Control Number: 45624

Item Number: 339

Addendum StartPage: 0

RECEIVED
2016 MAY 27 PM 1:55

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

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	§	**STATE OFFICE OF ADMINISTRATIVE HEARINGS**

ERCOT'S RESPONSES TO
LUMINANT'S FIRST REQUEST FOR INFORMATION

Electric Reliability Council of Texas, Inc. (ERCOT) provides the attached Responses to *Luminant Energy Company LLC and Luminant Generation Company LLC's (Luminant) First Request for Information to Electric Reliability Council of Texas*, filed on May 17, 2016. ERCOT's responses are due on May 27, 2016 and are therefore timely filed. ERCOT stipulates that all parties may treat these responses as if they were filed under oath.

Respectfully submitted,

Chad V. Seely
Vice President and General Counsel
Texas Bar No. 24037466
(512) 225-7035 (Phone)
(512) 225-7079 (Fax)
chad.seely@ercot.com

Nathan Bigbee
Assistant General Counsel
Texas Bar No. 24036224
(512) 225-7093 (Phone)
(512) 225-7079 (Fax)
nathan.bigbee@ercot.com

Jennifer N. Littlefield
Corporate Counsel
Texas Bar No. 24074604
(512) 225-7179 (Phone)
(512) 225-7079 (Fax)
jennifer.littlefield@ercot.com

ERCOT
7620 Metro Center Drive
Austin, Texas 78744

ATTORNEYS FOR ELECTRIC
RELIABILITY COUNCIL OF TEXAS, INC.

CERTIFICATE OF SERVICE

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

ERCOT'S RESPONSES TO LUMINNAT'S FIRST REQUEST FOR INFORMATION TO ELECTRIC RELIABILITY COUNCIL OF TEXAS

1.1 Refer to the Direct Testimony of Dan Woodfin at page 6, lines 3-10.

a. Is the failure of Security Constrained Economic Dispatch (SCED) to resolve potential post-contingency overloads a mandatory prerequisite to ERCOT implementing a CMP? Explain fully why or why not.

b. Would the same be true with respect to implementing a Special Protection System? Explain fully why or why not.

Response:

a. No. The definition of "Constraint Management Plan" (CMP) in Section 2.1 of the ERCOT Protocols states that "...CMPs may be developed in cases where...SCED is unable to resolve a transmission security violation." The failure of SCED to resolve a constraint is an acceptable reason to develop a CMP, but is not a necessary condition for the development and implementation of a CMP. A CMP, by definition, is, "[a] set of pre-determined actions executed in response to system conditions to prevent or to resolve one or more thermal or non-thermal transmission security violations..."

b. Yes. Subject to ERCOT review and approval, a Special Protection System (SPS) may be employed to address any thermal or non-thermal constraint irrespective of whether SCED can resolve that constraint. The definition of SPS in Section 2 of the ERCOT Protocols states that SPSs are designed "...to provide acceptable ERCOT System performance."

PREPARER: Chad Thompson

WITNESS: Dan Woodfin

1.2 Has ERCOT ever approved a CMP in a circumstance other than the situation described in the Direct Testimony of Dan Woodfin at page 6, lines 5-10? If so, identify and describe fully each and every such CMP.

Response:

ERCOT has previously approved Constraint Management Plans (CMPs) in situations in which SCED may have been able to resolve potential overloads. Per agreement with Luminant concerning the scope of this RFI, I am providing below the names of all such *currently active* CMPs. However, ERCOT has previously employed other CMPs not listed below that meet this same condition.

PCAPs
Big Hill – Orsted – Edison – Kendall 345 kV Double Circuit
Seymour Area Pre-Contingency Condition
Freer (FREER) to Lobo (LOBO) 69 kV Line
LCRA Fort Mason – Yellow Jacket 138 kV circuit
Lobo to San Miguel 345 kV Line or Lobo 345/138 kV Autotransformer

RAPs
Allen Sw. – Royce/Monticello Double Circuit 345 kV Line
Baytown 138/345 kV Autotransformers AT1 and AT2
Navarro – Limestone Plant 345 kV Double Circuit Lines
Salem to Fayette Power Plant 345 kV Line
Salem to Fayette Power Plant 345 kV Line and Salem – Fayetteville 138 kV line

MPs
Formosa 138/69 kV Autos 21 and 22
Formosa 138/69 kV Autos 21 and 22
Hutto - Round Rock/Gabriel 138kV Double Circuit Line
Laquinta – Lobo 138 kV
Odessa EHV CB 3630 - Midessa 138 kV Line
San Miguel to Sigmor 138 kV Line

PREPARER: Chad Thompson

WITNESS: Dan Woodfin

1.3 Has ERCOT ever approved a Special Protection system in a circumstance other than the situation described in the Direct Testimony of Dan Woodfin at page 6, lines 5-10? If so, identify and describe fully each and every such SPS.

