**PUC PROJECT NO. 55984**

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| **REVIEW OF DC TIE ISSUES IN TRANSMISSION PLANNING** | **§****§** | **PUBLIC UTILITY COMMISSION****OF TEXAS** |

TCPA’s COMMENTS ON STAFF QUESTIONS

Texas Competitive Power Advocates (TCPA)[[1]](#footnote-1) appreciates the opportunity to provide comments on the questions staff issued for comment on January 18, 2024. The Commission and Stakeholders at ERCOT underwent an extensive process to implement directives ordered by the Commission in the City of Garland certificate of convenience and necessity (CCN) Docket authorizing the Southern Cross Transmission (SCT) DC Tie[[2]](#footnote-2) as well as the subsequent project to oversee the ERCOT matters associated with the SCT DC Tie.[[3]](#footnote-3) The multi-year process included many analyses, studies, and recommendations on how to incorporate the 2,100 MW SCT DC tie and ultimately the Commission’s directives into ERCOT’s planning models “so that the reliability of the ERCOT system is not jeopardized and cost responsibilities are properly placed on market participants.”[[4]](#footnote-4)

The process included multiple reviews and recommendations by stakeholders at various work groups, subcommittees, committees, and the Board at ERCOT and ultimately by the Commission, most recently on September 29, 2022 when the Commission instructed Docket Management to “issue an order finding that the Commission agrees with ERCOT’s solutions to the 14 directives in Project No. 46304, closing out Project No. 46304, and opening a new project.”[[5]](#footnote-5) The closing of Project No. 46304 was premised, in key part for two of the directives, on the assumption that ERCOT would curtail DC ties to manage congestion in its planning models and therefore need not build transmission to support full import deliverability of the SCT DC Tie[[6]](#footnote-6) or assign such costs to the SCT DC Tie.[[7]](#footnote-7)

Planning Guide Revision Request 105 (PGRR105) was proposed following the closing of Project No. 46304 and is pending at the Technical Advisory Committee (TAC). PGRR105 proposes to reverse the curtailment assumption upon which prior directives were concluded and instead would require ERCOT to plan for full import deliverability from a DC tie thus rendering the cost allocation policies mooted by the resolution of the issues in Project No. 46304 once again relevant for the Commission to take up. TCPA recommends the Commission approach its current review of DC Ties transmission planning issues consistent with its order in the SCT DC Tie case and uphold the spirit of the recent resolution of the applicable SCT DC Tie directives.

Fundamentally, the Commission should view this project holistically in terms of the overall resource adequacy goals established by the Texas Legislature and the Commission to ensure that policies regarding DC ties do not undermine the overall goal of supporting (and increasing) reliable dispatchable generation capacity in ERCOT. Similarly, TCPA is concerned with the additional regulatory uncertainty that would be added to this market, already in flux, if the Commission were to depart from the policy decisions that the Commission established in the SCT DC Tie case and conceptually reaffirmed just over a year ago. The Commission was clear in its order in the SCT DC Tie case that the operation of the DC tie could not operate “in a manner that would impair ERCOT’s reliability” or “that imperils the thermal capacity of the ERCOT system.”[[8]](#footnote-8) TCPA supports the Commission’s original findings in the SCT DC Tie case and thus offers the following responses to Staff’s questions with an eye toward market stability and reliability in light of the resource adequacy goals established by the Legislature in 2021 and reaffirmed in 2023 through the many pieces of legislation currently undergoing implementation at the PUC and ERCOT.

**Responses to Questions**

1. **Should a policy change regarding Direct Current (DC) tie minimum deliverability and planning assumptions be addressed in a Commission rulemaking project or in the ERCOT stakeholder process via a Nodal Protocol revision request or a Planning Guide revision request?**

TCPA Response: Such a policy change could be addressed either in a PUC rulemaking project or via revisions to the ERCOT Nodal Protocols and Planning Guides, which are also subject to Commission review and approval before taking effect. However, TCPA believes this policy change is appropriate for the Commission to consider because of the interaction between pending PGRR105 (recently tabled by the TAC) and ERCOT’s previous resolution of Directive 6 (and in part Directive 11) from the prior Commission order regarding DC ties described above. Specifically, in the Southern Cross order,[[9]](#footnote-9) ERCOT was directed by the Commission to establish numerous policy issues related to DC ties including how to treat DC ties in transmission planning for purposes of determining cost allocation for transmission upgrades necessary to manage congestion caused by the DC ties. Following significant study and deliberation, the ERCOT Board approved Directive 6, which requires ERCOT to assume curtailment of DC Tie flows in its transmission planning studies when necessary to meet reliability criteria.[[10]](#footnote-10) The justification for this decision is to ensure consistency with ERCOT’s ability to curtail DC ties as it operates the transmission system.

