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| PGRR Number | [134](https://www.ercot.com/mktrules/issues/PGRR134) | PGRR Title | Interconnection Studies Reform for Dispatchable Loads |

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| Date | November 14, 2025 |

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| Market Segment | Not applicable |

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| Comments |

These comments to Planning Guide Revision Request (PGRR) 134 remove the originally proposed separate “CLR Election Study” construct in consideration of further discussion with utilities and system customer stakeholders. The comments reaffirm that the proposal to energize CLRs in ERCOT is an outcome pursued by the Interconnecting Large Load Entity (ILLE) upon receipt of the completed Large Load Interconnection Study (LLIS) announcing and identifying constraints. The purpose of the PGRR is to provide the most workable, cleanest bridge between the outcomes of a firm load study and the voluntary decision by the ILLE to use the ERCOT CLR registration process under Section 23 of the ERCOT Nodal Protocols to energize a nodal CLR. Provisions in this PGRR are designed to ensure that TSP and ERCOT conditions precedent to CLR energization are well articulated and standardized in the ERCOT Planning Guides.

Creating a linkage between the new LLIS process and the soon-to-be-available nodal CLR registration option in ERCOT is a reliability, transmission upgrades, and AI investment unlock for Texas. The proposal should motivate developers to invest in private studies of nodal congestion and dispatchability potential at constrained sites today, speed up TSP upgrades under negotiated interconnection agreements for projects that can safely energize at a nodal location as a CLR, and motivate more loads in ERCOT SCED to provide critical market-enabled demand response at a scale which makes sense for a grid that is set to onboard gigawatts of new firm load. Standing behind this principle is that ERCOT is the best market in the United States from an engineering and energy price formation standpoint to effectively provide an investment signal to developers of large loads that they can create privately management bankability of firm power delivery service and energize sooner to support grid-integrated operations pending queued upgrades of the power transmission system.

The proposal does not trigger any restudy of firm power studies (LLIS results), nor delay firm transmission upgrades identified in an LLIS and negotiated in a large load interconnection agreement: in fact the passage of PGRR134 along with prioritized implementation of ERCOT NPRR1188 may increase the speed at which local upgrades may be funded in the interconnection agreement to effectuate earlier energization of a CLR. The language below clarifies that the “no impairment” review for previously submitted Large Loads is performed as a condition of advancing to the ERCOT Quarterly Stability Assessment (QSA) milestone for the proposed CLR.

The proposal continues to include as modified by these comments, that in Real-Time operations, SCED governs CLR consumption; if curtailment is required for transmission security and CLR Energy Bids are insufficient, ERCOT may direct the TSP to curtail the load (including use of disconnects/breakers), which is consistent with current intentions to implement Senate Bill 6 and preexisting ERCOT and TSP reliability requirements. Interconnection Reliability Operating Limits (IROLs) or other limits that cannot be resolved by CLR redispatch will gate provisional energization under this approach, which may be determined as an outcome of a complete LLIS and addressed in advance of an ILLE’s attempt to register a CLR at the node in question under ERCOT Nodal Protocols Section 23. Private developers assume the risk of non-firm power delivery: PGRR134 provides a bankable pathway for private parties energizing large load campuses to make informed choices on firming power needs with a stack of preferred dispatachability solutions, incented by earlier energization in ERCOT and by the opportunity to take advantage of gigawatts of generation produced in ERCOT at non-peak hours.

Because ERCOT SCED cannot directly observe or manage non-thermal criteria such as voltage and stability margins, this comment redlines PGRR134 to note that LLIS-identified non-thermal limits and associated transmission or reactive projects remain addressed through the ERCOT/TSP planning and facilities process and, where designated as gating to energization of a CLR, must be completed before granting a Production Load Date. Those projects can be advanced in parallel and may function as a transmission-construction acceleration path on a case-by-case basis.

