



### Effective Load Carrying Capability for Limited Duration Resources and Intermittent Resources

#### Problem / Opportunity Statement

As the resource mix in PJM evolves to include more renewables such as wind and solar, as well as other emerging technologies such as energy storage, offshore wind, and hybrid resources (generation + energy storage), the way in which PJM evaluates the contribution of such resources towards resource adequacy also needs to evolve. Today, PJM calculates an Intermittent Resource's or limited duration resource's capacity capability with a methodology that is independent of changes to the overall resource mix, meaning a resource's capacity capability, and therefore its contribution towards meeting PJM's resource adequacy requirements, would not be impacted by the amount of renewables and energy storage within the RTO as a whole. This is problematic because there is reason to believe that as the amount of Intermittent and limited duration resources changes (increases), it will have an effect on the hourly loss of load probability (LOLP) risk profile. Without recognizing this dynamic in the way capacity capability is determined for these resources, PJM may be over or under valuing their contribution to resource adequacy over time.

Recognizing this dynamic, in 2018 the Planning Committee began discussions on a new methodology for calculating the capacity capability of wind and solar, but those discussions did not amount to any stakeholder approved changes. More recently, in PJM's compliance filing on FERC Order 841 (Energy Storage Resources), FERC issued a paper hearing (RM19-100) to investigate whether PJM's application of the '10-hour rule' to calculate the capability of energy storage resources was unjust and unreasonable. In that docket, PJM responded that it was committed to investigating a new methodology for calculating the capacity capability of energy storage resources, and told FERC that it would start a stakeholder process to address this issue.

Therefore, Staff is putting forward this Problem/Opportunity Statement, and accompanying Issue Charge, so that it can work with stakeholders to consider application of Effective Load Carrying Capability to equitably calculate the capability of all Intermittent and limited duration resources such that these resources are valued appropriately for their contribution to resource adequacy while taking into account the effects of the evolving resource mix.