Proposed Design Options for the Connect & Manage and Reliability Backstop Auction

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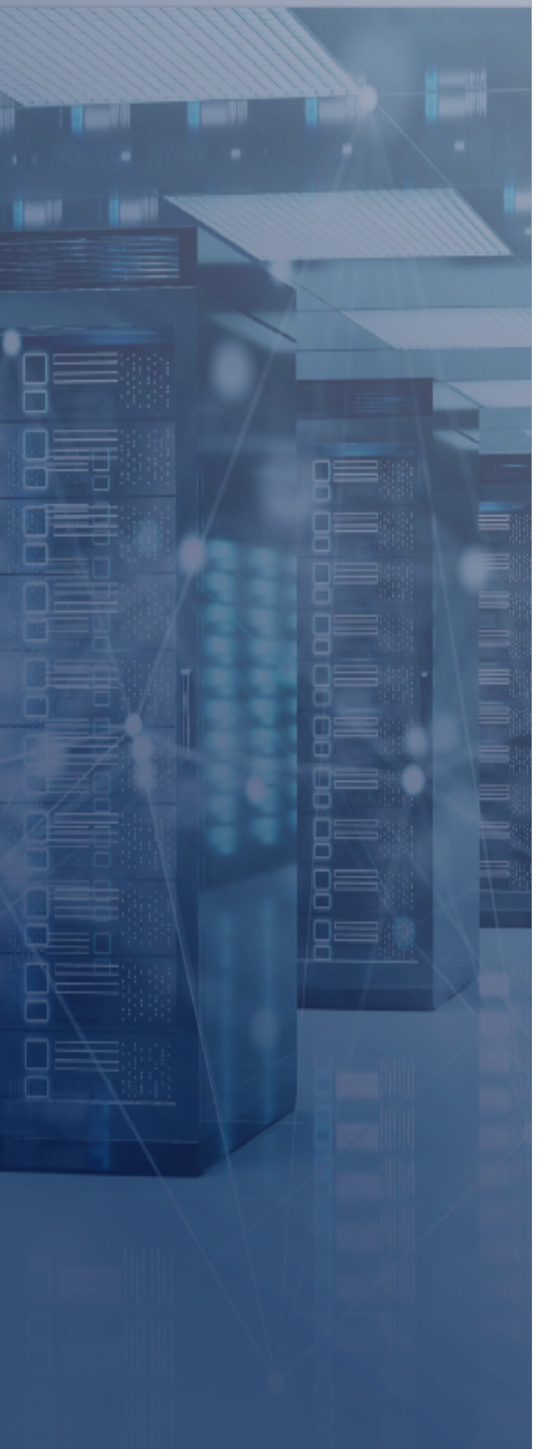


Moving Forward on Reliability Backstop Procurement and Connect & Manage

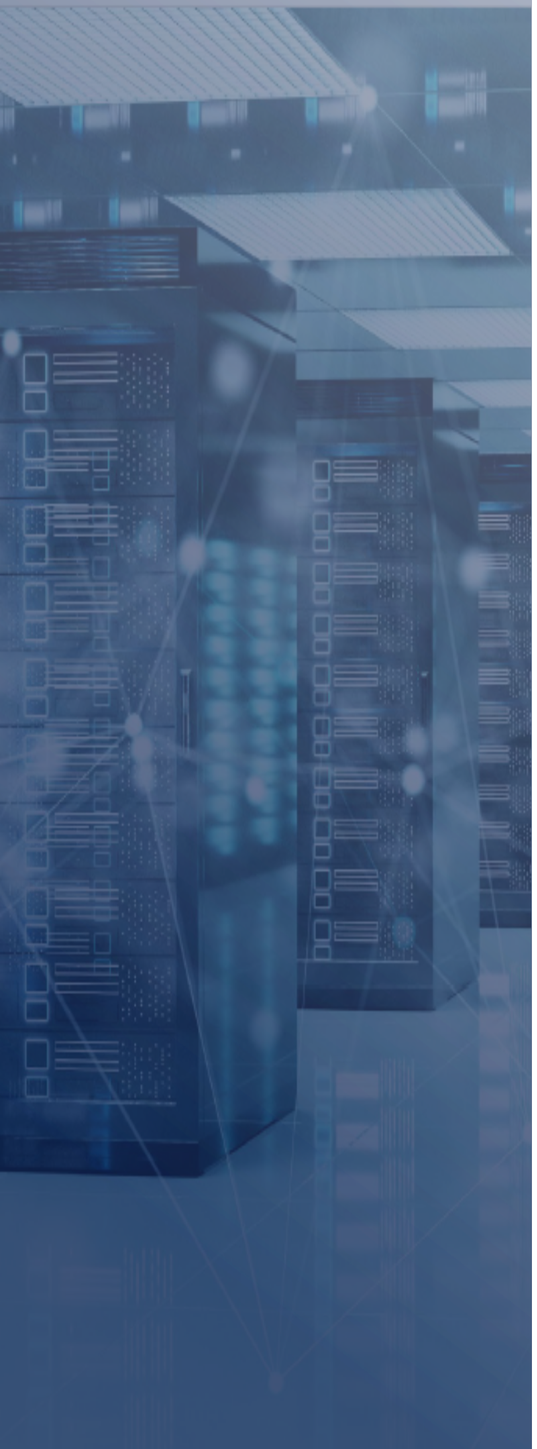
1. Strong and clear Connect & Management rules are critical to driving supply procurement by new Large Loads.

2. New Large Loads subject to Connect & Manage should pay for the level of capacity service they receive.

3. Definitions of what constitutes a “new” or “incremental” Large Load should include a transition period and account for state regulatory differences.

4. “Tokenize” Bring-Your-Own-type requirements and create a Registry to enable retail competition and better compliance/tracking for both RBP and Connect & Manage.

Clarifying that new large loads are Non-Firm (i.e., Connect & Manage) until they demonstrate compliance with Bring Your Own-type requirements is critical to the success of bilateral contracting ***and*** compliance with the Ratepayer Protection Pledge/Joint Principles.



1. Strong Connect & Manage is Critical to Driving Successful Contracting

- Incentive to contract (whether bilaterally, through RBP, or otherwise) requires strong Connect & Manage rules.
- Temporary Connect & Manage undermines Bring-Your-Own capacity program and reduces incentive to invest in long-term supply infrastructure.
- The Ratepayer Protection Pledge and Gov/NEDC principles both require strong, permanent, Connect & Manage rules.

Per the Ratepayer Protection Pledge: "Companies will build, bring, or buy the new generation resources and electricity needed to satisfy their new energy demands, paying the full cost of those resources whether by building, or buying from, new or otherwise additive power plants."

Per the Joint Principles: "PJM should allocate the cost of any ***new*** capacity procured through the aforementioned Reliability Backstop Auction to load serving entities (LSEs) **with new data centers that have not self-procured new capacity or agreed to be curtailable**."(Emphasis added)

We believe that **PJM should be indifferent to whether new Large Loads connect on a firm or non-firm basis** and should not be advocating what is effectively a commercial position.

2. Ensure the Connect & Manage Customers Pay a Rate Commensurate with the Non-Firm Capacity Service they Receive

- PJM's proposal to charge Connect & Manage load customers full capacity rates stems from an assumption that non-firm service is a temporary exception and should be avoided.

