Decision No. R10-1245

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.

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 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.

RECOMMENDED DECISION OF ADMINISTRATIVE LAW JUDGE MANA L. JENNINGS-FADER GRANTING APPLICATIONS IN PART AND SUBJECT TO CONDITIONS AND DENYING MOTIONS

Mailed Date: November 19, 2010

TABLE OF CONTENTS

I. STATEMENT

1. On May 14, 2009, Tri-State Generation and Transmission Association, Inc. (Tri-State), filed an Application for a Certificate of Public Convenience and Necessity (CPCN) for its San Luis Valley-Calumet-Comanche transmission project (Project); for findings with respect to (a) the reasonableness of a 150 milliGauss (mG) level of electromagnetic field (EMF) when the Project is in service and (b) the reasonableness of the noise levels that Tri-State projected would occur when the Project is in service; and for approval of ownership interest transfer as needed when the Project is completed (Tri-State Application).[1] That filing commenced Docket No. 09A-324E (Tri-State Docket).

2. On May 15, 2009, the Commission issued its Notice of Application Filed in the Tri-State Docket. The notice established an intervention period. The notice contained a procedural schedule, which was vacated by Decision No. R09-0635-I.

3. By Minute Order, the Commission referred the Tri-State Docket to an Administrative Law Judge (ALJ). By Decision No. C09-0650, the Commission determined that it would issue an Initial Decision in the Tri-State Docket. By Decision No. C10-0855, the Commission directed the ALJ to issue a recommended decision in the Tri-State Docket.

4. By Decision No. R09-0603-I, the ALJ ordered the caption of the Tri-State Docket amended; ordered the Tri-State Application to be renoticed; and established a shortened intervention period.

5. On May 14, 2009, Public Service Company of Colorado (Public Service or PSCo) filed an Application for a CPCN for the Project; for findings with respect to (a) the reasonableness of a 150 mG level of EMF when the Project is in service and (b) the

[1] The Tri-State Application is Hearing Exhibit No. 1.

reasonableness of the noise levels that PSCo projected would occur when the Project is in service; and for approval of ownership interest transfer as needed when the Project is completed (PSCo Application).[2] That filing commenced the PSCo Docket.

6. On May 15, 2009, the Commission issued its Notice of Application Filed in the PSCo Docket. The Notice established an intervention period. The Notice contained a procedural schedule, which was vacated by Decision No. R09-0636-I.

7. By Minute Order, the Commission referred the PSCo Docket to an ALJ. By Decision No. C09-0649, the Commission determined that it would issue an Initial Decision in the PSCo Docket. By Decision No. C10-0855, the Commission directed the ALJ to issue a recommended decision in the PSCo Docket.

8. By Decision No. R09-0604-I, the ALJ ordered the caption of the PSCo Docket amended; ordered the PSCo Application to be renoticed; and established a shortened intervention period.

9. By Decision No. R09-0723-I, at the request of Public Service and Tri-State, the ALJ consolidated the PSCo Docket and the Tri-State Docket.

10. By Decision No. R09-0743-I, on the joint motion of Public Service and Tri-State, the ALJ ordered Public Service and Tri-State each to publish, in the July 12, 2009 edition of *The Denver Post*, notice of its Application filed on May 14, 2009. The ALJ also extended the intervention period in this consolidated proceeding through and including July 24, 2009.

11. Bar Nothing Ranches, LLC (Bar Nothing), filed a Petition for Leave to Intervene in the PSCo Docket. The ALJ granted this petition in Decision No. R09-0723-I.

[2] The PSCo Application is Hearing Exhibit No. 2.

12. Blanca Ranch Holdings, LLC, and Trinchera Ranch Holdings, LLC (collectively, Trinchera Ranch), filed a Petition to Intervene and Request for Hearing in each docket. The ALJ granted these petitions in Decision No. R09-0723-I.

13. Blue Diamond Ventures/FreedomWorks Joint Venture, LLC (Blue Diamond), filed a Motion to Intervene in this consolidated proceeding. The ALJ granted this motion in Decision No. R09-0868-I.

14. Colorado Governor's Energy Office (GEO) intervened of right in each docket. The ALJ acknowledged these interventions in Decision No. R09-0723-I.

15. Colorado Office of Consumer Counsel (OCC) intervened of right in each docket. The ALJ acknowledged these interventions in Decision No. R09-0723-I.

16. Colorado Open Lands, Inc. (Colorado Open Lands), filed a Petition to Intervene in this consolidated proceeding. The ALJ granted this petition in Decision No. R09-0868-I.

17. Colorado Springs Utilities (CSU) filed a Petition to Intervene in each docket. The ALJ granted these petitions in Decision No. R09-0723-I.

18. Interwest Energy Alliance (Interwest) filed a Petition to intervene in each docket and requested a hearing. The ALJ granted these petitions in Decision No. R09-0723-I.

19. La Veta, LLC (La Veta), filed a Petition to Intervene in this consolidated proceeding. The ALJ granted this petition in Decision No. R09-0868-I.

20. Majors Ranch Property Owners Association, Inc. (Majors Ranch), filed a Petition to Intervene in this consolidated proceeding. The ALJ granted this petition in Decision No. R09-0868-I.

21. Oxy USA, Inc. (Oxy), filed a Motion to Intervene and Request for Hearing in each docket. The ALJ granted these motions in Decision No. R09-0723-I.[3]

22. Pole Canyon Transmission, Inc. (Pole Canyon), filed a Corrected Motion to Intervene in each docket. The ALJ granted these motions in Decision No. R09-0723-I.

23. Ranchview Investments, LLC (Ranchview), filed a Petition to Intervene in this consolidated proceeding. The ALJ granted this petition in Decision No. R09-0868-I.

24. Staff of the Commission (Staff) intervened of right in each docket. The ALJ acknowledged these interventions in Decision No. R09-0723-I.

25. Anthony Velarde of Walsenburg, Colorado and Ron D. Velarde of Grand Junction, Colorado each filed a Petition to Intervene in this consolidated proceeding. The ALJ granted these petitions in Decision No. R09-0868-I.

26. Western Resource Advocates (WRA) filed a Petition to Intervene in each docket. The ALJ granted these petitions in Decision No. R09-0723-I.

27. By Decisions No. R09-0724-I and No. R09-0871-I, the ALJ denied numerous motions to intervene, petitions to intervene, and requests to intervene. The ALJ certified each Order as immediately appealable to the Commission. No one whose intervention was denied appealed the denial.

28. Public Service and Tri-State, collectively, are the Applicants. Bar Nothing, Blue Diamond, Colorado Open Lands, CSU, GEO, Interwest, La Veta, Majors Ranch, OCC, Oxy, Pole

[3] Oxy also filed the Verified Motion of Richard P. Noland for Admission *Pro Hac Vice* in each proceeding and filed the Verified Motion of James E. Guy for Admission *Pro Hac Vice* in each proceeding. The ALJ granted both motions and admitted Messrs. Noland and Guy *pro hac vice* in each docket. Decision No. R09-0723-I.

Canyon, Ranchview, Staff, Trinchera Ranch, Anthony Velarde, Ron Velarde, and WRA, collectively, are the Intervenors. Applicants and Intervenors, collectively, are the Parties.[4]

II. PROCEDURAL HISTORY

29. Numerous motions were filed and addressed by interim Orders issued by the Commission or by the ALJ. Only the significant interim Orders are discussed here.

30. By Decision No. C09-0886, the Commission determined that "§ 40-2-126, C.R.S., and the 180-day expedited timeline provided for in § 40-2-126(4), C.R.S., does **not** apply to this consolidated docket[.] Instead, § 40-6-109.5, C.R.S. dictates the deadline by which the Commission must issue a final order on the merits" in this proceeding. Decision No. C09-0886 at ¶ 25 (emphasis in original); *see also id*. at Ordering Paragraph No. 2 (same).

31. The Commission clarified Decision No. C09-0886 in Decision No. C09-1004. There, the Commission held that "the standard of review contained in § 40-2-126(3)(a), C.R.S., does not apply to" this consolidated proceeding. Decision No. C09-1004 at ¶ 10. As discussed in detail below, the Commission also addressed the issue of need as it pertains to a transmission project.

32. On June 30, 2009, by operation of Commission rule, the Tri-State Application and the PSCo Application were deemed complete within the meaning of § 40-6-109.5, C.R.S. By Decision No. R09-0635-I and pursuant to § 40-6-109.5(1), C.R.S., the ALJ enlarged the time for Commission decision in the Tri-State Docket. By Decision No. R09-0636-I and pursuant to § 40-6-109.5(1), C.R.S., the ALJ enlarged the time for Commission decision in the PSCo

[4] All Parties, except Messrs. Anthony and Ron Velarde, are represented by counsel. As individuals, Messrs. Anthony and Ron Velarde are permitted to appear without counsel to represent their own interests. Rule 4 *Code of Colorado Regulations* (CCR) 723-1-1201(b)(I).

Docket. Following a hearing and pursuant to § 40-6-109.5(4), C.R.S., the ALJ further enlarged the time for Commission decision in the two dockets. Decision No. R09-1094-I. As a result of subsequent events, Applicants concede that the provisions of § 40-6-109.5, C.R.S., no longer apply to the Applications. Decision No. R10-0486-I.

33. During the course of this proceeding, the ALJ held several prehearing conferences, heard oral argument on motions, and issued Orders that, among other things, scheduled the hearing in this matter and established the procedural schedule.[5] In addition, the ALJ ruled on discovery-related motions and motions to strike prefiled testimony.[6]

34. By Decision No. R09-1435-I, the ALJ scheduled the evidentiary hearing in this matter for February 1-5, 8, 10, and 11, 2010 and established the procedural schedule. This was the controlling procedural Order for the February evidentiary hearing.

35. On January 25, 2010, Trinchera Ranch filed a Motion to Dismiss.[7] In that filing, Trinchera Ranch asked, among other things, that the Commissioners recuse themselves in this consolidated proceeding. The Applicants and Interwest filed responses in opposition to that motion. On February 1, 2010, the Parties presented oral argument on the motion.

36. On February 4, 2010, the Commission took up the Trinchera Ranch motion to dismiss. The Commission first considered the recusal request. For the reasons stated in Decision No. C10-0124, neither Chairman Binz nor Commissioner Baker recused himself. For the reasons stated in Decision No. C10-0124 at ¶ 31, Commissioner Tarpey did recuse himself. Consequently, Commissioner Tarpey did not participate in this proceeding following that recusal.

[5] *See, e.g.*, Decisions No. R09-0723-I, No. R09-0868-I, and No. R09-1094-I.

[6] *See, e.g.*, Decisions No. R09-1355-I and No. R10-0222-I.

[7] Trinchera Ranch supplemented this filing on January 27, 2010.

37. The Commission (*i.e.*, Chairman Binz and Commissioner Baker) then addressed the motion to dismiss. By Decision No. C10-0125, the Commission denied that motion. On March 2, 2010, Trinchera Ranch filed a Request for Reconsideration, Reargument, or Reconsideration of Decision No. C10-0125. By Decision No. C10-0368, the Commission denied that request.

38. The evidentiary hearing was held as scheduled on February 1-5, 8, 10, and 11, 2010. At the close of the hearing, the ALJ closed the evidentiary record.

39. On March 22, 2010, Governor Ritter signed into law House Bill 10-1001, which became effective on August 11, 2010. As pertinent here, that legislation amended § 40-2-124, C.R.S. (the Renewable Energy Standard or RES). As a result, the ALJ reopened the evidentiary record in this proceeding "for the limited purpose of taking testimony on the impact, if any, of the amendment to the RES on the need for the Project." Decision No. R10-0329-I at ¶ 8. The ALJ scheduled the reopened evidentiary hearing for May 6, 2010.

40. On May 4, 2010, Public Service filed a Motion to Vacate May 6, 2010 Hearing. The ALJ granted that motion and vacated the scheduled evidentiary hearing. In addition and without objection from the Parties, the ALJ expanded the reopened record to

> address, *vis-à-vis* the Project, these two issues: (a) the impacts, if any, of the RES amendments enacted in 2010; and (b) the effects, if any, of the amendments to the [PSCo 2007 Colorado] Resource Plan to be sought by PSCo. ... The ALJ finds that the evidentiary record in this consolidated proceeding should be reopened for the limited purpose of receiving evidence solely on the two identified issues. Accordingly and consistent with this discussion, the ALJ will grant the Motion and will reopen the record.

Decision No. R10-0486-I at ¶ 20.[8] The ALJ scheduled the reopened evidentiary hearing for July 26, 30, and 31, 2010. Decisions No. R10-0486-I and No. R10-0746-I.

41. On July 20, 2010, Trinchera Ranch filed a Motion for Administrative Notice (Administrative Notice Motion). In that filing, Trinchera Ranch asked the Commission to take administrative notice of three documents from Docket No. 09M-616E and of two documents from Docket No. 10M-245E. Applicants and WRA opposed the motion. Following oral argument,[9] the ALJ found that Trinchera Ranch had failed to meet its burden of proof with respect to its motion. Accordingly, the ALJ orally denied the Administrative Notice Motion on July 30, 2010.[10]

42. The reopened evidentiary hearing was held as scheduled on July 26 and 30, 2010. At the close of the reopened hearing, the ALJ closed the evidentiary record.

43. On July 30, 2010, during the reopened evidentiary hearing, Trinchera Ranch made an oral motion to stay this docket pending resolution of issues pending in Docket No. 10A-377E, PSCo's application to amend its 2007 Colorado Resource Plan (CRP) (Application to Amend). Following oral argument, the ALJ denied that oral motion because (a) the Parties and witness were present and ready to proceed; (b) administrative efficiency would be served better by going forward with the hearing; and (c) the effect of a Commission decision in Docket No. 10A-377E on the issues in this transmission proceeding could be taken into consideration in the decision issued in this proceeding without a stay of the hearing in this matter.[11]

[8] On June 4, 2010, Public Service made the referenced filing, a verified application for approval to amend its 2007 Colorado Resource Plan. That filing commenced Docket No. 10A-377E.

[9] The oral argument is found in the July 30, 2010 transcript at 12-31.

[10] This Decision memorializes that oral ruling.

[11] This Decision memorializes that oral ruling.

44. On August 31, 2010, Trinchera Ranch filed a Motion to Reopen the Evidentiary Record and Permit Limited Discovery and Request for Leave to File a Reply (Motion to Reopen). By that filing, Trinchera Ranch asks that the evidentiary record be reopened to

> tak[e] testimony regarding the effect of the Expansion Plan filed by [Public Service] in the Clean Air - Clean Jobs Act docket on Public Service's sworn testimony in this docket with respect to its future plans to develop solar generation in the San Luis Valley.

Motion to Reopen at 1.[12] Based on the Expansion Plan and PSCo's testimony filed in Docket No. 10M-245E (CACJA Docket), Trinchera Ranch argues that PSCo's testimony in this transmission proceeding concerning its future plans to export electricity generated by solar resources in the San Luis Valley[13] (*i.e.*, PSCo's reliance on its 2007 CRP and PSCo's reliance on its 2010 Renewable Energy Standard Compliance Plan) "is both inaccurate and incomplete." Motion to Reopen at 2. Trinchera Ranch also asserts that Public Service violated its obligation to supplement its discovery responses when it failed to provide the Generic Expansion Plan to Trinchera Ranch in response to Discovery Requests Trinchera Ranch No. 1-4 (dated June 29, 2009) and Trinchera Ranch No. 17-3 (dated December 16, 2009).[14] Trinchera Ranch asserts that PSCo should have provided the Generic Expansion Plan in response to those discovery requests and that PSCo's failure to do so resulted in a misleading or incomplete record in this proceeding. Motion to Reopen at 9-10.

[12] The referenced Expansion Plan is the Generic Expansion Plan that contains a mix of generic generation units as detailed in Appendix 7 of PSCo's Clear Air - Clean Jobs Act Emissions Reduction Plan (Emissions Reduction Plan) filed in Docket No. 10M-245E. (The Emissions Reduction Plan is Exhibit A to the Motion to Reopen.) The Generic Expansion Plan shows the generic resource acquisitions for the period 2016 to 2046 that Public Service believes are necessary to replace the coal units that Public Service proposes to retire. The method used by Public Service to develop the Generic Expansion Plan is described in the Emissions Reduction Plan at 54.

[13] This is one of Applicants' bases for the need for the Project.

[14] These discovery requests are Exhibit E to the Motion to Reopen.

45. On September 3, 2010, Public Service and Tri-State each filed a response. Each opposes the Motion to Reopen.

46. Public Service responds that there is no contradiction between the testimony given in this proceeding and the filings made in Docket No. 10M-245E:

> As Public Service has clearly explained on the record in Docket No. 10M-245E (a docket where Trinchera Ranch is a party) the CACJA Docket addresses only how to reduce emissions from the Company's coal plants, either by installing emission controls, refueling the coal facilities with natural gas, or replacing coal-fired capacity. The CACJA Docket does *not* address future resource acquisitions beyond the capacity needed to replace the retired coal units, nor does it address any new generation plans or opportunities outside the Denver metro area (except to a limited extent in modeling runs requested by parties to Docket No. 10M-245E). Public Service has made it very clear in the CACJA Docket that Public Service's plans for acquiring *additional* capacity to serve load growth and to replace expiring contracts, including the acquisition of additional renewable energy capacity, would *not* be addressed in Docket No. 10M-245E, but instead would be addressed in the RES Plan to be filed in 2011 and in the 2011 Resource Plan.

Public Service's Response to the Motion to Reopen (PSCo Response) at 2-3 (emphasis in original).[15] Public Service states that the Generic Expansion Plan "does not purport to show what renewable resources Public Service is likely to acquire in the future to the maximum extent practicable within the two percent retail rate impact cap. Therefore, the [Generic Expansion Plan] is wholly irrelevant to" the instant proceeding. PSCo Response at 10.

47. Concerning the discovery requests, Public Service argues that the Generic Expansion Plan is not responsive to the cited Trinchera Ranch discovery requests "because it does not involve either solar generation in the San Luis Valley or any generation in Huerfano and Pueblo Counties." *Id.* at 11. In addition, Public Service argues that the cited discovery requests

[15] In support of this assertion, Public Service attached and relied on the Affidavit of Karen T. Hyde (Exhibit A to PSCo Response) and the PSCo testimonies filed in the CACJA Docket (Exhibit B and Exhibit C to PSCo Response). Public Service also relies on its July 1, 2010 Report Detailing Proposed Modeling Scenarios, which was filed in the CACJA Docket and is attached to the Motion to Reopen as Exhibit B.

pertain to the February 2010 hearing and were not propounded in the discovery period that preceded the reopened evidentiary hearing. It states that

> Trinchera Ranch has cited no authority for the proposition that, after the evidentiary record was closed at the conclusion of the February 2010 hearing, Public Service had the duty to supplement discovery responses for the hundreds of discovery requests posed before February 2010. ... [PSCo also argues that] it is absurd to suggest that Public Service had the duty to supplement responses to the 25 sets of discovery posed prior to the February 2010 hearing. Certainly the ALJ's procedural orders did not indicate that the reopening of the record somehow reactivated prior discovery requests, whether relevant to the limited issues in the reopened record or not. As Trinchera Ranch has cited no new discovery requests related to the reopened evidentiary record as having been insufficiently answered or supplemented, Trinchera Ranch's argument is without legal basis.

Id. at 11 & n.14.

48. Tri-State agrees with Public Service's response. Tri-State raises an additional and practical consideration:

> The Trinchera Ranch Motion [to Reopen] must also be denied for another eminently practical reason, simply put -- when will it end? Public Service is fully regulated by the Commission and, as such, regularly files numerous reports and plans in a multitude of dockets many of which pertain to Public Service's generation resources and/or its transmission system. ... Given the interrelated nature of these filings and the Commission's ongoing jurisdiction over Public Service, it will always be possible for some party to make the argument that a decision on a particular issue in one docket will have a bearing on an issue in another docket. In light of the fact that there is virtually never a point in time when Public Service does not have one or more such dockets pending before the Commission, there will never be a moment when all issues in all dockets have been decided such that their potential or alleged interactions are known. To wait for this improbable, if not impossible, window of decisional opportunity would completely hamstring the Commission and the utility involved.

Tri-State Response to Motion to Reopen at ¶ 3.

49. The ALJ will deny the Motion to Reopen.[16] The ALJ finds no inconsistency between the PSCo testimony presented in this proceeding and the PSCo filings in Docket No. 10M-245E. The ALJ finds that the filings in the CACJA Docket do not address, and were not prepared for the purpose of addressing, all-source or renewable resource acquisition such as occurs in resource planning proceedings. The ALJ finds that the filings in the CACJA Docket do not address, and were not prepared for the purpose of addressing, PSCo's Renewable Energy Standard compliance plan.[17]

50. In addition, the ALJ is persuaded by Tri-State's argument that there must be an end to this litigation and that, due to the interrelated nature of dockets involving Public Service, one must recognize that not every proceeding that tangentially touches on or mentions future renewable resources or future resource acquisition warrants reopening the evidentiary record in this transmission proceeding. The ALJ finds persuasive ALJ Adams's observation that,

> [o]f necessity, complex Commission proceedings often include litigated results of other proceedings. In general, administrative efficiency and good public policy dictate that every such component not be fully re-litigated in each proceeding.

Decision No. R10-0586 at ¶ 51.

51. In accordance with § 40-6-109, C.R.S., the undersigned ALJ now transmits to the Commission the record in this proceeding along with a written recommended decision.

---

[16] The ALJ informed the Parties of this ruling in an e-mail dated September 7, 2010. In that e-mail, the ALJ *sua sponte* determined that she would not certify her ruling as immediately appealable to the Commission. Certification of an interim order as immediately appealable, pursuant to Rule 4 CCR 723-1-1502(b), is discretionary with the ALJ. Given the posture of this transmission proceeding, the ALJ was satisfied that certification would not advance the proceeding and was unnecessary. In addition, as stated above, the ALJ found no inconsistency between the PSCo testimony in this consolidated proceeding and the PSCo filings in the CACJA Docket. Finally, the ALJ found that not certifying the denial of the motion as immediately appealable would not harm Trinchera Ranch because it could take exception to denial of the Motion to Reopen in its exceptions to the recommended decision in this case. This Decision memorializes those rulings.

[17] In its filings in the CACJA Docket, PSCo consistently and repeatedly urges the Commission *not* to address renewable energy acquisitions (*e.g.*, size, location, type) outside the 2011 energy resource plan and the next Renewable Energy Standard compliance plan.

III. WRITTEN PUBLIC COMMENTS RECEIVED OUTSIDE HEARINGS

52. In the period preceding the February 2010 evidentiary hearing in this case, the Commission received 48 written comments with respect to the Project. Of these written comments, nine supported the Project; 27 opposed the Project; ten addressed issues that are not related to this proceeding; and two requested a moratorium on consideration of any facilities pending completion of both the Huerfano County Land Use Guide and Comprehensive Plan and the Environmental Impact Statement being undertaken by the U.S. Department of Agriculture's Rural Utilities Service.[18]

53. In the period between February 11, 2010[19] and July 28, 2010,[20] the Commission received 119 written comments with respect to the Project. Of these written comments, 14 supported the Project; 99 opposed the Project; and six addressed issues that are not related to this proceeding. In addition, the Commission received a petition "asking [the Commission] to withhold support for [the Project] until a comprehensive Environmental Impact Statement (EIS) is completed and made public." The petition was dated October 1, 2009 and was signed by 183 individuals. Finally, the Commission received 27 requests for additional time within which to submit written comments.[21]

[18] The RUS Environmental Impact Statement is discussed below.

[19] February 11, 2010 was the last day of the February evidentiary hearing in this matter.

[20] July 28, 2010 was the last date on which written comments could be received timely. After July 28, 2010, the Commission received six comments. Although the comments were placed in the Commission's file in this matter, these comments were neither read nor considered. These late-filed comments are not included in the referenced 119 written comments.

[21] These 27 timely-filed comments took no position with respect to the Project. In light of the two hearings to take public comment, the significant time already provided for submission of written comments (*i.e.*, May 2009 to July 2010), and the fact that the comments are not evidence in this proceeding, the ALJ determined that no additional time to submit written comments would be provided. Some individuals who requested additional time also filed written comments, signed the petition, and/or made statements at one of the November 2009 hearings to take public comment.

54. A number of the individuals who submitted written comments also made statements at one of the November 2009 hearings to take public comment. Some individuals who signed the petition also filed written comments and/or made statements at one of the November 2009 hearings to take public comment.

55. As has been done in other proceedings, the Parties were given an opportunity to present testimony or otherwise to address the written comments. The written comments timely received from members of the public were read and considered. None of these written comments is evidence in this proceeding.

IV. EVIDENTIARY RECORD

56. The evidentiary record contains testimony and exhibits from the two hearings to take public comment and the 10-day evidentiary hearing.

A. Hearings to Take Public Comments.

57. The ALJ held two hearings to take public comment (public comment hearings). By Decisions No. R09-0868-I and No. R09-1203-I, the ALJ established procedures for these public comment hearings: (a) each person who made a statement was placed under oath; (b) counsel for the Parties were permitted to ask questions of, and some did ask questions of, persons making statements; (c) each statement is part of the evidentiary record in this matter; and (d) each public comment hearing was transcribed.[22]

58. The 12 exhibits offered at the public comment hearings were admitted as Exhibits No. PC-1 through No. PC-12.[23] These are part of the evidentiary record.

[22] The transcripts are filed in the record in this proceeding.

[23] Exhibit No. PC-12 was admitted during the Walsenburg hearing but was late-filed by permission of the ALJ.

59. As is the practice before the Commission, the Parties were given an opportunity to present testimony or otherwise to address the public comment hearing comments and exhibits.

1. Walsenburg Public Comment Hearing.

60. The first public comment hearing was held in Walsenburg, Colorado on November 9, 2009 (Walsenburg hearing). At the Walsenburg hearing, the ALJ heard the testimony of 20 individuals, a number of whom represented and spoke on behalf of a group. Of the individuals who presented testimony, four supported the Project and 15 opposed it. The Walsenburg hearing lasted for three hours.

61. When the Project was first proposed by Applicants, the preferred route or siting took what is referred to as the Southern Route.[24] A few days prior to the Walsenburg hearing, Applicants changed the Project's preferred route or siting to what is referred to as the Northern Route.[25] Although the Northern Route is now the preferred route or siting, Applicants reserve their right to change to another route, including the Southern Route.

62. One of those who testified in support of the Project was Commissioner Roger Cain, a member of the Board of County Commissioners of Huerfano County (Huerfano County Board). Commissioner Cain was authorized to testify on behalf of, and to state the official position of, the Huerfano County Board. The Huerfano County Board supports the Project to increase electric reliability in the San Luis Valley and to realize the potential for economic development presented by renewable resource development. *See also*

[24] Exhibit No. PC-7 is a map that shows the Southern Route and the Northern Route.

[25] This route should not be confused with the Trinchera Ranch transmission alternatives, discussed below, that go north from the San Luis Valley Substation.

letters from Huerfano County Board dated March 17, 2010 and June 16, 2010 (to the same effect).

63. Those who opposed the Project focused almost exclusively on the Project's proposed siting or route, particularly in the vicinity of La Veta Pass. For a variety of reasons (*e.g.*, adverse impact on the environment and animal habitat, adverse visual impact, adverse impact on land values), the speakers opposed the Southern Route through La Veta Pass. Most stated that they did not oppose the Northern Route, but they presented their testimony for the Commission's consideration in the event Applicants chose the Southern Route as their preferred route or siting.

64. At the Walsenburg hearing, there was support for the concept of greater use of renewable resources for generating electricity. The speakers linked their support for renewable resources to support for locating both the generation and the transmission close to the Denver Metropolitan area load center.

65. One person who opposed the Project did so on an additional basis: the existence of adverse health effects associated with high-voltage overhead transmission lines. That individual submitted five articles on the subject of health risks that may be associated with high-voltage overhead transmission lines (Exhibit No. PC-6).[26] Review of that Exhibit reveals that the articles are, at best, non-committal on the issue of health hazards that may be posed by high-voltage overhead transmission lines. In the main, the articles conclude that (a) no causal relationship between health risks and high-voltage transmission has been established and

[26] The articles are from the popular press, not scientific or medical journals. Three of the articles (dated June 2005) report on the results of a study conducted in the United Kingdom; the results were released in 2005. One of the articles (dated September 2004) is an opinion piece. One of the articles (dated April/May 1996) is an article reporting on then-underway research efforts.

(b) more research on the issue is necessary. Given the age of the articles, the fact that none is from a scientific or medical journal, and the fact that none reaches a conclusion with respect to the relationship (if any) between health risks and high-voltage overhead transmission lines, the ALJ finds that the articles are not persuasive evidence of any health risk associated with high-voltage overhead transmission lines.

66. Exhibit No. PC-12 is entitled Save Huerfano County - Petition and contains approximately 160 signatures of persons who oppose the Project's crossing Huerfano County. The ALJ notes that there is some limited overlap between the signatories of Exhibit No. PC-12 and the signatories of the petition dated October 1, 2009 that is discussed above.

2. Alamosa Public Comment Hearing.

67. The second public comment hearing was held in Alamosa, Colorado on November 10, 2009 (Alamosa hearing). At the Alamosa hearing, the ALJ heard the testimony of 36 individuals, a number of whom represented and spoke on behalf of a group. Of the individuals who presented testimony, 19 supported the Project and 17 opposed it. The Alamosa hearing lasted three and one-half hours.

68. One of those who testified in support of the Project was Commissioner Darius Allen, a member of the Board of County Commissioners of Alamosa County (Alamosa County Board). Commissioner Allen was authorized to testify on behalf of, and to state the official position of, the Alamosa County Board. The Alamosa County Board supports the Project.

69. One of those who testified in support of the Project was Chairman Doug Davie, Chairman of the Board of County Commissioners of Rio Grande County (Rio Grande County Board). Chairman Davie was authorized to testify on behalf of, and to state the official position

of, the Rio Grande County Board. The Rio Grande County Board supports the Project because it will bring increased electric reliability to the San Luis Valley. Chairman Davie also provided information about the adverse economic impact on farmers that can result from an outage in the San Luis Valley.

70. In general, those who supported the Project did so for these reasons: (a) the need for increased electric service reliability in the San Luis Valley; (b) the need for greater redundancy of electric supply (*i.e.*, for looped service) into the San Luis Valley; and (c) the need for transmission to assist with economic development within the San Luis Valley and to permit export of electricity generated by renewable resources (*e.g.*, solar facilities) located within the San Luis Valley.

71. While acknowledging the need for reliable electric service in the San Luis Valley, those opposed to the Project argued that one must take a good hard look at the Project before proceeding with it. Given the potential for adverse impacts on the environment, animal habitat, and quality of life, the speakers urged that the Project not go forward. They questioned whether the Project is the best solution to the acknowledged reliability problem. In addition, speakers opposed the Project because of concerns about the possibility of reduced property values, adverse health effects from EMF, and transmission line-related noise. Finally, some opposed the proposed siting or route of the Project but not the Project itself.

72. At the Alamosa hearing, there was mixed reaction to the concept of greater use of renewable resources for generating electricity. Some speakers supported greater use of renewable resources but linked their support to support for locating both the generation and the transmission close to the Denver Metropolitan area load center. Some speakers opposed the idea

of locating large solar generation facilities in the San Luis Valley because those facilities would be inconsistent with the existing quality of life and land use in the area.

73. Exhibit No. PC-9 is a notice of proposed findings and notice of public comment period printed from the U.S. Environmental Protection Agency (EPA) website.[27] The document discusses an EPA proposal to make an endangerment finding and a cause or contribute finding for greenhouse gases under § 202(a) of the federal Clean Air Act. The document also announces a 60-day public comment period. Given that it is simply an announcement of proposed findings and notice of opportunity to submit written comment, the ALJ finds that Exhibit No. PC-9 is not persuasive evidence or authority with respect to either greenhouse gases or the EPA's final administrative determination.

B. Evidentiary Hearing in February and July, 2010.

74. On February 1-5, 8, 10, and 11, 2010, at the times and place scheduled, the ALJ held an evidentiary hearing in this consolidated proceeding.[28] The ALJ heard the testimony of 23 witnesses.[29]

[27] The notice is not the *Federal Register* notice.

[28] A transcript of each day of the February hearing has been filed in this proceeding. By Decision No. R10-0222-I, the ALJ struck from the record the February 1, 2010 transcript at 16:25 through 18:15. By that same Order, the ALJ struck from the record portions of the oral testimony given by Mr. Barlow, Ms. Hyde, Ms. Korbe, and Mr. Pike.

[29] These witnesses prefiled testimonies. When they testified, some of the witnesses modified or corrected their prefiled testimonies. The testimonies as modified or corrected were admitted as Hearing Exhibits.

75. Applicants presented the testimony of 13 witnesses:[30] Mr. Michael L. Barningham,[31] Mr. Joel K. Bladow,[32] Mr. Thomas W. Green,[33] Ms. Karen T. Hyde,[34] Ms. Nicole C. Korbe,[35] Mr. Andrew R. Leoni,[36] Mr. Stephen A. Mundorff,[37] Mr. Danny J. Pearson,[38] Dr. Robert L. Pearson,[39] Mr. James P. Spiers,[40] Mr. Gerry M. Stellern,[41]

[30] As stated in Hearing Exhibit No. 2 at 9-10, Public Service endorsed and relied upon Tri-State's witnesses in support of the Public Service Application. As stated in Hearing Exhibit No. 1 at 5-8, Tri-State endorsed and relied upon PSCo's witnesses in support of the Tri-State Application. Thus, this Decision refers to a witness presented by either Applicant as "Applicants witness" irrespective of the utility that presented the witness and irrespective of the fact that the testimony may state that the witness is testifying on behalf of one applicant.

[31] Mr. Barningham is County Permitting Manager and is employed by Tri-State. Mr. Barningham adopted a portion of the prefiled direct testimony of Mr. Mark J. Murray. Mr. Barningham's direct testimony is Hearing Exhibit No. 18. His oral testimony is found in the February 5, 2010 transcript (Feb. 5 tr.) at 248-57.

[32] Mr. Bladow is Senior Vice President, Transmission and is employed by Tri-State. Mr. Bladow's direct testimony is Hearing Exhibit No. 3. His oral testimony is found in the February 1 transcript (Feb. 1 tr.) at 74-223, and his oral sur-surrebuttal is found in the February 11, 2010 transcript (Feb. 11 tr.) at 6-90. By Decision No. R10-0222-I, the ALJ struck the following portions of Mr. Bladow's February 1, 2010 testimony: 170:23 through 172:13.

[33] Mr. Green works in the Department of Transmission Asset Management and is employed by Public Service. Mr. Green's direct testimony is Hearing Exhibit No. 10, and his rebuttal testimony is Hearing Exhibit No. 11. His oral testimony is found in the February 3, 2010 transcript (Feb. 3 tr.) at 154-299, and his oral sur-surrebuttal is found in the Feb. 11 tr. at 186-268.

[34] Ms. Hyde is Vice President, Rates and Regulatory Affairs - Colorado and is employed by Xcel Energy Services, Inc. Ms. Hyde's rebuttal testimony is Hearing Exhibit No. 4. Her oral testimony is found in the Feb. 1 tr. at 224-348 and in the February 2, 2010 (Feb. 2 tr.) at 5-72. By Decision No. R10-0222-I, the ALJ struck the following portions of Ms. Hyde's February 1, 2010 testimony: 335:17 through 336:12.

[35] Ms. Korbe is Senior Environmental Planner for transmission projects and is employed by Tri-State. Ms. Korbe adopted a portion of the prefiled direct testimony of Mr. Mark J. Murray. Ms. Korbe's direct testimony is Hearing Exhibit No. 16, and her rebuttal testimony is Hearing Exhibit No. 17. Her oral testimony is found in the February 4, 2010 transcript (Feb. 4 tr.) at 163-231. By Decision No. R10-0222-I, the ALJ struck the following portions of Ms. Korbe's February 4, 2010 testimony: 168:24 through 170:20.

[36] Mr. Leoni is Senior Manager, Power System Planning and is employed by Tri-State. Mr. Leoni's direct testimony is Hearing Exhibit No. 12, and his rebuttal testimony is Hearing Exhibit No. 13. His oral testimony is found in the Feb. 3 tr. at 299-317 and in the Feb. 4 tr. at 14-99.

[37] Mr. Mundorff is Senior Manager, Transmission Engineering and is employed by Tri-State. Mr. Mundorff's direct testimony is Hearing Exhibit No. 19. His oral testimony is found in the Feb. 5 tr. at 258-305.

[38] Mr. Pearson is a Principal Transmission Design Engineer, Transmission Engineering, and is employed by Xcel Energy Services, Inc. His direct testimony is Hearing Exhibit No. 20, and his rebuttal testimony is Hearing Exhibit No. 21. His oral testimony is found in the Feb. 5 tr. at 308-55, and his oral sur-surrebuttal is found in the Feb. 11 tr. at 91-124.

[39] Dr. Pearson is Vice President of CH2M HILL, a consulting engineering company. Dr. Pearson's direct testimony is Hearing Exhibit No. 22. His oral testimony is found in the Feb. 5 tr. at 355-91.

[40] Mr. Spiers is Senior Manager Energy Strategies and is employed by Tri-State. Mr. Spiers's rebuttal testimony is Hearing Exhibit No. 7. His oral testimony is found in the Feb. 2 tr. at 227-311.

[41] Mr. Stellern is Manager of Transmission Assessment Management and is employed by Public Service. Mr. Stellern's direct testimony is Hearing Exhibit No. 8, and his rebuttal testimony is Hearing Exhibit No. 9. His oral testimony is found in the Feb. 2 tr. at 315-26 and the Feb. 3 tr. at 4-149.

Mr. Joseph Taylor,[42] and Mr. Rick L. Thompson.[43] Colorado Open Lands presented the testimony of Mr. Daniel E. Pike.[44] GEO presented the testimony of Mr. Morey Wolfson.[45] Interwest presented the testimony of Mr. Gregory T. Blue.[46] Staff presented the testimony of Mr. Inez G. Dominquez.[47] Trinchera Ranch presented the testimony of three witnesses: Mr. R. Mark Clements,[48] Mr. James R. Dauphinais,[49] and Mr. Michael J. McFadden.[50]

[42] Mr. Taylor is Manager, Transmission Access and is employed by Xcel Energy Services, Inc. Mr. Taylor's direct testimony is Hearing Exhibit No. 5, and his rebuttal testimony is Hearing Exhibit No. 6. A portion of Mr. Taylor's rebuttal testimony is Highly Confidential Hearing Exhibit No. 6B. His oral testimony is found in the Feb. 2 tr. at 72-226.

[43] Mr. Thompson is Supervisor, Siting and Land Rights, and is employed by Public Service. Mr. Thompson's direct testimony is Hearing Exhibit No. 14, and his rebuttal testimony is Hearing Exhibit No. 15. His oral testimony is found in the Feb. 4 tr. at 99-162, and his oral sur-surrebuttal is found in the Feb. 11 tr. at 125-79.

