PUC Project No. 46304

Oversight Relating to the Southern Cross Transmission (SCT) DC Tie

Outage Coordination Considerations (Directive 4)

Date: 07/25/2019

Market stakeholder input: OWG 06/26/2019 and 07/25/2019

OWG action: Consensus to endorse ERCOT’s Southern Cross Transmission whitepaper regarding Directive #4, Outage Coordination Considerations.

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| **Directive # 4 –Outage Coordination Considerations** | **ERCOT shall develop and implement a methodology to reliably and cost-effectively coordinate outages following the interconnection of the Southern Cross DC Tie and shall certify to the Commission when it has completed these actions.** |

***Determination: ERCOT has determined that existing procedures set forth in ERCOT Protocols and Guides are sufficient to ensure the reliable and cost-effective coordination of outages following the interconnection of the SCT DC Tie. Further modifications to ERCOT’s outage coordination systems are unnecessary specifically for the SCT DC Tie because NPRR818 and NPRR825 clarify ERCOT’s authority to curtail DC Tie flows as necessary to address system conditions that may be influenced by approved Outages.***

Technical reasons for determination

In 2016, as part of PUC Docket No. 45624, *Application of the City Of Garland to Amend a Certificate of Convenience and Necessity for the Rusk to Panola Double-Circuit 345-kV Transmission Line in Rusk and Panola Counties*, ERCOT submitted testimony indicating that it may have to develop a more complex process for coordinating outages due to the magnitude of the import and export capacity of the SCT DC Tie. More specifically, ERCOT expressed concern that, depending on the type of methodology adopted for coordinating outages, the size of the SCT DCT Tie could make studying and approving outages scheduled near the SCT DC Tie more complex.

Since that time, however, two revisions to ERCOT Protocols—NPRR818, *Allow Curtailment of DC Tie Load Prior to Declaring Emergency Condition*, and NPRR825, *Require ERCOT to Issue a DC Tie Curtailment Notice Prior to Curtailing any DC Tie Load*—have clarified ERCOT’s practices with respect to the scheduling of DC Ties. With these changes, ERCOT believes that it can reliably manage outage coordination after the SCT DC Tie is energized.

NPRR 818 allows ERCOT to curtail DC Tie flows without declaring an Emergency Condition and clarifies that “DC Tie limits shall be based on expected system conditions, including Outages . . . .” NPRR818 thus made clear that DC Tie flows would be subject to the reliability impacts of any approved outages on the system. NPRR 825 then requires ERCOT to calculate and post DC Tie advisory limits, based on expected system conditions, for every hour on a rolling 48 hour basis. Those limits consider approved outages. The system changes needed to create the advisory limit postings and other requirements of NPRR 825 are expected to be complete well before the SCT Tie begins operations. NPRR 825 also added language that authorizes ERCOT to issue a DC Tie Curtailment Notice if Security Constrained Economic Dispatch (SCED) is insufficient to manage congestion and curtailment of a DC Tie would resolve a transmission security violation. *See* ERCOT Protocol Section 4.4.4(15). Accordingly, to the extent any approved outage may contribute to that violation, ERCOT has the option of curtailing the DC Tie exports, if necessary, to help resolve that congestion.

ERCOT believes that the market rules changes implemented since PUC Docket No. 45624 will avoid any need for complicated modifications to ERCOT systems that were discussed in the PUC Docket, and will provide reliable and cost-effective coordination of outages when the SCT Tie begins operations.

Directive 4 does not require ERCOT to study economic outage coordination

A few stakeholders have suggested that the phrase “cost-effectively coordinate” in Directive 4 mandates that ERCOT adopt economic outage coordination—i.e., coordination of outages based on predicted cost impacts to one or more groups of Market Participants. ERCOT interprets the directive to refer to costs incurred by ERCOT when coordinating Outages, which is consistent with ERCOT’s testimony in PUC Docket No. 45624. ERCOT is not aware of any discussion of economic outage coordination in that proceeding, whereas the Commission’s order in that case *did* address the costs of changes ERCOT could have to incur to develop a process for coordinating outages related to the SCT DC Tie in light of the potential increase in complexity. See Order on Rehearing, PUCT Docket 45624, Finding of Fact 90 (“ERCOT’s determination of what changes may need to be made to its processes and systems for coordinating outages once the Southern Cross DC tie is interconnected is vital to ensuring the reliability of the ERCOT system.”).

Potential impacts of NPRR 904 / OBDRR 009

Finally, ERCOT notes that NPRR 904, *Revisions to Real-Time On-Line Reliability Deployment Price Adder for ERCOT-Directed Actions Related to DC Ties*, and Other Binding Document Revision Request (OBDRR) 009, *ORDC OBD Revisions for ERCOT-Directed Actions Related to DC Ties*, are currently pending and would impact DC Ties, including the SCT DC Tie. The changes proposed in NPRR 904 and OBDRR 009 concern adjustments to price adders related to curtailment of DC Ties. Because these changes concern pricing, not reliability, ERCOT believes NPRR 904 and OBDRR 009 are beyond the scope of Directive 4. By its terms, Directive 4 is limited to the question of how ERCOT will coordinate outages following interconnection of the SCT Tie.