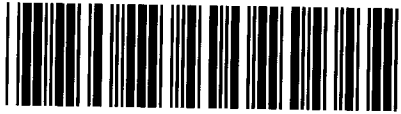




Control Number: 45624



Item Number: 251

Addendum StartPage: 0

SOAH DOCKET NO. 473-16-2751
PUC DOCKET NO. 45624

RECEIVED

2016 APR 27 PM 2:48

APPLICATION OF THE CITY OF
GARLAND TO AMEND A
CERTIFICATE OF CONVEINCE
AND NECESSITY FOR THE RUSK TO
PANOLA DOUBLE-CIRCUIT 345-KV
TRANSMISSION LINE IN RUSK AND
PANOLA COUNTIES

§
§
§
§
§
§
§

STATE OFFICE

OF

ADMINISTRATIVE HEARINGS

PUBLIC UTILITY COMMISSION
FILED

DIRECT TESTIMONY

OF

TED HAILU

ON BEHALF OF

ELECTRIC RELIABILITY COUNCIL OF TEXAS, INC.

APRIL 27, 2016

TABLE OF CONTENTS

I.	Introduction and Qualifications	3
II.	Purpose of Testimony and Summary of Conclusions.....	4

I. INTRODUCTION AND QUALIFICATIONS

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is Ted Hailu. My business address is 2705 West Lake Drive, Taylor, Texas 76574.

Q. BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?

A. I have been employed by Electric Reliability Council of Texas, Inc. (ERCOT) since May 2000 and I am currently the Director of Client Services. I was named to this position in January 2012 and prior to that was employed by ERCOT as Manager of Market Training and Manager of Client Services. As the director of Client Services, my responsibilities include overseeing the registration of market participants in the ERCOT market.

Q. PLEASE DESCRIBE YOUR PROFESSIONAL EXPERIENCE AND EDUCATIONAL BACKGROUND.

A. I have over 30 years of experience in the electric utility industry and operation of retail and wholesale electricity markets including the last fifteen years at ERCOT and the preceding fifteen years at two of the largest municipally owned utilities in the United States, Austin Energy and City of Los Angeles Department of Water and Power (LADWP).

I hold a Bachelor of Science degree in Electrical Engineering from the University of California Los Angeles (UCLA) and a Master of Science degree in Electrical Engineering from the University of Southern California (USC).

1 **II. PURPOSE OF TESTIMONY AND SUMMARY OF CONCLUSIONS**

2 **Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?**

3 A. The purpose of my testimony is to address Southern Cross Transmission LLC's
4 (Southern Cross) registration as an ERCOT market participant. I will address
5 whether Southern Cross should be required to register as a market participant and
6 what issues may arise depending on what market participant type Southern Cross
7 registers as.

8 **Q. SHOULD SCT BE REQUIRED TO EXECUTE A MARKET PARTICIPANT**
9 **AGREEMENT WITH ERCOT?**

10 A. Yes, Southern Cross should execute a Standard Form Market Participant
11 Agreement (SFMPA) before Garland Power & Light energizes the interconnection
12 facilities. Execution of the SFMPA formally binds the market participant to the
13 ERCOT Protocols and other relevant standards and ensures that ERCOT, as the
14 independent system operator, may lawfully demand compliance with these
15 standards. Registration of the DC tie operator would also ensure that ERCOT has
16 appropriate contact information for those persons designated to be ultimately
17 responsible for the operation of the tie. Furthermore, for any entity that owns a
18 physical asset interconnected to the ERCOT system, registration entails providing
19 and maintaining accurate parameters about the asset required for planning and
20 reliable operation of the ERCOT system

21 In addition to executing the SFMPA, as part of its registration procedures, ERCOT
22 may also require reasonable tests of a market participant's ability to communicate
23 with ERCOT or perform as required under the protocols. ERCOT may also require

1 related agreements for specific purposes that only apply to some market
2 participants. These additional registration requirements may be appropriate when
3 SCT becomes a market participant.

