|  |  |  |  |
| --- | --- | --- | --- |
| NOGRR Number | [258](https://www.ercot.com/mktrules/issues/NOGRR258) | NOGRR Title | Related to NPRR1198, Congestion Mitigation Using Topology Reconfigurations |

|  |  |
| --- | --- |
| Date | March 8, 2024 |

|  |  |
| --- | --- |
| Submitter’s Information | |
| Name | Blake Holt |
| E-mail Address | [blake.holt@lcra.org](mailto:blake.holt@lcra.org) |
| Company | Lower Colorado River Authority (LCRA) |
| Phone Number | 512-578-2003 |
| Cell Number |  |
| Market Segment | Cooperative |

|  |
| --- |
| Comments |

LCRA submits these comments to Nodal Operating Guide Revision Request (NOGRR) 258 on top of the 2/16/24 LCRA comments:

1. In paragraph (3) of Section 11.1, Introduction, we clarified that Extended Action Plans (EAPs) may be proposed by any Market Participant or developed by ERCOT for reliability or economic reasons.
2. In paragraph (3)(b) of Section 11.1, we added “any” to clarify that the $5 million of congestion cost over three months within the past 36 months do not have to be consecutive.
3. Paragraph (3)(c) of Section 11.1 was removed as the “reasonably expected to result in similar costs” is subjective and would be challenging to accurately quantify.
4. In paragraph (1) of Section 11.8, Extended Action Plans, we removed “[EAPs] may be proposed by any Market Participant or developed by ERCOT” as similar language was added to paragraph (3) of Section 11.1, making the paragraph (1) of Section 11.8 language redundant.
5. In paragraph (2) of Section 11.8, we simplified the description with “for economic reasons” instead of “to address avoidable congestion prior to Security-Constrained Economic Dispatch (SCED)”. Additionally, we moved the “has not previously been rejected” item to the end of the list in the paragraph. Clarity was added that the “rejected by” party referenced here is ERCOT.
6. In paragraph (2)(b) of Section 11.8, we reverted back to the original language of “does not result in radial Load”.
7. In paragraph (2)(d) of Section 11.8, the previous LCRA comments excluded 115 kV transmission lines. The language was modified to capture the remaining transmission line ratings on the ERCOT system (i.e., 115 kV and above).
8. In paragraph (1) of 11.8.1, Extended Action Plan Process, we clarified that EAPs for reliability reasons have an expedited review and are not subject to the process outlined in Section 11.8.1.
9. In paragraph (3) of Section 11.8.1, the language was updated to allow a Market Participant or ERCOT to propose a suspension of an existing EAP.

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

|  |  |
| --- | --- |
| Nodal Operating Guide Sections Requiring Revision | 11.1, Introduction  11.4, Remedial Action Plan  11.4.1, Remedial Action Plan Process  11.6, Pre-Contingency Action Plans  11.8, Extended Action Plans (new)  11.8.1, Extended Action Plan Process (new) |

|  |
| --- |
| Revised Proposed Guide Language |

**11 CONSTRAINT MANAGEMENT PLANS AND REMEDIAL ACTION SCHEMES**

**11.1 Introduction**

(1) Constraint Management Plans (CMPs) are developed in accordance to the guidelines set forth in the sections below, and are defined in Protocol Section 2.1, Definitions. CMPs include, but are not limited to the following:

(a) Remedial Action Plans (RAPs) which are modeled in Network Security Analysis (NSA) where practicable;

(b) Automatic Mitigation Plans (AMPs) which are modeled in NSA where practicable;

(c) Pre-Contingency Action Plans (PCAPs);

(d) Extended Action Plans (EAPs);

(e) Temporary Outage Action Plans (TOAPs); and

(f) Mitigation Plans.

