Topaz Power Management, LP Comments Regarding PJM’s Performance Capacity Proposal

September 17, 2014

Topaz Power Management, LP (“TPM”) agrees that RPM requires certain reforms to improve reliability and market efficiency. However, PJM’s proposal is unnecessarily complex and unlikely to resolve the root cause of the January cold weather events. It introduces additional reliability and market risk that could harm both load and supply.

The Independent Market Monitor (“IMM”) recently presented a series of analytic sensitivities indicating that flaws in the capacity market design have resulted in clearing prices being suppressed by between approximately $2.25 and $16.36 billion annually.1 TPM believes that PJM should consider the reliability value associated with an explicit increase in capacity prices, achievable by correcting price suppressive market design elements such as the 2.5% hold back.

As a general policy matter, TPM believes it is extremely important for PJM to recognize that energy and capacity price signals work in tandem and that this past winter provided a tremendous market incentive to drive generator performance during critical peak hours. PJM’s scarcity pricing structure performed well during peak hours and was punitive to units forced out during high price periods. It is also driving substantial generator investment and behavior changes independent of PJM’s proposed capacity reforms.

PJM’s proposed construct is likely to aggravate reliability concerns by excluding entire classes of resources from the Capacity Performance Resource (“CPR”) construct despite historically-reliable performance. Reliability may also be negatively impacted by the financial risk posed by PJM’s proposed penalty construct, which could force otherwise economic and reliable units to retire. At a minimum, existing generator offer caps and Cost of New Entry (“CONE”) calculations will need to be revised to accommodate additional costs and risks associated with delivering CPR.

TPM recommends that any construct offered by PJM should include the following reforms.

I. PJM’s proposed “flexibility requirements” will exclude certain classes of historically-reliable resources from CPR.

PJM states that the “ability for resources to be flexible throughout the operating day is integral to efficiently dispatching the system and minimizing uplift.”2 PJM seeks to achieve resource flexibility by creating three separate classes of resources: 1) Base Load Asset Class; 2) Interday Cycling Class; and 3) Intraday Cycling Class. These classes and their associated parameter limits will exclude reliable units from

2 PJM Capacity Performance Proposal at P. 23.
qualifying as CPR. TPM recommends striking the flexibility requirements from the proposal and allowing energy market price signals and operating rules to drive dispatch flexibility.

A. The Base Load Asset Class excludes reliable units from participation based on total run hours, a metric that is entirely out of the resource’s control.

PJM should either remove the link between Base Load Asset Class qualification and the number of run hours achieved by the unit or provide an exception process that would allow historically-reliable resources with less than 6,000 run-hours to qualify as CPR. The 6,000 hour run-hour restriction is discriminatory, anti-market and fuel-preferential and should be eliminated. It would prevent certain coal units from participating in CPR based on a metric that is out of the resources’ control. The energy market clears on an economic basis, meaning that fuel costs are the primary factor in determining run hours. Limiting base load assets to units that have more than 6,000 run hours naturally discriminates against coal resources that operate less due to market forces but otherwise have the ability to provide reliable service during a scarcity event. The run-hour restriction would distort energy market performance, incentivizing units to generate uneconomically or outside of PJM dispatch instructions. It could also result in resources being eligible for CPR one year but not the following year. Similarly, a unit may be able to satisfy the run-hour requirement at the time of the Base Residual Auction (“BRA”), but may not be able to satisfy it three years later during the delivery year. This volatility puts both generators and reliability at risk.

PJM should include an additional CPR asset class for long lead time units that is based on physical operating characteristics (i.e., start up and notification time) and not run hours. The current proposal discriminates against these resources because all other physical generation can participate in RPM based on their ability to perform when needed to meet demand. PJM has repeatedly stated that it is “fuel neutral,” but this provision is contrary to that assertion. In the event PJM must articulate certain flexibility requirements for generators, it should not exclude historically-reliable resources based on run-hours.

