Newark Energy Center Comments on Capacity Performance

The Newark Energy Center (NEC) is a state-of-the-art 655 MW combined cycle generating station that is currently under construction in the heart of Newark, New Jersey. Once complete, NEC will be available to PJM to provide electric power supply to approximately 700,000 homes. NEC represents a critical supply resource that is located within the most historically constrained portion of the PJM footprint: the PS-North Locational Deliverability Area (LDA).

I. NEC is a State-of-the-Art Natural Gas Fired Resource Located in the Heart of PJM’s Most Constrained LDA

NEC lies in the epicenter of the PS-North LDA, which has provided the most consistent development signal of any area within PJM by clearing at a price premium relative to neighboring LDAs for all delivery years (DY) beginning in 2012. Indeed a fundamental tenet of PJM’s market design is the notion that capacity prices are intended to “provide incentives regarding new investment and retention or retirement of existing capacity.” NEC represents the physical realization of that market: new, highly efficient supply entering the PJM markets in response to the capacity price signal.

Like all major development projects, the specific circumstances related to the development of the project dictated the decisions NEC made when pursuing the project. A critical concern for NEC was the ability to obtain the necessary permit to comply with the applicable environmental standards due to the fact that all of Essex County, New Jersey is designated as a non-attainment area for a variety of pollutants including Nitrogen Oxides, Carbon Monoxide, Sulfur Oxides, and others. Non-attainment areas are the subject to significant permitting concerns that can create insurmountable hurdles to development. Permitting was a primary driver in the initial investment decision NEC made with respect to the asset.

II. NEC Elected to Interconnect Directly to Transco so as to Firm its Fuel Source

NEC was developed with the desire to provide supply to PJM to the greatest extent possible. To that end, the plant was developed with a new natural gas pipeline lateral connection from the Transco

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high pressure gas lateral located approximately one mile from the site. NEC could have accessed fuel from an alternate and vastly more affordable source, but elected to interconnect to the Transco transmission pipeline to enable it to access the most contractually firm gas commodity and transport available. To that end, NEC was able to obtain sufficient firm fuel to accommodate the plant’s needs. Therefore, NEC has already engaged in the very type of behavior PJM seeks to incent with the Capacity Performance Resource (CPR) product.

III. NEC does not Believe itQualifies for CPR Despite the Presence of a Contractually Firm Fuel Contract Supported by a Direct Connection to Transco’s Interstate Gas Pipeline

PJM states that “an Officer Certification will be required at the time of the Base Residual Auction or Incremental Auction for the Delivery Year in which the resource is being committed attesting that the resource in question will satisfy the . . . five criteria to be a Capacity Performance product.”

These five criteria include the expectation that “Generation Capacity Resources will have fuel on-site in the case of coal . . . or oil back up for gas-fired resources.” Indeed, that notion is echoed in the section titled “Eligibility”, which states that, “[a] generator must have on-site fuel (or dual fuel backup capability) for at least 16 hours of continuous operation per day for three consecutive days at an output equal to its quantity of committed Installed Capacity.”

Plainly, NEC could not meet this requirement, despite the significant capital outlay spent to accommodate a reliable and firm fuel supply. By requiring an officer to certify that it has oil back up, PJM is making a de facto fuel choice for NEC: It must have dual fuel to qualify as a Capacity Performance Resource. This conflicts with PJM’s suggestion that it does not “mandate how fuel availability is ensured.” Contrary to PJM’s own stated goal, under the PJM proposal no longer will decisions be “left up to the individual resource owner on how to best manage fuel availability risks.” Accordingly, the PJM proposal should be modified to allow for generation with appropriately firm gas resources to qualify as a CPR.

IV. PJM’s Officer Certification Should Focus on Recognition of the Performance Obligation and Not on the Specific Performance Factors of the Unit

NEC supports PJM’s assertion that market participants are in the best position to make fuel procurement decisions. We further agree that this market-based concept is most likely to result in a construct that is supportive of responsible and reliable resource development. PJM should therefore eliminate the requirement that a resource certify it has obtained a specific fuel arrangement, allowing resources to manage their risk relative to the performance obligation. If an Officer Certification is needed at all, it should provide an opportunity for the entity to certify that it recognizes the

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4 PJM Capacity Performance Proposal at P. 10.
5 Id. at P. 8.
6 Id. at P. 5.
7 Id. at 8.
8 Id.
requirement to perform when needed for reliability by PJM. PJM should not require officers to certify to a specific fuel arrangement.

