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PUBLIC UTILITY COMMISSION
TALLAHASSEE, FLORIDA

APPLICATION OF THE CITY OF	§	BEFORE THE STATE OFFICE
GARLAND TO AMEND A	§	
CERTIFICATE OF CONVENIENCE AND	§	
NECESSITY FOR THE RUSK-TO-	§	OF
PANOLA DOUBLE-CIRCUIT 345-KV	§	
TRANSMISSION LINE IN RUSK AND	§	
PANOLA COUNTIES	§	ADMINISTRATIVE HEARINGS

Cross-Rebuttal Testimony of

Amanda J. Frazier

on Behalf of
Luminant Energy Company LLC
and Luminant Generation Company LLC

May 24, 2016

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OF AMANDA J. FRAZIER

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1 **CROSS-REBUTTAL TESTIMONY OF AMANDA J. FRAZIER**

2 **I. INTRODUCTION AND SUMMARY**

3 Q. **ARE YOU THE SAME AMANDA J. FRAZIER WHO PREVIOUSLY**
4 **TESTIFIED IN THIS CASE?**

5 A. Yes.

6 Q. **WHAT IS THE PURPOSE OF YOUR CROSS-REBUTTAL TESTIMONY?**

7 A. I address the direct testimony filed by ERCOT in this case. Specifically, I
8 respond to ERCOT's Statement of Position recommending that the
9 Commission not address policy issues in this case; to Mr. Warren Lasher's
10 testimony regarding the planning process for DC Ties; and to Mr. Dan
11 Woodfin's testimony regarding the use of Constraint Management Plans
12 (CMPs).

13 Q. **PLEASE SUMMARIZE YOUR TESTIMONY.**

14 A. I respond to ERCOT's recommendation that the Commission not address
15 policy issues in this case, addressing why the Commission should impose
16 reasonable conditions in this case. I also respond to Mr. Lasher's
17 recommendation that ERCOT use a "wait-and-see" approach to planning
18 transmission upgrades to accommodate flows over the DC Tie. Finally, I
19 rebut Mr. Woodfin's statements that CMPs are only to be used when the
20 Security-Constrained Economic Dispatch (SCED) model cannot solve
21 reliability issues, and request that the Commission direct ERCOT to
22 develop plans to address and mitigate congestion created by flows across
23 the DC Tie.

1 **II. RESPONSE TO ERCOT**

2 Q. ERCOT STATES THAT MANY OF THE ISSUES IDENTIFIED IN THE
3 PRELIMINARY ORDER INVOLVE COMPLEX AND TECHNICAL
4 POLICY QUESTIONS THAT ARE NOT EASILY ADDRESSED WITHIN
5 THE PROCEDURAL LIMITATIONS OF A CONTESTED CASE.¹ DO
6 YOU AGREE?

7 A. I agree that there are a number of issues associated with the Southern
8 Cross (SCT) DC Tie Project that will need to be evaluated in detail through
9 the ERCOT stakeholder process, rather than fully developed in this
10 proceeding. However, I disagree that all issues affecting the SCT DC Tie
11 should be left for future consideration. The ERCOT stakeholder process
12 works much more efficiently when the Commission has weighed in on
13 specific policy issues. And the Legislature has expressly directed that the
14 Commission formally assess the impacts of new large DC ties on
15 consumers and producers.² Reflecting this directive, PURA § 37.051(c-2)
16 specifically outlines that this is the proceeding in which the Commission
17 “may prescribe reasonable conditions to protect the public interest that are
18 consistent with the final order of the Federal Energy Regulatory
19 Commission.”

20 Therefore, the Commission should impose reasonable conditions
21 regarding matters of policy in its final order in this case. Specifically, the
22 Commission should:

- 23 • Direct ERCOT to mitigate price suppression created by ERCOT-
24 directed imports or curtailment of exports over the DC Tie;
25 • Direct ERCOT to develop a plan to address congestion before the
26 DC Tie is energized; and

¹ Electric Reliability Council of Texas, Inc.’s Statement of Position at 1 (Apr. 27, 2016).

- 1 • Direct ERCOT to develop a method to identify appropriate
2 transmission upgrades needed to support the DC Tie, with the
3 clarification that ERCOT must study transmission planning for
4 imports over the DC Tie to allow for full deliverability of both the DC
5 Tie and existing generation.

6 Q. **DO YOU AGREE WITH MR. LASHER'S PROPOSAL FOR MODELING**
7 **A NEW DC TIE IN THE ERCOT PLANNING STUDIES?**

8 A. I agree with much of Mr. Lasher's testimony, including that the approach
9 ERCOT currently uses for the existing DC Ties is appropriate for those
10 facilities. However, I disagree with Mr. Lasher's suggestion that, in
11 modeling a new large DC tie between ERCOT and the Southeastern
12 Electric Reliability Council (SERC) region, ERCOT could use modeling
13 assumptions that minimize the need for system improvements in the
14 vicinity of the new DC tie project.³

² Senate Research Center, Bill Analysis, S.B. 933, 84th Leg., R.S. (July 1, 2015).
³ Direct Testimony of Warren Lasher at 11:4-7 (Apr. 27, 2016).

1 Q. **PLEASE EXPLAIN.**

2 A. Mr. Lasher testifies that the existing DC Ties are modeled for reliability
3 studies based on their observed activity during recent peak demand
4 periods.⁴ Thus, for all of the existing DC Ties between ERCOT and other
5 US markets, the DC Ties are modeled as fully importing, and for DC Ties
6 into Mexico, the DC Ties are modeled as fully exporting. That makes
7 sense and is consistent with my recommendation that the SCT DC Tie
8 should be modeled for reliability studies as fully importing, since there are
9 strong incentives to import into ERCOT's energy-only market over peak
10 periods, when prices are expected to be at their highest levels.