[44] Mr. Pike is President of Colorado Open Lands. Mr. Pike's answer testimony is Hearing Exhibit No. 27. His oral testimony is found in the Feb. 5 tr. at 103-201. By Decision No. R10-0222-I, the ALJ struck the following portions of Mr. Pike's February 5, 2010 testimony: 175:23 through 177:2.

[45] Mr. Wolfson is Transmission Program Manager and is employed by the GEO. Mr. Wolfson's answer testimony is Hearing Exhibit No. 28. His oral testimony is found in the February 10, 2010 transcript (Feb. 10 tr.) at 7-57.

[46] Mr. Blue is employed by SunPower Corporation. Mr. Blue's cross-answer testimony is Hearing Exhibit No. 30. His oral testimony is found in the Feb. 5 tr. at 201-47.

[47] Mr. Dominguez is a Staff Engineer and is employed by the Commission. His answer testimony is Hearing Exhibit No. 37, and his cross-answer testimony is Hearing Exhibit No. 39. His oral testimony is found in the Feb. 10 tr. at 285-353.

[48] Mr. Clements is President and owner of Web Support Services, LLC. Mr. Clements's surrebuttal testimony is Hearing Exhibit No. 32; his confidential surrebuttal testimony is Confidential Hearing Exhibit No. 32A; and his highly confidential surrebuttal testimony is Highly Confidential Hearing Exhibit No. 32B. His oral testimony is found in the February 8, 2010 transcript (Feb. 8 tr.) at 124-220 and 245-99 and in the Feb. 10 tr. at 58-77. His confidential oral testimony is found in the Feb. 8 tr. at 254-62.

[49] Mr. Dauphinais is a Principal of Brubaker & Associates, Inc. Mr. Dauphinais's answer testimony is Hearing Exhibit No. 33, his supplemental answer testimony is Hearing Exhibit No. 34, his confidential supplemental answer testimony is Confidential Hearing Exhibit No. 34A, his cross-answer testimony is Hearing Exhibit No. 35, and his surrebuttal testimony is Hearing Exhibit No. 36. His oral testimony is found in the Feb. 10 tr. at 77-285.

[50] Mr. McFadden is President of McFadden Consulting Group, Inc. Mr. McFadden's answer testimony is Hearing Exhibit No. 31. His oral testimony is found in the Feb. 8 tr. at 5-124.

Mr. Ron D. Velarde[51] presented his own testimony. WRA presented the testimony of two witnesses: Mr. Dean Apostol[52] and Mr. Tom Darin.[53]

76. Including prefiled testimonies, 131 exhibits were marked and offered. Of these offered exhibits, Hearing Exhibits No. 1-37, 39-47,[54] 49-60,[55] 62-82,[56] 84-85, 87-103,[57] 105-106, 108-109, 111-119, and 121-31[58] were admitted into evidence.[59]

77. At the conclusion of the February 2010 hearing, the ALJ closed the evidentiary record.

78. Each of the following Parties filed a Statement of Position (SOP): Public Service, Tri-State, Bar Nothing, GEO, Interwest, OCC, Pole Canyon, Staff, Trinchera Ranch, and WRA.

---

[51] Mr. Velarde is a property owner whose land lies within or near one of the possible corridors for the Project. Mr. Velarde's answer testimony is Hearing Exhibit No. 23. His oral testimony is found in the Feb. 8 tr. at 221-44.

[52] Mr. Apostol is a Senior Landscape Architect and Restoration Ecologist and is employed by MIG Associates. Mr. Apostol's answer testimony is Hearing Exhibit No. 26. His oral testimony is found in the Feb. 5 tr. at 74-102.

[53] At one time, Mr. Darin was the Energy Transmission Attorney for WRA. Mr. Darin's answer testimony is Hearing Exhibit No. 24, and his surrebuttal testimony is Hearing Exhibit No. 25. His oral testimony is found in the Feb. 5 tr. at 23-74.

At present, Mr. Darin is employed by the U.S. Department of Energy. Mr. Darin's testimony does not represent the views or opinions of the U.S. Department of Energy. His testimony is based solely on his work while he was with WRA.

[54] Hearing Exhibit No. 45 is the first page of, and thus is less complete than, Hearing Exhibit No. 87. The ALJ relied on Hearing Exhibit No. 87 because it is the complete document. The oral testimony given during the February 2010 hearing concerning Hearing Exhibit No. 45 remains in the record.

[55] Hearing Exhibit No. 54 is House Bill 10-1001 (HB10-1001) as introduced. Following the conclusion of the evidentiary hearing, HB10-1001 was amended significantly and, as amended, was enacted. Hearing Exhibit No. 132 is HB10-1001 as enacted and is relied upon in this Decision. The oral testimony given during the February 2010 hearing concerning Hearing Exhibit No. 54 remains in the record. Hearing Exhibit No. 58 was admitted subject to a limitation.

[56] Hearing Exhibit No. 67A is an enlargement of one of the maps contained in Hearing Exhibit No. 67. Hearing Exhibit No. 80 does not include WRA responses to Trinchera Ranch 1-7 and Trinchera Ranch 1-8.

[57] One of these is confidential: Confidential Hearing Exhibit No. 102.

[58] Hearing Exhibit No. 131 refers to Attachment TR15-2A, which is not appended to the Hearing Exhibit.

[59] The following exhibits were marked, were offered, but were not admitted: numbers 38, 48, confidential 61, 83, 86, 104, 107, 110, and 120.

79. Each of the following Parties filed a Response to Statements of Position (SOP Response): Public Service, Tri-State, Staff, Trinchera Ranch, Ron Velarde, and WRA.[60]

80. The ALJ reopened the evidentiary record. On July 26 and 30, 2010, at the times and place scheduled, the ALJ held the reopened evidentiary hearing.[61] The ALJ heard the testimony of three witnesses.[62] Applicants presented the testimony of Ms. Karen T. Hyde.[63] Trinchera Ranch presented the testimony of Mr. James R. Dauphinais[64] and Dr. Anjali Sheffrin.[65]

81. During the reopened evidentiary hearing, Exhibits 132 through 148 were marked for identification.[66] Of these, Hearing Exhibits No. 132, 133, 137-141,[67] 143, and 144 were admitted into evidence.[68]

---

[60] Although some of these filings are denominated "reply," they are responses.

[61] A transcript of each day of the reopened evidentiary hearing has been filed in this proceeding. No portion of these transcripts has been struck from the record.

[62] There was no prefiled testimony.

[63] Ms. Hyde is Vice President, Rates and Regulatory Affairs - Colorado and is employed by Xcel Energy Services, Inc. Ms. Hyde previously presented testimony in this proceeding. Her testimony in the reopened proceeding is found in the July 26, 2010 transcript (July 26 tr.) at 15-207. The ALJ struck from the record Ms. Hyde's testimony at July 26 tr. at 186:17-24.

[64] Mr. Dauphinais is a Principal of Brubaker & Associates, Inc. Mr. Dauphinais previously presented testimony in this proceeding. His testimony in the reopened proceeding is found in the July 26 tr. at 208-80. By oral ruling, the ALJ struck the following portions of Mr. Dauphinais's July 26, 2010 testimony from the record: 244:1-6. The ALJ struck from the record Mt. Dauphinais's testimony at July 26 tr. at 244:1-6.

[65] Dr. Sheffrin is a Research Professor at the Tulane University Energy Institute, New Orleans, Louisiana. Her *curriculum vitae* is Hearing Exhibit No. 144. Dr. Sheffrin did not previously testify in this proceeding. Her testimony in the reopened proceeding is found in the July 30, 2010 transcript (July 30 tr.) at 38-237. Dr. Sheffrin did not address Applicants' reliability need in her testimony.

[66] The exhibit numbering began with 132. This is the next number following the last exhibit marked during the February 2010 hearing.

[67] Hearing Exhibit No. 139 is Volume 1 of Public Service's 2010 Renewable Energy Standard Compliance Plan (dated October 27, 2009) as filed with the Commission in Docket No. 09A-772E. Hearing Exhibit No. 140 is Volume 2 of PSCo's 2010 Renewable Energy Standard Compliance Plan, as filed with the Commission in Docket No. 09A-772E. It contains technical information to support Volume 1 of PSCo's 2010 Renewable Energy Standard Compliance Plan, including Tables 7-1 through and including 7-5. Public Service revised Tables 7-1 through and including 7-5 on March 19, 2010, and the revised Tables were admitted into evidence in Docket No. 09A-772E. The revised Tables are Hearing Exhibit No. 141 in this proceeding; they supersede the same Tables in Hearing Exhibit No. 140. Thus, Tables 7-1 through and including 7-5 in Hearing Exhibit No. 140 are not relied upon in this Decision.

[68] Exhibit No. 136 was marked and not offered. The following exhibits were marked, were offered, but were not admitted: 134, 135, Confidential Exhibit No. 135A, 142, and 145-148.

82. At the conclusion of the reopened hearing, the evidentiary record was closed.

83. Each of the following Parties filed a Supplemental Statement of Position (Supplemental SOP):[69] Public Service, Tri-State, Interwest, and Trinchera Ranch. Response to Supplemental SOPs was not permitted.

V. BURDEN OF PROOF AND RELATED PRINCIPLES

84. In their Applications, Public Service and Tri-State each requests that the Commission (a) grant a Certificate of Public Convenience and Necessity to construct the Project; (b) find to be reasonable an electromagnetic field level of 150mG; (c) find to be reasonable the audible noise levels that they estimate will result from the operation of the Project; and (d) authorize the transfer of ownership rights in the Project as necessary to achieve the ownership shares upon which the Applicants ultimately agree.

85. As the parties seeking action by the Commission, Applicants bear the burden of proof with respect to the relief sought by a preponderance of the evidence. Section 24-4-105(7), C.R.S.; § 13-25-127(1), C.R.S.; Rule 4 *Code of Colorado Regulations* (CCR) 723-1-1500. The evidence must be "substantial evidence," which the Colorado Supreme Court has defined as

---

[69] In Decision No. R10-0486-I at ¶ 26, j, the ALJ invited Parties that wished to do so to address the following three issues in their Supplemental Statements of Position:

> (a) whether, as a matter of law, a CPCN for a transmission line must identify the two locations/points between which the transmission line must be built; (b) assuming that the Commission has the authority to issue a CPCN for a transmission line that does not identify the two locations/points between which the transmission line must be built, whether there are factors that the Commission ought to consider with respect to issuing CPCN that does not identify the two locations/points between which the transmission line must be built and, if so, what those factors are; and (c) if the Commission wished to impose a condition similar to that proposed by Bar Nothing in ¶ 1 of its Position Statement, the additional information (if any) that would be necessary to develop the parameters of, and to craft, the condition.

Parties addressed these issues in their Supplemental SOP.

> such relevant evidence as a reasonable person's mind might accept as adequate to support a conclusion ... it must be enough to justify, if the trial were to a jury, a refusal to direct a verdict when the conclusion sought to be drawn from it is one of fact for the jury.

City of Boulder v. Colorado Public Utilities Commission, 996 P.2d 1270, 1278 (Colo. 2000) (quoting *CF&I Steel, L.P. v. Public Utilities Commission*, 949 P.2d 577, 585 (Colo. 1997)). The preponderance standard requires the finder of fact to determine whether the existence of a contested fact is more probable than its non-existence. *Swain v. Colorado Department of Revenue*, 717 P.2d 507 (Colo. App. 1985). A party has met this burden of proof when the evidence, on the whole and however slightly, tips in favor of that party.

86. If an intervenor advocates that the Commission adopt its position (for example, if an intervenor requests that a condition be placed on the CPCN), that intervenor must meet the same preponderance of the evidence burden of proof with respect to its advocated position.

87. Each of the Applicants' four requests is a matter of the public interest. The Commission has an independent duty to determine matters that are within the public interest. *Caldwell v. Public Utilities Commission*, 692 P.2d 1085, 1089 (Colo. 1984). As a result, the Commission is not bound by the proposals made by the Parties. The Commission may establish conditions that the Commission deems necessary to assure that the final result is just, is reasonable, and is in the public interest *provided* the evidentiary record supports the result *and provided* the reasons for the choices made (*e.g.*, policy decisions) are stated.[70]

88. In reaching her decision in this matter, the ALJ is mindful of these principles and of the Commission's duty.

[70] Applicants take a somewhat different position with respect to the Commission's authority to establish conditions. This issue is discussed *infra*.

VI. FINDINGS

89. Applicant Public Service is a public utility that, as pertinent here, owns and operates facilities, including electric transmission lines, used in the provision of regulated electric service to its ratepayers in Colorado and of electric power to its wholesale customers. As a public utility, Public Service has a certificated service territory in Colorado; a portion of this certificated service territory is in the San Luis Valley. Public Service's transmission system interconnects with, and is operated in a coordinated fashion with, that of Tri-State.

90. The following are on file with the Commission: PSCo's Amended Articles of Incorporation; the names of its officers and directors; the names of its affiliated companies that conduct business in Colorado; and a copy of its most recent audited balance sheet, income statement, and statement of retained earnings. No party addressed, rebutted, or controverted these data; thus, the information is unrefuted.

91. Applicant Tri-State is a cooperatively-owned generation and transmission association that provides wholesale electric power to its 44 electric cooperative members (Tri-State Members); the Tri-State Members are located in Colorado, Nebraska, New Mexico, and Wyoming. Tri-State is owned by its 44 Members. As a wholesale provider, Tri-State has neither a certificated service territory nor retail electric customers in Colorado.

92. Tri-State owns interests in electric generating facilities in Arizona, Colorado, New Mexico, and Wyoming. Tri-State owns transmission facilities in Colorado, Nebraska, New Mexico, and Wyoming. Tri-State's transmission system interconnects with, and is operated in a coordinated fashion with, that of Public Service.

93. The following are provided in Tri-State's Application (Hearing Exhibit No. 1): Tri-State's Articles of Incorporation, including all amendments (*id*. at Exhibit F); the names and

addresses of Tri-State Members (*id*. at Exhibit H) and a map showing the service territory of each Tri-State Member (*id*. at Exhibit I); the names of Tri-State's officers and directors (*id*. at Exhibit G); and a copy of Tri-State's [Rural Utilities Service] Form 12 Reports for Calendar Year 2008 (*id*. at Exhibit D).[71] No party addressed, rebutted, or controverted these exhibits; thus, the information is unrefuted.

94. Intervenor Bar Nothing owns and uses an 82,000-acre contiguous, deeded property located in Huerfano and Pueblo Counties. That property is within or near one of the corridors identified by Applicants as a possible transmission corridor for the Project.[72]

95. Intervenor Blanca Ranch owns a large ranch in the San Luis Valley. The ranch straddles U.S. Highway 160 between Ft. Garland, Colorado and La Veta Pass. Blanca Ranch is contiguous to Intervenor Trinchera Ranch and is part of a single operating ranch that consists of approximately 172,000 acres. At the time of the February 2010 hearing, Colorado Open Lands was negotiating a conservation easement on Blanca Ranch. Blanca Ranch is located in or near a corridor identified by Applicants as a possible transmission corridor for the San Luis Valley Substation to Calumet Substation component of the Project.

[71] Exhibit D is an Operating Report - Financial and includes a balance sheet, a cash flow statement, and an operations statement.

[72] This intervenor did not present a witness and did not cross-examine a witness. It filed a Statement of Position following the February 2010 hearing.

96. Intervenor Blue Diamond is a developer that plans to construct 198 megawatts (MW) of new renewable wind energy generation that will interconnect at the San Luis Valley Substation.[73]

97. Intervenor Colorado Open Lands is a non-profit, charitable corporation. At present, Colorado Open Lands holds 234 conservation easements[74] in 36 Colorado counties;[75] these easements total 195,059 acres. As pertinent here, Colorado Open Lands holds a conservation easement on Intervenor Trinchera Ranch[76] and, at the time of the February 2010 hearing, was negotiating to obtain a conservation easement on Intervenor Blanca Ranch. Colorado Open Lands holds approximately 20 conservation easements that are located within the Project Study Area.

98. Intervenor CSU is an enterprise of the City of Colorado Springs, Colorado. CSU provides retail electric service to customers and operates high-voltage transmission facilities that are interconnected with Applicants' transmission facilities.[77]

---

[73] This intervenor did not participate in the hearing, did not present a witness, did not cross-examine a witness, and did not file a post-hearing statement of position. Consequently, this recommended decision does not refer to this intervenor further.

The ALJ notes that, in its Response to SOP at 6, Tri-State states that Blue Diamond's support for the Project "is evident from its earlier filings" in this proceeding. Because Blue Diamond did not participate in this proceeding and did not develop its position during the course of this proceeding, the ALJ declines to draw the inference that Blue Diamond supports the Project.

[74] Unless the context indicates otherwise, as used in this Decision, the term "conservation easement" means "conservation easement in gross," as that term is defined in § 38-30.5-102, C.R.S.

[75] Hearing Exhibit No. 82 is a map that shows the location of the conservation easements held by Colorado Open Land.

[76] The Trinchera Ranch conservation easement is Hearing Exhibit No. 85.

[77] This intervenor did not participate in the hearing, did not present a witness, did not cross-examine a witness, and did not file a post-hearing statement of position.

The ALJ notes that, in its Response to SOP at 7, Tri-State states that CSU supports the Project and that CSU's stated concerns about adverse impacts on its system "will be further evaluated in the relevant studies to be conducted ... and appropriate mitigation measures will be addressed if needed." Because CSU did not participate in this proceeding and did not develop its position during the course of this proceeding, the ALJ declines to draw the inference that CSU supports the Project.

99. Intervenor GEO is a Colorado state office established pursuant to § 24-38.5-101(1), C.R.S. Its charge is as set out in § 24-38.5-102, C.R.S.

100. Intervenor Interwest is a Colorado-based trade association that represents renewable energy companies that seek, or that may seek, to provide Public Service with generation that would be served by the Project.

101. Intervenor La Veta owns property in Huerfano County and Pueblo County. That property is within or near one of the corridors identified by Applicants as a possible transmission corridor for the Project.[78]

102. Intervenor Majors Ranch owns property in Huerfano County. The property is a platted area consisting of approximately 20,000 acres that are situated between Highways 160 and 169 and on the west and east sides of County Road 520. The property is located within or near one of the corridors identified by Applicants as a possible transmission corridor for the Project.[79]

103. Intervenor OCC is a Colorado state agency established pursuant to § 40-6.5-102, C.R.S. Its charge is as set out in § 40-6.5-104, C.R.S.

104. Intervenor Oxy owns and operates the Sheep Mountain CO_2 Field located in Huerfano County. That property is within or near one of the corridors identified by Applicants as a possible transmission corridor for the Project. In addition, Oxy owns and operates a 35-mile

[78] This intervenor did not participate in the hearing, did not present a witness, did not cross-examine a witness, and did not file a post-hearing statement of position. Consequently, this recommended decision does not refer to this intervenor further.

[79] This intervenor did not present a witness, did not cross-examine a witness, and did not file a post-hearing statement of position. Consequently, this recommended decision does not refer to this intervenor further.

long 115 kilovolt (kV) transmission line that runs from the Walsenburg Substation north to the site of the proposed Calumet Substation and then west toward Sheep Mountain.[80]

105. Intervenor Pole Canyon is a corporation that has secured, or is in the process of securing, land use permits and rights to a transmission corridor between the proposed Calumet Substation and the Comanche Substation.

106. Intervenor Ranchview owns property in Huerfano County. That property is within or near one of the corridors identified by Applicants as a possible transmission corridor for the Project.[81]

107. Intervenor Staff is litigation Staff of the Commission as identified in the Rule 4 CCR 723-1-1007(a) notices filed in this proceeding.

108. Intervenor Trinchera Ranch is a large ranch located on the south side of U.S. Highway 160. Trinchera Ranch is contiguous to Intervenor Blanca Ranch and is part of a single operating ranch that consists of approximately 172,000 acres. Colorado Open Lands owns a conservation easement on Trinchera Ranch. Trinchera Ranch is located in or near a corridor identified by Applicants as a possible transmission corridor for the San Luis Valley Substation to Calumet Substation component of the Project.

109. Intervenor Anthony Velarde and Intervenor Ron Velarde own property in Costilla

[80] This intervenor did not participate in the hearing, did not present a witness, did not cross-examine a witness, and did not file a post-hearing statement of position. Consequently, this recommended decision does not refer to this intervenor further.

[81] This intervenor did not participate in the hearing, did not present a witness, did not cross-examine a witness, and did not file a post-hearing statement of position. Consequently, this recommended decision does not refer to this intervenor further.

County and Huerfano County. The property is within or near one of the corridors identified by Applicants as a possible transmission corridor for the Project.[82]

110. Intervenor WRA is a regional environmental law and policy center that serves the States within the Interior West. It has members who live in Colorado and are retail customers of Public Service, and it has members who live in Colorado and are retail customers of Tri-State Members.

111. The active Parties in this proceeding are: Applicants, Bar Nothing, Colorado Open Lands, GEO, Interwest, OCC, Pole Canyon, Staff, Trinchera Ranch, the Velardes, and WRA. Unless the context indicates otherwise, reference in the remainder of this Decision to the Parties is to these active Parties.

112. Additional findings of fact are contained in the remainder of the Decision.

113. Any issue raised or argued by the Parties that is not specifically addressed in this Decision was considered and rejected.

VII. CERTIFICATES OF PUBLIC CONVENIENCE AND NECESSITY

A. History of the Development of the Proposed San Luis Valley-Calumet-Comanche Transmission Lines and of the Proposed Calumet-Walsenburg Transmission Line.

114. The facts contained in this discussion are not disputed.

115. Tri-State is owned by, and provides electric service to, its 44 Members.[83] It is required to meet federally-mandated electric reliability standards that address bulk transmission

[82] Intervenor Ron Velarde provided testimony on behalf of both Anthony Velarde and Ron Velarde. Consequently, unless the context indicates otherwise, reference in this Decision to Ron Velarde is to both Anthony and Ron Velarde.

[83] These Members, which are electric distribution cooperatives and public power districts, provide retail electric service to their end-use customers.

planning, operations, and maintenance. The Tri-State Members and Tri-State customers expect Tri-State efficiently to provide them with economical and reliable electric power.

116. Public Service is required to meet federally-mandated electric reliability standards that address bulk transmission planning, operations, and maintenance. Public Service's ratepayers and wholesale customers expect Public Service efficiently to provide them with reliable electric power.

1. San Luis Valley-Calumet-Comanche Transmission.

117. Two Tri-State Members are certificated to provide electric service in the San Luis Valley: the San Luis Valley Rural Electric Cooperative and the San Isabel Electric Association. In addition, Public Service provides electric service in the San Luis Valley.

118. The San Luis Valley electric load[84] is served by a 230kV transmission line and a 115kV transmission line. The 230kV transmission line connects the Poncha Substation and the San Luis Valley Substation, is a radial line (*i.e.*, delivers power into the San Luis Valley from only one source: Poncha Substation), and is jointly owned by Public Service and Tri-State. The 115kV transmission line connects the Poncha Junction Substation and the San Luis Valley Substation, is a radial line (*i.e.*, delivers power into the San Luis Valley from only one source: Poncha Junction Substation), and is owned by Public Service. The two transmission lines run parallel for most of the approximately 60 miles between the Poncha area and the San Luis Valley Substation. The Poncha Substation and the Poncha Junction Substation are located near Salida, Colorado; and the San Luis Valley Substation is located near Alamosa, Colorado.[85]

[84] The San Luis Valley electric load is created by the customer demand of the three retail serving entities.

[85] This Decision sometimes refers to these two transmission lines as the San Luis Valley-Poncha lines or as the San Luis Valley-Poncha transmission.

119. The current transmission into the San Luis Valley is of concern to Tri-State and affects its ability to provide reliable electric service to its Members in the San Luis Valley.[86] When the jointly-owned 230kV line trips off, Tri-State must shed load because it has no transmission rights on PSCo's 115kV line.

120. In May, 1997, participants (through Tri-State) issued their San Luis Valley High Voltage System Study Report (1997 Study), a technical study that assessed the adequacy and capability of the two San Luis Valley-Poncha lines reliably to serve electric loads in the San Luis Valley.[87] The study participants were Public Service, Tri-State, the Rocky Mountain Region of Western Area Power Administration (WAPA),[88] and San Luis Valley Rural Electric Cooperative. The 1997 Study was initiated within the Colorado Coordinated Planning Group. In accordance with the Colorado Coordinated Planning Group's procedures, participation was open to all interested parties.

121. The participants conducted a number of studies and analyses, including power flow studies and contingency studies.[89] The participants used a multi-step process to determine their preferred solution. First, the participants performed analyses to identify the critical contingencies or conditions (*i.e.*, those that caused the transmission system to violate applicable reliability criteria). As a result of those analyses, the participants identified 14 critical

[86] Public Service also has reliability issues in the San Luis Valley.

[87] The 1997 Study is Exhibit JRD-6 of Hearing Exhibit No. 33.

[88] WAPA is a federal power marketing agency that owns and operates high-voltage transmission and other facilities in Colorado. WAPA serves no load in the San Luis Valley but has an ownership interest in the Poncha Substation. WAPA owns and operates the Poncha-West Canon-Midway transmission line.

[89] Powerflow studies are used by electric utilities to identify and to investigate, *inter alia*, the need for, whether to undertake, and the impact of, building a transmission project. Powerflow studies provide information such as (a) the impact of proposed transmission on the investigating utility's transmission system and on the systems of other utilities; (b) where the power will flow; (c) what transmission system upgrades and generation additions will be necessary to increase the total transfer capability of a transmission path; and (d) what will occur in the event of an unplanned forced outage.

contingencies. Second, the participants identified 19 alternative solutions that had the potential to address the 14 critical contingencies. Third, to identify which of the 19 alternative solutions were feasible, the participants conducted technical analyses (*e.g.*, power flow studies).[90] Fourth, when two or more feasible alternative solutions were identified, the participants performed an economic (*i.e.*, a cost) analysis comparing those feasible alternative solutions. The cost analyses used the single-entity planning concept.[91] Fifth, based on the economic analysis results, feasible alternative solutions were retained for further consideration.[92] Sixth and finally, the participants selected the preferred solution from among those retained feasible alternative solutions.

122. The 1997 Study found that the San Luis Valley High Voltage System is influenced by the San Luis Valley load level, the San Luis Valley load power factors, and the San Luis Valley generation level. The 1997 Study found that the level of TOT5[93] power transfers does not affect the ability of the San Luis Valley High Voltage System to serve loads.

123. The 1997 Study concluded that the existing transmission system was inadequate to support either the San Luis Valley peak loads projected to occur in 2006 or the 1995 San Luis Valley coincident peak loads[94] during North American Electric Reliability Corporation (NERC)-defined N-1 conditions.[95] The 1997 Study also concluded that the system was at risk for voltage

[90] The participants did not study further any solution determined to be infeasible.

[91] The single-entity planning concept develops costs assuming that the participants are one entity.

[92] At least five feasible alternative solutions were retained after the economic analysis.

[93] TOT is total of the transmission. Hearing Exhibit No. 130 is a map of the TOTs in Colorado and shows the transmission lines (and the size of each line) that make up each TOT. TOT5 is "a monitored path of transmission lines and transformers that transfer power from the west slope of Colorado, where large generation resources are located, to the east slope of Colorado, where most of the state's loads exist." Hearing Exhibit No. 33 at Exhibit JRD-6 at 22. The principal power flow across TOT5 is west to east, and the transfer capability limit of TOT5 is 1,680 MW from west to east. Hearing Exhibit No. 130.

[94] The 1997 Study used the 1995 (summer) coincident peak load in the San Luis Valley of 135 MW, used the projected 2006 (summer) coincident peak load of 144 MW and used a 2006 light load of 20 MW.

[95] An N-1 condition occurs when there is a single unplanned forced outage on the system. Hearing Exhibit No. 36 at Exhibit JRD-18 contains the NERC Standard for System Performance Following Loss of a Single Bulk

collapse,[96] and the possibility of partial or total black-out, throughout the entire region south of the Poncha Substation if an outage of the San Luis Valley-Poncha 230kV line should occur when the total San Luis Valley load exceeded 65 MW.[97] The 1997 Study concluded that bringing the two Alamosa Terminal generating units (36 MW) on-line would mitigate or reduce the severity of some N-1 contingencies but was insufficient to satisfy all reliability criteria during N-1 conditions. Consequently, the 1997 Study determined that upgrades to the San Luis Valley transmission system should be made and, using the process described above, identified the preferred solution.

124. In the 1997 Study, as pertinent here, the participants' preferred solution was to construct a new single-circuit 230kV transmission line between the San Luis Valley Substation and the Walsenburg Substation;[98] to upgrade the San Luis Valley Substation with a second 230/115kV transformer; and to upgrade the Walsenburg Substation with a second 230/115kV transformer. The estimated cost was $13.9 million (1997$). The Study determined that "[t]hese additions are required as soon as possible, and the costs should be shared by" Public Service and Tri-State. Hearing Exhibit No. 33 at Exhibit JRD-6 at 1.

Electric System Element (Category B) (Standard TPL-002-0a) and the NERC Standard for System Performance Following Loss of Two or More Bulk Electric System Elements (Category C) (Standard TPL-003-0a).

[96] Voltage collapse defines the ultimate or maximum capability of the system. When a voltage collapse occurs, the electric utility cannot deliver electricity to its customers in the affected area.

[97] In 1995, the San Luis Valley's total load exceeded 65 MW approximately 15 percent of the time. The critical load exceedance is 101 MW with both Alamosa Terminal generators on-line. However, as the Alamosa Terminal generators are typically off-line and cannot be brought quickly on-line, the 101 MW load is not the critical load. The 65 MW load is the critical load exceedance factor, a finding also made by the 1997 Study participants.

[98] This line would create a 230kV loop into the San Luis Valley Substation. A looped system is one in which there is an independent, secondary source of power that can be used as a backup in the event that an outage prevents the use of the primary source. The addition of the San Luis Valley-Walsenburg 230kV line would supply power to the San Luis Valley from the Walsenburg Substation in the event of an outage of the San Luis Valley-Poncha 230kV line.

125. In Decision No. C03-0707, the Commission determined that Tri-State needed a CPCN to construct the San Luis Valley-Walsenburg 230kV Transmission Line, which Tri-State estimated would be in service in early 2010. Tri-State did not seek a CPCN for that project.

126. In January, 2004, Tri-State issued its PV (Power Voltage) Study Report on the San Luis Valley Substation Second 230kV Source (2004 Study).[99] Tri-State conducted the 2004 Study and was the only participant.

127. The 2004 Study built on the results of the 1997 Study. The 2004 Study reported that the San Luis Valley peak loads were approaching 150 MW. It also reported that the electric load in the San Luis Valley exceeded 65 MW approximately 20 percent of the time;[100] this is an increase over the 15 percent reported in the 1997 Study.

128. The 2004 Study sought "to investigate an exhaustive set of 230kV transmission options" into the San Luis Valley. Hearing Exhibit No. 33 at Exhibit JRD-7 at 2. It states that it

> supplements the 1997 study by determining the point-of-collapse for several other 230kV alternatives into the San Luis Valley. The results of this study indicate that the San Luis Valley-Walsenburg 230kV line is a superior option to any of the other alternatives considered. There are other acceptable alternatives to provide a second source of power into the valley, however, the San Luis Valley-Walsenburg option is the best value.
>
> * * *
>
> Recent system outages have accelerated the need for a second source into the San Luis Valley substation. The 1997 [Study] was not an exhaustive investigation of 230kV options. This [2004 Study] provides a *comprehensive investigation of all 230kV alternatives for providing a second 230kV source into San Luis Valley substation. If a better technical solution for improving load*

[99] The 2004 Study is Exhibit JRD-7 of Hearing Exhibit No. 33.

[100] As discussed above, the risk of voltage collapse exists if an outage of the San Luis Valley-Poncha 230kV line occurs when the total San Luis Valley load exceeds 65 MW.

> *serving capability in the valley than the San Luis Valley-Walsenburg 230kV line exists, it will be identified through this study*.

Id. (emphasis supplied).

129. The 2004 Study began with a base case that included the existing transmission system and an additional 230kV line that was to be in service before the construction of the second line into San Luis Valley Substation.[101] Tri-State modeled PV curves[102] for normal system condition and for the outage of the San Luis Valley-Poncha 230-kV line.[103]

130. Tri-State identified potential 230kV interconnections in every direction, including north and northeast, from the San Luis Valley Substation. Using modeling, Tri-State evaluated each of the 20 identified potential interconnections for its point-of-collapse in system normal condition and during an outage of the San Luis Valley-Poncha 230kV line (*i.e.*, the critical N-1 condition). In addition, Tri-State did a cost estimate for each of the 20 studied alternatives. Table 2 of the 2004 Study shows the alternatives ranked by a combination of their ability to meet the San Luis Valley reliability needs and their cost per MW of incremental increase during the critical single contingency. Hearing Exhibit No. 33 at Exhibit JRD-7 at 7.

131. Based on the technical results and the cost analysis results, Tri-State concluded that the San Luis Valley-Walsenburg 230kV transmission line recommended by the 1997 Study participants was the best option to improve load serving capability in the San Luis Valley. Tri-State based this conclusion on its determination that the line was

[101] In transmission studies, it is the usual practice to include in a base case the facilities that are expected to be in service when the transmission facilities being studied are added to the system. The base case then reflects the system as the utility expects the system to operate when the transmission line being studied is constructed and in service, and the utility can evaluate the effects of adding the transmission being studied.

[102] PV curves "denote the cause-and-effect relationship between the loading of a system and the resultant voltage profile on that system. The stable region of a PV curve is where the region's voltage trend[s] lower for increased power loading." Hearing Exhibit No. 33 at Exhibit JRD-7 at 3 & n.6.

[103] This outage is the critical contingency in the San Luis Valley.

> the best value for meeting the objectives of the project [*i.e.*, an additional 230kV transmission line into the San Luis Valley], requiring an investment of $234,000 per MW of increased single contingency load serving capability. It provides an incremental single contingency load serving capability of 206 MW, third best of all the alternative considered, and the cost of the project is estimated to be $33.6 million, lowest of all the alternatives that meet the technical objectives of the project. Further, the San Luis Valley-Walsenburg 230kV line will strengthen the Walsenburg substation, additionally supporting the Northeast portion of New Mexico, improving the performance of the area when [a] Comanche-Walsenburg 230kV outage occurs.

Hearing Exhibit No. 33 at Exhibit JRD-7 at 6. Tri-State selected the San Luis Valley-Walsenburg alternative because it both met the reliability needs in the San Luis Valley during the critical N-1 contingency and strengthened another portion of Tri-State's transmission system.

132. Among the potential interconnections evaluated and ranked in the 2004 Study, as pertinent here, was a Poncha-Sargent-San Luis Valley 230kV transmission line.[104] This alternative met the reliability needs and ranked sixth among the studied alternatives.

133. As compared to the San Luis Valley-Walsenburg alternative, however, the Poncha-Sargent-San Luis Valley 230kV alternative (a) had lower MW transfer capability under both system normal condition and the outage of San Luis Valley-Poncha 230kV condition; (b) had a lower incremental increase in MW during single contingency conditions; and (c) had a higher incremental cost per MW of incremental increase in single contingency capability. In every category evaluated, the San Luis Valley-Walsenburg 230kV option was superior to the Poncha-Sargent-San Luis Valley 230kV option. In addition, given its location, the Poncha-Sargent-San Luis Valley option would not interconnect with the Walsenburg Substation and,

[104] This alternative is similar to, if not the same as, at least one of the alternatives presented by Trinchera Ranch. *See* discussion, *infra*. As shown on the map in Hearing Exhibit No. 33 at Exhibit JRD-7 and as discussed in the 2004 Study, the Poncha-Sargent-San Luis Valley 230kV transmission line option was only one of several alternative 230kV transmission lines studied that went north or northeast out of the San Luis Valley Substation.

thus, would not provide the additional benefit of strengthening another portion of the Tri-State transmission system.

134. For large electric facilities, such as transmission lines, Tri-State applies to the U.S. Department of Agriculture's Rural Utilities Service (RUS) for funding.[105] As part of the loan process, RUS requires an applicant to prepare a borrower's environmental report that is developed in accordance with the policy and procedural requirements in 7 *Code of Federal Regulations* (CFR) Part 1794.[106] In 7 CFR § 1794.51(c), RUS requires a borrower to submit an Alternative Evaluation Study[107] and, for transmission lines, a Macro Corridor Study.[108]

135. Tri-State applied for RUS funding to construct the single-circuit San Luis Valley-Walsenburg 230kV transmission line and related system upgrades.[109] In support of its loan application, Tri-State provided its June 2008 Alternative Evaluation and Macro Corridor Study for the San Luis Valley Electric System Improvement Project (2008 Study).[110] Tri-State was the only participant in the 2008 Study.

136. The Alternative Evaluation portion of the 2008 Study built on the results of the

[105] The regulations governing loans under the RUS electric program are found at 7 *Code of Federal Regulations* Part 1710.

[106] As stated in 7 CFR 1794.1, part 1794 "contains the policies and procedures of the [RUS] for implementing the requirements of the National Environmental Policy Act of 1969 (NEPA), as amended (42 U.S.C. 4321-4346); the Council on Environmental Quality Regulations for Implementing the Procedural Requirements of NEPA (40 CFR parts 1500 through 1508); and certain related Federal environmental laws, statutes, regulations, and Executive Orders (EOs) that apply to RUS programs and administrative actions."

[107] The Alternative Evaluation describes the purpose and need for the facilities for which the loan is sought, describes the evaluation of the alternatives considered, and explains the utility's reasons for selecting the facilities for which the loan is sought.

[108] The Macro Corridor Study identifies and evaluates potential corridor alternatives for the transmission line for which the loan is sought.

[109] This is also referred to as the San Luis Valley Electric System Improvement Project. For ease of reference and recognizing that there are several upgrade elements included in addition to the transmission line itself, this Decision refers to this project as the San Luis Valley-Walsenburg 230kV transmission line.

[110] The 2008 Study is Exhibit MJM-2 of Hearing Exhibit No. 16. The Alternative Evaluation is § 3, and the Macro Corridor Study is § 4. Tri-State began the Macro Corridor Study between June 2007 and early 2008.

1997 Study and the 2004 Study. The 2008 Study reported that, based on the 2007 combined electric load of Public Service and two Tri-State Members, the San Luis Valley peak loads exceeded 120 MW. It also reported that the load in the San Luis Valley exceeded 65 MW approximately 25 percent of the time during 2007;[111] this is an increase over the two previous studies.

137. In the 2008 Study, Tri-State identified improving the reliability of electric service in the San Luis Valley as the primary purpose of the San Luis Valley-Walsenburg 230kV transmission line. Tri-State explained that the

> purpose ... is related to *both the capacity* of the existing high voltage system *and the radial nature of the existing transmission lines*.
>
> * * *
>
> The two existing lines [*i.e.*, the 230kV line and the 115kV line into San Luis Valley Substation] provide power from essentially the same location (Poncha) and are essentially adjacent and "radial." As a result, these two lines do not provide the reliability that would be achieved by supplying power from a second or alternative power supply source. A new line from a second source would provide redundant service (rather than radial), thus improving the dependability and reliability of the electrical service.