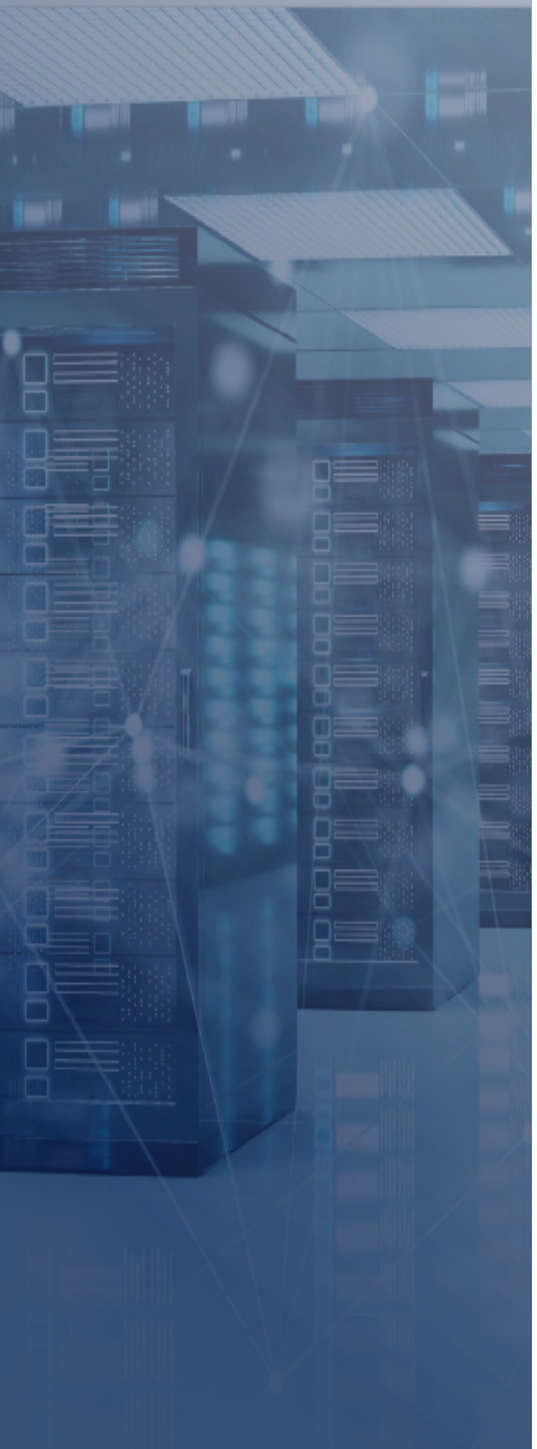
- Non-firm capacity service provides value to LLA customers, but that value is less than firm service. Arguments to the contrary create legal risk for PJM and uncertainty for all stakeholders.

Proposal:

Customers that receive non-firm capacity service from PJM will be energized and served fully for the majority of hours in a given delivery year.

- Connect & Manage customers should make a payment in lieu of RPM equal to 50% of the applicable RPM clearing price to represent the value of the capacity service they receive outside of curtailment hours.

- The payment would be applied as a credit to all existing RPM customers on a pro rata basis.



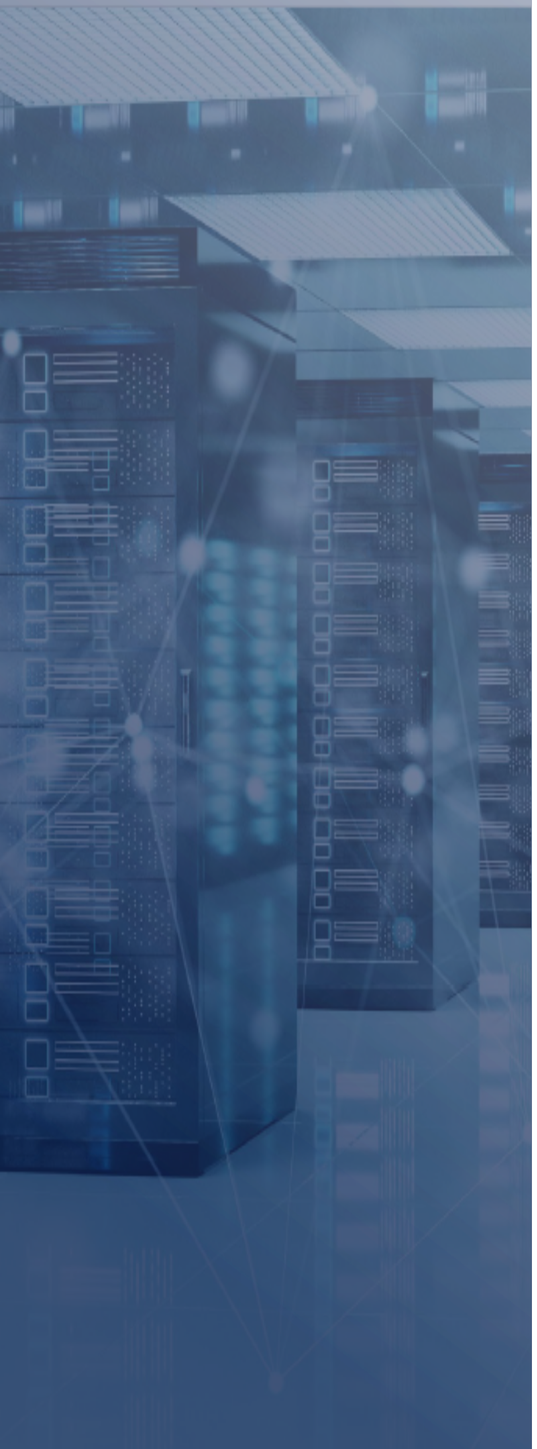
3. Defining “Incremental” or “New” Large Loads

All stakeholders benefit from a clear definition of “New or Incremental” large load additions.

New/incremental LLAs are subject to both Connect & Manage ***and*** Reliability Backstop Procurement.

- The quantity of capacity procured in the BRA needs to account for new/incremental LLA in order to give effect to the Ratepayer Protection Pledge & 13 State Gov/NEDC Joint Principles.

- Definition of “new” should be used to establish RBP procurement targets.



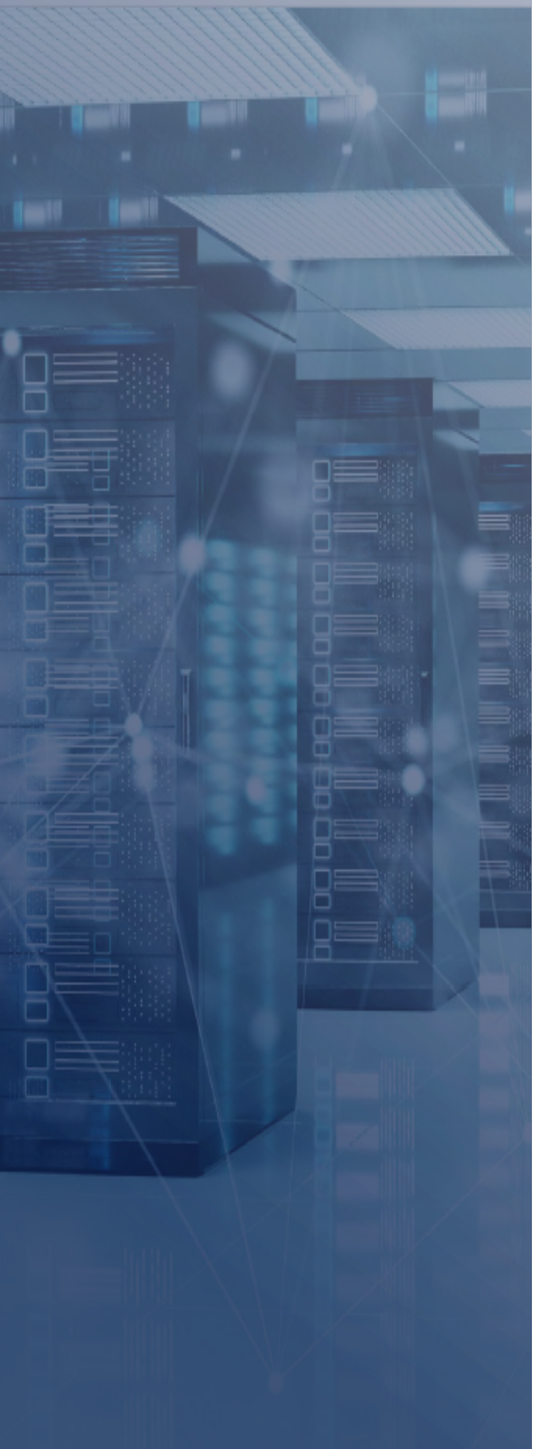
3. Definition of “New” Should Account for State Regulatory Structures

Obligations may need to be phased-in to consider the legitimate expectation interest of the new large loads.

- The legitimate expectation interest for what is covered in the ESA varies – **particularly between restructured states** (where energy/capacity is a separate pass-through) and **vertically integrated states** (where ESAs may explicitly include capacity/energy costs).

- While honoring expectation interests is important, PJM has been clear that data centers do not have any contractual entitlement to specific forecasted load that was included in the Base Residual Auction (BRA).

