Joint EDCs Connect & Manage CIFP Package

Executive Summary

Joint EDCs = Buckeye Power, Dominion Energy, Duquesne Light Company, East Kentucky Power Cooperative, Exelon, Old Dominion Electric Cooperative, PPL Electric Utilities Corp., Southern Maryland Electric Cooperative, Duke Energy Ohio, Duke Energy Kentucky

The Joint EDCs present a framework for PJM to develop a Connect and Manage construct that is premised on imposing obligations on LSEs serving Large Loads (as defined by the PJM Tariff) via the Reliability Assurance Agreement (RAA). This framework, like the current capacity construct and the current emergency operations rules, allows the Relevant Electric Retail Regulatory Authorities (RERRAs) to develop retail rules and procedures that align with the PJM wholesale requirements to effectuate the construct. Essentially, this proposal is rooted in existing wholesale level responsibilities where expectations are placed on LSEs and differentiate between LSEs based on the risk that they pose to the reliability of the PJM region. If LSEs take on a retail obligation to supply Large Loads, as defined by the PJM Tariff, without sufficient capacity resources to serve them, they impose risk onto the PJM region. It is appropriate to place rules upon such entities to mitigate that unreasonable risk to others. LSEs rely on the PJM markets to serve their retail load so it is within PJM's authority to place reasonable requirements on them. Indeed, this is the foundation for the RPM capacity market and is an appropriate foundation for a Connect and Manage framework.

Registry

The proposed framework requires PJM to establish and maintain a registry to track information about Large Loads by LSE and Zone Areas, including: MW size (incremental MW and Large Load meeting PJM's definition) after June 1, 2027; bilateral contracts between LSEs and Large Loads and BYONC (including those secured through PJM's RBP Phase 1; and the MW allocation of RBP resources after subscription by the LSE associated with the specific Large Load. LSEs (or voluntarily the Large Loads directly) provide the information for the registry. The registry will capture information through the 2042/2043 DY.

The registry also will capture the operational constraints and capabilities of the Large Load to effectuate PJM curtailment activations within 15 minutes. Transmission Owners will coordinate with the Electric Distribution Companies and Load Serving Entities to support affected large loads switching off from utility power sources within 15 minutes. [1] The execution of curtailment under

[1] PJM and stakeholders are currently considering revisions to PJM Manual 13, Attachment O to address Department of Energy (DOE) Federal Power Act Section 202(c) directives regarding large loads. The current draft revisions require consideration of the operational ability of affected loads to switch to their backup generation and off utility power sources within 15 minutes. Also, Joint EDCs note that the North American Electric Reliability Council (NERC) is currently developing rules that may require what they define as "Computational Loads" to become Registered Entities and comply with various communications and

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Connect and Manage should reflect operational realities such as ramp down, switching to backup generation and the effects of large load curtailment on grid stability.

Definition of "New Large Load"

Joint EDCs propose this definition of "New Large Load". A New Large Load is a facility that is 50 MWs or greater, or will add incremental load to become greater than 50 MWs, at a single site. To assess whether a load falls within this definition, the LSE (or EDC) will provide PJM with the incremental peak demand MWs of any site that was sized less than 50 MWs before June 1, 2027. The LSE shall indicate in the registry whether the MWs are associated with an incremental increase or entirely new facility.

BYONC Resources and Determination

PJM will determine whether any resources proffered as BYONC satisfy the BYONC requirements to enable an LSE serving the Large Load to avoid being subject to Connect and Manage.

What qualifies as Bring Your Own Capacity (BYONC)

A portfolio of BYONC may be associated with an individual Large Load served by an LSE (or portfolio of an LSE's Large Load) to enable an LSE serving new Large Loads to avoid a Connect and Manage obligation.

New generation and energy storage resources are eligible BYONC. Once designated as BYONC a resource is not permitted to submit a Must Offer Exception for an RPM auction (associated with external sales) and must be a price taker in RPM auctions for 10 years. Once the capability of the resource is established in the initial year of it coming on-line, it offsets the Connect and Manage obligation of the Large Load LSE by the amount of its initial fully demonstrated capability.

New demand response resources also are eligible to be BYONC resources. Unlike generation and storage resources, they must continue to demonstrate their capability for each year of the 10-year period.

Excess BYONC may be reserved for future Large Loads in a portfolio or for the future ramp of a Large Load which may take multiple years.

Determining whether a resource qualifies as BYONC requires consideration of whether the resource has a capacity commitment (and will be on-line after June 1, 2027 and committed to the

operational requirements. It is likely that whatever is decided in this CIFP process would need to evolve to be consistent with any future NERC requirements.

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PJM region via RPM BRA or IA clearing), and whether it is an existing resource in a supply portfolio of a Self-Supply Entity[2] subject to RERRA IRP processes (further described below).

The Connect and Manage framework will be effective June 2027, and will remain effective for as long as the PJM region did not satisfy the PJM Reliability Requirement for a Delivery Year. Should PJM have sufficient capacity and not need to trigger Connect and Manage for three consecutive Delivery Years, all LSEs will be relieved of any Connect and Manage obligation it held by virtue of not demonstrating sufficient resources in the registry to supply the Large Loads it is obligated to serve under retail. The applicable "no longer subject to Connect and Manage" date shall be noted in the registry.