(2) When developing CMPs, ERCOT shall first attempt to utilize the 15-Minute Rating of the impacted Transmission Facilities, where available, to develop RAPs such that the ERCOT Transmission Grid is utilized to the fullest extent.

|  |
| --- |
| ***[NOGRR215: Insert paragraph (3) below upon system implementation and renumber accordingly:***]  (3) Remedial Action Schemes (RASs) and/or AMPs may also be implemented in order to allow Generation Resources described in paragraph (3) of Planning Guide Section 4.1.1.7, Minimum Deliverability Criteria, to meet the minimum deliverability criteria in Planning Guide Section 4.1.1.7, or Transmission Facilities that would otherwise be subject to restrictions to operate without such restrictions. |

(3) EAPs may be proposed by any Market Participant or developed by ERCOT and can be utilized for reliability or economic reasons. EAPs proposed for reliability reasons may have thermal constraints that do not have a Security-Constrained Economic Dispatch (SCED) solution. EAPs proposed for economic reasons may have thermal constraints that are resolvable by SCED but result in high congestion costs. If an EAP is proposed primarily for economic reasons, the avoidable congestion must have resulted in:

(a) Over $2 million of congestion cost in a given month within the past 36 months; or

(b) $5 million of congestion cost over any three months within the past 36 months.

(4) ERCOT shall provide notification to the market of any approved, amended, or removed CMP or Remedial Action Scheme (RAS). ERCOT shall provide notification to the market of any RAP, AMP, or RAS that cannot be modeled in the Network Operations Model. ERCOT shall post to the Market Information System (MIS) Secure Area all CMPs and RASs and any unmodeled CMPs or RASs.

(5) ERCOT is not required to provide notification to the market of any proposed TOAPs.

(6) All submittals related to CMPs or RASs must be emailed to [ras\_cmp@ercot.com](mailto:ras_cmp@ercot.com).

**11.4 Remedial Action Plan**

(1) Remedial Action Plans (RAPs) are defined in Protocol Section 2.1, Definitions, and may be relied upon in allowing additional use of the transmission system in Security-Constrained Economic Dispatch (SCED). Normally, it is desirable that a Transmission Service Provider (TSP) constructs Transmission Facilities adequate to eliminate the need for any RAP; however, in some circumstances, such construction may be unachievable in the available time frame.

(2) RAPs must:

(a) Be coordinated by ERCOT with all Transmission Operators (TOs) and Resource Entities included in the RAP, and approved by ERCOT;

(b) Be limited to the time required to construct replacement Transmission Facilities; however, the RAP will remain in effect if ERCOT has determined the replacement Transmission Facilities to be impractical;

(c) Comply with all applicable requirements in the Protocols and applicable North American Electric Reliability Corporation (NERC) Reliability Standards;

(d) Clearly define and document TOs and Resource Entities included in the RAP actions;

(e) Must be able to resolve the issue for which it was designed over the range of conditions that might reasonably be experienced;

(f) Be executed by the TOs and/or Resource Entities;

(g) Have a 15-minute Rating greater than the Normal and Emergency Ratings for the Transmission Facilities it intends to resolve;

(h) Be defined in the Network Operations Model and considered in the SCED and Reliability Unit Commitment (RUC) processes. RAPs that cannot be modeled using ERCOT’s existing infrastructure shall be rejected unless the Technical Advisory Committee (TAC) approves a plan to work around the infrastructure problem; and

(i) Not include generation re-Dispatch or Load shed.

(3) An approved RAP may be executed immediately after a contingency by the TOs and Resource Entities included in the RAP without instruction by ERCOT or shall be executed upon direction by ERCOT.

(4) ERCOT shall conduct a review of each existing RAP annually or as required by changes in system conditions to ensure its continued effectiveness. Each review shall proceed according to a process and timetable documented in ERCOT Procedures.

(5) ERCOT may approve the expiration of a RAP after consultation with the TOs and Resource Entities included in the RAP. ERCOT shall modify its reliability constraints to recognize the unavailability of the RAP.

11.4.1 Remedial Action Plan Process

(1) RAPs may be proposed by any Market Participant or may be developed by ERCOT. For RAPs submitted by Market Participants not registered as a TSP:

(a) ERCOT shall post RAPs submitted by a Market Participant not registered as a TSP on the Market Information System (MIS) Secure Area as soon as practicable, but no later than five Business Days of receipt.

(b) ERCOT shall provide a five Business Day comment period from the date when the proposed RAP under review is posted by ERCOT unless notice of a shorter comment period is provided.

(c) ERCOT shall consider all comments received within the five Business Day comment period on the proposed RAP, along with its own evaluation and those of the Transmission Facility owners, and either approve, modify or reject that proposed RAP.