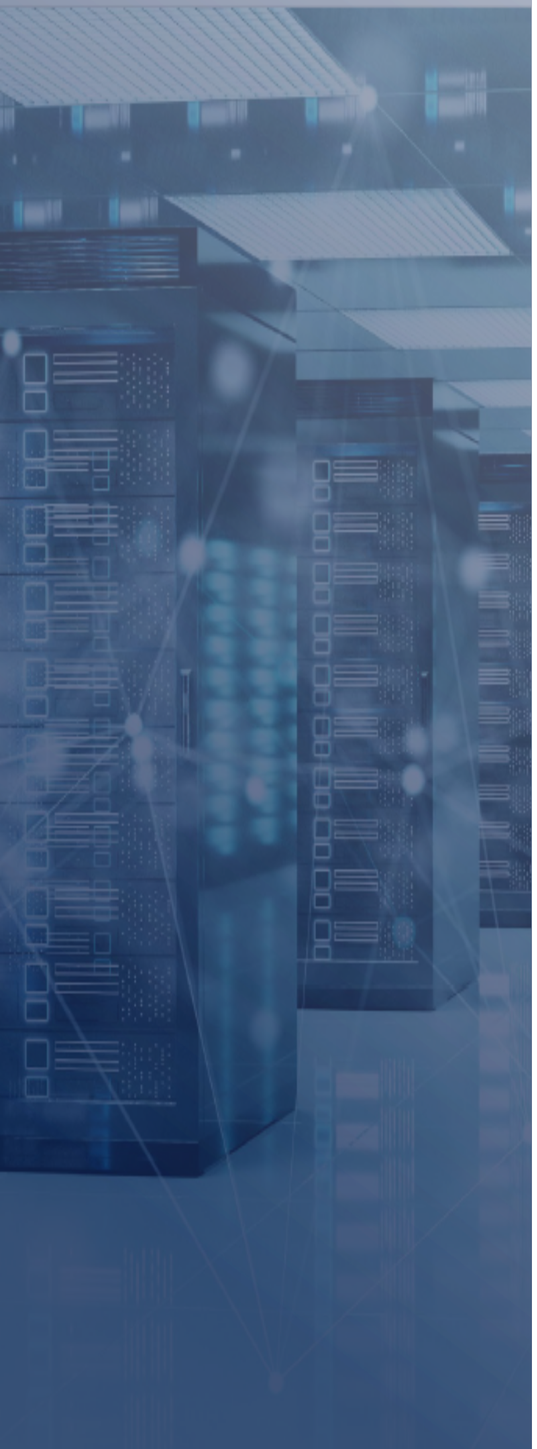
- At the February 25 workshop PJM confirmed that the load forecast does not map to specific data centers, and that granularity is zonal.



Phase-In Proposal: Applicability of RPB & Connect & Manage

	Applicability Date of New Rules Load Subject to Fixed Resource Requirement or Vertical Integration)	Applicability Date of New Rules (Restructured LSEs in RPM)
Large Loads without an executed ESA	June 1, 2026	June 1, 2026
Large Loads with an ESA, but pre-connection	No applicability if capacity and energy are covered; otherwise, June 1, 2026	June 1, 2026, unless there are explicit provisions addressing energy and capacity
Large Loads connected, but early on in ramp schedule. Incremental additions greater than 10 MWs, not currently in service, would be considered new.	No applicability if capacity and energy are covered; otherwise, June 1, 2027	June 1, 2027, unless there are explicit provisions addressing energy and capacity
Large Load already connected and operating at >80% of total requested capacity and not greater than 10 MW of incremental load.	No applicability	No applicability

Applicability rules would form the basis for RPB allocation and for determining which resources are subject to Connect & Manage, unless they demonstrated compliance with BYO requirements.



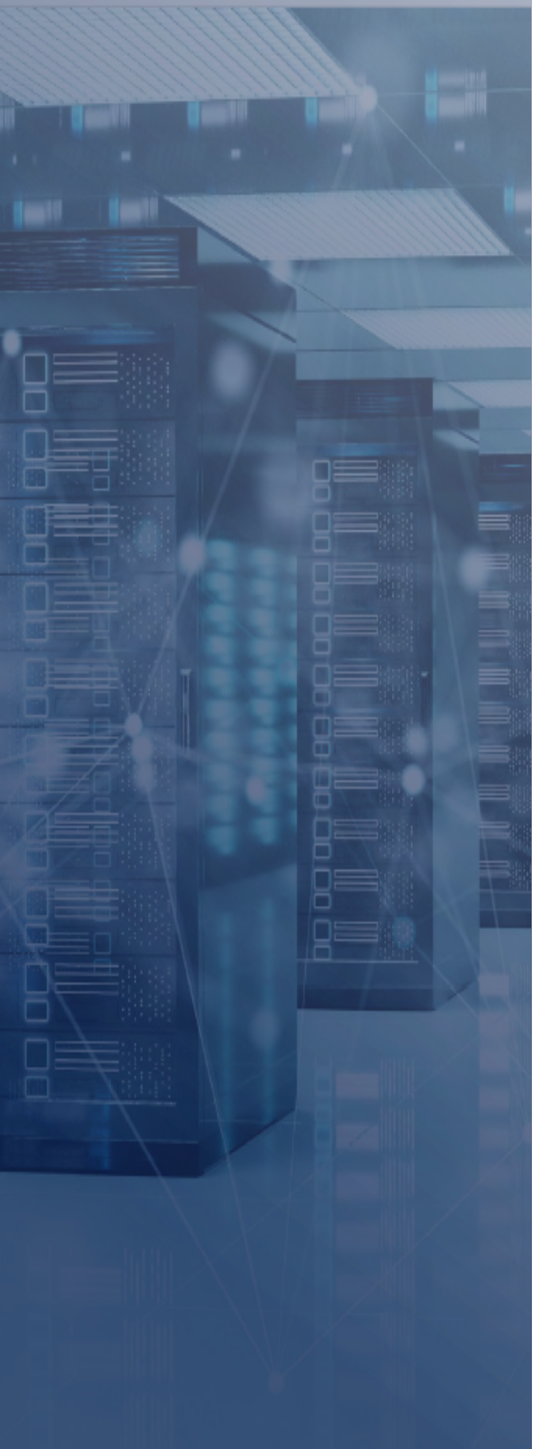
Transition Rules for Valuing Short-Term Firm Capacity Rights

- The Phase-In proposal has the potential to create additional capacity (i.e., the difference between the quantity procured in the BRA and the amount allocated to Large Loads after the implementation of the Phase-In)

- Additional capacity that becomes available would be available for purchase in the incremental auction and could be used by Large Loads to firm themselves up in the relevant delivery year.

- This effectively creates a market mechanism for Large Loads to compete on valuing this capacity.

- Any revenue created from the re-sale would be credited to ratepayers in the relevant delivery years, on a pro rata basis.

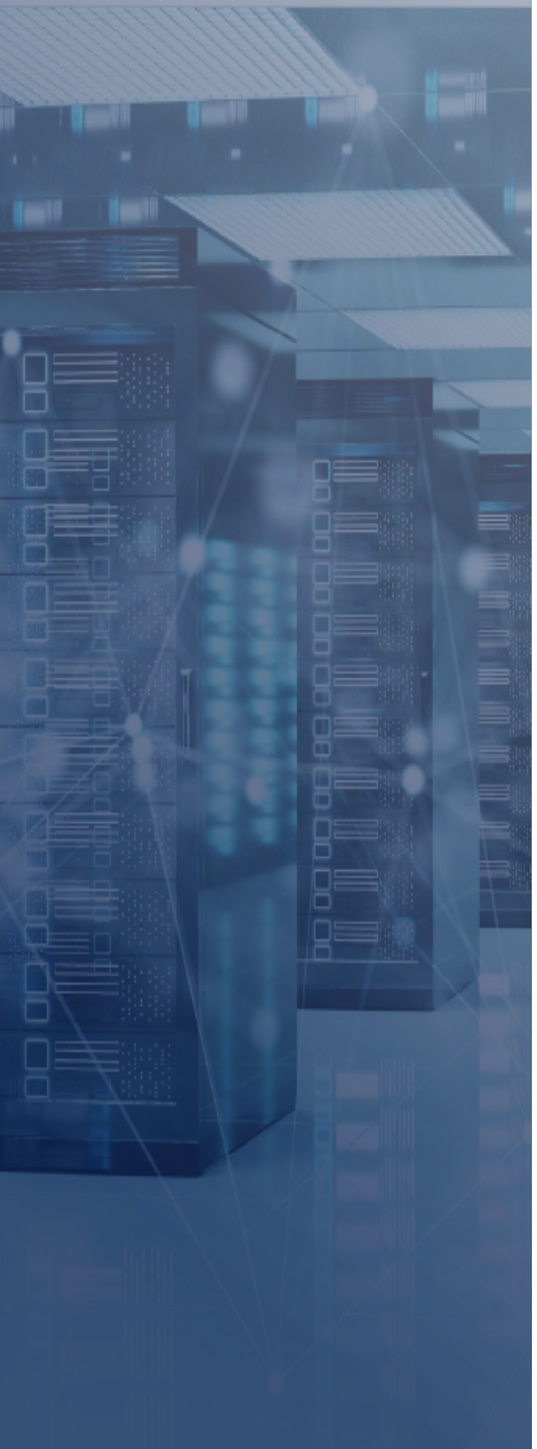


4. “Tokenize” New Capacity Resources

Establish certified new capacity “tokens” or “credits” to demonstrate compliance with Bring-Your-Own-type obligations and track through a new Registry.

