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| PGRR Number | [107](https://www.ercot.com/mktrules/issues/PGRR107) | PGRR Title | Related to NPRR1180, Inclusion of Forecasted Load in Planning Analyses |

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| Date | December 13, 2023 |

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| Market Segment | Not Applicable |

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| Comments |

ERCOT submits these comments to revise language proposed by Oncor Electric Delivery Company LLC (“Oncor”) in its 10/13/23 comments addressing Load data provided by a Transmission Service Provider (TSP).

As an initial matter, ERCOT disagrees with Oncor’s assertion that “ERCOT should accept at face value any forecasted Load provided by a [TSP].” As explained in ERCOT’s 12/13/23 comments to Nodal Protocol Revision Request (NPRR) 1180, Inclusion of Forecasted Load in Planning Analyses, that conclusion does not appear to be required by the Public Utility Commission of Texas’s (PUCT’s) rules or by any statute, including recent amendments to Public Utility Regulatory Act (PURA) section 37.056(c-1) introduced by House Bill (HB) 5066.[[1]](#footnote-1) As amended by HB 5066, section 37.056(c-1) requires the PUCT only to “consider” TSP-provided Load values—including those that may not be supported by an interconnection agreement—in determining whether to grant a Certificate of Convenience and Necessity (CCN). This provision does not require the PUCT to *grant* a CCN based on such Load values; nor does it require ERCOT to rely on those values in determining whether to endorse such a project based on a finding of need or in evaluating transmission needs as part of the Regional Transmission Plan (RTP). Moreover, the PUCT’s rules require that a CCN application for a reliability project must be substantiated by “quantifiable evidence” of Load growth. 16 Tex. Admin. Code § 25.101(b)(3)(A)(ii)(II).

Nevertheless, ERCOT is comfortable with Oncor’s proposal to provide greater specificity of the information ERCOT may rely on as “quantifiable evidence” to establish Load values used for purposes of its planning analyses, provided the information is credible. ERCOT therefore generally agrees with Oncor’s additions to Paragraph (1)(e) of Section 3.1.7, Steady State Transmission Planning Load Forecast, which clarify ERCOT’s existing discretion to use a TSP-provided Load forecast that exceeds the ERCOT 90/10 forecast plus the boundary threshold, to recognize that such a forecast may be based on “historical Load, and any quantifiable evidence supporting the forecasted Load growth,” with such “quantifiable evidence” to include “additional Load seeking interconnection an independent third-party Load forecast provided by a TSP or other entity, a letter from a TSP officer attesting to such Load growth, or Customer agreements other than an interconnection agreement provided by a TSP to ERCOT,” among other possible evidence. However, ERCOT proposes further revisions to require that ERCOT must find the TSP-provided Load value to be credible as a condition for using that value in its planning analyses. ERCOT believes credibility of forecast information is already implicit in its existing discretion to use a higher, TSP-supplied forecast but should be explicitly stated in this provision, given the potential for Load forecast information to drive ERCOT’s need finding for a Regional Planning Group (RPG) project submission or in its RTP. Additional detail concerning the impact of ERCOT’s credibility determination on ERCOT’s consideration of RPG projects is described in ERCOT’s proposed revisions to paragraph (3)(a) of Protocol Section 3.11.4.9, Regional Planning Group Acceptance and ERCOT Endorsement, in its 12/13/23 comments to NPRR1180.

In keeping with the revisions to Section 3.1.7, ERCOT has also proposed revisions to paragraph (1) of Section 3.1.3, Project Evaluation, to reflect that any TSP-supplied Load values should be credible. Similar revisions to paragraph (5) of Section 4.1.1.1, Planning Assumptions, are unnecessary because the language already requires that the Load additions be “reasonable.”

As further explained in ERCOT’s 12/13/23 comments to NPRR1180, ERCOT disagrees that it should be required to endorse any project that is supported by neither an interconnection agreement nor other quantifiable evidence of Load growth. TSP-submitted Load forecast information that ERCOT has found not to be credible would not be considered “quantifiable evidence” that ERCOT would rely upon to identify transmission needs.

In these comments, ERCOT also removes paragraph (5) in Section 3.1.3 because that language—addressing the Load forecasts to be used in ERCOT’s independent reviews of Tier 1 and 2 projects—is redundant of Paragraph (1)(e) of Section 3.1.7, which addresses ERCOT’s use of TSP-supplied Load forecasts that exceed ERCOT’s 90/10 forecast plus the specified boundary threshold.