Therefore, one path to reconciling the issues the Commission is addressing in this project is to ensure that ERCOT operates as the resolution to Directive 6 and associated PGRR 077 assumes it will, and simply curtails DC ties when their import results in congestion of in-ERCOT generation resources, consistent with prior policies established through Board approval of the Southern Cross directives[[11]](#footnote-11) and the Commission’s Southern Cross order’s dictates to not harm ERCOT reliability and/or the ERCOT thermal fleet. The Commission should avoid altering these policies. If the Commission does endorse PGRR105 (or some “middle ground”), however, then it should maintain its policy precedent from the Southern Cross order by assigning those resulting transmission expansion costs directly to the DC ties.

Imports into ERCOT across DC ties during emergencies are governed by coordination agreements among the bordering ISOs. As ERCOT has alluded, expanding transmission infrastructure to accommodate full import will not improve reliability unless it is certain ERCOT can actually import that full amount after taking into account the conditions in the neighboring ISO.[[12]](#footnote-12) Consistency with how DC ties are treated in ERCOT operations and ERCOT planning is important, and the Commission should reinforce its prior policy determinations by ensuring this is the case – be it by Commission rule or by ERCOT rule. As an overarching matter, the Commission should prioritize Staff resources and rulemakings in accordance with the directions they have been given by the Legislature.

1. **If the Commission chooses to consider the deliverability of imports over DC ties into ERCOT, should it consider a middle ground solution between zero and full deliverability of imports over DC ties?**

TCPA Response: Adopting a “middle ground” solution would be difficult for the following reasons.

First, DC ties are not currently dispatchable by ERCOT via the security constrained economic dispatch (SCED). Instead, both exports and imports are scheduled transactions by private parties based on economic decisions made by those scheduling entities outside of the ERCOT real-time market. Because exports and imports are economic transactions, the relative economics between two different grids with different market rules, rather than the available transmission infrastructure, will largely dictate the percent of deliverability the DC ties are able to import or export. According to ERCOT, “as a general principle, DC ties…allow QSEs to schedule power transfers such that less expensive power from one region can be used to serve load in another region.”[[13]](#footnote-13)

Second, this question implies there are reliability criteria for DC tie deliverability, but there are not today. That is one reason ERCOT can assume full curtailment of DC ties in their modeling. In fact, in its comments in Project No. 54163, ERCOT detailed how the existing, currently energized DC ties provided limited or no energy to ERCOT during Winter Storm Uri, because the storm impacted the Southwest Power Pool (SPP) as well as northern Mexico and further explained that “historical data suggests that scarcity does not necessarily result in imports over the ties.”[[14]](#footnote-14) Therefore, the Commission should not assume there would be actual deliverability over DC ties into ERCOT, particularly during reliability events, even if the Commission were to direct ERCOT to adopt some minimum deliverability criteria for imports over DC ties for transmission planning purposes.

Third, at a minimum, in developing any minimum deliverability criteria for planning purposes, the DC ties would need an appropriate level of accreditation based on an analysis of what the firm capacity is behind the tie. Since it would be difficult to assume either a 0% or 100% deliverability, it would be critical for the necessary data to drive that input. However, the available data indicates that this would be a difficult process at best. As noted, deliverability during Winter Storm Uri was extremely variable, based upon the needs of the adjacent grids also experiencing the storm. Similarly, as indicated in a joint report by the Federal Energy Regulatory Commission (FERC) and the North American Electric Reliability Corporation (NERC), during Winter Storm Elliott, SPP had significant generation outages of its own beginning in the afternoon on December 22, 2022 and continuing throughout the event.[[15]](#footnote-15) The report continues and highlights that multiple grids were experiencing significant outages at the same time demand on their systems was increasing during Elliott, with all experiencing their peak demands at the same time and all implementing conservative operations and energy emergency measures, and ultimately several, including SPP, shedding load.[[16]](#footnote-16) These recent storms, which also affected ERCOT, are clear examples of the difficulty of predicting what amount of energy (if any) that neighboring grids could be expected to send to ERCOT over DC ties during reliability events. Thus, adopting a “middle ground” deliverability approach would be a complex exercise.