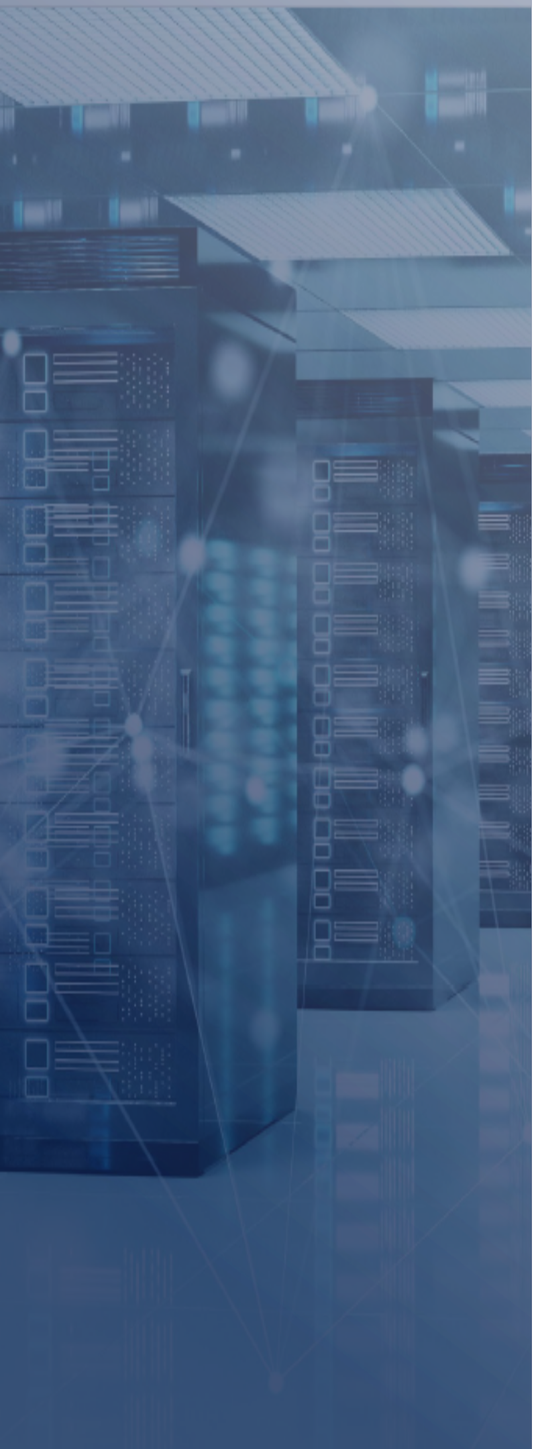
- Puts the obligation to demonstrate compliance with BYO-type obligations on the LLAs, where it belongs. LLAs would be Connect & Manage until they require tokens.
- PJM remains indifferent to whether LLAs enter the market as Connect & Manage or integrated into RPM.
- Allows the EDCs/LSEs to demonstrate compliance with a State- or PJM-imposed BYO-type obligations (i.e., connect & manage or RBP) without committing financial resources.
- Respects jurisdictional framework by utilizing a system similar to PJM-EIS/GATS for REC tracking.

By “tokenizing” the BYO-type obligation, we avoid making EDCs/LSEs responsible for new capacity while preserving existing jurisdictional framework.



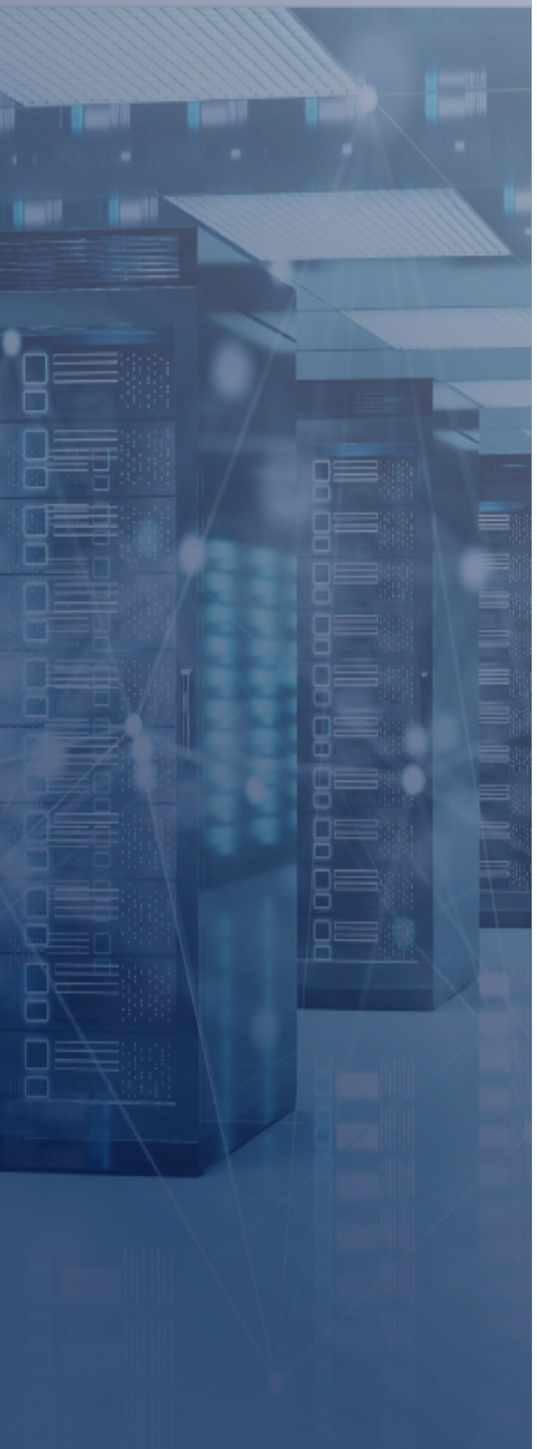
Why Tokenize & Create a Registry (Part 1)?

- Creates a fungible, tradeable, “token” for tracking and enforcing obligations at the state or utility level.
- Registry would track the “retirement” of Tokens once the load and the generation are added to the system.
- Allows “vintaging” by creating different prices for Tokens tied to specific delivery years.
- Registry provides a practical process for States and PJM to track LLA capacity commitments in a manner that respects existing jurisdictional frameworks.
- If states or utilities adopt different standards, that could be accommodated as is the case for different type of REC products today.
- Any “new” or “incremental” generation (however it ends up being defined) would be eligible to enter the Registry.



Why Tokenize & Create a Registry (Part 2)?

- Enables retail shopping by allowing an LLA to transfer the entitlement to a new EDC or LSE as it switches competitive suppliers (or shrinks/expands operations).
  - Otherwise, we risk locking LSEs into a supplier relationship with the EDC or a specific LSE, which harms retail choice structures.
- Allowing financing counterparties to easily evaluate the status of the facility.
- Avoids “lumpiness” challenges of matching new LLAs with specific generation resources.
- Allows registration of new capacity from a variety of new procurement mechanisms, including bilateral transactions, Reliability Backstop Procurement entitlements, self-build, etc.
- **Optional:** The Registry could include a “non-emitting” or “clean” flag to facilitate purchases and/or sales of clean capacity.