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| Revised Cover Page Language |

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| **Revision Description** | This PGRR allows Interconnecting Large Load Entities (ILLEs) to be provisionally energized after completion of the Large Load Interconnection Study (LLIS), when the load is registered to operate as a nodal, SCED-dispatchable Controllable Load Resource (CLR) under NPRR1188. Planning remains unchanged: LLIS identifies the transmission facilities required to provide firm service, and those upgrades continue on normal timelines.  In Real-Time operations, SCED governs CLR consumption; if curtailment is required for transmission security and CLR Energy Bids are insufficient, ERCOT may direct the TSP to curtail the load (including use of disconnects/breakers). Interconnection Reliability Operating Limits (IROLs) or other non-thermal limits that cannot be resolved by CLR redispatch and require completed of projects identified in the LLIS will gate provisional energization. |
| **Justification of Reason for Revision and Market Impacts** | NPRR1188, approved by the Public Utility Commission of Texas (PUCT) in November 2024 with a 12–24 month implementation window, changes dispatch and pricing for CLRs that are not Aggregate Load Resources (ALRs), to advance utilization of Load Resources for grid reliability. It focuses on market design and technical measures that make price signals to load transparent. The approved description states that Resources will be dispatched “using their locational nodal shift factor,” which “is essential for efficient congestion management.” ILLEs that elect CLR status must be assigned a Resource Node Settlement Point and must follow Security-Constrained Economic Dispatch (SCED) Base Points while consuming; OUTL may be telemetered only when the CLR is truly out and consuming 0 MW.  ERCOT has now created a durable incentive for loads to contribute to reliability as CLRs. To close the loop for successful reliability, load energization, and Customer outcomes for all loads constrained by base case and N-1 violations today. The Planning Guide should specify a consistent, repeatable provisional energization solution to bridge between the outcome of LLISs and early energization of a CLR pending firm transmission upgrades; provided the load is registered to operate as a nodal, SCED-dispatchable CLR with certain caveats designed to protect reliability outcomes, the CLR should be permitted earlier energization.  Allowing new loads to be studied as CLRs today increases planning efficiency and targets earlier justification of ratepayer funded transmission upgrades, while giving loads faster energization with delivery risk borne by the Customer that chose to do so. This approach aligns with NPRR1188’s CLR operational framework and should be in force before any electing load studied now is energized.  On October 23, 2025, ERCOT presentation at the PUCT Open Meeting emphasized need to accelerate the implementation of NPRR1188 immediately after RTC effort. ERCOT stated that “Large Loads which are flexible could utilize available transmission capacity if they are willing to curtail under certain conditions.” It is urgent that this PGRR advance in parallel to ensure seamless integration and planning alignment. Advancing this PGRR in parallel ensures planning alignment with NPRR1188: LLIS remains the firm planning basis, provisional energization is permitted only for nodal CLRs, SCED governs dispatch and curtailment in Real-Time, and IROLs or other limits requiring project upgrades identified in the LLIS will gate provisional energization. |

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| Revised Proposed Guide Language |

**2.1 DEFINITIONS**

**Manual System Adjustment**

Operator actions, with consequences allowed by Section 4, Transmission Planning Criteria, in response to an outage in the ERCOT System, including, but not limited to circuit switching or changes to schedules of Controllable Load Resources (CLRs), Generation Resources, but excluding the physical repair or replacement of any damaged equipment.

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| ***[PGRR118: Replace the definition “Manual System Adjustment” above with the following upon system implementation of NPRR1246:]***  **Manual System Adjustment**  Operator actions, with consequences allowed by Section 4, Transmission Planning Criteria, in response to an outage in the ERCOT System, including, but not limited to circuit switching or changes to schedules of Controllable Load Resources (CLRs), Generation Resources and Energy Storage Resources (ESRs), but excluding the physical repair or replacement of any damaged equipment. |

**4.1.1.1 Planning Assumptions**

(1) A contingency loss of an element includes the loss of an element with or without a single line-to-ground or three-phase fault.

(2) A common tower outage is the contingency loss of a double-circuit transmission line consisting of two circuits sharing a tower for 0.5 miles or greater.

(3) Unavailability of a single generating unit includes an entire Combined Cycle Train, if no part of the train can operate with one of the units Off-Line as provided in the Resource Registration data.

(4) The contingency loss of a single generating unit shall include the loss of an entire Combined Cycle Train, if that is the expected consequence.

(5) The following assumptions may be applied to planning studies:

(a) Reasonable variations of load forecast, including forecasted load growth based on Substantiated Load;

(b) Reasonable variations of generation commitment and dispatch applicable to transmission planning analyses on a case-by-case basis may include, but are not limited to, the following methods:

(i) Production cost model simulation, security constrained optimal power flow, or similar modeling tools that analyze the ERCOT System using hourly generation dispatch assumptions;

(ii) Modeling of high levels of intermittent generation conditions; or

(iii) Modeling of low levels of or no intermittent generation conditions.

(6) Assumed Direct Current Tie (DC Tie) imports and exports will be curtailed as necessary to meet reliability criteria in planning studies.