1. **If so, what process should be employed? Please describe the mechanics of this process.**

TCPA Response: Please see TCPA response to Question 2 above.

1. **What are some of the potential policy, market, cost, and practical implications to consider with a middle ground solution?**

TCPA Response: In-state dispatchable generation should be the Commission’s policy priority over and above DC ties, consistent with the Commission’s precedent in the Southern Cross case and as that directive was made very clear by the Legislature in the 2023 Regular Session.[[17]](#footnote-17) While the Commission and Texas leadership are trying to entice new dispatchable generation investment in ERCOT, the premise of planning around deliverability from other grids could send a counter message that the focus is not on in-ERCOT investment, which would provide a disincentive to invest in new generation in ERCOT. The possibility of excess generation in other grids is not guaranteed for delivery into ERCOT during reliability events, as discussed in response to Question 2 and at more length in the ERCOT comments referenced above. ERCOT addressed reliability value in those same comments saying, “to provide reliability value during a widespread, multi-state weather event, a new DC tie connecting to the ERCOT region would need to be accompanied by transmission additions in other areas of the United States that would allow power transfers from regions that are sufficiently distant to ensure weather diversity during such an event.”[[18]](#footnote-18) Additionally, ERCOT noted that imports over new DC ties in real time could be subject to a variety of limits that would, in turn, limit the ability of those ties to address resource adequacy deficiencies in ERCOT.[[19]](#footnote-19)

Further, imports over DC ties would negatively impact price formation in ERCOT, causing signals deleterious for economic investment into in-ERCOT resources – and directly harming existing in-ERCOT resources near the DC tie due to congestion. In other words, imports over DC ties are not guaranteed to be incremental to in-ERCOT resources, but rather in many instances would simply replace in-ERCOT resources. With little assurance that energy will be available for import into ERCOT during reliability events coupled with the potential to negatively impact investment signals for new dispatchable generation in ERCOT, TCPA recommends the Commission evaluate this project from a more holistic perspective in terms of overall resource adequacy goals established by the Texas Legislature and the Commission.

1. **Should this middle ground solution apply to both existing and new DC ties?**

TCPA Response: As an initial matter, any middle ground solution (if adopted) should apply on a prospective basis only. As noted above, transmission planning issues surrounding the SCT DC tie have already been debated at length and addressed in implementing the directives related to the Commission’s order in the SCT case. There is also no need to revisit whether additional transmission is needed to accommodate the already-energized DC ties in North and East Texas and into Mexico that have been operating for years. But more fundamentally, for all the reasons noted above in response to Question 2, a middle ground process would be difficult to define and implement in the first place.

1. **How and by whom (e.g., ERCOT Planning, Commission, bilateral capacity contracts) would the appropriate amount of transmission capacity required be determined?**

TCPA Response: ERCOT Planning Guides are the appropriate place to continue determining transmission requirements. The implementation of the Southern Cross directives resulted in multiple Planning Guide Revision Requests to address DC ties in ERCOT’s transmission planning criteria and were approved by the ERCOT Board. PGRR105 proposes to change that criteria, and if PGRR105 is approved by TAC and adopted by the ERCOT Board, the Commission would need to ultimately approve, reject, or modify PGRR105 before it can become effective. In addition, the Commission has the ability to independently direct transmission build-out if necessary and has exercised that authority, as needed, evidenced by the projects approved and underway in the Rio Grande Valley.[[20]](#footnote-20)

1. **Would additional imports over DC ties impact competition in the wholesale generation market and price formation, particularly when prices are high or during scarcity conditions?**