Role of Tokens in Reliability Backstop Procurement

- PJM conducts centralized procurement as proposed, but allows Large Loads to purchase tokens directly, shifting a portion of the obligation from the EDCs/LSEs to the new Large Loads.
  - Ensures that Large Loads are bearing 100% of the costs and risks associated with new capacity procurement, consistent with the Governors/NEDC Joint Principles & Ratepayer Protection Pledge.
- New large loads entering the market post-June 1, 2026 would be responsible for retiring tokens (see proposal for more details on what “new” means).
- EDCs/LSEs would have the option to purchase from the RBP after consultation with their state regulators but could require new LLAs to assume obligation for Tokens and “step into the shoes” of the EDC.

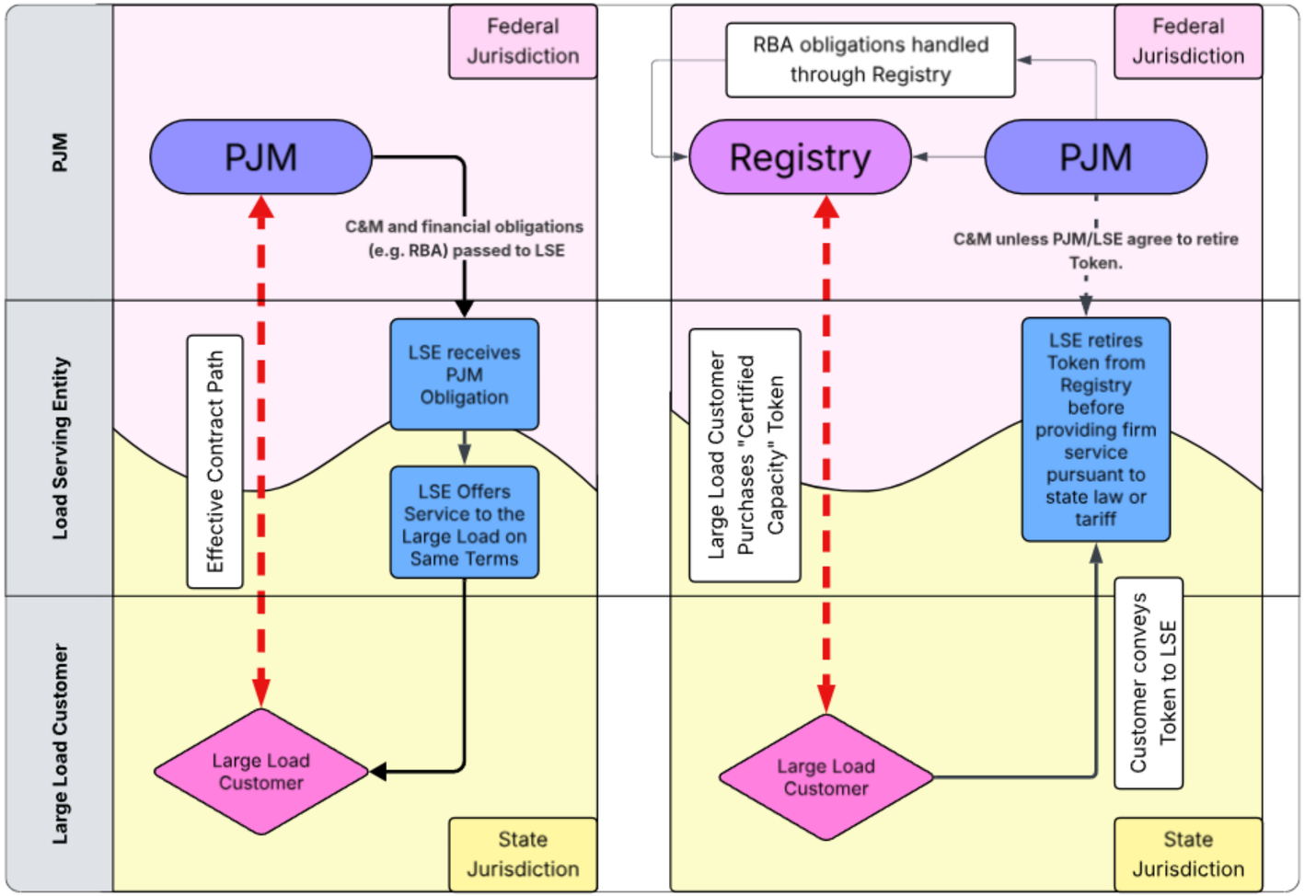
Jurisdictional Framework for Tokens

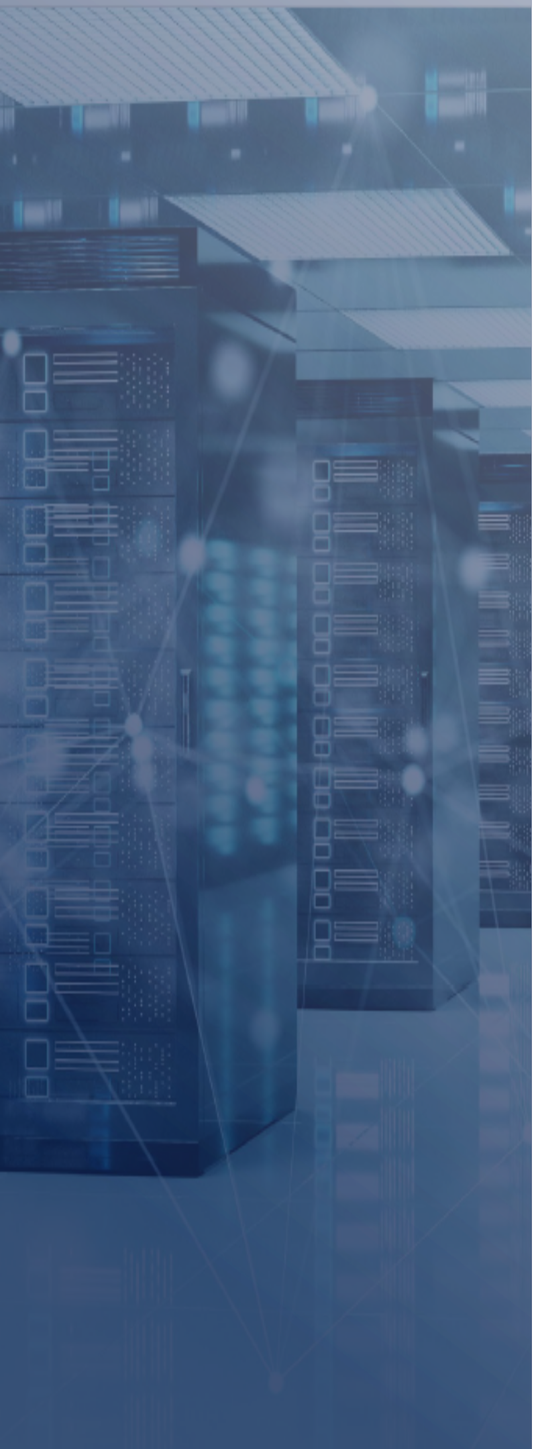
- PJM has jurisdiction over EDCs/LSEs who are parties to the Reliability Assurance Agreement (pink shading).
- States retain jurisdiction over the rates, terms and conditions of sales by those EDCs/LSE to end-use customers, including over cost allocation (yellow shading).
- PJM and the States share jurisdiction over the EDC/LSE (middle).

“Tokenization” would honor this jurisdictional framework, while minimizing risk for EDC/LSEs and captive customers of those EDCs/LSEs.

The Certified Capacity requirement could be imposed through a utility tariff filing or by other state legal requirement, minimizing changes to existing law.

No requirement that relevant state entity use the Registry – it could adopt a different framework!





Registry Examples

Example:

- States or utilities could incorporate the requirement that a new LLA have entitlements from the Registry as a transparent means of enforcing BYO-type requirements.