B. The proposed turn-down ratio may negatively impact reliability by excluding historically-reliable resources from CPR.

The RPM capacity market is designed “to ensure sufficient resources are available to cover low probability high reliability impact events.” Peaking fleet units, are built, designed, and utilized by PJM to provide supply during the time of most extreme need, even if they do not meet PJM’s proposed requirements. These resources performed reliably during the polar vortex. In particular, PJM’s proposed turn-down ratio

---

3 Id. (“[A]s fuel prices rise and fall, the marginal cost of providing energy rises and falls, and therefore LMP will rise and fall along with fuel prices.”)

4 See, Testimony of Sean McNamara, Manager of Regulatory and Legislative Affairs, before the New Jersey Clean Air Counsel, “We do not have a preference for certain types of generation nor do we advocate for certain types.” At P. 4 http://www.state.nj.us/dep/cleanair/hearings/pdf/09_pjm.pdf. See also, Small Generator Interconnection Agreements and Procedures, Docket No. RM13-2-000, at P. 1 “PJM is agnostic to the type of resource requesting interconnection, focusing instead on the reliability of the grid[.]”

5 Problem Statement on PJM Capacity Performance Definition, at P. 12.
of 50% unreasonably excludes many of these resources from participation in CPR. PJM should retain the existing Parameter Limited Schedules (“PLS”) for CPR. In the event PJM seeks to impose a specific turn-down ratio beyond the existing PLS construct, it should adopt an exception process that allows historically-reliable resources to participate in CPR.

PJM’s turn-down ratio expressly excludes resources that operate at a higher minimum load to meet environmental permit requirements. Often units that rely on steam injection for Nitrogen Oxides (“NOx”) controls have an operating load equivalent to or greater than 50% of the gas turbine output. This is a compliance requirement imposed for environmental reasons and not by the generator’s choice. It has no bearing on the unit’s ability to provide supply during “high reliability impact events.”

II. **PJM’s proposal may negatively impact reliability by excluding certain gas-fired resources from CPR due to gas supply issues outside the control of the resource.**

To be eligible as a Capacity Performance resource an officer of the generation resource’s owner would have to certify that certain requirements have been met. In particular:

- A generator must have on-site fuel (or dual-fuel back up capability) for at least 16 hours of continuous operation for three consecutive days at an output equal to its quantity of committed Installed Capacity.
- Generators that burn gas only must have secured fuel supply with some combination of firm transport, firm commodity, and access to storage or equivalent to provide flexible operation during peak gas-usage conditions.6

Simply put, certain units will not be able to meet the requirements imposed by PJM regardless of the financial incentive to do so and thus would not qualify as CPR. In some portions of the PJM footprint, generation owners may not be able to access the type of fuel contracts sought by PJM. There are no current offers for the winter gas season market (which runs from November to March) on several pipelines in the northeastern portion of PJM. As such, the resource would be required to attempt to procure firm service on a monthly basis, meaning that market fundamentals would dictate a resource’s ability to access a firm contractual arrangement. This uncertainty would likely exclude the impacted units from participating in CPR. Moreover, many of the pipelines that are under development throughout the northeast are fully subscribed for their initial open seasons. It may be impossible for a unit to certify by the May BRA that it has a sufficient transport arrangement in place to comply with the CPR requirements.

PJM’s proposed construct will increase demand for firm fuel gas contracts, which could create scarcity in these product types. This problem is compounded by the fact that many generators are interconnected to the local gas utility, which places the unit behind the local city gate such that it could be curtailed for human need/residential load during the most trying winter periods of gas system stress. These

---

6 PJM Capacity Performance Proposal at P. 5.
uncertainties would prevent any kind of officer certification. At the very least an officer certification would have to be based on “best efforts” prediction of the potential fuel supply three years forward.

III. **PJM’s penalty construct is overly punitive and may result in reliable resources exiting the market.**

PJM’s proposed penalty structure is unreasonably severe. When coupled with balancing charges, it puts generators at significant financial risk following a single forced outage. TPM agrees that penalties should be strengthened, but recommends that PJM cap the penalty at 100% of the annual capacity revenues, or in the alternative, adopt a monthly stop-loss mechanism equal to two months total capacity revenues.

