



varied technologies which supply power to the region and will enable PJM to ensure reliability more accurately and efficiently as the resource mix evolves. EPSA therefore supports the implementation of ELCC, encourages efforts by PJM and its stakeholders to continue to assess and re-evaluate the ELCC tool after implementation in order to address evolving technologies, and highlights the importance of ELCC as a reliability tool – not merely a capacity market element.

## I. COMMENTS

As PJM stated in both its Initial ELCC Filing and the June 1 Filing, implementation of ELCC as a technology-neutral method for determining resources' capacity capability better positions PJM "to ensure the PJM Region maintains reliability through a resource adequacy paradigm that recognizes the benefits and limitations of each resource."<sup>4</sup> This approach becomes even more critical as new, often uncontrollable and duration-limited technologies are increasingly integrated into the Bulk Power System and comprise a growing share of the system's capacity requirement. The procedural history and stakeholder support for this approach has been well established as part of the record in Docket No. ER21-278-000. Additionally, the Commission found in that proceeding that the ELCC methodology "appears to be a just and reasonable approach to determining the capacity value of Variable Resources, Limited Duration Resources, and Combination Resources and *an improvement over PJM's current approach*."<sup>5</sup>

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<sup>4</sup> June 1 Filing, p. 3.

<sup>5</sup> *PJM Interconnection, L.L.C.*, 175 FERC ¶ 61,084 (2021) ("April 2021 Order"), P 51, emphasis added.

In light of the discussion in that proceeding and the June 1 Filing from PJM, EPISA supports the implementation of PJM's ELCC proposal. As several stakeholders have noted, once in place there should be improvements or revisions warranted based on experience and the impact of evolving external factors.

Additionally, EPISA urges the Commission to encourage the development and implementation of this type of capacity accreditation approach in every ISO/RTO to ensure reliability and resource adequacy. This method of valuing the reliability contribution of non-firm resources is a necessary next step for system operators to ensure reliability as the resource mix evolves in every part of the country.

Implementation of ELCC is necessary to ensure that regional system operators have in hand a critical reliability tool that enables all supply resources to be valued for their reliability contribution, including hybrid resources, which leads to better planning by the system operator. This arms the system operator with a more transparent and accurate understanding of its available physical capacity from a diversity of non-firm, intermittent, or short duration resources even during unexpected weather or other events, including those extreme weather events that are occurring with greater frequency and have garnered needed attention in recent months, including from FERC. At the Commission's recent two-day technical conference addressing issues related to extreme weather, climate change and system reliability, accurately measuring and accounting for capacity capabilities was mentioned as an element of addressing reliability and resource adequacy. In particular, Dr. David Patton of Potomac Economics noted,

[T]he one thing we don't do well in the capacity markets is we don't pay generators based on the fact that they are there during tight conditions,

but they are contributing to reliability. So, we've been recommending in New England, New York, and MISO *that they all improve their accreditation* and have it be based in large part on generators being there, and that would help on outage scheduling because if you know you're going to lose capacity revenues because you're on outage during tight conditions, then it brings your incentives into alignment again with the RTO on outage scheduling.<sup>6</sup>

In written comments submitted to the Commission in advance of this conference, LS Power also highlighted the importance of ELCC in addressing both the changing resource mix and changes to weather patterns and expectations. LS Power explained,

New analytical tools are being made available to assess how to achieve reliability in a grid evolving to net zero emissions. One of the most critical tools is the Electric Load Carrying Capability (“ELCC”) concept, which measures the value in terms of quantity that an intermittent or duration limited resource contributes to the grid...Planners must now consider longer duration outages due to the change in resource mix...Ultimately, maintaining reliability will be based on studies that determine how much firm supply will be required and how the market will be designed to incent such service.

[A] well-structured ELCC will help planners factor in higher coincident outages than in the past modeling, and model for longer term weather duration.<sup>7</sup>

To date, ELCC has often been discussed as it relates to the reform of ISO/RTO centralized capacity markets, in particular at the Commission’s technical conferences addressing *Resource Adequacy in the Evolving Electricity Sector*,<sup>8</sup> which largely focused on capacity and resource adequacy issues in

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<sup>6</sup> *FERC Technical Conference to Discuss Climate Change, Extreme Weather, & Electric System Reliability*, June 1 and 2, 2021, Docket AD21-13-000. See archived video of Panel 3, June 2, “Operating Practices for Addressing Climate Change and Extreme Weather,” remarks from Dr. David Patton, President, Potomac Economics (market monitor entity for MISO, ERCOT, ISO New England, and NYISO) (Emphasis added). Available here: <http://ferc.capitolconnection.org/#>

<sup>7</sup> Comments of LS Power Development, LLC, *Technical Conference to Discuss Climate Change, Extreme Weather, & Electric System Reliability*, Docket AD21-13-000, (filed April 15, 2021), pp. 5-6.