Connect and Manage may be revived if the RPM clears short in a subsequent DY. In that scenario LSEs service new Large Load (including new incremental load) in the registry that contributed to the shortfall, was not previously subject to Connect and Manage and does not meet the requirements for exemption will receive Connect and Manage obligations.

Load that is part of a Fixed Resource Requirement (FRR) Alternative Capacity Plan is excluded from Connect and Manage only to the extent the FRR plan is sufficient. An FRR Entity with new Large Load that did not BYONC cannot satisfy its FRR obligations with existing generation capacity resources that are not owned by the FRR Entity as of June 1, 2027, or had been committed under contract to the FRR Entity as of June 1, 2024.

In many instances the timing of the BRA or IA will be sufficient to allow a planned resource to receive an RPM commitment to make it eligible to be a BYONC resource. However, there can be a mismatch between the infrequent conduct of the IA and the in-service date of planned resources. The Joint EDC proposal addresses this by allowing resources whose COD would not have enabled them to participate in the 3rd IA of the Delivery Year associated with the new Large Load ramping or achieving full operation to still be considered BYONC until its first opportunity to participate in a BRA and obtain an RPM commitment. To be eligible, the resource must be online, not take on capacity obligations outside of the PJM region, and must offer into the Day Ahead energy market commensurate with the Large Load's schedule for ramping and achieving full operation.

Additionally, for each Delivery Year, LSEs who are Self-Supply Entities subject to RERRA IRP processes and obligated to serve new Large Loads shall be exempt from Connect and Manage for any portion of the new Large Load obligation that may be satisfied with that LSE's portfolio of capacity resources only to the extent (i) that LSE's non-Large Load serving obligation is satisfied, and (ii) any existing capacity resources (owned or bilaterally contracted) were approved by the

[2] **Self-Supply Entity:** "Self-Supply Entity" shall mean the following types of Load Serving Entity that operate under long-standing business models: single customer entity, public power entity, or vertically integrated utility, where "vertically integrated utility" means a utility that owns generation, includes such generation in its regulated rates, and earns a regulated return on its investment in such generation or receives any cost recovery for such generation through bilateral contracts; "single customer entity" means a Load Serving Entity that serves at retail only customers that are under common control with such Load Serving Entity, where such control means holding 51% or more of the voting securities or voting interests of the Load Serving Entity and all its retail customers; and "public power entity" means cooperative and municipal utilities, including public power supply entities comprised of either or both of the same and rural electric cooperatives, and joint action agencies.

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RERRA before June 1, 2024 for inclusion in the LSE's supply portfolio. Any new Capacity Resources that the LSE constructs, or with whom LSE enters into a bilateral contract, will exempt from Connect and Manage any portion of New Large load obligation that exists when those resources have come on-line and demonstrated their capability.

Large Load LSE obligations Under Connect and Manage

LSEs serving Large Load that interconnects prior to their BYONC resources or the RBP procured MW achieving their COD will be subject to the Connect and Manage framework until the BYONC or RBP procured MWs are on-line and have demonstrated their capability. The Large Load capacity obligation must be satisfied by the designated resources or RBP procurement allocation in order for the LSE to no longer be subject to Connect and Manage. The Large Load LSE shall coordinate with the TO and EDC to make appropriate arrangements for executing the curtailment directives PJM may issue *(see Delivery Year Operations below)*.

Delivery Year Operations

If Connect and Manage is triggered, the Connect and Manage total MW quantity for the PJM region equals the sum of the Large Load MWs with no associated qualifying supply per the registry. *(See flowchart diagram below for an understanding of how the registry would enable identification of which LSE loads would be subject to Connect and Manage.)*

PJM will use the registry to determine the sum of the Large Load MWs with no associated qualifying supply per the registry to a Zone Area, informing the TOs and LSEs subject to Connect and Manage obligations of the allocations by Zone Area. Any curtailment directive will be associated with the real-time capacity shortage being experienced, which may be less than the total Connect and Manage MW quantity available in the PJM region. The PJM curtailment directive will be a MW quantity assigned by zone (not by Large Load end use retail consumer). In response to a curtailment instruction from PJM, Transmission Owners will coordinate with the EDC and LSEs (aligned with any applicable RERRA rules and procedures) on how they will effectuate the curtailment obligation. Any necessary telemetry shall be provided.

While PJM must retain full discretion to utilize its emergency operations procedures, the Connect and Manage framework is intended to enable PJM to obtain system relief by having LSEs subject to Connect and Manage obtain the Connect and Manage directed curtailments after PJM dispatched Demand Response. A PJM Connect and Manage curtailment directive, if needed, would occur in PJM's hierarchy of Emergency Procedures, after PJM has issued a Pre-Emergency or Emergency Load Management Reduction Action (30, 60 or 120-minute) and under emergency conditions to avoid or mitigate an Energy Emergency Alert ("EEA") level 3. The Connect and Manage MW curtailment will be assigned to LSEs by zone (not by Large Load end use retail consumer), based on information contained in the registry.