PJM’s penalty structure fails to recognize the total cost incurred by a generator that is forced out during a single scarcity event. The combined impact of the penalty factor and spot-market energy purchases that would have been incurred during the January 7 shortage event approaches 60% of the annual capacity revenues earned by the 100 MW unit located in the PSEG territory (approaching $2.89 million in penalty and spot market energy purchases relative to $4.98 million in annual capacity revenues). This “all-in” penalty places the generation asset at unreasonable financial risk following a single forced outage. Moreover, the total cost incurred by a generator could exceed PJM’s proposed cap of 2.5 times the total capacity revenues ($12.45 million) because the cap does not include the cost paid in balancing charges. The combined financial implications of the penalty factor and balancing charges are overly burdensome and will harm reliability by driving resources from the CPR market.

PJM’s penalty construct is exacerbated by the elimination of Out of Management Control ("OMC") designations, including forced outage due to force majeure events like Hurricane Sandy or a catastrophic failure of the regional fuel transportation system, such as a train derailment that halts coal deliveries to a unit. It is standard practice in commercial transactions to recognize that certain events are outside of any entity’s control. PJM’s elimination of the force majeure creates unreasonable risk for generation resources.

PJM should continue to recognize justifiable reasons for a performance failure, including the longstanding and legally sound concept of “impossibility” via force majeure. Elimination of force majeure will not advance reliability. Many resources may not accept the risk of the proposed penalty construct and exit the capacity market.

IV. **The PJM markets must allow for the recovery of costs incurred by new and existing CPR Resources.**

The PJM energy and capacity market are intended to provide full recovery of the cost to maintain reliability. Failing to align the market signals with the cost to serve load will stall new entry and invite premature exit from the market. This result will degrade reliability.
A. The CONE calculation must reflect the total cost needed to qualify as CPR.

PJM’s proposal seeks to redefine the physical requirements that are necessary for participation in CPR. Many of these costs are not reflected in the current CONE calculation. Failure to align CONE with system reliability needs will negatively impact RPM’s market-based price signal prior to the next quadrennial review. CONE is a principle driver of RPM clearing prices and should be set to reflect the cost to provide CPR capacity, which could include 85% of PJM’s resource. At a minimum, PJM should reevaluate CONE prior to the next quadrennial review based on the changes that result from CPR. This will allow capacity prices to best reflect the cost associated with meeting PJM’s reliability needs.

B. The PJM market must reflect transition costs incurred by existing resources.

Existing generators will incur certain unavoidable costs during the transition to CPR. For example, many gas-fired resources have entered into long-term gas contracts that may no longer be consistent with PJM’s CPR product definition (i.e., they are not considered “firm” because they are behind an LDC). Indeed, the New Jersey Board of Public Utilities recently approved natural gas utility tariffs that are intended to enable the local utility to provide discounted gas service rates to counter “Economically Viable Bypass” threats. Existing PJM capacity resources may have availed themselves of this just and reasonable contracting mechanism to decrease their overall cost to provide supply to load. As such, they may have entered into long-term natural gas transportation and/or supply agreements that were intended to satisfy the current market design objective of ensuring “reliable and least-cost electricity in PJM.” Terminating these contracts in order to actually bypass the LDC will result in a financial consequences, such as an amount “equal to 50% of the sum of the Distribution Charge multiplied by the Contract Terms multiplied by the number of months remaining for the term of the service agreement.” These costs will be incurred by resources that will have to transition to the CPR product and should be reflected in the markets.

V. Conclusion

As currently proposed, PJM is likely to create an untenable scenario for resources that decreases participation in the capacity market and further exacerbates PJM’s reliability concerns. The revisions discussed above would enhance reliability by building on PJM’s existing market design.

---

7 See e.g., In the Matter of Rate Schedule CSG Transportation Service Agreement between Public Service Electric and Gas Company and Bayonne Plant Holdings, LLC. Docket No GR14030267 at P. 2. (June 18, 2014).
9 Public Service Electric and Gas Company First Revised Sheet No. 112D.