



**Date:** August 9, 2022  
**To:** Board of Directors  
**From:** Nathan Bigbee, Deputy General Counsel  
**Subject:** ERCOT Recommendations to PUC Regarding 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 (Southern Cross): Directive 11, Cost Allocation

**Issue for the ERCOT Board of Directors**

**ERCOT Board of Directors Meeting Date:** August 16, 2022

**Item No.:** 10.2

**Issue:**

Whether the Board of Directors (Board) of Electric Reliability Council of Texas, Inc. (ERCOT) should vote to accept ERCOT staff's determination that: (1) costs identified in the Public Utility Commission of Texas's (PUC's) Final Order in Docket No. 45624 (the 45624 Order) have been appropriately addressed through the resolution of each of the PUC's directives in Project No. 46304 and through the memorandum of understanding between ERCOT and Southern Cross Transmission LLC; and (2) ERCOT has not identified any additional revisions to ERCOT Protocols or PUC rules that are required to appropriately address these costs.

**Background/History:**

In 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 Southern Cross DC Tie to ERCOT. In the Order, the PUC also imposed certain conditions on the interconnection of the Southern Cross DC Tie. The PUC then opened PUC Project No. 46304, and, on May 23, 2017, it issued a Revised Order in that project (the Revised Order) that directed ERCOT to complete a number of tasks set forth in 14 different Directives.

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. ERCOT staff has been working with stakeholders and Southern Cross 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.

For each Directive, ERCOT staff will propose one or more determinations for stakeholder



review and comment, along with any Nodal Protocol Revision Requests (NPRRs) needed to address the Directive, and will seek stakeholder endorsement of the determination at relevant working groups, subcommittees, TAC, and the Board.

This particular determination concerns Directive 11, which requires that ERCOT:

“...shall study and recommend appropriate responsibility for, and allocation of, the costs identified in the Commission's final order in Docket No. 45624, including costs common to the ERCOT system and special costs that are specific to the Garland line and Southern Cross DC tie, and shall identify any existing protocols that need to be modified or new protocols that need to be created, or (if appropriate) any existing Commission rules that need to be modified or new rules that need to be enacted, to appropriately address those costs.”

Discussions with stakeholders regarding this issue occurred at the following meetings: ROS 6/2/2022, WMS 6/1/2022, and TAC 6/27/2022. ERCOT staff prepared a [whitepaper](#) setting forth its determination and considerations relevant to that resolution, which was presented for discussion and endorsement at these meetings.

The 45624 Order identified a number of different categories of anticipated costs associated with the DC Tie proposed by Southern Cross:

- Costs associated with the operation of the DC Tie, including for example, costs of transmission upgrades driven by imports and exports over the DC Tie and costs associated with Ancillary Services needed to accommodate flows over the DC Tie.
- Costs of ERCOT labor for studies and other activities undertaken pursuant to the PUCT's directives identified in Revised Order.
- Costs of software changes associated with revisions to ERCOT rules necessitated by the interconnection of the Southern Cross DC Tie.

With respect to the first category identified above, ERCOT has determined that the costs associated with the operation of the Southern Cross DC Tie have been implicitly addressed by the resolution of each of the directives in the 46304 Order without requiring an explicit allocation of costs. In some cases, the resolution of the directive will naturally require Southern Cross to bear the cost of the solution. For example, NPRR1098,<sup>1</sup> which was proposed to resolve the voltage support service element of Directive 8, will require Southern Cross to install reactive capability equivalent to a 0.95 power factor. Because Southern Cross will bear the cost of installing that capability, there is no other cost under this directive that needs to be allocated. In other cases, the resolution of the directive resulted in a policy solution that avoided creating costs that would need to be allocated. For example, to address the risk of frequency overshoot in the event of a loss of the Southern Cross DC Tie while exporting, as identified as part of ERCOT's resolution of Directive 9, NPRR1034<sup>2</sup> allows ERCOT to limit and/or curtail flows on a DC Tie to avoid such a risk, rather than requiring the creation of a new Ancillary Service or procurement of additional Ancillary Service amounts to address this risk, which would impose

<sup>1</sup> NPRR1098, Direct Current Tie (DC Tie) Reactive Power Capability Requirements.

