



**Item 9: ERCOT Recommendation to PUC
Project No. 46304, Oversight Proceeding
Regarding ERCOT Matters Arising Out of
PUC Docket No. 45624 Relating to DC Tie
Project Proposed by Southern Cross
Transmission, LLC, Directive 4 – ERCOT
Determination regarding Development of
Methodology for Outage Coordination**

Matt Mereness
Director, Compliance

Board of Directors Meeting

ERCOT Public
October 8, 2019

Overview

- Background of Project and PUCT Directives
- Consideration of Directive #4 - Outage Coordination
- Next Steps
- Appendix
 - List of PUCT Order 46304 Directives
 - Market Stakeholder Process Summary

Background of Project and PUCT Directives

- Southern Cross Transmission LLC (SCT) /Pattern Power Marketing LLC received FERC approval (FERC Docket No. TX 11-1-001) to interconnect DC Tie line.
- PUCT imposed conditions for interconnection of the SCT DC Tie line in two PUCT proceedings:
 - City of Garland CCN docket – Docket No. 45624
 - Oversight proceeding arising out of City of Garland docket – Project No. 46304
- As part of the oversight proceeding, PUCT issued 14 Directives to ERCOT, requiring certain studies and determinations be made to accommodate the SCT DC Tie.
- Planned energization date is 2023.

The bi-directional SCT Project can deliver up to 2,000 MW of economic energy and reliability products in either direction



Consideration of Directive #4- Outage Coordination

Directive 4

- “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 NPRR825 improved ERCOT’s processes and tools to study and coordinate outages, including assessing DC Tie schedules and the impact of outages on DC Tie schedules, while recognizing the authority to curtail DC Tie flows as necessary to address system conditions that may be influenced by approved Outages in Real-Time.*

Supporting Details for Determination on Directive 4

- **Basis for Determination**
 - ERCOT had submitted testimony in Docket No. 45624 expressing concern about the complexity of outage coordination following the interconnection of the SCT DC Tie.
 - After the PUC issued its final order in that proceeding, the ERCOT Board of Directors approved NPRR825, Require ERCOT to Issue a DC Tie Curtailment Notice Prior to Curtailing any DC Tie Load. NPRR825 introduced system tools that will give ERCOT greater visibility of operational limitations on the DC Ties and improve ERCOT's coordination of planned outages. NPRR825 also recognized ERCOT's authority to curtail DC Tie flows as necessary to address system conditions that may be influenced by approved outages in real-time.
 - With the system changes introduced by NPRR825, ERCOT believes it can reliably and cost-effectively manage outage coordination after the SCT DC Tie is energized. Further changes to ERCOT's outage coordination systems are unnecessary.
- **ROS unanimously endorsed ERCOT Staff's determination on August 8, 2019.**
- **TAC unanimously endorsed ERCOT Staff's determination on September 25, 2019.**



Next steps

- Request Board consideration to accept ERCOT's Determination on Directive #4.
- ERCOT staff continues to work with stakeholders on remaining Directives.
- Webpage on [ercot.com](http://www.ercot.com) tracks progress and artifacts supporting each Directive:
<http://www.ercot.com/mktrules/puctDirectives>

Appendix

List of PUCT Order 46304 Directives

Directive	Subject	Anticipated Start
1	Determination of appropriate Market Participant category and market segment for SCT.	Started
2	Execution of any necessary coordination agreements.	Q2-2020
3	Determination regarding ramp rate restrictions.	Started
4	Development of methodology for outage coordination.	Started
5	Determination of planning model assumptions and considerations.	Complete
6	Determination regarding any needed transmission upgrades.	Started
7	Determination as to how to manage congestion caused by DC Ties.	Started

List of PUCT Order 46304 Directives (continued)

Directive	Subject	Anticipated Start
8	Determination regarding Primary Frequency Response and Voltage Support Service.	Started
9	Determination regarding modifications to Ancillary Services.	Started
10	Determination regarding price formation under emergency conditions.	Complete
11	Determination regarding allocation of costs identified in PUCT Docket No. 45624.	TBD
12	Determination regarding possible assignment of export-related costs to Qualified Scheduling Entities (QSEs).	TBD
13	ERCOT reporting of status of work on Directives to PUCT.	Ongoing
14	ERCOT updates to PUCT regarding completion dates for Directives 1 to 12.	Ongoing

Market Stakeholder Process Summary

Working Groups

ERCOT's engagement with experts in non-voting Working Groups or Workshops
Capture key assumptions and solutions in whitepapers and/or Revision Requests

At the direction of TAC/ROS/WMS, ERCOT has engaged the appropriate working groups to brainstorm and assist ERCOT staff in reaching determinations for the issues raised in each Directive.