Hearing Exhibit No. 16 at Exhibit MJM-2 at 1-2 (emphasis supplied). Tri-State also identified these additional benefits from construction of the San Luis Valley-Walsenburg 230kV line: (a) improved transmission support for the surrounding region, and (b) transmission capacity for development of renewable energy generation in the San Luis Valley. *Id*. at 1-4.

138. With respect to the need for transmission to support development of renewable generation resources, Tri-State reported in the 2008 Study that

> several renewable energy projects have been proposed in the San Luis Valley; the transmission system in this area will likely be used to transmit this "renewable" energy to other customers in and around Colorado. [San Luis Valley Rural

[111] As discussed above, the risk of voltage collapse exists if an outage of the San Luis Valley-Poncha 230kV line occurs when the total San Luis Valley load exceeds 65 MW.

> Electric Cooperative] and Tri-State have been approached by several renewable resource developers that have expressed interest in developing substantial amounts of renewable energy projects in the San Luis Valley. For example, solar energy projects have been discussed by Sun Edison, SkyFuel Inc., and others. ... In addition, there are geothermal resources in the valley that are being investigated, and biomass projects have also been proposed.

Hearing Exhibit No. 16 at Exhibit MJM-2 at 1-4. Tri-State went on to discuss its January 2008 Request for Proposals (RFPs) for renewable resources; the impact of Senate Bill 07-100 on the need for transmission capacity;[112] Public Service's designation of the San Luis Valley as an Energy Resource Zone; and the bases for Tri-State's opinion that there would be a need for "new transmission capacity from the San Luis Valley on the order of 2,000 MW by 2012." *Id.*

139. To address the San Luis Valley reliability issue created by the single contingency outage of the San Luis Valley-Poncha 230kV transmission line, the 2008 Study identified and studied four alternative approaches: (a) do nothing; (b) add generation capacity in the San Luis Valley; (c) reduce the peak energy demand; and (d) add transmission capacity into the San Luis Valley. For the reasons discussed in the 2008 Study, Tri-State determined that the most cost-effective and realistic solution was the addition of 230kV transmission capacity.

140. To determine which of the alternative 230kV transmission lines should be selected, Tri-State discussed the 230kV transmission line alternatives evaluated in the 2004 Study and selected five of those alternatives for a feasibility analysis. The feasibility analysis examined "how the lines would operate electrically based on the current power flows

[112] With reference to Senate Bill 07-100, Tri-State wrote: "It is quite clear from recent legislation in Colorado ... that new transmission capacity to serve areas with the potential for renewable energy development is necessary and is especially desired." Hearing Exhibit No. 16 at Exhibit MJM-2 at 1-4.

and [reviewed] the route for 'fatal flaws.'"[113] Hearing Exhibit No. 16 at Exhibit MJM-2 at 3-14. None of the alternatives evaluated contained a "fatal flaw," as defined by Tri-State in the Alternative Evaluation in the 2008 Study.

141. As relevant here, two of the alternatives selected for feasibility analysis were the San Luis Valley-Walsenburg 230kV line and the San Luis Valley-Poncha 230kV line.[114] With respect to the San Luis Valley-Poncha 230kV line, the Tri-State analysis revealed that the

> performance of the system electrically was similar for the interconnection points at Parlin, Monarch/Poncha, and Cotopaxi. Each of these interconnections [is] influenced by the overall power transfer capability across the total of the transmission (TOT-5) or WECC Path 39. The Curecanti-Poncha 230kV Transmission Line is 1 of 10 transmission lines that cross the Continental Divide and connect western Colorado to the Front Range. ... This path (TOT-5) is often heavily loaded with power flowing from the west to the east, and the power transfer capability of the path is limited thermally. The two existing lines currently serving the San Luis Valley interconnect to this line, and providing additional power or energy into the San Luis Valley from the Curecanti-Poncha Transmission Line would add complexity to the load flows and potentially affect the thermal limits of the lines. [Based on the foregoing, Tri-State concluded that] [*p*]*roviding power supply to the San Luis Valley from lines involved with TOT-5 is possible, but not preferred*.

Hearing Exhibit No. 16 at Exhibit MJM-2 at 3-15 (emphasis supplied).

142. Of the alternatives studied in the feasibility analysis, Tri-State determined that the San Luis Valley-Walsenburg 230kV line was the alternative that best met its needs. In making this determination, Tri-State relied on the reasons stated in the 2004 Study for selecting this alternative and then stated that, "[a]s an *additional benefit*, the [line] will provide a path to the north-south 'Front Range' transmission system that will increase the ability for energy projects

[113] The "fatal flaw" analysis included a review of the following factors that influence or may influence the routing of the transmission lines under review: land jurisdiction and ownership (principally federal and state ownership and lands with special designation or protection), natural resources (*e.g.*, wetlands, rivers, steep slopes), biological resources (principally wildlife habitat and potential conservation areas), cultural resources (*e.g.*, areas on the National Register of Historic Places), and land use (*e.g.*, proximity to airports, residential areas).

[114] In the feasibility study, the San Luis Valley-Poncha line is in the Monarch/Poncha alternative.

that are proposed in the San Luis Valley to provide renewable energy to major markets."[115] Hearing Exhibit No. 16 at Exhibit MJM-2 at 3-13 (emphasis supplied).

143. In its 2008 Alternative Evaluation, Tri-State considered underground construction of the single-circuit San Luis Valley-Walsenburg 230kV transmission line because underground construction "is often perceived as a way to accomplish the electrical objective of the project while minimizing visual impacts." Hearing Exhibit No. 16 at Exhibit MJM-2 at 3-16. Tri-State rejected this alternative, principally because the "costs for constructing 230kV underground transmission lines are approximately 10 times higher than an equivalent overhead line[, and the costs] could be even higher in mountainous terrain." *Id*. Tri-State also stated that (a) the duration of an outage on an underground line could be weeks because the failures are more difficult to locate than failures in an overhead line; and (b) the repair of an underground line must be done by skilled contract personnel, who may not be available, whereas Tri-State can quickly repair an overhead line with its maintenance crews using standard line materials. Finally, Tri-State stated that the environmental impacts of, and thus the siting considerations for, an underground transmission line differ significantly from, and are likely to be more long-lasting than, those of an overhead line.

144. Having determined that its preferred transmission line was the San Luis Valley to Walsenburg 230kV line, Tri-State performed its Macro Corridor Study and included it in the 2008 Study. Tri-State first identified the Study Area for 2008 Macro Corridor Study.[116] In that

[115] Generally speaking, the referenced Front Range transmission system is the high voltage transmission system between the Comanche Substation in Pueblo, Colorado and the Pawnee Substation in Brush**,** Colorado.

[116] The Study Area for the 2008 Macro Corridor Study is shown on the map in Hearing Exhibit No. 16 at Exhibit MJM-2 at Figure 2-1. It includes all, or a portion, of Alamosa, Conejos, Costilla, Huerfano, Las Animas, and Rio Grande Counties. The Study Area for the Project at issue in this proceeding is different; includes all, or a portion, of Alamosa, Costilla, Huerfano, and Pueblo Counties; and is shown on the map in Hearing Exhibit No. 17 at Exhibit NCK-3.

Macro Corridor Study, Tri-State identified and discussed the alternative transmission line corridors between the San Luis Valley Substation and the Walsenburg Substation. The resources and their location considered in the 2008 Macro Corridor Study are shown on the maps in Hearing Exhibit No. 16 at Exhibit MJM-2 at Appendix A.

145. After identifying the Study Area, Tri-State developed project opportunity and constraint criteria to be considered in identifying alternative transmission corridors for its preferred alternative.[117] Applying these criteria, Tri-State identified the preliminary alternative transmission corridors shown in Hearing Exhibit No. 16 at Exhibit MJM-2 at Figure 4-2. Each alternative corridor is approximately one mile wide, which allows for the incorporation of more than one project opportunity, the minimization of the use of avoidance areas, and the routing around exclusion areas to the extent possible.

146. Additional findings of fact are contained in the remainder of the Decision.

2. Walsenburg-Comanche Transmission.

147. Tri-State Members San Isabel Electric Association and Southwestern Electrical Cooperative provide electric service in southern Colorado, including portions of Huerfano, Las Animas, and Pueblo Counties. Tri-State Members Southwestern Electrical Cooperative and Springer Electric Cooperative provide electrical service in northern New Mexico.

148. In addition, Tri-State has a network customer (Public Service Company of New Mexico) with electric loads in northern New Mexico. Tri-State relies on a portion of Southwestern Electrical Cooperative's 69kV facilities to serve the Public Service Company of New Mexico loads.

[117] These are contained and described in Hearing Exhibit No. 16 at Exhibit MJM-2 at Table 4-1.

149. If a single outage event occurs on Tri-State's Comanche-Walsenburg 230kV transmission line, the West Station-Stem Beach-Walsenburg 115kV transmission line overloads. To stop the overload on that 115kV line, Tri-State uses a Remedial Action Scheme (RAS) that automatically opens (or trips) the Walsenburg-Gladstone 230kV transmission line and unloads (or mitigates) the overload on the West Station-Stem Beach-Walsenburg 115kV line. Tripping the Walsenburg-Gladstone 230kV line, however, reduces the load serving capability of the Springer-Gladstone-Clapham 115kV transmission line, which, in turn, requires Tri-State Members Southwestern Electrical Cooperative and Springer Electric Cooperative to shed load in northeastern New Mexico.

150. In 2006, Tri-State determined that these reliability issues needed to be addressed. After studies and analysis, Tri-State concluded that an additional transmission line, electrically parallel to the Comanche-Walsenburg 230kV transmission line, would address the reliability issue created by the West Station-Stem Beach-Walsenburg 115kV transmission line overloads; would eliminate the need for the RAS; and would improve system reliability for Tri-State Members San Isabel Electric Association, Southwestern Electrical Cooperative, and Springer Electric Cooperative and for Tri-State's network customer Public Service Company of New Mexico. Tri-State's proposal to meet these reliability objectives was a new Boone-Comanche-Stem Beach-Walsenburg 230kV transmission line.

151. In Decision No. C06-0761, the Commission determined that Tri-State needed a CPCN to construct the Boone-Comanche-Stem Beach-Walsenburg 230kV line, which Tri-State represented would be in service in early 2009. Tri-State did not seek a CPCN for that project.

152. In 2008, Tri-State finalized its Boone-Comanche-Stem Beach-Walsenburg 230kV Line Report. In that report, Tri-State studied and evaluated seven transmission line alternatives

and concluded that the Boone-Comanche-Stem Beach-Walsenburg 230kV line was its preferred solution for the identified reliability issues south of Pueblo, Colorado and in northern New Mexico. In addition, Tri-State found that the new 230kV line would eliminate the need for the RAS and would increase its system reliability in southern Colorado and northern New Mexico.

153. The proposed Boone-Comanche-Stem Beach-Walsenburg 230kV line provided some system benefits to both Public Service and Black Hills Energy as a result of the connection at Comanche. As neither of those utilities expressed an interest in the Boone-Comanche-Stem Beach-Walsenburg 230kV line, Tri-State alone developed this project.

154. Additional findings of fact are contained in the remainder of the Decision.

3. Creation and Studies of the Proposed Joint Project.

155. As a result of its participation in the 1997 Study that originally recommended that the line be built, Public Service has been aware of the proposed single-circuit 230kV San Luis Valley-Walsenburg transmission line since at least 1997. As a result of its participation in joint transmission planning forums and open stakeholder meetings, Public Service has been aware of Tri-State's proposed Boone-Comanche-Stem Beach-Walsenburg 230kV line since at least 2006.

156. In Senate Bill 07-91, the General Assembly created the Task Force on Renewable Resource Generation Development Areas (SB 91 Task Force) and, among other things, charged that Task Force with identifying Renewable Resource Generation Development Areas (GDAs)[118] and the potential for development of renewable resources. In December 2007, the SB 91 Task

[118] The SB 91 Task Force defined a GDA as "a concentration of renewable resources within a specific geographic region that provides a minimum of 1000 [MW] of developable electric generating capacity that could connect to an existing or new high voltage transmission line." Hearing Exhibit No. 106 at 4.

Force issued its report entitled Connecting Colorado's Renewable Resources to the Markets (SB 91 Task Force Report).[119]

157. As pertinent to this proceeding, the National Renewable Energy Laboratory (NREL) conducted an analysis for the SB 91 Task Force. As a result of that analysis, NREL identified (a) a technical potential of 240,000 MW for concentrating solar power (CSP) development in the San Luis Valley;[120] (b) a technical potential of 35,000 MW for CSP in the area south and southeast of Pueblo;[121] and (c) a technical potential for 20,000 MW of wind in the Walsenburg area. Based on NREL's findings, the SB 91 Task Force identified wind GDAs in the Front Range, the Eastern Plains, and the Walsenburg area. In addition, the SB 91 Task Force identified solar GDAs in the San Luis Valley and south and southeast of Pueblo.

158. As pertinent to this proceeding, a critical conclusion of the SB 91 Task Force was: the foremost challenge to development of renewable resources is transmission constraints. This includes the inability of utilities to construct high voltage transmission lines, which is a five-to-seven year process, within a timeframe that correlates to the much shorter two-to-three year construction period for renewable resources.

159. In March 2007, the General Assembly passed Senate Bill 07-100 (SB07-100).[122] Pursuant to that legislation, Public Service identified Energy Resource Zone[123] 4 (Zone 4 or

[119] The SB 91 Task Force Report is Hearing Exhibit No. 106.

[120] NREL reported "in the San Luis Valley there are 2,400 potential sites for a 100 MW CSP plant, with likely costs of between $181 and $202 per MWh[.]" Hearing Exhibit No. 106 at 64. These estimated costs do not include the cost of transmission.

[121] NREL reported "in the area south and east of Pueblo there are potentially 350 sites for a 100 MW CSP plant, with likely costs of between $190 and $211 per MWh[.]" Hearing Exhibit No. 106 at 64. These estimated costs do not include the cost of transmission.

[122] SB07-100 is codified primarily at §§ 40-2-126 and 40-5-101(4), C.R.S.

[123] An ERZ is "a geographic area in which transmission constraints hinder the delivery of electricity to Colorado consumers, the development of new electric generation facilities to serve Colorado consumers, or both." Section 40-2-126(1), C.R.S.

ERZ 4) (generally, the area located in the San Luis Valley) and Energy Resource Zone 5 (Zone 5 or ERZ 5) (generally, the area south and southeast of Pueblo and Walsenburg) as areas that contain developable renewable resource generation (solar in Zone 4 and wind and solar in Zone 5) and that are transmission-constrained.

160. In 2008, Public Service and Tri-State discussed Public Service's participation in both the San Luis Valley-Walsenburg project and the Walsenburg-Comanche project. As a result of the discussions, Public Service and Tri-State agreed to meld Tri-State's two proposed transmission projects into one jointly-owned, larger transmission project. As stated in Tri-State's January 31, 2009 project filing with RUS,[124] the larger transmission project included a "second circuit of the 230kV San Luis Valley-Calumet line [that] was added with [Public Service's] participation, *further increasing reliability* in the San Luis Valley for both Tri-State and [Public Service], *while also allowing the potential development of generation resources in the San Luis Valley and Walsenburg areas*." Hearing Exhibit No. 44 at 2 (emphasis supplied). Tri-State also stated that the Calumet Substation was a new component of the overall project and was necessary because the existing Walsenburg Substation is constricted by its physical layout and cannot be expanded easily to accommodate the number of terminations needed for the larger transmission project. The new substation would provide additional interconnection between Walsenburg and Comanche, which would both improve reliability and reduce transmission constraints in southern Colorado. Finally, Tri-State stated that the single-circuit 230kV Boone-Comanche-Stem Beach-Walsenburg line was replaced with the double-circuit 345kV Calumet-Comanche line and with the single-circuit 230kV Calumet-Walsenburg line, both of which would improve reliability and reduce transmission constraints in southern Colorado.

[124] This is Hearing Exhibit No. 44.

161. In May 2009, Public Service and Tri-State issued their San Luis Valley-Calumet-Comanche Transmission Project Study Report (2009 Study).[125] Public Service and Tri-State conducted this Study within the open discussion and joint transmission planning efforts of the Colorado Coordinated Planning Group and its SB07-100 Subcommittee.[126] The 2009 Study was based on the work done in the 1997 Study, the 2004 Study, the 2008 Study, and the Boone-Comanche-Stem Beach-Walsenburg 230kV Line Report. The 2009 Study reported the analyses done with respect to the Project as proposed and four alternative transmission lines; each of the alternatives began at San Luis Valley and went east toward Walsenburg and Comanche.

162. To be consistent with other planning studies prepared by the Colorado Long Range Transmission Planning Group,[127] and because PSCo and Tri-State were conducting technical studies for high voltage transmission additions between Lamar and Comanche,[128] the 2009 Study modeled a 345kV transmission line from Lamar, Colorado to Comanche. Lamar is located in southeast Colorado within Energy Resource Zone 3 (Zone 3). As a result of that modeling, the Study states that it "is important to note that if a high voltage line path between Zone 3 and Comanche is established, any increase in generation in Zone 3 may adversely impact the simultaneous level of generation in Zones 4 and 5." Hearing Exhibit No. 10 at Exhibit TWG-1 at 6. This means that the Project's simultaneous transfer capability as stated in the 2009 Study

[125] The 2009 Study is Exhibit TWG-1 of Hearing Exhibit No. 10.

[126] The SB07-100 Subcommittee coordinates its joint planning activities with the Colorado Long Range Transmission Planning Group, another subcommittee of the Colorado Coordinated Planning Group.

[127] Hearing Exhibit No. 49 includes the 2008-2018 Transmission Planning Study prepared by the Colorado Long Range Transmission Planning Group and issued in January 2009. In one planning scenario, that Planning Study shows a 500/345kV transmission line from Energy Center (located near Lamar, Colorado in Zone 3) to Comanche. A similar line is shown in Hearing Exhibit No. 67, which is the November 2009 PSCo 10-Year Plan/20-Year Scenario Assessment for transmission in Colorado. *See also* Hearing Exhibit No. 9 at Exhibit GMS-9 (line drawing showing Project in relation to Colorado's 2014 transmission system and showing 230kV transmission line between Lamar and Comanche).

[128] This is discussed in Hearing Exhibit No. 1 at Exhibit A at 1.

may be reduced if generation from Zone 3 is injected at Comanche. The extent of the potential reduction in the Project's transfer capability is unclear.

163. The 2009 Study analyzed injection of generation at San Luis Valley Substation and at Calumet Substation to determine the export capability of those injection points. The 2009 Study modeled and presented the results for three conditions: energy injection at San Luis Valley Substation only, energy injection at Calumet Substation only, and simultaneous energy injection at San Luis Valley Substation and Calumet Substation. Simultaneous energy injection is the condition most likely to occur; is the condition that meets the stated objective of moving renewable energy from both the San Luis Valley and the area south and southeast of Pueblo and Walsenburg; and, thus, is most representative of the Project when it is in service. In the 2009 Study, Public Service and Tri-State focused on simultaneous generation injection (or simultaneous generation).

164. After modeling a benchmark case, Public Service and Tri-State identified and modeled five alternative transmission projects and evaluated the ability of each alternative to meet Applicants' requirements. For the reasons stated in the 2009 Study, Public Service and Tri-State determined that three of the transmission alternatives did not meet their requirements or were less desirable than the Project.

165. Two alternatives met Applicants' requirements and were technically feasible: the Project as proposed (*i.e.*, double-circuit 230kV transmission in the San Luis Valley-Calumet component)[129] and the Project with the San Luis Valley-Calumet component constructed as double-circuit 345kV transmission.[130] The 2009 Study concluded that, for both alternatives, the

[129] This is Alternative 1 in the 2009 Study.

[130] This is Alternative 5 in the 2009 Study.

simultaneous generation limit was approximately 1,500 MW due to contingency issues (or limiting elements) outside the region that would have to be addressed to increase the simultaneous generation limit beyond 1,500 MW. The 2009 Study found that Alternative 5 would cost approximately $54 million more than the Project and, due to limiting elements, would accommodate no additional simultaneous generation.

166. Notwithstanding the similar simultaneous generation injection limits, the 2009 Study recommended the Project. It did not recommend Alternative 5 because that "Alternative would require more right-of-way and larger structures, each of which affect the land use and degrade the aesthetic impacts of the project. It may be more cost effective to spend the $54 million on transmission for other [Energy Resource] Zones, or to alleviate future constraints in [Energy Resource] Zones 4 and 5." Hearing Exhibit No. 10 at Exhibit TWG-1 at 29.

167. In June, 2009, Tri-State submitted to RUS an Alternative Evaluation (2009 AE) for the Project.[131] Tri-State prepared this document and submitted it in support of Tri-State's request for funding for the Project. The 2009 AE built on the work done for, and updated the information in, the 2009 Study and the Alternative Evaluation contained in the 2008 Study.

168. The 2009 AE results for the Project were the same as the 2008 Study and 2009 Study results. For the conditions modeled, the San Luis Valley-Calumet lines were loaded at approximately 14 percent of their thermal rating. With respect to the Project, the 2009 AE concluded that, "to fully utilize the potential transfer capability afforded by the San Luis Valley-Calumet double-circuit 230kV line, significant unplanned transmission additions in the San Luis Valley, Pueblo, Colorado Springs, Denver metropolitan area, and western Colorado areas are

[131] The 2009 AE is Hearing Exhibit No. 42. Unlike the 2008 Study, there is no Macro Corridor Study in this document.

required." 2009 AE (Hearing Exhibit No. 42) at 3-6. The referenced transmission additions are not identified.

169. In the 2009 AE, Tri-State estimated that Alternative 5 (double-circuit 345kV San Luis Valley-Calumet component) would cost approximately $54 million more than the Project. The 2009 AE results for Alterative 5 were the same as the 2009 Study results. For the conditions modeled, the Alternative 5 lines were loaded at approximately seven percent of their thermal rating. With respect to Alternative 5, the 2009 AE concluded that, "[s]imilar to [the Project], in order to utilize the potential transfer capability afforded by the San Luis Valley-Calumet double-circuit 345kV line, significant unplanned transmission additions in the San Luis Valley, Pueblo, Colorado Springs, Denver metropolitan area, and western Colorado areas are required." Hearing Exhibit No. 42 at 3-10. The referenced transmission additions are not identified.

170. The 2009 AE discussed the impact of renewable resource generation in the San Luis Valley and the Calumet area on Alternative 5. It stated that, due to the intermittent nature of some of those resources and their

> minimal voltage control capacity[, ...] the 345kV option will introduce operational issues such as high voltage. Studies indicate approximately 80 MVAR of switched reactors at both San Luis Valley and Calumet Substation are required to maintain voltage within limits for the 345kV option. The addition of reactors increases initial capital costs, operational complexity, and maintenance cost, and could lead to an overall decrement in system availability.

Hearing Exhibit No. 42 at 3-12. In addition, Tri-State determined that line losses were not a defining condition as between the Project and Alternative 5. *Id*.

171. The 2009 AE recommended the Project, as had the 2009 Study and the Alternative Evaluation contained in the 2008 Study.

172. At one end of PSCo's existing 115kV transmission line into the San Luis Valley is the Poncha Junction Substation. Public Service intends to upgrade that substation to add a 230/115kV transformer that will connect PSCo's 115kV bus to the WAPA 230kV bus. The effect of this substation upgrade, which will be in service in 2013, was not evaluated in the above-discussed power flow studies of the Project.

173. To evaluate the planned upgrade's effects under both summer peak load condition and light load condition, a power flow study was done; the results are presented in the San Luis Valley-Calumet-Comanche Transmission Project Summer Peak and Light Load Power Flow Study Results with the Poncha 230/115kV Auto-Transformer (2009 Poncha Study).[132] The 2009 Poncha Study evaluated both the Project (Alternative 1) and Trinchera Ranch Alternative TR1A[133] under light load condition and summer peak load condition. For each of the alternatives, the 2009 Poncha Study reported the *non-simultaneous* (*i.e.*, no injection at Calumet Substation) generation limits for the San Luis Valley Substation[134] and the limiting elements.[135]

174. To determine the Project's *simultaneous* (*i.e.*, injection at both San Luis Valley Substation and Calumet Substation) generation limits under light load condition and summer load condition, Applicants did additional power flow studies. The results are reported in Hearing

[132] This document is Exhibit GMS-8 of Hearing Exhibit No. 9.

[133] Trinchera Ranch Alternative TR1A is a new single-circuit 230kV transmission line from the San Luis Valley Substation to WAPA's Poncha Substation. The Trinchera Ranch alternatives are discussed below.

[134] None of the Trinchera Ranch alternatives connect the San Luis Valley Substation directly to the Calumet Substation. Thus, for the Trinchera Ranch-proposed alternatives, there is no simultaneous generation interaction between the San Luis Valley Substation and the Calumet Substation.

[135] Because the systems of interconnected utilities may be affected by the system operation of, and changes to, any of the interconnected utilities, the identified limiting elements may be on any of the systems that are interconnected with Applicants' systems. The 2009 Poncha Study identified the limiting elements but not their owners.

Exhibit No. 128.[136] This Hearing Exhibit identified the limiting elements that create the simultaneous generation limits.[137]

175. For the Project under summer peak condition and under light load condition, the level of generation injected at the San Luis Valley Substation affects the level of generation that can be injected at the Calumet Substation and *vice versa*. For example, under summer peak load condition, generation at San Luis Valley is 0 MW when generation at Calumet is 1,400 MW; and generation at Calumet is 100 MW when generation at San Luis Valley is 925 MW. The demonstrated interrelationship is consistent with the 2009 Study's simultaneous generation results and with the results shown in Hearing Exhibits No. 111 and No. 113.[138]

176. In his answer testimony, Staff witness Dominguez observed that Applicants had presented no stability study for the Project. In response to this observation, Applicants presented the Initial Stability Analysis for the Proposed Southeastern Colorado Transmission Expansion (December 1, 2009) (2009 Stability Analysis).[139] This preliminary analysis examined both the

[136] Hearing Exhibit 128 also presents the simultaneous generation limits and the limiting element under light load and summer peak load conditions for Trinchera Ranch Alternative TR1AE.

[137] Hearing Exhibit No. 128 identified the limiting elements but not their owners.

[138] Hearing Exhibit No. 111 was presented by Trinchera Ranch and shows the simultaneous generation limits for the Project and for Alternative TR1AE with Greenwood-Prairie rated at 478 MVA. Hearing Exhibit No. 113 was presented by Trinchera Ranch and shows the simultaneous generation limits for the Project and for Alternative TR1AE with Greenwood-Prairie rated at 506 MVA. There is dispute with respect to which exhibits -- Hearing Exhibit No. 128 or Hearing Exhibits No. 111 and No. 113 -- ought to be relied on by the Commission. The ALJ finds that it is unnecessary to resolve this dispute because all three Hearing Exhibits demonstrate the same truth: generation injection at San Luis Valley Substation affects generation injection at Calumet Substation and *vice versa*. In addition, all Hearing Exhibits demonstrate that the Project cannot accommodate all the generation that Public Service believes will be developed by the year 2018. This is the salient fact, not the precise level of generation injection that is possible at each Substation.

[139] This document is Exhibit TWG-3 to Hearing Exhibit No. 11. Because the potential generation has not been identified and defined and because not all potential disturbances were studied, the 2009 Stability Analysis is a preliminary analysis.

Project as proposed and Trinchera Ranch Alternative TR1A[140] under heavy load and light load conditions, as did the 2009 Poncha Study. The 2009 Stability Analysis indicated that, for the disturbances modeled, the Project does not have transient stability issues.

177. Additional findings of fact are contained in the remainder of the Decision.

B. Description of the Proposed San Luis Valley-Calumet-Comanche and Calumet-Walsenburg Transmission Project.

178. The facts contained in this discussion are not disputed.

179. Applicants propose to build the Project in, and have studied, the Study Area (*i.e.*, all or portions of Alamosa, Costilla, Huerfano, and Pueblo Counties). The Study Area encompasses the certificated service territory of at least Tri-State Members San Luis Valley Rural Electric Cooperative and San Isabel Electric Association. In addition, Public Service provides electric service in a portion of the Study Area located in the San Luis Valley.

180. The Project[141] will add new overhead double-circuit 230kV transmission lines from the San Luis Valley Substation to the Calumet Substation; new overhead double-circuit 345kV transmission lines from the Calumet Substation to the Comanche Substation; and a new overhead single-circuit 230kV transmission line from the Calumet Substation to the Walsenburg Substation. In addition, there will be a new 345kV/230kV Calumet Substation. Each of these four components is described below, beginning with the western-most facilities (located at the San Luis Valley Substation near Mosca, Colorado) and continuing to the eastern-most facilities

[140] Because Trinchera Ranch Alternative TR1A does not include the double-circuit San Luis Valley-Calumet 230kV transmission, those faults were not studied for Trinchera Ranch Alternative TR1A. In view of that Alternative's addition of a single-circuit 230kV transmission line from San Luis Valley to Poncha, additional delayed clearing analyses were performed for faults near the Poncha bus.

[141] A line diagram of the Project is found in Hearing Exhibit No. 8 at 7 and in Hearing Exhibit No. 19 at Exhibit SAM-3. A line drawing that shows the Project in relation to Colorado's 2014 transmission system is found in Hearing Exhibit No. 9 at Exhibit GMS-9.

(located at the Comanche Substation near Pueblo, Colorado) and the southern-most facilities (located at the Walsenburg Substation near Walsenburg, Colorado).[142]

181. The first component of the Project is **new double-circuit 230kV transmission to be constructed between the San Luis Valley Substation and the Calumet Substation**.[143]

182. To accommodate the new transmission line, the San Luis Valley Substation will be upgraded. With the addition of the two new 230kV circuit breakers and associated equipment needed for the two new 230kV connections, Tri-State will expand the existing three breaker ring bus to a five breaker ring. As shown in Hearing Exhibit No. 19 at Exhibit SAM-4, the substation upgrade costs are included in the Project. Tri-State will be responsible for maintenance of the additions at the San Luis Valley Substation.

183. This Segment will be approximately 95 miles long. Tri-State will be responsible for acquiring the new 150-foot wide right of way (ROW)[144] necessary for the San Luis Valley-Calumet Segment.

184. This Segment contains a wide range of topography and land use.[145] The western portion, which is in the San Luis Valley, is relatively flat and consists principally of agricultural land or open land (*e.g.*, rangeland, conservation easement property). The eastern portion, which includes the La Veta Pass area,[146] is mountainous terrain and coniferous forests. Near the

[142] Hearing Exhibit No. 19 at Exhibit SAM-2 is a map showing the Project's general location. The exhibit shows preliminary alternative transmission corridors; the preliminary corridors are subject to change.

[143] This Decision sometimes refers to this component as the San Luis Valley-Calumet Segment.

[144] The width of a transmission corridor's ROW is sized in accordance with the requirements of the National Electric Safety Code. These requirements are based on safety considerations, with the result that the width of a ROW depends in large part on the transmission voltage of the particular line. In addition, NERC has standards that govern the proximity of transmission lines to one another.

[145] Photographs of portions of this Segment are contained in Hearing Exhibit No. 17 at Exhibit NCK-4.

[146] The original proposed transmission corridor (*i.e.*, the Southern Route) went over Old La Veta Pass. With the understanding that events may necessitate further consideration of this corridor, Applicants have withdrawn that proposed corridor from active consideration.

alternative corridors under consideration for this Segment, there are few residences; and there is no concentrated residential development.

185. In the San Luis Valley-Calumet Segment, Tri-State may use a mix of support structures: one for the mountainous terrain through La Veta Pass and one for the remainder of the line.[147] The typical structure is a single double-circuit tubular steel pole approximately 115-150 feet in height, has six horizontal steel arms that support the insulator/hardware assemblies,[148] and has two shorter arms at the top of the pole to support the overhead shield wires. The mountainous terrain structure is a steel lattice double-circuit structure approximately 115-150 feet in height, has six horizontal steel arms that support the insulator/hardware assemblies,[149] and has two shorter arms at the top of the pole to support the overhead shield wires.

186. For this Segment, Tri-State proposes to use single 1272 kcmil aluminum, steel reinforced (ACSR) "Bittern" conductor. It has used this conductor on numerous transmission lines in Colorado. Because it is widely used on its system, Tri-State has an existing inventory of this type of conductor and has the tools with which to repair this type of conductor. The conductor thermal rating (*i.e.*, the maximum transfer capacity) of the line will be approximately 612 MVA.[150]

187. Using double-circuit support structures requires less ROW than does using two

[147] Hearing Exhibit No. 19 at Exhibit SAM-5 contains support structure diagrams. The typical structure is on the right, and the mountainous terrain structure is on the left.

[148] The insulators are positioned vertically and support the conductor.

[149] The insulators are positioned vertically and support the conductor.

[150] By convention, a transmission line's transfer capacity is referred to as MVA. This is similar to the capacity of the line stated as MW, except that MVA includes the line losses that will be incurred when the line is in service. With this understanding, this Decision uses MVA and MW interchangeably when referring to the transfer capability of a transmission line.

separate support structures. In addition, using double-circuit support structures reduces construction costs as compared to constructing two separate support structures.

188. The typical span length between poles will be 1,000 feet. The vertical clearance will be three feet greater than the minimum clearance required by the National Electric Safety Code. The purpose of the additional clearance is to assure that the line will meet or exceed the minimum clearance requirement at all times.

189. The April 16, 2009 Draft Term Sheet for the Project (Hearing Exhibit No. 1 at Exhibit B) (Draft Term Sheet) sets out the interests of Public Service and the interests of Tri-State with respect to ownership, operation, maintenance and replacement responsibilities, and capacity rights and contract path.[151] The Draft Term Sheet also contains each entity's responsibility for the Project's design and engineering, construction, siting and environmental permitting, land rights and ROWs, and land use permitting. This document is the basis of the Applicants' preliminary assignment of responsibility and costs with respect to construction, operation, and maintenance of the Project as stated in the testimony and exhibits.[152]

190. In this Decision, the discussion of ownership interests, responsibilities, and costs is based on the Draft Term Sheet and the record evidence. This information is preliminary and is subject to change, but it is the most current information available.

191. According to the Draft Term Sheet, for the San Luis Valley-Calumet Segment, Tri-State will take the lead with respect to design and engineering, construction, land acquisition, land use permitting, siting, and environmental permitting. Tri-State will be responsible for the

[151] For each component, the capacity rights and the contract path rights are the same as the ownership interests.

[152] *See*, *e.g.*, Hearing Exhibit No. 19 at Exhibit SAM-4 (May 6, 2009 cost estimates for Applicants' joint participation in the Project).

line's operation and maintenance. Public Service will own 60 percent of this transmission line and will be responsible for 60 percent of the costs; Tri-State will own 40 percent of this transmission line and will be responsible for 40 percent of the costs.

192. The second component of the Project is the **new Calumet Substation**. The substation will be constructed approximately six miles north of Walsenburg, Colorado. The Calumet Substation is necessary because the existing Walsenburg Substation cannot be expanded due to land and other constraints. The new 345kV/230kV substation will consist of a 345kV four position ring built to be expandable to a six position breaker-and-a-half arrangement, two 560MVA 345/230kV autotransformers, and a 230kV seven position breaker-and-a-half arrangement.[153]

193. Tri-State owns the Calumet Substation site and surrounding lands. Applicants do not anticipate the need to acquire any additional land.

194. According to the Draft Term Sheet, for the Calumet Substation, Tri-State will take the lead with respect to design and engineering, construction, land acquisition, land use permitting, siting, and environmental permitting. Public Service will be responsible for the operation of the 345kV switchyard, and Tri-State will be responsible for the operation of the 230kV switchyard. Public Service will own 60 percent of the Calumet Substation and will be responsible for 60 percent of the costs; Tri-State will own 40 percent of the Calumet Substation and will be responsible for 40 percent of the costs. Tri-State will be responsible for maintenance of the Calumet Substation.

[153] Hearing Exhibit No. 19 at Exhibit SAM-3 is a one-line diagram showing the arrangement and the associated line connections.

195. The third component of the Project is **new double-circuit 345kV transmission to be constructed between the Calumet Substation and the Comanche Substation**.[154]

196. This Segment will be approximately 45 miles long. Public Service will be responsible for acquiring a new 200 feet-wide ROW for the Calumet-Comanche Segment.

197. This Segment is primarily undeveloped open prairie rangeland interspersed with small canyons and ravines that contain forested areas. Where there is residential development between Calumet and Comanche, it is principally located on subdivided parcels that are typically 35 acres or larger. Near the alternative corridors under consideration for this Segment, there are few residences; and there is no concentrated residential development in most of the Segment. The record contains little information about the nature of the land use, the population density, and the proximity of residences to the proposed transmission corridors in the vicinity of the Comanche Substation, which is located near Pueblo, Colorado.

198. In this Segment, Public Service will use steel poles as the support structures for the double-circuit 345kV transmission line.[155] The typical support structure is a self-weathering steel pole that darkens over time to a color similar to that of wood, is approximately 100-150 feet in height,[156] and has six horizontal arms to support the insulator/hardware assemblies.[157]

199. Although the Segment's alignment has not been determined, Public Service anticipates that, for some portion, the Calumet-Comanche Segment may parallel existing 230kV transmission. In that event, Public Service intends to locate the new double-circuit

[154] This Decision sometimes refers to this component as the Calumet-Comanche Segment.

[155] A drawing of the support structure is found in Hearing Exhibit No. 20 at Exhibit DJP-1.

[156] The support structures will be higher than the typical structures where the line crosses other electric lines or highly traveled roads. The higher structures may be over 170 feet in height.

[157] The insulators are positioned vertically and support the conductor.

345kV transmission adjacent to any parallel line structures. This will have the effect of eliminating or reducing the visual impact of the new transmission line.

200. In this Segment, Public Service proposes to use double-circuit 1272 kcmil "Bittern" conductor in a bundled configuration.[158] This Segment will have non-specular wire, which will minimize reflection (and, thus, glare) from the line. This Segment will have low-corona hardware to minimize noise.

201. Public Service will design and build this Segment to the minimum ground clearance prescribed by the National Electric Safety Code with an additional three to five feet of clearance. The purpose of this clearance is to assure that the line will meet or exceed the minimum clearance requirement at all times.

202. According to the Draft Term Sheet, for the Calumet-Comanche Segment, Public Service will take the lead with respect to design and engineering, construction, land rights and ROW, and land use permitting. Tri-State will take the lead with respect to siting and environmental permitting. Public Service will be responsible for the line's operation and maintenance. Public Service will own 60 percent of this transmission line and will be responsible for 60 percent of the costs; Tri-State will own 40 percent of this transmission line and will be responsible for 40 percent of the costs.

203. To accommodate the new transmission line, Public Service will upgrade the Comanche Substation with the addition of one new 345kV circuit breaker, a half bay with three breakers, and the associated equipment needed for the new 345kV connections. As shown in Hearing Exhibit No. 8 at Exhibit GMS-5, the substation upgrade costs are included in the

[158] Bundled configuration refers to the use of two wires per phase in a vertical configuration.