<sup>2</sup> NPRR1034, Frequency-Based Limits on DC Tie Imports and Exports.  
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additional costs on ERCOT consumers.

The second and third categories of costs identified above—costs of studies and costs of software changes—were allocated pursuant to an October 2017 memorandum of understanding (MOU) between ERCOT and Southern Cross.<sup>3</sup> The MOU provides that Southern Cross will reimburse ERCOT each month for its labor costs associated with studies and other tasks associated with the resolution of the directives. Since the MOU was executed, ERCOT has been invoicing Southern Cross, and Southern Cross has been paying ERCOT for these costs. The MOU also provides that Southern Cross will fund the development of software changes needed to implement the revisions to ERCOT rules required by the directives.

ERCOT believes that the resolution of the directives and the cost recovery mechanism under the MOU appropriately address the costs identified in the Commission’s order. ERCOT therefore concludes that no further revision of ERCOT rules is necessary to allocate costs under the 45624 Order.

**Key Factors Influencing Issue:**

- Costs associated with the operation of the Southern Cross DC Tie have been implicitly addressed by the resolution of each of the directives in the 46304 Order without requiring an explicit allocation of those costs.
- Costs of studies and other ERCOT staff activities were allocated pursuant to an October 2017 MOU between ERCOT and Southern Cross. The MOU provides that Southern Cross will reimburse ERCOT each month for its labor costs associated with the resolution of the directives.
- The MOU also provides that Southern Cross will fund the development of software changes needed to implement the revisions to ERCOT rules required by the directives.

**Conclusion/Recommendation:**

ERCOT staff recommends that the Board accept ERCOT staff’s determination that: (1) costs identified in the 45624 Order have been appropriately addressed through the resolution of each of the PUCT’s directives in Project No. 46304 and through the memorandum of understanding between ERCOT and Southern Cross; and (2) ERCOT has not identified any additional revisions to ERCOT Protocols or PUCT rules that are required to appropriately address these costs.

<sup>3</sup> The MOU was attached to ERCOT’s Second Status Update to the PUC, which is available at: [http://interchange.puc.texas.gov/Documents/46304\\_7\\_965009.PDF](http://interchange.puc.texas.gov/Documents/46304_7_965009.PDF).



**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 (Southern Cross) DC Tie and make determinations as to whether certain actions must be taken by ERCOT in order to accommodate the Southern Cross DC Tie;

WHEREAS, Directive 11 of the Revised Order requires that ERCOT determine the appropriate responsibility for, and allocation of, the costs identified in the Commission's final order in Docket No. 45624, including costs common to the ERCOT system and special costs that are specific to the Garland line and Southern Cross DC tie, and shall identify any existing protocols that need to be modified or new protocols that need to be created, or (if appropriate) any existing Commission rules that need to be modified or new rules that need to be enacted, to appropriately address those costs;

WHEREAS, costs associated with the operation of the Southern Cross DC Tie have been implicitly addressed by the resolution of each of the directives in the Revised Order without requiring an explicit allocation of those costs;

WHEREAS, costs of studies and other ERCOT staff activities were allocated pursuant to an October 2017 memorandum of understanding (MOU) between ERCOT and Southern Cross, and the MOU provides that Southern Cross will reimburse ERCOT each month for its labor costs associated with the resolution of the directives;

WHEREAS, the MOU also provides that Southern Cross will fund the development of software changes needed to implement the revisions to ERCOT rules required by the directives;

WHEREAS, ERCOT has not identified any additional revisions to ERCOT Protocols or PUC rules that are required to appropriately address these costs; 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: (1) costs identified in the PUC's final order in Docket No. 45624 have been appropriately addressed through the resolution of each of the PUC's directives in Project No. 46304 and through the MOU between ERCOT and Southern Cross; and (2) ERCOT has not identified any additional revisions to ERCOT Protocols or PUC rules that are required to appropriately address these costs.



**CORPORATE SECRETARY'S CERTIFICATE**

I, Jonathan M. Levine, Assistant Corporate Secretary of ERCOT, do hereby certify that, at its August 16, 2022, meeting, the Board passed a motion approving the above Resolution by\_\_\_\_\_.

IN WITNESS WHEREOF, I have hereunto set my hand this \_\_\_\_ day of August 2022.

\_\_\_\_\_  
Jonathan M. Levine  
Assistant Corporate Secretary