(d) When a proposed RAP is approved, modified, or rejected, ERCOT shall post an explanation for the approval or rejection, or a description of the modification. If the RAP is approved the posting shall include the start date of the RAP.

**11.6 Pre-Contingency Action Plans**

(1) Pre-Contingency Action Plans (PCAPs) are defined in Protocol Section 2.1, Definitions, and are implemented in anticipation of a contingency. Normally, it is desirable that a Transmission Service Provider (TSP) construct Transmission Facilities adequate to eliminate the need for any PCAP; however, in some circumstances, such construction may be unachievable in the available time frame.

(2) A PCAP may be proposed by any Market Participant, and be approved by ERCOT and the Transmission Operator (TO) included in the PCAP prior to implementation. PCAPs must:

(a) Be coordinated with the TOs included in the PCAP;

(b) Be limited in use to the time required to construct replacement Transmission Facilities and until such Facilities are placed in-service, or the PCAP is no longer needed; however, the PCAP will remain in effect if ERCOT has determined the replacement Transmission Facilities to be impractical;

(c) Comply with all requirements of the Protocols and applicable North American Electric Reliability Corporation (NERC) Reliability Standards;

(d) Clearly define and document TO actions;

(e) Be executed by TOs; and

(f) Not include generation re-Dispatch or Load shed.

(3) An approved PCAP may be executed immediately prior to a contingency by the TO without instruction by ERCOT, or shall be executed upon direction by ERCOT.

(4) All proposed, approved, amended, and removed PCAPs shall be managed in accordance with paragraph (4) of Section 11.1, Introduction.

(5) ERCOT may limit the quantity of PCAPs that are used.

**11.8 Extended Action Plans (EAPs)**

(1) Extended Action Plans (EAPs) must be approved prior to implementation by ERCOT, the Transmission Operators (TOs) that operate the affected equipment, and Resource Entities that are directly impacted operationally. Impacts resulting from price and Dispatch changes due to market clearing processes shall not constitute a direct operational impact under this section. EAPs must:

(a) Be accepted by the Resource Entities and TOs that are directly impacted operationally by the EAP;

(b) Be restored to normal configuration when either:

1. A transmission project intended to address the congestion is placed in-service, if such a project has been made public and it was identified by either the TO during the initial EAP review, or by a Transmission Service Provider (TSP) during the EAP comment period; or
2. A period of temporary congestion is expected to end, if such temporary congestion and its estimated end date were identified during the initial EAP review. For chronic congestion which does not have an identified transmission project solution or expected end, an end date for the EAP must be proposed as if it is temporary congestion.

(c) Comply with all requirements of the Protocols and applicable North American Electric Reliability Corporation (NERC) Reliability Standards;

(d) Clearly define and document TO actions;

(e) Be executed by TOs; and

(f) Not include generation re-Dispatch or Load shed.

(2) Prior to approving an EAP proposal for economic reasons on the ERCOT Transmission Grid, ERCOT must verify that the EAP:

(a) Meets all of the criteria in paragraph (1) above;

(b) Does not result in radial Load ;

(c) Does not negatively impact current or scheduled Transmission Facility Outages;

(d) Does not create new binding thermal constraints or voltage violations, or increase flow on any existing binding constraint by more than 2% for 69 kV and 1% for 115 kV and above;

(e) Does not negatively impact any Generic Transmission Constraints (GTCs),decrease Generic Transmission Limits (GTLs), or create new instability situations;

(f) Provides more than $1 million savings to total production cost or total congestion cost with the EAP action in place compared to generation re-Dispatch alone. This can be established either by using annual production cost model simulation or other methods acceptable to ERCOT;

(g) Limits the action to changing the normal status of circuit breakers at up to three substations;

(h) If applicable, is limited to a post-contingency generation trip of no more than ERCOT frequency bias; and

(i) Does not impact the ability of a Resource to meet its minimum deliverability criteria described in Planning Guide Section 4.1.1.7, Minimum Deliverability Criteria.

(j) Has not been previously rejected by ERCOT for disqualification under criteria in paragraphs (b) through (i) above, unless there have been major changes to the system configuration or EAP proposal;

(3) An approved EAP may be executed by the TO in coordination with ERCOT, on the effective date of the EAP.

(4) All proposed, approved, amended, and removed EAPs shall be managed in accordance with paragraph (4) of Section 11.1, Introduction.

