

## Section 5: Additional Generator Requirements

In this section you will find:

- The definition of Behind the Meter Generation and requirements related to such projects,
- Generator power factor requirements, and
- Wind generator requirements.

### Behind the Meter Generation Projects

Behind the Meter Generation refers to one or more generating units that are located with load at a single electrical location such that no transmission or distribution facilities owned or operated by any Transmission Owner or Electric Distributor are used to deliver energy from the generating unit(s) to the load; provided, however, that Behind the Meter Generation does not include (i) at any time, any portion of such generating unit(s)' capacity that is designated as a Capacity Resource; or (ii) in any hour, any portion of the output of the generating unit(s) that is sold to another entity for consumption at another electrical location or into the PJM Interchange Energy Market. Behind the Meter Generation rules permit load serving entities in PJM to net operating Behind the Meter Generation against load in the calculation of charges for energy, capacity, transmission service, ancillary services and PJM administrative fees. This total netting approach is intended to encourage the use of Behind the Meter Generation during times of scarcity and high prices, thus increasing the opportunity for load to compete in PJM markets.

### Behind the Meter Generation Interconnection Requests

Any Behind the Meter Generation that desires to be designated, in whole or in part, as a Capacity Resource or Energy Resource must submit a Generation Interconnection Request. **(OATT at Part VI, in Section 36.1.01 – formerly Subpart A at 36.1A, in Part IV)**

### Metering of Behind the Meter Generation

Behind the meter generation consisting of one or more generating units individually rated at ten megawatts or greater or that otherwise have been identified by PJM as requiring metering for operational security reasons must have both revenue quality metering and telemetry equipment for operational security purposes. Behind the meter generation consisting of multiple generating units that are individually rated less than ten megawatts but together total more than ten megawatts at a single site and are identified by PJM as requiring revenue quality metering and telemetry equipment may meet these metering requirements by being metered as a single unit. **(Operating Agreement, Section 14.5)**

## **Behind the Meter Generation Effects on Market Operations**

Market Buyers shall be charged for all load and associated ancillary services based on the Market Buyer's total load (net of operating Behind the Meter Generation, but not to be less than zero.) (**Operating Agreement, Schedule 1**)

Prior to the commencement of the Planning Period, Parties may elect to place ALM associated with Behind the Meter Generation under the direction of PJM. This election shall remain in effect for the entire Planning Period. In the event such an election is made, such Behind the Meter generation will not be netted from load for the purposes of calculating Accounted-For Obligations under the appropriate PJM Regional Reliability Assurance Agreement.

## **Generator Power Factor Requirements**

Except as PJM may determine otherwise for small generation resources of less than 20 MW, all generators interconnected with the PJM System shall be designed to maintain a composite power delivery at continuous rated power output at the generator's terminals at a power factor of at least 0.95 leading to 0.90 lagging. (**OATT at Part VI, in Section 4.7.1 in Att. O, App. 2 – formerly 54.7.1 in Part IV**)

### **Application of Power Factor Requirements to Increases of Existing Generation**

Existing PJM Tariff provisions require generators to be designed to operate at a power factor range of 0.95 leading to 0.90 lagging as measured at the generator terminals.

- The above requirement also applies to increases to existing generation.
- PJM will provide for certain exceptions to existing generators that apply for increases of less than 20 MW.
- Increases of more than 20 MW to existing generators must be designed to maintain the original power factor capability for grandfathered MWs and a power factor range of at least 1.0 (unity) to 0.90 lagging for all incremental MW increases.

## **Wind-Powered Generation Projects**

Because of the intermittent nature of wind-power generation, a specific procedure is required to determine an appropriate capacity value for wind generator output. Further, the use of induction-type generators for wind-powered projects requires the application of specific reactive power requirements.

### **Wind Generation Capacity Credit Rules**

PJM business rules allow for wind-powered generation projects to qualify for Capacity Resource status. Refer to PJM Manual M-21 "Rules and Procedures for Determination of



Generating Capability” for details of PJM procedures for calculating Capacity Credits for Wind Farms.

### **Wind Generation—Specific Technical Requirements**

Without exception, all Customer Facilities will be subject to the provisions of the PJM OATT at Part VI, in Section 4.7.2 and Section 4.7.3 in Att. O, App. 2 – formerly 54.7.2 and 54.7.3 in Part IV, which describes real-time obligations to supply reactive power and the consequences of deviations from voltage schedules and/or reactive power schedules.

Wind projects connected to lower voltage systems must be designed to operate to a voltage schedule, reactive schedule or power factor schedule designed to meet local transmission owner criteria. When applicable, non-standard terms and conditions will be included in a project’s Interconnection Service Agreement to address individual power factor requirements.