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| Revised Cover Page Language | |
| Planning Guide Sections Requiring Revision | 3.1.2.1, All Projects 3.1.3, Project Evaluation  3.1.4.2, Use of Regional Transmission Plan 3.1.7, Steady State Transmission Planning Load Forecast 4.1.1.1, Planning Assumptions |
| Revision Description | This Planning Guide Revision Request (PGRR) aligns the Planning Guide with NPRR1180. PGRR107 revises the Planning Guide to address recent amendments to P.U.C. Subst. R. 25.101, Certification Criteria, which became effective on December 20, 2022. Specifically, PGRR107 incorporates the requirement in P.U.C. Subst. R. 25.101(b)(3)(A)(ii)(II) for any review of project need conducted by ERCOT to incorporate the historical Load, forecasted Load growth, and additional Load seeking interconnection, in ERCOT’s analysis, while recognizing that ERCOT’s Regional Transmission Plan will include only that Load that ERCOT has determined to be credibly supported by quantifiable evidence of Load growth. PGRR107 also requires a Regional Planning Group (RPG) project submitter to provide such information to ERCOT, when available, for inclusion in ERCOT’s planning analyses. |

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| Proposed Guide Language Revision |

**3.1.2.1 All Projects**

(1) The submittal of each transmission project (60 kV and above) for RPG Project Review should include the following elements:

(a) The proposed project description including expected cost, feasible alternative(s) considered, transmission topology and Transmission Facility modeling parameter data, and all study cases used to generate results supporting the need for the project in electronic format (powerflow data should be in PTI Power System Simulator for Engineering (PSS/E) RAWD format). Also, the submission should include accurate maps and one-line diagrams showing locations of the proposed project and feasible alternatives;

(b) Identification of the SSWG, Dynamics Working Group (DWG), or Regional Transmission Plan powerflow cases used as a basis for the study and any associated changes that describe and allow accurate modeling of the proposed project;

(c) Description and data for all changes made to the SSWG base cases or Regional Transmission Plan cases used to identify the need for the project, such as Generation Resource unavailability and area peak Load forecast;

(d) A description of the reliability and/or economic problem that is being solved;

(e) Information that supports any Load values that differ from the Load forecast used in the base cases identified in (b), above, including any relevant historical Load information or quantifiable evidence supporting the forecasted Load growth and additional Load seeking interconnection in the project area;

(f) A description of the Subsynchronous Resonance (SSR) impact of the proposed project to the generation facilities in the system pursuant to Protocol Section 3.22.1, Subsynchronous Resonance Vulnerability Assessment, and potential SSR Countermeasure plan for any identified SSR vulnerability, if applicable;

(g) Desired/needed in-service date for the project, and feasible in-service date, if different;

(h) The phone number and email address of the single point of contact who can respond to ERCOT and RPG participant questions or requests for additional information necessary for stakeholder review; and

(i) Analysis of rejected alternatives, including cost estimates, and other factors considered in the comparison of alternatives with the proposed project.

(2) Both transmission and distribution solutions to performance deficiencies may be considered where applicable.

(3) If there is any other information, not included above, that the submitting party believes is relevant to consideration of the need for any submitted project, the submitting party should include that information in the project submission.

***3.1.3 Project Evaluation***

(1) ERCOT and the RPG shall evaluate proposed transmission projects using a variety of tools and techniques as needed to ensure that the system is able to meet applicable reliability criteria in a cost-effective manner. For most proposed projects, several alternatives will be identified to meet the reliability criteria or other performance improvement objectives that the proposed project is designed to meet. The project alternative with the expected lowest cost over the life of the project is generally recommended, subject to consideration of the expected long-term system needs in the area, including, as applicable, any evidence of forecasted Load growth and Load seeking interconnection that may not have signed an agreement, if deemed credible by ERCOT, and subject to consideration of the relative operational impacts of the alternatives.

(2) In some cases, one alternative may be to dispatch the system in such a way that all reliability requirements are met, even without the proposed transmission project or any transmission alternative, resulting in a less efficient dispatch than what would be required to meet the reliability requirements if the proposed project was in place. Consideration of the merits of this alternative relative to the proposed transmission project is more complex. To facilitate the discussion and consideration of these alternatives, ERCOT has adopted certain definitions and practices, described in paragraph (4) of Protocol Section 3.11.2, Planning Criteria, and Sections 3.1.3.1, Definitions of Reliability-Driven and Economic-Driven Projects, and 3.1.3.2, Reliability-Driven Project Evaluation below.

(3) In conducting an independent review of any project, ERCOT may, in its discretion, make adjustments to the planning case to ensure that the case reaches a solution. When conducting an independent review of any project classified as Tier 1 pursuant to Protocol Section 3.11.4, Regional Planning Group Project Review Process, ERCOT must provide reasonable advance notice to the RPG of any proposed adjustments and an opportunity for stakeholder comment on them.

