|  |  |  |  |
| --- | --- | --- | --- |
| PGRR Number | [110](https://www.ercot.com/mktrules/issues/PGRR110) | PGRR Title | Revision to Accommodate Steady-State Node-Breaker Modeling |
| Date of Decision | October 24, 2023 |
| Action | Recommended Approval |
| Timeline | Normal |
| Proposed Effective Date | First of the month following Public Utility Commission of Texas (PUCT) approval |
| Priority and Rank Assigned | Not Applicable |
| Planning Guide Sections Requiring Revision  | 6.1, Steady-State Model Development |
| Related Documents Requiring Revision/Related Revision Requests | None |
| Revision Description | This Planning Guide Revision Request (PGRR) removes paragraph (2)(a) of Section 6.1 to accommodate the release of steady-state planning models in node-breaker format pursuant to System Change Request (SCR) 789, Update NMMS Topology Processor to PSSE 34 Capability.  |
| Reason for Revision |  Addresses current operational issues. Meets Strategic goals (tied to the [ERCOT Strategic Plan](https://www.ercot.com/files/docs/2018/12/13/ERCOT_Strategic_Plan_2019-2023.pdf) or directed by the ERCOT Board). Market efficiencies or enhancements Administrative Regulatory requirements Other: (explain)*(please select all that apply)* |
| Business Case | With the implementation of SCR789, the Network Operations Model will no longer be converted from a node-breaker model to a bus-branch model for planning purposes. Therefore, the differences due to the conversion from node-breaker to bus-branch will be removed from the steady-state models.  |
| ROS Decision | On 8/3/23, ROS voted unanimously to table PGRR110 and refer the issue to the Steady State Working Group (SSWG). All Market Segments participated in the vote. On 9/7/23, ROS voted unanimously to recommend approval of PGRR110 as submitted. All Market Segments participated in the vote.On 10/5/23, ROS voted unanimously to endorse and forward to TAC the 9/7/23 ROS Report and 7/19/23 Impact Analysis for PGRR110. All Market Segments participated in the vote. |
| Summary of ROS Discussion | On 8/3/23, ERCOT Staff reviewed PGRR110 and referenced previous, ongoing SSWG discussion.On 9/7/23, Market Participants referenced SSWG approval of PGRR110.On 10/5/23, Market Participants reviewed the 7/19/23 Impact Analysis. |
| TAC Decision | On 10/24/23, TAC voted unanimously to recommend approval of PGRR110 as recommended by ROS in the 10/5/23 ROS Report. All Market Segments participated in the vote. |
| Summary of TAC Discussion | On 10/24/23, TAC reviewed the ERCOT Opinion, ERCOT Market Impact Statement, and Independent Market Monitor (IMM) Opinion for PGRR110. |

|  |
| --- |
| Opinions |
| Credit Review | Not applicable |
| Independent Market Monitor Opinion | IMM has no opinion on PGRR110. |
| ERCOT Opinion | ERCOT supports approval of PGRR110. |
| ERCOT Market Impact Statement | ERCOT Staff has reviewed PGRR110 and believes that it provides a positive market impact by creating market efficiencies and enhancements through the removal of paragraph (2)(a) of Section 6.1 in order to accommodate the release of steady-state planning models in node-breaker format pursuant to SCR789. |

|  |
| --- |
| Sponsor |
| Name | Eric Meier |
| E-mail Address | Eric.Meier@ercot.com |
| Company | ERCOT |
| Phone Number | 512-248-6770 |
| Cell Number |  |
| Market Segment | Not Applicable |

|  |
| --- |
| **Market Rules Staff Contact** |
| **Name** | Jordan Troublefield |
| **E-Mail Address** | Jordan.Troublefield@ercot.com |
| **Phone Number** | 512-248-6521 |

|  |
| --- |
| **Comments Received** |
| **Comment Author** | **Comment Summary** |
| None |  |

|  |
| --- |
| **Market Rules Notes** |

Please note that the following PGRR(s) also propose revisions to the following section(s):

* PGRR111, Related to NPRR1191, Registration, Interconnection, and Operation of Customers with Large Loads; Information Required of Customers with Loads 25 MW or Greater
	+ Section 6.1

|  |
| --- |
| Proposed Guide Language Revision |

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 Generation Resource 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 Generation Resources (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.