|  |  |  |  |
| --- | --- | --- | --- |
| NPRR Number | [1247](https://www.ercot.com/mktrules/issues/NPRR1247) | NPRR Title | Incorporation of Congestion Cost Savings Test in Economic Evaluation of Transmission Projects |
|  | |  | |
| Date | | October 23, 2024 | |
|  | |  | |
| Submitter’s Information | | | |
| Name | | Alexandra Miller; Ajay Pappu; Kat Patrick (Joint Commenters) | |
| E-mail Address | | [alexandra.miller@edf-re.com](mailto:alexandra.miller@edf-re.com);  [apappu@invenergy.com](mailto:apappu@invenergy.com);  [kat.patrick@patternenergy.com](mailto:kat.patrick@patternenergy.com) | |
| Company | | EDF Renewables; Invenergy; Pattern Energy | |
| Phone Number | | Alexandra Miller 615-420-0471  Ajay Pappu 312-582-1772  Kat Patrick 973-906-4275 | |
| Cell Number | |  | |
| Market Segment | | Independent Generator (IG) | |

|  |
| --- |
| Comments |

EDF Renewables, Invenergy, and Pattern Energy (collectively, “Joint Commenters”) appreciate the opportunity to comment on Nodal Protocol Revision Request (NPRR) 1247.

**Joint Commenters endorse and submit these comments on top of the 10/18/24 comments of Reliant Energy Retail Services LLC (Reliant).**

Reliant’s proposed amendments to NPRR1247 improve the transparency of the process and provide additional details and guardrails.

**Joint Commenters recommend codifying ERCOT practices by pointing to existing white papers until the Protocols and/or Planning Guide are updated with an optimal level of detail.**

The Planning Guide currently contains details about *reliability* analyses and criteria, and Planning Guide Revision Request (PGRR) 117, Addition of Resiliency Assessment and Criteria to Reflect PUCT Rule Changes, proposes adding a section describing the *resiliency* analysis and criteria. This leaves a distinct gap in the Planning Guide with no details on *economic* analyses and criteria. Unfortunately, NPRR1247 does not have a companion PGRR to add details of the economic planning study processes. A simple temporary solution is to reference the white papers that do currently exist. This will increase transparency while still allowing for future updates to the details of the methodology as needed.

There are multiple ways ERCOT staff could choose to document these process details in the future. Either the Protocols could include additional details, the Planning Guide could be completed and include a section on economic planning, or a procedure manual could be developed for economic procedures. When any of these are implemented in the future, it will be straightforward to include in the associated NPRR to strike the sentences referencing white papers.

The Planning Working Group (PLWG) is the appropriate forum to discuss current and proposed methodology details and allow for stakeholders to support ERCOT staff to improve processes with a wide range of industry experience, as well as improve the transparency and communication with stakeholders impacted by the results of the planning process.

**Joint Commenters request clarification of the threshold for engaging in weather and outage sensitivities.**

Joint Commenters previously proposed a new paragraph (7) to point to the current process for the inclusion of weather scenarios and transmission outage sensitivities in certain economic project evaluations and note that the process will apply to both tests. Based on ERCOT’s verbal response in PLWG, the change of the threshold to 10% is removed. However, Joint Commenters request that ERCOT staff put in reply comments the correct interpretation of the phrase, "If the B/C ratio for the transmission project is within +/- 5% of the economic criteria...", as referenced in the white paper, Impact of Weather Uncertainty and Transmission Outages on Economic Project Evaluations. This seems simple, however, it is an ambiguous statement that could be interpreted, for example if the criteria were 15%, as meaning either 10-20% or 14.25%-15.75%. The referenced white paper can include an example in future versions to add clarity.

|  |
| --- |
| Revised Cover Page Language |

None

|  |
| --- |
| Revised Proposed Protocol Language |

3.11.2 Planning Criteria

(1) ERCOT and Transmission Service Providers (TSPs) shall evaluate the need for transmission system improvements and shall evaluate the relative value of alternative improvements based on established technical and economic criteria.

(2) The technical reliability criteria are established by the Planning Guide, Operating Guides, and the North American Electric Reliability Corporation (NERC) Reliability Standards. ERCOT and TSPs shall strongly endeavor to meet these criteria, identify current and future violations thereof and initiate solutions necessary to ensure continual compliance.

(3) ERCOT shall attempt to meet these reliability criteria as economically as possible and shall actively study the need for economic projects to meet this goal.

(4) For economic projects, the net economic benefit of a proposed project, or set of projects, will be assessed over the project’s life based on the net benefit that is reasonably expected to accrue from the project as demonstrated through the production cost savings test or the congestion cost savings test.