(5) ERCOT may limit the quantity of EAPs that are used.

(6) ERCOT may reject proposals that fail to practicably assess impact to operations and reliability.

(7) The implementation of an approved EAP may be temporarily suspended by the TO or by ERCOT for reliability reasons, or for the duration of a Transmission Facility Outage if the EAP interferes with a TO’s ability to take the outage. The existence of an EAP shall not, in and of itself, prevent a requested Transmission Facility Outage from being approved by ERCOT.

(8) ERCOT shall conduct a review of each existing EAP annually or as required by changes in system conditions to ensure its continued effectiveness. Each review shall proceed according to a process and timetable documented in ERCOT procedures.

***11.8.1 Extended Action Plan (EAP) Process***

(1) EAPs proposed by a Transmission and/or Distribution Service Provider (TDSP) primarily for reliability reasons have an expedited review and are not subject to the process outlined in this section. EAPs proposed primarily for economic reasons need to follow the process outlined below in addition to the requirements in Section 11.8, Extended Action Plans (EAPs):

(a) The EAP must be submitted to ERCOT for initial review. ERCOT must provide the submission of qualified EAPs to impacted TOs and Resource Entities directly impacted operationally. Impacts resulting from price and Dispatch changes due to market clearing processes shall not constitute a direct operational impact under this paragraph.

(i) Impacted TOs, and Resource Entities directly impacted operationally, will provide either a concurrence with or an objection to the proposed EAP to ERCOT in writing within 30 days of receipt, and may request additional time if necessary while making reasonable efforts to consider proposed EAPs as soon as possible;

(ii) Impacted TOs may limit the quantity of EAPs they have under evaluation, on the basis of undue or excessive work load, and will include this as the reason for objection to an EAP, if applicable; and

(iii) An objection by either an impacted TO or a Resource Entity directly impacted operationally, will result in an initial rejection of the proposed EAP by ERCOT.

(b) EAPs submitted by a Market Participant will be posted on the Market Information System (MIS) Secure Area by ERCOT within five Business Days of receipt of a complete submission.

(c) ERCOT will provide a 30 day comment period from the date the proposed EAP is posted to the MIS Secure Area by ERCOT, unless notice of a shorter comment period is provided by ERCOT.

(d) ERCOT shall consider all comments received within the 30 day comment period on the proposed EAP, along with its own evaluation and those of the Transmission Facility owners, and either approve, modify, or reject the proposed EAP within 15 days, unless extended by ERCOT.

(e) When a proposed EAP is approved, modified or rejected, ERCOT shall post an explanation for the approval or rejection, or a description of the modification within five Business Days of its determination. If the EAP is approved, the posting shall include the start date and end date or associated Transmission Facility change that will determine the end date of the EAP.

(2) The implementation and management of EAPs will be facilitated through the Network Operations Model Change Request (NOMCR) and Outage scheduling processes as follows:

(a) A NOMCR will be submitted by the applicable TO or Resource Entity to implement an approved EAP in the Network Operations Model. This NOMCR will be submitted prior to the EAP’s start date and during the appropriate NOMCR production model load schedule. The EAP start date should align with the NOMCR production model load date, and if these two dates differ, Transmission Facility Outages will be submitted by the applicable TO or Resource Entity to manage interim configuration changes until the submitted NOMCR implements the EAP in the Network Operations Model.

1. If a TO or ERCOT identifies that an approved EAP will create a conflict with a current or scheduled Transmission Facility Outage or other system conditions, the applicable TO or Resource Entity will reverse the EAP configuration by submitting the necessary Transmission Facility Outage(s) and/or by utilizing the NOMCR process to address the timeframe for which the conflict is expected to exist. ERCOT shall also post any such EAP changes to the MIS Secure Area.
2. A NOMCR will be submitted by the applicable TO or Resource Entity to reverse an EAP prior to the scheduled EAP end date and during the appropriate NOMCR production model load schedule. Transmission Facility Outages may also be used to manage interim configuration changes before the NOMCR takes effect, if necessary.

(3) A Market Participant or ERCOT may propose that an existing EAP be suspended, modified, or extended. ERCOT will process any proposed EAP modifications or extensions as described by paragraphs (1)(a) through (e) above.