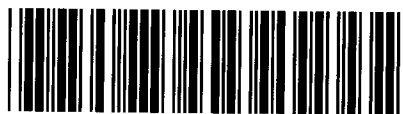




Control Number: 45624



Item Number: 191

Addendum StartPage: 0

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 §

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**SOUTHERN CROSS TRANSMISSION LLC'S RESPONSE TO TEXAS INDUSTRIAL  
ENERGY CONSUMERS' SECOND SET OF REQUESTS FOR INFORMATION  
TO SOUTHERN CROSS TRANSMISSION LLC  
QUESTION NOS. TIEC 2-1 THROUGH TIEC 2-44**

Southern Cross Transmission LLC (SCT) files this response to Texas Industrial Energy Consumers' Second Set of Requests for Information (RFI) to SCT. SCT received Texas Industrial Energy Consumers' Second RFI on April 4, 2016. Pursuant to SOAH Order No. 2, SCT's response is due on April 14, 2016; therefore, this response is timely filed. All parties may treat these answers as if they were filed under oath.

SCT reserves the right to object at the time of the hearing to the admissibility of the information provided herein.

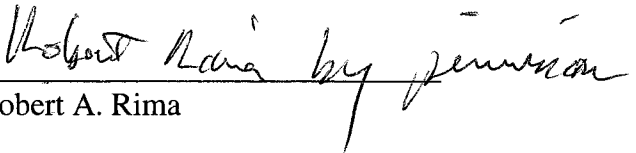
Respectfully submitted,

*Robert Rima by permission*  
Robert A. Rima  
State Bar No. 16932500  
Law Offices of Robert A. Rima  
7200 N. MoPac Expy, Suite 160  
Austin, TX 78732-2560  
512-349-3449  
512-349-9339 Fax  
bob.rima@rimalaw.com

*Attorney for Southern Cross Transmission LLC*

**CERTIFICATE OF SERVICE**

I certify that a true and correct copy of this document was served by electronic mail, facsimile, hand-delivery, overnight delivery, or First Class U.S. Mail on Texas Industrial Energy Consumers on April 14, 2016.

  
Robert A. Rima

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

<b>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</b>	§ § § § § § §	<b>BEFORE THE  STATE OFFICE OF  ADMINISTRATIVE HEARINGS</b>
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**SOUTHERN CROSS TRANSMISSION LLC RESPONSE TO TEXAS INDUSTRIAL  
ENERGY CONSUMERS' FIRST SET OF REQUESTS FOR INFORMATION  
TO SOUTHERN CROSS TRANSMISSION LLC  
QUESTION NOS. TIEC 2-1 THROUGH TIEC 2-36**

**Question No. TIEC 2-1**

Please state the percentage of Pattern Energy Group, LP's (Pattern's) common stock that is owned by Riverstone Holdings, LLC (Riverstone).

**Response No. TIEC 2-1**

Pattern Energy Group LP is a limited partnership and does not have common stock.

Prepared by: David Parquet  
Sponsored by: David Parquet

Title: Senior Vice President – Special Projects  
Title: Senior Vice President – Special Projects

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

<b>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</b>	§ § § § § § §	<b>BEFORE THE  STATE OFFICE OF  ADMINISTRATIVE HEARINGS</b>
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**SOUTHERN CROSS TRANSMISSION LLC RESPONSE TO TEXAS INDUSTRIAL  
ENERGY CONSUMERS' FIRST SET OF REQUESTS FOR INFORMATION  
TO SOUTHERN CROSS TRANSMISSION LLC  
QUESTION NOS. TIEC 2-1 THROUGH TIEC 2-44**

**Question No. TIEC 2-2**

Please state what percentage of Talen Energy is owned by Riverstone.

**Response No. TIEC 2-2**

SCT does not have information in its possession, custody, or control that is responsive to this Request.

Prepared by: David Parquet  
Sponsored by: David Parquet

Title: Senior Vice President – Special Projects  
Title: Senior Vice President – Special Projects

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

<b>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</b>	§ § § § § § §	<b>BEFORE THE  STATE OFFICE OF  ADMINISTRATIVE HEARINGS</b>
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**SOUTHERN CROSS TRANSMISSION LLC RESPONSE TO TEXAS INDUSTRIAL  
ENERGY CONSUMERS' FIRST SET OF REQUESTS FOR INFORMATION  
TO SOUTHERN CROSS TRANSMISSION LLC  
QUESTION NOS. TIEC 2-1 THROUGH TIEC 2-44**

**Question No. TIEC 2-3**

Please state the percentage of Pattern Energy's common stock that is owned by Carlyle Group, LP (Carlyle).

**Response No. TIEC 2-3**

Pattern Energy Group is a limited partnership and does not have common stock.

Prepared by: David Parquet  
Sponsored by: David Parquet

Title: Senior Vice President – Special Projects  
Title: Senior Vice President – Special Projects

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

<b>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</b>	§ § § § § § §	<b>BEFORE THE  STATE OFFICE OF  ADMINISTRATIVE HEARINGS</b>
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**SOUTHERN CROSS TRANSMISSION LLC RESPONSE TO TEXAS INDUSTRIAL  
ENERGY CONSUMERS' FIRST SET OF REQUESTS FOR INFORMATION  
TO SOUTHERN CROSS TRANSMISSION LLC  
QUESTION NOS. TIEC 2-1 THROUGH TIEC 2-44**

**Question No. TIEC 2-4**

Please state what percentage of Talen Energy is owned by Carlyle.

**Response No. TIEC 2-4**

SCT does not have information in its possession, custody, or control that is responsive to this Request.

Prepared by: David Parquet  
Sponsored by: David Parquet

Title: Senior Vice President – Special Projects  
Title: Senior Vice President – Special Projects

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

<b>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</b>	§ § § § § § §	<b>BEFORE THE  STATE OFFICE OF  ADMINISTRATIVE HEARINGS</b>
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**SOUTHERN CROSS TRANSMISSION LLC RESPONSE TO TEXAS INDUSTRIAL  
ENERGY CONSUMERS' FIRST SET OF REQUESTS FOR INFORMATION  
TO SOUTHERN CROSS TRANSMISSION LLC  
QUESTION NOS. TIEC 2-1 THROUGH TIEC 2-44**

**Question No. TIEC 2-5**

Please identify all generating plants that Talen Energy owns in ERCOT.