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| ***[PGRR115: Insert paragraph (7) below upon system implementation of NPRR1234 and renumber accordingly:]***  (7) Each Large Load included in a planning study shall be set to a level of Demand consistent with the current Load Commissioning Plan (LCP), if applicable. |

(7) Manual System Adjustments shall not increase the amount of consequential load loss following a common tower outage, or the contingency loss of a single generating unit, transmission circuit, transformer, shunt device, flexible alternating current transmission system (FACTS) device, or DC Tie Resource or DC Tie Load, with or without a single line-to-ground fault.

(8) Upon completion of the LLIS, and upon the ILLE’s notice that it is ready to take service, the load may begin consuming prior to completion of the identified transmission facilities, provided the load has registered and is operating as a Controllable Load Resource (CLR). Provisional energization under this paragraph is subject to the following:

(a) Prior to advancing the proposed CLR to the QSA milestone, the Interconnecting Large Load Entity (ILLE) must provide the ERCOT Load Resource Registration Data Request Form to enable the TSP to determine that the request does not impair any previously submitted Large Load’s requested energization date or capacity.

(b) The load must participate in SCED as a CLR at all times it is consuming, so that SCED manages the load’s consumption level consistent with system constraints. A CLR is either ON and following SCED, or OUTL (Off-Line) at 0 MW.

(c) Price impacts and load curtailment required to prevent unacceptable thermal loadings will be determined by ERCOT during Real-Time operations and would depend on the system conditions existing at the time the facility is operating as a CLR.

(d) If curtailing the load would contribute to transmission security and CLR Energy Bids are insufficient to effect curtailment, ERCOT may direct the TSP to curtail the load, including by the use of disconnect devices or breaker operations; if time permits, ERCOT will inform the CLR’s QSE of such direction.

(e) The LLIS Report may identify limits, including Interconnection Reliability Operating Limits (IROLs) and non-thermal limits such as voltage or stability criteria that cannot be resolved via CLR redispatch; these may require the TSP and/or ERCOT to undertake and complete identified projects which must be implemented as a condition of energization.

(f) Registration and operation as a CLR under this paragraph does not waive or defer implementation of LLIS-identified non-thermal projects the TSP determines must be in-service prior to CLR energization; those projects are implemented under the applicable interconnection or facilities agreement between the ILLE and the TSP and may proceed in parallel with CLR registration and other conditions of energization.

(g) Operating as a CLR under this paragraph does not trigger any restudy of LLIS results.

(h) For transmission planning purposes, the proposed CLR will be treated as any other firm Load. Transmission upgrades identified in the LLIS remain required and continue on normal timelines.

(9) A CLR registered for the purposes of paragraph (8) above may choose to be retired at the Resource Node if the network upgrades identified by the LCP are completed or the TSP otherwise determines there are not unanticipated system impacts, or may choose to continue to operate as a CLR after the network upgrades are completed.

**4.1.1.7 Minimum Deliverability Criteria**

(1) In conducting its planning analyses, ERCOT and each TSP shall ensure that an ERCOT-defined minimum percentage of capacity of each Resource described in paragraph (3) below can be delivered to serve peak system Load while meeting the following reliability criteria:

(a) Category P0, P1, P2-1, P3, and P7 planning events from the NERC Reliability Standard addressing Transmission System Planning Performance Requirements; and

(b) The ERCOT-specific reliability performance criteria included in Section 4.1.1.2, Reliability Performance Criteria.

(2) The minimum percentage of capacity referenced in paragraph (1) above shall be applied to each Resource’s applicable Seasonal Net Max Sustainable Rating submitted through the Resource Registration process.

(3) The minimum deliverability condition described in paragraph (1) applies to the following Resources:

(a) Any Generation Resource utilizing combined cycle, steam turbine, combustion turbine, hydro, or reciprocating engine technology; or

(b) Any Energy Storage Resource (ESR) meeting an ERCOT-defined minimum duration threshold.

(4) Resources other than those described in paragraph (3) above may be redispatched as necessary to meet the requirements of this Section.

(5) ERCOT-proposed revisions to the minimum percentage of capacity or minimum duration threshold for ESRs used to implement the requirements of this Section will be recommended by the Technical Advisory Committee (TAC) and approved by the ERCOT Board.

(a) ERCOT will post the current values approved by the ERCOT Board pursuant to paragraph (5) above on the ERCOT website.