V. PJM Must Include its Energy Market Offer Construct to Provide Necessary Flexibility to Support Reliability

PJM has indicated on several occasions that a principle cause of the uplift in January and February was changes to parameters in the gas fleet’s ability to procure fuel during times of system stress. While NEC supports PJM’s view that there are certain responsible steps that gas-fired units can take to become more reliable in winter periods, PJM should reform its energy market construct to support the burgeoning coal to gas transition.

One telling wrinkle in the reliability story articulated by PJM during the January 7 Polar Vortex is that PJM reported that 9,848 MWs of gas fired generation was unavailable due to a lack of fuel. However, upon further evaluation, 8,503 MWs or 86% of these units were called outside of the Day Ahead market. PJM’s analysis suggests that a significant portion of the resources that were forced out for lack of fuel were unable to procure gas during a timely nomination cycle. PJM should reform both the timing and flexibility of its energy market offer construct to allow for fuel scheduling in a manner that allows PJM’s reliability concerns to be addressed.

Allowing generators to nominate gas during timely nomination cycles will dramatically improve fleet performance for three reasons. First, allowing units to timely nominate gas dramatically increases the economic and reliability value of firm gas contracts. Secondly, it preserves “no bumping” rights, where resources retain priority to scheduled fuel, thereby significantly increasing the likelihood that the generators procure the commodity necessary to support the run. Third, during times of severe system stress – which are directly targeted by the creation of the Capacity Performance construct – the gas pipelines can dictate the flow of fuel to gas fired resources regardless of the firmness of the gas construct. Firm fuel contracts do not provide complete protection from gas supply issues when the gas system is struggling to maintain reliability. Failing to allow gas fired generation to nominate fuel during timely nomination periods may make procuring fuel to accommodate a run impossible regardless of the price the generator is willing to pay for the commodity. The new RPM construct must include modifications that allow resources to timely nominate fuel to support PJM’s dispatch instructions.

VI. PJM Should Amend its Dispatch Paradigm to Reflect the Limitations on Gas Fired Supply Posed by Gas Pipelines

PJM has recently proposed the creation of a new thirty minute reserve product that is intended to eliminate uplift paid by load during conservative operations periods. This product amounts to a change in the resource scheduling algorithm that moves the most flexible resources into a new reserve product. These units then incur Lost Opportunity Costs by not selling energy to the grid because more expensive units set the energy market price. The theoretical result is an LMP price that is reflective of the actual cost to maintain reliability while allowing PJM to hold the necessary units in
reserve should the system become unstable. While NEC reserves its specific comments on the validity of this particular construct, we suggest that it is indicative of the type of creative and forward thinking that is needed to address reliability during times of system stress.

PJM needs to become more aware of the constraints that natural gas pipelines are imposing on generators during scarcity events. These conditions should function like a physical constraint that impacts both the availability and cost of gas fired generation at PJM’s disposal. PJM could then dispatch its gas fired units pursuant to the new “gas constraint”, thereby allowing these units to set price, while holding additional reserves to accommodate real time changes in supply/demand fundamentals. A construct such as this would allow PJM to have a more granular view of the operational viability of its assets in real time, which should reduce the need to pay uplift and better preserve reliability.

Indeed, PJM has suggested that the change in gas supply fundamentals was a principal factor in the uplift dollars paid by load. This construct would limit load’s exposure to this unhedgable risk and allow PJM to use these units to maintain reliability during times of gas/electric stress. When coupled with adjustments to the market clearing deadlines to accommodate timely nomination cycles, PJM would arrive at an operational construct that meshes its reliability goals with the realities of the ongoing transition to a gas-dominated market.
VII. Conclusion

PJM’s construct as proposed would prevent NEC from certifying as a CPR resource despite the significant capital outlay spent to accommodate firm fuel. PJM should recognize that gas only resources can provide reliable supply during times of system stress with necessary modifications to the electric market design. These modifications include flexibility for offer parameters during pipeline imposed reliability periods and adjustments to the market clearing process to allow resources to nominate fuel during designated nomination windows. These reforms will dramatically improve reliability relative to a requirement that resources include dual fuel technology, particularly in environmentally sensitive areas where permitting this technology may not be feasible.

Respectfully submitted,

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