**Response No. TIEC 2-5**

SCT does not have information in its possession, custody, or control that is responsive to this Request.

Prepared by: David Parquet  
Sponsored by: David Parquet

Title: Senior Vice President – Special Projects  
Title: Senior Vice President – Special Projects



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

<b>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</b>	§ § § § § § §	<b>BEFORE THE  STATE OFFICE OF  ADMINISTRATIVE HEARINGS</b>
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**SOUTHERN CROSS TRANSMISSION LLC RESPONSE TO TEXAS INDUSTRIAL  
ENERGY CONSUMERS' FIRST SET OF REQUESTS FOR INFORMATION  
TO SOUTHERN CROSS TRANSMISSION LLC  
QUESTION NOS. TIEC 2-1 THROUGH TIEC 2-44**

**Question No. TIEC 2-6**

Please identify all generating plants in ERCOT that Riverstone controls or in which Riverstone owns more than a 5% interest.

**Response No. TIEC 2-6**

SCT does not have information in its possession, custody, or control that is responsive to this Request. SCT believes some of the requested information may be publicly available in FERC filings.

Prepared by: David Parquet  
Sponsored by: David Parquet

Title: Senior Vice President – Special Projects  
Title: Senior Vice President – Special Projects

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

<b>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</b>	§ § § § § § §	<b>BEFORE THE  STATE OFFICE OF  ADMINISTRATIVE HEARINGS</b>
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**SOUTHERN CROSS TRANSMISSION LLC RESPONSE TO TEXAS INDUSTRIAL  
ENERGY CONSUMERS' FIRST SET OF REQUESTS FOR INFORMATION  
TO SOUTHERN CROSS TRANSMISSION LLC  
QUESTION NOS. TIEC 2-1 THROUGH TIEC 2-44**

**Question No. TIEC 2-7**

Please identify all generating facilities in SERC or TVA that Riverstone controls or in which Riverstone owns more than a 5% interest.

**Response No. TIEC 2-7**

SCT does not have information in its possession, custody, or control that is responsive to this Request. SCT believes some of the requested information may be publicly available in FERC filings.

Prepared by: David Parquet  
Sponsored by: David Parquet

Title: Senior Vice President – Special Projects  
Title: Senior Vice President – Special Projects

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

<b>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</b>	§ § § § § § §	<b>BEFORE THE  STATE OFFICE OF  ADMINISTRATIVE HEARINGS</b>
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**SOUTHERN CROSS TRANSMISSION LLC RESPONSE TO TEXAS INDUSTRIAL  
ENERGY CONSUMERS' FIRST SET OF REQUESTS FOR INFORMATION  
TO SOUTHERN CROSS TRANSMISSION LLC  
QUESTION NOS. TIEC 2-1 THROUGH TIEC 2-44**

**Question No. TIEC 2-8**

Please identify all generating plants in ERCOT that Carlyle controls or in which Carlyle owns more than a 5% interest.

**Response No. TIEC 2-8**

SCT does not have information in its possession, custody, or control that is responsive to this Request.

Prepared by: David Parquet  
Sponsored by: David Parquet

Title: Senior Vice President – Special Projects  
Title: Senior Vice President – Special Projects

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

<b>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</b>	§ § § § § § §	<b>BEFORE THE  STATE OFFICE OF  ADMINISTRATIVE HEARINGS</b>
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**SOUTHERN CROSS TRANSMISSION LLC RESPONSE TO TEXAS INDUSTRIAL  
ENERGY CONSUMERS' FIRST SET OF REQUESTS FOR INFORMATION  
TO SOUTHERN CROSS TRANSMISSION LLC  
QUESTION NOS. TIEC 2-1 THROUGH TIEC 2-44**

**Question No. TIEC 2-9**

Please identify all generating facilities in SERC or TVA that Carlyle controls or in which Carlyle owns more than a 5% interest.

**Response No. TIEC 2-9**

SCT does not have information in its possession, custody, or control that is responsive to this Request.

Prepared by: David Parquet  
Sponsored by: David Parquet

Title: Senior Vice President – Special Projects  
Title: Senior Vice President – Special Projects

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

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

**SOUTHERN CROSS TRANSMISSION LLC RESPONSE TO TEXAS INDUSTRIAL  
ENERGY CONSUMERS' FIRST SET OF REQUESTS FOR INFORMATION  
TO SOUTHERN CROSS TRANSMISSION LLC  
QUESTION NOS. TIEC 2-1 THROUGH TIEC 2-44**

**Question No. TIEC 2-10**

Please identify and list any generating plant in ERCOT which Pattern controls or in which it owns more than a 5% interest.

**Response No. TIEC 2-10**

Pattern Energy Group LP does not control any generating plant in ERCOT. Pattern Energy Group LP has an indirect 22.76% interest in Pattern Energy Group Inc. Pattern Energy Group Inc. has an indirect ownership interest in the following wind farms in ERCOT: Logan's Gap Wind, Panhandle Wind 1, Panhandle Wind 2, and Gulf Wind.

Prepared by: David Parquet  
Sponsored by: David Parquet

Title: Senior Vice President – Special Projects  
Title: Senior Vice President – Special Projects

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

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

**SOUTHERN CROSS TRANSMISSION LLC RESPONSE TO TEXAS INDUSTRIAL  
ENERGY CONSUMERS' FIRST SET OF REQUESTS FOR INFORMATION  
TO SOUTHERN CROSS TRANSMISSION LLC  
QUESTION NOS. TIEC 2-1 THROUGH TIEC 2-44**

**Question No. TIEC 2-11**

Please identify each generating facility in SERC or TVA which Pattern controls or in which it owns more than a 5% interest.

**Response No. TIEC 2-11**

Pattern Energy Group LP does not control nor does it own more than a 5% interest in any generating facility in SERC or TVA.

