

Effective Load Carrying Capability (ELCC): Conforming Manual Language Changes

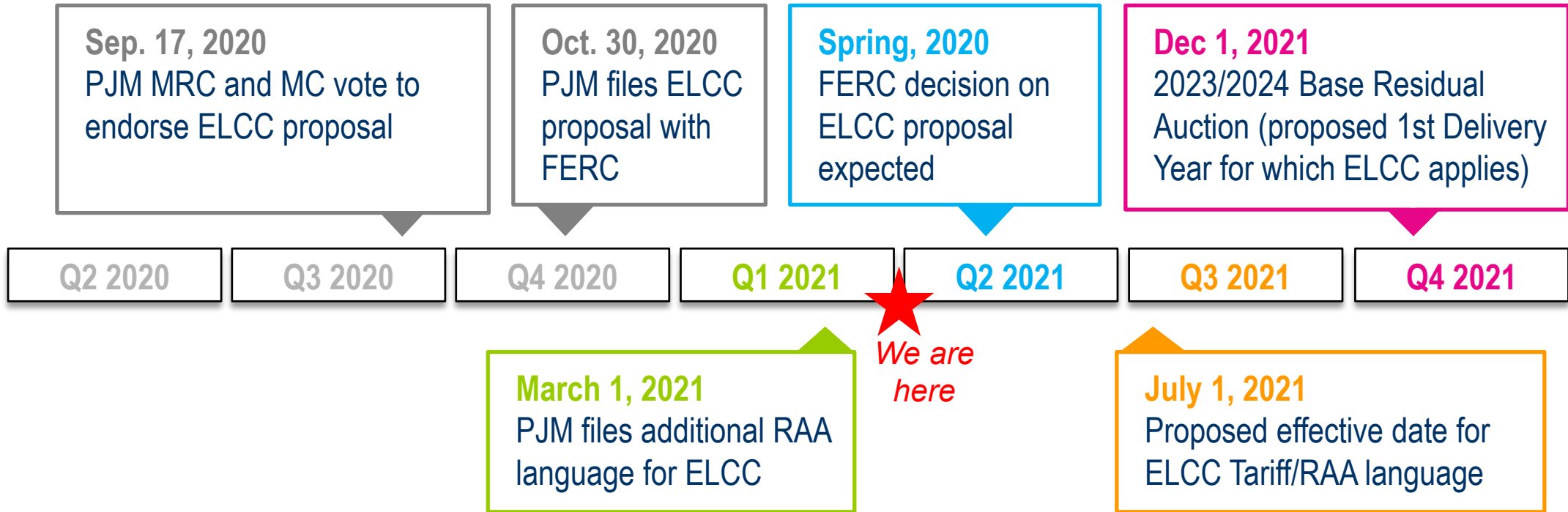
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ELCC sets the capacity value for storage and renewables. A unit's ELCC accreditation would be updated annually based on system conditions and unit performance.



- [Edits to Manual 20](#)¹: PJM Resource Adequacy Analysis
 - New Section 5 describes the details of the ELCC methodology in calculating the ELCC Class Rating values.
- [Edits to Manual 21](#)²: Rules and Procedures for Determination of Generating Capability
 - Remove the “10 hour rule”
 - Expiration date for current testing rules for ELCC Resources (i.e., renewables and storage)
- [Manual 21A](#)³: Determination of Accredited UCAP Using Effective Load Carrying Capability Analysis (new manual):
 - Business processes related to ELCC and the calculation of Accredited UCAP values based on ELCC Class Rating values and other inputs.

1. <https://www.pjm.com/-/media/committees-groups/task-forces/ccstf/2021/20210401/20210401-item-03-manual-20-elcc.ashx>
2. <https://www.pjm.com/-/media/committees-groups/task-forces/ccstf/2021/20210401/20210401-item-02b-manual-21-elcc.ashx>
3. <https://www.pjm.com/-/media/committees-groups/task-forces/ccstf/2021/20210308/20210308-item-03-conceptual-draft-for-new-elcc-manual-21a.ashx>

- The ELCC analysis is LOLE-based and therefore, probabilistic in nature; in fact, it shares several features with other LOLE analysis that PJM performs such as the Reserve Requirement Study (RRS).
- As such, PJM Manual 20 (PJM Resource Adequacy Analysis) is the appropriate repository for details about the model as well as inputs, outputs and the post-processing necessary to determine the ELCC Rating of each ELCC Class.
- A new section will be added to PJM Manual 20 titled “Effective Load Carrying Capability Analysis”.

- Derivation of hourly shapes for:
 - Load
 - Unlimited Resources (i.e., thermal resources)
 - Variable Resources (e.g., wind, solar, intermittent hydro, etc)
 - Limited Duration Resources and Combination Resources (e.g., battery storage, pumped hydro, dispatchable hydro)
 - Emergency Demand Resources
- Calculation of Loss of Load Expectation
- Calculation of ELCC Portfolio UCAP
- Calculation of ELCC Class UCAP and ELCC Class Ratings

1.5 Changes for ELCC Commencing Delivery Year 2023/2024

Requirements for the following resource types below, which are covered in this manual, will expire on June 1, 2023 as they are being transitioned to Manual 21A. Commencing Delivery Year 2023/2024, Manual 21A will become the official manual for the rules and procedures for determination of ELCC resource capability.

[List of ELCC Resource types]

5. All or any part of a unit's capability that can be sustained for a number of hours of continuous operation commensurate with PJM load requirements, specified as 10 hours, shall be considered as unlimited energy capability. All or any part of a unit's capability that cannot be sustained for a number of hours of continuous operation commensurate with PJM load requirements, specified as 10 hours, shall be considered as limited energy capability. Such limited energy capability will be used to meet the energy requirements of PJM and depending on the extent to which it meets these requirements such capability may be reduced as provided in Schedule 9 of the Reliability Assurance Agreement (RAA).

- Applicability and function of ELCC, definitions, list of ELCC Classes.
- Timeline for ELCC accreditation process
- Calculation of Accredited UCAP
- Determination of Effective Nameplate Capacity
- ELCC Resource data submission process
- Development of backcasts for Variable Resources
- Development of other inputs
- Transition mechanism (i.e., “floor ratings”)
- Plant derates, uprates, and other physical changes

- Manual 18: minor conforming changes
 - Treatment of ELCC Accredited UCAP values in Capacity Exchange
 - Limitation that providers of ELCC Resources cannot offer above the lesser of the Accredited UCAP value or CIRs
 - MOPR sections updated to match ELCC terminology

<https://www.pjm.com/-/media/committees-groups/task-forces/ccstf/2021/20210401/20210401-item-02c-m18.ashx>

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