Project. Public Service will be responsible for maintenance of the Comanche Substation additions.

204. The fourth component of the Project is **new single-circuit 230kV transmission with double-circuit 230kV structures to be constructed from the Calumet Substation to the Walsenburg Substation**.[159]

205. This Segment will be approximately six miles long. There are three existing transmission lines between Calumet and Walsenburg, and Tri-State owns two of the lines. One of Tri-State's lines is a single-circuit 230kV line that connects the Comanche Substation and the Walsenburg Substation. This line is not part of the Project.

206. The other Tri-State line is a 115kV transmission line that connects the Stem Beach Substation and the Walsenburg Substation; a portion of that 115kV line coincides with the alignment of the Calumet-Walsenburg Segment. As part of the Project, Tri-State plans to rebuild the Stem Beach-Walsenburg line between Calumet Substation and Walsenburg Substation using double-circuit 230kV support structures. Tri-State will operate one circuit at 115kV to complete the existing Stem Beach-Walsenburg 115kV transmission line and will operate the other circuit at 230kV as the Calumet-Walsenburg Segment.

207. Tri-State intends to use the existing Stem Beach-Walsenburg 115kV 100 foot-wide ROW for the Calumet-Walsenburg Segment. When the Project is constructed, there will be three transmission lines in the Calumet to Walsenburg corridor: an existing 115kV single circuit

[159] This Decision sometimes refers to this component as the Calumet-Walsenburg Segment.

line,[160] Tri-State's existing 230kV single-circuit line, and the new 230kV/115kV double-circuit line.[161]

208. In the Calumet-Walsenburg Segment, Tri-State will use one type of support structure.[162] The structure is a single double-circuit tubular steel pole, is approximately 115-135 feet in height, has six horizontal steel arms that support the insulator/hardware assemblies,[163] and has two shorter arms at the top of the pole to support the overhead shield wires.

209. In this Segment, for both the new 230kV circuit and the rebuilt 115kV circuit, Tri-State proposes to use single 1272 kcmil ACSR "Bittern" conductor. Tri-State has used this conductor on transmission lines in Colorado. Because it is widely used on its system, Tri-State has an existing inventory of this type of conductor and has the tools with which to repair this type of conductor. The conductor thermal rating will be approximately 612 MVA. In addition, installation of this conductor on the rebuilt 115kV line will reduce the cost should Tri-State decide to uprate the 115kV Stem Beach-Walsenburg line to 230kV in the future. Finally, using the same hardware for both the 230kV circuit and the 115kV circuit in this Segment should make maintenance more efficient and should improve the appearance of the line.

210. Using double-circuit support structures requires less ROW than does using two separate support structures. In addition, using double-circuit support structures will reduce construction costs as compared to constructing two separate support structures.

211. In this Segment, the typical span length between poles will be 800 feet. The

[160] This line is not owned by Tri-State or by Public Service.

[161] A depiction of this corridor is found in Hearing Exhibit No. 22 at Exhibit RLP-2 at Figure 4.

[162] Hearing Exhibit No. 19 at Exhibit SAM-5 contains the support structure diagrams. The structure to be used in this Segment is on the right.

[163] The insulators are positioned vertically and support the conductor.

vertical clearance will be three feet greater than the minimum clearance required by the National Electric Safety Code. The purpose of the additional clearance is to assure that the line will meet or exceed the minimum clearance requirement at all times.

212. To accommodate the new transmission line, the Walsenburg Substation will be upgraded. Tri-State will upgrade the substation by adding a new 230kV circuit breaker and associated equipment for the new 230kV connection. As shown in Hearing Exhibit No. 19 at Exhibit SAM-4, the substation upgrade costs are included in the Project. Tri-State will be responsible for maintenance of the additions at the Walsenburg Substation.

213. According to the Draft Term Sheet, for the Calumet-Walsenburg Segment, Tri-State will take the lead with respect to design and engineering, construction, land acquisition, land use permitting, siting, and environmental permitting. Tri-State will also be responsible for the line's operation and maintenance. Tri-State will own 80 percent of this transmission line and will be responsible for 80 percent of the costs; and Public Service will own 20 percent of this transmission line and will be responsible for 20 percent of the costs.

214. **With respect to the Project as a whole**, aside from already-planned system improvements[164] and the system upgrades included in the Applications, no upgrades on the Public Service system and no upgrades on the Tri-State system will be necessary as a result of the Project as proposed.

215. It is uncertain whether the Project, when in service, will have an impact on the Colorado Springs Utilities system. In the event there is an impact, Applicants have agreed to work with CSU to address the issue.

[164] One of the most important of these already-planned system improvements is the installation of a new 280MVA, 230/115kV autotransformer at the Public Service Poncha Junction Substation. This improvement has a planned in-service date of May 31, 2013.

216. Often, the cost of transmission system upgrades occasioned by a particular generation addition is associated with, or assigned to, that generation addition. In this case, Applicants consider the Project to be a system upgrade because it is necessary to assure or to increase system reliability; to relieve transmission constraints; and to provide transmission for renewable generation located in the San Luis Valley and in the area south and southeast of Pueblo and Walsenburg. As a result, Applicants do not consider the costs of the Project to be associated with, or assignable to, specific generation additions.

217. The Project goes through Alamosa, Huerfano, and Pueblo Counties, each of which has site permitting authority. The Alamosa County Board and the Huerfano County Board support the Project, as does the Rio Grande County Board. Applicants anticipate that they will have the permits and approvals required for the Project within 18 months of submission.

218. Applicants estimate the cost of the Project to be $180 million (2013$), which is a high-level scoping estimate.[165] Applicants expect the final costs to be within +/- 30 percent of the estimate. On the assumption that the Project would be in service by May 2013, Applicants expected the cost of the Project to fall within a range of approximately $126 million to $234 million (2013$).

219. Based on the Draft Term Sheet, Public Service will be financially responsible for approximately $105 million (or approximately 60 percent) of the total Project costs. Tri-State will be financially responsible for approximately $75 million (or approximately 40 percent) of the total Project costs.

[165] The estimated costs were: $8.5 million to upgrade the three existing substations; $27 million to construct the Calumet Substation; and $144.5 million to construct 146 miles of transmission line. The costs were developed in 2008 and escalated for the planned May 2013 in-service date. The record contains little information about the escalation method used.

220. Applicants originally anticipated that the Project would be in service by May 31, 2013.[166] For a variety of reasons, the May 2013 in-service date is no longer feasible and Spring 2015 is the likely in-service date.[167] The record contains no information concerning whether a delay in the in-service date will affect the Project's costs and, if it does, the impact on the total cost. The record contains no information concerning whether changes in the Project's costs occasioned by a delay in the in-service date are encompassed within the +/- 30 percent bandwidth.

221. To meet the objectives identified in the studies and analyses discussed above, Tri-State originally planned to construct two transmission lines (*i.e.*, the San Luis Valley Electric System Improvement Plan and the Boone-Comanche-Stem Beach-Walsenburg 230kV transmission line project). Tri-State's high-level scoping estimated cost for its portion of the Project costs is $75,000,000 (2013$). This is less than the cost of Tri-State's two originally-planned transmission projects. In addition, because Tri-State uses a postage stamp rate (*i.e.*, its Members and customers pay the same rate irrespective of location), Tri-State's share of the Project cost will be spread out among Tri-State's Members in four states. Finally, Tri-State's participation in the Project will allow its Members to meet their Renewable Energy Standard obligations, which is an additional benefit to Tri-State from participation in the Project.

222. Public Service needs to build transmission to address its reliability issue in the San Luis Valley and to facilitate the delivery of renewable resource generation in ERZ 4 and ERZ 5 in southern Colorado to the Denver Metropolitan area load center. Tri-State's

[166] Applicants provided Project schedules in written testimony. These schedules are no longer accurate in light of events that have occurred since they were prepared.

[167] In its Application to Amend the 2007 Colorado Resource Plan, Public Service states that "a more realistic in-service date for the SLV-Calumet-Comanche line [is] spring 2015." Hearing Exhibit No. 133 at ¶ 12.

participation in the Project considerably lowers the cost of the Project to Public Service. The net result is that, due to the joint participation in the Project, Public Service's ratepayers will pay less to receive the benefits of the Project than they would pay if Tri-State did not participate.

223. Both Applicants need the transmission in southern Colorado. The cost sharing between Public Service and Tri-State results in savings to Public Service's ratepayers and Tri-State's Members and customers. This is a significant benefit of the Project.

224. As a transmission project that is jointly planned and owned by Public Service and Tri-State, the Project reduces costs to ratepayers and customers (as discussed above); reduces environmental impacts (because there is one transmission line to be sited, constructed, and maintained instead of two or more lines); and reduces local land use and siting issues (because there is one transmission line to be sited instead of two or more lines and because there is efficient use of the new and existing transmission corridors).

225. There are, at present, federal incentives available to encourage the development of renewable resources.[168] These incentives reduce the cost to develop the renewable resource generation that the Project will deliver from southern Colorado. The reduced cost makes it more likely that renewable resource generation that needs and will use the Project will be developed in southern Colorado.

[168] Unless extended by Congress, these incentives expire within the next five years.

226. Additional findings of fact are contained in the remainder of the Decision.

C. Rural Utilities Service: Environmental Impact Study, Tri-State's Loan Application.

227. The facts contained in this discussion are not disputed.

228. The Rural Utilities Service electric program provides capital loans to electric cooperatives for the expansion, upgrade, replacement, and maintenance of electric infrastructure, including transmission lines, in rural areas. Tri-State has applied to RUS for a loan for its share of the capital costs of the Project.

229. RUS is required to evaluate the environmental impact of its actions (this includes, as pertinent here, approval of a loan to construct the Project) under the National Environmental Policy Act (NEPA) and the Council on Environmental Quality NEPA implementing regulations.[169] To assist loan applicants, RUS issues Bulletins on its NEPA implementation.

230. The NEPA process is a transparent process that includes public notification, public scoping meetings, analysis of alternatives and impacts, document release, public comment, and final agency decision. With respect to a project, a federal agency may do an Environmental Assessment (EA) or an EIS to evaluate the environmental impact of its decision.

231. The RUS review of the Project under NEPA began in August, 2009 with public notice of the review. Following the 2009 public scoping meetings and after considering written submissions, RUS decided to do an EIS with respect to the Project.

232. In accordance with applicable federal regulations, the EIS

> will identify the project purpose and need, evaluate alternatives including the proposed action and the no action alternative, discuss the affected environment, and analyze environmental consequences, including direct, indirect and cumulative impacts and proposed mitigation measures. The EIS will also provide

[169] These regulations are found at 40 CFR Parts 1500-1508.

> a summary of public and agency coordination on the project, and will respond to public comments.

Hearing Exhibit No. 17 at 5. The applicable federal regulations require the EIS to include an alternatives evaluation section that evaluates all reasonable alternatives, that evaluates specified alternatives, that identifies the federal agency's preferred alternative(s), and that includes appropriate mitigation measures that are not included in the proposed action or the alternatives.

233. RUS will establish the alternatives, issues, and impacts to be addressed in the EIS. As part of that process, there were public meetings in early 2010 to assist in scoping the alternatives to be studied and the issues to be addressed in the EIS.

234. At least some of the transmission corridors likely to be reviewed in the EIS are those identified by Applicants as alternative corridors with the Study Area, which includes all, or a portion, of Alamosa, Costilla, Huerfano, and Pueblo Counties. Although Tri-State has presented its alternative corridors for the Project and has evaluated the Project in the context of the Study Area, RUS is not bound by Tri-State's previous studies or alternative corridors. RUS will make its own decision with respect to the scope of the EIS, including the corridors to be studied. Thus, it is possible that the EIS will include consideration of corridors that Tri-State previously studied and decided not to pursue (*e.g.*, the routes north and northeast out of the San Luis Valley) or that Applicants no longer favor (*e.g.*, the Southern Route over La Veta Pass).

235. RUS's determination of the routes to be included in the EIS is part of the EIS scoping process. RUS will set the direction for EIS preparation when the scoping is complete.

236. The EIS will be prepared by an independent contractor selected and overseen by RUS and funded by Tri-State. RUS has sole responsibility for the EIS and will supervise and independently evaluate the Project and the environmental analyses to arrive at its independent

conclusions with respect to the Project, its environmental impacts, and the mitigation measures (if any) necessary to address the identified environmental impacts.

237. Tri-State expects the RUS to issue its draft EIS in late 2010 or early 2011. Federal regulations require both a 45-day comment period and hearings to take public comment on the draft EIS. RUS will consider the oral and written comments and will prepare a final EIS. There is a comment period on the final EIS of at least 30 days. Following this comment period, the RUS may issue its final EIS or may change the final EIS in response to the comments received.[170] The final EIS will contain RUS's preferred route for the Project.[171] There is no prescribed time within which the NEPA/EIS process must be completed.

238. With the issuance of the final EIS, Applicants will have a clear idea of the Project route that RUS finds acceptable.

239. The EIS is one factor in the RUS's consideration of Tri-State's loan application for the Project. When there is a final EIS and the application has been reviewed, RUS will issue a Record of Decision on the loan application. At that point, Tri-State will know whether there is a RUS funding source for its participation in the Project and, if there is, whether there are conditions on the RUS funding. Tri-State's best estimate is that the RUS will issue its Record of Decision in mid-2011.

240. If Tri-State were to seek a loan for a different transmission line (*e.g.*, a single-circuit 230kV line from the San Luis Valley Substation to the Poncha Substation to the Malta

[170] If the RUS changes the final EIS, there is an additional public comment period.

[171] The final EIS is used by other federal agencies (*e.g.*, U.S. Forest Service) should the transmission line route cross federal land and need a permit. Each affected federal agency uses the EIS as it deems appropriate and may reach a conclusion that differs from that reached by the RUS.

Substation[172]), it is unclear whether the change in the proposed transmission line would require RUS to conduct an environmental analysis of, and potentially to issue an environmental impact statement for, that different line.

241. The Project is undergoing, and RUS's decision will consider the results of, the extensive EIS process. RUS's determinations with respect to its preferred route for the Project and with respect to Tri-State's loan application will not be made until after the instant transmission proceeding is decided.

242. This is the first time a Tri-State Colorado transmission line has been the subject of a RUS EIS process. In the past, RUS has conducted an Environmental Assessment of a proposed Tri-State transmission project in Colorado.

243. Additional findings of fact are contained in the remainder of the Decision.

D. Relevant Statutory Provisions, Commission Rules, Commission Decisions, and State Policies.

244. The Commission has determined in this proceeding that the Applicants seek a CPCN for construction and operation of the Project pursuant to § 40-5-101(1), C.R.S. As pertinent here, that provision states: "No public utility shall begin the construction of a new facility ... without first having obtained from the commission a certificate that the present or future public convenience and necessity require or will require such construction." This statute applies to both Applicants.

245. To secure a CPCN to construct facilities, the public utility must show by competent evidence that (a) there is a present or future need for the construction or extension and (b) existing facilities are not reasonably adequate and available. *Public Service Company of*

[172] This is Trinchera Ranch Alternative TR1AE, which is discussed below.

Colorado v. Public Utilities Commission, 142 Colo. 135, 350 P.2d 543, *cert. denied sub nom. Union Rural Electric Association, Inc. v. Public Service Company of Colorado,* 364 U.S. 820 (1960) (*Public Service*). In addition, Rule 4 CCR 723-3-3102(b)(VIII) contains a third element that, where applicable, the applicant utility must provide specified information concerning alternatives that the applicant utility studied.

246. The Commission has intimated by *dicta*, but has not decided directly, that § 40-5-101, C.R.S., can be satisfied where the Commission believes that increased transmission capacity likely will be required in the future to meet new loads or system needs. Decision No. C04-0051 (Hearing Exhibit No. 91) at ¶ 11 ("This Commission has encouraged the construction of more 345kV lines, and we believe that the continued growth of the metro Denver area population will likely require increased transmission capacity in the future.").

247. Section 40-5-103(1), C.R.S., pertains to the granting of a CPCN. That provision states, as pertinent to this proceeding:

> Nothing contained in [§ 40-5-103(1), C.R.S.,] shall be construed to limit or restrict the power and authority of the commission: To regulate, issue, or refuse to issue certificates of public convenience and necessity for construction of a new facility ... as provided in section 40-5-101; and to attach to the exercise of the rights granted by such certificate such terms and conditions as in the commission's judgment may be required by the public convenience and necessity.

In addition, § 40-3-102, C.R.S., vests in the Commission the power and authority, and imposes on the Commission the duty, "to generally supervise and regulate every public utility in this state; and to do all things, whether specifically designed in articles 1 to 7 of [Title 40] or in addition thereto, which are necessary or convenient in the exercise of such power[,]" subject to restrictions that are not relevant to this proceeding.

248. In considering whether to grant a CPCN, the Commission considers whether it is necessary, in the public interest, to establish conditions to which the CPCN is subject. As the

Colorado Supreme Court has observed, "[i]n the exercise of … any … power granted to [the Commission], the interest of the public should always be given first and paramount consideration." *Public Service*, 142 Colo. at 147, 350 P.2d at 549.

249. In Decision No. C09-1004, the Commission provided additional guidance concerning the showing necessary to establish the need for the Project. The Commission stated that it was

> not aware of any prior Commission decisions or case law that address the issue of whether a utility can establish the need for a transmission line project without showing that it has contracted with or will contract with particular generation resources. We find that, in the abstract, the presence or absence of contracts by a utility for particular generation resources does not by itself establish the need for a transmission line or lack thereof. Instead, we believe that the need for a transmission line should be considered in light of the evidence and arguments presented at the evidentiary stage of the proceeding. We will, of course, be guided by the statutory standards that "the present or future public convenience and necessity require or will require such construction."
>
> We finally clarify that our ruling that § 40-2-126, C.R.S., does not apply to this docket does not mean that Public Service's obligation to meet the renewable energy standards ... cannot be considered as a factor in determining whether there is a need for the proposed transmission line project. We also clarify that general legislative policy directives related to development of renewable energy such as those found in § 40-2-123, C.R.S., may also be considered as one of the factors in this determination. We will determine the appropriate weight that should be given to these and other factors upon our review of the evidence and arguments that will be presented in this case.

Id. at ¶¶ 11-12. In determining the need for the Project, therefore, the ALJ looks to and considers Colorado statutes and legislative policy directives.

250. The declaration of intent in Amendment 37,[173] an initiated measure passed by Colorado's voters in 2004, states:

> Energy is critically important to Colorado's welfare and development, and its use has a profound impact on the economy and environment. Growth of the state's population and economic base will continue to create a need for new energy resources, and Colorado's renewable energy resources are currently underutilized.
>
> Therefore, in order to save consumers and businesses money, attract new businesses and jobs, promote development of rural economies, minimize water use for electricity generation, diversify Colorado's energy resources, reduce the impact of volatile fuel prices, and improve the natural environment of the state, it is in the best interests of the citizens of Colorado to develop and utilize renewable energy resources to the maximum practicable extent.

Sections 40-2-124 and 40-2-125, C.R.S., contain the substance of Amendment 37.

251. In furtherance of that declaration of intent, and as amended in 2010 by HB10-1001, § 40-2-124(1)(c), C.R.S., establishes a Renewable Energy Standard that sets out the minimum amount of electricity that Public Service, as a qualifying retail utility, must generate, or must cause to be generated, from eligible energy resources.[174] Section 40-2-124(1)(c)(I), C.R.S., sets the minimum amount of electricity that Public Service must generate, or must cause to be generated, from eligible energy resources (a) at 12 percent of PSCo's retail electricity sales for 2011 through 2014; (b) at 20 percent of PSCo's retail electricity sales for 2015 through 2019; and (c) at 30 percent of PSCo's retail electricity sales for 2020 and thereafter.

252. In addition, as applicable to Public Service, the 2010 amendments to § 40-2-124,

[173] Similar language appears in § 40-2-123(1)(a), C.R.S., which states that new clean energy and energy-efficient technologies make "beneficial contributions ... to Colorado's energy security, economic prosperity, environmental protection, and insulation from fuel price increases." Section 40-2-123(l)(b), C.R.S., provides: "The commission may give consideration to the likelihood of new environmental regulation and the risk of higher future costs associated with the emission of greenhouse gases such as carbon dioxide when it considers utility proposals to acquire resources[.]"

[174] Eligible energy resources include, but are not limited to, distributed generation and renewable energy resources (such as solar and wind).

C.R.S., removed the explicit requirements for acquisition of solar resources and substituted a three percent set-aside for distributed generation (DG). The amendments allow up to half of that DG set-aside to be met with wholesale DG, defined as a renewable energy resource in Colorado with a nameplate rating of 30 MW or less. Sections 40-2-124(1)(a)(II), (IV), (V), and (VI); § 40-2-124(1)(c), C.R.S. Pursuant to § 40-2-124(1)(c)(II)(C), C.R.S., upon application by an affected utility, the Commission can lower the three percent DG set-aside if it is in the public interest to do so. The Commission may lower the three percent DG set aside for any period that begins after December 31, 2014.

253. The 2010 RES amendments also addressed the Standard Rebate Offer (SRO). At present, the SRO is $2.00 per watt. Section 40-2-124(1)(e)(I.5), C.R.S., permits the Commission to reduce the SRO in a resource planning docket or in an application docket if market changes support the change.

254. In deciding this transmission case, the ALJ considers the amended RES requirements because these are the standards that Public Service must meet going forward and this docket evaluates the present and future need for the Project. The amended RES continues the requirement that Public Service acquire renewable resources, which include solar and wind. The amended RES does not affect the resource acquisition directions given to Public Service in Docket No. 07A-447E (PSCo 2007 CRP Docket). Further, the Commission will assess the impact of the amended RES on PSCo's future resource acquisitions in future energy resource plans (beginning with the PSCo energy resource plan to be filed in 2011).

255. Section 40-2-124(1)(c)(V), C.R.S., establishes the RES for cooperative electric associations for 2011-2014, for 2015-2019, and for 2020 and thereafter. Pursuant to that statute, cooperative electric associations, including Tri-State Members, must acquire in 2020 and

thereafter a minimum of ten percent of their Colorado retail electricity sales from electricity that is generated from eligible energy resources. The 2010 RES amendments did not change this statutory provision.

256. By § 40-2-124(1)(g), C.R.S., the General Assembly established the retail rate impact rule or cap that, for Public Service, limits the impact of the Renewable Energy Standard Adjustment (RESA) to a maximum of two percent of the total annual electric bill[175] for each retail customer other than a customer who installs distributed generation.[176] Subject to the retail rate impact rule, Public Service may acquire more renewable energy than the minimum levels stated in the amended RES.

257. Section 40-2-124(1)(g)(I)(B), C.R.S., provides that,

> [a]t the request of the qualifying retail utility and upon the Commission's approval, the qualifying retail utility may advance funds from year to year to augment the amounts collected from retail customers under [§ 40-2-124(1)(g), C.R.S.,] for the acquisition of more eligible energy resources. Such funds shall be repaid from future retail rate collections, with interest calculated at the qualifying retail utility's after-tax weighted average cost of capital, so long as the retail rate impact does not exceed two percent of the total annual electric bill for each customer.

Thus, Public Service may request that the Commission allow it to advance the RESA funds from year to year. If that request is approved, the interest rate is calculated at PSCo's weighted average cost of capital. This provision permits PSCo to acquire renewable resource generation earlier than, and in a greater amount than, it could acquire that generation if it were limited to strict adherence to the two percent retail rate impact rule.

[175] The Commission has determined that it has the authority to approve a renewable resource under § 40-2-123(1)(a), C.R.S. (Section 123 resource), whose incremental costs would exceed the two percent retail rate impact rule provided that the Section 123 resource is a demonstration project or a new clean energy or energy-efficient technology. Decisions No. C10-1033 and No. C08-0559. These incremental costs are not included in the two percent retail rate impact rule.

[176] *See* discussion of § 40-2-124(1)(g)(IV)(B), C.R.S., below.

258. Section 40-2-124(1)(g)(IV)(B), C.R.S., permits the Commission to ensure that Public Service's retail customers who install distributed generation "continue to contribute, in a nondiscriminatory fashion, their fair share to their utility's renewable energy program fund or equivalent renewable energy support mechanism even if such contribution results in a charge that exceeds two percent of such customers' annual electric bills."[177]

259. For Public Service, there is considerable room for acquisition of renewable resources between the floor established by the RES and the ceiling established by the retail rate impact rule, particularly when the 2010 RES amendments, including the ability to advance (with Commission permission) the RESA funds, are taken into account.

260. Section 40-2-126(2)(b), C.R.S., provides that, on or before October 31 of each odd-numbered year, each rate-regulated electric utility shall "[d]evelop plans for the *construction ... of transmission facilities necessary to deliver electric power consistent with the timing of the development of beneficial energy resources located in or near the energy resource zones* designated by the utility in its filing" (emphasis supplied). This effectuates the legislative declaration that rate-regulated public utilities, such as Public Service, should evaluate continually the adequacy of their transmission facilities and should be encouraged to improve their transmission infrastructure as required to meet Colorado's existing and future energy needs, including the acquisition of renewable resource generation.

261. Section 40-5-101(4), C.R.S., provides "additional encouragement to [rate-regulated] utilities to pursue the construction and expansion of transmission facilities." It creates

[177] In this proceeding, this is sometimes referred to as the fair share provision. In Docket No. 10R-243E, the Commission determined how that contribution should be calculated and collected. Decision No. C10-0952 at ¶¶ 62-70 (discussion of net metering) and Rules 4 CCR 723-3-3661(a) and 723-3-3664(h) adopted in that Decision.

the Transmission Rate Cost Adjustment and, as specified in that section, permits current recovery of prudently-incurred transmission-related costs.

262. The legislative directives that encourage the development of transmission for renewable resource generation is not the only applicable directive, however. The Commission must consider those directives in conjunction with, and must balance them against, the Commission's obligation to protect ratepayers and customers by assuring that utility facilities are adequate, efficient, just, and reasonable. *See, e.g.*, §§ 40-3-101(2), and 40-3-102, C.R.S. In this regard, the ALJ agrees with Public Service that "[t]here is no suggestion in [§ 40-2-126, C.R.S.,] that utilities *must* build transmission to energy resource zones *regardless of* customer cost, benefit, load, or need." Hearing Exhibit No. 93 at 3 (emphasis supplied).

263. In addition to legislative statements of public policy, the Commission must consider public policy established by the executive. Statements of the executive's energy-related policy are found in the New Energy Economy and Governor Ritter's Climate Action Plan (CAP).

264. A significant feature of the New Energy Economy is the economic development and job growth opportunities that stem from the construction of clean energy infrastructure in Colorado. That infrastructure includes both generation and transmission.

265. The Climate Action Plan (CAP) is contained in a report issued in November 2007. The CAP calls global warming the greatest environmental challenge of this generation, contains proposals that Colorado should adopt to reduce greenhouse gas (including $C0_2$) emissions by 20 percent by 2020, and makes a commitment with other states and nations to cut emissions even more by 2050. Noting that, in 2007, approximately 36 percent of $C0_2$ emissions in Colorado was from the total emissions of the utility sector, the CAP states that the problem of climate change cannot be addressed in Colorado unless the utilities work to reduce their CO_2 emissions.

266. In reaching her decision in this matter, the ALJ is mindful of, and applies, these statutes, rules, decisions, and statements of Colorado's public policy.

E. Structure of CPCN-Related Findings, Discussion, and Conclusions.

267. Applicants seek a CPCN for the Project as a whole; as a result, they request that the Commission grant one CPCN for the entire Project, not a separate CPCN for each component of the Project. The ALJ agrees with Applicants on this point, and this Decision will grant, subject to conditions, one CPCN for the Project as a whole.

268. With respect to the CPCN for the Project, although there are four components, the Parties focused their attention (both in testimony and in statements of position) on the San Luis Valley-Calumet Segment. This proceeding covers many CPCN-related issues, and not all of the issues pertain to all components. Thus, solely for ease of discussion, the ALJ structures this Decision by Project component and makes findings and reaches conclusions with respect to each component separately. In doing so, the ALJ does not make -- and does not intend to make -- a decision that grants a CPCN for each component. To be clear, this Decision grants, subject to conditions, one CPCN for the Project.

F. San Luis Valley-Calumet Segment.

1. Facts.

a. Reliability in San Luis Valley.

269. The existing reliability issue in the San Luis Valley is: the potential for voltage collapse -- and, thus, for loss of electric service -- in the event of the loss of the 230kV San Luis Valley-Poncha transmission line (owned by Public Service and Tri-State) when the load in the

San Luis Valley exceeds approximately 65 MW.[178] This reliability issue impacts Public Service and Tri-State Members that provide retail electric service to customers in the San Luis Valley. Consequently, Public Service and Tri-State have taken steps to reduce the probability of voltage collapse in the San Luis Valley.[179]

270. Tri-State has capacity rights on the 230kV San Luis Valley-Poncha transmission line. Tri-State owns no transmission capacity rights on the only other transmission line into the San Luis Valley: the 115kV San Luis Valley-Sargent-Poncha Junction transmission line owned by PSCo. Thus, when the 230kV line is unavailable and demand within the San Luis Valley exceeds available generation, Tri-State and its Members must shed load to avoid an adverse impact on Public Service's load in the San Luis Valley.[180] This load shedding can occur notwithstanding the steps that Public Service and Tri-State have taken to reduce the probability of voltage collapse in the San Luis Valley.

271. The probability of voltage collapse in the San Luis Valley has increased over time as a result of load growth in the region. The 1997 Study reported that, over the course of a year, the San Luis Valley load exceeded 65 MW approximately 15 percent of the time. The 2004 Study reported that, over the course of a year, the San Luis Valley load exceeded 65 MW approximately 20 percent of the time. The 2008 Study reported that the San Luis Valley summer

[178] The discussion above concerning development of the Project details the technical studies and analyses concerning this reliability issue.

[179] These steps include, for example, the use or facilitation of demand-side management and energy conservation programs; operation of PSCo's Alamosa turbines as needed; upgrading the San Luis Valley Substation transformers; and installation of capacitor banks at various locations.

[180] This is Tri-State's undervoltage load shedding system.

peak load exceeded 120 MW[181] and that, over the course of a year, the San Luis Valley load exceeded 65 MW approximately 23 percent of the time.

272. Tri-State forecasts increased electricity usage, principally in residential and small commercial loads, as a result of an increase in the number of Member customers and increased electric use per customer. Thus, unless addressed, the probability of voltage collapse in the San Luis Valley will continue to increase in the future because the number of hours during which the San Luis Valley load exceeds 65 MW will increase.

273. The growth in the number of hours during which the San Luis Valley load exceeds 65 MW adversely impacts Applicants' ability to perform maintenance operations. They must restrict their maintenance operations to times when the San Luis Valley loads are low enough to permit the 230kV line to be taken out of service. As the load and load duration curves increase (as they are forecast to do), the number of hours during which the 230kV line can be taken out of service (and, thus, the number of hours available for Applicants to perform maintenance operations) is reduced. This situation exists at present and, unless addressed, will continue to worsen in the future.

274. NERC and the Western Electricity Coordinating Council (WECC) establish mandatory electric system reliability standards with which both Public Service and Tri-State must comply. At the present time, the existing situation in the San Luis Valley violates no mandatory reliability standards. This may change in the future.

[181] The peak loads in the summer months are driven by irrigation and, thus, fluctuate with the seasonal weather (*e.g.*, more irrigation is needed if the weather is dry during the growing season).

275. NERC and WECC mandatory reliability standards and good utility practices (these are defined by the Federal Energy Regulatory Commission (FERC)) are minimum requirements. Individual utilities may elect to perform to a higher standard.

276. Tri-State has elected to perform to a higher standard because, in its opinion, its Members and customers expect and deserve a system reliability level that exceeds the minimum level established by NERC and WECC. Tri-State does not deem it appropriate to maintain its system reliability through an UVLS, even though NERC and WECC standards permit use of an UVLS.[182] Tri-State does not deem it appropriate to maintain its system reliability through a RAS, even though NERC and WECC standards permit use of a RAS. The Project, among other things, eliminates the ULVS and the RAS now used on Tri-State's transmission system in southern Colorado and in northeastern New Mexico.

277. Public Service also has elected to perform to a higher standard than the minimum NERC and WECC standards. Thus, although NERC and WECC standards permit it to do so, Public Service will not implement a RAS to address an identified NERC Category B.2 (loss of one transmission system element or N-1) reliability contingency because this is the type of contingency that is more likely to occur.[183] Public Service will implement a RAS to address an identified NERCC Category C.5 (loss of any two circuits of a multiple circuit towerline or N-2) reliability contingency because this type of contingency is less likely to occur.

[182] Hearing Exhibit No. 36 at Exhibit JRD-18 contains the NERC Standard for System Performance Following Loss of a Single Bulk Electric System Element (Category B) (Standard TPL-002-0a) and the NERC Standard for System Performance Following Loss of Two or More Bulk Electric System Elements (Category C) (Standard TPL-003-0a). These NERC Standards identify the remedial actions that a utility may take in various contingency situations. *See also* Hearing Exhibit No. 36 at Exhibit JRD-14 (WECC System Performance Criteria).

[183] Staff witness Dominguez testified that, in his professional engineering judgment, a load-shedding RAS is not a viable solution for a transmission line N-1 contingency.

278. The transmission into the San Luis Valley is radial transmission as it delivers energy from only one substation (*i.e.*, Poncha Substation for the 230kV transmission line and Poncha Junction Substation for the 115kV transmission line).

279. Looped service delivers energy from more than one substation and, thus, allows continuity of electric service in the event of loss (including the total loss of substations or of all transmission lines within a corridor) of one source of power. To assure reliability in the San Luis Valley, looped service is preferable to, and should be used in lieu of, radial service.[184]

280. Looped service into the San Luis Valley would allow Applicants to perform maintenance operations as necessary. They would no longer be restricted to performing maintenance operations during times when the San Luis Valley loads are low enough to permit the 230kV line to be taken out of service.

281. The ALJ reopened the record to receive evidence on the impacts, if any, of the 2010 amendment to § 40-2-124, C.R.S. (2010 RES amendments), on the need for the Project.

282. The 2010 RES amendments do not affect the reliability needs underlying Applicants' participation in the Project, and this is not in dispute. Both Applicants have an interest in eliminating the reliability issue in the San Luis Valley and in transmission additions that support projected load growing in the San Luis Valley. In addition, Tri-State has an interest in transmission additions that improve reliability in the area south and east of Pueblo and Walsenburg and in northeastern New Mexico and that supports load growth in those same areas. The 2010 RES amendments have no impact on these needs and purposes for the Project.

[184] The same is true for the areas south and southeast of Pueblo and Walsenburg.

283. There is no dispute that the Project will address the identified and studied reliability issues in the San Luis Valley and south and east of Pueblo and Walsenburg.

284. Additional findings of fact are contained in the remainder of the Decision.

b. Export of renewable generation from San Luis Valley.

285. Based on an analysis performed by Staff witness Dominguez, the maximum amount of new generation in the San Luis Valley that can be exported during minimum load conditions by existing transmission facilities is 65 MW.

286. The SB 91 Task Force Report assessed the capability of Colorado's utility-scale renewable resources to contribute electric power from the ten GDAs that the SB 91 Task Force identified. Hearing Exhibit No. 106. The Project will serve three GDAs: (a) the San Luis Valley GDA (solar); (b) the South and Southeast of Pueblo GDA (solar); and (c) GDA 8 (Walsenburg area - wind). The Project will connect these GDAs (which include ERZ 4 and ERZ 5) -- and the power generated from renewable resources located within the ERZs -- with the Denver Metropolitan area load center and other areas of Colorado.

287. The GEO released an analysis of utility-scale renewable energy development and high-voltage transmission infrastructure entitled the Renewable Energy Development Infrastructure (REDI) Report. Hearing Exhibit No. 70. Two REDI Report conclusions are particularly relevant to this proceeding: (a) Colorado must greatly increase its investment in utility-scale solar and wind generation; and (b) Colorado must accelerate construction of high-voltage transmission to deliver renewable energy from renewable resource-rich areas to Colorado's major load centers.

288. The SB 91 Task Force Report and the REDI Report are consistent with the conclusions of the Western Governors' Association and the U.S. Department of Energy's report

entitled Western Renewable Energy Zones - Phase I Report (June 2009). That report identifies the San Luis Valley region as a major solar hub with potential solar capacity of 2,303 MW and potential solar energy of 4,943 GWh/yr.

289. The Project is proposed, in part, to address the dilemma identified by the SB 91 Task Force and the dilemma described by WRA witness Darin:

> In the western U.S. and in Colorado, many of the best renewable energy locations are remote from population centers, and need expanded transmission access in order for these renewable sources of electricity to be brought to market. In this sense, these resources are location-constrained, and this finding applies to the world-class solar resources in Colorado's San Luis Valley. In many respects, renewable energy generation projects and transmission proposals present the classic chicken-and-egg dilemma: renewable energy projects are waiting for sufficient transmission to access customers (and move forward on project financing), while transmission providers are hesitant to make large investments before the generation projects are built. The proposed [Project] help[s] resolve that policy dilemma by building transmission to a renewable rich energy zone.

Hearing Exhibit No. 24 at 7:19-8:5.

290. Any significant development of new electric generation capacity in ERZ 4 and ERZ 5 requires the expansion of transmission capacity between southern Colorado and the Denver Metropolitan area load center. New transmission is essential to tapping renewable energy generation in those Zones.

291. In addition, new transmission to ERZ 4 and ERZ is consistent with Public Service's 2007 CRP. In its § 40-2-126(4), C.R.S., informational filing dated November 2008, Public Service identified the Project as a high priority transmission project.

292. The following characteristics make the San Luis Valley extremely desirable for development of solar resources, particularly solar photovoltaic (PV) technology: (a) the San Luis Valley elevation keeps solar panels cooler than lower elevation desert areas where extreme heat degrades solar panel performance; (b) the San Luis Valley elevation means there is less air for

the solar rays to penetrate, increasing solar PV output; and (c) the San Luis Valley's extremely clear skies allow panels to produce power with less interference from clouds.

293. The San Luis Valley contains Colorado's best solar energy resources because the San Luis Valley has the highest annual incidence of direct normal insulation.[185] This is borne out by the Large Generation Interconnection Process (LGIP) requests for interconnection of 1,220 MW of solar generation in ERZ 4 (the San Luis Valley).

294. Solar thermal generation and solar PV generation have declining cost curves, as does solar distributed generation.[186] The solar thermal with storage generation that Public Service would like to add to its system can be dispatched during peak load times and has a capacity credit (or value) of 100 percent.[187] Finally, the integration cost for solar thermal with storage is less that that for wind or central solar PV. Given these facts, Public Service favors the acquisition of solar thermal with storage facilities.

295. Every RFP for renewable resource generation issued by western utilities has been oversubscribed. This is true for the most recent renewable resource RFPs issued by Applicants. Unsuccessful bidders in one renewable resource RFP are likely to submit bids in the next or later renewable resource RFPS.