Prepared by: David Parquet  
Sponsored by: David Parquet

Title: Senior Vice President – Special Projects  
Title: Senior Vice President – Special Projects

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

<b>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</b>	§ § § § § § §	<b>BEFORE THE  STATE OFFICE OF  ADMINISTRATIVE HEARINGS</b>
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**SOUTHERN CROSS TRANSMISSION LLC RESPONSE TO TEXAS INDUSTRIAL  
ENERGY CONSUMERS' FIRST SET OF REQUESTS FOR INFORMATION  
TO SOUTHERN CROSS TRANSMISSION LLC  
QUESTION NOS. TIEC 2-1 THROUGH TIEC 2-44**

**Question No. TIEC 2-12**

Please provide all documents and communications exchanged between or among Pattern, Resero Consulting (Resero), and LCG Consulting (LCG) regarding this project, including interim reports.

**Response No. TIEC 2-12**

By agreement with TIEC, this response will be provided on April 19, 2016.

Prepared by: Ellen Wolfe  
Sponsored by: Ellen Wolfe

Title: President – Resero Consulting  
Title: President – Resero Consulting

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

<b>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</b>	§ § § § § § §	<b>BEFORE THE  STATE OFFICE OF  ADMINISTRATIVE HEARINGS</b>
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**SOUTHERN CROSS TRANSMISSION LLC RESPONSE TO TEXAS INDUSTRIAL  
ENERGY CONSUMERS' FIRST SET OF REQUESTS FOR INFORMATION  
TO SOUTHERN CROSS TRANSMISSION LLC  
QUESTION NOS. TIEC 2-1 THROUGH TIEC 2-44**

**Question No. TIEC 2-13**

In reference to the organizational chart attached to SCT's response to TIEC 1-10, please provide an organizational chart that lists:

- a. The specific entities and facilities that comprise the "Renewable Energy Business," including identifying all generation facilities owned by the "Renewable Energy Business" and the size of that generation in megawatts;
- b. Any owners of more than 5% of Pattern's equity; and
- c. Any generation subsidiaries of any entity that owns more than 5% of Pattern's equity, including identifying the specific generation facilities and the size of those facilities in megawatts.

**Response No. TIEC 2-13**

By agreement of the parties, TIEC 2-13(a) is limited to the Renewable Energy Business in Texas.

- a. There are no generation facilities owned by the Renewable Energy Business in Texas.
- b. Pattern Energy Group LP direct limited partnership interests are held by Pattern Energy Group Holdings LP.
- c. Pattern Energy Group Holdings LP has an indirect 22.76 interest in Pattern Energy Group Inc. Pattern Energy Group Inc. has an indirect ownership interest in the following wind farms in Texas: Logan's Gap Wind (200MW), Panhandle Wind 1 (218 MW), Panhandle Wind 2 (182 MW), and Gulf Wind (283.2 MW).

Prepared by: David Parquet  
Sponsored by: David Parquet

Title: Senior Vice President – Special Projects  
Title: Senior Vice President – Special Projects



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

<b>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</b>	§ § § § § § §	<b>BEFORE THE  STATE OFFICE OF  ADMINISTRATIVE HEARINGS</b>
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**SOUTHERN CROSS TRANSMISSION LLC RESPONSE TO TEXAS INDUSTRIAL  
ENERGY CONSUMERS' FIRST SET OF REQUESTS FOR INFORMATION  
TO SOUTHERN CROSS TRANSMISSION LLC  
QUESTION NOS. TIEC 2-1 THROUGH TIEC 2-44**

**Question No. TIEC 2-14**

Please refer to SCT's response to TIEC 1-19. Is it Ms. Wolfe's contention that a production cost simulation does not report production costs by the hour? If such costs are not reported by the hour, what is the smallest increment of time for which they are reported by the model (e.g., daily, weekly)? Please provide all data related to production costs by this smallest reported increment.

**Response No. TIEC 2-14**

The production cost model UPLAN reports what the user specifies is to be reported. For studies such as this, Resero and LCG have worked out a typical set of metrics to be reported which were included in the report shown in Ms. Wolfe's testimony Exhibit EW-2. Resero and LCG did not report out the production cost metrics by any smaller time division than is reflected in Exhibit EW-2.

Reporting data by hour for the three cases run for SCT for 8760 hours in the year for each of the approximately 74,000 nodes that were modeled in UPLAN, as requested by TIEC, would produce almost 2 billion records, an unmanageable amount of data. UPLAN is not intended to be used in this fashion.

Prepared by: Ellen Wolfe  
Sponsored by: Ellen Wolfe

Title: President – Resero Consulting  
Title: President – Resero Consulting

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

<b>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</b>	§ § § § § § §	<b>BEFORE THE  STATE OFFICE OF  ADMINISTRATIVE HEARINGS</b>
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**SOUTHERN CROSS TRANSMISSION LLC RESPONSE TO TEXAS INDUSTRIAL  
ENERGY CONSUMERS' FIRST SET OF REQUESTS FOR INFORMATION  
TO SOUTHERN CROSS TRANSMISSION LLC  
QUESTION NOS. TIEC 2-1 THROUGH TIEC 2-44**

**Question No. TIEC 2-15**

Please refer to SCT's response to TIEC 1-20. Please provide all data related to the hours of wind curtailment and the associated amount of wind curtailment for each of the cases studied. If hourly results were not reported, please provide the results based on the smallest increment of time reported.

**Response No. TIEC 2-15**

Please refer to TIEC 2-15Attachment1\_HSPM.xls, which is provided on CD pursuant to the terms of the Protective Order in this proceeding.

