ERCOT Large Load Working Group (LLWG) Comments

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Introduction

We appreciate ERCOT's ongoing efforts and recognize the immense complexity of refining the Large Load Batch Study process. As the queue of large, highly flexible loads continues to grow, it is critical that ERCOT's interconnection framework aligns with the rapidly evolving software and market mechanisms designed to manage these assets. To ensure Batch 0 successfully integrates these loads without unnecessarily stranding grid capacity, creating duplicative study work for ERCOT staff, or stifling technological innovation, we respectfully submit the following comments focusing on Controllable Load Resource (CLR) optionality, SCED integration, and interim telemetry bridging.

Batch 0 Should Include the CLR Pathway and Retain Late-Stage Optionality

We strongly support ERCOT explicitly including the Controllable Load Resource (CLR) designation as a foundational pathway for projects entering Batch 0. Furthermore, we advocate that developers be allowed to retain the optionality to finalize their Firm vs. CLR megawatt allocation as late in the interconnection process as possible—specifically, up until the execution of the Large Load Interconnection Agreement (LLIA).

Because ERCOT has established that dropped capacity will not be dynamically re-allocated within a batch, retaining optionality does not hoard capacity from peer developers. Because dynamic models already study the boundary conditions of sudden load loss and dispatch down to Low Power Consumption (LPC), retaining optionality does not create duplicative or burdensome study requirements for ERCOT planning engineers. Finally, because CLRs are fully dispatchable by SCED, they act as a compliant grid buffer and pose zero risk to operational or outage planning.

Mechanically, enabling this optionality for Batch 0 is administratively simple. ERCOT does not need to rewrite the study parameters; it only needs to update the intake mechanism. ERCOT can accommodate this by simply adding a "Dual-Study (Firm/CLR) Optionality" checkbox within the Resource Integration and Ongoing Operations (RIOO) portal, or by accepting a standardized affidavit during the Batch 0 entry window. This allows the load to secure its place in the batch without prematurely locking its commercial election, all while ERCOT proceeds with its standard boundary-condition modeling.

Therefore, requiring a binding Firm vs. CLR election prior to the LLIA phase introduces rigidity without yielding corresponding engineering or planning benefits. Enabling this flexible intake naturally begs the question of how these massive, controllable resources will actually operate once they energize—which leads directly to our next point.

Leverage the 18-24 Month Construction Runway to Implement MOC for CLRs

ERCOT has correctly highlighted in recent working group presentations that the "Load-Only" CLR configuration is structurally the most straightforward and easiest to implement from a market perspective. The primary remaining hurdle to making this Load-Only configuration economically viable is the IT integration of Maximum Operating Capacity (MOC) bidding within SCED.

Fortunately, ERCOT has a massive, built-in timeline buffer to complete this IT update. As demonstrated in the data center master timeline recently presented to the LLWG by Crusoe Energy, the critical path for physical construction—from ERCOT approval to actual energization—spans a minimum of 18 to 24 months. Physical constraints, including Substation Construction, Long Lead Equipment (LLE) procurement, and GPU integration, dictate that the vast majority of Batch 0 projects will not be physically capable of drawing power until late 2027 or 2028.

Because the physical supply chain dictates a nearly two-year runway, developers should be allowed to confidently check the CLR optionality box in RIOO / sign an affidavit today. This 18-to-24-month construction window provides ERCOT the necessary runway to prioritize and deploy the MOC IT update. The framework is straightforward: select CLR optionality now, and sort the MOC software integration before energization. By the time these Batch 0 substations are physically capable of pulling load, the MOC mechanics can be natively integrated into SCED, replacing static curtailment assumptions with dynamic, price-responsive market participation.

While the timeline provides ample runway, we must account for potential IT deployment delays or scenarios where developers complete physical construction ahead of schedule.

To accommodate these early energizers without breaking existing SCED logic, ERCOT has two practical fallback options:

- Option 1: ERCOT could formally establish the MOC SCED integration as a condition precedent to commercial energization. Under this approach, ERCOT would simply adopt a rule stipulating that the CLR-designated portion of a Batch 0 project will not receive ERCOT approval for full commercial operations until the MOC IT update is live.
- Option 2: Market-Based Interim Mitigation. Alternatively, and more efficiently, ERCOT could allow these early-energizing CLRs to operate by "bidding the constraint cap." Under this interim framework, the load willingly accepts the risk of lambda-driven curtailment—meaning they acknowledge they could be dispatched down by system-wide price spikes not strictly associated with their localized constraints within the standard bidding window. To ensure this market exemption does not compromise local physical reliability, developers can pair this operating posture with localized, automated failsafes—which leads to our final recommendation.

Recognize Localized Telemetry Failsafes as a Bridge for Early Energization

To safely execute Option 2 without exposing the grid to thermal risk, ERCOT does not need to invent new market mechanisms or require bespoke, ultra-low-latency telecom infrastructure. ERCOT already possesses the regulatory framework to securely enable this interim market posture through Constraint Management Plans (CMPs).

We advocate that ERCOT allow Batch 0 developers to propose privately funded mitigation solutions to be formally adopted as localized CMPs. Specifically, if an early-energizing CLR is paired with a non-colocated Energy Storage Resource (BESS) in a virtual capacity sleeve arrangement, it can proactively guarantee that local thermal limits will not be breached by utilizing a standard telemetry "heartbeat."

Because transmission thermal constraints are governed by physical heat accumulation over minutes, sub-second latency is entirely unnecessary. This architecture can utilize standard, secure commercial telemetry. By employing a programmatic "watchdog" framework within the site’s Energy Management System (EMS), the data center expects a continuous heartbeat signal verifying the BESS is actively offsetting the constraint. A brief, predefined grace period (e.g., 10 seconds) can be established to account for standard internet packet loss, preventing unnecessary nuisance actions.

Critically, this architecture relies on deterministic, automated control logic rather than disruptive hardware trips. If the grace period expires without a verifiable heartbeat, the

site’s EMS programmatically defaults to a safe state. The load is automatically obligated to initiate a graceful, controlled ramp-down to its Low Power Consumption (LPC) baseline within the subsequent SCED interval. This automated action, verifiable during site commissioning, effectively mimics a standard 5-minute SCED curtailment instruction, protecting grid stability without inducing transient voltage shocks.

By adopting these private, automated failsafe architectures as formal CMPs, ERCOT can safely grant these specific CLRs a regulatory exclusion to "bid the offer cap" during normal operations. This provides ERCOT Operations with absolute physical reliability using standard, cost-effective telecom and software tools available today, gracefully bridging the gap until the MOC integration is officially rolled out.

Conclusion

By utilizing simple intake mechanisms (like a RIOO checkbox or affidavit) to preserve late-stage optionality for Load-Only CLRs and leveraging the 24-month construction runway to accelerate the MOC update to SCED, ERCOT can successfully process Batch 0 while unlocking gigawatts of flexible load.

We greatly appreciate ERCOT's leadership on this issue and look forward to working collaboratively with the LLWG to refine these mechanisms.