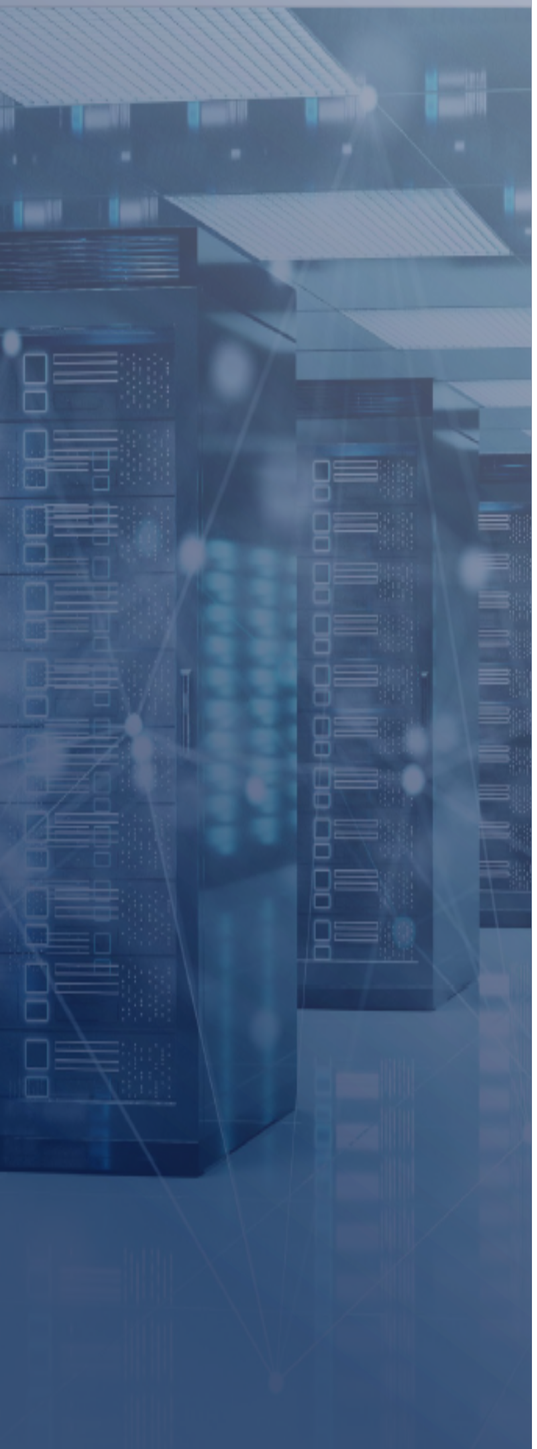
  - Example #1 - State Driven: State A passes a law requiring new LLAs to meet a certain percentage of their load from new capacity. State A could require the LLA to provide certified capacity from the Registry.

  - Example #2 – Utility Driven: Utility X establishes a new large load tariff requiring LLAs to meet a certain percentage of their load from new capacity. Utility X could require the LLA to provide certified capacity from the Registry as a condition of receiving retail service.

  - Example #3 - PJM Driven: PJM adopts a “connect & manage” requirement for new LLAs that don’t bring new capacity to market. PJM could require the LLA to provide certified capacity from the Registry as a condition of receiving retail service.

  - Example #4 – Customer Driven Bilateral: Big Tech 1, a large new data center, enters a bilateral contract arrangement with a new generation resource. The new resource registers with PJM and assigns the token to Big Tech 1, demonstrating compliance with PJM’s Connect & Manage requirement and enabling finance.

  - Example #5 – Customer Driven RBP: Advanced Manufacturer 1, a new large load agrees to purchase tokens under contract to the EDC/LSE it is connecting to. EDC/LSE transfers the tokens to Advanced Manufacturer 1 upon execution of an appropriate agreement.



Questions & Risks

- Who manages Token valuation and ELCC risk?

Proposal: ELCC is locked at the time of the delivery year in which the supply resources reaches COD. While this does not entirely address risk, it reasonably balances commercial needs of new large loads and ratepayer protection.

- What happens when the market is long?

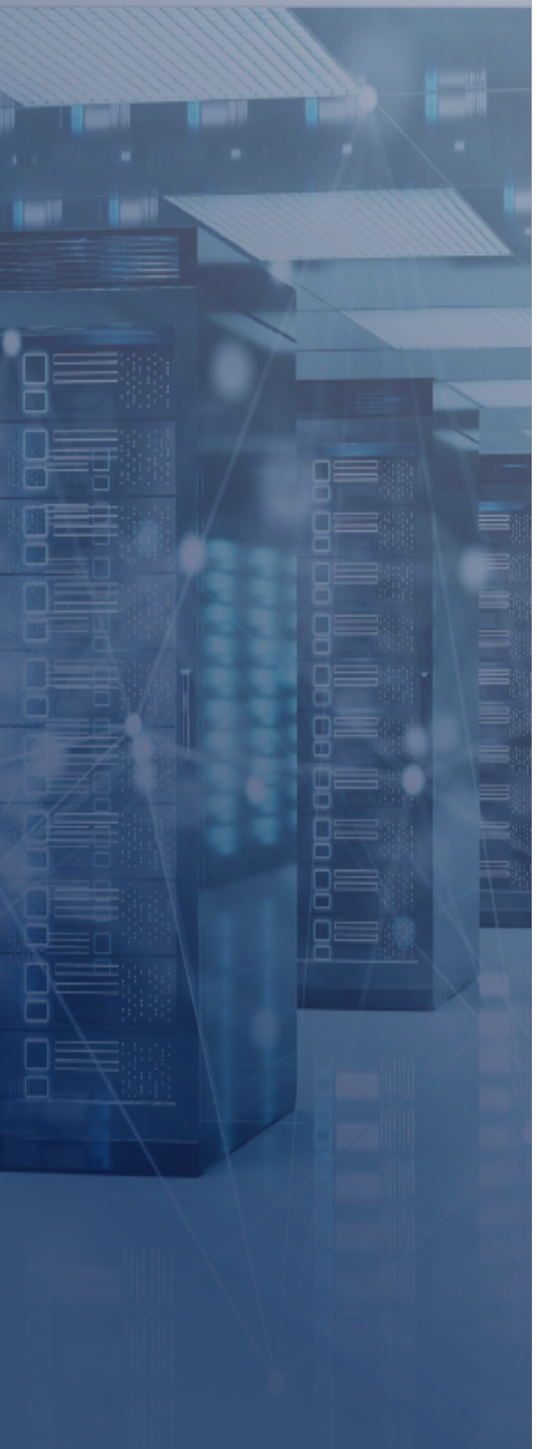
Proposal: All new LLAs should be automatically placed into Connect & Manage status until they acquire Tokens equal to their load, grossed up for reserve margin, with the caveat that if the supply-demand balance exceeds Point B on the VRR curve (i.e., there is sufficient capacity being built and offering into the auction to produce competitive prices), then LLAs will be included in the capacity auction without requiring retirement of tokens.

- How are locational requirements enforced?

Proposal: Tokens would include a zonal attribute. Buyers of the token would hold any deliverability risk pursuant to today's rules.

- Does this require a pro forma agreement to make projects transactable?

Proposal: A pro forma governing minimum terms for entry to the registry is not necessary, as non-performance risk is handled through standard PJM market rules.



APPENDIX

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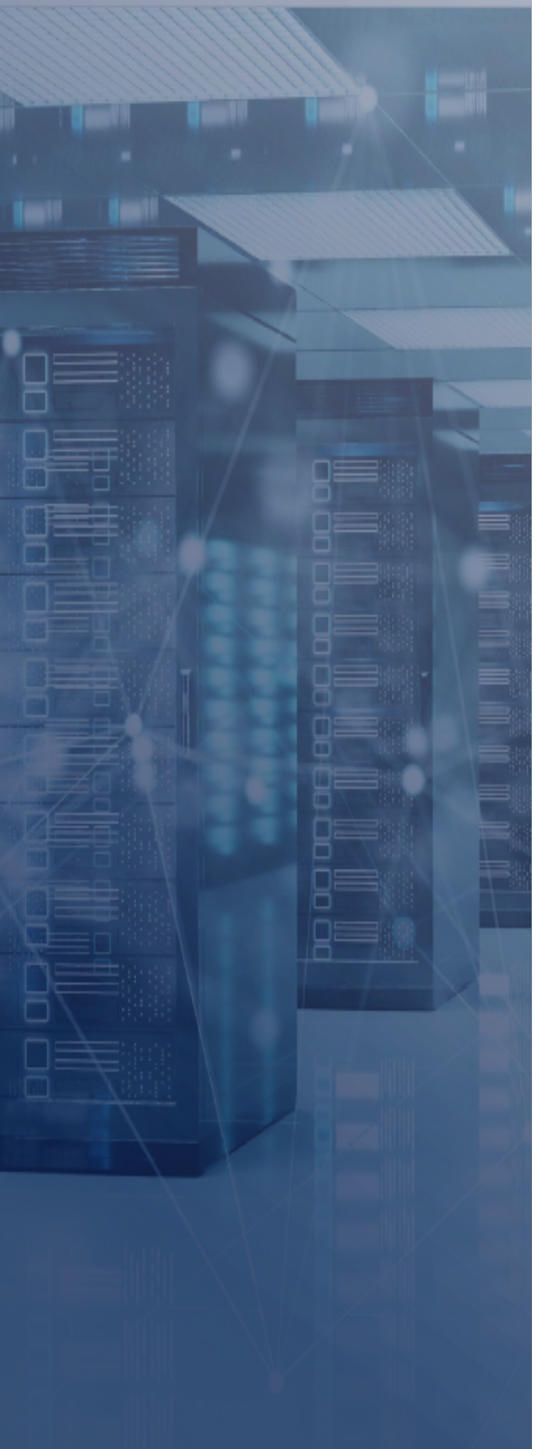

What Incremental Load Should be Included in the Base Residual Auction?