Prepared by: Ellen Wolfe  
Sponsored by: Ellen Wolfe

Title: President – Resero Consulting  
Title: President – Resero Consulting

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

<b>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</b>	§ § § § § § §	<b>BEFORE THE  STATE OFFICE OF  ADMINISTRATIVE HEARINGS</b>
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**SOUTHERN CROSS TRANSMISSION LLC RESPONSE TO TEXAS INDUSTRIAL  
ENERGY CONSUMERS' FIRST SET OF REQUESTS FOR INFORMATION  
TO SOUTHERN CROSS TRANSMISSION LLC  
QUESTION NOS. TIEC 2-1 THROUGH TIEC 2-44**

**Question No. TIEC 2-16**

Please refer to SCT's response to TIEC 1-20. Describe in detail how "LCG and Resero considered the level of wind curtailment, investigated the apparent root causes of the curtailment need, and considered possible resolutions to the observed wind curtailment." Provide all workpapers, communications, and other documents associated with this consideration and investigation.

**Response No. TIEC 2-16**

The average curtailment in all of the cases were within LCG's expectations based on their experience with the large number of studies that they have conducted in Texas/ERCOT. The only other independent study considered by Resero/LCG was the "Panhandle Renewable Energy Zone (PREZ) Study" by ERCOT System Planning, April 2014, which is publicly available on the ERCOT website. According to the ERCOT study:

- With 3000 MW of Panhandle wind capacity, the expected curtailments are 6.3% and 0%, respectively, without upgrade and with stage one upgrade. With 6,500 MW of wind and with stage one upgrade, the estimated curtailment is 23.1%.
- Panhandle wind generation capacity of 6,500 MW triggers stage two upgrade with a stability limit of 4,680 MW (90% of export limit). ERCOT estimates the curtailment to be 6.5%.

Prepared by: Ellen Wolfe  
Sponsored by: Ellen Wolfe

Title: President – Resero Consulting  
Title: President – Resero Consulting

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

<b>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</b>	§ § § § § § §	<b>BEFORE THE  STATE OFFICE OF  ADMINISTRATIVE HEARINGS</b>
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**SOUTHERN CROSS TRANSMISSION LLC RESPONSE TO TEXAS INDUSTRIAL  
ENERGY CONSUMERS' FIRST SET OF REQUESTS FOR INFORMATION  
TO SOUTHERN CROSS TRANSMISSION LLC  
QUESTION NOS. TIEC 2-1 THROUGH TIEC 2-44**

**Question No. TIEC 2-17**

Please refer to SCT's response to TIEC 1-22. Please provide all data related to the "hour-by-hour nodal loads" referenced in that response. Additionally, please provide the hourly load forecast used in the model runs (i.e., the summation of the "hour-by-hour nodal loads") both by load zone and for ERCOT as a whole.

**Response No. TIEC 2-17**

The ERCOT hour-by-hour load shapes for each weather zone come from the 2014 RTP Economic Case. These shapes are then prorated based on the ERCOT 50-50 non-coincidental peak load forecast (published September 2014) publicly available from ERCOT. The distribution of weather zone load to each node comes from the ERCOT summer peak power flow case for 2020 (SSWG network published October 2015). These specific cases and forecasts are available to ERCOT market participants and to consultants satisfying ERCOT's security verification procedures.<sup>1</sup>

Prepared by: Ellen Wolfe  
Sponsored by: Ellen Wolfe

Title: President – Resero Consulting  
Title: President – Resero Consulting

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<sup>1</sup> Note that some of the ERCOT information indicated as available is protected under ERCOT's Critical Energy Infrastructure Information (CEII) protection and requires authorization from ERCOT to access or transfer.

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

<b>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</b>	§ § § § § § §	<b>BEFORE THE  STATE OFFICE OF  ADMINISTRATIVE HEARINGS</b>
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**SOUTHERN CROSS TRANSMISSION LLC RESPONSE TO TEXAS INDUSTRIAL  
ENERGY CONSUMERS' FIRST SET OF REQUESTS FOR INFORMATION  
TO SOUTHERN CROSS TRANSMISSION LLC  
QUESTION NOS. TIEC 2-1 THROUGH TIEC 2-44**

**Question No. TIEC 2-18**

Please refer to SCT's response to TIEC 1-24. Please provide all workpapers and underlying calculations that led to the annual estimated price reduction of \$0.42 per megawatt hour. Please provide all supporting data starting from the smallest time interval reported by the model (hourly, daily, etc.).

**Response No. TIEC 2-18**

See SCT's supplemental response to TIEC 1-24.

Prepared by: Ellen Wolfe  
Sponsored by: Ellen Wolfe

Title: President – Resero Consulting  
Title: President – Resero Consulting

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

<b>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</b>	§ § § § § § §	<b>BEFORE THE  STATE OFFICE OF  ADMINISTRATIVE HEARINGS</b>
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**SOUTHERN CROSS TRANSMISSION LLC RESPONSE TO TEXAS INDUSTRIAL  
ENERGY CONSUMERS' FIRST SET OF REQUESTS FOR INFORMATION  
TO SOUTHERN CROSS TRANSMISSION LLC  
QUESTION NOS. TIEC 2-1 THROUGH TIEC 2-44**

**Question No. TIEC 2-19**

Please refer to SCT's response to TIEC 1-26. Please provide all data, workpapers, calculations, and "algorithms" that underlie the results referenced in this response, starting with the simulation case results on the smallest time interval reported by the model (hourly, daily, etc.).

**Response No. TIEC 2-19**

Regarding the impact of the SCT project on the LMP reduction, please see SCT's supplemental response to TIEC 1-24 and SCT's response to TIEC 2-15. Other results referenced in TIEC 1-26 were not reported from UPLAN at smaller time intervals or in a more disaggregated format than is reflected in Exhibit EW-2 to the direct testimony of Ellen Wolfe.

Prepared by: Ellen Wolfe  
Sponsored by: Ellen Wolfe

Title: President – Resero Consulting  
Title: President – Resero Consulting

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**Question No. TIEC 2-20**

Please refer to SCT's response to TIEC 1-26. Please provide the spreadsheet underlying the attachment to this response and all workpapers or linked spreadsheets that underlie the entries in that attachment.

**Response No. TIEC 2-20**

See response to TIEC 2-19 and the material provided in SCT's supplemental response to TIEC 1-24.