(4) As part of its independent review of any project classified as Tier 1 pursuant to Protocol Section 3.11.4, ERCOT shall:

(a) Perform a generation sensitivity analysis. The generation sensitivity analysis will evaluate the effect that proposed Generation Resources in or near the study area will have on a recommended transmission project. Generation Resources that have signed Standard Generation Interconnection Agreements (SGIAs) but were not included in the study cases because they did not meet all of the requirements for inclusion in the cases pursuant to Section 6.9, Addition of Proposed Generation to the Planning Models, will be included in the sensitivity analysis. ERCOT shall not consider the results of the generation sensitivity analysis in determining project need during its independent review of the project; and

(b) Evaluate impacts related to the Load scaling used in the study on any constraints resulting in project recommendations. The results of this evaluation shall be included in the final recommendations in the independent review.

(5) ERCOT’s independent review shall incorporate and consider any information provided by the RPG project submitter regarding the historical Load and any quantifiable evidence of the forecasted Load growth and additional Load seeking interconnection in the project area that may not have signed an agreement, and will also include Load levels and Load additions from other TSPs affected by the project, as provided by the RPG project submitter. **3.1.4.2 Use of Regional Transmission Plan**

(1) If a project submitted for RPG review is included in the Regional Transmission Plan, and no changes are identified which would affect the need for the proposed project through the comment period described in Section 3.1.5, Regional Planning Group Comment Process, then the Regional Transmission Plan may serve as the ERCOT Independent Review of the proposed project.

(2) Tier 1, 2, and 3 projects that are included in the Regional Transmission Plan should be submitted for RPG Project Review at an appropriate lead time. Generally, this lead time should be sufficient to allow the review to be completed before the TSP reaches the decision point at which it must initiate the engineering and procurement in order to meet the required in-service date, but not farther in advance than is necessary. In general, these lead times will be three to four months for Tier 3 projects and six to seven months for Tier 1 and 2 projects.

(3) Tier 1, 2, and 3 projects that are included in the Regional Transmission Plan but do not reach this decision point before the development of the next year’s Regional Transmission Plan begins will be removed from the case used to develop the Regional Transmission Plan and will be re-evaluated as a part of the development of this subsequent Regional Transmission Plan.

***3.1.7*** ***Steady State Transmission Planning Load Forecast***

(1) ERCOT shall use the following process for determining the Load level to be used in the starting base cases for the Regional Transmission Plan and in the steady-state evaluation of a Tier 1 or Tier 2 project pursuant to Protocol Section 3.11.4, Regional Planning Group Project Review Process:

(a) ERCOT will compare the ERCOT 90/10 Load forecast with the summed SSWG bus-level Load forecast for each Weather Zone.

(b) If the ERCOT 90/10 Load forecast is higher, ERCOT will use this forecast for the Weather Zone.

(c) If the SSWG Load forecast is higher than or equal to the ERCOT 90/10 Load forecast, but below the ERCOT 90/10 Load forecast plus a boundary threshold determined in accordance with paragraph (f) below, ERCOT will use the SSWG Load forecast for the Weather Zone.

(d) If the SSWG Load forecast is higher than or equal to the ERCOT 90/10 Load forecast plus the boundary threshold, ERCOT will use the ERCOT 90/10 Load forecast plus the boundary threshold for the Weather Zone.

(e) If a TSP(s) believes that the ERCOT 90/10 Load forecast plus the boundary threshold does not adequately represent the Weather Zone or an area within the Weather Zone, the TSP(s) may present ERCOT with additional information to justify using a higher Load forecast, including the SSWG Load forecast, for that Weather Zone. This may consist of information regarding historical Load and any quantifiable evidence supporting forecasted Load growth and additional Load seeking interconnection. Such information may include, but is not limited to, an independent third-party Load forecast provided by a TSP or other entity, a letter from a TSP officer attesting to such Load growth, or Customer interconnection agreements or other agreements provided by a TSP to ERCOT. ERCOT, in its sole discretion, may choose to use a higher Load forecast than indicated in paragraph (d) above if it reasonably determines that the Load forecast indicated in paragraph (d) above does not adequately represent the Weather Zone or an area within the Weather Zone and it determines that the higher Load forecast proposed by the TSP is credible. If ERCOT uses a Load forecast higher than the ERCOT 90/10 Load forecast plus the boundary threshold in the evaluation of a Tier 1 project, ERCOT must explain and document the basis for that choice, using aggregated information as needed to shield Protected Information, in its independent review.

(f) ERCOT-proposed revisions to the boundary threshold used to implement the requirements of this section will be recommended by the Technical Advisory Committee (TAC) and approved by the ERCOT Board.

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 and any additional Load seeking interconnection in the project area that may not have signed an agreement;

(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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| ***[PGRR098: Insert paragraph (7) below upon system implementation:]***  (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, FACTS device, or DC Tie Resource or DC Tie Load, with or without a single line-to-ground fault. |

1. Tex. H.B. 5066, 88th Leg., R.S. (2023). [↑](#footnote-ref-1)