Lots of discussion around what the goal of the RPB and Connect & Manage, and what quantity of capacity should be procured in RPM. Do we want to buy enough capacity to:

- Relieve the reliability challenges in 2027/2028?
- Avoid making the reliability deficit worse in 2028/2029?
- Put ratepayers back to where they would have been without data centers, per the Ratepayer Protection Pledge & 13 Govs/NEDC proposals?

<u>Sample Economic Analysis:</u>

- If we were to apply the BYOS/connect & manage rules to all incremental load from data centers coming online post June 1, 2026, then the 13 GW of new data center load growth currently scheduled to come online in 2027/2028 would be subject to BYOG/Connect & Manage.
- The ~4 GW shortfall (adjusted down from 6 GW) would turn into an 8 GW surplus.
- This would alleviate the short-term reliability challenges and there would be excess generation available to serve organic load growth and prices would likely clear to the floor of the Price Collar.

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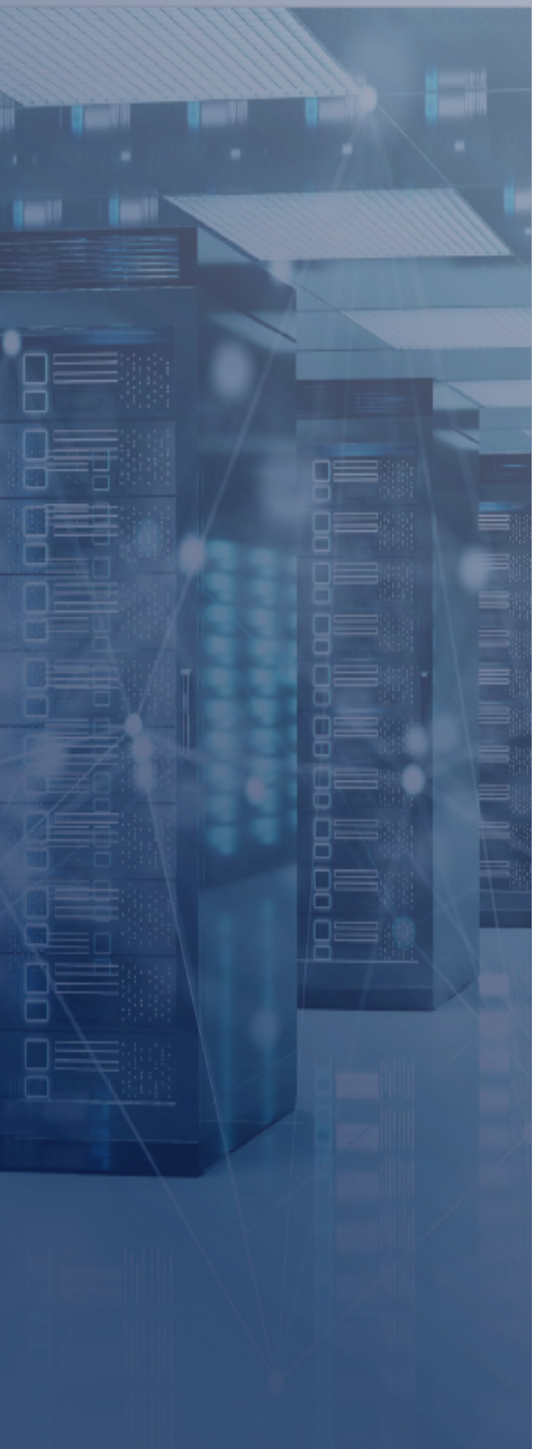
Recommended Principles on How Connect & Manage and RBP Influence Reliability & Cost

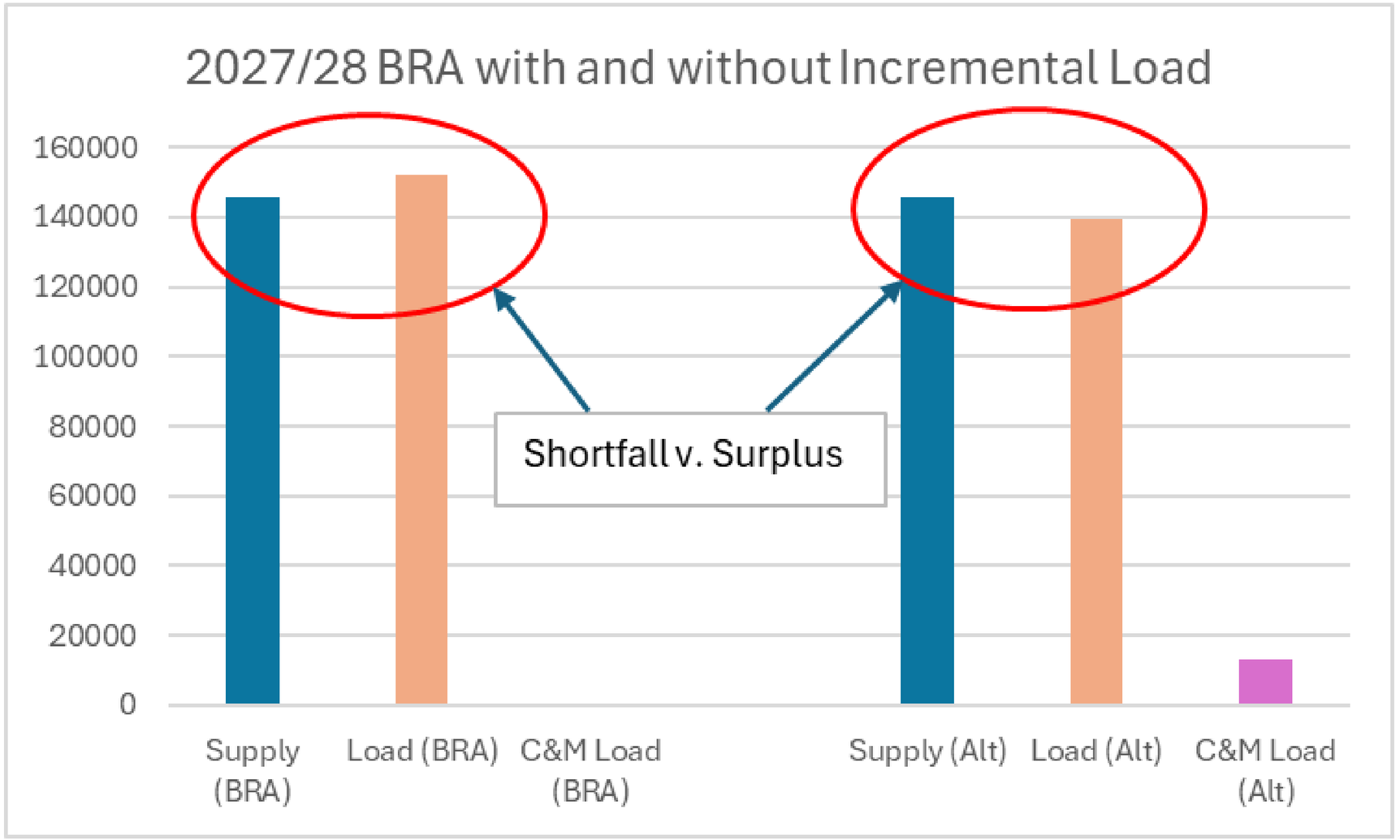
PJM Board letter of January specifically states in footnote 6 that "The Board reserves the right to look at this issue again as part of the design of the reliability backstop procurement described in this letter", referring to whether load should be removed from the market.