4 **Q. DO YOU HAVE A RECOMMENDATION AS TO THE MARKET**
5 **PARTICIPANT CATEGORY THAT WOULD BE MOST APPROPRIATE**
6 **FOR SCT?**

7 A. At this time, I am unable to provide a recommendation as to the appropriate market
8 participant category for Southern Cross for several reasons. First, ERCOT is unsure
9 how Southern Cross would be categorized under the NERC functional registration
10 model. This categorization could have some implications on how ERCOT interacts
11 with Southern Cross. Second, the registration options presented in this testimony
12 assume that Southern Cross's role in the market will be similar to those of current
13 DC tie operators. Changes to that assumption, such as whether or not the DC tie
14 will be subject to economic dispatch, could impact the evaluation of what type of
15 market participant registration is best suited to Southern Cross. Evaluation of
16 options and detailed impact analysis of SCT's options for registration as an ERCOT
17 market participant and options for the operation of the DC tie are better suited to be
18 evaluated through ERCOT stakeholder process.

19 However, it is appropriate to begin consideration of the potential system impacts
20 and need for policy changes that may arise under different market participant
21 categorizations. I have considered the potential impacts of Southern Cross
22 registering as Transmission Service Provider (TSP), a Resource Entity (RE), or a
23 new type of market participant.

1 **Q. WHAT ARE SOME POTENTIAL IMPACTS OF SOUTHERN CROSS**
2 **REGISTERING AS A TRANSMISSION SERVICE PROVIDER?**

3 A. Under this option, registration of Southern Cross as a TSP would be handled in the
4 same manner as any other new TSP and have little or no impact to ERCOT's
5 systems. However, future policy and system changes may be needed because
6 Southern Cross's interactions and responsibilities in the ERCOT market as the
7 operator of the proposed DC tie will constitute a small fraction of the total TSP
8 responsibilities detailed in the ERCOT protocols, guides and other binding
9 documents. This will most likely lead to a need for policy changes to carve out
10 performance and compliance exceptions that will apply only to SCT.

11 This raises a policy question regarding whether Southern Cross, as a potential TSP
12 that would be responsible for the operation of a single electrical bus, should have
13 the same access to ERCOT systems and market data as other TSPs. TSPs are
14 granted access to a wide array of ERCOT systems and market data due to their
15 engagement in the planning and operations of the ERCOT Transmission Grid.
16 Southern Cross would have access to all market systems and data currently made
17 available to other TSPs related to grid operations and market operations through
18 ERCOT's market information system, including access to ERCOT planning and
19 operations models, transmission and generation outages, generation
20 interconnection requests, system dynamics information, reports and data extracts
21 on a wide variety of ERCOT system planning, operations and settlement, as well
22 as communications between ERCOT and transmission operators.

23 This level of access to ERCOT market systems and data as other TSPs will likely

1 not be necessary for Southern Cross to carry out its responsibilities as a DC tie
2 operator. Whether it is appropriate to give Southern Cross the same level of access
3 to market systems and data should first be addressed through the ERCOT
4 stakeholder process.

5 **Q. WHAT ARE SOME POTENTIAL IMPACTS OF SOUTHERN CROSS**
6 **REGISTERING AS A RESOURCE ENTITY?**

7 A. Although Southern Cross's only proposed function--the operation of a DC tie--is
8 currently performed only by TSPs in the ERCOT market, registration as an RE is
9 an option that should be considered. Under this option, registration of Southern
10 Cross as an RE would be handled in the same manner as any other new RE and
11 have little or no impact to ERCOT's systems. A change in the definition of
12 "Resource Entity" in the ERCOT protocols would be required since REs are
13 defined as entities that own or control generation or load resources. In addition to
14 generation or load resources, REs also own or operate some transmission facilities at
15 their points of interconnection. REs submit information needed for modeling of their
16 facilities including transmission assets through ERCOT's resource registration
17 process. Unlike TSPs that are granted access to a wide variety of planning and
18 operational information, access to information provided to REs is limited to
19 facilities owned or operated by each RE. RE registration would also largely avoid
20 the concerns about the level of access to ERCOT systems and market data described
21 under the option of registering Southern Cross as a TSP. In addition, outage
22 information for resource or transmission facilities owned by REs is submitted and
23 maintained by the Qualified Scheduling Entity (QSE) designated by each RE. If
24 Southern Cross registers as an RE, its interaction with ERCOT related to the

1 transmission facilities associated with the operation of the proposed DC tie would be
2 similar to that of REs for transmission facilities at their points of interconnection.