**6.1 Steady-State Model Development**

(1) To adequately simulate steady-state system conditions, it is necessary to establish and maintain steady-state data and simulation-ready study cases in accordance with the ERCOT Steady State Working Group Procedure Manual. These case models, known as steady-state base cases, shall contain appropriate equipment characteristics and system data, and shall represent projected system conditions that provide a starting point for each required season and year.

(a) The Annual Planning Model base cases, which represent the annual peak load conditions, as prescribed in Protocol Section 3.10.2, Annual Planning Model, shall be developed annually, updated on a biannual basis, and may be updated as needed on an interim basis. Each Annual Planning Model base case, biannual updates, and off-cycle updates shall be posted on the Market Information System (MIS) Secure Area to ensure availability of the most accurate steady-state base cases.

(b) Additional steady-state base cases, such as seasonal base cases, shall also be developed annually, updated on a biannual basis, and may also be updated as needed on an interim basis. These derivative base cases, biannual updates, and off-cycle updates shall be posted on MIS Secure Area to ensure availability of the most accurate steady-state base cases.

(c) Off-cycle updates not associated with the biannual update shall be posted in a timely manner and include:

(i) Corrections to significant errors discovered in modeling or major changes in operation configuration that affect the steady-state base cases; or

(ii) A significant change in the scope or timing of a transmission project or the development of a new transmission project that impacts either of the next two summer base cases.

(d) Off-cycle updates that are posted as described in paragraphs (1)(a) through (c) above shall be in the form of a Power System Simulator for Engineering (PSS/E) formatted incremental change file.

(e) All steady-state base cases and incremental change files on the MIS Secure Area shall be available for use by Market Participants.

(f) The ERCOT Steady State Working Group Procedure Manual describes each base case that is required to be built. The schedule for posting all steady-state base cases shall be made available on the MIS Secure Area.

(2) Transmission Service Providers (TSPs) and ERCOT shall develop the steady-state base cases. The steady-state base cases are derived from the Network Operations Model to ensure consistency of key characteristics, including Ratings, impedance and connectivity for Transmission Facilities that are common between the Network Operations Model and each steady-state base case. Minor differences between the models will occur for several reasons. For example:

(a) Additional detailed modeling may be added to the converted Network Operations Model for planning purposes.

(b) Future projects are added to the converted Network Operations Model that do not exist in the Network Operations Model past the model build date used to extract a snapshot from the Network Operations Model.

(3) Using the Network Model Management System (NMMS), ERCOT and TSPs shall create steady-state models that represent current and planned system conditions from the following data elements:

(a) Each TSP, or its Designated Agent, shall provide its respective transmission network steady-state model data, including load data.

(b) Each TSP, or its Designated Agent, shall not include the impact of energy sources connected to the Distribution System that are registered with ERCOT and required to provide telemetry including, but not limited to, Distribution Generation Resources (DGRs), Distribution Energy Storage Resources (DESRs), or Settlement Only Distribution Generators (SODGs) in its submitted Load data as negative loads or as embedded reductions in the submitted load forecast.

(c) Each TSP, or its Designated Agent, shall include the impact of energy sources connected to the Distribution System that are not registered with ERCOT in its submitted Load data. The methodology used shall be consistent across all TSPs and described in the ERCOT Steady State Working Group Procedure Manual.

(d) ERCOT shall utilize the latest available Resource Entity and Private Use Network model data submitted to ERCOT by the Resource Entity and the Private Use Network owners through the Resource Registration process for Resource Entities.

(e) ERCOT shall utilize proposed Controllable Load Resource (CLR) and Generation Resource model data provided by the Interconnecting Entity (IE) during the generation interconnection process in accordance with Section 5, Generator Interconnection or Modification.

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| ***[PGRR118: Replace paragraph (e) above with the following upon system implementation of NPRR1246:]***  (e) ERCOT shall utilize proposed Controllable Load Resource (CLR), Generation Resource and Energy Storage Resource (ESR) model data provided by the Interconnecting Entity (IE) during the generation interconnection process in accordance with Section 5, Generator Interconnection or Modification. |

(f) ERCOT shall determine the operating state of CLRs, ESRs, and Generation Resources (MW, MVAr) using a security-constrained economic dispatch tool.

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| ***[PGRR118: Replace paragraph (f) above with the following upon system implementation of NPRR1246:]***  (f) ERCOT shall determine the operating state of CLRs, Generation Resources, and ESRs (MW, MVAr) using a security-constrained economic dispatch tool. |

(g) ERCOT shall determine the import/export levels of asynchronous transmission interconnections based on historical data.