- Capacity subject to Reliability Backstop Procurement and Connect & Manage should affect supply-demand balance, and therefore both reliability and price, starting in 2028/2029 DY.

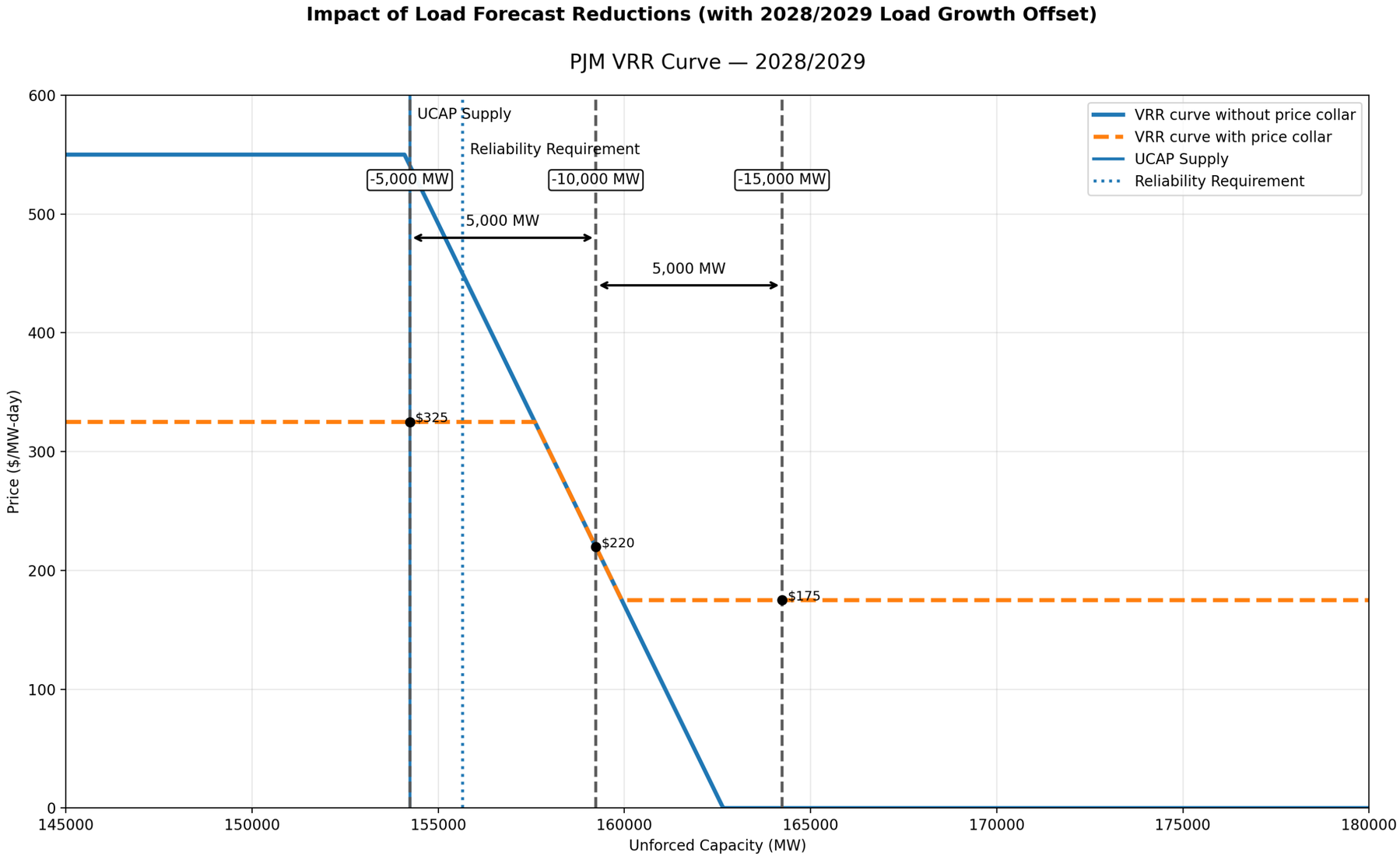
- *Given that most consumer capacity costs are tied directly to the BRA, ignoring the C&M and RBP purchases results in higher costs and violates the Ratepayer Protection Pledge & Joint Principles.*

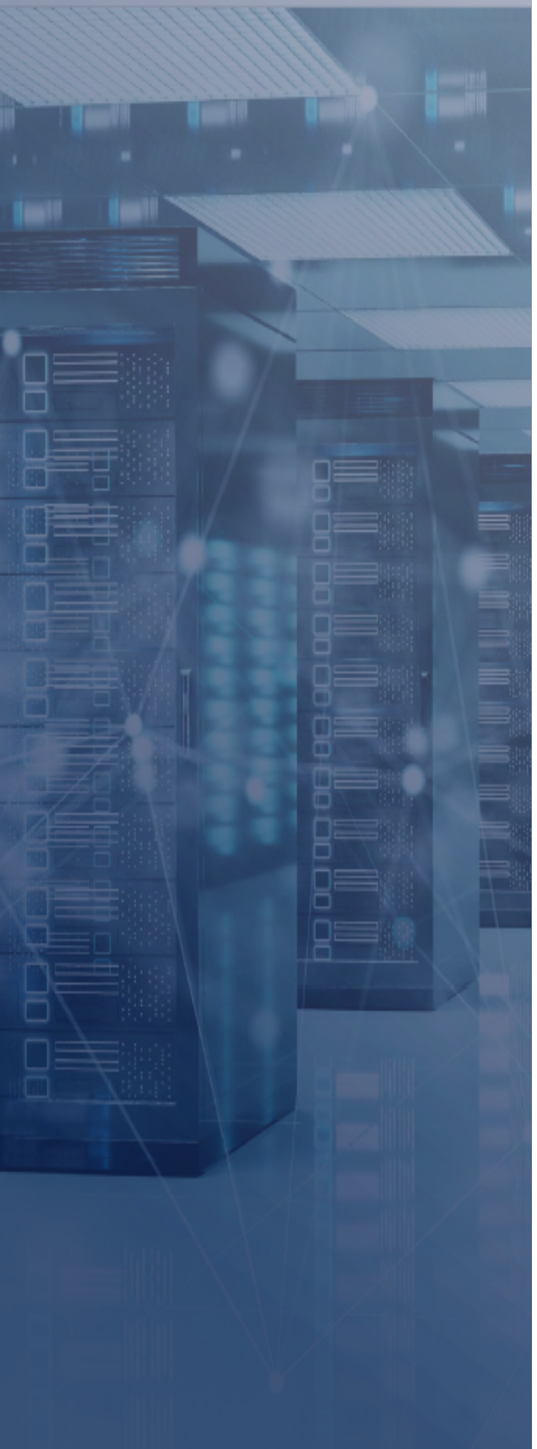
- Capacity should not be double-counted.
  - The goal of Connect & Manage is to substitute curtailment for additional investment in new capacity in economically-efficient manner.
  - We should also avoid sending price signals designed to attract new investment that is infeasible in the short-term.
  - The goal of Reliability Backstop Procurement is to eliminate reliability shortfall and transfer those investment signals directly to large loads.




2027/28 BRA with and without Incremental Load
160000
140000
120000
100000
80000
60000
40000
20000
0
Shortfall v. Surplus
Supply (BRA)
Load (BRA)
C&M Load (BRA)
Supply (Alt)
Load (Alt)
C&M Load (Alt)

Load Forecasting in a Time of Uncertainty





New LLAs Have No Special Entitlement to Forecasted Capacity

While honoring expectation interests is important, PJM has been clear that data centers do not have any contractual entitlement to specific forecasted load that was included in the Base Residual Auction (BRA).

- At the February 25 workshop PJM confirmed that the load forecast does not map to specific data centers, and that granularity is zonal.

- To illustrate this, if forecasted incremental data center load in the 2027-28 BRA is 13 GWs, and the total cleared quantity is 6 GWs short of the Reliability Requirement, that means forecasted data center load represents 7 GWs of the total cleared quantity.

- There is no way for the 7 GWs to be allocated to individual data centers because the load forecast does not map to specific data centers and no specific data centers will have participated in the BRA, other than those (potentially) in vertically integrated utilities or where the ESA expressly covers those things.

- There is no apparent solution to this problem other than the exclusion of forecasted data center load from the BRA, so that data centers would know the amount to seek to procure in the Reliability Backstop Procurement.