The current set of financial assumptions upon which the revenue requirement calculations for these tests are based will be reviewed annually, updated as necessary by ERCOT, and posted on the Market Information System (MIS) Secure Area. The expected economic benefits are based on chronological simulations of the security-constrained unit commitment and economic dispatch of the generators connected to the ERCOT Transmission Grid to serve the expected ERCOT System Load over the planning horizon, comparing simulations with and without the project. These market simulations are intended to provide a reasonable representation of how the ERCOT System is expected to be operated over the simulated time period. From a practical standpoint, it is not feasible to perform these simulations for the entire 30 to 40 year expected life of the project. Therefore, the economic benefits are projected over the period for which simulations are feasible, which is the planning horizon established in Planning Guide Section 3.1.1.2, Regional Transmission Plan, and a qualitative assessment is made of whether the factors driving the economic benefits due to the project can reasonably be expected to continue. If ERCOT must add generation to the planning models that does not satisfy the requirements of Planning Guide Section 6.9, Addition of Proposed Generation to the Planning Models, in order to address a supply and demand deficiency, no transmission project can be approved either through the production cost savings test or the congestion cost savings test if the addition of that generation is the primary reason for either economic criterion being met.

|  |
| --- |
| ***[NPRR1183: Replace paragraph (4) above with the following upon system implementation:]***  (4) For economic projects, the net economic benefit of a proposed project, or set of projects, will be assessed over the project’s life based on the net benefit that is reasonably expected to accrue from the project as demonstrated through the production cost savings test or the congestion cost savings test. The current set of financial assumptions upon which the revenue requirement calculations for these tests are based will be reviewed annually, updated as necessary by ERCOT, and posted on the ERCOT website. The expected economic benefits are based on chronological simulations of the security-constrained unit commitment and economic dispatch of the generators connected to the ERCOT Transmission Grid to serve the expected ERCOT System Load over the planning horizon, comparing simulations with and without the project. These market simulations are intended to provide a reasonable representation of how the ERCOT System is expected to be operated over the simulated time period. From a practical standpoint, it is not feasible to perform these simulations for the entire 30 to 40 year expected life of the project. Therefore, the economic benefits are projected over the period for which simulations are feasible, which is the planning horizon established in Planning Guide Section 3.1.1.2, Regional Transmission Plan, and a qualitative assessment is made of whether the factors driving the economic benefits due to the project can reasonably be expected to continue. If ERCOT must add generation to the planning models that does not satisfy the requirements of Planning Guide Section 6.9, Addition of Proposed Generation to the Planning Models, in order to address a supply and demand deficiency, no transmission project can be approved either through the production cost savings test or the congestion cost savings test if the addition of that generation is the primary reason for either economic criterion being met. |

(5) To determine the economic benefits of a proposed project under the production cost savings test, the revenue requirement of the capital cost of the project is compared to the expected savings in system production costs resulting from the project over the expected life of the project. Outputs from the market simulations described in paragraph (4) above will be used to provide an estimate of the expected reduction in total system-wide production cost due to the project. Other adequately quantifiable and ongoing direct and indirect costs and benefits to the transmission system attributable to the project may be considered as appropriate. If the levelized ERCOT-wide annual production cost savings equals or exceeds the first-year annual revenue requirement of the transmission project, the project will be deemed to demonstrate sufficient economic benefit and will be recommended. ERCOT will publish requested non-confidential modeling inputs, assumptions, and outputs utilized in the production cost savings test if that information can be reasonably provided.

(6) To determine the economic benefits of a proposed project under the congestion cost savings test, the revenue requirement of the capital cost of the project is compared to the expected system-wide consumer energy cost reduction resulting from the project over the expected life of the project. Outputs from the market simulations described in paragraph (4) above will be used to provide an estimate of the expected reduction in total system-wide consumer energy cost due to the project. In the market simulations, system-wide consumer energy cost will be calculated using hourly load in MWh multiplied by hourly load nodal energy prices in $/MWh. Other adequately quantifiable and ongoing direct and indirect costs and benefits to the transmission system attributable to the project may be considered as appropriate. If the levelized system-wide consumer energy cost reduction equals or exceeds the average of the first three years’ annual revenue requirement for the project, the project will be deemed to demonstrate sufficient economic benefit and will be recommended. If ERCOT must incorporate unserved energy cost in the market simulations, modeling, or calculation of the congestion cost savings test, ERCOT will use the most recently approved Value of Lost Load (VOLL) by the Public Utility Commission of Texas (PUCT) to determine the economic value of the unserved energy cost. ERCOT will publish requested non-confidential modeling inputs, assumptions, and outputs utilized in the congestion cost savings test if that information can be reasonably provided. The details of the methodology for the congestion cost savings test are described in a white paper, “Congestion Cost Savings Test Evaluation Guideline,” posted to the public system planning area of the ERCOT website. If the methodology for performing these sensitivities is changed, the white paper shall be updated with a revised version, and ERCOT shall provide notification to the market.

(7) In evaluating the “Benefit-to-Cost” ratio (B/C ratio) of a project evaluated under paragraphs (5) and (6), ERCOT shall perform weather scenario analysis and transmission outage sensitivity analysis to ensure that benefits of a project reflect realistic assumptions and a range of likely conditions as described in a white paper, “Impact of Weather Uncertainty and Transmission Outages on Economic Project Evaluations,” posted to the public system planning area of the ERCOT website. If the methodology for performing these sensitivities is changed, the white paper shall be updated with a revised version, and ERCOT shall provide notification to the market.