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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 11, 2024 | |
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| Submitter’s Information | | | |
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| Cell Number | |  | |
| Market Segment | | Not applicable | |

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| Comments |

ERCOT provides these comments to Nodal Protocol Revision Request (NPRR) 1247 in response to the comments submitted by American Electric Power Service Corporation (AEPSC) and Texas Industrial Energy Consumers (TIEC) respectively. ERCOT agrees with AEPSC that the production cost savings test and congestion cost savings tests are separate, standalone tests and that a project only needs to pass one of these tests in order to be recommended as an economic project. ERCOT uses the same model to conduct both tests, but different outputs of that model are used to perform the congestion cost savings test than the outputs used to perform the production cost savings test. ERCOT is comfortable with the edits from AEPSC’s comments to better reflect this in the Protocol language, except that the characterization of “expected costs” determined under the economic tests would more accurately be characterized as “expected benefits,” which ERCOT proposes in these comments. These comments also recommend merging paragraphs (4) and (5) now that both are broadly applicable to both economic tests.

TIEC raised that the Public Utility Commission of Texas’ (PUCT’s) Order in Project No. 53403, under which the revisions to 16 Texas Administrative Code (TAC) § 25.101 that instituted the congestion cost savings test were adopted, at page 21 requires the use of a six-year horizon, absent PUCT approval of a different time horizon. A six-year horizon is used in the Regional Transmission Plan pursuant to Planning Guide Section 3.1.1.2, Regional Transmission Plan. ERCOT agrees with TIEC that it is appropriate for the Protocol language to clarify that the amount of time for which the simulation of a project’s benefits is feasible is the horizon from the Regional Transmission Plan. If that horizon were to be changed, that would require a Planning Guide Revision Request (PGRR), which would require PUCT approval. However, it is appropriate to maintain the reference to the “expected life of the project” and the qualitative assessment as to whether benefits are expected to continue because, although the simulation only quantifies and assesses benefits during the planning horizon, this is with the expectation that benefits continue over the life of a project.

TIEC’s comments also proposed certain edits to the description of how the congestion cost savings test is performed. The complexity of the congestion cost savings test best lends itself to inclusion in a white paper and ERCOT presented the Congestion Cost Savings Test Evaluation Guideline to the Planning Working Group (PLWG) at the September 24, 2024 meeting for this purpose.

TIEC’s proposal to require ERCOT to “publish all relevant modeling assumptions and outputs” is not necessary because ERCOT already posts the following relevant information on the Market Information System (MIS) Secure Area: the input assumptions detailing updates to the art reliability cases; the input data, including network data, load data, contingencies, interface definitions, and Direct Current Tie (DC Tie), hydro, and renewable profiles; the congestion rent and percentage of hours congested for all constraints; and the economic project evaluation results, currently including the production cost savings and generator revenue reduction values for the projects evaluated and subsequently to include the congestion cost savings values as well. The input assumptions and the detailed economic project evaluation results are also posted on the ERCOT website on the Planning page. In addition, ERCOT publishes the complete economic cases on the MIS Transmission Service Providers- (TSPs-) Only Certified Area. ERCOT is concerned that including such a requirement in the Protocols would be too broad and too vague for ERCOT to reasonably comply with it. If stakeholders desire any additional information beyond what is currently published, ERCOT is open to posting more information so long as it is not confidential or overly voluminous.

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| Revised Cover Page Language |

None

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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 a chronological simulation 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. This market simulation is 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 this simulation for the entire 30 to 40 year expected life of the project. Therefore, the economic benefits are projected over the period for which a simulation is 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 a chronological simulation 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. This market simulation is 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 this simulation for the entire 30 to 40 year expected life of the project. Therefore, the economic benefits are projected over the period for which a simulation is 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 simulation 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.

(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 simulation 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. 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.