



**Item 10: 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 10 – ERCOT
Determination regarding Price Formation
Under Emergency Conditions**

Matt Mereness
Director, Compliance

Board of Directors Meeting

ERCOT Public
October 9, 2018

Outline of Discussion for 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

- Background of Project and PUCT Directives
- Process to review and make recommendations on Directives
- Specific Directives in this update:
 - Directive 1 (Informational only)
 - **Directive 10 – Emergency Condition Price Formation (Vote)**

Background of Project and PUCT Directives

- Southern Cross Transmission LLC/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 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



Directive Review and Approval by ERCOT Board

- 1) If ERCOT determines that a Revision Request is necessary to resolve an issue raised in a Directive, then:
 - ERCOT will provide informational updates on the issue at relevant working groups, subcommittees, the Technical Advisory Committee (TAC), and the ERCOT Board.
 - ERCOT will request a vote when the Revision Request intended to resolve the issue is before each group for a vote.

- 2) If ERCOT determines that no Revision Request or other ERCOT action is needed to resolve an issue raised in a Directive, then:
 - Relevant working groups, subcommittees and TAC may vote to endorse this determination, at their discretion; and
 - ERCOT will present the issue and determination to the ERCOT Board for a vote to accept the determination.

Informational Update for Directive 1

Directive 1

- Requires that ERCOT make two determinations:
 - 1) Determine the appropriate Market Participant category for SCT
 - 2) Determine the appropriate market segment for SCT
- This request addresses the first (1) determination only.
- **Determination:** Create a new Market Participant category called Direct Current Tie Operator (DCTO)
- **Solution:**
 - NPRR857, Creation of Direct Current Tie Operator Market Participant Role
 - NOGRR177, Related to NPRR857, Creation of Direct Current Tie Operator Market Participant Role.
 - Both revisions unanimously recommended for approval at TAC and here for consideration
 - ERCOT filed NPRR comments and Impact Analysis to document that SCT pays for the accompanying project, and project initiation activities are based on future status of the SCT Project (e.g., financing).

Request for Vote to Accept Determination on Directive 10

Directive 10

- Requires the following determination:

Determine whether, to avoid the flows over the DC ties adversely affecting price formation in the ERCOT wholesale market or otherwise causing outcomes inconsistent with a properly functioning energy market, any changes to pricing within the ERCOT market during emergencies are necessary.

- **Determination: While ERCOT Staff concludes that actions affecting DC Tie flows during emergencies can impact prices, no revisions to Protocols or Other Binding Documents are necessary at this time to address these impacts.**

Supporting Details for Determination on Directive 10

- **Basis for Determination**
 1. ERCOT has determined that pricing issues were previously considered by ERCOT stakeholders as reflected in consideration of these issues and approval of associated Revision Requests following the issuance of PUC Order in Docket No. 45624 approving CCN for SCT DC Tie and PUC Order in Project No. 46304.
 2. ERCOT is prepared to participate in future stakeholder discussions upon submission of an NPRR or upon direction from the Commission.
- **TAC endorsed ERCOT Staff’s determination on September 26, 2018, with the following language: “Although ERCOT Staff recognizes potential price formation issues, ERCOT Staff has identified no need for additional market changes at this time.”**

Next steps

- ERCOT staff will continue to provide periodic updates to the PUCT on the status of these, and other, Directives.
- ERCOT staff will continue to work with stakeholders on remaining Directives
- Webpage on [ercot.com](http://www.ercot.com/mktrules/puctDirectives) tracks work on Directives:
<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.	Q1-2019
4	Development of methodology for outage coordination.	Q1-2019
5	Determination of planning model assumptions and considerations.	Started
6	Determination regarding any needed transmission upgrades.	Started
7	Determination as to how to manage congestion caused by DC Ties.	Q1-2019

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.	Started
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

Summary of engagement process to date

Working Groups

ERCOT's engagement with experts in non-voting Working Groups or Workshops (OWG, PWG, QMWG)

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 subcommittee. Stakeholder comments accepted and 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.





Date: October 2, 2018
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 10 – ERCOT Determination regarding Price Formation Under Emergency Conditions

Issue for the ERCOT Board of Directors

ERCOT Board of Directors Meeting Date: October 9, 2018

Item No.: 10

Issue:

Whether the Board of Directors (Board) of Electric Reliability Council of Texas, Inc. (ERCOT) should vote to accept ERCOT staff’s determination that no changes to pricing are necessary at this time to address the potential impact on price formation of certain actions that affect Direct Current (DC) Tie flows during emergencies?

Background/History:

In PUC Project No. 45624, the Public Utility Commission of Texas (PUC or Commission) issued an Order that approved the City of Garland's application for a certificate of convenience and necessity to build a new 38-mile-long, 345kv transmission line connecting the proposed 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.