TCPA Response: Yes. ERCOT still has an energy-only market, and the market design changes under development will not counter-balance the price formation interference or congestion causing the imperilment of in-ERCOT thermal resources resulting from imports over DC ties. With the limits placed on the Performance Credit Mechanism (PCM) by House Bill (HB) 1500,[[21]](#footnote-21) the ERCOT system will necessarily still depend on times when prices reflect higher demand on the system to send an investment signal. Therefore, price distortions from DC tie imports could signal to generation investors not to invest in ERCOT. Further, there is no guarantee that DC ties will import into ERCOT, even during scarcity conditions as other grids could be curtailing exports during that time or have more favorable economics that make exporting into ERCOT unattractive for the DC tie owner. It is important to consider the cost to both reliability and consumers in ERCOT of implementing new policy that undermines other policy changes designed to get new investment in dispatchable generation in ERCOT over which ERCOT’s operators have full control.

1. **From a consumer cost standpoint, would imports over DC ties benefit consumers when prices are high by increasing the supply and reducing the prices?**

TCPA Response: The impacts to consumers will ultimately depend on the timeframe and resource adequacy status at that point in time. The potential exists for imports to be perversely more expensive if relatively less expensive resources that otherwise would participate in the market are congested out by the DC tie imports, or ultimately driven into early retirement or Reliability Must Run (RMR) contracts because market economics do not support their continued operation. Note that it is unclear if the transmission system can support both imports over DC ties and output from units contracted under RMR without the very transmission upgrades that PGRR077 does not require (and PGRR105 proposes to drive). As noted in NRG’s testimony before the Federal Energy Regulatory Commission on December 6, 2022, “…in ERCOT, which depends on energy scarcity pricing for resource adequacy, imports ironically could have a negative effect on long-term reliability… incremental transfer capability ironically could harm reliability in the long run within ERCOT.”[[22]](#footnote-22)

While the Legislature has enacted programs designed to increase investment in dispatchable generation, DC tie imports do not spur investment in in-state generation resources and thus could undermine the Texas Energy Fund loan and completion bonus programs, Dispatchable Reliability Reserve Service, Firm Fuel Supply Service, the PCM, and other programs designed to drive investment in new generation. Increasing the dependency on DC ties to resolve resource adequacy needs thus would increase the uncertainty regarding reliability in ERCOT as bordering ISOs may not approve imports into ERCOT during emergencies based on the terms and conditions of the coordination agreements. Therefore, adopting a policy to increase DC tie imports – particularly without also adopting a policy of curtailing DC tie imports when they negatively impact in-ERCOT generation – could create a trade-off between retaining in-state dispatchable resources dispatched by ERCOT and depending on economic transactions that may not be available when ERCOT needs them the most.

For all these reasons, it is difficult, if not impossible, to predict how an increase in DC tie imports would impact the amount of installed capacity and resource mix in ERCOT and ultimately how it would impact retail consumers without also knowing how the Commission will coordinate other important policy decisions related to DC tie imports.

1. **Can the benefits for wholesale and retail consumers be quantified from question above? Please specify how in detail.**

TCPA Response: Before changing course on prior policy decisions regarding DC ties, the Commission should conduct a comprehensive cost-benefit study. It is possible new ties could increase costs for consumers through export of low-cost energy while providing negligible benefits or even added costs resulting from investment in the transmission system or through early retirement of (or RMR status for) in-state dispatchable resources. Importantly, the Commission has already addressed these issues in its order in the Southern Cross proceeding, and net costs could be minimized/net benefits maximized by ensuring that ERCOT curtail DC tie imports when those imports negatively impact in-ERCOT generation resources.

1. **Which additional obligations currently imposed on the Generation Resources within ERCOT should be required of DC ties before providing them the same planning assumptions and deliverability criteria?**