296. In general, it is an economic advantage to a bidder into a renewable resource RFP to bid to construct facilities where there are existing transmission facilities. Thus, bidders tend to submit bids to construct renewable resource generation in areas where there is transmission.

[185] This was NREL's conclusion, as discussed in the SB 91 Task Force Report (Hearing Exhibit No. 106).

[186] For example, according to Trinchera Ranch witness Sheffrin (July 30 tr. at 197-99), generic central solar PV generation will reach cost parity with generic natural gas combined cycle generation on a dollars per megawatt-hour basis ($/MWh) by the 2015-16 time period.

[187] By comparison, the capacity credit (or value) for solar PV is 60-70 percent and for wind is 12.5 percent. Capacity value is the unit's contribution to coincident peak.

297. Intervenor Blue Diamond is developing a new wind energy facility that will interconnect at the San Luis Valley Substation. Blue Diamond intervened in this proceeding because its planned wind project "would compliment [Applicants'] objectives in pursuing the subject Transmission Project," and "[b]ecause of the proximity of the proposed Transmission Project to [Blue Diamond's] planned wind project, as well as the uncertainties and challenges related to the siting of transmission, the decision in this proceeding will impact the development and perhaps the eventual construction of [Blue Diamond's] planned wind project." Blue Diamond Motion to Intervene at 4.

298. Public Service identified the following need for the Project: accommodation of new generation from renewable resources in ERZ 4 and ERZ 5 and delivery of that generation from the San Luis Valley (ERZ 4) and from the area south and southeast of Pueblo and Walsenburg (ERZ 5) to the Denver Metropolitan area load center and throughout Colorado.[188] In May 2009, when the Applications, pre-filed direct testimonies, and supporting technical studies were filed, Applicants estimated the export need at 200-600 MW of new solar generation in the San Luis Valley and approximately 250 MW of new wind resources in ERZ 5. In general, the Project and the studies supporting the CPCN Applications addressed accommodating these generation levels.

299. During the February hearing, Applicants' statement of export need for the Project was clarified. Rather than needing to accommodate 200-600 MW of generation in the San Luis Valley, Public Service identified a need to accommodate a total of 1129 MW of generation in the

[188] This Decision sometimes refers to this identified need as the export need for the Project. During the course of the proceeding, Parties also referred to this need as the export need.

San Luis Valley by 2018.[189] The export need from the Walsenburg and Pueblo area also increased from the originally-stated 250 MW to 1000 MW by 2020.[190]

300. The Project cannot accommodate the new solar and wind generation levels that Public Service has identified as its export need by 2018 or 2020. This is due to the interaction that occurs when there is simultaneous generation injection at the San Luis Valley Substation and the Calumet Substation.[191]

301. The ALJ reopened the record to receive evidence on two issues: (a) the effects, if any, of the amendments to the 2007 Colorado Resource Plan sought by Public Service on the need for the Project; and (b) the impact, if any, of the 2010 RES amendments on the need for the Project.

302. In the PSCo 2007 CRP proceeding, the Commission authorized Public Service to pursue acquisition of the resources identified in PSCo's preferred Portfolio 5 with some modifications. The Commission authorized Public Service to pursue acquisition of a total of 250 MW of Section 123 solar thermal with storage in the San Luis Valley and up to a total of 355 MW of solar resources in the San Luis Valley. Hearing Exhibits No. 59 (Decision No. C09-1257) and No. 55 (Decision No. C09-1434).

[189] Public Service reached the 1129 MW as follows: (a) full development of PSCo's 2007 CRP would yield 300-355 MW of solar generation in the San Luis Valley by 2015; (b) an additional 750 MW of solar resources (*i.e.*, three 250 MW solar thermal facilities with storage, as shown in PSCo's 2010 RES Compliance Plan filed in Docket No. 10A-772E (Hearing Exhibits No. 139, No. 140, and No. 141)), would be on-line in the San Luis Valley by 2018; and (c) there are an existing eight MW solar facility and a planned 16 MW solar facility in the San Luis Valley.

[190] Public Service indicated that, by 2018, additional wind resources beyond the 200-250 MW level identified in PSCo's 2007 CRP very likely will be developed in ERZ 5. Public Service plans to add another 1000 MW of wind resources by 2020, some of which will be located in ERZ 5. As of December 2009, Public Service was modeling generation injection in ERZ 5 at 1000 MW. Hearing Exhibit No. 11 at Exhibit TWG-3 at 2-2.

[191] As explained above, as the energy injection at San Luis Valley Substation increases, the energy injection at Calumet Substation decreases (and *vice versa*).

303. In its Application to Amend, Public Service requests that the Commission determine whether modification of the 2007 CRP is in the public interest and, if it is, the modifications that are in the public interest.[192] Public Service suggests that the Commission choose one of the following options: (a) continue contract negotiations for the acquisition of the 125 MW solar thermal with storage bid (at a now higher price) along with two 30 MW solar PV bids, for a total solar acquisition of 185 MW, all located in the San Luis Valley; (b) terminate contract negotiations with the 125 MW solar thermal with storage bidder, continue pursuing the two 30 MW solar PV bids, and begin pursuing an additional 30 MW solar PV bid for a total solar acquisition of 90 MW, all located in the San Luis Valley; or (c) acquire the 60 MW of solar PV (located in the San Luis Valley) currently under negotiation and delay acquisition of additional solar resources until the 2011 Energy Resource Plan Phase II acquisition process. Hearing Exhibit No. 133.

304. In its Application to Amend, Public Service states that, if the Commission determines that the Section 123 solar thermal with storage resource is in the public interest notwithstanding its increased cost, PSCo will continue negotiating a Power Purchase Agreement (PPA) for 125 MW of that resource. If the Commission determines that PSCo should no longer pursue a contract with the Section 123 resource, then Public Service requests that the Commission determine which of the other two options for contracting with solar PV facilities Public Service should pursue.

[192] By Decision No. C10-0839, the Commission dismissed the Application to Amend. Upon reconsideration, the Commission reversed that Decision; allowed the Application to Amend to proceed; and referred the Application to Amend to an ALJ. Decision No. C10-1076. *See also* Decision No. R10-1226-I (establishing tentative procedural schedule).

305. In its Application to Amend, Public Service explains that it has current plans to upgrade its San Luis Valley-Sargent-Poncha Junction 115kV transmission line. When the transmission line upgrade is completed, the export capability of existing transmission from the San Luis Valley will be 185 MW. Public Service states that, without the Project, 185 MW is the maximum export capability from the San Luis Valley.

306. As part of its Application to Amend, Public Service informed the Commission of four circumstances that have changed since the Commission authorized Public Service to acquire up to 355 MW of solar resources in the San Luis Valley.[193] Public Service informed the Commission in order to provide updated information in the event that the Commission found it useful.

307. The Commission will decide, in Docket No. 10A-377E, whether to grant the Application to Amend and, if it does, which option it will authorize Public Service to pursue. In the current transmission proceeding, the Application to Amend is relevant only insofar as there exists a possibility that the Commission will amend PSCo's 2007 CRP and will authorize Public Service to acquire fewer solar resources than were authorized in the 2007 CRP, thus potentially affecting the identified export need for the Project. This proceeding does not consider any resource acquisition issue except as it may relate to the identified export need for the Project. Even if a resource acquisition issue may relate to the identified export need for the Project and may be discussed in this Decision, nothing in this proceeding determines, guides, or impacts in

[193] The PSCo-identified changes are: (a) an increase in the incremental cost of the solar thermal with storage facility when the project is downsized from 250 MW to 125 MW; (b) the effect of implementing a carbon proxy cost in 2014 rather than 2010: (c) a decrease in the forecasted price of natural gas; and (d) a decrease in Public Service's energy sales forecast.

any way resolution of the issues presented in the Application to Amend or any other resource acquisition proceeding.

308. Public Service views the reduction in current solar acquisition, as evidenced by the Application to Amend, as temporary. Public Service intends to pursue acquisition of significant amounts of additional solar resources in future energy resource plans (beginning in 2011) and sees the San Luis Valley as Colorado's premium solar location.

309. Even if the Commission amends Public Service's 2007 CRP and sets the solar resource acquisition level at 60 MW (the lowest level proposed by PSCo), the record establishes a future need for the Project.

310. There is no evidence that the 2010 RES amendments affect in any way Applicants' reliability need for the Project.

311. The 2010 amendment of § 40-2-124(1)(c)(I)(E), C.R.S., increased the RES so that Public Service must supply at least 30 percent of its retail sales through renewable energy generation by 2020. Public Service does not need the Project to meet the RES for the year 2020.

312. The RES establishes the minimum amount of renewable generation that Public Service must acquire. The two percent retail rate impact cap establishes the maximum amount of renewable generation that Public Service may acquire.

313. As discussed above, acquisition of growing percentages of solar resources and of wind resources over and above the basic RES requirements is supported by Colorado public policy.

314. Public Service intends to obtain the maximum amount of renewable generation permitted under the two percent retail rate impact cap. Within the constraints of the two percent retail rate impact cap, Public Service intends to acquire solar resources located in the San Luis

Valley because it is the best solar resource and there are developers who are willing to develop projects in the San Luis Valley.

315. In its 2010 RES Compliance Plan, Public Service provided its plan to meet its RES obligations for the period 2010 through 2020. Hearing Exhibit No. 139. In that plan, Public Service showed three placeholder 250 MW solar thermal with storage generating units: one would come on-line in 2016, one in 2017, and one in 2018. Given the high-quality solar resource located in the San Luis Valley, it is highly likely that solar resources represented by these placeholder units will be developed in the San Luis Valley.

316. As to the effect of the new three percent DG set-aside, the 2010 RES amendments allow up to half of the three percent DG set-aside to be met with wholesale DG, defined as a renewable energy resource in Colorado with a nameplate rating of 30 MW or less. Sections 40-2-124(1)(a)(II), (IV), (V), and (VI), C.R.S.; § 40-2-124(1)(c), C.R.S. The wholesale (*i.e.*, up-to-30 MW) DG facilities can be central solar (*i.e.*, not located on a customer's premises). Sections 40-2-124(1)(a)(II), (IV), (V), and (VI), C.R.S. Under the statute, it appears that Public Service may be able to acquire multiple 30 MW (or less) central solar PV facilities in the San Luis Valley.[194] Public Service could use RESA dollars toward acquisition of solar PV resources in the San Luis Valley or elsewhere in Colorado.

317. Based on the evidence in this proceeding, it appears that most of Public Service's three percent DG set-aside may be able to be met by utility-scale resources because of the way in which distributed generation is defined in §§ 40-2-124(1)(a)(II), (IV), (V), and (VI), C.R.S. Assuming that is correct, Public Service is able to count as DG (and count as resources that meet

[194] These appear to be the generic central solar PV resources that Trinchera Ranch witness Sheffrin believes will reach cost parity with generic natural gas combined cycle units on a dollars per megawatt-hour basis ($/MWh) by the 2015-16 time period.

the RES) resources that, previously, it could not count toward meeting its RES requirement (for example, PSCo's 100-year-old hydro plants and existing solar resources). While the percentage of PSCo's retail load that must be met by DG has increased from zero to three percent, Public Service needs only approximately 32 MW in resource acquisitions to fulfill that requirement.

318. The change from a three percent solar set-aside to a three percent distributed generation set-aside does not affect the need for the Project.

319. To acquire renewable resource generation, Public Service uses -- and will continue to use -- funds collected through the RESA, pursuant to § 40-2-124, C.R.S. Subject to the exception for DG customers, the two percent retail rate impact rule (§ 40-2-124(g), C.R.S.) limits the amount of money that can be collected through the RESA.

320. There are RESA dollars available in the future to support acquisition of renewable resource energy from the three 250 MW placeholder solar thermal with storage units in Public Service's 2010 RES Compliance Plan and additional renewable resource generation. Hearing Exhibits No. 139 and No. 141. Hearing Exhibit No. 141 (which contains corrected tables from the 2010 RES Compliance Plan) shows the rolling RESA balance. These tables already include the cost of the three 250 MW solar thermal with storage placeholders and show that the RESA balance turns positive in either 2012 or 2015, depending upon when the proxy cost of carbon begins,[195] and accumulates to hundreds of millions of dollars by 2020.

[195] If the proxy cost of carbon begins in 2010 (as is now the case), the RESA balance is positive in 2012; and the RESA percentage is zero by 2016. Hearing Exhibit No. 141 at Table 7-3. If the proxy cost of carbon begins in 2014, the RESA balance is positive in 2015; and the RESA percentage remains at two percent through at least 2016. *Id*. at Table 7-4.

321. The 2010 RESA amendments gave the Commission regulatory tools that can be used to ensure that the three percent DG set-aside, the SRO, and/or the DG customers not contributing their fair share to Public Service's RESA do not adversely affect the availability of RESA dollars. These tools are: (a) the ability of the Commission to lower the three percent DG set-aside as of January 1, 2015 (§ 40-2-124(1)(c)(II)(C), C.R.S.); (b) the ability of the Commission to reduce the Standard Rebate Offer if market changes support the change (§ 40-2-124(1)(e)(I.5), C.R.S.);[196] and (c) the ability of the Commission to assure that DG customers contribute their fair share to PSCo's RESA (§ 40-2-124(1)(g)(IV)(B), C.R.S.). Either singly or collectively, these regulatory tools have the potential to make RESA dollars available to Public Service for its acquisition of renewable resource generation.

322. In addition, the 2010 RES amendments added § 40-2-124(1)(g)(I)(B), C.R.S., the provision that, if the Commission approves, permits Public Service to acquire renewable resources through advancing RESA funds to pay for the acquisition and that requires that any such Commission-approved advancement of RESA funds be repaid with interest from future RESA collections. Under this provision, Public Service advances monies to acquire renewable resources so that those resources are acquired earlier than they otherwise would be. Ratepayers benefit from the earlier acquisition of additional renewable resources although, as RESA balances go negative, a portion of the RESA payments go toward paying a carrying charge on RESA balances.

[196] Reducing the SRO has the potential to make substantial RESA funds available to acquire renewable resources because, at present, the majority of RESA dollars paid out are for SROs for the DG Solar Reward program.

323. Tri-State Members' RES requirement is unaffected by the 2010 RES amendment. Tri-State needs the Project so it can acquire renewable resource generation and deliver it to its Members so they can meet their RES requirement.

324. There is a strong probability that a significant amount (*i.e.,* 1100 MW or more) of solar generation will be developed in the San Luis Valley within the next ten years (*i.e.*, by 2020). There is a strong probability that a significant amount of wind generation and solar generation will be developed in ERZ 5 within the next ten years (*i.e.*, by 2020).

325. Colorado's public policy strongly supports and encourages expansion of the renewable energy infrastructure, both generation and transmission. This includes the advanced planning and construction of transmission to areas in which renewable resources have been determined to be plentiful. Section 40-2-126(4), C.R.S.

326. The Project (including the San Luis Valley-Calumet Segment) is a transmission project that is necessary for the delivery of renewable resources generation from southern Colorado to the Denver Metropolitan area load center and elsewhere in Colorado. Construction of the Project must begin as soon as possible so that the necessary transmission facilities will be available when the renewable resource generation comes on-line.

327. Additional findings of fact are contained in the remainder of the Decision.

c. Inadequacy of Existing Facilities.

328. The existing transmission lines into the San Luis Valley cannot and do not address the existing reliability issue in the San Luis Valley. The existing facilities in the San Luis Valley are inadequate to meet the identified reliability need for the Project, including the San Luis Valley-Calumet Segment.

329. The existing transmission facilities cannot export more than 65 MW, and then only during light load conditions, from the San Luis Valley. The existing transmission facilities are inadequate to meet the identified export need for the Project, including the San Luis Valley-Calumet Segment.

330. With the planned upgrade of the 115kV San Luis Valley-Poncha Junction transmission line, the transmission facilities in the San Luis Valley will have the capability of exporting 185 MW from the San Luis Valley. The upgraded transmission facilities will be inadequate to meet the identified export need for the Project, including the San Luis Valley-Calumet Segment.

331. Additional findings of fact are contained in the remainder of the Decision.

d. Applicants' evaluation of alternatives.

332. Applicants began studying precursors to the Project in 1997.[197] In at least the 1997 Study and the 2008 Study, specific alternative transmission corridors going north from the San Luis Valley Substation were identified, studied, and evaluated. In each study, the participants determined that a transmission line going east from the San Luis Valley Substation was the preferred alternative.

333. Prior to filing the Applications, Applicants identified and examined alternatives to the Project, including the San Luis Valley-Calumet Segment. Since the filing the Applications, Applicants have examined (in the 2009 Poncha Study, in Hearing Exhibit No. 128, and in the 2009 Stability Analysis) the Trinchera Ranch alternatives.

334. Additional findings of fact are contained in the remainder of the Decision.

[197] The studies and analyses done by Applicants are discussed *supra*.

2. Intervenors' positions and responses.

335. Several Intervenors both stated their support for the Project and asked the Commission to place one or more conditions on the CPCN. From the testimony the ALJ could not determine whether an Intervenor that supported granting a CPCN for the Project and recommended a condition (a) supported the CPCN unconditionally or (b) supported the CPCN only if the Commission's attached the Intervenor's condition(s) to the CPCN. To clarify the situation, the ALJ informed the Parties that, if an Intervenor that recommended a condition did not state in its Statement of Position that its support for the Project was unconditional, the Commission would assume that imposition of the Intervenor's requested condition(s) is required for that Intervenor to support the Project. Notwithstanding the ALJ's advisement, many Intervenors that stated their support for the Project and recommended conditions were unclear in their post-hearing submissions about whether support for the Project was contingent on imposition of their recommended condition(s).[198]

a. Bar Nothing Ranches.

336. Bar Nothing generally supports granting the CPCN. Bar Nothing, however, proposes that the Commission place conditions on the CPCN for the Project. In its Statement of Position, Bar Nothing is unclear whether its support for the Project is premised on the Commission's attaching Bar Nothing's conditions to the CPCN.

b. Colorado Open Lands.

337. Colorado Open Lands takes no position with respect to the Project.[199]

[198] The suggested conditions are discussed below in a separate section of this Decision.

[199] Colorado Open Lands did not file a statement of position or a response to a statement of position. One finds its position with respect to the Project in the written and oral testimony of Colorado Open Lands witness Pike.

338. Colorado Open Lands' concern is that no environmental analysis was done of either the Project or the alternatives evaluated in the 2008 Study and the 2009 Study. Colorado Open Lands believes that, before a decision on the CPCN Applications can be made, the environmental impacts, including visual and other impacts on existing conservation easements held by Colorado Open Lands, must be evaluated. It states that the environmental impact evaluation should include analysis of: (a) the Project, (b) the alternatives studied in the 2008 Study and in the 2009 Study, and (c) any other alternative proffered in this proceeding, even if that alternative is outside the Project Study Area. Colorado Open Lands also states that an environmental analysis should be presented and considered by the Commission in this transmission proceeding notwithstanding, and in addition to, the RUS EIS process.

339. With an appropriately-done and comprehensive environmental evaluation, asserts Colorado Open Lands, the Commission will be in a position "to weigh the relative environmental impacts of the [Project] versus the alternatives." Hearing Exhibit No. 27 at 20:7-10. According to Colorado Open Lands, weighing the relative environmental impacts of the Project and of the alternatives is an important aspect of the Commission's consideration of the CPCN Applications because (a) the present preferred Project route is likely to have negative impacts on the existing conservation easement on Trinchera Ranch and may have negative impacts on other sensitive areas (*e.g.*, La Veta Pass and conservation easements within the Study Area) that should be protected; and (b) a feasible alternative may exist that, if built, would have a relatively smaller environmental impact than the Project.

c. Governor's Energy Office.

340. GEO supports the Project and recommends that the Commission approve the request for a CPCN for the Project. GEO states that approval of the CPCN will meet these

important objectives: (a) securing reliable electric service in southern Colorado; (b) implementing the principal objective of the New Energy Economy;[200] (c) making progress toward achieving the objectives set forth in the Climate Action Plan; and (d) building essential modernization of Colorado's transmission infrastructure in anticipation of meeting the electric power needs of Colorado's growing population.

d. Interwest Energy Alliance.

341. Interwest supports approval of a CPCN for the Project because the Project is necessary to remedy the acknowledged, existing, and immediate reliability requirements of electric consumers and to provide transmission for renewable resource generation located in, and to be constructed in, southern Colorado. Interwest recommends that the Commission place two conditions on the Project CPCN.[201] Interwest states that "Colorado requires additional transmission build-out and we should not continue to let perfection be an enemy of the good." Interwest SOP at 2 & n.1.

342. Interwest states that solar thermal resources and solar PV resources are, and will continue to be, an important part of Colorado's energy future. In addition, according to Interwest, the economics likely will warrant acquisition of solar thermal with storage in the future because (a) the highest cost electricity is purchased during Public Service's summer peak; (b) solar thermal with storage can be dispatched (and other solar energy is available) during these

[200] This objective is securing Colorado's energy future, its economic future, and its environmental future through greater reliance on renewable energy and encouragement of renewable energy-related businesses.

[201] The proposed conditions are: (a) require Applicants to provide a long-term master plan or transmission conceptual plan before they file for approval of additional transmission and (b) require Applicants to obtain sufficient ROW for the Project to allow for future expansion of the transmission lines. From reading Interwest's SOP, the ALJ cannot determine whether the first condition (*i.e.*, the master or conceptual plan) is or is not a condition precedent to Interwest's support for the Project. It is clear, however, that the second condition (*i.e.*, the wider ROW) is "not an absolute condition precedent to [Interwest's] support of the" Project. Interwest SOP at 2 & n.1. The conditions are discussed below.

peak hours; and (c) as a result of their availability during peak hours, solar resources are particularly valuable relative to other (*e.g.*, intermittent) renewable resources. Further, Interwest states that there are developers ready, willing, and able to develop solar generation facilities in the San Luis Valley; that the principal obstacle to that development is the absence of transmission; and that the Project will remove that obstacle. Finally, Interwest states that the Project will deliver wind and solar resources from southern Colorado to the Denver Metropolitan area load center and throughout Colorado.

343. Interwest observes that Trinchera Ranch witness Sheffrin listed the principles that, in her opinion, a rational decision-maker will use when making large capital investments in the face of uncertainty: to be prudent, a utility should stay flexible, stay small, look at alternatives, and wait until it is ready. Interwest asserts that the record establishes that Applicants applied these principles when they decided to build the Project and that further delay and additional study are unnecessary.

344. Interwest hopes that this CPCN proceeding will signal a transition in Colorado toward transmission planning that will allow creation of a high-speed transmission highway for renewable energy to serve PSCo's and Tri-State Members' load.

e. Office of Consumer Counsel.

345. The OCC takes no position on the Project. OCC addressed only the CPCN conditions proposed by WRA.

f. Pole Canyon Transmission.

346. Pole Canyon recommends that the Commission grant the Project CPCN as sought by Applicants. Pole Canyon states that the record establishes that the Project is consistent with the State's clear energy policies and that, if approved, the Project will deliver to the Front Range

both significant amounts of solar generation from the San Luis Valley (and elsewhere in southern Colorado) and significant amounts of wind generation from southern and southeastern Colorado.

g. Staff of the Commission.

347. Staff supports the Project but proposes that conditions be placed on the CPCN. If the Commission does not adopt Staff's proposed conditions, Staff recommends that the Commission grant the requested CPCN as proposed by Applicants.

348. Staff agrees with Applicants that the Project will address, and is necessary to remedy, the identified reliability issues in southern Colorado. In addition, Staff agrees with Applicants that the Project is necessary to deliver renewable resource generation to the Denver Metropolitan area load center and throughout Colorado. Finally, Staff states that Staff witness Dominguez considered all of the different alternatives and concluded that, from a transmission planning perspective, the best option is the Project (including the San Luis Valley-Calumet Segment) proposed by Applicants.

h. Trinchera Ranch.

349. Trinchera Ranch opposes the San Luis Valley-Calumet Segment, recommends that the Commission deny a CPCN for that Segment, and may recommend that the Commission deny the requested CPCN entirely.[202] [203] Trinchera Ranch argues that Applicants have neither established a need for the Project nor done an adequate evaluation of alternatives to the Project.

[202] Trinchera Ranch's position with respect to the CPCN is not clear. In testimony and in portions of its Statement of Position, Trinchera Ranch opposes only the San Luis Valley-Calumet Segment of the Project. It assumes that the remaining components of the Project (*i.e.*, the Calumet Substation, the Calumet-Comanche Segment, and the Calumet-Walsenburg Segment) are granted a CPCN and are constructed. In other portions of its Statement of Position, however, Trinchera Ranch seems to recommend that the Commission deny the CPCN Applications in their entirety because Applicants have not met their burden of proof.

[203] If the Commission grants the requested CPCN, Trinchera Ranch recommends that the Commission attach conditions to the CPCN. The recommended conditions are discussed below.

Assuming a need is established, Trinchera Ranch asserts that its alternatives are preferable to, and should be constructed in lieu of, the San Luis Valley-Calumet Segment.

(a) Evidence sufficient to support issuance of transmission CPCN.

350. To understand Trinchera Ranch's arguments that Applicants have not met their burden to show need for the Project, one must know its analytical framework. Trinchera Ranch begins its analysis with § 40-5-101, C.R.S., for the proposition that the requested CPCN can be issued only if Applicants show that the "present or future public convenience and necessity require or will require" the transmission facilities. Citing Decision No. C82-0199 at 20, Trinchera Ranch states that Commission has determined that the concept of necessity has two parts: (a) whether the requested new or additional facilities are required;[204] and (b) if new facilities are required, whether the facilities as proposed by the applicant utility are appropriate to the need.

351. Trinchera Ranch states that, historically, to establish need for new transmission the applicant utility *either* identified specific generation projects that the proposed transmission project would connect to the grid in order to deliver the generation to the load center[205] *or* produced power flow studies, reliability analyses, and/or load analyses that showed the reliability need for the proposed transmission *or* both. Trinchera Ranch notes that, in this proceeding, the Commission addressed the issue of need and stated that the "renewable energy standards, particularly solar electric generation standards set forth in § 40-2-124, C.R.S.," and the "general

[204] Trinchera Ranch states that, under the requirement, Applicants must demonstrate a need for the Project that cannot be satisfied by existing facilities. *City of Fort Morgan v. Colorado Public Utilities Commission*, 159 P.3d 87, 93-94 (Colo. 2007) (stating that an applicant must make a showing that existing service in the area is either unavailable or substantially inadequate).

[205] This is the equivalent of the export need in this proceeding.

legislative policy directives related to development of renewable energy such as those found in § 40-2-123, C.R.S.," may provide guidance in determining whether there is a need for the Project. Decision No. C09-1004 at ¶ 12. Trinchera Ranch maintains that consideration of these standards and directives must occur within the framework of § 40-5-101, C.R.S., which permits a finding of need only where public convenience and necessity "require[s]" or "will require" new construction. Consequently, Trinchera Ranch asserts that, at a minimum, to satisfy the first prong of the necessity analysis Applicants must produce hard evidence of their future need[206] and cannot rely on speculative evidence of future need.

352. Trinchera Ranch states that the necessary hard evidence should take the form of either a CPCN for the utility-owned generation resource(s) that would be served by the transmission or a signed PPA with one or more third-party generators that would be served by the transmission. In Trinchera Ranch's view, a resource plan that authorizes acquisition of resources which, if built, would be served by the transmission line, standing alone, is not hard evidence that is adequate to meet the first prong of the necessity test.

353. If Applicants satisfy the first prong of the necessity analysis with hard evidence, Trinchera Ranch states that Applicants must satisfy the second prong of the necessity analysis: demonstration that "the particular system or facility proposed by the applicant utility is appropriate to the need" (Decision No. C82-0199 at 20). According to Trinchera Ranch, this demonstration requires Applicants to show that the Project meets the identified need and "avoid[s] 'an excessive investment in relation to productivity or efficiency'" (Decision No. C82-

[206] For this proposition, Trinchera Ranch cites Decision No. C82-0199 at 31 (in denying application for CPCN, the Commission observed that there was "no hard evidence in the record ... by which the projected load of any potential Colorado-Ute member large customer can be scrutinized for accuracy and reliability") and at 32 (noting the absence of "any quantified or quantifiable data reflecting the impact of any saturation studies on Colorado-Ute's 1984 and 1988 projections").

0199 at 22 (internal citation omitted)).[207] Trinchera Ranch points out that, in Decision No. C82-0199 at 43, the Commission denied a CPCN where the applicant "failed to prove that the existing transmission system, with construction of some modifications significantly less extensive than the [applicant's] proposal, ... could not meet the [identified] needs" for the next five to eight years. Citing Decision No. C08-0444 and Decision No. C06-0786 (Hearing Exhibit No. 90), Trinchera Ranch asserts that the Project's appropriateness can only be demonstrated through examination of feasible cost-effective alternatives[208] and that it is Applicants' (and not an intervenor's) responsibility and duty to study alternatives.[209] Finally, Trinchera Ranch points out that, in making CPCN determinations, the Commission "has a general responsibility to protect the public interest regarding utility rates and practices." *City of Montrose v. Public Utilities Commission*, 629 P.2d 619, 624 (Colo. 1981) (internal citations omitted) (*City of Montrose*).

(b) Applicants' failure to demonstrate need.

354. Applying its analytical framework, Trinchera Ranch asserts that Applicants have failed to meet their burden of proof with respect to necessity because (a) there is no hard evidence that the San Luis Valley solar resources contained in PSCo's 2007 CRP will be developed; (b) there is no hard evidence of an export need from the San Luis Valley that cannot be accommodated by the existing transmission system with already-planned upgrades to PSCo's

[207] Trinchera Ranch asserts that, in two recent transmission line proceedings, the Commission reiterated this requirement: Decision No. C08-0444 at ¶¶ 55, 71 ("[p]owerflow studies and contingency studies are the means by which electric utilities investigate, inter alia, the need for, whether to undertake, and the impact of building a transmission project" and finding that powerflow studies in that case demonstrated that the project met the need and was the least expensive) and Decision No. C06-0786 (Hearing Exhibit No. 90) at ¶ 64 (same).

[208] Pursuant to Rule 4 CCR 723-3-3102(b)(VIII), as part of the CPCN Applications if applicable, Applicants must provide information on any alternatives studied; the costs for those alternatives; and the criteria used to rank or to eliminate alternatives.

[209] Trinchera Ranch notes that, in Decision No. C82-0199, the Commission stated that "feasibility studies to determine cost effective alternatives to [the applicants'] proposal ... which will meet the realistic transmission needs of its ... system" must be performed (*id*. at 43) and that alternatives suggested by other transmission planning experts should be considered in such studies. *Id*. at 43-48.

San Luis Valley-Sargent-Poncha Junction 115kV transmission line; (c) there is no hard evidence of an export need from the San Luis Valley beyond that shown in Public Service's 2007 CRP; and (d) in light of Applicants' failure to establish an export need, the San Luis Valley-Calumet Segment is overbuilt to remedy the reliability issue in the San Luis Valley. If there is hard evidence of necessity (which Trinchera Ranch disputes), Trinchera Ranch asserts that: (a) the Project cannot meet Public Service's transmission need to export 1129 MW from ERZ 4 (San Luis Valley) in 2018 and simultaneously to export 850 MW from ERZ 5 (area south and southeast of Pueblo and Walsenburg) in 2018 and to export 1000 MW from ERZ 5 by 2020; (b) Applicants did not perform the necessary technical analyses to determine whether the San Luis Valley-Calumet Segment can be expanded to meet the 2018 export need in the San Luis Valley; and (c) because it cannot meet the 2018 export need and has not been shown to be expandable to meet that need, the San Luis Valley-Calumet Segment is under-built for the identified export need.

355. If there is an established need for additional transmission into the San Luis Valley (which Trinchera Ranch disputes), Trinchera Ranch asserts that its alternatives for the San Luis Valley-Calumet Segment (and especially TR1AE) are preferable to the San Luis Valley-Calumet Segment because the Trinchera Ranch alternatives meet the identified reliability and export needs and are lower cost than the Project. Trinchera Ranch asserts that one of its alternatives should be constructed in lieu of the San Luis Valley-Calumet Segment.[210]

356. In PSCo's 2007 CRP, the Commission authorized Public Service to acquire up to 355 MW of new solar generation in the San Luis Valley and 250 MW of new wind generation in

[210] Trinchera Ranch does not oppose -- and, in fact, supports -- construction of the other three components of the Project.

ERZ 5. The 2007 CRP addresses Public Service's resource need through 2015 and authorizes, but does not require, Public Service to acquire those renewable resources.

357. The first argument presented by Trinchera Ranch addresses Public Service's 2007 CRP. Trinchera Ranch argues that there is a significant question concerning whether the 355 MW of solar generation authorized in that CRP will be developed in the San Luis Valley. In support of this argument, Trinchera Ranch states: (a) as of early February 2010, Public Service had not entered into a single contract for any of its 2007 CRP solar resources; (b) the Commission authorized Public Service to acquire up to 355 MW of solar resources and permitted Public Service to acquire fewer resources, provided Public Service evaluates what level of capacity of a resource is most appropriate during negotiations with the bidder (Decision No. C09-1257 (Hearing Exhibit No. 59) and Decision No. C09-1434 (Hearing Exhibit No. 55)); and (c) given Public Service's preference for geographic diversity of solar resources, there are no assurances that all 355 MW will be developed in the San Luis Valley.[211]

358. The second argument presented by Trinchera Ranch addresses Public Service's 2007 CRP and assumes that the 2007 CRP is amended. The information provided by Public Service in its Application to Amend establishes that the existing transmission system into San Luis Valley with the planned upgrades to PSCo's San Luis Valley-Sargent-Poncha Junction 115kV transmission line can accommodate up to 185 MW of new generation. If the Commission grants the Application to Amend and reduces the amount of renewable resources that Public Service is authorized to acquire in its 2007 CRP, 185 MW is the maximum amount of new generation in the San Luis Valley that Public Service will acquire through 2015 under its 2007 CRP. Trinchera Ranch asserts that, if the PSCo 2007 CRP is amended, there is no dispute

[211] For example, areas such as Pueblo have excellent potential for solar generation.

that the San Luis Valley-Calumet Segment is not needed to accommodate the renewable generation proposed to be built in the San Luis Valley through 2015.

359. In addition, assuming the 2007 CRP is amended, Trinchera Ranch states that there is no dispute that, beyond the resources in the amended 2007 CRP, Public Service needs no significant new generation resources to meet its forecasted demand through 2015. With resource additions in the San Luis Valley at the 60-185 MW level, in 2015 there will be either a small surplus or a small deficit (40 MW at most) of generation; and Public Service stated that this will not create a resource need. Trinchera Ranch asserts that this further undercuts the asserted export need as a basis for the Project.

360. The third argument presented by Trinchera Ranch addresses the period beyond 2015.[212] Trinchera Ranch disputes Public Service's claimed need to export more than 355 MW from the San Luis Valley (particularly the claimed need to export 1129 MW from the San Luis Valley). Trinchera Ranch asserts that Applicants have produced no hard evidence that the Commission can examine in order to assess for accuracy and reliability the claimed need to export 1129 MW from the San Luis Valley. In the absence of hard evidence to support the claimed need in excess of 355 MW, Trinchera Ranch asserts that Applicants have not met the first prong of the necessity standard for any amount of export need over 355 MW.

361. The number beyond the 355 MW figure is based principally on the 750 MW of additional solar thermal resources identified in Public Service's 2010 RES Compliance Plan (*i.e.*, three 250 MW generating units). Hearing Exhibits No. 139, No. 140, and No. 141. Trinchera

[212] 2015 is the end of the acquisition period for PSCo's 2007 CRP.

Ranch asserts that there is no hard evidence that any of the three 250 MW solar generation units will be constructed at all, let alone constructed in the San Luis Valley.[213]

362. In addition, Trinchera Ranch argues that the evidence establishes that the uncertainty surrounding the three 250 MW units is exacerbated by changed economic and legislative circumstances that make it less likely that Public Service will acquire these resources. To acquire renewable resources, Public Service uses RESA dollars. Trinchera Ranch argues that the availability of RESA dollars to acquire the three 250 MW units is extremely questionable because (a) Table 7-3 and Table 7-4 in Hearing Exhibit No. 141 show that the availability of RESA funds rests on economic assumptions and at least four of those assumptions have changed[214] or may change, with the result that Public Service's projection of available RESA funds is overly-optimistic;[215] (b) the 2010 RES amendment increased the minimum amount of renewable resources that Public Service must acquire to 30 percent of its retail electric sales in the year 2020 and thereafter and did not increase the retail rate impact cap of two percent; (c) at

[213] Trinchera Ranch states that the uncontested evidence establishes the following concerning the 750 MW in new solar thermal resources: (a) the resources are placeholders, are speculative, and are uncertain; (b) Public Service cautioned that the modeling data used to generate these numbers should be viewed with a "great deal of caution" and a "large degree of uncertainty" as these resources will be "completely reevaluated" by 2016 (Hearing Exhibit No. 47 at 24:5-15; Feb. 1 tr. at 302:19-23); (c) Public Service has tied neither specific project resources nor facilities to the 750 MW, has identified no location for the resources, has determined no actual costs, has issued no request for proposals, and has entered into neither a contract nor a PPA for any of the 750 MW; and (d) no developer has demonstrated a willingness to commit to build any of the three 250 MW solar thermal facilities.

[214] The changes are: (a) an increase in the incremental cost of the solar thermal with storage facility when the project is downsized from 250 MW to 125 MW; (b) the year for beginning to use a carbon proxy cost moves from 2010 to 2014: (c) a decrease in the forecasted price of natural gas; and (d) a decrease Public Service's energy sales forecast. These are the changes that Public Service identified in its Application to Amend and that are discussed above. In Docket No. 10A-377E, the Commission will consider the impact (if any) of these changes on PSCo's 2007 CRP and the resources to be acquired under that plan if it is amended.

[215] For example, a change from 2010 to 2014 in the start date for use of the carbon proxy cost (all else remaining constant) results in a positive RESA balance in 2015 and a two percent RESA through at least 2016. Hearing Exhibit No. 141 at Table 7-4. Without the change in start date and all else remaining constant, the RESA balance is positive in 2012; and there is a reduction in the RESA percentage beginning in 2013 (*i.e.*, RESA at one percent in 2013 and at zero in 2016). *Id*. at Table 7-3. As another example, all else remaining constant, as the negative RESA balance grows, the portion of RESA collections that PSCo can use to acquire renewable resources shrinks because a growing portion of the RESA collections goes to pay interest to Public Service on the RESA negative balance.

present, the costs associated with acquisition of distributed generation constitute the majority of RESA expenditures, thus leaving few RESA dollars for acquisition of renewable resource generation; (d) the combination of the reduction in available RESA dollars, the DG costs, and the increase in the RES to 30 percent puts pressure on Public Service to acquire the most cost-effective renewable resources; and (e) as a result, Public Service is less likely to acquire the three 250 MW generating units because solar thermal with storage is not as cost-effective as other renewable resource generation.[216] Due to the unavailability of necessary RESA dollars, according to Trinchera Ranch, Public Service's acquisition of the additional 750 MW solar thermal with storage is extremely unlikely.