<sup>8</sup> *FERC Technical Conference Regarding Resource Adequacy in the Evolving Electricity Sector*, March 23, 2021, Docket No. AD21-10-000, (“March 23 Conference”), see event page here: <https://www.ferc.gov/news-events/events/technical-conference-regarding-resource-adequacy-evolving-electricity-sector>

PJM, and *Wholesale Markets Administered by ISO New England, Inc.*<sup>9</sup> At each of these conferences, ELCC was pointed to as an important market reform needed to accompany any revisions of capacity market constructs or capacity market mitigation mechanisms, and also the increase in state procurements of resources which may become capacity resources for the region.<sup>10</sup> However, it is critical to understand that ELCC is at its foundation a planning and analytics tool to help ensure reliability, not solely or even predominantly a market mechanism.

For example, a critically important feature of the ELCC construct is its backstop mechanism that helps maintain reliability by adjusting a resource's capacity accreditation based on the amount of market penetration by various types of ELCC Resources, including within LDAs. This backstop allows the capacity market to accommodate the reliability contribution of variable and limited duration resources without impeding the primary goal of ensuring resource adequacy in the region and better preparing for extreme weather events that may impact various resource technologies in different ways.

Due to its importance as a reliability tool for PJM – one which will also improve the operations, efficiency, and cost-effectiveness of the centralized

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<sup>9</sup> *FERC Technical Conference Regarding Wholesale Markets Administered by ISO New England, Inc.*, May 25, 2021, Docket AD21-10-000, see event page here: <https://www.ferc.gov/news-events/events/technical-conference-regarding-wholesale-markets-administered-iso-new-england>

<sup>10</sup> See e.g., Joint Statement of Principles from ISO-New England, PJM Interconnection, and New York ISO, "Foundational Market Objectives for A Reliable Future Grid," (March 23, 2021) *available here*, <https://cms.ferc.gov/media/panel-1-manu-asthana-president-and-ceo-pjm-interconnection-llc>. See Principle 4: "Accurate Assessment of Resource Capacity Contributions to Resource Adequacy."

See also, Remarks from Frederick S. "Stu" Bresler III, Sr Vice President-Market Services, PJM Interconnection, Panel 3, March 23 Conference. "The challenge for us, I think, is to make sure that the resource mix remains reliable in the future, and there's several aspects to ensuring that. The first, as again was mentioned earlier today, is to make sure that capacity is appropriately credited to resources. That's the effective load carrying capability, that is the ELCC concept that we talked about earlier to make sure that in the aggregate we have, sufficient supply of resources to maintain reliability." Transcript, p. 167, lines 3-11.

capacity market – the ELCC proposal should be audited and assessed once in place for some period of time to ensure it is achieving the needed reliability analysis and procurement for the region. This will likely include further investigation regarding the outcomes achieved by either a marginal approach or the adjusted class average approach, as an example.

## II. CONCLUSION

**WHEREFORE**, EPSA highlights the importance of implementing ELCC as a reliability tool particularly as the generation mix moves to include more intermittent and short duration resources. Therefore, EPSA supports PJM's proposal in the instant proceeding as ELCC will help PJM properly determine the capacity capability of the varied technologies which supply power to the region and will enable PJM to ensure reliability more accurately and efficiently as the resource mix evolves. EPSA commends to the Commission the comments herein for consideration.

Respectfully submitted,

*/s/ N. E. Bagot*

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Dated: June 22, 2021

**CERTIFICATE OF SERVICE**

I hereby certify that I have this day served the foregoing document on each person designated on the official service list compiled by the Secretary of the Federal Energy Regulatory Commission in this proceeding.

Dated at Washington, D.C., this 22<sup>nd</sup> day of June, 2021.

*/s/ N. E. Bagot*

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Nancy Bagot, Senior Vice President