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| NPRR Number | [1247](https://www.ercot.com/mktrules/issues/NPRR1247) | NPRR Title | Incorporation of Congestion Cost Savings Test in Economic Evaluation of Transmission Projects |
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| Date | October 23, 2024 |
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| Submitter’s Information |
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| Market Segment | Not Applicable |

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| Comments |

ERCOT submits these comments in response to Joint Commenters’ October 15, 2024 comments and Reliant Energy Retail Services LLC’s (Reliant’s) October 18, 2024 comments. ERCOT agrees with Joint Commenters’ edits to paragraph (4) clarifying that benefits are measured by comparing simulations with and without the project.

As discussed at the October 16, 2024 Planning Working Group (PLWG) meeting, ERCOT has concerns with Joint Commenters’ proposal to add paragraph (7) referring to the white paper *Impact of Weather Uncertainty and Transmission Outages on Economic Project Evaluations*. Because the amount of detail that can be included in Protocols or Other Binding Documents (OBDs) is finite, ERCOT develops white papers in certain instances to provide greater transparency to stakeholders as to the more granular details of practices that ERCOT utilizes to implement Protocol and OBD requirements. In this sense, white papers are akin to the Business Practice Manual. ERCOT believes there is value in explaining certain details of how it intends to carry out more granular processes to provide both transparency and consistency. However, white papers are not typically referenced in the Protocols since they are intended only to be informational. If the intent of including a reference to a white paper in the Protocols is to make the processes in the white paper binding, then those processes should instead be codified in the Protocols or OBDs. If the substance of *Impact of Weather Uncertainty and Transmission Outages on Economic Project Evaluations* were to be codified in the Protocols, the language that Joint Commenters included in paragraph (7) would need to be modified because being “within 10% of the economic criteria” does not align with the practice described in the white paper. Moreover though, this white paper is not appropriate for codification in the Protocols because 16 Texas Administrative Code (TAC) § 25.101(b)(3)(A)(i) gives ERCOT discretion whether to include adequately quantifiable and ongoing direct and indirect costs and benefits to the transmission system attributable to a project which ERCOT exercises on a case-by-case basis depending on whether such analysis is appropriate for the specific project.

Reliant’s comments propose language in paragraphs (5) and (6) that would require ERCOT, if requested, to publish additional modeling inputs, assumptions, and outputs utilized in the production cost savings test and congestion cost savings test, respectively, so long as the requested information is not confidential and can be reasonably provided. As ERCOT indicated in its prior comments, ERCOT will provide such requested information so long as it is not confidential or overly voluminous. To provide greater assurance to stakeholders of ERCOT’s commitment, ERCOT is not opposed to including this as a requirement in the Protocols but proposes that “feasibly” is the more appropriate modifier.

Reliant’s comments propose including an additional description in paragraph (6) of the market simulations used to perform the congestion cost savings test. ERCOT agrees with the addition of this description.

Reliant proposes to add a requirement to paragraph (5) such that generation added to the planning models to address a supply and demand deficiency would not be the primary reason for a transmission project to be approved under either the production cost savings test or the congestion cost savings test. The addition of generation to planning models is governed by Planning Guide Section 6.9, Addition of Proposed Generation to the Planning Models, and applies not only to economic project evaluation under the production cost savings test and the congestion cost savings test, but also to reliability project evaluation. ERCOT agrees that whether and where to add generation, or potentially to scale down the included load, in the planning models may merit further discussion. However, because that issue is not specific to the congestion cost savings test, ERCOT requests that it be taken up in a separate Planning Guide Revision Request (PGRR) in order to allow for any revisions to be considered in the broader context of economic *and* reliability project evaluation that it will impact.

Reliant’s comments also propose adding a requirement to paragraph (6) that the Value of Lost Load (VOLL) recently approved by the Public Utility Commission of Texas (PUCT), $35,000 per megawatt hour (MWh), be used for the cost of unserved energy if such cost is reflected in the congestion cost savings test. As discussed at the October 16, 2024 PLWG meeting, ERCOT removed the step referring to the cost of unserved energy from the draft *Congestion Cost Savings Test Evaluation Guideline* white paper because unserved energy is rarely observed in economic project evaluation. Even if unserved energy were observed, it would appear both in the base case and in the project case because it would be present due to a resource adequacy issue rather than a transmission congestion issue and accordingly cannot be solved by a transmission project. For these reasons, ERCOT recommends that the reference to VOLL not be included in this Nodal Protocol Revision Request (NPRR).

Note that when the cost of unserved energy is reflected in transmission planning, the System-Wide Offer Cap (SWCAP) is used to align with market outcomes given that Locational Marginal Prices (LMPs) will not exceed SWCAP. If stakeholders would like to have a discussion regarding whether to use a VOLL higher than SWCAP for transmission planning purposes, ERCOT recommends that this be added as a separate agenda item for discussion at a future PLWG meeting.

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| 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.

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| ***[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.  |

(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 feasibly 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. ERCOT will publish requested non-confidential modeling inputs, assumptions, and outputs utilized in the congestion cost savings test if that information can be feasibly provided.