363. For these reasons, Trinchera Ranch argues that the Public Service 2010 RES Compliance Report and especially the three 250 MW solar thermal placeholder units are unsupported speculation. It urges the Commission not to rely on this speculation as the basis for a determination that there is a need to export renewable resource generation beyond the (up to) 355 MW authorized in PSCo's 2007 CRP.

364. Trinchera Ranch contends that, once one puts aside Public Service's 2010 RES Compliance Plan, the remaining evidence as to whether (and how much) solar generation in the San Luis Valley will be developed in the period beyond 2015 consists of unsubstantiated projections based on the potential for solar development. Trinchera Ranch asserts that an unsupported averment that there is the prospect of solar development is not hard evidence that meets the first prong of the necessity test. It notes that there is no dispute that the

[216] Trinchera Ranch points out that the cost to construct a solar thermal with storage facility similar in size and scope to each of the three 250 MW units is estimated to be in the range of $1.5 to $2 billion. In comparison, wind generation and solar PV generation, both renewable resources pursued by Public Service in its 2007 CRP, are significantly more cost effective.

public convenience and necessity does not require new transmission to satisfy a mere potential for development.

365. In addition, Trinchera Ranch states that the solar resource potential is not the sole factor in determining future solar development in the San Luis Valley.[217] Trinchera Ranch asserts that Applicants have not produced hard evidence that addresses any of the pertinent factors. According to Trinchera Ranch, this supports its position that there is no hard evidence of future development of solar resources in the San Luis Valley.

366. Finally, Trinchera Ranch states that the record shows that, to satisfy the non-DG requirement in the amended RES, Public Service needs no new renewable resources of any kind, including the three 250 MW solar thermal placeholders, until 2030. Trinchera Ranch argues that, given that Public Service plans its transmission system to accommodate resource acquisitions that will occur within next ten years, constructing the Project now for a need that will not exist for 20 years is unreasonable and unsupportable.

367. The fourth argument presented by Trinchera Ranch assumes that the export need has not been established and that the only proven need for the San Luis Valley-Calumet Segment is remedying the reliability issue in the San Luis Valley. Trinchera Ranch observes that the 1997 Study, the 2004 Study, and the 2008 Study demonstrate that a single-circuit 230kV transmission line (including the Trinchera Ranch alternatives to the north) out of the San Luis Valley is capable of addressing this reliability need. Given this undisputed evidence,

[217] Trinchera Ranch points out that the record establishes that future development of solar resources, and the amount of solar resources developed, in the San Luis Valley will depend on a number of variables: (a) the development of solar technology in the future; (b) the cost effectiveness of the solar resource (noting that, as of today, the cost per megawatt of solar generation is significantly higher than the cost per megawatt of wind generation); (c) the availability of land (noting that solar thermal with storage facilities require significant amounts of land); (d) the availability of water (noting that San Luis Valley's water supply is limited); and (e) Public Service's goal of geographic diversity for its solar resources.

Trinchera Ranch argues that the double-circuit 230kV San Luis Valley-Calumet Segment is overbuilt to address the identified reliability need and, thus, does not meet the second prong of the necessity test (*i.e.*, the facility must be sized appropriately to meet the identified need).

368. The fifth argument presented by Trinchera Ranch assumes that Applicants have presented sufficient evidence of an export need beyond 2015 (which Trinchera Ranch disputes). With that assumption, Trinchera Ranch asserts that the Project cannot meet Public Service's claimed need in 2018 for transmission to export 1129 MW of new generation from ERZ 4 (the San Luis Valley) and more than 800 MW of new generation from ERZ 5 (the area south and southeast of Pueblo and Walsenburg). The evidence establishes that the Project cannot meet this need.[218] Trinchera Ranch argues that, because the second prong of the necessity test requires that the Project be sized to satisfy the identified need (*i.e.*, to accommodate the export need in 2018) and the Project demonstrably has insufficient transfer capability to accommodate that need, the Commission must deny the CPCN Applications or, at least, must not grant a CPCN for the San Luis Valley-Calumet Segment.

369. The sixth argument presented by Trinchera Ranch assumes that Applicants have presented sufficient evidence of an export need beyond 2015 (which Trinchera Ranch disputes) and then addresses Applicants' assertion that the Project can be expanded to meet the export need in 2018. Trinchera Ranch notes that Applicants have performed no studies to determine whether the Project can be expanded, and (if it can be) to determine the cost to expand the Project, to

[218] The Project cannot export 1129 MW of additional generation from the San Luis Valley because, due to regional system constraints, the limit is 925 MW with a double-circuit 230kV line when there is simultaneous injection at the Calumet Substation.

meet the 2018 levels of export need.[219] Trinchera Ranch asserts that not-yet-performed powerflow studies and transient stability analyses are essential to establish that the Project can be expanded to meet the stated 2018 export need. Trinchera Ranch argues that, in view of the massive scope and cost of the Project, the acknowledged need for regional transmission upgrades in order to expand the Project's transfer capability, and Applicants' failure to complete the essential technical studies, the Commission must deny the CPCN Applications or, at least, must not grant a CPCN for the San Luis Valley-Calumet Segment.

370. The seventh argument presented by Trinchera Ranch is that, as to the export need for the Project, the San Luis Valley-Calumet Segment is overbuilt because (a) with 600 MW of generation injection at the San Luis Valley Substation and 800 MW of generation injection at the Calumet Substation,[220] the 2009 Study shows that only 14 percent of the thermal capacity of the San Luis Valley-Calumet Segment is used; (b) with injection levels at a maximum of 185 MW at the San Luis Valley Substation[221] and at 250 MW at the Calumet Substation[222] through 2015, the percentage of the thermal capacity of the San Luis Valley-Calumet Segment that is used will be significantly lower because the injection levels are lower;[223] and (c) to meet its non-DG RES requirement, Public Service needs no new renewable resources of any kind until 2030. Trinchera

[219] As discussed above, the 2009 AE confirmed that, if simultaneous generation injection levels at the San Luis Valley Substation and the Calumet Substation exceed the levels that the Project can accommodate (and certainly if they reach the 2018 levels identified by Public Service), regional reliability/contingency issues must be addressed. These include "significant unplanned transmission additions in the San Luis Valley, Pueblo, Colorado Springs, Denver Metropolitan area, and western Colorado areas" that would be required. Hearing Exhibit No. 42 at 3-6. There is no dispute that addressing these reliability/contingency issues will be extremely expensive and will involve most, if not all, transmission owners in Colorado.

[220] The Calumet Substation is the injection point for ERZ 5 renewable resource generation.

[221] This assumes that the Commission grants Public Service's Application to Amend.

[222] In Public Service's 2007 CRP, the Commission authorized the acquisition of 200-250 MW of renewable resources in ERZ 5.

[223] There are no studies that show the percentage of thermal capacity of the San Luis Valley-Calumet Segment that is used at the lower injection levels.

Ranch argues that, as to the stated export need, Applicants do not meet the second prong of the necessity test because Applicants seek to construct the San Luis Valley-Calumet Segment (at a cost of approximately $90 million) and that Segment is overbuilt because, at best, it will be used at 14 percent of its thermal capacity and, at worst, it will not be needed to accommodate generation for 20 years.

371. For the foregoing reasons, Trinchera Ranch asserts that Applicants have not met their burden of proof to establish the necessity for the Project (or, at least, the San Luis Valley-Calumet Segment). Accordingly, Trinchera Ranch urges the Commission to deny the CPCN Applications or, at least, not to grant a CPCN for the San Luis Valley-Calumet Segment.

(c) Applicants' insufficient evaluation of alternatives.

372. Trinchera Ranch acknowledges that, beginning in 1997, Applicants have completed a number of technical studies and analyses of transmission alternatives that have the potential to remedy the reliability issue in the San Luis Valley. Trinchera Ranch does not have a disagreement with the studies. Trinchera Ranch does not argue that Applicants did not study alternatives to address reliability.

373. Trinchera Ranch asserts that Applicants have not completed technical studies and analyses of transmission alternatives that have the potential to address the need to export renewable energy generation from the San Luis Valley. Trinchera Ranch argues that Applicants may not continue to rely on the studies of alternatives that focused exclusively on the reliability issue now that the Project includes the San Luis Valley export need because this is a significant expansion of the Project's purpose. Trinchera Ranch asserts that, irrespective of and without relying on the studies and analyses conducted from 1997 to 2008, Applicants should have

conducted new evaluations of alternatives for a transmission line that met both the export need and the reliability need. Because Applicants did not conduct such studies and analyses, Trinchera Ranch asserts that the Commission must deny the CPCN Applications because Applicants did not satisfied the Rule 4 CCR 723-3-3102(b)(VIII) requirement[224] as they simply assumed that a transmission line east out of the San Luis Valley was the solution to their reliability and export needs.

(d) Trinchera Ranch's alternatives to the San Luis Valley-Calumet Segment.

374. Assuming that Applicants have established a need for the Project (a proposition with which Trinchera Ranch disagrees), Trinchera Ranch argues that it has presented alternatives that are preferable to the San Luis Valley-Calumet Segment and that the Commission should grant a CPCN for one of the alternatives. Trinchera Ranch presented these transmission line alternatives to the San Luis Valley-Calumet Segment:[225] (a) TR1A (a new single-circuit 230kV transmission line from the San Luis Valley Substation to the WAPA Poncha Substation); (b) TR2A (a new single-circuit 230kV transmission line from the San Luis Valley Substation to the Public Service Sargent Substation and continuing to the Public Service Poncha Junction Substation and a new transformer at Public Service's Sargent Substation); (c) TR3A (a new single-circuit 230kV transmission line from the San Luis Valley Substation to the Black Hills Energy Canon West Substation); and (d) TR1AE (a new 114-mile long single-circuit 230kV line

[224] Rule 4 CCR 723-3-3102(b)(VIII) provides that, as part of the CPCN Applications and if applicable, Applicants must provide information on any alternatives studied; the costs for those alternatives; and the criteria used to rank or to eliminate alternatives.

[225] In addition to the four alternatives listed, Trinchera Ranch proposed three alternatives (*i.e.*, TR1, TR2, and TR3) on which it no longer relies.

from the San Luis Valley Substation to the WAPA Poncha Substation and terminating at the Public Service Malta Substation).[226]

375. Trinchera Ranch asserts that its alternatives address each of Applicants' needs and do so at less cost than the Project (or, at least, the San Luis Valley-Calumet Segment). Trinchera Ranch argues that any one of its four alternatives is a more appropriate first step toward addressing the Applicants' needs than is the San Luis Valley-Calumet Segment. Consequently, Trinchera Ranch advocates that the Commission order Applicants first to construct one of the Trinchera Ranch alternatives and then to conduct studies to determine what additional facilities are necessary (including regional upgrades) to address their needs (*i.e.*, reliability and 1129 MW of export from the San Luis Valley).

376. As to *reliability*, Trinchera Ranch asserts that its alternatives meet the identified need because (a) there is no dispute that both the 2004 Study[227] and the 2008 Study[228] concluded that a transmission line from the San Luis Valley to Poncha or Monarch would remedy the San Luis Valley reliability issue; (b) each Trinchera Ranch alternative provides looped

[226] TR1AE is an extension of TR1A. Trinchera Ranch suggests that TR1AE could be constructed in phases with the San Luis Valley-Poncha section built first, followed by the Poncha-Malta section.

[227] As detailed above, the 2004 Study included an alternatives evaluation conducted by Tri-State. The alternatives included transmission line north out of the San Luis Valley. Hearing Exhibit No. 33 at Exhibit JRD-7.

[228] As detailed above, the 2008 Study included a feasibility analysis of the top alternatives considered. Those top alternatives included two options to the north out of the San Luis Valley (one to Poncha and one to Monarch). Hearing Exhibit No. 16 at Exhibit MJM-2.

transmission service to the San Luis Valley by means of a separate transmission corridor;[229] (c) if solar thermal with storage is developed in the San Luis Valley (as Public Service plans to do), the risk for voltage collapse in the San Luis Valley will be reduced,[230] making construction of an alternative more desirable; and (d) each of the Trinchera Ranch alternatives assumes that the Calumet Substation, the Calumet-Comanche Segment, and the Calumet-Walsenburg Segment are constructed and, thus, the reliability issue in the Pueblo and Walsenburg areas and in northeastern New Mexico will be addressed by those Project components.

377. As to *export*, Trinchera Ranch accepts, for purposes of discussing its alternatives, that the export need from the San Luis Valley is as much as 1129 MW by 2018. It also recognizes that additional transmission will be required in the future.

378. Trinchera Ranch states that each alternative accommodates the levels of generation expected from Public Service's 2007 CRP as originally authorized (*i.e.*, up to 355 MW of solar resources in the San Luis Valley and up to 250 MW of wind and solar resources

[229] Trinchera Ranch asserts that each northern alternative provides looped transmission service because the single-circuit 230kV transmission from the San Luis Valley Substation to the north would bring power into the San Luis Valley from two separate sources: (a) WAPA's Curecanti Substation (by means of WAPA's 230kV transmission line to WAPA's Poncha Substation to the new 230kV line to the San Luis Valley Substation), which is located to the west; and (b) WAPA's West Canon Substation (by means of WAPA's 230kV transmission line to WAPA's Poncha Substation to the new 230kV line to the San Luis Valley Substation), which is located to the east.

In addition, Trinchera Ranch asserts that its alternatives provide looped transmission service because they can be sited in a separate transmission corridor that parallels the existing San Luis Valley to Poncha corridor. It asserts that, in locations in which a separate corridor may not be feasible (*e.g.*, Poncha Pass), the northern alternatives maximize the use of the existing transmission corridor, a transmission planning principle employed by both Applicants. Trinchera Ranch notes that its northern alternatives meet the NERC and the WECC reliability planning criteria.

[230] The solar thermal resources would provide a local source of power in the San Luis Valley that is separate from, and independent of, the existing San Luis Valley-Poncha single-circuit 230kV line and the new Trinchera Ranch-proposed single-circuit 230kV line to the north. Thus, the proposed new solar generation in the San Luis Valley would enhance reliability in the San Luis Valley.

in the area south and southeast of Pueblo and Walsenburg) with capacity to spare.[231] In addition, each northern alternative is able to operate at its limits in the San Luis Valley while, simultaneously, the Calumet Substation is able to accommodate all of the proposed new resources in ERZ 5.[232] Trinchera Ranch asserts that each alternative performs significantly better than the Project on a simultaneous injection basis.

379. Trinchera Ranch states that there is no evidence that a construction schedule for any of its alternatives would be substantially longer than the construction schedule for the Project. Trinchera Ranch asserts that its alternatives are capable of being completed in time to accommodate the new renewable resource generation to be developed in the San Luis Valley and that there is no evidence to the contrary. Further, should the renewable resource generation planned for the San Luis Valley be in service before the new transmission is in service (whether that transmission is the San Luis Valley-Calumet Segment or one of Trinchera Ranch's alternatives), Trinchera Ranch notes that operating procedures (for example, a generation tripping scheme) could be placed in effect on a short-term basis to accommodate all of the new generation in the San Luis Valley until new transmission is available.

380. Trinchera Ranch argues that any of its alternatives meets Applicants' export need and is a *more appropriate first step* to addressing Applicants' future export need than is the Project because (a) any Trinchera Ranch alternative would cost significantly less than the

[231] Trinchera Ranch asserts that a northern alternative that runs from San Luis Valley Substation to Poncha Substation could accommodate 575 MW of new generation in the San Luis Valley under peak load conditions and 475-575 MW of new generation under light load conditions. It asserts that TR1AE, which terminates at the Malta Substation, could accommodate 850 MW of new generation in the San Luis Valley under peak load conditions and 750-850 MW under light load conditions.

[232] No Trinchera Ranch alternative connects with the Calumet Substation. As a result, interaction between the energy injection at the San Luis Valley Substation and the energy injection at the Calumet Substation does not occur and does not limit the energy injection capacity of either substation.

San Luis Valley-Calumet Segment;[233] (b) there is agreement that, under any plan, new transmission to the north out of the San Luis Valley will be necessary to accommodate the anticipated amount of solar generation in the San Luis Valley and to address the chronic overload of the San Luis Valley-Sargent-Poncha 115kV line that is shown in all powerflow studies; and (c) given the likelihood that a line from the San Luis Valley Substation north to Poncha will be built, it is logical to begin with Trinchera Ranch's more cost-effective alternative, which meets Applicants' needs through 2015, in order to provide time for Applicants to perform the powerflow and transient stability studies necessary to determine the additional transmission and system upgrades (in the San Luis Valley and regionally) that are necessary to accommodate the large potential future generation in ERZ 4 and ERZ 5 that Public Service believes is likely to be developed.

381. Trinchera Ranch identified these *additional advantages* of building transmission north from the San Luis Valley: (a) a northern alternative may be more stable because the length of the transmission line between the San Luis Valley generation and the Denver Metropolitan area load center is 40-60 miles shorter than the length of the Project's transmission line; (b) a northern alternative would reduce the interaction between the ERZ 4 and ERZ 5; (c) a northern alternative would avoid having the (potentially) several thousand megawatts of renewable resource generation from two, and possibly three, ERZs interconnecting at a single point in Comanche and then traveling up the same corridor to the Denver Metropolitan area load center;

[233] Applicants estimate that the San Luis Valley-Calumet Segment will cost $90 million (2013$). Trinchera Ranch estimates that a transmission line from the San Luis Valley to Poncha would cost $40-$50 million and that extending that line from Poncha to the Malta (TR1AE) would cost an additional $20 million (*i.e.*, $60-70 million).

and (d) the transmission line to Malta Substation is an acknowledged weak link in the transmission system, is long overdue for an upgrade, and would be upgraded if TR1AE is built.

382. Trinchera Ranch concludes that each of its alternative to the San Luis Valley-Calumet Segment addresses the Applicants' reliability needs; accommodates in ERZ 4 and ERZ 5 nearly as much generation as, and in some cases more generation than, the Project and does so at significantly lower cost; and could be expanded in the future to achieve 1700-2000 MW (and perhaps more) of export capacity from the San Luis Valley.[234] For these reasons, Trinchera Ranch states that any of its northern transmission alternatives[235] is not only a feasible alternative to the San Luis Valley-Calumet Segment but is the more appropriate project for addressing the Applicants' needs through at least 2015.

(e) Responses addressing evidence sufficient to support issuance of transmission CPCN.

383. Applicants[236] disagree with Trinchera Ranch's analytical framework and, in particular, with Trinchera Ranch's position that a CPCN for transmission facilities can be issued, and transmission facilities can be constructed, only if there is hard evidence that the transmission is being constructed to accommodate one or more existing generation units or one or more generation units that are proven to be certain to be constructed (*i.e.*, a utility-owned generation unit for which a CPCN has been granted or a third party-owned unit for which there is a signed

[234] Trinchera Ranch notes that the expansion could include constructing a transmission line east from the San Luis Valley but that additional studies must be conducted.

[235] Of the alternatives, TR1AE is the alternative that Trinchera Ranch appears to advance as the alternative that best meets Applicants' needs, including a transmission path for Public Service to deliver renewable energy from the San Luis Valley to the Denver Metropolitan area load center.

[236] In their respective filings and in the Applications, Public Service and Tri-State each relied on and incorporated by reference the filings and Application of the other. In all respects, Applicants have treated their Applications as if a joint application had been filed. Accordingly, this Decision discusses Public Service's and Tri-State's arguments as if they were filed jointly by the Applicants.

PPA). Applicants state that Trinchera Ranch's view is a legacy approach that does not recognize recent statutory amendments that have effected a fundamental change in the showing necessary to obtain a CPCN for transmission.

384. Applicants assert that setting the demonstration of interest requirement (*i.e.*, hard evidence) too high -- as Trinchera Ranch seeks to do -- would be a barrier to development of solar resources in the San Luis Valley and of renewable resources elsewhere in Colorado because it would impede, if not prevent, construction of transmission in advance of the renewable resource generation. In Applicants' opinion, retaining the hard evidence approach and applying it to the Project is contrary to §§ 40-2-126(b)(2) and 40-5-101(4), C.R.S.

385. Applicants state that, by enacting § 40-2-126(2)(b), C.R.S.,[237] and § 40-5-101(4), C.R.S.,[238] the Colorado General Assembly provided a statutory basis that allows the Commission to move away from the hard evidence-based two-prong test of necessity advocated by Trinchera Ranch. Applicants assert that the cited statutes, among others (such as the RES and § 40-2-123, C.R.S.), permit the Commission to grant a CPCN for transmission facilities when those facilities will be constructed now in order to tap future beneficial energy resources in transmission-constrained Energy Resource Zones. Applicants assert that this is the point that the Commission made in Decision No. C09-1004:

> We are not aware of any prior Commission decisions or case law that address the issue of whether a utility can establish the need for a transmission line project without showing that it has contracted with or will contract with particular generation resources. We find that, in the abstract, the presence or absence of contracts by a utility for particular generation resources does not by itself

[237] Section 40-2-126(2)(b), C.R.S., requires Public Service, as a rate-regulated electric utility, every two years to develop "plans for the construction or expansion of transmission facilities necessary to deliver electric power consistent with the timing of the development of beneficial energy resources located in or near" designated Energy Resources Zones.

[238] Section 40-5-101(4), C.R.S., created the transmission rate adjustment clause to encourage rate-regulated electric utilities to "pursue the construction and expansion of transmission facilities."

> establish the need for a transmission line or lack thereof. Instead, we believe that the need for a transmission line should be considered in light of the evidence and arguments presented at the evidentiary stage of the proceeding. We will, of course, be guided by the statutory standards that "the present or future public convenience and necessity require or will require such construction."
>
> We ... clarify that our ruling that § 40-2-126, C.R.S., does not apply to this docket does not mean that Public Service's obligation to meet the renewable energy standards ... cannot be considered as a factor in determining whether there is a need for the [Project]. We also clarify that general legislative policy directives related to development of renewable energy such as those found in § 40-2-123, C.R.S., may also be considered as one of the factors in this determination. We will determine the appropriate weight that should be given to these and other factors upon our review of the evidence and arguments that will be presented in this case.

Decision No. C09-1004 at ¶¶ 11-12.

386. Applicants state that adopting a test of need that recognizes and incorporates the recent statutory amendments resolves the well-documented timing dilemma that exists because transmission facilities take five to seven years to construct while renewable resource generation can be constructed in a much shorter time period (*e.g.*, two to three years).[239] In addition, Applicants note the location-constraint dilemma described by WRA witness Darin:

> In the western U.S. and in Colorado, many of the best renewable energy locations are remote from population centers, and need expanded transmission access in order for these renewable sources of electricity to be brought to market. In this sense, these resources are location-constrained, and this finding applies to the world-class solar resources in Colorado's San Luis Valley. In many respects, renewable energy generation projects and transmission proposals present the classic chicken-and-egg dilemma: renewable energy projects are waiting for sufficient transmission to access customers (and move forward on project financing), while transmission providers are hesitant to make large investments

[239] As evidence that this problem exists, Applicants point to PSCo's Application to Amend its 2007 CRP. In that filing, Public Service asks the Commission for authorization to scale back the solar acquisition plans contained in PSCo's 2007 CRP because the authorized level of solar resources cannot be acquired unless transmission capacity is available to export the solar power from the San Luis Valley to the Denver Metropolitan area load center. Hearing Exhibit No. 133. In that filing, Public Service states that it intended to acquire up to 355 MW of solar resources in the San Luis Valley (as it was authorized to do); that the delay in, and uncertainty surrounding, obtaining a CPCN and other permitting for the Project led to its filing the Application to Amend; and that the delay in, and uncertainty surrounding, obtaining a CPCN and other permitting for the Project may result in Public Service's acquiring in its 2007 CRP no more than 185 MW of solar resources in the San Luis Valley.

> before the generation projects are built, The [Project] in this case help resolve[s] that policy dilemma by building generation to a renewable rich energy zone.

Hearing Exhibit No. 24 at 7:19-8:5.

387. Applicants assert that adherence to the analytical framework used by Trinchera Ranch -- and particularly the insistence on hard evidence that generation resources will be developed and that those generation resources will use the Project -- does nothing to address, and certainly does not resolve, either the timing dilemma or the location-constraint dilemma. In addition, Applicants argue that the Commission must move beyond the hard evidence approach advocated by Trinchera Ranch in order to support the public policies encouraging development of renewable energy, in order to support the public policies underpinning the New Energy Economy, and in order to support implementation of the Governor's Climate Action Plan. Finally, Applicants assert that the Commission must move beyond the hard evidence approach in order to address what the SB 91 Task Force identified as the foremost challenge to development of renewable resource generation: constrained transmission to areas designated as GDAs/ERZs.

388. Applicants urge the Commission to adopt a proactive approach that allows transmission to be planned and constructed at this time in order to serve renewable resource generation, such as that is ERZ 4 and ERZ 5, likely to be constructed in the future. Applicants urge the Commission to adopt their approach because it is the only way to assure that substantial solar generation will be developed in the San Luis Valley and that significant renewable resource generation will be developed in other areas in southern Colorado.

389. Bar Nothing also urges the Commission to move away from the concept that only hard evidence (defined as a CPCN or a PPA for generation that will use the transmission) can be used to establish need for the Project. Bar Nothing states that the practical effect of requiring hard evidence in the context of this transmission proceeding is to continue "just in time"

transmission planning and construction, an approach that is detrimental to the future development of renewable resource generation in Colorado.

390. Bar Nothing states that Trinchera Ranch recommends that a utility plan and construct transmission to meet those energy needs that are expected to develop, and generation that will be built, within the next five years (*i.e.*, a five-year planning horizon). Bar Nothing asserts that a more reasonable horizon is 10-12 years given the relative newness of some types of solar and wind technologies, the State's policies that emphasize and encourage the development of renewable resource generation, and the potential for economic development in the State's poorest economic area that comes with development of renewable resource generation.[240]

391. WRA joins Applicants and Bar Nothing in urging the Commission to rely on something other hard evidence (as defined by Trinchera Ranch) when determining need for the Project. WRA states that, under the future public convenience and necessity portion of § 40-5-101, C.R.S., the Commission may consider a wide range of issues and concerns and that the Colorado Supreme Court agrees, citing *City of Boulder v. Colorado Public Utilities Commission*, 996 P.2d 1270 (Colo. 2000), and *International Union, United Mine Workers of America v. Public Utilities Commission*, 170 Colo. 556, 463 P.2d 465 (1970). Among the considerations that the Commission may -- indeed, must -- take into account in this proceeding, according to WRA, are Colorado statutes and policies that promote, even require, both the development of renewable resource generation and the construction of transmission as necessary to encourage and to facilitate development of renewable resource generation. WRA asserts that Applicants' future plans designed to satisfy or to implement these statutes and energy policies are evidence of the

[240] Bar Nothing recognizes that a 10 to 12-year planning horizon has the potential to raise concerns about the prudence of the investment in the transmission. To address these concerns, Bar Nothing recommends that the Commission place conditions on the CPCN for the Project. These conditions are discussed below.

future public convenience and necessity and, thus, sufficient basis for a Commission decision to grant the requested CPCN for the Project. WRA argues that continuation of the requirement for hard evidence (as defined by Trinchera Ranch) will hamper, if not preclude, the Commission's ability to evaluate the CPCN Applications in a way that is consistent with Colorado's existing energy policies and statutes.

(f) Responses addressing Applicants' demonstration of need.

392. Applicants observe that, throughout this proceeding, Trinchera Ranch has had one objective: prevent the construction of the San Luis Valley-Calumet Segment (the only Project component that may cross portions of Trinchera Ranch's property).[241] To accomplish its objective, according to Applicants, Trinchera Ranch treats their identified purposes and needs as if only Tri-State has a reliability issue in the San Luis Valley and as if only Public Service has a need to export energy from renewable resources from the San Luis Valley.

393. Applicants state that Trinchera Ranch's approach is inconsistent with Applicants' integrated approach, which developed one elegant, comprehensive, and unified transmission project with multiple, mutually supporting benefits and goals and that Trinchera Ranch ignores the benefits of pursuing a joint project in favor of a piecemeal approach. Applicants assert that the Project's strengths and benefits lie in the sum of its parts and how they combine *both* to create a robust solution to remedy the reliability concerns in southern Colorado and northeastern New Mexico *and* to provide present capability and future opportunities to deliver renewable resource generation from southern Colorado to the Denver Metropolitan area load center and

[241] Applicants note the Trinchera Ranch does not oppose the Calumet Substation, the double-circuit 345kV Calumet-Comanche Segment, or the single-circuit 230kV Calumet-Walsenburg Segment and, in fact, assumes that the Commission will grant a CPCN for those three Project components and that they will be constructed.

elsewhere in Colorado. In addition, it is Applicants' view that (a) no component of the Project is separable from any other component; and (b) the mutually-reinforcing benefits are not possible with a piecemeal approach to the Project, such as that proffered by Trinchera Ranch. Finally, Applicants state unequivocally that they do not seek approval of the Project components individually. Accordingly, they state that the Commission must approve or deny the Project in its entirety.

394. Notwithstanding their position that the Project is an indivisible whole that addresses all of Applicants' identified needs, Applicants responded to the Trinchera Ranch arguments that treated separately the reliability need and the export need.

395. As to their *reliability* need, Applicants state that (a) the Project will enhance Public Service's ability to provide reliable electric service in the San Luis Valley and Tri-State's ability to provide reliable service to its Members in southern Colorado and northeastern New Mexico; and (b) the Project will create a looped transmission system into the San Luis Valley and a redundant transmission path between the Pueblo and Walsenburg areas.[242] In addition, Applicants state that the Project is a cost-effective project that addresses the transmission

[242] Applicants state that looped service requires continuity of service in the event of loss, including the total loss of substations or all transmission lines in a corridor, of one source of power. Applicants assert that the Project provides the necessary continuity of service to the San Luis Valley: (a) if all lines to the San Luis Valley from Poncha substations are lost, the San Luis Valley would be served from the Calumet Substation; and (b) if the Calumet Substation or all lines in the San Luis Valley-Calumet Segment are lost, the San Luis Valley would be served from the Poncha substations. They assert that the Project also provides continuity of service in the Walsenburg area: if all lines in the Calumet-Comanche Segment are lost, the Walsenburg area can be served by the San Luis Valley-Calumet Segment and by the existing Comanche-Walsenburg lines. In addition, Applicants state that the Project creates a looped transmission system that serves load in the San Luis Valley and in the Walsenburg area from separate sources of power through widely-separated corridors. Finally, Applicants state that the Project-created looped transmission system is robust because the San Luis Valley-Calumet Segment provides the missing link between the existing San Luis Valley-Poncha transmission lines and the existing Comanche-Walsenburg transmission lines.

challenges identified in this proceeding; is a critical component in meeting Colorado's goals of clean, reliable, affordable, and secure electrical power now and into a possible carbon-constrained future; and meets the reliability needs. Finally and importantly, Applicants state that there is no dispute that the Project meets Applicants' needs and purposes.[243]

396. Applicants note that the only concern Trinchera Ranch expressed concerning the reliability need is that the San Luis Valley-Calumet Segment is sized inappropriately (*i.e.*, is too large) for the reliability need. Because this Trinchera Ranch concern assumes that reliability is the only established need and because this assumption is demonstrably incorrect, Applicants state that the Project is sized appropriately for their needs and purposes.

397. As to their *export* need, Applicants state that their need for the Project rests on their future need to access the San Luis Valley solar resources and to access the renewable resources located elsewhere in southern Colorado and to export renewable resource generation.[244]

398. Applicants state that there is no dispute that the Project will deliver renewable generation from the San Luis Valley and the area south and southeast of Pueblo and Walsenburg to Public Service's Denver Metropolitan area load center, to Tri-State Members' load centers, and to other locations in Colorado.

399. In addition, Applicants state that there is demonstrable and substantial developer interest in the southern Colorado renewable resources, as evidenced by (a) the stakeholder participation in SB07-100 meetings; (b) the developer response to, and the oversubscription of, RFPs for renewable resource generation; and (c) the undisputed fact that the absence of

[243] Applicants note that Trinchera Ranch witness Dauphinais agreed that the Project meets Applicants' needs and purposes, both reliability and export.

[244] Applicants note that Trinchera Ranch witness Dauphinais agreed that the Project meets Applicants' needs and purposes, both reliability and export.

transmission has hindered, and continues to hinder, development of the premier solar resources located in the San Luis Valley (ERZ 4) and the renewable resources (*i.e.*, solar and wind) in ERZ 5.[245]

400. Applicants also point to the NREL analysis of the renewable resource generation potential in southern Colorado[246] as evidence that there will be development of renewable resource generation in southern Colorado when the Project is constructed, making transmission available.

401. Further, Applicants state that there is no dispute that, while solar thermal with storage resources cost more than other renewable resources, solar thermal resources have a declining cost curve. Thus, from a cost perspective, solar thermal resources will become more attractive over time.

402. Finally, Applicants point out that Public Service is very likely in the future to acquire solar thermal with storage generation units in the San Luis Valley[247] because these units are dispatchable and dispatchability is a critical advantage over intermittent renewable

[245] *See, e.g.*, the SB 91 Task Force Report (Hearing Exhibit No. 106).

[246] As reported in the SB 91 Task Force Report, NREL identified (a) a technical potential of 240,000 MW for concentration solar power (CSP) development in the San Luis Valley; (b) a technical potential of 35,000 MW for CSP in the area south and southeast of Pueblo; and (c) a technical potential for 20,000 MW of wind in the Walsenburg area. Hearing Exhibit No. 106.

[247] Applicants note that this is true notwithstanding Public Service's preference for geographic diversity for solar resources. First, in Public Service's view, there is no need for geographic diversity if the generation is solar thermal with storage. Second, Public Service's preference is for geographic diversity for PV solar and for solar technologies without storage. This preference is based, at least in part, on the conclusions reached in the 2009 Solar Integration Study for Public Service Company of Colorado. Hearing Exhibit No. 52. The study was prepared in response to the Commission's direction in Public Service's 2007 CRP proceeding that Public Service investigate the integration costs of intermittent solar generation; thus, the study focused only on the costs of solar integration. The study concluded that higher levels of geographic diversity tend to reduce the integration costs of intermittent solar technologies and that it is reasonable to assume "that geographic diversity will be the primary solution to handling system operation issues from the extreme sub-hourly variability evident with photovoltaic generation." *Id*. at 18.

resources[248] such as wind, solar PV, and DG resources.[249] Applicants state that a generating unit that can be dispatched during peak load times (when energy costs are highest) has significantly more value to them than a unit that cannot be dispatched. Consequently, a dispatchable generating unit, such as solar thermal with storage, is the type of renewable resource generation that is more likely to be acquired.[250]

403. For the foregoing reasons, Applicants state that record supports a finding of an export need for the entire Project.

404. With respect to the Trinchera Ranch arguments that Applicants have not established an export need for the Project (or, at least, for the San Luis Valley-Calumet Segment), Applicants assert that Trinchera Ranch's arguments concerning export are misplaced because those arguments focus exclusively on Public Service. Applicants reiterate that the Project is needed to allow both Applicants to acquire renewable resource generation.

405. Concerning Tri-State, Applicants assert that the unrebutted evidence establishes that the Project is necessary to support Tri-State's objective of enhancing its ability to incorporate additional renewable energy resources into its generation portfolio. They point out that this Tri-State goal is consistent with, and advances, Colorado public policy that encourages the acquisition of renewable resource generation. Applicants point out that none of Trinchera

[248] Applicants note that Public Service continues to study the integration costs imposed on its system by intermittent renewable resources but caution that, at some point, a utility can reach a breaking point where it is cost prohibitive to integrate more intermittent resources. Trinchera Ranch witness Dauphinais agrees.

[249] Because it is a dispatchable resource, solar thermal with storage plants have a capacity credit of 100 percent while the capacity credit for solar PV is 60-70 percent and for wind is 12.5 percent.

[250] Applicants state that there is no dispute that Public Service favors the acquisition of concentrating solar power facilities due to dispatchability. They assert that Trinchera Ranch's position that solar thermal with storage should be abandoned in favor of wind, solar PV, and DG ignores the fundamental value of dispatchability.

Ranch's arguments addresses Tri-State's acknowledged export needs, which remain uncontested and unrebutted.

406. Turning to the arguments presented by Trinchera Ranch concerning the likelihood that Public Service will acquire solar resources in the San Luis Valley, Applicants address -- and disagree with -- Trinchera Ranch's assertions that (a) there is no need for transmission to export resources out of the San Luis Valley beyond the 355 MW of solar in the Public Service 2007 CRP; (b) the acquisition of 355 MW of solar resources in the San Luis Valley is uncertain; and (c) because the existing transmission system (with already-planned transmission line upgrades) can export 185 MW out of the San Luis Valley, if the Commission reduces PSCo's 2007 CRP solar resource requirement to 185 MW in the San Luis Valley, no additional transmission facilities are required.

407. Applicants assert that the unrebutted evidence establishes that the Project is necessary to support Public Service's goal of acquiring renewable resources to the maximum extent practicable up to the two percent retail rate impact cap[251] and through Commission approval of Section 123 resources (such as solar thermal with storage facilities). They point out that this Public Service goal is consistent with, and advances, Colorado public policy that encourages the acquisition of renewable resource generation. Thus, they argue, Trinchera Ranch's focus on whether Public Service needs the Project simply to meet the minimum obligations imposed by the RES or needs the Project simply to meet the resource acquisition level in the 2007 CRP is misplaced and is too narrow.

[251] Applicants point out that Hearing Exhibits No. 137 and No. 138, which are spreadsheets that show that Public Service can meet the RES standards without additional resources, do not take into account PSCo's plans to add more than the required minimum renewable resources to meet future load growth and future resource needs.

408. In addition, for the same reasons as those discussed above with respect to the likelihood that solar resources will be developed in, and acquired from, the San Luis Valley, Applicants assert that Public Service will acquire at least 750 MW of solar generation in the San Luis Valley (whether as three 250 MW solar thermal with storage facilities or otherwise) in the years beyond 2015.

409. Applicants disagree with Trinchera Ranch's assertions that economic or cost issues make it unlikely that Public Service will acquire either the three 250 MW solar placeholder units or solar generation in the San Luis Valley beyond the acquisition level authorized in the PSCo 2007 CRP. The economic or cost issues are those that Public Service identified in its Application to Amend: (a) an increase in the incremental cost of the solar thermal with storage facility when the facility is downsized from 250 MW to 125 MW; (b) the effect of implementing a carbon proxy cost in 2014 rather than in 2010;[252] (c) a decrease in the forecasted price of natural gas;[253] and (d) a decrease in Public Service's energy sales forecast.[254]

[252] In regard to delay in the carbon proxy cost, Applicants note that the Commission adopted a carbon proxy cost to be used beginning in 2010 and that proxy cost was not necessarily tied to any expected legislation. They observe that the Commission may decide to continue to impose a carbon adder on carbon-emitting resources because a change to a later date (*i.e.*, 2014) could affect a number of dockets involving demand-side management and resource planning. As a result, Applicants argue that, in the absence of a Commission decision, one should not assume -- as Trinchera Ranch has done in this proceeding -- that there will be a reduction in RESA dollars available in the future due to a delay in the carbon proxy cost imputation.