TCPA Response: This question assumes that applying the same planning assumptions and deliverability criteria for generation resources and DC tie imports is technically feasible – but TCPA asserts that is a false premise. There are numerous requirements and standards applicable to generation resources that do not apply to DC ties. One of the most notable ones is the ability for generation resources to be available to ERCOT even when uneconomic via Reliability Unit Commitment (RUC) by ERCOT. It is unlikely that DC ties could be subject to RUC since DC ties resources are not currently dispatchable via SCED at all and doing so would be complicated by coordination agreements between grid operators for the forced import of DC tie energy. With that said, additional requirements on generation resources that should apply to DC tie operators if the Commission decides to treat DC ties like generation resources for planning purposes (assuming it is technically feasible to do so) include frequency and voltage ride-through requirements, inclusion in inertia and stability studies to determine whether additional responsive reserves need to be procured to protect the system from a full loss (i.e., if the tie is big enough, the greatest single contingency could be the tie), and weatherization standards. To the extent that the neighboring ISO has different standards, the ties should be required to meet the ERCOT standards if they are more stringent than the other area in which they operate to ensure ERCOT consumers are protected. In addition, the Southern Cross directives regarding ramp rates, ancillary service (AS) cost assignment, primary frequency response, voltage support, and the many other aspects thoroughly vetted and approved by stakeholders, ERCOT, and the Commission should also be fully applicable to any new DC tie.

Contributions to Texas’ public interest that generation resources in ERCOT provide include jobs, tax-base growth, and the ability for ERCOT to dispatch those resources when needed for reliability. These are all important reasons to prioritize in-ERCOT resources instead of resources shared with other grids.

1. **How should deliverability criteria for the existing DC tie interconnections to ERCOT with neighboring grids be accounted for in the transmission planning considerations?**

**a. Should it be dependent on the partnering Balancing Authority or Independent System Operator or other power regions on the other side of the DC tie?**

TCPA Response: The Commission has already endorsed deliverability criteria in Southern Cross Directive 6.[[23]](#footnote-23) The Commission should ensure that ERCOT operations are aligned with ERCOT’s planning posture, and require curtailment of DC ties when they would create congestion to the detriment of in-ERCOT resources.

**6. How should deliverability criteria of future DC tie interconnections to ERCOT with neighboring grids be accounted for in the transmission planning considerations?**

**a. Should deliverability criteria consider how future DC tie interconnections are dispatched (SCED vs e-tags)?**

**b. Should the deliverability criteria consider existence (or absence) of an interconnection agreement between power regions?**

**c. Should it be dependent on the partnering Balancing Authority or Independent System Operator or other power regions on the other side of the DC tie?**

TCPA Response: It should be consistent with the Commission’s prior policy determinations in the Southern Cross order and reiterated in the Southern Cross Directives.[[24]](#footnote-24)

**7. What are the secondary impacts of changing the planning assumptions and minimum deliverability criteria of DC ties? For example, would it impact Steady State Working Group models, or other protocols or processes?**

**8. How should the Commission address transmission cost recovery and cost allocation with changes in DC tie import policies?**

TCPA Response: The PUC’s Southern Cross order is direct in allocating costs to the DC tie owner, and that should remain the Commission’s policy. If that policy were to be changed, it would increase regulatory uncertainty at a time when regulatory certainty is critically needed. Therefore, if the DC tie import deliverability criteria for transmission planning are changed, as proposed in PGRR105, then those costs should be assigned to the DC tie owners, consistent with the existing Commission precedent. Additionally, the public has been told in recent media articles that the public will not pay for the DC ties so to allocate costs to consumers now would erode the public’s trust and confidence regarding regulation of the ERCOT grid.[[25]](#footnote-25)

**CONCLUSION**

 TCPA appreciates the opportunity to provide comments to Staff’s questions. We look forward to continuing to work with the Commission, Staff and other stakeholders throughout this project. Finally, we recommend the Commission retain the policies and procedures that have been extensively and recently vetted to ensure a great regulatory stability and alignment with overall resource adequacy goals and legislative direction to increase dispatchable generation capacity inside ERCOT. Should the Commission determine it necessary to implement rules applicable to all DC ties, the rules should be consistent with existing precedent from the fourteen Southern Cross order and directives.