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Sponsored by: Ellen Wolfe

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**Question No. TIEC 2-21**

Please refer to SCT's response to TIEC 1-29. Did the model always maintain the assumed amount of ancillary reserves, or were there instances where those ancillary reserves were deployed (i.e., used to provide [sic] energy)? Please identify and describe the instances where the model assumed that ancillary services would be deployed.

**Response No. TIEC 2-21**

In this study, UPLAN was configured such that reserve capacity was not deployed for energy.

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**Question No. TIEC 2-22**

Please refer to the response to TIEC 1-34. Given that the Houston Import Project was included, please describe the constraints that Ms. Wolfe believes the SCT would relieve “in the south and in and around Houston.” In what conditions and/or hours do those constraints occur? Describe in detail how a DC converter station 200 miles from Houston can relieve these constraints and provide any underlying documents supporting this analysis.

**Response No. TIEC 2-22**

File TIEC 2-22Attachment1.xls, which is provided on CD, contains a summary of constrained lines by zone and by case. The constraints in the Houston zone themselves are not significantly reduced by the SCT project per se. Rather, the SCT project, as well as adding additional wind, changes the dispatch for that scenario and therefore its impact on the monitored line also changes. Generally, with SCT the congestion is lower since the SCT connection allows some excess capacity to be exported instead of congesting local lines.

Prepared by: Ellen Wolfe  
Sponsored by: Ellen Wolfe

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**Question No. TIEC 2-23**

Please provide the input and output data files for all production cost model runs performed by or under the supervision of Ms. Wolfe in connection with this project.

**Response No. TIEC 2-23**

By agreement with TIEC, this request has been modified as follows:

With respect to inputs, this request is limited to the assumptions and data related to:

- ERCOT load, generation, and DC ties
- Load and generation in the area immediately around the Eastern Interconnect connection point
- This request does not include data for generation and load in the eastern interconnect that is far from the tie line.

With respect to outputs, this request asks for any and all reports that were produced at the time of the model runs, and does not include information that the consultants chose not to have the model produce.

SCT provides the following response to this request as modified:

Resero and LCG do not have input and output data files per se for the production cost model runs. Rather UPLAN draws data from a Microsoft SQL database that holds all the inputs for the simulation runs. LCG establishes queries to retrieve data from and write data to this database. Resero and LCG use standard reports to share information about the inputs and outputs. Please refer to the following files, some of which have been designated as containing highly sensitive protected information and are provided pursuant to the protective order in this proceeding.

- TIEC 2-23Attachment1\_HSPM.xls, which is provided on CD pursuant to the terms of the Protective Order in this proceeding, summarizes select input assumptions for the ERCOT market.

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- TIEC 2-23Attachment2\_HSPM.xls, which is provided on CD pursuant to the terms of the Protective Order in this proceeding, summarizes select input assumptions for the Eastern Interconnect region, including generators in the Southern Company area and peak demand and energy assumptions for the Eastern Interconnect areas modeled.
- TIEC 2-23Attachment3\_HSPM.xls, which is provided on CD pursuant to the terms of the Protective Order in this proceeding, contains wheeling/hurdle rates used in the modeling.
- TIEC 2-23 Attachment4.xls, which is provided on CD, contains a summary of the zones modeled in detail in the Eastern Interconnect.

Please see also response to TIEC 2-24.

Prepared by: Ellen Wolfe  
Sponsored by: Ellen Wolfe

Title: President – Resero Consulting  
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**Question No. TIEC 2-24**

Please provide all of the data, workpapers, and calculations that underlie the results shown on pages 3, 10, 11, 12, 13, 14, 15, 17, 19, 20, 21, 22, and 25 of Exhibit EW-2.

**Response No. TIEC 2-24**

The following responds by page number of Exhibit EW-2. Note also that values on pages 3, 11, 15, 17, 19, and 25 referenced for the 2010 study year were taken from the report filed by ERCOT in Public Utility Commission Project No. 28500.

**EW-2, Page 3**

Much of the information on page 3 of EW-2 is general in nature summarizing the inputs to the model. Regarding the results for the 2015 analysis, the average ERCOT LMP calculations are shown on page 17 of EW-2, and the data underlying the EW-2, page 17 LMP savings values is provided as TIEC 1-24attachment1.xls to the supplemental response to TIEC 1- 24.

For the ERCOT annual consumer benefits and annual production cost savings for the 2015 study, please see TIEC 1-26Attachment1.xls. For the additional revenues to ERCOT ratepayers from export related charges collected, please see TIEC 1-18attachment1.xls.

**EW-2, Page 10 – 11.**

See TIEC 2-24 attach\_pp\_10 11\_1.xls, which is provided on CD.

**EW-2, Page 13 – 15**

See TIEC 1-18attachment1.xls.

**EW-2, Page 17**

See TIEC 2-24attach\_p\_3\_1.xls, which is provided on CD.

**EW-2, Page 19, 20**

See TIEC 1-26attachment1.xls.

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EW-2, Page 21

See TIEC 2-24attach\_p22\_1.xls, which is provided on CD.

EW-2, Page 22

See TIEC 2-24attach\_p22\_1.xls, which is provided on CD.

EW-2, Page 25

See response to the data sources for EW-2, Page 3, in this TIEC 2-24 response above.

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**Question No. TIEC 2-25**

For Ms. Wolfe's base case, please provide a list of the generators included, the zone in which each generator is located, and the associated capacity for each.

**Response No. TIEC 2-25**

The list of ERCOT generators, their capacity and their zone and county location is publicly available from ERCOT, as the ERCOT Planning assumptions and capacity assumptions were taken directly from ERCOT in accordance with ERCOT's planning guide. This study used the generator data as published by ERCOT in its May 2015 *Capacity, Demand and Reserve ("CDR") report*. See, EW-2 pages 30 and 31 for the assumed ERCOT resource additions. See also, TIEC 2-23 Attachment1\_HSPM.xls and TIEC 2-23 Attachment2\_HSPM.xls, which is provided on CD pursuant to the terms of the Protective Order in this proceeding, for additional assumption information about ERCOT and Eastern Interconnect generators, respectively.

