

Comments of MN8 Energy on the CIFP-RA Process

Introduction

MN8 Energy (MN8) develops, owns, and operates solar and battery energy storage projects across PJM. MN8 has been an active contributor to PJM's efforts to reform its resource adequacy construct over the last year. There are many components of PJM's proposed package that MN8 supports, including PJM's enhancements to reliability risk modeling, thermal accreditation, and MSOC, to name a few. In the comments that follow, we focus on areas where there is room for improvement. Many of these enhancements can and should be implemented with this filing; we also note several reforms that should be done as part of a "Phase 2" CIFP-RA, which PJM should aim to kick off immediately and complete ahead of the 26/27 BRA.

PJM should enhance winter deliverability studies to unlock valuable UCAP

Under the status quo, winter deliverability levels studied in the interconnection process are applied as a constraint on hourly output in ELCC modeling. Whereas this has not been impactful to-date, PJM now shows material reliability risk in the winter, such that this meaningfully diminishes accreditation for certain resources. This is problematic because resources have no ability to control this through interconnection requests – it is a wholly administrative decision. This likely does not reflect the physical reality of the system, given transmission is generally sized to meet peak summer load, and likely materially undercounts existing UCAP.

Following from the ELCC-CIR reform, PJM now limits the accredited hourly output in its ELCC modeling at resources' studied winter deliverability. This constrains the accreditation of suppliers such as solar, battery, and thermals, to the detriment of consumers. This issue is most salient for solar resources. Under the status quo, winter deliverability is studied at P80 production during the period of December to February, 5 am – 9 am and 6 pm – 10 pm.¹ This means that solar is limited to a 5% deliverability constraint in ELCC modeling, greatly below their capability and observed output.² With PJM's new reliability risk modeling showing substantial EUE in winter, this will constrain the modeled marginal reliability impact and accreditation of solar. Beyond directly limiting the MRI of solar, this deliverability constraint will artificially constrain energy availability in the middle of the day and, in turn, reduce the ELCC of storage resources by creating energy scarcity in ELCC models that does not in fact exist. Ultimately, this will hamstring the ability of solar, storage, and other resources to receive compensation for their reliability benefits, unnecessarily increasing customer bills.

PJM should address this issue in this filing by aligning the winter deliverability study hours with the hours that matter for system reliability, and update resource accreditation accordingly. To do so, PJM should introduce an additional study window in the winter for the daytime hours, e.g., 9 am – 6 pm. The studied deliverability during this window should be used in ELCC modeling. For as long as this paradigm lasts, PJM should also do transitional deliverability studies that resemble the Transitional CIR studies done following from the ELCC-CIR reforms, whereby PJM would assess whether there is available headroom on the system during deliverability study windows and allocate whatever exists on a temporary basis to existing capacity resources. This would more accurately accredit resources for their reliability impacts and reduce costs to consumers.

As part of a Phase 2 filing, PJM should create winter CIRs so that resources can control the amount of deliverability that they request in the winter based on economic considerations, commensurate with summer CIRs today. Upon doing so, PJM should create a one-time window for existing resources to opt

¹ Manual 14B, Section C.3, <https://www.pjm.com/directory/manuals/m14b/index.html#about.html>

² Slide 10, https://www.pjm.com/-/media/committees-groups/subcommittees/ips/2023/20230731/20230731-item-10---ips_7_31_23_cir-transfer-process_updated.ashx

for additional winter CIRs, and these resources should be eligible for “Transitional CIRs” that are studied ahead of each BRA and allocated on a temporary basis ahead of each DY up until the time that these additional winter CIRs materialize (i.e., an ISA is signed and all necessary enabling upgrades are built), similar to the ELCC-CIR Transitional CIRs process.

PJM should implement a seasonal market construct as soon as possible

A more granular market construct is valuable when there are multiple periods with material reliability risk that have meaningfully different risk drivers. Whereas PJM previously modeled nearly all reliability risk as arising in summer months, under PJM’s updated reliability risk modeling, there is material risk in both summer and winter months, with very different drivers in each period. Given this finding, MN8 encourages PJM to implement two-season market for the 25/26 BRA. If this is not done, this should be prioritized as part of a Phase 2 filing, and PJM should also evaluate the case for and feasibility of introducing additional granularity to the market construct (e.g., “Slice of Day”).

A seasonal market will lead to more durable market dynamics by creating more fungible reliability products: summer UCAP and winter UCAP. The use of annual UCAP means that UCAP is not truly fungible – that is, one resource may be accredited at 0.5 due to strictly winter MRI, and another due to strictly summer MRI. If PJM underestimates risk in one season and overestimates risk in the other, whether due to inaccurate forecasts of the existing supply mix or for other reasons, it is no longer indifferent between these two suppliers, but will treat them as equal. The resource with positive MRI in the season with underestimated risk will in fact be more valuable. Fungibility is important for ensuring not only an efficient and reliable BRA result, but also, that all activity in subsequent IAs and UCAP trades is economic and does not undermine reliability. Fungibility was widely acknowledged as a valuable attribute by PJM and other stakeholders throughout the RASTF and CIFP-RA processes.