3 Although most protocol requirements for REs related to ownership and operation of
4 load and generation resources would likely not apply to Southern Cross, its
5 registration as an RE would enable it to meet some of its obligations as the DC tie
6 operator, such as maintenance of the network model. But SCT will be required to
7 designate a QSE to meet the full requirements of operating the transmission facility,
8 such as management of transmission outages and real-time communication.

9 **Q. WHAT ARE SOME POTENTIAL IMPACTS OF SOUTHERN CROSS**
10 **REGISTERING AS A NEW TYPE OF MARKET ENTITY?**

11 A. From a policy perspective, there will need to be changes made to the Protocols and
12 possibly other procedures to create and define requirements for registration and
13 participation in the ERCOT market. Creating a new type of market participant in
14 the ERCOT protocols would require a modification of ERCOT Protocols and other
15 procedural documents to explicitly describe that participant's obligations. If
16 Southern Cross desires to become a voting member of ERCOT, the ERCOT bylaws
17 would also need to be amended so that Southern Cross could qualify under one of
18 the eligible member segments.

19 From an operational perspective, the benefit of creating a new participant type is
20 that it allows an opportunity to tailor the appropriate level of data access as well as
21 tailoring the other rights and obligations that should attach to Southern Cross.
22 Under this option, ERCOT would need to develop a set of performance
23 requirements and an associated profile of access to ERCOT systems and market
24 data. The ERCOT market rules defining the roles and responsibilities of the new

1 market participant type would also be defined to allow Southern Cross to meet all
2 of its obligations without the need for a QSE as would be the case if Southern Cross
3 registered as an RE under current requirements.

4 The costs of this approach would also need to be considered. ERCOT recently
5 created a new type of market participant, the Independent Market Information
6 System Registered Entity (IMRE.). The costs to implement the IMRE system
7 changes were approximately \$100,000. The magnitude of the system changes
8 necessary to implement a new market participant type for Southern Cross will likely
9 be significantly larger than the IMRE implementation costs. Unlike the IMRE,
10 Southern Cross will need access to more ERCOT systems and the implementation
11 will require integration across more systems. The IMRE implementation costs
12 provide a suitable estimate for the low end of the range of the costs of creating a
13 new type of market participant for Southern Cross.

14 **Q. PURA § 37.051(c-2) ALLOWS THE COMMISSION TO PRESCRIBE**
15 **REASONABLE CONDITIONS WHEN APPROVING THE CERTIFICATE**
16 **OF CONVENIENCE AND NECESSITY (CCN) APPLICATION FILED IN**
17 **THIS PROCEEDING. DO YOU HAVE SUGGESTIONS FOR**
18 **REASONABLE CONDITIONS RELATED TO SOUTHERN CROSS'S**
19 **REGISTRATION AT ERCOT THAT THE COMMISSION MIGHT**
20 **IMPOSE WHEN APPROVING THE CCN?**

21 **A.** Yes, one reasonable condition the Commission might impose is for Southern Cross
22 to become a registered market participant with ERCOT before the DC tie project is
23 energized. It is critical to the reliable operation of the ERCOT system for Southern

1 Cross to become a registered market participant and for ERCOT to implement all
2 necessary system changes before power begins to flow across the new DC tie. As
3 I stated previously, I believe it is premature to make a final determination in this
4 proceeding about the appropriate category of market participant for Southern Cross.
5 That decision is best made after further evaluation by and input from the ERCOT
6 stakeholder process.

7 **Q. WAS YOUR TESTIMONY AND ANALYSIS PREPARED BY YOU OR**
8 **UNDER YOUR DIRECT SUPERVISION?**

9 A. Yes.

10 **Q. DOES THIS CONCLUDE YOUR TESTIMONY?**

11 A. Yes, it does.

CERTIFICATE OF SERVICE

I hereby certify that a copy of this document was served on all parties of record on April 27, 2016, by posting on the PUC Interchange in accordance with the provisions regarding service in SOAH Order No. 3 in this proceeding.

U. M. B. J.