Prepared by: Ellen Wolfe  
Sponsored by: Ellen Wolfe

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**Question No. TIEC 2-26**

Did Ms. Wolfe assume that any currently mothballed generation capacity was operational in 2020? If so, please identify and list the mothballed generation and the amount of capacity assumed available.

**Response No. TIEC 2-26**

Resero and LCG did not modify mothballed generation status unless a mothballed unit was permanently retired in ERCOT's planning assumptions.

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**Question No. TIEC 2-27**

Please explain in detail the assumptions Ms. Wolfe employed regarding imports and exports. Specifically, were they economically dispatched in all hours? If not, please specify the amount of capacity assumed to be imported or exported in each hour and how this was determined. If so, please provide the amounts of imports and exports in a format consistent with the results for the SCT DC tie as reported on page 10 of Exhibit EW-2.

**Response No. TIEC 2-27**

Resero/LCG modeled the SPP DC tie flows as follows. Import flows were economically determined by the combined ERCOT-Eastern Interconnect model. Resero/LCG constrained SPP DC tie output flows to zero, based on LCG's experience with ERCOT's economic project modeling practices.

Other ties including EaglePass, Laredo & Railroad were economically modeled as a supply source priced at zero, which resulted in supplies imported into ERCOT every hour at the ties' maximum capacity.

TIEC 2-27Attachment1\_HSPM.xls, which is provided on CD pursuant to the terms of the Protective Order in this proceeding, contains the resultant highly sensitive SPP-ERCOT DC tie flows, and is provided under the protective order in this proceeding. Export and import flows have not been prepared in the format requested.

Prepared by: Ellen Wolfe  
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**Question No. TIEC 2-28**

For the SCT + 2000 MW wind case, please describe in detail Ms. Wolfe's assumptions regarding the capacity contribution of this additional wind in a given hour. For example, were the operating characteristics based on National Renewable Energy Laboratory (NREL) data? Were they based on some other assumption(s)? Please describe those assumptions in detail and provide any supporting documentation.

**Response No. TIEC 2-28**

Please reference TIEC 2-23Attachment1\_HSPM.xls, provided on CD pursuant to the terms of the Protective Order in this proceeding, which contains the detailed wind location, capacity, and capacity factor assumptions. SCT provided overall instructions on placement of the wind. Specific siting was designed by LCG where other wind developments were located. Wind profiles were taken from ERCOT's publicly-available long-term planning study assumptions by county.

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**Question No. TIEC 2-29**

Please state the amount of unserved energy in each of the three cases modeled by Ms. Wolfe.

**Response No. TIEC 2-29**

The Base Case resulted in 44.3 MWs of unserved energy over three hours. There was no unserved energy reported in the change cases.

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**Question No. TIEC 2-30**

Please refer to page 16, lines 15-18 of Ms. Wolfe's testimony. Please specifically describe the nature and purpose of the adjustment referenced in this sentence and provide all data, workpapers, and calculations associated with the referenced adjustment.

**Response No. TIEC 2-30**

See also response to TIEC 1-31.

With respect to the nature of the adjustment, the adjusted production costs were determined as:  
The adjusted production cost = the ERCOT generation production costs + (the purchases of import energy – the value of exported energy).

With respect to the purpose of the adjustment, without adjusting the production cost of ERCOT's own generation fleet by the costs of net imports a distortion could arise if the ERCOT fleet produced more energy or less energy in total as result of being interconnected through the SCT project to the Eastern Interconnect.

As a simplified example, assume ERCOT's annual production costs were \$10 billion without the SCT project. Assume further that the simulation model showed that with the SCT project in place ERCOT's cost of production went down to \$5 billion after the SCT project, but that ERCOT also purchased on net \$4 billion of energy from its Eastern Interconnect neighbors across SCT. Reporting that the production cost savings with SCT was \$ 5 billion (\$10 billion - \$5 billion) would distort the reported savings by ignoring that ERCOT's purchases increased with the SCT project. Rather, ERCOT internal production cost should be adjusted to account for the \$4 billion in purchased energy and report a result of a production cost savings of: \$10 billion - \$5 billion + \$4 billion = \$1 billion.

TIEC 1-26attachment1.xls contains the data and calculations for this adjustment.

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**Question No. TIEC 2-31**

Please refer to page 10 of Exhibit EW-2.

- a. Provide all data, calculations, and workpapers underlying the ERCOT customer energy benefits for the months without imports shown on that page.
- b. What are the production costs from each of the model runs in the months referenced in (a)? Please provide all underlying data, calculations, and workpapers.
- c. What are the megawatt hours of load in each of the months referenced in (a)? Please provide all underlying data, calculations, and workpapers.
- d. Please refer to the imports shown for July, August, and September. It appears that for July, on-peak imports are greater in the SCT+2000 MW wind case than they are in the SCT Only case. Additionally, for September, both on-peak and off-peak imports are greater in the SCT+2000 MW wind case than they are in the SCT Only case. Please explain how adding 2000 MW of zero-cost generation results in higher imports in those months compared to the SCT Only case.

**Response No. TIEC 2-31**

With respect to “a, b and c.” consumer energy benefits and production cost benefits were not determined by month. Load values were taken directly from publicly available ERCOT planning assumption data. TIEC 2-23Attachment1\_HSPM.xls, which is provided on CD pursuant to the terms of the Protective Order in this proceeding, provides resultant energy values by weather zone.

With respect to “d,” the data requested of the UPLAN simulations do not lend themselves to answering with certainty this specific “why” question. However, a possible explanation is that the additional wind on the ERCOT system results in a lower level of commitment of flexible gas-fired resources in ERCOT at times, and that as a result it is efficient from time to time to import additional energy from the Eastern Interconnect rather than committing an additional ERCOT gas-fired generator for ramping needs or to supply lower wind-production hours.

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**Question No. TIEC 2-32**

On page 6 of Exhibit EW-2, Ms. Wolfe states that the gas price forecast is an LCG forecast and that the delivered price is \$3.12/MMBtu. This forecast is attached as Attachment 1 to TIEC 1-27. However, Attachment 2 to TIEC 1-27 shows a different LCG forecast for Texas. What was the date that each of these forecasts was prepared? Please explain the discrepancy between these forecasts, and specifically describe the adjustments made between the amounts for ERCOT and Texas in Attachments 1 and 2 to TIEC 1-27.