Furthermore, while all of PJM’s modeling has shown risk in both summer and winter, the share of risk in each season has varied. The ultimate split will hinge on the assessment PJM makes of the existing resource mix ahead of the BRA. A seasonal market allows for a dynamic, market-based accounting of seasonal risk, absolving the need for an administrative determination. Furthermore, it enables more precise representation of cost to supply by suppliers, which will allow them to make more accurate, lower-risk bids with commensurately lower prices. Similarly, it more accurately captures willingness to pay in each season across diverse, unpredictable outcomes. In conjunction, these factors facilitate more efficient price discovery. This is evident in PJM’s own analysis, where they simulated the 24/25 auction under an annual and seasonal design and got very different results.³ However, this analysis by PJM doesn’t capture the benefits of seasonal clearing in a case where PJM’s forecast of the supply mix is inaccurate, which is inevitable, particularly given the many changes in rules that are currently being rolled out and the rapid energy transition unfolding today.

A seasonal market also has benefits for the capacity performance (CP) framework. A seasonal market yields seasonally differentiated CP obligations, whereas an annual market “peanut butters” CP obligations across the entire year. For instance, under an annual market, a resource with a summer accreditation of 1 and a winter accreditation of 0 may have an annual accreditation of 0.5, causing it to bear CP risk in the winter for which it has no “physical hedge,” and less in the summer than it is capable of bearing. Seasonal markets would more closely align CP obligations with resource capability, which should improve system reliability and mitigate uncontrollable CP penalty risk for suppliers, leading to lower offer prices.

While a seasonal design would introduce some additional complexities to PJM’s capacity market, this is worth the effort given the manifold benefits that it would yield. PJM’s proposed seasonal design is

³ Slide 9, <https://www.pjm.com/-/media/committees-groups/cifp-ra/2023/20230814/20230814-item-05d---2023-08-14-market-simulation-analysis.ashx>

relatively straightforward to implement in that it does not require comprehensive changes to reliability risk modeling, the VRR curve, capacity accreditation, market seller mitigation, system operations, or settlements. The clearing function that PJM proposes is computationally feasible and is simpler than the clearing functions that PJM's energy markets use every day. Finally, implementing an annual market in the face of material EUE in two seasons comes with numerous market design challenges that a seasonal design would address. For these reasons, we believe that the benefits of PJM's seasonal design proposal easily warrant the modest net administrative burden and risks of implementation.

PJM should minimize transaction costs and maximize liquidity in the secondary market for UCAP

The ability to trade UCAP is an important tool that enables cleared resources to efficiently manage CP risk, and allows cleared and uncleared resources to monetize their physical attributes not recognized in the BRA process. This tool can be enhanced to increase the flexibility of the mechanism and reduce associated transaction costs without increasing reliability risks. To this end, we support PJM's proposal to allow for hourly UCAP trades, which will allow resources with strong diurnal profiles to better align their obligations under CP with expected performance – for instance, allowing solar resources to buy out their CP obligations at night.

PJM can do more with this filing to enhance the bilateral UCAP market – they should allow resources to take on UCAP obligations up to their CIRs. This will enhance liquidity in the secondary market. Furthermore, this will better allow resources to take on obligations in line with their genuine performance expectations – for example, allowing a solar resource to take on obligations above its accreditation in daytime hours, consistent with its performance expectations; or allowing an under-accredited resource, such as a gas unit that recently added on-site fuel, to take on obligations in excess of its accreditation. The gas unit example would create more financeable revenues for such an investment in enhancing (or maintaining) valuable physical attributes for resource adequacy, which should lead to more of these investments. Coupled with the current policy, whereby a resource off-loading its obligation remains on the hook for CP penalties if the resource taking on the obligation fails to make payment, this will, if anything, reduce the risk of defaults by introducing a second liable party, and by introducing an incentive for suppliers off-loading their obligations to look for credit-worthy counterparties and/or require some form of collateral to hedge counterparty default risk.

In Phase 2, PJM should strive to play a more active role in this secondary market, serving as a central clearinghouse for UCAP trades. In providing this service, PJM could materially reduce transaction costs by removing expensive broker fees and legal costs associated with bilateral transactions. Additionally, this would allow resources to seamlessly place buy and sell positions, allowing for more effective price discovery.

Conclusion

PJM has improved its reliability modeling to better represent system risk and accredit suppliers, but more can and should be done. We ask that the Board direct PJM to enhance winter deliverability studies, introduce a two-season market, and increase flexibility in the bilateral UCAP market as part of this filing. The Board should also direct PJM to start a CIFP-RA Phase 2 process as soon as possible, with the goal of completing this ahead of the 26/27 BRA. We thank PJM staff and the Board for receiving these comments, and for their ongoing effort and leadership to build and maintain a reliable and efficient grid.

MN8 Energy LLC

Grant Glazer, Manager, Regulatory & Market Affairs

Zander Bischof, Head of Regulatory & Government Affairs