[253] In its Application to Amend, Public Service informed the Commission that, using the method approved by the Commission to forecast natural gas prices, Public Service forecasts that the price of natural gas will decrease by approximately $1 per dekatherm. Public Service presented the changed gas price forecast because the Commission compared the cost of a gas combined cycle unit to the 250 MW solar thermal bid when the Commission approved that bid in the Public Service 2007 CRP. Hearing Exhibit No. 133. Applicants argue that this change has little relevance to this transmission docket because the decrease in forecasted gas price will affect the relative cost comparison of a gas combined cycle unit to any renewable energy technology.

[254] In its Application to Amend, Public Service informed the Commission that, due in part to the continued economic downturn, Public Service's energy sales forecast for Colorado has decreased. Public Service informed the Commission of the decreased energy sales forecast to show that the reduction in solar resources in the San Luis Valley from 355 MW to 185 MW, 90 MW, or 60 MW will not require Public Service to implement a contingency plan in order to meet load. Hearing Exhibit No. 133. Applicants assert that this change has little relevance to this transmission docket because Public Service expects that it will have a need for significant amounts of solar resources in the future.

410. Applicants argue that the Commission must assess the significance of these changes in a proceeding other than this transmission proceeding. In addition, they assert that these economic or cost factors are likely to change from year to year. They point out that the changes identified in the Application to Amend (a) are temporary; (b) do not diminish the value of dispatchable solar generation such as solar thermal with storage; (c) do not change the fact that solar is a declining cost resource; and (d) do not change Public Service's plans to add solar thermal with storage from the San Luis Valley to its resource mix.

411. Applicants state that the acquisition of 750 MW (or more) of renewable resource generation in the San Luis Valley is likely to occur even if Trinchera Ranch is correct that the three 250 MW solar placeholder units are less likely to be acquired in the future due to economic or cost issues (a position with which Applicants disagree). Applicants assert that Public Service could use RESA dollars toward acquisition of solar PV generation in the San Luis Valley because (a) the amended RES allows up to half of the three percent DG set-aside to be met with wholesale DG, which is defined as a renewable energy resource in Colorado with a nameplate rating of 30 MW or less (§§ 40-2-124(1)(a)(II), (IV), (V), and (VI), C.R.S.; § 40-2-124(1)(c), C.R.S.); (b) the up-to-30 MW facilities can be central solar (*i.e.*, facilities are not located on a customer's premises) (§§ 40-2-124(1)(a)(II), (IV), (V), and (VI), C.R.S.); (c) there is no dispute that nothing prohibits Public Service from acquiring multiple 30 MW central solar PV facilities in the San Luis Valley;[255] and (d) there is no dispute that the San Luis Valley is particularly well-suited for the development of solar PV facilities.

[255] Applicants note that Trinchera Ranch witness Sheffrin believes generic central solar PV generation and generic solar DG will reach cost ($/MWh) parity with generic natural gas combined cycle generation by the 2015-2016 time period.

412. In addition, Applicants state that Public Service can meet the majority of the three percent DG set-aside by existing utility-scale resources as a result of the definition of distributed generation in §§ 40-2-124(1)(a)(II), (IV), (V), and (VI), C.R.S.[256] Thus, while the percentage of Public Service's load that must be met by DG has increased, the undisputed fact is that Public Service only needs approximately 32 MW in resource acquisitions to fill that amount. As a result, Applicants argue, the three percent DG set-aside will not cause Public Service to direct significant RESA funds away from acquisition of solar and wind generation.

413. Applicants address -- and disagree with -- Trinchera Ranch's assertion that fewer RESA dollars will be available in the future to support the acquisition of renewable resource generation, including the three 250 MW solar thermal with storage placeholder units in the Public Service's 2010 RES Compliance Plan. Applicants assert that the evidence establishes that sufficient RESA dollars will be available to support future acquisition of renewable resource generation in southern Colorado.

414. Applicants point to Hearing Exhibit No. 141, which contains tables from PSCo's 2010 RES Compliance Plan and shows the rolling RESA balance. Applicants note that these tables already include the costs of the three 250 MW solar thermal with storage placeholder units and show that the RESA balance turns positive in either 2012 or 2015, depending upon when the proxy costs of carbon begins, and accumulates to hundreds of millions of dollars by 2020.

415. Applicants also point out that the 2010 amendments to the RES included

[256] For example, Public Service can count as DG some resources, such as Public Service's 100-year-old hydro plants and existing solar resources, that it could not count prior to the RES amendment.

regulatory tools[257] that the Commission can use to lessen the negative impact on available RESA dollars of the three percent DG set-aside, the SRO,[258] and the lack of fair share contributions to the RESA from DG customers. Applicants state that there is no dispute that using one or more of these regulatory tools will make additional RESA funds available for the acquisition of renewable resource generation in ERZ 4 and ERZ 5.

416. Applicants further point to the addition of § 40-2-124(1)(g)(I)(B), C.R.S., which gives the Commission the ability to approve a renewable resource generation acquisition plan under which PSCo funds the renewable resource generation acquisition in advance of PSCo's collection of RESA funds from ratepayers for that acquisition, so long as any advancement of RESA funds is repaid with interest from future RESA collections. Under this statutory provision and with Commission approval, Public Service can acquire renewable resource generation even if there are insufficient RESA funds available for the acquisition.[259]

417. Applicants state that the Project is an indivisible whole that addresses multiple issues and meets many inextricably intertwined needs of both Public Service and Tri-State. They assert that the record is clear that Applicants have met their burden of proof with respect to the need for the Project as a whole.

418. Interwest joins Applicants in stating that Applicants have met their burden of

[257] The regulatory tools are: (a) the ability of the Commission to lower the three percent DG set-aside as of January 1, 2015; (b) the ability of the Commission, in a resource planning proceeding or application proceeding, to reduce the SRO for solar DG if market changes support the reduction; and (c) the ability of the Commission to require retail DG customers to contribute their fair share to RESA even if that share exceeds the two percent retail rate impact cap.

[258] At present, the majority of RESA dollars paid out are for SROs for the DG Solar Reward program.

[259] Applicants acknowledge that, as RESA balances go negative, some of the ratepayers' RESA payments go toward paying interest on the RESA balance. Applicants assert that this is offset (if not outweighed) by the fact that ratepayers get the benefit of the renewable resource generation earlier than they would have if the generation acquisition had been delayed until sufficient RESA dollars were collected to acquire that generation.

proof with respect to their need for the Project. First, Interwest notes that there is no real issue concerning the reliability need. Second, as to the San Luis Valley export need, Interwest asserts that the following make the acquisition of solar resources in the San Luis Valley very likely: (a) the undisputed fact that the sole impediment to completion of PPAs for solar generation in the San Luis Valley is the absence of a CPCN for the transmission line (*i.e.*, the Project) necessary to deliver the power out of the San Luis Valley to the load; (b) the undisputed fact that there have been robust responses to RFPs by solar developers in the San Luis Valley and that any generation project over 50 MW requires construction of additional transmission; (c) the undisputed fact that energy costs for some solar technologies are dropping and will reach grid parity in the 2015-2016 timeframe, thus making those solar resources more appealing from a cost perspective; and (d) the undisputed fact that, because the San Luis Valley has the most productive solar resources in the nation, there are 240,000 MW of solar resources, of all types, available for development in the San Luis Valley.[260]

419. Interwest concludes that acquisition of additional solar resources in the San Luis Valley is warranted and that Applicants will acquire those resources in the near future. Interwest states that the record is clear that Applicants have met their burden of proof with respect to showing their need for the Project.

(g) Responses addressing Applicants' evaluation of alternatives.

420. Applicants dispute Trinchera Ranch's assertion that they failed to study feasible alternatives to the Project and, without the benefit of study, assumed a transmission line east from the San Luis Valley was the solution to their reliability and export needs.

[260] In addition, the SB 91 Task Force Report estimates a solar potential of 35,000 MW in the area south and southeast of Pueblo.

421. To Trinchera Ranch's assertion that Applicants did not perform export need-focused studies as they are required to do, Applicants respond: (a) since 1997, Tri-State, either on its own or with the participation of others (including Public Service), has conducted a number of studies that evaluated transmission alternatives to address the risk of voltage collapse in the San Luis Valley, including alternatives that go north out of the San Luis Valley;[261] (b) it is good and accepted transmission planning practice to rely on previous studies when evaluating a transmission project because that reliance builds on existing knowledge; (c) the 1997 Study and the 2008 Study concluded that a transmission line going east from the San Luis Valley was the preferred alternative to address the San Luis Valley reliability issue; (d) before filing their CPCN Applications, Applicants did not reevaluate transmission routes going north from the San Luis Valley to determine the export capability of those routes because Applicants determined that it did not make transmission planning sense to reevaluate for export capability the northern alternatives that Tri-State (and others) had determined were not the preferred solution to the reliability issue; and (e) there is no requirement that Applicants evaluate every conceivable alternative to determine whether the alternative does nor does not meet Applicants' every purpose and need.[262]

422. In addition, Applicants state that, although they did not evaluate the northern routes specifically with respect to their ability to address the identified export need prior to filing the CPCN Applications (an evaluation they assert they were not required to perform), Applicants have done that evaluation now, citing the exhaustive evaluation of the Trinchera Ranch

[261] Trinchera Ranch acknowledges that those studies were done and does not question the study of alternatives to address the reliability issue.

[262] Rule 4 CCR 723-3-3102(b)(VIII) requires Applicants, as part of their CPCN Applications and as applicable, to provide information on any alternatives studied; the costs for those alternatives; and the criteria used to rank or to eliminate alternatives.

alternatives conducted in the context of this proceeding. Applicants assert that the studies and analyses of the Trinchera Ranch alternatives confirm that (a) none of those alternatives meets the Applicants' purposes and needs for the Project and (b) the Project is the correct and best solution to the Applicant's combined needs (*i.e.*, remedying Applicants' reliability concerns and facilitating Applicants' export of renewable resource generation from ERZ 4 and ERZ 5.

(h) Responses to Trinchera Ranch's alternatives to the San Luis Valley-Calumet Segment.

423. Trinchera Ranch recommends that the Commission order Applicants to construct one of its alternatives in place of the San Luis Valley-Calumet Segment because, in Trinchera Ranch's view, any of its alternatives (and particularly TR1AE) satisfies Applicants' purposes and needs for that Segment. Applicants disagree. They urge the Commission to reject the alternatives because Trinchera Ranch failed to meet its burden of proof to establish that any of its alternatives (and particularly TR1AE) should be constructed in lieu of the San Luis Valley-Calumet Segment.

424. As to burden of proof, Applicants state that, as the proponent of the alternatives that it recommends be built, Trinchera Ranch has the burden of proving the suitability of the alternatives by a preponderance of the evidence.[263] Section 24-4-105(7), C.R.S.; § 13-25-127(1), C.R.S.; Rule 4 CCR 723-1-1500. According to Applicants, the record establishes that Trinchera Ranch (a) failed to prove the feasibility of its alternatives; (b) failed to prove that any alternative

[263] Applicants state that Trinchera Ranch attempts to shift the burden to them to disprove the feasibility of the alternatives and that Trinchera Ranch states that, because Applicants have not studied thoroughly the issues presented by the alternatives, the Commission should not grant a CPCN for the Project or at least the San Luis Valley-Calumet Segment. Applicants respond that Trinchera Ranch failed to look at, let alone study thoroughly, the most basic obstacles to its alternatives even though Trinchera Ranch must demonstrate the feasibility of the alternatives. Although they looked at, and presented extensive information about, the problems associated with TR1AE (some of which apply to all alternatives), Applicants state that they have no duty or responsibility to study -- and do not have the burden of disproving the feasibility of -- every alternative advanced by Trinchera Ranch.

meets Applicants' reliability and export needs; and (c) understated the cost of its alternatives. Thus, Applicants argue, Trinchera Ranch failed to prove that any alternative is equal to, let alone superior to, the San Luis Valley-Calumet Segment such that the Commission ought to substitute an alternative for the San Luis Valley-Calumet Segment.

425. Applicants point out that Trinchera Ranch does not claim that a transmission line running north from the San Luis Valley is the only transmission line that would meet Applicants' purposes and needs for the Project, including the San Luis Valley-Calumet Segment. They observe that there is no dispute that, and Trinchera Ranch agrees that, the Project meets the Applicants' purposes and needs.

426. With respect to the *feasibility of the Trinchera Ranch alternatives*, Applicants state that Trinchera Ranch witness Dauphinais, the sponsor of the alternatives,[264] testified that he did not explore the feasibility of his proposed northern alternatives. Applicants state that the record establishes that Trinchera Ranch did not take into account, did not study, and did not present evidence with respect to numerous factors that one must study and evaluate to determine the feasibility and cost of the northern alternatives (and, in particular, TR1AE), including the following: (a) the plausibility of siting a new transmission corridor at least 500 feet from the existing transmission lines from San Luis Valley to Poncha and to Malta; (b) the environmental and wildlife impact from siting and constructing a new transmission line from the San Luis Valley to Poncha and to Malta; (c) the topography, the soil, and the number of transmission structures necessary for the alternatives; (d) the effect on the TOT5 path rating of constructing

[264] Applicants point out that the alternatives originated and were evaluated in the course of this proceeding. They state that, in contrast, the Project is the product of, and has been evaluated in, an open and transparent transmission planning process with numerous participants.

TR1AE;[265] (e) the existing land uses on the existing and proposed transmission corridors; and (f) the constructability of TR1AE from Poncha Substation to Malta Substation, including whether the line could be constructed using roads or would need to be constructed using helicopters.

427. Applicants state that, instead of performing its own independent studies and analyses of the feasibility of its alternatives (as it ought to have done), Trinchera Ranch relied on the 2008 Study, which found no fatal flaw in a transmission line running north from the San Luis Valley to either Poncha or Monarch. Applicants state that Trinchera Ranch's reliance on the fatal flaw analysis in the 2008 Study is misplaced because the purpose of that analysis was to determine whether any insurmountable obstacle (*e.g.*, national parks, restricted military space, military bases) exists that would prevent building a transmission line in a given direction or area. Applicants state that the unrebutted evidence establishes that a fatal flaw analysis is not intended to look at, and the fatal flow analysis in the 2008 Study did not look at, the actual feasibility of siting and constructing a new transmission line in a particular location.

428. Applicants note that Trinchera Ranch did not study the siting and construction

[265] For TE1AE, Trinchera Ranch proposes no new transmission lines from the Malta Substation to the Denver Metropolitan area load center. Consequently, the existing transmission lines must accommodate the existing TOT5 flows and the additional generation from the San Luis Valley. Applicants assert that this additional generation has the potential to impact adversely the TOT5 transfer capability.

TOT5 is a major transmission corridor that is comprised of transmission lines owned principally by Platte River Power Authority, Public Service, Tri-State, and WAPA. The TOT5 path rating (or transfer capability) is 1680 MW, which is approximately 1000 MW lower than the simple total of the thermal limits of the individual transmission lines that comprise TOT5; the difference in the transfer capability is the result of the interaction of the lines. When a new transmission line (or additional generation) is proposed to be added to or in close proximity to TOT5 (which is the case with respect to TR1AE), it is necessary to determine (a) whether the addition will impact (and, if it does, how it will impact) the transfer capability of the existing lines that comprise TOT5; and (b) whether proximity to TOT5 will impact (and, if it does, how it will impact) the transfer capability of the new transmission line. To make these determinations, one must perform numerous system impact studies and analyses, preferably with the involvement of all owners of the transmission that makes up TOT5. There is no dispute that no one -- not Trinchera Ranch, not Applicants, not the owners of TOT5 transmission -- has performed the system impact studies necessary to determine the impact of adding TR1AE to, or in the vicinity of, TOT5.

issues presented by siting and constructing another line north from the San Luis Valley Substation to Poncha Substation (any northern alternative) and then continuing to Malta Substation (TR1AE). Applicants assert that, because it did not do the necessary studies, Trinchera Ranch does not know whether its alternatives (and, particularly, TR1AE) can be sited, constructed, or permitted and that this fact is undisputed. Thus, Trinchera Ranch did not meet its burden of proof.

429. As further support for their argument that the Commission should not adopt any of the Trinchera Ranch alternatives, Applicants state that they considered, and presented evidence on, the siting and construction issues associated with the Trinchera Ranch alternatives.[266] Applicant identified the following difficulties, among others, with siting and constructing northern alternatives and TR1AE: (a) there are residential areas along Highway 285 south of Poncha Pass near the existing transmission lines that restrict opportunities to site new transmission lines (this affects any northern alternative); and (b) the area through which TR1AE would run from Poncha Substation to Malta Substation includes U. S. Forest Service and Bureau of Land Management lands, 10-12 Colorado state wildlife refuges, the Collegiate Peaks mountain range, the Arkansas River Basin, and the town of Buena Vista, the combination of which results in significant impediments to siting and constructing TR1AE in an already-congested corridor.[267]

[266] Between them, Tri-State and Public Service own three existing transmission lines that run north from the San Luis Valley to the Poncha area. In addition, Public Service owns an existing transmission line that runs north from Poncha Junction Substation to Malta Substation. Applicants state that they are very familiar with the area between the San Luis Valley Substation and the Malta Substation and relied on this familiarity, as well as on a site visit, in assessing the alternatives.

[267] In addition to testimony, Applicants provided pictures of the area through which TR1AE would run and of the vistas in the area. Hearing Exhibits No. 116-27.

430. Further, Applicants assert that adopting any of Trinchera Ranch's alternatives effectively decouples Tri-State's interests from those of Public Service and that Tri-State has indicated its general unwillingness to participate in a transmission project that includes a northern alternative.[268] They point out that an undisputed and significant benefit of the Project is the cost-sharing between Tri-State and Public Service, a benefit that would be lost if Tri-State does not participate. The result would be higher costs for PSCo ratepayers[269] and for Tri-State Members and their customers.[270]

431. Finally, as a general objection, Applicants state that the Commission's approving one of the alternatives in lieu of the San Luis Valley-Calumet Segment would require Tri-State to update its Rural Utilities Service loan application, assuming that Tri-State decided to participate in the restructured transmission project. This would have, in Applicants' opinion, at least three consequences. First, Tri-State would need to perform the extensive analyses and system reliability studies of the alternatives that have not been done to-date in order to provide required information about the changed project to RUS. This is both costly and time-consuming. Second, at present, RUS is in the midst of an Environmental Impact Statement process focused on the

[268] Tri-State has stated that, if the CPCN for the Project as proposed is denied or if the Commission orders one of the Trinchera Ranch alternatives in lieu of the San Luis Valley-Calumet Segment (or if Public Service decides to pursue TR1AE in the event that the CPCN Applications are denied), Tri-State would not participate in the Poncha Junction Substation to Malta Substation portion of TR1AE. In addition, Tri-State has stated that its participation in the San Luis Valley Substation to Poncha Junction Substation portion of any alternative would be very doubtful. The bases for Tri-State's unwillingness to participate in a transmission project that includes a northern alternative as the preferred option to the San Luis Valley-Calumet Segment are found throughout the discussion of the Trinchera Ranch alternatives and in the studies performed by Tri-State (and others) beginning with the 1997 Study.

[269] If Public Service were to construct TR1AE without Tri-State participation and assuming that Trinchera Ranch's $70 million estimate of the cost to construct TR1AE is accurate (which Applicants dispute), Public Service's cost would be $16 million more than its share of the cost for the San Luis Valley-Calumet Segment. Public Service's ratepayers would bear the additional cost.

[270] If Tri-State were to construct the two transmission projects it originally developed to address the southern Colorado reliability issues (*i.e.*, the San Luis Valley Electric System Improvement Project and the Boone-Comanche-Stem Beach-Walsenburg transmission project), Tri-State's cost would be more than its share of the cost of the Project. Tri-State Members and their customers would bear this additional cost.

Project as proposed by Applicants. Eliminating the San Luis Valley-Calumet Segment and substituting one of the northern alternatives may require -- and in the case of TR1AE likely would require -- a new NEPA evaluation (either an Environmental Assessment or an Environmental Impact Statement) by RUS.[271] Third, there would be delay in the construction of the transmission lines as a result of the additional delay in the RUS loan process caused by the significant change in the project.

432. With respect to the *ability of the Trinchera Ranch alternatives to meet Applicants' needs and the purposes of the Project*, Applicants reiterate their position that Trinchera Ranch's proposal to eliminate the San Luis Valley-Calumet Segment is inconsistent with Applicants' integrated Project approach. Applicants assert that it is not possible to separate, as Trinchera Ranch seeks to do, one component of the Project from the other components because the Project's strengths and benefits come from the way in which the four components combine to create a robust and indivisible solution to both the reliability concerns in southern Colorado and northeastern New Mexico and the need to provide present capability, and future opportunities, to deliver renewable resource generation from southern Colorado to the Denver Metropolitan area load center and to locations elsewhere in Colorado.

433. Addressing the reliability purposes and needs for the Project,[272] Applicants state that each Trinchera Ranch alternative is a single-circuit 230kV transmission line going north from the San Luis Valley Substation along a corridor that contains existing transmission lines.

[271] At the least, such a change in the transmission project would require public comment periods to allow affected persons to comment on the preferred northern route(s), once identified by Applicants.

[272] Applicants reiterate the general reliability-based benefits of the Project: (a) creation of a looped transmission system that connects the Front Range electric transmission system with the electric transmission system on the Western Slope; (b) resolution of Applicants' reliability concerns in the San Luis Valley and in the Walsenburg area; and (c) creation of a secondary path for transmission service between Pueblo and Walsenburg.

They assert that, by separating the San Luis Valley from the other components of the Project, the Trinchera Ranch alternatives (a) fail to provide looped transmission service to the San Luis Valley by a distinct source of power using a widely-separated corridor[273] and (b) do not provide a separate, redundant source of power to either the San Luis Valley or the Walsenburg area.[274] Applicants state that the Trinchera Ranch alternatives are simply radial lines that provide power from a single source (*i.e.*, Poncha) and do nothing more than minimally improve the reliability of the southern Colorado transmission system. Applicants point out that (a) it is not good transmission planning to construct substation hubs with many radial lines in common corridors (as would be the situation with any of the alternatives) when looped transmission (such as the Project) can be built and (b) the preferred approach for reliability purposes is construction of looped transmission where possible. Consequently, Applicants assert, none of the alternatives meets the Applicants' reliability purpose and need for the Project.

434. To support its conclusion that its alternatives meet Applicants' reliability needs, Trinchera Ranch relies on the 2004 Study and the 2008 Study that Tri-State performed in connection with evaluation of earlier transmission projects designed to address the southern Colorado reliability issues. In particular, Trinchera Ranch relies on the studies' finding that a new transmission line from the San Luis Valley to Monarch or Poncha would meet the reliability concerns in the San Luis Valley. Applicants agree that the studies found that alternatives similar to those proposed by Trinchera Ranch would address the reliability concerns in the San Luis Valley. Applicants assert, however, that Trinchera Ranch's reliance on those studies is misplaced

[273] Trinchera Ranch states that its alternatives provide looped service because they could be sited at a distance of 500 feet or more from existing transmission lines and, thus, would be in a separate transmission corridor. Applicants respond that it is undisputed that Trinchera Ranch did not study whether a new 230kV transmission line from the San Luis Valley to Poncha could be sited in a transmission corridor that is separate from the existing lines.

because (a) the purpose and need for the Project has been expanded since Tri-State conducted the 2004 Study and the 2008 Study; (b) the 2004 Study and the 2008 Study are studies performed at the screening level to determine whether the transmission alternatives being examined would meet the minimum system reliability standards established by NERC and WECC; and (c) the Project is designed to address the reliability issues in the San Luis Valley and in the Walsenburg area and is a combination of two transmission lines that, at the time the studies were done, were two separate projects.

435. Applicants take exception to Trinchera Ranch's position that any alternative that meets the minimum NERC and WECC reliability standards (such as the Trinchera Ranch alternatives) satisfies Applicants' reliability needs. Applicants state that they do not plan to the minimum reliability standards.[275] They state that their goal with the Project is to create a robust, looped transmission system that resolves the reliability concerns in the San Luis Valley and Walsenburg areas and provides an interconnected transmission system that reliably delivers renewable resource generation from southern Colorado to the Denver Metropolitan area load center and other locations in Colorado. Thus, neither is interested in marginally increasing the reliability of the southern Colorado electric transmission system, which is the level of reliability improvement provided by the Trinchera Ranch alternatives.

436. Applicants agree with Trinchera Ranch that the San Luis Valley-Sargent-Poncha Junction 115kV transmission line is in need of an upgrade. They dispute, however, Trinchera Ranch's assertion that the need for the upgrade supports constructing a northern alternative as a

[274] Thus, according to Applicants, none of the Trinchera Ranch alternatives meets the reliability purposes and needs addressed by Tri-State's two original transmission projects: the San Luis Valley Electric System Improvement Project and the Boone-Comanche-Stem Beach-Walsenburg transmission project.

preferred first step. Applicants point out that the alternatives must be new transmission lines, not upgrades to the San Luis Valley-Sargent-Poncha Junction line, because the San Luis Valley-Sargent-Poncha Junction line cannot be taken out of service. They state that, once the Project is in service, the San Luis Valley-Sargent-Poncha Junction line can be taken out of service and upgraded.

437. Addressing the export purposes and needs for the Project, Applicants state that Tri-State does not have transmission ownership or firm transmission service rights originating either at Poncha or at Malta and that Trinchera Ranch did not explain how Tri-State could use any of the alternatives to meet its export needs.[276] Thus, Applicants assert, the record establishes that none of the Trinchera Ranch alternatives (a) permits Tri-State to serve its network load with Tri-State network resources using Tri-State-owned transmission beyond the San Luis Valley; (b) facilitates Tri-State's ability to export renewable resources to its Front Range load centers in order to support Tri-State Members in meeting their present and future RES requirements; or (c) satisfies Tri-State's long-term need for transmission capacity to facilitate its own acquisition of renewable resources that may be located in southern Colorado. Applicants state that, for Tri-State, the Trinchera Ranch alternatives are, in essence, lines to nowhere that provide no export benefit to Tri-State or its Members. This is not disputed.

[275] They point out that there is no dispute, and Trinchera Ranch agrees, that (a) it is a utility's prerogative to construct transmission to reliability standards that exceed the NERC and WECC reliability standards; and (b) the determination of what is or is not acceptable from a utility's planning perspective is best left to the utility.

[276] Because it does not have existing firm transmission rights originating at Poncha or at Malta, Tri-State would need to acquire transfer capability (*i.e.*, firm transmission rights) by contract if an alternative is built instead of the San Luis Valley-Calumet Segment. Applicants point out that, because the Trinchera Ranch focus was on Public Service's export needs, Trinchera Ranch witnesses *either* made unwarranted (*i.e.*, not based on investigation) assumptions about the availability of sufficient transfer capability from the Poncha area to the Front Range or from Malta Substation to the Front Range to meet Tri-State's contract path needs *or* did not consider Tri-State's contract path needs at all. Applicants state that, for whatever reason, Trinchera Ranch presented no credible evidence that a Trinchera Ranch alternative can accommodate Tri-State's present and future export needs.

438. Trinchera Ranch identifies as a benefit of its alternatives the increased simultaneous export capacity from the San Luis Valley and from Calumet that results when there is no San Luis Valley-Calumet Segment. Applicants disagree. They argue that, in making this assertion, Trinchera Ranch ignores one of the primary benefits of the Project: linking ERZ 4 and ERZ 5 in order to obtain the increased reliability benefits of having two generation sources into the San Luis Valley and into the Walsenburg area. Applicants state that the Project has an advantage over the Trinchera Ranch alternatives because the Project avoids TOT5-related impacts by moving power east instead of north.

439. Applicants also dispute Trinchera Ranch's claim that the export capacity of 114-mile long single-circuit 230kV TR1AE can accommodate future export from the San Luis Valley of up to 1489 MW and, thus, is preferable to the San Luis Valley-Calumet Segment. Applicants assert that the claimed TR1AE export capacity has at least the following flaws: (a) the claim rests on the unsupported assumption that there is sufficient Available Transfer Capability to move generation from Malta to the Front Range;[277] (b) to achieve the claimed export capacity, TR1AE needs a N-1 contingency Remedial Action Scheme, which is inconsistent with at least Public Service's transmission planning policies;[278] (c) Trinchera Ranch has not studied the effects of TOT5 on TR1AE's export capacity;[279] and (d) achieving the claimed level of export capacity for TR1AE depends on reconductoring the WAPA Poncha-West Canon-Midway 230kV transmission

[277] Applicants point out that Trinchera Ranch has not performed the powerflow studies and system impact studies necessary to determine whether (and, if so, how much) Available Transfer Capability exists on the contract paths identified by Trinchera Ranch as possibly being available to provide transmission rights to the Front Range.

[278] Implementation of a generation-tripping RAS could result in San Luis Valley solar thermal with storage facilities being tripped (*i.e.*, being unavailable) during system peak conditions. The San Luis Valley solar thermal with storage facilities have a capacity rating of 100 percent, and Public Service system operators count on having generation facilities with a capacity rating of 100 percent available to meet peak load. Applicants assert that Public Service will not implement an N-1 RAS for any transmission line serving solar thermal with storage plants (or any other type of firm generation), that this position is consistent with Public Service's overall transmission planning policies, and that this is undisputed.

line and no one has studied whether this is feasible[280] or the impact on EMF levels and transmission line-related noise levels from reconductoring the line.

440. Applicants assert that TR1AE's true export limit from the San Luis Valley is 550 MW (light load conditions) to 575 MW (peak load conditions), which is less than the Project's capacity to accommodate the simultaneous injection of 850 MW at the San Luis Valley and 450 MW at Calumet. In addition, Applicants assert that the record shows the existence of significant obstacles to constructing TR1AE.

441. Finally, Applicants dispute Trinchera Ranch's claim that the 114-mile long single-circuit 230kV TRlAE is $20 million less expensive that the San Luis Valley Segment. The Applicants state that the record establishes that: (a) Trinchera Ranch has not done a cost analysis of TRlAE that includes reasonable and foreseeable construction-related and siting-related costs (costs that take into account, for example, the line length; the terrain; the construction method; the number of towers, poles, and tangents; the dollars per acre; and necessary soil erosion measures); (b) Trinchera Ranch admits it made errors in its per-mile cost analysis for TR1AE and that the errors affect the accuracy of its cost estimates; (c) in Public Service's transmission planning experience, a 114-mile long 230kV transmission line would be planned and designed to be at least double-circuit capable in order to allow future upgrade, but Trinchera Ranch did not include the cost of constructing TR1AE as double-circuit capable; (d) Trinchera Ranch did not investigate the effect of transmission line crossovers at Poncha Substation, where six

[279] This issue is discussed above.

[280] Applicants state that Trinchera Ranch presented virtually no information about the existing WAPA line and had not examined critically important aspects of whether the existing transmission line can be reconductored (*e.g.*, whether the line can be taken out of service and, if it can be, for how long; whether the existing structures can support the heavier conductor that Trinchera Ranch proposes be used; whether the width of the ROW is sufficient to allow the new, larger conductor). In addition, Applicants note that Trinchera Ranch apparently did not investigate whether WAPA, the owner of the existing transmission line, would agree to reconductor the line. Finally,

transmission lines interconnect;[281] and (e) Trinchera Ranch does not know what siting, routing, and permitting difficulties may be encountered if TRlAE is to be constructed,[282] thus the Trinchera Ranch cost estimate for TR1AE does not take into account the costs (which likely would be substantial) associated with such difficulties.

442. Applicants argue that the record establishes that (a) Trinchera Ranch did not present the studies and analyses necessary to support its alternatives and its recommendation that the Commission substitute one of the alternatives for the San Luis Valley-Calumet Segment; (b) the Trinchera Ranch alternatives provide (at best) minimal reliability improvement, do not connect to Tri-State's transmission system, do not address Applicants' immediate and future needs to transmit renewable resource generation out of ERZ 4 and ERZ 5, and present significant constructability and siting challenges; and (c) the Trinchera Ranch alternatives are more expensive than the San Luis Valley-Calumet Segment. For these reasons, Applicants state, Trinchera Ranch failed to meet its burden of proof with respect to its proposal to substitute one of its alternatives for the San Luis Valley-Calumet Segment.

443. Applicants state unequivocally that they do not seek approval of the Project components individually. Accordingly, they assert that the Commission must approve or deny the Project in its entirety.

444. Pole Canyon notes Colorado Open Lands' concerns about possible environmental impacts on conservation easements associated with one of the potential routes of the San Luis

Applicants assert that the Trinchera Ranch underestimated the cost of the reconductoring by at least $11 million, which increases the cost estimate for TR1AE.

[281] Transmission line crossover is a concern, according to Applicants, because permission to have crossing transmission lines is a revocable license and WAPA, the Poncha Substation owner, could terminate the crossover right or could require Applicants to mitigate the crossover issue (*e.g.*, by rearranging the existing lines). Because Trinchera Ranch did not investigate this issue, the cost estimate for TR1AE (and any other alternative that involves the WAPA Poncha Substation) does not include costs that may be necessary to mitigate the crossover issue.

Valley-Calumet Segment.[283] Pole Canyon urges the Commission to apply the same environmental impact considerations to the Trinchera Ranch alternatives to the extent they must cross U.S. Forest Service lands.

i. Western Resource Advocates.

445. Western Resource Advocates supports issuance of a CPCN for the Project, provided the Commission places WRA's conditions on the CPCN.[284]

446. Assuming its conditions are attached to the CPCN, WRA supports the Project because it will provide transmission for solar energy generation in the San Luis Valley (ERZ 4) and for solar and wind energy development in the area south and southeast of Pueblo and Walsenburg (ERZ 5) to the Denver Metropolitan area load center and to other locations in Colorado. WRA states that the record establishes that ERZ 4 has substantial solar resources that can be developed and that ERZ 5 has considerable solar and wind resources that can be developed. WRA asserts that the Project will enable the development of those renewable energy resources, thereby helping to address the pressing issue of climate change and implementing important Colorado state policies, such as the RES, the New Energy Economy, and the Governor's Climate Action Plan.

[282] For example, Trinchera Ranch did not investigate whether TR1AE crosses the Fort Carson Military Reservation or would need to be routed around any environmentally-sensitive or residential areas.

[283] In Pole Canyon's opinion, the Commission should consider concerns about the Project's impacts on environmentally protected or sensitive areas. With respect to the Project, Pole Canyon believes that these concerns can be remedied by instructing Applicants to route the San Luis Valley-Calumet Segment so that it does not cross any conservation easement.

[284] In its Statement of Position at 1, WRA states that it supports the Project provided the Commission attaches WRA's proposed conditions to the CPCN. Accordingly, the ALJ views this as WRA's position *vis-à-vis* the Project, notwithstanding testimony from WRA witnesses that may indicate a different position. The WRA conditions are discussed below.

3. Discussion and Conclusions

a. Type of evidence that supports issuance of transmission CPCN.

447. There is no dispute about the standard for issuance of a CPCN in this proceeding. To meet their burden of proof with respect to a CPCN to construct and to operate transmission facilities, Applicants must establish by a preponderance of the evidence that (a) there is a present or future need for the transmission facilities, and (b) existing transmission facilities are not reasonably adequate and available to meet the identified need. Section 40-5-101(1), C.R.S. In addition, Applicants must provide, where applicable, the Rule 4 CCR 723-3-3102(b)(VIII) information.

448. Applicants have identified two present or future needs as support for issuance of a CPCN for the Project: a reliability need and an export need. No one suggests or argues that there is an absence of hard evidence (*e.g.*, power flow studies, reliability analyses, load analyses) for the Commission to examine in order to determine whether the Project is needed to address the reliability issues in southern Colorado. Thus, the dispute concerning the type of evidence that Applicants must produce to support a finding of need centers on the export need.

449. Applicants take the position that, although they have neither a CPCN nor a PPA for generation that will use the Project, they have produced evidence that the Commission can and should examine, and on which the Commission may rely, to determine whether they have met their burden of proof with respect to the export need. They argue that recent statutory changes and Colorado's energy policies (legislative and executive) require the Commission to rethink, and to move beyond, its prior transmission CPCN decisions concerning the type of evidence it will examine in order to determine whether the Project is needed to meet the export need.

450. Trinchera Ranch takes the position that, to support a finding of export need in this proceeding, Applicants must produce hard evidence to establish that existing generation, or generation that is certain to be constructed, will interconnect with the Project. Trinchera Ranch states that this is the type of evidence that the Commission traditionally has required, has examined, and has relied on to determine whether an applicant utility has established an export need for new transmission.

451. This is the first application for a CPCN for transmission filed and litigated since the addition of §§ 40-2-126 and 40-5-101(4), C.R.S., and the articulation of the State's energy policies in, for example, the New Energy Economy and the Governor's Climate Action Plan. Thus, this is a case of first impression as to the type of evidence that can be used, and on which the Commission will rely, in light of the cited statutes and Colorado energy policy, to support a finding of the export need for transmission.[285]

452. Section 40-2-126(1), C.R.S., creates the ERZ and defines an ERZ as "a geographic area in which *transmission constraints hinder* the delivery of electricity to Colorado consumers, *the development of new electric generation facilities*, or both." (Emphasis supplied.) This is a clear reference to the location-constraint dilemma described by WRA witness Darin and discussed above.

453. In addition, § 40-2-126(2)(b), C.R.S., requires Public Service (as a rate-regulated electric utility) in odd-numbered years to develop "plans for the *construction* or expansion *of transmission facilities necessary to deliver electric power consistent with the timing of the development of [renewable resource generation] located in or near*" ERZs. (Emphasis

[285] No party cited a case or decision -- and the ALJ's research found no case or decision -- that decides this issue. In Decision No. C09-1004, the Commission identified and discussed, but did not decide, this issue.

supplied.) This is a clear reference to the timing dilemma described in the SB 91 Task Force Report and discussed above.

454. Further, § 40-2-126(3)(a), C.R.S.,[286] discusses issuance of a CPCN for transmission facilities that "enable the [rate-regulated] utility to *meet the renewable energy standards* set forth in" § 40-2-124, CR.S. Those Renewable Energy Standards are, to a significant degree, future-looking as they extend past 2020. Thus, reference to those standards implies that the Commission may look beyond hard evidence when assessing the need for transmission.

455. Finally, § 40-5-101(4), C.R.S., creates the Transmission Rate Adjustment Clause, the express purpose of which is "to provide *additional encouragement* to [rate-regulated] utilities *to pursue the construction* and expansion *of transmission facilities*[.]" (Emphasis supplied.) While this section applies to all transmission facilities, not just transmission facilities necessary to deliver renewable resource generation to load, it is important to note that the section was enacted as part of SB07-100. Given that context, this statute evidences the General Assembly's awareness that, in the absence of hard evidence that the transmission line will be used, utilities need encouragement to invest in (*i.e.*, to construct) transmission facilities. Section 40-5-101(4), C.R.S., is intended to encourage, *inter alia*, construction of transmission facilities to ERZs even in the absence of hard evidence that there is generation (or generation that is certain to be constructed) that will use the transmission facilities.