11 Mr. Lasher further testifies that for economic studies, the existing
12 DC Ties are modeled using historical data for all 8,760 hours in a year.⁵
13 Since ERCOT does not have historical data for the SCT DC Tie, and since
14 its operation may not be consistent with the operation of the existing DC
15 Ties, Mr. Lasher expresses uncertainty as to whether current modeling
16 assumptions could be used for the SCT DC Tie.⁶ I agree that current
17 modeling assumptions are not necessarily appropriate for economic
18 planning studies of the SCT DC Tie, but as I recommended in my direct
19 testimony, the Commission should direct ERCOT to develop a method to
20 specifically identify congestion that is caused by imports and exports
21 across the DC Tie. One approach would be to model full imports and full
22 exports as bookends to identify the congestion that could be created by
23 the new DC Tie. It is appropriate to conservatively plan for DC Tie imports
24 and exports because the DC Ties do not respond in SCED to economics.

25 However, Mr. Lasher's suggestion to use modeling assumptions
26 that minimize the need for system improvements in the vicinity of a new

⁴ *Id.* at 8:1-2.

⁵ *Id.* at 8:14-9:8.

1 DC Tie is concerning,⁷ since transmission projects take multiple years to
2 plan and build. To approach modeling of the SCT DC Tie with minimal
3 improvements would be inconsistent with the premise of transmission
4 planning, which aims to plan for worst-case scenarios in order to avoid
5 worst-case outcomes. Waiting for operational data to demonstrate that
6 there is a problem can create havoc, as we have seen before in ERCOT
7 when transmission upgrades are delayed past the time they are needed.⁸
8 "Wait-and-see" is an especially problematic approach given the testimony
9 by Mr. Woodfin that alternative solutions for managing congestion are
10 complicated and, in the case of Constraint Management Plans (CMPs),
11 may not work in all situations.

12 Q. DO YOU AGREE WITH MR. WOODFIN THAT CONSTRAINT
13 MANAGEMENT PLANS ARE ONLY USED WHEN SCED REDISPATCH
14 CANNOT SOLVE A POST-CONTINGENCY TRANSMISSION
15 OVERLOAD?

16 A. No, I do not. ERCOT employs CMPs and Special Protection Systems
17 (SPSs) to facilitate the market use of the ERCOT transmission grid while
18 maintaining system security and reliability in accordance with the
19 Protocols and NERC Reliability Standards. CMPs generally, and SPSs in
20 particular,⁹ are appropriately used to prevent generation from being
21 backed down due to congestion. The Nodal Operating Guides specifically

⁶ *Id.* at 10:18-22.

⁷ *Id.* at 11:4-7.

⁸ This was certainly true in 2012, when unanticipated load growth in the oil and gas fields in west Texas, and the inability to upgrade transmission facilities quickly, caused significant congestion-related price spikes that became the topic of national news. See e.g., Tom Fowler, *At Center of Oil Boom, Electricity Costs Soar*, WALL ST. J., July 23, 2013, at <http://www.wsj.com/articles/SB10001424127887324694904578601793013694354>.

⁹ In the ERCOT Nodal Operating Guides, an SPS is not listed as a specific type of CMP. SPSs are very similar to CMPs, in that they use a relay system to detect transmission contingencies and take automatic corrective action, and thus allow ERCOT to operate using post-contingency ratings for the affected transmission facilities.

1 state that such a use is permissible. For example, Section 11.1(3) of the
2 Nodal Operating Guides states that SPSs may be implemented "in order
3 to allow Generation Resources or Transmission Facilities that would
4 otherwise be subject to restrictions to operate to their full Rating."

5 Q. **WHAT WOULD BE THE IMPLICATION OF MR. WOODFIN'S**
6 **APPROACH?**

7 A. If CMPs or SPSs are not used to manage congestion, as Dr. Siddiqi
8 recommends in his direct testimony, current ERCOT generators, including
9 Luminant's units, could be subject to economic back down to
10 accommodate imports across the DC Tie. This would result in increased
11 congestion costs for consumers, as other generation will be dispatched up
12 to resolve the constraints that are created by the increased imports. This
13 impact is exacerbated by the fact that DC Ties are not dispatched by
14 ERCOT, and cannot respond to economic inputs from SCED. For these
15 reasons, the Commission should direct ERCOT to develop an approach to
16 managing congestion—whether a CMP, SPS, or a combination thereof—
17 caused by imports across the DC Tie, to be implemented before the SCT
18 DC Tie is energized.

19 **III. CONCLUSION**

20 Q. **DOES THIS CONCLUDE YOUR CROSS-REBUTTAL TESTIMONY?**

21 A. Yes.

STATE OF TEXAS §
 §
COUNTY OF TRAVIS §

BEFORE ME, the undersigned authority, on this day personally appeared
Amanda J. Frazier, who, having been placed under oath by me, did depose as follows:

My name is Amanda J. Frazier. I am of legal age and a resident of the
State of Texas. The foregoing testimony offered by me is true and correct, and the
opinions stated therein are, to the best of my knowledge and belief, accurate, true and
correct.

Amanda J. Frazier
Amanda J. Frazier

SUBSCRIBED AND SWORN TO BEFORE ME by the said Amanda J. Frazier
this

24th day of May, 2016.

Lynn Needles
Notary Public, State of Texas

My Commission Expires:

10-23-2016