Sub-committee

Take determinations to appropriate voting body (ROS, WMS, PRS) for endorsement

Whitepapers presented to relevant subcommittees for endorsement. Stakeholder comments posted on ercot.com along with other documents relevant to work on Directives.

TAC

Determination on Directive presented to Technical Advisory Committee (TAC)

TAC has the option to vote to endorse a determination on a Directive.

Board

Determination on Directive presented to ERCOT Board of Directors

ERCOT Board has the option to vote to approve a determination on a Directive.





Date: October 1, 2019
To: Board of Directors
From: Matt Mereness, Director of Compliance
Subject: ERCOT Recommendations to PUC Project No. 46304, Oversight Proceeding Regarding ERCOT Matters Arising Out of PUC Docket No. 45624 Relating to DC Tie Project Proposed by Southern Cross Transmission, LLC, Directive 4 – ERCOT Determination regarding Development of Methodology for Outage Coordination

Issue for the ERCOT Board of Directors

ERCOT Board of Directors Meeting Date: October 8, 2019

Item No.: 9

Issue:

Whether the Board of Directors (Board) of Electric Reliability Council of Texas, Inc. (ERCOT) should vote to accept ERCOT staff’s determination that further modifications to ERCOT’s Outage Coordination systems are unnecessary to facilitate Outage Coordination following the interconnection of the Southern Cross Transmission LLC (SCT) Direct Current Tie (DC Tie) because improvements to those systems introduced by Nodal Protocol Revision Request (NPRR) 825, Require ERCOT to Issue a DC Tie Curtailment Notice Prior to Curtailing any DC Tie Load, coupled with ERCOT’s ability to curtail DC Tie flows as necessary, enable ERCOT to reliably and cost-effectively manage the impacts of Outages.

Background/History:

In Public Utility Commission of Texas (PUC) Project No. 45624, the PUC issued an Order that approved the City of Garland’s application for a certificate of convenience and necessity (CCN) to build a new 38-mile-long, 345kV transmission line connecting the proposed 2,000 MW SCT DC Tie to ERCOT. In the Order, the PUC also imposed certain conditions on the interconnection of the SCT DC Tie. The PUC then opened PUC Project No. 46304, and on May 23, 2017, it issued a Revised Order in that project that directed ERCOT to complete a number of tasks—set forth in 14 different Directives—that the PUC deemed were necessary in order to accommodate the new SCT DC Tie.

ERCOT staff has been working with stakeholders and SCT since mid-2017 to complete the tasks set forth in the Directives. Discussions on the Directives have been taking place in the relevant working groups and subcommittees of the Technical Advisory Committee (TAC) to assist ERCOT staff in reaching resolutions on the discrete issues raised in each Directive, and these discussions are expected to continue until all of the issues raised in the Directives are fully resolved.

Once ERCOT staff makes a final determination as to how to resolve a discrete issue raised in a Directive, ERCOT staff follows an approval procedure that varies depending

on whether or not the resolution of a Directive (or, in some cases, a part of a Directive) requires a Protocol or Other Binding Document (OBD) Revision Request. If the resolution requires a Protocol or OBD Revision Request, then, as appropriate, ERCOT staff will present the issue for discussion at relevant working groups and subcommittees, the TAC, and to the Board; however, ERCOT staff will only request a vote from these groups when the Protocol or OBD Revision Request that is intended to resolve the Directive is before the group for consideration and vote. However, when ERCOT staff has determined that no Protocol or OBD Revision Requests are needed in order to resolve an issue raised in a Directive, ERCOT staff will seek endorsement of this determination at the relevant working groups, subcommittees and TAC. Regardless of whether those groups endorse the determination, ERCOT staff will present the issue and determination to the Board for a vote to accept the determination.

This particular determination concerns Directive 4, which requires that 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.”

