

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF COLORADO

Docket No. 09A-324E

IN THE MATTER OF THE APPLICATION OF TRI-STATE GENERATION AND TRANSMISSION ASSOCIATION, INC. (A) FOR A CERTIFICATE OF) PUBLIC CONVENIENCE AND NECESSITY FOR THE SAN LUIS VALLEY-CALUMET-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.

AND

Docket No. 09A-325E

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-CALUMET-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.

**RESPONSE OF TRI-STATE GENERATION AND TRANSMISSION
ASSOCIATION, INC. TO SECOND SET OF INTERROGATORIES OF
BLANCA RANCH HOLDINGS, LLC AND TRINCHERA RANCH HOLDINGS, LLC**

Tri-State Generation and Transmission Association, Inc. ("Tri-State"), pursuant to Rule 1405 of the Rules of Practice and Procedure of the Colorado Public Utilities Commission, hereby responds to the Second Set of Interrogatories of Blanca Ranch Holdings, LLC and Trinchera Ranch Holdings, LLC (collectively "Trinchera Ranch" or "TR") to Tri-State Generation and Transmission Association, Inc. as follows¹:

TRINCHERA RANCH 4-1. Please identify the total MW of transmission capacity, if any, Tri-State currently has right to on Western Area Power Administration's ("WAPA") Canyon West to Midway transmission path.

RESPONSE TO TRINCHERA RANCH 4-1: Tri-State has 0 MW firm transmission capacity rights on the WAPA Canyon West to Midway transmission path.

Sponsor: Andrew R. Leoni

¹ Trinchera Ranch's Second Set of Interrogatories to Tri-State are, in fact, the fourth set of discovery requests submitted to Trinchera Ranch to Tri-State. Accordingly, for purposes of differentiating Tri-State's answers to these interrogatories from its answers to such earlier discovery requests, Tri-State's present answers will refer to, for example, "Trinchera Ranch 4-1" and "Answer to Trinchera Ranch 4-1."

- (a) There has never been a failure of the load shedding operation equipment. However, the settings of the load shedding equipment were changed following the outage in 2003 to coordinate with voltage regulating equipment in operation in the San Luis Valley.
- (b)
 - i. No
 - ii. Yes, load is shed at 10, 20 and 30 seconds when specific monitored voltages drop below a threshold.
 - iii. No
 - iv. No
 - v. There are no events or conditions other than those previously described.

Sponsor: Andrew R. Leoni

TRINCHERA RANCH 4-8: With reference to the previously provided June 1997 Tri-State "San Luis Valley High Voltage System Study Report" at TSGT 00032 through TSGT 00038 and the previously provided January 2004 Tri-State "PV Study Report-San Luis Valley Substation Second 230 kV Source" at TSGT 000794-000798:

- (a) Please identify whether Tri-State ever adopted its working criterion that "[t]he system will be designed to operate so that the single contingency point-of-collapse is at least 5 percent higher, measured in MW or MVA, with the single most critical VAr source unavailable" (TSGT 00033). If so, please identify whether this is still Tri-State's voltage collapse/stability criterion.
- (b) Please identify whether the aforementioned January 2004 PV Study Report utilized the working voltage collapse/stability criterion mentioned above in a. If not, please explain in detail why the June 1997 study working voltage collapse/stability criterion was not utilized in the January 2004 PV Study.
- (c) Please confirm the voltage collapse limits presented in Table 1 of the January 2004 PV Study Report (TSGT 000798) were based on the point-of-collapse on the PV curves and not based on a MW level 5% lower than the MW level at the point-of-collapse on the PV curves.
- (d) Please identify the specific load model (see TSGT 00034-00035) used for active (i.e., real power) and reactive power loads in the San Luis Valley in the January 2004 PV Study.
- (e) Please identify whether San Luis Valley loads were modeled on the low-side of 115 kV and 69 kV transformers (see TSGT 00034) in the January 2004 PV Study. If so, please identify whether load tap changers on these transformers were allowed to automatically adjust during the calculation of the PV curves for the January 2004 PV Study.

- (f) Please confirm neither the June 1997 nor January 2004 studies examined the use of STATCON (or DVAR) devices, synchronous condensers or series line compensation as an alternative to address the voltage collapse problem in the San Luis Valley. In addition, please provide a detailed explanation in regard to why the use of these devices was not explored in the January 2004 and June 1997 studies as an alternative to a new transmission or the addition of a conventional static VAR compensator (SVC).
- (g) Please confirm that no new voltage collapse analysis was performed for Tri-State's June 2008 "San Luis Valley Electric System Improvement Project – Alternative Evaluation and Macro Corridor Study" and that June 2008 study relies on the past power flow analysis performed for the June 1997 and January 2004 studies. If this is not the case, please provide a copy of the additional power flow analysis Tri-State conducted for the June 2008 study.

RESPONSE TO TRINCERA 4-8:

- (a) Yes, these criteria were adopted by Tri-State and remain Tri-State's voltage collapse criteria.
- (b) The January 2004 PV Study Report did not make use of the working voltage collapse/stability criterion mentioned in (a). The purpose of the 2004 report was to provide a comparison of possible 230 kV connections to San Luis Valley Substation, on the basis of voltage collapse. Therefore, all of the comparisons were made on the points-of-collapse as determined in the January 2004 study.
- (c) Confirmed.
- (d) The January 2004 study utilized a constant MVA load model.
- (e) Tri-State believes the 2004 report was based on loads modeled on the high sides of 115 and 69 kV load-serving transformers.
- (f) The use of dispersed static VAR devices to address the voltage collapse problem in the San Luis Valley was considered and rejected in both the 1997 and 2004 study reports. The 2004 report investigated a VAR source at San Luis Valley 230 kV, the results of which are noted in the last line of Table 1 on page 5 of the report (TSGT 000796). The 1997 report investigated

dispersed VAR sources throughout the San Luis Valley region, known as Alternative 5 in the 1997 report (TSGT 000085). It does not appear that the use of series capacitors was examined in those reports.

(g) Confirmed.

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TRINCHERA RANCH 4-9. Please provide a copy, in electronic form only, of all documents in the Company's possession, custody or control, that support, relate to or form the basis for the Company's answers to each of the foregoing interrogatories.

RESPONSE TO TRINCHERA RANCH 4-9: Tri-State will provide any such documents that are responsive to this request in accordance with the 20-day deadline set forth in the Commission's rules.

Sponsor: Andrew R. Leoni

Dated this 24th day of August, 2009.

TRI-STATE GENERATION AND
TRANSMISSION ASSOCIATION, INC.



Andrew R. Leoni,
Senior Manager, Power System Planning

STATE OF COLORADO

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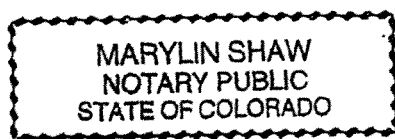
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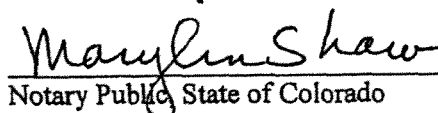
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Before me, the undersigned authority, personally appeared Andrew R. Leoni of Tri-State Generation and Transmission Association, Inc., who acknowledged before me that the information contained in the foregoing Responses to First Set of Discovery Requests of The Colorado Office of Consumer Counsel is true and correct to the best of his knowledge, information and belief.

WITNESS my hand and official seal this 24th day of August, 2009.



My Commission Expires 09/04/2009



Notary Public, State of Colorado