GlidePath Development, LLC EL19-100 Minimum Run-Time Proposal

January 31, 2020

GlidePath Development, LLC (GlidePath) appreciates the opportunity to engage with PJM prior to PJM's filing of its initial brief in EL19-100 regarding the justness and reasonableness of PJM's 10-hour minimum run-time requirement for electric storage resource (ESR) capacity accreditation. Clear, principled, and consistent rules for ESR participation are critical to the process of resource development and financing. Therefore, GlidePath sets forth the following comments and proposal to both immediately correct for current discriminatory policies towards ESRs, while also supporting a long-term process for ensuring these resources can effectively participate in the PJM markets.

The Ten-Hour Requirement is Unprincipled and Should Be Replaced

- The 10-hour requirement should have been evaluated in connection with PJM's Order No. 841 compliance filing
 - Order No. 841 requires RTOs/ISOs to develop a participation model that provides a realistic opportunity ESRs to participate in wholesale electricity markets at just and reasonable rates through providing services that they are technically capable of supplying.
 - The value ESRs are capable of providing to reliability is significantly greater than PJM's current 10-hour requirement for capacity accreditation allows, and therefore does not adequately compensate ESRs for their ability to provide the service of maintaining reliability through providing capacity.
- The 10-hour requirement is discriminatory
 - This requirement applies a more onerous capability demonstration than PJM applies to intermittent resources that are not even readily dispatchable and applies more scrutiny than is applied to thermal resources.
 - ESRs have the technical capability provide capacity at rates substantially greater than intermittent resources but are subject to a different, higher accreditation standard.
 - Although other classes of generators are free to make risk-reward decisions regarding meeting their cleared capacity obligations (e.g., natural gas facilities are not required to demonstrate firm gas supply and transport contracts), ESRs have not been allowed to make similar decisions.
- The 10-hour requirement is arbitrary
 - The 10-hour requirement is not based on any technical or economic concept of current or future grid conditions and resource supply mixes.

PJM Should Adopt an Interim Solution in its March 11 Filing Pending Further Stakeholder Proceedings

- PJM should adopt an interim solution to provide immediate relief for ESR developers that are currently harmed by the 10-hour requirement.
 - Development of a longer-term solution could take years, and ESRs need immediate relief.
- Per GlidePath's prior suggestions, GlidePath would support an interim model based on PJM's current treatment for intermittent and environmentally limited resources that is already in PJM's tariff, effectively implementing a five-hour storage requirement.
 - PJM Tariff Attachment DD.6.1 states that Capacity Storage Resources are authorized to submit Sell Offers "in a MW quantity consistent with their average expected output during peak-hour periods." This is the same approach used for intermittent and

environmentally limited resources. Elsewhere in the PJM tariff, these peak-hour periods are defined as a period of five consecutive hours

- This proposal uses a familiar accreditation mechanism that is simple to implement. The proposal would require minimal adjustment to PJM's tariff and business practice manuals.
- The proposal would at least place ESRs on a more level playing field in the interim period than the highly discriminatory 10-hour requirement.
- The proposal does not present any reliability risk—it is still capability-based and already in practice for resources that are less "reliable," flexible, and readily available than ESRs.
- This proposal will not harm reliability over the time that PJM expects
- Per PJM's analysis in the paper "Limited Energy Capability Resource Duration Requirement for Participation in PJM Capacity Market" (see Fig. 9), system reliability is not materially impacted until 5-hour duration storage becomes around 5% of supply during peak system loading. Based on the current PJM peak loading, this represents approximately 7.5GW of 5-hour storage. There are approximately 4GW of storage projects in the current PJM interconnection queue, and new resources entering today have little ability to come online within the 1-2 year timeframe expected to implement a longterm solution.

GlidePath Supports Stakeholder Proceedings to Develop a Principled, Capability-Based Solution

- GlidePath may support a longer-term solution that incorporates capability-based principles and the goals of 841 to compensate ESRs for all services they are technically capable of providing.
- As a market design matter, the proposal should allow ESRs to fully participate in this market to the extent that they are able, considering the service that is being performed and not solely arbitrary qualification rules. This allows ESRs the ability to appropriately weigh their capacity revenues against underperformance penalties, just as other PJM Capacity Performance resources are currently doing.
- PJM should propose a discrete timeline and hard deadlines for development of the long-term PJM proposal. Because this is currently harming ESR developers and should have been addressed as part of PJM's Order 841 tariff adjustments, it is discriminatory towards ESR developers and owners to delay this further through a purely consensus-based stakeholder process where incumbent players have strong incentives to stall progress rather than allow a new class of competition. This is especially the case if an interim solution, as suggested above, is not adopted.
- Although GlidePath is not yet willing to endorse a specific analytic tool until more details and assumptions are established, and other stakeholder proposals are presented, we are encouraged that several methodologies are under consideration. Regardless of the methodology used, GlidePath reiterates that any new framework must meet certain criteria to maintain just and reasonable treatment of ESRs as compared to other resource classes, namely:
 - The ability for ESR owners to fully participate in the risk-reward framework of the Capacity Performance construct
 - A framework that does not remove capacity accreditation for an ESR over time, as ELCC or other accreditation values are updated. This is vital to develop a sustainable market for financing capacity ESR projects
 - A stakeholder process that includes and values inputs from all stakeholders, not just incumbents
 - Recognition that the "service" being provided by sellers of capacity is not merely conformance to certain parameters, but the ability to perform during emergency and peak load conditions.