Response:

ERCOT has previously approved Special Protection Systems (SPSs) in situations in which SCED may have been able to resolve potential overloads. Per agreement with Luminant concerning the scope of this RFI, I am providing below the names of all such *currently active* SPSs. However, ERCOT has previously employed other SPSs not listed below that meet this same condition.

Oncor Allen Switch Autotransformer # 1 Series Reactor
AEP Barney Davis
Oncor Eskota Switching Station
NEXTera Horse Hollow Generation Tie
Oncor Monticello B
Oncor Permian Basin Switching Station
Oncor Stryker Creek
Oncor Morgan Creek Switching Station

PREPARER: Chad Thompson

WITNESS: Dan Woodfin

1.4 Refer to the Direct Testimony of Dan Woodfin at page 6, lines 11-13. Does Mr. Woodfin agree or disagree that a Special Protection System is a plan to implement certain actions in order to alleviate an overload and prevent a broader system problem? Explain fully.

Response:

I generally agree with this description of an SPS. The ERCOT Protocols define "Special Protection Systems" (SPSs) as "[a]utomatic protective relay systems designed to detect abnormal or pre-determined ERCOT System conditions and take pre-planned corrective action, other than the isolation of faulted Transmission Facilities, to provide acceptable ERCOT System performance." SPSs are, by nature, automatic relay schemes whereas Constraint Management Plans (CMPs) are, by nature, manual operator-initiated plans. SPSs and CMPs are exclusive of one another.

PREPARER: Chad Thompson

WITNESS: Dan Woodfin

1.5 Refer to ERCOT's Responses to Commission Staff's Second Requests for Information, Question Staff 2-3. Describe fully the coordination that would be required with the Reliability Coordinator (RC) and/or Balancing Authority (BA) on the other side of the Southern Cross DC Tie in order to develop a CMP.

Response:

ERCOT has not assessed the details of the coordination that would be required to develop a CMP that would, if activated, result in a sudden loss (or gain) of a large amount of energy on one system due to an transmission contingency on the other system. Generally, the affected RCs and/or BAs would need to contemplate whether such a CMP could reliably be accommodated, and what actions might need to be taken by all affected RCs, BAs, and Transmission Operators in the event the CMP is activated.

PREPARER: Chad Thompson

WITNESS: Dan Woodfin

1.6 Refer to ERCOT's Responses to Commission Staff's Second Requests for Information, Question Staff 2-3. Describe fully the coordination that would be required with the Reliability Coordinator (RC) and/or Balancing Authority (BA) on the other side of the Southern Cross DC Tie in other to initiate a CMP.

Response:

ERCOT has not assessed the details of the coordination that would be required to initiate a CMP that would result in a sudden loss (or gain) of a large amount of energy on one system due to a transmission contingency on the other system. Generally, the affected RCs and/or BAs would need to determine whether the activation of such a CMP could reliably be accommodated, and if so, what actions might need to be taken by the affected RCs, BAs, and Transmission Operators in the event the CMP is activated.

PREPARER: Chad Thompson

WITNESS: Dan Woodfin

1.7 Refer to ERCOT's Responses to Commission Staff's Second Request for Information, Question Staff 2-3.

a. Has ERCOT previously coordinated with another Reliability Coordinator (RC) and/or Balancing Authority (BA) on the other side of a DC Tie to develop and initiate a CMP?

b. If the answer to part a above is "yes," identify each and every instance when ERCOT has previously coordinated with another RC and/or BA to develop and initiate a CMP.

c. If the answer to part a above is "yes," would the coordination between ERCOT and the RC and/or BA that would be required to develop and initiate a CMP for the Southern Cross DC Tie be different than the coordination required to develop any other CMP related to a DC Tie? Explain fully.

Response:

a. No.

b. N/A

c. N/A

PREPARER: Chad Thompson

WITNESS: Dan Woodfin

1.8 Refer to ERCOT's Responses to Commission Staff's Second Requests for Information, Question staff 2-3.

a. Has ERCOT previously coordinated with another Reliability Coordinator (RC) and/or Balancing Authority (BA) on the other side of a DC Tie to develop and initiate a Special Protection System?

b. If the answer to part a above is "yes," identify each and every instance when ERCOT has previously coordinated with another RD and/or BA to develop and initiate a Special Protection System.

c. If the answer to part a above is "yes," would the coordination between ERCOT and the RC and/or BC that would be required to develop and initiate a Special Protection System for the southern Cross DC Tie be different than the coordination required to develop any other Special Protection System related to a DC Tie? Explain fully.