**Response No. TIEC 2-32**

Eastern Texas, that portion of Texas within the Eastern Interconnect, is fueled by different gas pipelines than are other portions of Texas that are within ERCOT. This results in different gas prices for the Eastern Interconnect portion of Texas than for the ERCOT portion of Texas.

The forecasts were prepared in January or early February of 2016.

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**Question No. TIEC 2-33**

Please specifically describe how each of the load resources providing reserves, load emergency response services, and TDSP standard offer load management programs were dispatched in the model. Were they subtracted from load in certain hours, economically dispatched using assumed dispatched prices, or ignored? Was some other approach used to dispatch these resources in the model?

**Response No. TIEC 2-33**

While the model used load acting as reserves (LARs) as spinning reserves, the model did not deploy load for energy during the SCT project simulation runs. Such resources were not ignored but rather viewed as outside of the control of the automated dispatch algorithms that settle the energy markets.

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<b>CERTIFICATE OF CONVENIENCE</b>	§	
<b>AND NECESSITY FOR THE RUSK TO</b>	§	<b>STATE OFFICE OF</b>
<b>PANOLA DOUBLE-CIRCUIT 345-KV</b>	§	
<b>TRANSMISSION LINE IN RUSK AND</b>	§	<b>ADMINISTRATIVE HEARINGS</b>
<b>PANOLA COUNTIES</b>	§	

**SOUTHERN CROSS TRANSMISSION LLC RESPONSE TO TEXAS INDUSTRIAL  
ENERGY CONSUMERS' FIRST SET OF REQUESTS FOR INFORMATION  
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QUESTION NOS. TIEC 2-1 THROUGH TIEC 2-44**

**Question No. TIEC 2-34**

Please refer to Article 4 of the Asset Purchase agreement between Garland and Rusk Interconnection, LLC ("Rusk") (attachment 2 to Garland's response to Staff 1-9).

- a. Please explain why Rusk requested the ability to call the project back to Rusk from Garland. Under what circumstances would Rusk expect to exercise this option?
- b. Does Rusk believe exercising this call option would provide Rusk with a CCN under PURA's transfer provision (PURA § 37.154)? Does Rusk believe this would require PUC approval? Please explain.
- c. In Rusk's opinion, would exercise of the call option make Rusk an electric utility in Texas?
- d. Would Garland's commitment to not put the cost of the line in TCOS be imputed to Rusk if Rusk exercised the call option?

**Response No. TIEC 2-34**

- a. The agreements between Rusk and Garland were initially negotiated in the 2010/2011 timeframe. SCT and Garland believed the options were prudent in the event some condition or context changed at some time in the future.
- b. SCT does not believe that exercising the Put Right would provide Rusk with a CCN under PURA's transfer provision (PURA § 37.154). Only the Commission could provide Rusk with a CCN. SCT does believe that exercise of the Put Right would require PUC approval. See Section 9.4 of the Transmission Line Agreement.
- c. Please see the response to subsection b, above.
- d. SCT has committed not to seek to recover from ratepayers any costs of any facilities to be owned by Garland and SCT identified in the interconnection agreements, and Southern Cross's commitment extends to Rusk. See SCT's response to TIEC 1-4.

Prepared by: David Parquet  
Sponsored by: David Parquet

Title: Senior Vice President – Special Projects  
Title: Senior Vice President – Special Projects

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

<b>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</b>	§ § § § § § §	<b>BEFORE THE  STATE OFFICE OF  ADMINISTRATIVE HEARINGS</b>
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**Question No. TIEC 2-35**

Please refer to Article 9.1 of the Asset Purchase agreement between Garland and Rusk.

- a. Please provide all executed financing documents related to this agreement.
- b. Please provide all documents and communications exchanged between Garland and Rusk pertaining to how the lender or equity financing entity could exercise its security interest in the line if Rusk were to default.

**Response No. TIEC 2-35**

- a. None
- b. SCT has not identified any documents responsive to this Request.

Prepared by: David Parquet  
Sponsored by: David Parquet

Title: Senior Vice President – Special Projects  
Title: Senior Vice President – Special Projects



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**Question No. TIEC 2-36**

Please refer to Article 5.5 of the Interconnection Agreement (attachment 3 to Garland's Response to Staff 1-9). Therein, SCT seeks to prevent a situation where it would be subject to the jurisdiction of the PUCT or ERCOT as a transmission service provider. To what aspects of the jurisdiction of the PUCT or ERCOT does SCT object? How does SCT seeking to be an ERCOT market participant differ from those aspects of PUCT and ERCOT jurisdiction to which it objects?

**Response No. TIEC 2-36**

SCT is a FERC - regulated interstate transmission project. SCT does not "object" to becoming a transmission service provider (TSP) as this question suggests. However, SCT does not meet the definition of a TSP under the ERCOT Protocols or under PURA. While SCT has not undertaken a specific study, it appears that utilities are subject to a broad range of requirements under PURA that might not fit with SCT's business model as a transmission owner located outside of Texas that operates under a negotiated rate order issued by FERC. ERCOT defines the term "market participant" and the obligations of a market participant differ significantly from the obligations associated with being a TSP or an electric utility.

Prepared by: David Parquet  
Sponsored by: David Parquet

Title: Senior Vice President – Special Projects  
Title: Senior Vice President – Special Projects

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**Question No. TIEC 2-37**

Please refer to page 3, lines 6-8 of Mr. Bruce's supplemental direct testimony. In Mr. Bruce's opinion, what issues related to the addition of a new DC tie are ripe for resolution? In Mr. Bruce's opinion, what issues related to the addition of a new DC tie are well-suited to be addressed in this proceeding?

**Response No. TIEC 2-37**

Questions related to the proper regulatory classification of a DC Tie owner that is not a Texas TSP are both ripe for resolution and well-suited to be addressed in this proceeding.