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 Respectfully submitted,

 

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EXECUTIVE SUMMARY OF TCPA COMMENTS

* This project must be viewed holistically in terms of overall resource adequacy goals set by the Legislature and Commission to ensure these policies do not undermine the overall goal of supporting and increasing dispatchable generation capacity in ERCOT.
* ERCOT should continue the adopted policy of curtailing DC ties when their import results in congestion of in-ERCOT generation resources to ensure the continued dictate of not harming ERCOT reliability or the ERCOT thermal fleet.
* Regardless of Commission decision, the policy precedent of assigning resulting transmission expansion costs directly to the DC ties should be maintained.
* The Commission should approach its current review of DC tie planning issues consistent with its order in the SCT DC tie case and in the spirit of the directive resolutions the Commission affirmed in September 2022.
* Incorporation of DC ties into ERCOT planning and appropriate assignment of costs to market participants underwent a multi-year process with stakeholders and ERCOT, culminating in a Commission order agreeing with the solutions adopted for the 14 directives related to Southern Cross Transmission’s (SCT’s) 2100 MW DC tie.
* PGRR 105, pending at TAC, would significantly depart from the SCT solutions and order and would resurrect the cost allocation policies that were mooted by resolution of the SCT directives and thus would require additional Commission action.
* Consistency in treatment of DC ties in both ERCOT operations and ERCOT planning is critical as ERCOT has indicated full import of DC ties does not guarantee any improvement in ERCOT reliability as the condition of neighboring grids will determine import availability.
* A middle ground solution is difficult since exports and imports are economic transactions scheduled by private parties outside of the ERCOT real-time market and are not currently dispatchable by ERCOT in SCED. Relative economics between two grids (and conditions of neighboring grids) will dictate availability of the DC tie and not the available transmission infrastructure.
* A middle ground assumes reliability criteria for DC tie deliverability and there are not any today.
* Any minimum deliverability criteria for planning purposes will require accreditation based on an analysis of how much firm capacity is behind the tie. Recent winter storms demonstrate the difficulty in doing that as adjacent grids were experiencing the same storms and grappling with their in-region generation outages.
* In-ERCOT dispatchable generation has been a clear priority of the Legislature, the Governor, and the Commission. The premise of planning around deliverability from other grids is counter to the programs enacted in SB 3, HB 1500, and SB 2627 and provides a disincentive to invest in new generation in ERCOT.
* ERCOT continues to have an energy-only market and has a number of market design changes under development. Those changes will not counterbalance the price formation interference or congestion that imperils in-ERCOT thermal resources as a result of imports over DC ties.
* Consumers could be subject to perversely more expensive power if DC tie imports congest out relatively less expensive resources in ERCOT or force thermal assets into early retirement or Reliability Must Run (RMR) status because market economics do not support their continued operation.
* The Legislature has enacted programs designed to increase investment in dispatchable generation inside ERCOT. DC ties not only do not spur investment in in-state generation but could ultimately undermine the programs enacted to increase investment in ERCOT generation resources.
* Assuming that it is technically feasible to apply the same planning assumptions and deliverability criteria to DC ties that applies to generation resources is a false premise because there are numerous requirements and standards applicable to generation resources that are unlikely to be able to apply to DC ties.
* The Commission has already endorsed deliverability criteria in SCT and should ensure that ERCOT operations are aligned with ERCOT’s planning posture and require curtailment of DC ties when they create congestion to the detriment of in-ERCOT resources.