Response:

a. No.

b. N/A

c. N/A

PREPARER: Chad Thompson

WITNESS: Dan Woodfin

1.9 Refer to the Direct Testimony of Dan Woodfin at page 9, line 4 through page 10, line 1. Is the use of a Special Protection System an alternative approach that might be used to adjust transfers across a DC tie?

Response:

A Special Protection System (SPS) could potentially be an alternative approach, although whether an SPS is a viable solution in any case depends on a number of technical details and would require consultation with the Transmission Operator that would operate the DC Tie and the Transmission Owner of any lines that would be protected by the SPS. Installing an SPS that adjusts transfers and/or interrupts a DC Tie as large as the Southern Cross DC Tie would pose significant operational challenges as described in the Direct Testimony of Dan Woodfin at page 11 line 12 through page 12 line 16. Furthermore, if the SPS were intended to relieve overloads in the event of congestion due to exports over the tie, the SPS would not be able to curtail the exports unless an Emergency Condition were declared because DC Tie exports are generally treated like firm load under the ERCOT Protocols.

Alternatively, it might be possible to implement an SPS solely within the ERCOT Region that would interrupt one or more generating units within ERCOT for the same contingencies, but this would require coordination of the technical details with the unit owner(s) and the owner(s) of any lines that would be protected by the SPS.

PREPARER: Chad Thompson

WITNESS: Dan Woodfin

1.10 Refer to the following statement in ERCOT's Responses to Commission Staff's Second Requests for Information, Question Staff 2-4: "CMPs are only used in situations where the SCED system is unable to solve any base case or post-contingency overloads."

a. Identify any and all ERCOT binding documents and provide any other authorities that support this statement.

b. Is the same true with respect to a Special Protection System? Explain fully why or why not.

Response:

a. The quoted statement was in the context of my direct testimony addressing methods for ensuring reliability due to congestion created by DC Tie exports or imports. My response to Staff RFI 2-4 should be understood to be limited to the context of reliability-based CMPs. As noted above, some CMPs have been developed that are not based on congestion irresolvable by SCED. Section 2.1 of the ERCOT Protocols states that "CMPs may be developed in cases where...SCED is unable to resolve a transmission security violation."

b. Yes, the same is true for SPSs. SPSs may be used in lieu of CMPs. Under the definitions in the ERCOT Protocols, the fundamental difference between a CMP and an SPS is that a CMP requires manual operator action, while an SPS operates automatically.

PREPARER: Chad Thompson

WITNESS: Dan Woodfin

1.11 Admit or deny: A Special Protection System may be used to adjust transfers across a DC tie in order to allow Generation Resources that would otherwise be subject to restrictions to operate at their full Rating? Explain fully.

Response:

The ERCOT market rules do not generally preclude an SPS design from curtailing transfers across a DC Tie in such a way that would allow nearby Generating Resources that would otherwise be subject to restrictions to operate at their full Rating. However, whether an SPS is an acceptable solution depends on a technical analysis of the proposal by ERCOT and the affected TOs. SPSs must provide "acceptable ERCOT System performance" as indicated in the definition of SPS in Section 2.1 of the ERCOT Protocols.

PREPARER: Chad Thompson

WITNESS: Dan Woodfin

1.12 Refer to the following statement in ERCOT's Responses to Commission Staff's Second Request for Information, Question Staff 2-4: "A CMP would only be used if SCED could not, or was not anticipated to be able to, alleviate the overloads in the importing or exporting case."

a. Identify any and all ERCOT binding documents and provide any other authorities that support this statement.

b. Is the same true with respect to a Special Protection System? Explain fully why or why not.

Response:

a. The quoted statement was in the context of my direct testimony addressing methods for ensuring reliability due to congestion created by DC Tie exports or imports. My response to Staff RFI 2-4 should be understood to be limited to the context of reliability-based CMPs. As noted above, some CMPs have been developed that are not based on congestion irresolvable by SCED. Section 2.1 of the ERCOT Protocols states that "CMPs may be developed in cases where…SCED is unable to resolve a transmission security violation."

b. Yes, the same is true for SPSs. SPSs may be used in lieu of CMPs. Under the definitions in the ERCOT Protocols, the fundamental difference between a CMP and an SPS is that a CMP requires manual operator action, while an SPS operates automatically.

PREPARER: Chad Thompson

WITNESS: Dan Woodfin