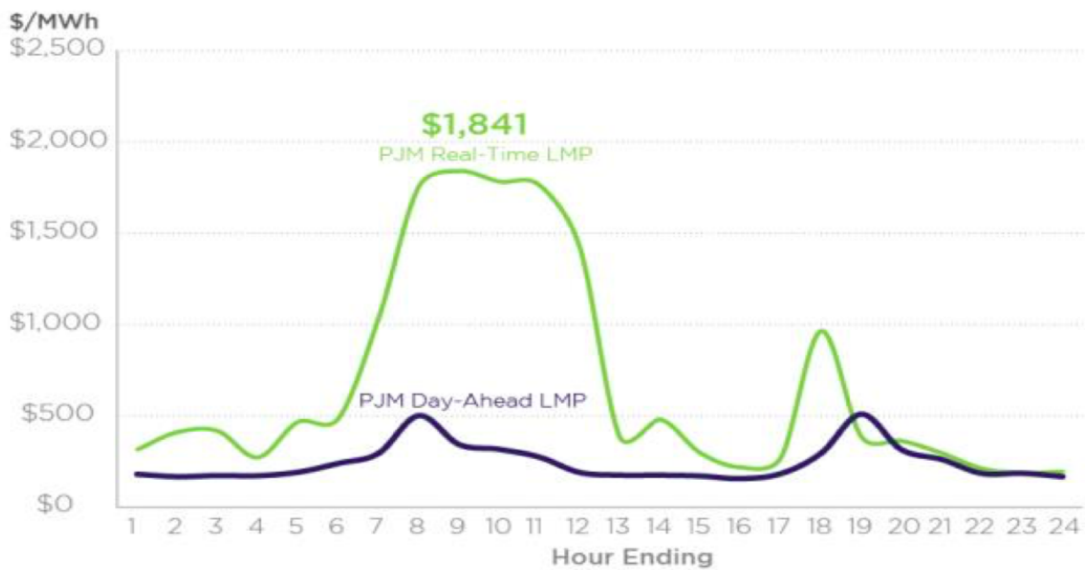


Figure 3. Day-ahead and real-time LMP on January 14, 2014. Source: PJM 2014.

As flow date approaches, opportunities to hedge appear, allowing for more certainty in profits. Currently wind and solar providers hedge 50% of their day ahead expected output. They do not hedge the full amount because if they do not deliver, it often means the market is short leading to increased prices. There is no short term market to hedge on an hourly basis besides real-time. If they can hedge up to 80% from 50%, it would materially improve profitability for renewable projects by lowering the payback period. For generators that already exist, they can increase profits in addition to their existing PPA. This would also lead to more projects being approved at better interest rates.

Difficulties for Generators: “The hourly nature of the [bank hedging] contract creates the additional risk of mismatch in the timing of wind generation versus contracted hourly power sales (shape risk).”

- “Reducing Risk in Merchant Wind and Solar Projects Through Financial Hedges”,
[Resources for the Future](#)

Current electricity exchanges either have prohibitive costs of entry, or do not provide the products designed to manage risk in the short dated markets. Banks and other wholesale electricity market participants (which are fewer in number today than even five years ago), often will not quote intra-month, small size transactions. Those that do, charge up to five times the cost of hedging more standard products — which makes it challenging for generators to make use of this service.

The solution is an electricity trading exchange, which would allow market participants to trade in odd-lot, small size volumes, and to be able to trade anywhere from next hour out to the balance of the month. Having affordable risk management tools in this, most volatile period, with products that are specifically designed for the needs of renewable generators, will facilitate investment and motivate long term financial health for these asset owners as well as improve the resilience, reliability, and carbon efficiency of the grid as a whole as it continues to integrate these intermittent assets. We look forward to speaking with the CFTC in the months to come to advance this needed market infrastructure.

Sincerely,



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