The Directives require ERCOT to study various issues related to the new DC Tie and make determinations as to whether any actions need to be taken by ERCOT in order to accommodate the new DC Tie, which is expected to have a capacity of approximately 2,000MW. 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 a final determination is made by ERCOT staff as to how to resolve a discrete issue raised in a Directive, ERCOT staff follow 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 10, which requires that ERCOT:

“...shall study price formation issues to determine whether, to avoid the flows over the DC ties adversely affecting price formation in the ERCOT wholesale market or otherwise causing outcomes inconsistent with a properly functioning energy market, any changes to pricing within the ERCOT market during emergencies are necessary.”

Discussions with stakeholders regarding this issue occurred at the following meetings: Qualified Scheduling Entity Managers Working Group (QMWG) 02/13/2018, 03/19/2018, 05/19/2018, 07/09/2018; Wholesale Market Subcommittee (WMS) 08/08/2018, 09/05/2018; and TAC 09/26/2018. ERCOT staff prepared a whitepaper ([link](#)) setting forth its determination and considerations relevant to that resolution, which was presented for discussion at these meetings.

Although ERCOT’s study and discussions with stakeholders with respect to Directive 10 identified certain actions related to all DC Ties that could adversely impact price formation during emergencies, ERCOT staff has not identified a need for any changes to pricing at this time. These pricing issues were previously considered as part of stakeholder discussions of NPRR626, Reliability Deployment Price Adder, and NPRR768, Revisions to Real-Time On-Line Reliability Deployment Price Adder Categories, and the ERCOT Protocols were revised to reflect policy determinations made as part of those discussions. Further, NPRR768 was approved in October 2017, subsequent to the PUCT issuing its Orders imposing conditions on the interconnection of the SCT DC Tie.

Although ERCOT staff recommends no further action on this issue at this time, stakeholders have expressed a desire to continue the discussion of price formation issues related to all DC Ties. ERCOT expects to participate in future stakeholder discussions on this issue upon submission of an NPRR or upon further direction from the Commission.

ERCOT's recommendation was endorsed by TAC on September 26, 2018 with one abstention. Specifically, TAC endorsed the following determination language: "Although ERCOT Staff recognizes potential price formation issues, ERCOT Staff has identified no need for additional market changes at this time."

Key Factors Influencing Issue:

- There are potential actions related to DC Ties that may adversely affect price formation in the ERCOT wholesale market during both Emergency Conditions and non-Emergency Conditions in ERCOT or in neighboring systems.
- This price formation issue was previously considered during stakeholder discussions of NPRR626 and NPRR768.
- Both NPRR626 and NPRR768 were approved by the Board. Further, NPRR768 was approved in October 2017, many months after the PUCT issued its Orders imposing conditions on the interconnection of the SCT DC Tie.
- ERCOT has not determined a need to submit a new NPRR that would modify the policy determinations effectuated by NPRR626 and NPRR768.
- ERCOT, however, expects to participate in future stakeholder discussions on this price formation issue either upon submission of an NPRR by stakeholders or upon further direction from the Commission.

Conclusion/Recommendation:

ERCOT staff has identified certain actions related to DC Ties that may adversely impact price formation in the ERCOT wholesale market during emergencies. This issue, however, was previously considered during stakeholder discussions and the approval process of NPRR626 and NPRR768. Consequently, ERCOT staff has not identified a need at this time to modify the policy determinations achieved in these NPRRs. ERCOT staff recommends that the Board accept ERCOT staff's determination that no further action is necessary at this time.



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

WHEREAS, the Public Utility Commission of Texas (PUCT) issued a Revised Order (Revised Order) on May 23, 2017, in PUCT 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) 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 10 of the Revised Order requires that ERCOT determine whether, to avoid the flows over the DC ties adversely affecting price formation in the ERCOT wholesale market or otherwise causing outcomes inconsistent with a properly functioning energy market, any changes to pricing within the ERCOT market during emergencies are necessary;

WHEREAS, ERCOT staff, after discussions with stakeholders, has identified potential price formation concerns arising from possible actions related to DC Ties during emergencies, but because of prior stakeholder consideration of these issues, has also determined that no changes to pricing are necessary at this time to address the potential impact on price formation of certain actions affecting DC Tie flows during emergencies; 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 changes to pricing are necessary at this time to address the potential impact on price formation of certain actions affecting DC Tie flows during emergencies, effective upon Board approval.

CORPORATE SECRETARY'S CERTIFICATE

I, Vickie G. Leady, Assistant Corporate Secretary of ERCOT, do hereby certify that, at its October 9, 2018 meeting, the ERCOT Board passed a motion approving the above Resolution by _____.

IN WITNESS WHEREOF, I have hereunto set my hand this 9th day of October 2018.

Vickie G. Leady
Assistant Corporate Secretary