Discussions with stakeholders regarding this issue occurred at the following meetings: Operations Working Group (OWG) on 6/26/2019, 7/25/2019; Reliability Operations Subcommittee (ROS) on 8/8/2019; Wholesale Market Subcommittee (WMS) on 9/4/2019; and TAC on 9/25/2019. ERCOT staff prepared a whitepaper ([link](#)) setting forth its determination and considerations relevant to that resolution, which was presented for discussion at these meetings.

ERCOT determined that no further revisions to ERCOT Protocols or OBDs are necessary in order to effectuate ERCOT’s determinations regarding reliable and cost-effective coordination of Outages following the interconnection of the SCT DC Tie.

ERCOT’s determination regarding Directive 4 was unanimously endorsed by TAC on September 25, 2019.

Key Factors Influencing Issue:

- The PUC’s Order in Docket No. 45624 was based in part on concerns relating to Outage Coordination that ERCOT raised in testimony it submitted in that proceeding. Following the PUC’s Order, however, the Board approved NPRR825. NPRR825 clarified ERCOT’s practices with respect to scheduling DC Ties but also introduced system tools that will give ERCOT greater visibility of operational limitations on the DC Ties and improve ERCOT’s coordination of Planned Outages. NPRR825 also recognized ERCOT’s authority to curtail DC Tie flows as necessary to address system conditions that may be influenced by approved Outages in Real-Time.

- With the system changes introduced by NPRR825, ERCOT believes it can reliably and cost-effectively manage Outage Coordination after the SCT DC Tie is energized. Further changes to ERCOT's Outage Coordination systems are unnecessary.

Conclusion/Recommendation:

ERCOT staff requests that the Board vote to accept ERCOT staff's determination that no further modifications to ERCOT's Outage Coordination systems are necessary to facilitate Outage Coordination following the interconnection of the SCT DC Tie because improvements introduced by NPRR825, coupled with ERCOT's ability to curtail DC Tie flows as necessary, enable ERCOT to reliably and cost-effectively manage the impacts of Outages.



ELECTRIC RELIABILITY COUNCIL OF TEXAS, INC.
BOARD OF DIRECTORS RESOLUTION

WHEREAS, the Public Utility Commission of Texas (PUC) issued a Revised Order (Revised Order) on May 23, 2017, in PUC Project No. 46304 that contains 14 Directives requiring Electric Reliability Council of Texas, Inc. (ERCOT) to study certain issues related to the proposed Southern Cross Transmission, LLC (SCT) Direct Current Tie (DC Tie) and make determinations as to whether certain actions must be taken by ERCOT in order to accommodate the SCT DC Tie;

WHEREAS, Directive 4 of the Revised Order requires that ERCOT study and determine how to reliably and cost-effectively coordinate Outages following the interconnection of the SCT DC tie, make any necessary revisions to its standards, guides, systems, and protocols as appropriate, and certify to the Commission when it has completed these actions;

WHEREAS, ERCOT staff, after discussions with stakeholders, determined that no further revisions to ERCOT Protocols or Other Binding Documents are needed in order to effectuate ERCOT's determinations regarding how to coordinate Outages following the interconnection of the SCT DC Tie; and

WHEREAS, after due consideration of the alternatives, the Board deems it desirable and in the best interest of ERCOT to accept ERCOT staff's determination;

THEREFORE, BE IT RESOLVED, that the Board hereby accepts ERCOT staff's determination that no further modifications to ERCOT's Outage Coordination systems are necessary to facilitate Outage Coordination following the interconnection of the SCT DC Tie because improvements introduced by Nodal Protocol Revision Request (NPRR) 825, Require ERCOT to Issue a DC Tie Curtailment Notice Prior to Curtailing any DC Tie Load, coupled with ERCOT's ability to curtail DC Tie flows as necessary, enable ERCOT to reliably and cost-effectively manage the impacts of Outages.

CORPORATE SECRETARY'S CERTIFICATE

I, Vickie G. Leady, Assistant Corporate Secretary of ERCOT, do hereby certify that, at its October 8, 2019 meeting, the ERCOT Board passed a motion approving the above Resolution by _____.

IN WITNESS WHEREOF, I have hereunto set my hand this ____ day of October, 2019.

Vickie G. Leady
Assistant Corporate Secretary