If in the operating day there is an RTO-wide energy shortage, PJM would allocate the Connect and Manage curtailment obligation pro-rata by Connect and Manage load ratio share across all zones. If the operational challenge is not an RTO-wide issue, PJM will allocate to only those zones where the curtailment would be effective at mitigating the issue.

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Cost Allocation

Large Loads (whose LSEs are subject to Connect and Manage) continue to be included in the RPM VRR curve and their LSEs remain obligated to pay RPM charges in each Delivery Year. Otherwise, RPM costs would get shifted to other loads who are not driving the need for the Connect and Manage in the first instance. Additionally, retention of an RPM charge responsibility reflects the reality that all load benefits from the energy provided by RPM committed capacity resources.

Coincident Peak Determinations

C&M curtailments could improperly impact coincident peak (12cp and 5cp) calculations. Therefore, Joint EDCs propose that any curtailed load be added back for these calculations.

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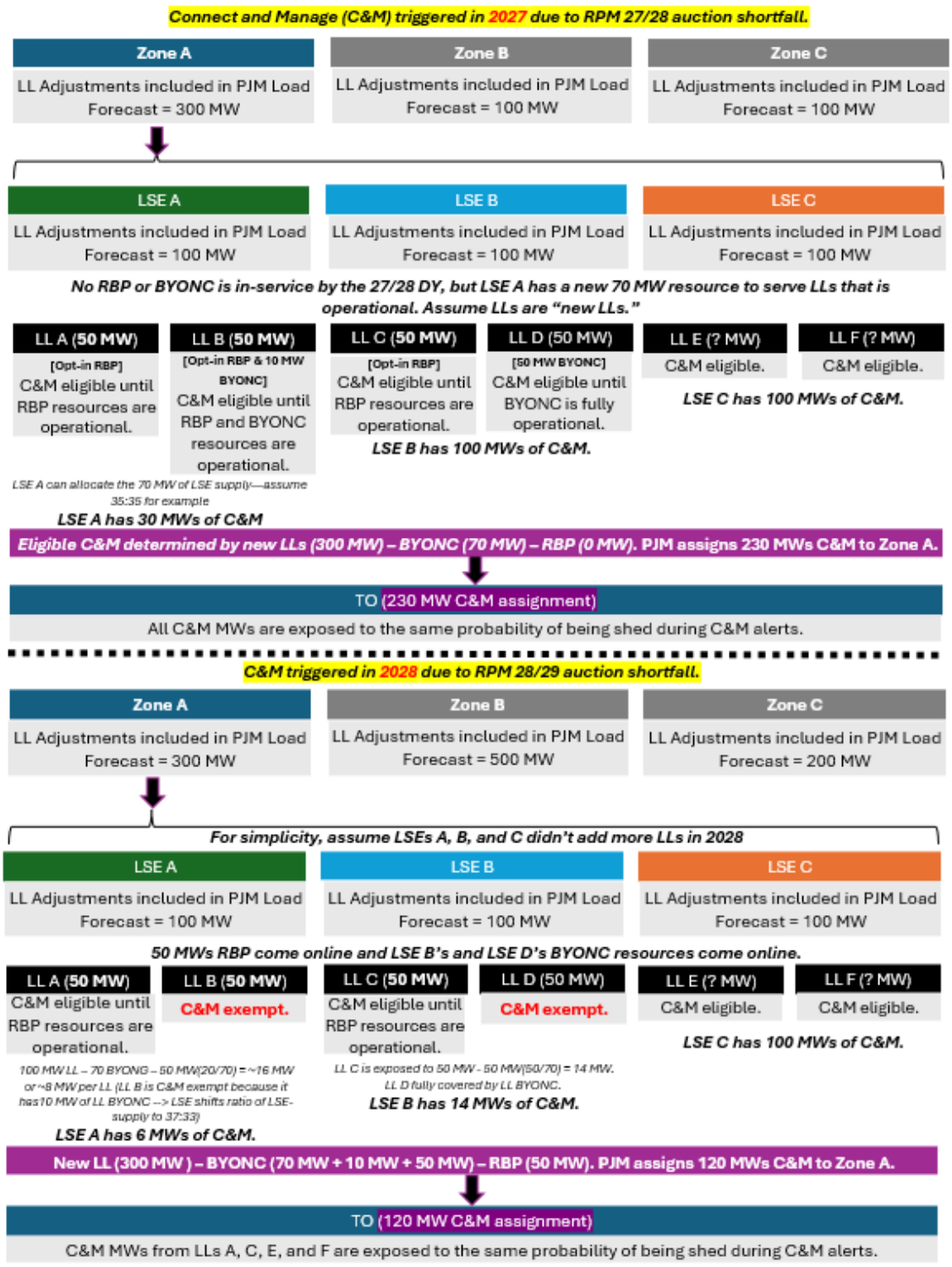
The example below is intended to illustrate conceptually how the registry could be used to facilitate the Connect and Manage framework. This example is illustrative. The MW values are small for computational ease.



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