

# D.C. Circuit to address PJM capacity market rules affecting renewables and demand resources

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Parties to a recent Federal Energy Regulatory Commission proceeding are challenging rules governing the PJM Interconnection's forward capacity market in the U.S. Court of Appeals for the District of Columbia Circuit. PJM – the regional transmission organization that coordinates the movement of wholesale electricity in all or parts of 13 states and the District of Columbia – procures commitments from electric generators and demand resources by conducting auctions, beginning three years in advance of the delivery year, to ensure that the grid has adequate resources. PJM filed its "capacity performance" rules with FERC in December 2014. These rules restructure substantial features of PJM's capacity market. PJM has indicated that these rule changes are necessary in order to meet regional electric reliability needs.

FERC affirmed its approval of PJM's new rules in May 2016. The Advanced Energy Management Alliance (a trade association representing demand resource interests), several environmental groups and public power entities, and a state utility commission filed petitions for review with the court in July 2016. Intervenor from all sectors of the wholesale elec-

tricity industry will participate, some in support of the petitioners and some in support of FERC.

The petitioners had argued before FERC that PJM's capacity performance rules will eliminate the ability of many renewable resources and demand resources to participate in PJM's market, driving up PJM's costs without corresponding benefits. As a result, they believe FERC erred in approving PJM's rules. In his dissenting opinions, FERC Chairman Norman Bay generally agreed. Now the petitioners are expected to make similar arguments to the court on appeal.

They are seeking a decision from the court in advance of PJM's auction in May 2017, which is when the capacity performance rules are scheduled to go into full effect. A decision by the court favorable to the petitioners, coupled with further action by FERC and PJM, could allow robust participation by renewable resources and demand resources in PJM's market going forward. Conversely, if these stars do not align, PJM can expect to see significantly reduced participation by these resources. The result would be higher capacity costs due to increased auction clearing prices caused by constrained supply and increased penalty exposure under the new rules.

To put this into perspective, almost 12,000 MW of demand response resources were offered into PJM's auction in May 2016. Of this offered capacity, 10,348 MW was accepted by PJM. Total capacity procured in that auction was

approximately 167,306 MW – at a cost of approximately \$6.9 billion.

While demand resources are a minority of PJM's overall capacity resource base, small reductions in available capacity can materially increase the capacity prices determined through the auction process. In the event a significant portion of the demand resources offered in the May 2016 auction do not participate in May 2017, as some market participants have predicted, significantly higher capacity prices may result.

## RULES IMPEDE AUCTION PARTICIPATION

PJM's market rules in effect prior to implementation of its capacity performance rules accommodated certain "seasonal resources" fairly well. Dispatchable air-conditioning load is a key example of these seasonal resources. This type of demand resource typically comprises either aggregated residential air-conditioning equipment, the operation of which can be remotely curtailed, or larger commercial air-conditioning installations, such as those included within a district energy system. These resources can provide valuable load drop capability in summer but may not be available in winter.

PJM's old rules accommodated these demand resources by allowing them to submit offers in the capacity market auctions in subannual categories (known as "products"), such as "extended summer demand resources" and "limited demand resources." For the duration of the transition period ending next year, PJM

replaced these subannual products with "base capacity resources." Base capacity resources will be completely phased out in May 2017. Going forward, PJM will exclusively acquire capacity performance resources in its capacity market auctions.

As described by PJM, "Base Capacity Resources are those capacity resources that are not capable of sustained, predictable operation throughout the entire Delivery Year; but are capable of providing energy and reserves during hot weather operations." These resources are exposed to potential nonperformance penalties only during emergency operating conditions and only during the months of June through September. As such, this product definition provides many seasonal resources a viable way to participate in PJM's capacity market.

In contrast, PJM describes capacity performance resources as "capable of sustained, predictable operation that allows resource[s] to be available to provide energy and reserves during performance assessment hours throughout the Delivery Year." These resources are exposed to potential nonperformance penalties during emergency operating conditions in every month. As a result, this new product definition does not match up with the inherent performance characteristics of many seasonal resources and exposes them to nonperformance penalties in months where they may not have the ability to perform.

Additionally, PJM's new rules cause PJM to procure excess resources. Demand for electricity on PJM's system is summer-peaking in almost every zone. PJM has successfully allowed sellers to offer their resources on a time-differentiated basis in the past. During the transition period, PJM has continued to operate a market that includes multiple products with commitments that vary over the course of the year. These diverse products correlate well with PJM's needs. However, PJM's new rules will replace these products with a uniform annual strip upon fully transitioning to a single product in May 2017. As a result, PJM will pay for excess capacity that it does not need in the winter.

### NEW RULES WILL INCREASE PJM'S COSTS

The likely effect of full transition to PJM's capacity performance rules is pre-

dictable. Significant quantities of renewable and demand resources will be pushed out of the market because they will not be able to meet PJM's restrictive new performance criteria. This will constrain supply and tend to raise auction clearing prices, which will increase PJM's costs.

Sellers that remain in the market will face higher nonperformance penalties in all months under the new rules. Economically rational resource owners will take the increased risk of penalties into account, which will tend to raise prices offered in PJM's auctions. As a result, auction clearing prices, and therefore PJM's costs, will likely rise for this reason as well.


### OTHER EFFORTS TO ACCOMMODATE SEASONAL RESOURCES

PJM has initiated a stakeholder process for the purpose of determining "whether barriers to entry for seasonal resources exist" and to develop potential solutions. The current stakeholder process began in April 2016, and its work is not governed by any particular deadline. If the stakeholder process yields sufficient support for particular new market rules and PJM finds these acceptable, PJM may file these with FERC and seek FERC's approval. However, PJM elected to bypass the normal stakeholder process in 2014 when it decided to file its capacity performance proposal because it seemed unlikely to develop sufficient support. This suggests that it may be challenging to move a concrete proposal through the current stakeholder process and that any proposal coming out of this process may be resisted by at least some industry sectors.

One proposal under consideration is termed "aggregation." PJM included provisions in its capacity performance filing allowing for the possibility that summer-peaking seasonal resources could combine – or "aggregate" – with resources that may have peak capability in the winter, such as certain wind resources. However, aggregating these resources has proven to be practically impossible so far. There are numerous challenges associated with this approach, from the complex commercial issues it raises to the fact that summer-peaking resources are far more prevalent than winter-peaking resources. Nevertheless, parties in the stakeholder

process are searching to find ways around these obstacles.

Another proposal under consideration includes adjustments to the demand resource performance measurement and verification standards. These changes are intended to accommodate seasonal resources by reflecting their seasonality in the applicable performance requirements within the capacity performance construct. Other proposals reflect more explicitly seasonal product designs. One interim measure includes extending the transition period that allows for base capacity resource participation. Each of these potential solutions raises its own unique issues.

PJM is facing external pressure to address seasonal resource issues. For example, on Aug. 1, 2016, the Organization of PJM States Inc. passed a resolution urging "the PJM Board to direct its staff to develop market rules which optimize the participation and value of demand response in providing cost control, reliability, and competitiveness in PJM's wholesale market." OPSI is an association of 14 utility regulatory commissions from all of the states within PJM and the District of Columbia. The states represented by these utility regulators have substantial diversity in terms of their electric generating resource bases and their pursuit of renewables and demand response. In light of this, the resolution should be viewed as a particularly strong signal that PJM's market rules need to be revised. 



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