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In The Matter Of The Application Of )  
Public Service Company Of Colorado (A) )  
For A Certificate Of Public Convenience )  
And Necessity For The San Luis Valley To )  
Calumet To Comanche Transmission )  
Project, (B) For Specific Findings With )  
Respect To EMF And Noise, And (C) For )  
Approval Of Ownership Interest Transfer )  
As Needed When Project Is Completed. )

Docket No. 09A-325E )

Eighth Set of  
Discovery Requests  
From  
Trinchera Ranch

Dated September 25, 2009

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#### **Discovery Request Trinchera Ranch8-9**

Several PSCo witnesses cite improvement in system reliability as a benefit of the proposed project (see e.g., Gerald Stellern's filed testimony on line 1 of page 9; and Thomas Green's filed testimony on line 4, page 4). Please explain in detail how the Company or the system defines system reliability, including how it measures system reliability. Has the Company developed or utilized any metrics or criteria that permit it to measure system reliability? If yes, please provide copies of all such criteria or metrics. If no, please explain in detail why the Company has not developed any criteria or metrics to measure system reliability.

#### **SUPPLEMENT RESPONSE:**

Please see Attachments TR8-9.A1 and .A2 for copies of documents relating to Public Service Company's System Average Interruption Duration Index (SAIDI) metric. A complete description of the Quality of Service Plan that was agreed to between the Company and the Public Utilities Commission is also provided in Public Service Company of Colorado's electric tariff beginning on Sheet No. 105. A copy of the electric tariff can be accessed at the following website:

[http://www.xcelenergy.com/SiteCollectionDocuments/docs/psco\\_elec\\_entire\\_tariff.pdf](http://www.xcelenergy.com/SiteCollectionDocuments/docs/psco_elec_entire_tariff.pdf)

Also, please see Attachments TR 8-9 A.1, TR 8-9 A.2, TR 8-9 A.3, TR 8-9 A.4

The definition of SAIDI is as follows:

SAIDI = System Average Interruption Duration Index. It is the total amount of time an average customer is without power over the time frame being looked at. The index

### **Discovery Request Trinchera Ranch8-9 Cont'd**

measures Sustained outages only. The standard for a sustained outage is > 5 minutes in length.

SAIDI = Sum of Customer Interruption Minutes / Total No. Customers Served

The QSP is based on Sustained Distribution outages only and does not include outages that are coded as Properly Planned and Public Damage.

The QSP YE targets are based on looking at past performance. We Calculate the Natural Log of past years. Then we calculate the Average and Standard Deviation of those yearly Natural Logs. Then the threshold for SAIDI for the next year is set to Exponent of the Average plus 1 Standard Deviation.

The QSP storm normalization is based on using the IEEE method. PSCo look at Distribution only outages for the past 5 years on a daily basis. PSCo Calculates the SAIDI's per day. Then Calculate the Natural Log of the daily SAIDI's. Then calculate the average and Standard Deviation of the Natural Log of the daily SAIDI's. Then the storm day thresholds are set at the Exponent of the Average + 2.5 Standard Deviations. Any day in the following year that meets/exceeds this daily SAIDI threshold is considered a storm day and is removed from the calculations.

**Sponsor:** Gerald Stellern

**Response Date:** 10-20-2009

#### **RESPONSE:**

Public Service objects to this data request to the extent it has previously been asked and answered. Notwithstanding and without waiving this objection, Public Service states as follows:

The Company's definition and measures of system reliability are described in NERC TPL Standards. These were provided in response to Discovery Request TR-1-1. In addition the company discusses the NERC/WECC reliability criteria in the Generation interconnection studies. These were sent in previous discovery responses to TR1-4. See attachments TR1-4A1, TR1-4A2, TR1-4A3, TR1-4A4, TR1-4A6. The main metric of system reliability that the company has developed in agreement with the Commission is the System Average Interruption Duration Index or SAIDI. The SAIDI index measures the average minutes that each PSCo customer is without service during a period of time. Copies of this criteria and results are voluminous and are still being gathered. They will be provided as soon as is possible.

**Sponsor:** Gerald Stellern

**Response Date:** October 5, 2009