

## ELCC Data Submission Requirements and Deadlines

### Introduction

The ELCC methodology developed by PJM requires modeling hourly output from Intermittent Resources and limited duration resources (i.e., Generation Capacity Resources that are not capable of running continuously at their summer rated power level for 24+ hours). To perform the hourly modeling, PJM needs specific information about such resources (such information may go beyond the information the resources supplied during the interconnection process).

**Those Intermittent Resources (e.g., wind, solar, hydro without storage, landfill gas), limited duration resources (e.g., Energy Storage Resources including pumped hydro), and combination resources (e.g., hybrids of generation plus energy storage, hydro with non-pumped storage) that wish to offer in any auctions for Delivery Year 2022/23 or subsequent Delivery Years must provide the required information and supporting documentation as detailed below by the deadlines also outlined below in order to ensure that PJM can perform the necessary ELCC analysis if FERC's eventual order on PJM's ELCC proposal permits use of the ELCC construct in the 2022/23 or later BRAs.**

### Deadlines

| Delivery Year | Deadline      |
|---------------|---------------|
| 2022/23 BRA   | Nov. 1, 2020  |
| 2023/24 BRA   | Feb. 15, 2021 |
| 2024/25 BRA   | Aug. 15, 2021 |
| 2025/26 BRA   | Feb. 15, 2022 |

Under a regular auction schedule, the deadline is August 15<sup>th</sup> of each year.

### Required Information

**Note: for planned solar resources and onshore wind resources (as well as those that do not have complete historical output data since June 1, 2012), for Delivery Years 2022/23 and 2023/24, PJM plans to develop an hourly backcast (i.e., estimate of historical output given site conditions and historical weather). Owner/operators of such units do not need to submit any additional information other than that provided in the Interconnection Queue process, unless they wish to request a unit-specific backcast, in which case additional information is required (as outlined below).**

- Intermittent Resources (Offshore Wind, Run-of-River Hydro without Storage, Landfill Gas. Onshore wind and solar resource owners may provide the following data if desired)
  - Existing resources with incomplete data since June 1, 2012
    - Hourly backcast going back to June 1, 2012
  - Planned resources
    - Hourly backcast going back to June 1, 2012
  - Existing resources with complete data since June 1, 2012:

- These resources will not have the possibility of providing an hourly backcast unless owners can provide a justification for a significant change in their resource's future expected production hourly profile.
- Energy Storage Resources (standalone ESR, Pumped Hydro)
  - All resources (Existing and Planned)
    - Storage capacity in MWh
    - Black Start commitments in MW
    - Any other firm commitments in MW and MWh
    - Charging/discharging efficiency
- Combination Resources (non-Hydro Hybrids of generation plus storage located at the same site with a single shared Point of Interconnection)
  - All resources (Existing and Planned)
    - Maximum Output Facility (MFO) in MW
    - Amount of power capability associated with each constituent (in MW)
    - Storage capacity for ESR portion in MWh
  - Planned and Existing resources with incomplete data since June 1, 2012
    - Hourly backcast going back to June 1, 2012 for intermittent portion (for hybrids including onshore wind or solar, this is optional)
- Combination Resources (Hydro with non-pumped storage)
  - All resources (Existing and Planned)
    - Hourly maximum and minimum power capability for each month since June 2012 (in MW)
    - 24-hour rolling average streamflow data, converted to MW for each hour since June 1, 2012
      - If a valid source of such data is not available, PJM will work with the corresponding owner/operator to identify an alternate data source
    - Ordinary daily water storage capability, which can vary monthly, converted to MWh (as well as daily minimum and maximum forebay elevations)
    - Exigent water storage capability (water storage that is only available on exceptionally high load days or on a PJM-declared emergency), which can vary monthly, converted to MWh
    - Any cascading relationships to ordinary or exigent storage in plants on the same river system in MW

## Supporting Documentation

This documentation is intended to support the Requested Information detailed above.

- Onshore Wind units requesting a unit-specific backcast:
  - Turbine make, model, and rating
  - Turbine power curves
  - Hub height

- Geographical Location
- Offshore Wind
  - Existing resources with incomplete data since June 1, 2012 and Planned Resources
    - Power curves
    - Hub height
    - Geographical Location
- Solar units requesting a unit-specific backcast:
  - Inverter and panel make, model, ratings, and other specifications
  - Number of inverters
  - Number of panels
- Pumped Storage
  - All resources (Existing and Planned)
    - FERC-related documents
    - Documents from river basin authorities
    - Any relevant river-sharing agreements
    - Prime mover ratings, power curve and elevation
    - Upper and lower ponds volumes (minimum and maximum)
    - Pond elevations (minimum and maximum)
    - Daily average hourly inflows and outflows (if any) of upper and lower ponds
    - Requirements related to elevation changes or discharge rates
- Combination Resources (Hydro with non-pumped storage)

Owners of hydro plants with storage must provide documentation to support the parameters provided for dispatch modeling. This documentation must support a) their plants' physical capabilities; b) show that the parameters do not violate any operational limits of the plant or of other plants in the same river system; and c) show full authorization from FERC, river basin commissions, and any other applicable authorities to meet those capabilities.

- All resources (Existing and Planned)
    - FERC license
    - Documents from river basin authorities
    - Any relevant river-sharing agreements
    - Geographical information
    - Streamflow information to support streamflow MW values (in streamflow units)
    - Storage information to support storage MWh values (ordinary and exigent)
- Run-of-River Hydro without Storage
  - Existing resources with incomplete data since June 1, 2012 and Planned Resources
    - FERC license and any other agreements by which they are required to operate
- Landfill gas
  - Existing resources with incomplete data since June 1, 2012 and Planned Resources
    - Expected landfill life
    - Size (acreage)

- ESR
  - All resources (Existing and Planned)
    - Battery specifications
    - Inverter specifications