1. TCPA is a trade association representing power generation companies and wholesale power marketers with investments in Texas and the Electric Reliability Council of Texas (ERCOT) wholesale electric market. TCPA members and their affiliates provide a wide range of important market functions and services in ERCOT, including development, operation, and management of power generation assets, power scheduling and marketing, energy management services and sales of competitive electric service to consumers. TCPA members participating in this filing own more than 55,000 MW of generating capacity in ERCOT, representing billions of dollars of investment in the state, and employing thousands of Texans. TCPA member companies participating in these comments include: Calpine, Cogentrix, Constellation (formerly Exelon), EDF Trading North America, Hull Street Energy, LS Power, Luminant (aka Vistra), NRG, Rockland Capital, Shell Energy North America, Talen Energy, and TexGen Power. Tenaska Power Services is filing comments separately. [↑](#footnote-ref-1)
2. *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*, Docket No. 45624, Revised Order Creating and Scoping Project (May 23, 2017). [↑](#footnote-ref-2)
3. *Oversight Proceeding Regarding ERCOT Matters Arising Out of Docket No. 45624*, Project No. 46304, Revised Order Creating and Scoping Project (May 23, 2017). [↑](#footnote-ref-3)
4. *Id* at 2. [↑](#footnote-ref-4)
5. *See* Project No. 46304, Order Closing Project (Sept. 30, 2022), and *Compliance Project Related to Project No. 46304*, Project No. 54166, Order Opening Project at 1 (Sept. 30, 2022). [↑](#footnote-ref-5)
6. Directive 6, *Determination regarding any needed transmission upgrades* (“ERCOT shall study and determine what transmission upgrades, if any, are necessary to manage congestion resulting from power flows over the Southern Cross 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.”) [↑](#footnote-ref-6)
7. Directive 11, *Determination regarding allocation of costs identified in PUC Docket No. 45624* (“As ordered by the Public Utility Commission of Texas (PUCT) in Project No. 46304: 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.”) [↑](#footnote-ref-7)
8. Docket No. 45624, Order on Rehearing at 62 (Ordering Paragraphs 44-45). [↑](#footnote-ref-8)
9. Docket No. 45624, Revised Order Creating and Scoping Project at 2-4 (May 23, 2017). [↑](#footnote-ref-9)
10. [https://www.ercot.com/files/docs/2022/05/31/Directive\_6\_ERCOT\_Determination\_regarding\_Any\_Needed\_
Transmission\_Upgrades.pdf](https://www.ercot.com/files/docs/2022/05/31/Directive_6_ERCOT_Determination_regarding_Any_Needed_Transmission_Upgrades.pdf). [↑](#footnote-ref-10)
11. <https://www.ercot.com/mktrules/puctDirectives/southernCross>; *see also* Planning Guide Revision Request (PGRR) 077, Board Report (eff. Nov. 1, 2020), *available at*: <https://www.ercot.com/files/docs/2020/10/16/077PGRR-24_Board_Report_101320.doc>. [↑](#footnote-ref-11)
12. *ERCOT Interconnection Study for 2023 Biennial Report*, Project No. 54163, Comments of Electric Reliability Council of Texas, Inc. at 4 (Oct. 21, 2022). [↑](#footnote-ref-12)
13. Project No. 54163, Comments of Electric Reliability Council of Texas, Inc. at 3 (Oct. 21, 2022). [↑](#footnote-ref-13)
14. *Id* at 4. [↑](#footnote-ref-14)
15. Federal Energy Regulatory Commission (FERC), North American Electric Reliability Corporation (NERC), and Regional Entity Staff Report: *Inquiry into Bulk-Power System Operations During December 2022 Winter Storm Elliott*, November 7, 2023 at 46. [↑](#footnote-ref-15)
16. *Id* at 57-61. [↑](#footnote-ref-16)
17. *E.g.*, 88th Tex. Leg., R.S., House Bill 1500 (Enrolled) and Senate Bill 2627 (Enrolled). [↑](#footnote-ref-17)
18. Project No. 54163, Comments of Electric Reliability Council of Texas, Inc. at 6 (Oct. 21, 2022). [↑](#footnote-ref-18)
19. *Id*. [↑](#footnote-ref-19)
20. *See Project for Commission Ordered Transmission Facilities*, Project No. 52682, Order (Oct. 14, 2021). [↑](#footnote-ref-20)
21. *See* Public Utility Regulatory Act (PURA), Tex. Util. Code § 39.1594. [↑](#footnote-ref-21)
22. FERC Panel 4: Meeting the Goal of Increased Interregional Transfer Capability Commission Staff-Led Workshop, Dec. 6, 2022, *Opening Statement of Travis Kavulla Vice President, Regulatory Affairs NRG Energy, Inc.* at 7. [↑](#footnote-ref-22)
23. [https://www.ercot.com/files/docs/2022/05/31/Directive\_6\_ERCOT\_Determination\_regarding\_Any\_Needed\_
Transmission\_Upgrades.pdf](https://www.ercot.com/files/docs/2022/05/31/Directive_6_ERCOT_Determination_regarding_Any_Needed_Transmission_Upgrades.pdf). [↑](#footnote-ref-23)
24. *Id.* [↑](#footnote-ref-24)
25. https:// www.kvue.com/amp/article/news/investigations/defenders/
connect-texas-power-grid-nationally-plan-ercot/269-2918ca91-8e6a-43d3-9fa1-ee2af138e487. [↑](#footnote-ref-25)