Prepared by: Mark Bruce  
Sponsored by: Mark Bruce

Title: Consultant  
Title: Consultant

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<b>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</b>	§ § § § § § §	<b>BEFORE THE  STATE OFFICE OF  ADMINISTRATIVE HEARINGS</b>
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**Question No. TIEC 2-38**

Does Mr. Bruce believe that the PUC has authority to impose reasonable conditions on SCT pursuant to PURA 37.051(c-2)? Does SCT agree with Mr. Bruce's opinion? Please explain your answers.

**Response No. TIEC 2-38**

Mr. Bruce has not developed an opinion on this question at this time.

Prepared by: David Parquet  
Mark Bruce  
Sponsored by: David Parquet  
Mark Bruce

Title: Senior Vice President – Special Projects  
Consultant  
Title: Senior Vice President – Special Projects  
Consultant

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**Question No. TIEC 2-39**

Please refer to page 5, lines 5-7 of Mr. Bruce's supplemental direct testimony. According to Mr. Bruce and SCT, what aspect of the definition of transmission service provider (TSP) does SCT not meet? Please specifically address each aspect of that definition that SCT and Mr. Bruce contend that SCT does not meet.

**Response No. TIEC 2-39**

A Transmission Service Provider (TSP) is defined in 16 Tex. Admin. Code § 25.5(143) as "an electric utility, municipally-owned utility, or electric cooperative that owns or operates facilities used for the transmission of electricity. Under PURA § 31.002(6) an "electric utility" is "a person...that owns or operates for compensation in this state equipment or facilities to...transmit...electricity." SCT is not an electric utility, a municipally-owned utility or an electric cooperative and therefore falls outside the definition of a TSP.

Prepared by: Counsel  
Sponsored by: Counsel

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**Question No. TIEC 2-40**

Does SCT object to being classified as a TSP? If so, please explain the reasons for this objection in detail.

**Response No. TIEC 2-40**

See response to TIEC 2-36 and TIEC 2-39.

Prepared by: David Parquet  
Sponsored by: David Parquet

Title: Senior Vice President – Special Projects  
Title: Senior Vice President – Special Projects

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**Question No. TIEC 2-41**

Please refer to page 7, lines 3-11 of Mr. Bruce's supplemental direct testimony. What are the consequences if ERCOT cannot reach a coordination agreement with the system operator with whom SCT will interconnect?

**Response No. TIEC 2-41**

If ERCOT cannot reach a coordination agreement with the system operator with whom SCT will interconnect, ERCOT, QSEs, and DC Tie operators will follow the provisions of the ERCOT Protocols and other binding documents applicable to operation of DC Ties. These provisions include ERCOT's unilateral authority to accept or reject a NERC E-Tag request to export power from or import power to the ERCOT system, ERCOT's unilateral authority to curtail DC Tie exports during system emergencies, and ERCOT's unilateral authority to call for DC Tie imports during system emergencies. The Protocols give ERCOT significant authority to direct the operation of a DC Tie interconnected to the ERCOT system, with or without a coordination agreement. A coordination agreement with a neighboring bulk electricity system does not supplant or circumvent the DC Tie operations practices specified in the ERCOT Protocols.

Prepared by: Mark Bruce  
Sponsored by: Mark Bruce

Title: Consultant  
Title: Consultant

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**Question No. TIEC 2-42**

Please refer to page 10, lines 4-10 of Mr. Bruce's supplemental direct testimony. Please provide the most current timeline(s) for when SCT will provide financial security for the construction of the Rusk substation, the Garland line, the Panola substation, the actual DC line, and the interconnection facilities on the eastern end of the DC line.

**Response No. TIEC 2-42**

SCT's schedule estimate for posting security and issuing a notice to proceed to Oncor for the facilities required for the interconnection at the Rusk substation is near the time of close of construction financing of the SCT Project, presently scheduled for the end of 2017. There are no requirements to provide financial security for any of the other items listed in the Request.

Prepared by: David Parquet  
Sponsored by: David Parquet

Title: Senior Vice President – Special Projects  
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**Question No. TIEC 2-43**

Please refer to page 11, lines 1-7 of Mr. Bruce's supplemental direct testimony. Please provide all documentation underlying Mr. Bruce's beliefs regarding how ERCOT treats DC ties for purposes of transmission planning focused on reliability, transmission planning focused on economics, and generation planning.

**Response No. TIEC 2-43**

Lines 1-7 on page 11 of Mr. Bruce's supplemental direct testimony only address transmission planning for reliability projects. Transmission planning for economic projects is addressed on page 11, lines 16-19. Mr. Bruce does not know what is meant by "generation planning" in the context of this question. His testimony did not address generation planning. Mr. Bruce's understanding of ERCOT's treatment of DC Ties in reliability and economic studies is directly informed by ERCOT's comments filed in Commission Project No. 42647. See ERCOT's comments in Project No. 42647 at 12-13 (Sept. 12, 2014).

Prepared by: Mark Bruce  
Sponsored by: Mark Bruce

Title: Consultant  
Title: Consultant



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**Question No. TIEC 2-44**

Please refer to page 15, lines 5-10 of Mr. Bruce's supplemental direct testimony.

- a. Please identify the "certain economic principles" Mr. Bruce references.
- b. Will SCT agree to condition its sale of capacity across the DC tie such that the owners of that capacity will adhere to those "certain economic principles?" If not, why not?
- c. Will SCT agree to not sell capacity across its system to counterparties who wish to export power from ERCOT regardless of economic conditions (e.g. - fixed sales of solar or wind energy such that the utility in the Eastern Interconnect can claim it is receiving renewable energy)?

**Response No. TIEC 2-44**

- a. Mr. Bruce assumes QSEs transacting across DC Ties are rational economic actors seeking to maximize profit and minimize losses.
- b. SCT must make all of the project's capacity available to purchasers on an open access non-discriminatory basis and cannot withhold capacity made available by the project to the market.
- c. SCT must make all of the project's capacity available to purchasers on an open access non-discriminatory basis and cannot withhold capacity made available by the project to the market.

Prepared by: David Parquet  
Mark Bruce  
Sponsored by: David Parquet  
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