[286] The Commission has found that § 40-2-126(3), C.R.S., is not the standard that Applicants must meet for issuance of the CPCN for the Project. Decisions No. C09-0886 and No. C09-1004. The ALJ does not cite § 40-2-126(3), C.R.S., for the purpose of stating the standard that the Applicants must meet. The ALJ cites this statute as part of the discussion of statutes that show that the Commission may examine and rely on evidence other than hard evidence in determining whether Applicants have met their burden of proof with respect issuance of a CPCN for the transmission Project.

456. The ALJ finds Applicants' argument concerning the type of evidence that can support a finding of need to be the more persuasive. Applicants' approach rests on and incorporates the legislative policies in §§ 40-2-126 and 40-5-101(4), C.R.S., as well as those in §§ 40-2-123 and 40-2-124, C.R.S. Taken together, the statutes encourage construction of transmission to ERZs in advance of the construction of renewable resource generation in order to foster development of renewable resource generation. In addition, Applicants' approach is flexible and allows the Commission to consider other pertinent and relevant factors.[287] Finally, Applicants' approach does not preclude Commission consideration of hard evidence; rather, it expands the types of evidence that the Commission may consider.

457. In contrast, the hard evidence approach advocated by Trinchera Ranch rests on PUC decisions and court cases that predate, and fail to take into account, the changes brought about by §§ 40-2-123, 40-2-124, 40-2-126, and 40-5-101(4), C.R.S. The hard evidence approach does not address -- let alone resolve -- the concerns that §§ 40-2-126 and 40-5-101(4), C.R.S., clearly address and, from a transmission viewpoint, resolve.[288] In addition, applying the hard evidence approach to applicants for CPCNs for transmission facilities that, if built, would encourage future development of renewable resource generation eliminates the Commission's flexibility to consider in a transmission CPCN proceeding other germane factors (such as implementing Colorado's energy policies) and preludes Commission consideration of other types of evidence.

[287] These other factors include, for example and without limitation, whether (and, if it does, how) the Project will assist Applicants to implement Colorado's energy policies, to acquire renewable resource generation in the future, and to comply with statutory requirements (such as the RES).

[288] These are: (a) the timing dilemma created by the difference between the amount of time it takes to construct transmission (five to seven years) and the amount of time it takes to construct renewable resource generation (two to three years) and (b) the location-constraint dilemma that makes it difficult to finance (and, thus, to construct) renewable resource generation if there is no available transmission.

458. The ALJ agrees with Applicants and Bar Nothing that retention of the hard evidence approach, as advocated by Trinchera Ranch, perpetuates the mistaken idea that "just in time" transmission is acceptable. The "just in time" transmission idea, especially as applied to the Project, is not appropriate given the increasing difficulties faced by utilities when they attempt to site and to construct transmission facilities and given the clear statutory and energy policy directive that transmission is to be constructed in advance of, and to foster the development of, renewable energy generation.

459. The ALJ will adopt, and will use in this Decision, the approach advocated by Applicants.[289] Adoption of the Applicants' approach addresses only the *type* of evidence that will be considered when examining the issue of whether Applicants have met their burden of proof. Applicants still must produce the required *quantum* of evidence (*i.e.*, a preponderance of the evidence) in order to sustain their burden of proof.

b. Applicants' demonstration of need for Project.

460. Concerning Applicants' *reliability need* for the Project, there is no dispute that (a) there are identified, long-standing reliability issues[290] in the San Luis Valley, in the area south and southeast of Pueblo and Walsenburg, and in northeastern New Mexico and that these identified issues can and have resulted in load shedding; (b) the reliability issue in the San Luis Valley affects Public Service's ratepayers, Tri-State, and Tri-State Members' customers; (c) the reliability issue in the area south and southeast of Pueblo and Walsenburg and in northeastern New Mexico principally affects Tri-State, Tri-State customer, and its Members' customers;

[289] Adoption of Applicants' approach is a complete answer to Trinchera Ranch arguments that Applicants have not met their burden of proof with respect to the Project because they did not present hard evidence to support the need. The ALJ finds to be unpersuasive any argument based on the absence of hard evidence.

[290] The reliability issues are identified and established in the studies and analyses discussed above.

(d) there are no existing transmission facilities that can address (and the existing transmission facilities are not adequate to address) the reliability issue in the San Luis Valley; and (e) there are no existing transmission facilities that can address (and the existing transmission facilities are not adequate to address) the reliability issue in the area south and southeast of Pueblo and Walsenburg and in northeastern New Mexico.

461. There is no dispute that the Project addresses the identified reliability issues in southern Colorado. It accomplishes this by creating (a) looped transmission with two widely-separated corridors that provide second-source generation into the San Luis Valley and (b) looped transmission with two widely-separated corridors that provide second-source generation into the area south and southeast of Pueblo and Walsenburg and in northeastern New Mexico. The San Luis Valley-Calumet Segment is critical to creating those looped transmissions because it is the transmission line that connects, through the Calumet Substation, the San Luis Valley with Comanche and with Walsenburg.

462. The evidence establishes, and the ALJ finds, that the Applicants have met their burden to prove the there is a present or future need for the Project (including the San Luis Valley-Calumet Segment) in order to address reliability issues in southern Colorado.[291]

463. Concerning Applicants' *export need* for the Project, a finding that Applicants have met their burden of proof with respect to this need involves consideration of the likelihood that

[291] Finding a reliability need for the Project addresses the Trinchera Ranch argument that the San Luis Valley-Calumet Segment is overbuilt because a maximum of 14 percent of the Segment's thermal capacity is used. The ALJ finds this Trinchera Ranch argument to be unpersuasive. First, this argument appears to rest on the assumption that the sole need for the Project is the export need; finding a reliability need for the Project renders this assumption is incorrect. Second, the 14 percent occurs only under the specific condition described by Trinchera Ranch. Third, there is no evidence as to whether any authoritative body (including the Commission) has specified the percentage (and, if it has, what that percentage is) of a transmission line's thermal capacity that must be used in order to support a finding that the line is properly sized. Fourth and finally, the evidence establishes that, with regional transmission system upgrades, the transfer capability of San Luis Valley-Calumet Segment can be used to a greater extent.

future events will occur.[292] There is a wide spectrum with respect to the evidence that will support a finding that Applicants have met their burden of proof. At one end of the spectrum is hard evidence (advocated by Trinchera Ranch); the ALJ has determined that she will not require this type of evidence. At the other end of the spectrum is unsupported speculation, and there is no dispute that this type of evidence will not support a finding that Applicants have met their burden of proof.

464. The Commission has determined that, when consideration of future events is involved, evidence demonstrating a substantial possibility that a future event will occur is sufficient to support a decision:

> In its exceptions, [applicant] points out the ALJ found that destructive competition *could* result if the application were granted. [Applicant] argues a mere possibility is not sufficient to deny its application. ...
>
> We find that an absolute certainty that destructive competition and other negative public interest outcomes will result is not required before the Commission can make a decision; a substantial possibility of undesirable outcomes is sufficient. The Commission bases its decisions on substantial possibilities in many different contexts and some level of prediction is inherent in making a decision that will affect future conditions. For example, in rate cases, after selecting a test year, the Commission makes in-period and out-of-period adjustments so that the rates take into account *predicted future* conditions. *See Pub. Serv. Co. of Colorado v. Pub. Utils. Comm'n*, 26 P.3d 1198, 1205 (Colo. 2001) (emphasis added). In electric resource planning dockets, the Commission makes decisions based on probable future prices of natural gas and many other factors.
>
> We find that *Mobile Pre-Mix Transit, Inc. v. Pub. Utils. Comm'n*, 618 P.2d 663 (Colo. 1980) is on point. In that case, the Commission denied an application for a transfer of a contract carrier permit. On judicial review, the Applicant argued that the Commission based its denial on a mere speculation that it might practice discrimination and unfair competition. The majority of the Colorado Supreme Court found as follows:

[292] With respect to Applicants' export need as identified in this proceeding, the future events include the development of renewable resource generation in ERZ 4 and ERZ 5; Applicants' acquisition of those generation resources; and the need for the Project to export the renewable resource generation from ERZ 4 and ERZ 5 to the Denver Metropolitan area load center and other areas in Colorado.

> Where the PUC discovers actual intent on the part of a transferee to use its advantageous position in an industry to engage in discrimination or unfair competition if the transfer is granted, denial of the application is clearly appropriate. However, it is not necessary that the PUC find actual intent before it may deny a transfer in these circumstances. The PUC may properly deny a transfer wherever there is a *substantial opportunity* for a transferee, because of its advantageous position in the industry, to discriminate or compete unfairly. ...

Id., at 666 (emphasis added). The majority rejected the dissenting opinion that a "possibility" or "good probability" or "substantial opportunity" for unfair competition was insufficient to justify denial of an application. *Id.*, at 667.

> Based on the reasons mentioned above, we deny the exceptions on the ground that the ALJ did not find with absolute certainty that destructive competition or other negative public interest outcomes will occur if the application is granted.

Decision No. C10-1149 at ¶¶ 19-22 (emphasis in original).

465. The ALJ relies on, and applies, the substantial possibility language and discussion from this Decision in determining whether the evidence establishes that Applicants have met their burden of proof with respect to the export need.

466. The evidence establishes that there is a substantial possibility that considerable renewable resource generation will be developed in ERZ 4 and ERZ 5 within the next five to ten years *if* transmission is available to those ERZs.[293] The evidence includes (but is not limited to) the following facts: (a) NREL research demonstrates that there are substantial amounts of commercially-developable renewable energy resources (solar and wind) in ERZ 4 and ERZ 5; (b) the San Luis Valley (ERZ 4) contains the premier solar resource in Colorado because of its particular characteristics (such as days of direct insulation and elevation); (c) solar thermal generation and solar PV generation have declining cost curves; (d) Colorado energy policy

[293] This also addresses the Trinchera Ranch arguments that there is a question surrounding future development of renewable resource generation in southern Colorado. Based on the record in this proceeding, the ALJ finds the Applicants' arguments on this question to be persuasive and supported by the evidence. The ALJ finds unpersuasive Trinchera Ranch's arguments on this question.

(including statutes, the New Energy Economy, the Governor's Climate Action Plan) encourages the development of renewable resource generation; (e) federal financial incentives that encourage development of renewable resource generation exist at present but may expire within the next five years, which creates a sense of urgency and motivates developers to develop renewable resource generation sooner rather than later; (f) renewable resource generation RFPs in Colorado historically have been oversubscribed; (g) unsuccessful bidders in renewable energy RFPs are likely to bid in response to subsequent renewable energy RFPs and are more likely to bid if there is existing transmission; and (h) in the Public Service 2007 CRP, the Commission authorized Public Service to acquire up to 250 MW of wind generation in ERZ 5 by 2015. The evidence also established that failure to construct the Project creates a significant risk that renewable energy generation will not be built in these ERZs.

467. The evidence establishes that there is a substantial possibility that Applicants will acquire renewable resource generation in ERZ 4 and ERZ 5 within the next five to ten years *if* transmission is available to southern Colorado.[294] The evidence includes (but is not limited to) the following facts: (a) Tri-State and Tri-State Members must acquire renewable resource

[294] This addresses the Trinchera Ranch arguments that there is a question about whether Applicants (and particularly Public Service) will acquire renewable resource generation in southern Colorado in the period beyond 2015. Based on the record in this proceeding, the ALJ finds the Applicants' arguments on this question to be persuasive and supported by the evidence. The ALJ finds unpersuasive Trinchera Ranch's arguments on this question.

Trinchera Ranch makes two additional arguments related to the export need beyond 2015: (a) the San Luis Valley-Calumet Segment cannot accommodate the San Luis Valley export need in 2018 and, thus, does not meet the second prong of the necessity test because it is inappropriately sized (*i.e.*, too small); and (b) Applicants have not established that the San Luis Valley-Calumet Segment can be expanded to meet the 2018 export need. The ALJ finds Trinchera Ranch's arguments not to be persuasive. There is evidence that, with regional transmission upgrades, the transfer capacity of the San Luis Valley-Calumet Segment can be increased (*i.e.*, expanded). In addition, Trinchera Ranch's argument seems to be based on the premise that a utility cannot or should not construct transmission facilities unless those facilities are sized exactly (or nearly so) to meet identified needs. This premise is incorrect. A utility may construct transmission facilities in phases: construct facilities to meet less than 100 percent of identified need, then examine available options (including expansion of those facilities) to meet the remaining need, and then construct additional facilities to meet that remaining need. Applicants may use (but need not use) this approach to address any export need that may exist after the Project is in service.

generation; (b) a significant amount of commercially-developable renewable energy (solar and wind) resources is available in southern Colorado; (c) Colorado energy policy (*e.g.*, the RES) encourages acquisition of renewable resource generation; (d) unsuccessful bidders in renewable energy RFPs are likely to bid into subsequent renewable resource RFPs and are more likely to bid if there is existing transmission, thus providing a larger pool of bids from which Applicants may select; (e) Public Service plans, and its policy is, to acquire renewable resource generation at least to the maximum extent permitted under the two percent retail rate impact rule,[295] and the 2010 RES amendments create regulatory tools that permit the Commission to make RESA dollars available so that Public Service can acquire that generation; (f) solar thermal generation and solar PV generation have declining cost curves; (g) solar thermal generation with storage is a dispatchable generation resource; and (h) there may be federal action that requires utilities to reduce their CO_2 emissions and Applicants should take steps now to reduce CO_2 emissions in anticipation of such federal action.[296]

468. The most significant, even insurmountable, obstacle to the development of renewable resource generation in southern Colorado is the absence of transmission between ERZ 4 and EZ 5 and the Denver Metropolitan area load center and other areas in Colorado. Construction of the Project will remove this obstacle while addressing Applicants' reliability issue.[297] Because there is no transmission that connects ERZ 4 and ERZ 5 to the Denver

[295] As detailed above, Public Service may acquire renewable resource generation in excess of the two percent retail rate impact rule if the Commission approves (a) implementation of the fair share provision added in the 2010 RES amendments or (b) implementation of the borrow-ahead provision added in the 2010 RES amendments or (c) both.

[296] These facts also address the Trinchera Ranch arguments that there is a question about future development of renewable resource generation in southern Colorado. Based on the record in this proceeding, as discussed above, the ALJ finds these Trinchera Ranch arguments to be unpersuasive.

[297] The 2009 Study (Hearing Exhibit No. 10 at Exhibit TWG-1) evaluated the Project with respect to its ability to address the reliability issue and to provide export capability from southern Colorado to the Denver Metropolitan area load center. The 2009 Study establishes that the Project meets the identified needs and purposes.

Metropolitan area load center, there is a substantial possibility that any generation (whether or not renewable resource generation) developed in ERZ 4 and ERZ 5 will use the Project to export energy to the Denver Metropolitan area load center and other areas in Colorado.

469. The Project is robust, connects two ERZs, creates separate source looped transmission, creates a new and separate transmission corridor (San Luis Valley to Comanche), and makes the most efficient use of the new and existing transmission corridors. The Project is the result of studies performed in, and reviewed in, Colorado transmission planning forums (*e.g.*, Colorado Long Range Transmission Planning Group, Colorado Coordinated Planning Group, SB07-100 Subcommittee of Colorado Coordinated Planning Group). In planning the Project, Applicants considered all aspects of Project (*e.g.*, operations, maintenance, reliability, load serving) and found the Project to be acceptable with respect to all aspects. As a joint transmission undertaking, the Project lowers the costs for Public Service's ratepayers, Tri-State's customers, and Tri-State Members' customers relative to the cost of Public Service and Tri-State separately constructing transmission to meet their reliability and export needs.

470. The record establishes that that Applicants have met their burden of proof to establish that the Project (including the San Luis Valley-Calumet Segment) meets Applicants' reliability and export needs and purposes.[298]

471. The RUS EIS process is underway and will inform the RUS loan review process. In its final agency decision on the Tri-State loan, RUS will identify its preferred route or corridors for the Project. This process has not been concluded. As a result, there is no certainty at present that the Project's route or corridors will be the corridor(s) preferred by Applicants.

[298] Because Applicants have established that the Project is necessary to remedy the reliability issue and to export renewable resource generation, the Trinchera Ranch argument that Applicants have failed to establish that the Project is sized appropriately to meet the identified reliability need alone is moot.

Consequently, the possibility exists that the result of the RUS process might be inconsistent with a Commission decision granting a CPCN for the Project (for example, RUS might designate as its preferred route something other than the San Luis Valley-Calumet Segment).

472. In view of this possibility and to determine options that might be available to address the uncertainty, the ALJ requested the Parties (if they wished to do so) to address two issues: (a) whether as a matter of law, when granting a CPCN for transmission line facilities, the Commission must identify both the beginning point and the end (or termination) point between which a transmission line must be constructed; and (b) if the Commission need not do that identification, and recognizing that the Commission must identify the beginning point, what factors ought the Commission to consider in determining whether to identify the termination point for transmission line facilities. Public Service, Tri-State, and Trinchera Ranch addressed these issues in their Supplemental SOPs.

473. After consideration of the entire record and the arguments presented, the ALJ determines that it appears that, as a matter of law, the Commission has the authority to issue a transmission line CPCN that does not specify the termination point for the transmission line.

474. After consideration of the entire record and the arguments presented, the ALJ determines that the beginning points and the termination points should be, and will be, identified in the CPCN for each of the Project's two transmission lines (*i.e.*, the San Luis Valley Substation-Calumet Substation-Comanche Substation line and the Calumet Substation-Walsenburg Substation line).

475. First, there are practical difficulties that arise for a utility that attempts to implement a transmission line CPCN that does not specify the termination point(s).[299] Second, as stated by Tri-State in its Supplemental SOP, Rule 4 CCR 723-3-3102(b)(III) requires a "description of the proposed facilities to be constructed" and Rule 4 CCR 723-3-3102(b)(VII) requires, "[a]s applicable, electrical one-line diagrams." Applicants provided these data, and the beginning point and the termination point for each of the transmission line Segments[300] are identified in the Applications. The ALJ agrees with Tri-State that, in view of the cited Rules and with respect to the Project, the better approach is for the CPCN to identify the transmission line facilities, both beginning points and termination points, that the Commission authorizes Applicants to construct and to operate. Third, the Project is an integrated and indivisible whole; each component contributes to that integrated whole. Consequently, disconnecting any of the transmission line Segments from the remaining components of the Project would impair significantly (if not destroy) the Project's ability to meet Applicants' established and demonstrated needs.[301] Fourth and finally, if the termination point of any transmission line Segment is undefined, additional proceedings to identify that termination point might be necessary. This would delay construction of the Project to the detriment of Applicants; Applicants' ratepayers, customers, Members, and Members' customers; developers of renewable resource generation in southern Colorado; and Colorado citizens.

[299] These include, without limitation: (a) without a termination point, a utility cannot determine possible routes for the transmission line (which affects its ability to estimate costs and its ability to obtain siting and permitting approval); (b) without a termination point, a utility would find it difficult, if not impossible, to obtain informed public input about the transmission project's route and its impact; and (c) a utility cannot perform powerflow studies and stability analyses without assumed or known termination point(s) for transmission.

[300] These are the San Luis Valley-Calumet Segment, the Calumet-Comanche Segment, and the Calumet-Walsenburg Segment.

[301] In addition, disconnecting, or raising the specter of disconnecting, any transmission line Segment from the remaining components of the Project could result in a change in the joint participation in the Project to the detriment of Public Service's ratepayers, Tri-State, or Tri-State Members and their customers.

476. To address the issue about the uncertainty created by the pending RUS proceeding, the ALJ finds it appropriate to attach the following condition to the grant of the CPCN for Project: within 30 days of the date on which the RUS issues its Record of Decision on Tri-State's loan application, Applicants will make a filing with the Commission that (a) provides a copy of the Record of Decision, (b) informs the Commission whether the RUS-preferred Project route or corridors are consistent or inconsistent with the CPCN, and (c) if there is an inconsistency, informs the Commission of the action(s) that Applicants propose to take in light of the inconsistency and why. When the Commission receives this filing, the Commission will determine what (if any) action to take based on the filing.

c. Applicants' evaluation of alternatives.

477. Trinchera Ranch observes that, in Decision No. C82-0199, the Commission stated that "feasibility studies to determine cost effective alternatives to [the applicants'] proposal ... which will meet the realistic transmission needs of its ... system" must be performed (*id*. at 43) and that alternatives suggested by other transmission planning experts should be considered in such studies. *Id*. at 43-48. Trinchera Ranch asserts that this language is controlling and establishes the standard with respect to studies of alternatives that Applicants must meet; Trinchera Ranch argues that Applicants failed to meet the standard.

478. The ALJ finds that the cited language in Decision No. C82-0199 is neither applicable nor controlling. Decades after the Commission issued Decision No. C82-0199, the Commission promulgated Rule 4 CCR 723-3-3102(b)(VIII). The ALJ finds that the Rule, and not Decision No. C82-0199, establishes the information that Applicants must supply. Thus, the ALJ finds that Trinchera Ranch's argument is not persuasive.

479. Pursuant to Rule 4 CCR 723-3-3102(b)(VIII) and as part of their CPCN Applications, Applicants must provide, "*as applicable*, information on alternatives studied, costs for those alternatives, and criteria used to rank or [to] eliminate alternatives" (emphasis supplied).[302] The Rule requires an applicant utility to provide information on any alternative that the utility studied but does not mandate or specify the content of the utility's study of alternatives. The "as applicable" language modifies the information that the applicant utility must provide and indicates that the information concerning the cost of the alternatives studied and the criteria used to rank or to eliminate the studied alternatives is to be provided *if* the applicant utility has the information.

480. The record is clear that Applicants have met the Rule requirement.

481. Applicants began studying precursors to the Project in 1997.[303]

482. The 2004 Study included an evaluation of alternatives conducted by Tri-State. The alternatives included transmission lines north out of the San Luis Valley. The 2004 Study concluded that a transmission line east from the San Luis Valley was the preferred solution.

483. In the 1997 Study, the 2004 Study, and the 2008 Study, specific alternative transmission corridors going north and northeast from the San Luis Valley Substation were identified, studied, and evaluated. In each study, the study participants determined that a transmission line going east from the San Luis Valley Substation was the preferred alternative.

---

[302] Rule 4 CCR 723-3-3102(b)(VIII) states that this information is to be provided "as applicable." One could argue that a utility may elect not to evaluate any alternative(s) and still be in compliance with the Rule. Because Applicants in this proceeding did study alternatives to the Project and provided evidence concerning their evaluations, the ALJ finds it unnecessary to determine whether a utility may choose not to evaluate one or more alternatives and still be in compliance with Rule 4 CCR 723-3-3102(b)(VIII).

[303] The studies and analyses done by Applicants are discussed above. The Project is the result of studies reviewed in Colorado transmission planning forums (*e.g.*, Colorado Long Range Transmission Planning Group, Colorado Coordinated Planning Group, SB07-100 Subcommittee of Colorado Coordinated Planning Group). Thus, in developing the Project, there was input from the transmission planning experts in those forums.

484. The 2008 Study included a feasibility analysis of the top alternatives considered. Those top alternatives included two options to the north out of the San Luis Valley (one to Poncha and one to Monarch). The feasibility analysis included examination of some of the major routing obstacles (such as the location of federal lands) and found no fatal flaws with the siting and routing of a new line to the north. The 2008 Study recommended a transmission line to the east (from the San Luis Valley Substation to the Walsenburg Substation).

485. Finally, the 2009 Study evaluated the Project with respect to its ability to address both the reliability issue and to provide export capability from southern Colorado to the Denver Metropolitan area load center.

486. In each of the studies, there is a discussion of the alternatives studied. In addition, in most of the studies, there is discussion of the costs of the alternatives and of the criteria used to rank or to eliminate alternatives. As noted, the Rule does not mandate or specify the information that must be contained in a utility's evaluation of alternatives. Thus, Applicants have met the requirements of Rule 4 CCR 723-3-3102(b)(VIII).

487. Further, the ALJ agrees with Applicants that the northern alternatives have been examined in this proceeding irrespective of any previous (or lack of previous) evaluation of those alternatives. This occurred during the examination of the Trinchera Ranch alternatives, particularly TR1AE, which were examined to determine their ability both to meet the southern Colorado reliability issues and to deliver generation from southern Colorado to the Denver Metropolitan area load center and elsewhere in Colorado.[304]

[304] The Trinchera Ranch alternatives (especially TR1AE) are examined in the 2009 Poncha Study, in Hearing Exhibit No. 128, and in the 2009 Stability Analysis.

488. Finally, if Trinchera Ranch offered its alternatives to demonstrate that Applicants did not study and reject *every* northern alternative (as opposed to offering its alternatives as a substitute for the San Luis Valley-Calumet Segment), the ALJ finds that demonstration to be unavailing. First, as discussed, Rule 4 CCR 723-3-3102(b)(VIII) does not require Applicants to study -- let alone, to study and expressly to reject with detailed rationales -- every conceivable alternative. Second, the Trinchera Ranch alternatives were studied in this transmission proceeding, and Applicants raised serious issues with respect to those alternatives. The Rule requirement is satisfied.

489. Colorado Open Lands recommends that the Commission hold in abeyance its decision on the CPCN Applications until an environmental impact analysis has been conducted, in this proceeding, of both the Project and the northern alternatives. Colorado Open Lands is concerned about the Project's possible adverse impact on the environment or environmentally-sensitive areas (including impacts on the conservation easements held by Colorado Open Lands). Colorado Open Lands seeks to have the Commission examine, in this proceeding, whether transmission corridors are available that would have less of an adverse impact.

490. The Colorado Open Lands recommendation will not be adopted. Holding the CPCN decision in abeyance is unwarranted because the Commission does not make siting decisions in a transmission CPCN proceeding; thus, the purpose of the analysis recommended by

Colorado Open Lands in the context of this proceeding is unclear.[305] In addition, the ALJ is not persuaded that it is worth the expense to conduct, in this proceeding, an environmental impact analysis of northern alternatives that are not part of the Project and that have been shown to have the potential to result in significant adverse environmental impacts. Finally, the ALJ finds that the Colorado Open Lands recommendation is impractical because its implementation (a) would delay construction of the Project; (b) would result in additional hearings on an issue (*i.e.*, the environmental impacts of the Project and of the northern alternatives) that is not directly relevant to the present or future need for the Project; and (c) would impose considerable cost on Applicants and, potentially, on Tri-State Members' customers and Public Service's ratepayers.

d. Trinchera Ranch alternatives.

491. Trinchera Ranch recommends that the Commission substitute one of its four alternatives for the San Luis Valley-Calumet Segment. In doing so, Trinchera Ranch is the proponent of a Commission order and bears the burden of proof (by a preponderance of the evidence) with respect to its request. Section 24-4-105(7), C.R.S.; § 13-25-127(1), C.R.S.; Rule 4 CCR 723-1-1500.

492. Based on the record, the ALJ finds that Trinchera Ranch failed to meet its burden

[305] If the Commission were to require an environmental impact analysis in this proceeding, the Commission would do so only if it intended to use the results of that analysis as a basis for its CPCN decision. If the Commission does not intend to use the analysis results, the expense of the environmental impact analysis would be incurred for, and the delay caused by conducting the analysis would serve, no purpose in this proceeding.

The counties and local jurisdictions (and not the Commission) will make the initial siting decisions with respect to the Project, and those decisions may include consideration of environmental impacts and appropriate mitigation measures. In addition, RUS is conducting an environmental impact analysis as part of its EIS process; that process includes consideration of environmental impacts and mitigation measures. The Commission should not interfere with, or duplicate, those processes. If the Commission required an environmental impact analysis in this proceeding and then used that analysis as a basis for its decision with respect to the CPCN, the Commission could interfere with those processes if the Commission placed on the CPCN one or more conditions that conflict with, or impede the implementation of, (a) a county's siting decision and any conditions imposed by the county or (b) a RUS-mandated environmental impact mitigation method or technique or (c) both. In addition, requiring an environmental impact analysis in this proceeding almost certainly would duplicate the RUS EIS process.

of proof. The evidence establishes the following: (a) Trinchera Ranch did not conduct required system reliability and transient system stability analyses of its alternatives; (b) the Trinchera Ranch alternatives do not comport with Public Service's and with Tri-State's transmission planning policies and practices;[306] (c) the Trinchera Ranch alternatives require new transmission to be constructed in proximity to existing transmission and, if there may be a reliability impact from siting a new transmission line in proximity to an existing line, a specific assessment should be done to quantify this impact;[307] Trinchera Ranch did not perform a specific assessment of its alternatives; (d) Trinchera Ranch did not examine the impact of its alternatives on, or the interaction of its alternatives with, TOT5; (e) Tri-State does not have transmission ownership or firm transmission service rights originating either at Poncha Substation or at Malta Substation,[308] and there is no record that explains how Tri-State could use any of the alternatives to meet its export needs; (e) given the area through which TR1AE would have to be sited, the record establishes that, at best, a new line from San Luis Valley to Poncha to Malta would be extremely difficult to site and to build and, at worst, could not be sited and built at all; and (f) Trinchera Ranch's estimates of the cost to construct a single-circuit 230kV transmission line from the San Luis Valley to Poncha and to extend that line from Poncha to the Malta (TR1AE) are

[306] The Trinchera Ranch alternatives meet the NERC and the WECC reliability planning criteria but not the transmission planning standards used by either Public Service or Tri-State. There is no dispute that the NERC and the WECC reliability planning criteria are minimum planning criteria and that utilities may build to more exacting criteria. Both Public Service and Tri-State use more exacting criteria (*e.g.*, no load-shedding RAS to remedy an N-1 condition).

[307] *See*, *e.g.*, 2008 Study (Hearing Exhibit No. 16 at Exhibit MJM-2) at 4-13.

[308] *See* Hearing Exhibit No. 9 at Exhibit GMS-9 (line drawing of Colorado transmission system showing no Tri-State transmission out of Poncha Junction (other than 230kV transmission to San Luis Valley Substation) or into or out of Malta Substation).

understated.[309] In addition, the Trinchera Ranch alternatives were developed in the context of this transmission proceeding and have not been examined in the open Colorado transmission planning forums discussed above. Consequently, owners of transmission facilities (other than Public Service and Tri-State) have not had an opportunity to examine the impacts (if any) of the alternatives on their systems. Finally, the ALJ finds that the record supports Applicants' responses to, and criticisms of, the Trinchera Ranch alternatives, discussed above.

493. Based on the record and for the reasons discussed above, the ALJ finds that Applicants have met their burden of proof. The ALJ finds that the present or future public convenience and necessity requires or will require the construction and operation of the Project (including the San Luis Valley-Calumet Segment) *provided* Applicants construct and operate the San Luis Valley-Calumet Segment as described in the Applications, as described in this Decision, and subject to the conditions discussed in this Decision.

G. Calumet Substation.

1. Findings of Fact.

494. The facts contained in this discussion are not disputed.

495. The facts found above with respect to the Project (including the San Luis Valley-Calumet Segment) are incorporated here by reference.

496. Tri-State has a reliability issue in Colorado in the Walsenburg area, south of Walsenburg, in the Pueblo area, and in northeastern New Mexico: loss of load as a result of a

[309] For example, Trinchera Ranch acknowledges that it studied neither the contract path nor the costs associated with using such a contract path for its alternatives to Poncha or Malta. The cost of a Trinchera Ranch alternative is understated to the extent that the alternative depends on, or assumes, the acquisition of transmission capacity rights on transmission facilities owned by other entities but fails to include the cost of acquiring those rights.

single contingency outage of the existing 230kV Comanche-Walsenburg transmission line.[310] To address this reliability issue, Tri-State has determined that additional transmission is necessary.

497. The existing Walsenburg Substation cannot accommodate the planned additional transmission. It is constricted by its physical layout and cannot be expanded sufficiently.

498. NREL has identified a technical potential for 35,000 MW of concentrated solar power in the Walsenburg area. NREL has identified a technical potential for 2,000 MW of Wind Power Class (WPC) 4 (or better) power in the Walsenburg area and for 37,000 MW of WPC 4 (or better) power in the area southeast of Walsenburg. These areas are located within ERZ 5.

499. Applicants have evidenced an interest in obtaining wind resources. For example, Public Service's 2007 CRP contains approximately 700 MW of wind-powered generation to be in service by 2013. None of the identified wind resource is located in the San Luis Valley.

500. At present, there is no transmission capable of delivering significant amounts of electricity generated by ERZ 5 renewable resources (*i.e.*, solar and wind) to the Denver Metropolitan area load center and throughout Colorado.

501. The Calumet-Comanche Segment and the Calumet-Walsenburg Segment expand the transmission system that is necessary (a) to develop more diversity in Public Service's wind and solar portfolio; (b) to deliver resources from ERZ 5 to the Denver Metropolitan load center; (c) to allow Tri-State to acquire renewable resource generation in ERZ 5and (d) to address Tri-State's reliability issues in the Walsenburg area, south of Walsenburg, in the Pueblo area, and in northeastern New Mexico.

[310] This reliability issue is established in the analyses, studies, and reports detailed in this Decision in the discussion of the development of the Project.

502. As a principal substation in both the Calumet-Comanche Segment and the Calumet-Walsenburg Segment, the Calumet Substation is a critical component of the transmission that is necessary both to address the existing reliability issue and to deliver renewable resource generation to load.

503. The Calumet Substation will benefit Applicants -- and Colorado as a whole -- by providing the opportunity for Applicants to develop renewable resources to satisfy present and future demand and to export renewable resources out of the Walsenburg area and southern Colorado.[311] It will assist Public Service in its efforts to meet its RES requirements. It will assist Tri-State in its acquisition of renewable resource generation and will assist Tri-State Members in their efforts to meet their RES requirements.

504. Analyses and studies performed by Applicants consistently have identified both increased system reliability and the need for transmission for renewable resources as reasons for a new substation and for additional transmission south and southeast of Pueblo and Walsenburg. The Calumet Substation, in conjunction with the Calumet-Comanche Segment and the Calumet-Walsenburg Segment, will achieve those twin goals.

505. The Calumet Substation will be constructed north of Walsenburg on property owned by Tri-State. The Calumet Substation is sized appropriately (a) to accommodate the transmission lines necessary to address the reliability issue and (b) to provide space for the future interconnection of additional generation resources.

[311] If there is a San Luis Valley-Calumet Segment and there is generation injection at Calumet only, the Calumet Substation can accommodate up to 1,400 MW of generation from ERZ 5 at peak summer load. Hearing Exhibit No. 128. If there is a San Luis Valley-Calumet Segment and there is generation injection at San Luis Valley, the amount of peak summer load generation injection at Calumet varies with the amount of generation injection at San Luis Valley. *Id*. If there is no San Luis Valley-Calumet Segment, the Calumet Substation can accommodate up to 1,000 MW of generation from ERZ 5 at peak summer load. *Id*.

506. There are no existing substation facilities that can meet the identified needs that the Calumet Substation will meet.

507. No Intervenor identified an alternative to the Calumet Substation.

508. There is no alternative to the Calumet Substation.

509. No Intervenor objected to the Calumet Substation.

510. For reasons already discussed, Tri-State's Members and customers and Public Service's ratepayers will benefit from the cost-sharing between Public Service and Tri-State for the Calumet Substation. This is a significant benefit.

511. Additional findings of fact are contained in the remainder of the Decision.

2. Discussion and conclusions.

512. To meet their burden of proof with respect to the requested CPCN to construct and to operate transmission facilities, Applicants must establish by a preponderance of the evidence that (a) there is a present or future need for the facilities and (b) existing facilities are not reasonably adequate and available to meet the identified need. Section 40-5-101(1), C.R.S. In addition, if alternatives were studied, Applicants must provide, where applicable, the Rule 4 CCR 723-3-3102(b)(VIII) information.

513. The Calumet Substation is a critical component of the Project. In conjunction with other Project components, the Calumet Substation significantly reduces, if not eliminates, a principal reliability issue in southern Colorado. The existing Walsenburg substation cannot accommodate the transmission necessary to address this existing reliability issue. Thus, there is a demonstrated present need for the Substation.

514. In conjunction with other Project components, the Calumet Substation will assist Applicants in meeting their obligations and in implementing important state policies concerning increased use of renewable resources for the generation of electricity. In addition, the transmission lines that connect to the Calumet Substation serve Colorado's strong public policy goals of developing economic renewable resource generation in all GDAs/ERZs. Thus, there is a demonstrated future need for the substation.

515. The evidence that there are no existing facilities that can meet the identified needs is uncontroverted. In addition, the evidence of Applicants' study of alternatives is unrebutted.

516. Based on the record and for the reasons discussed, the ALJ finds that Applicants have met their burden of proof. The ALJ finds that the present or future public convenience and necessity requires or will require the construction and operation of the Calumet Substation *provided* Applicants construct and operate the Calumet Substation as described in the Applications, as described in this Decision, and subject to the conditions discussed in this Decision.

H. Calumet-Comanche Segment.

1. Findings of Fact.

517. The facts contained in this discussion are not disputed.

518. The facts found with respect to the Project (including the San Luis Valley-Calumet Segment and the Calumet Substation) are incorporated here by reference.

519. The current reliability issue in and south of Walsenburg concerns loss of load as a result of a single contingency outage of the existing 230kV Comanche-Walsenburg transmission line. Tri-State does not consider its Comanche-Walsenburg 230kV RAS and load shedding to be

acceptable long-term solutions to its reliability concerns.[312] Consequently, Tri-State has planned for some time to address this reliability issue.

520. The addition of the Project (including the San Luis Valley-Calumet Segment, the Calumet-Comanche Segment, and the Calumet-Walsenburg Segment) will improve reliability in the southern Colorado electric transmission system by creating a looped system (*i.e.*, a secondary path for transmission service) between the Pueblo area and the Walsenburg area.

521. The addition of the Project (including the San Luis Valley-Calumet Segment, the Calumet-Comanche Segment, and the Calumet-Walsenburg Segment) will improve reliability in the areas of Walsenburg and northeastern New Mexico by preventing loss of load as a result of a single contingency outage of the 230kV Comanche-Walsenburg line. The addition of the Project (including the San Luis Valley-Calumet Segment, the Calumet-Comanche Segment, and the Calumet-Walsenburg Segment) will eliminate the Walsenburg-Gladstone 230kV line RAS.

522. The addition of the Project (including the Calumet-Comanche Segment and the Calumet-Walsenburg Segment) will serve additional planned loads for Tri-State Member San Isabel Electric Association and for the Tri-State Member Southwestern Electrical Cooperative.

523. The Project (including the Calumet-Comanche Segment and the Calumet-Walsenburg Segment) provides a direct and critical connection with renewable resource generation in ERZ 5, delivered to Comanche. From Comanche, significant transmission is available to deliver the renewable resource generation to the Denver Metropolitan area load center.

[312] Public Service and Staff share this view.

524. The Project (including the Calumet-Comanche Segment and the Calumet-Walsenburg Segment) allows Applicants to obtain the benefits from lower-cost (although intermittent) wind resources and increases the geographic diversity of Public Service's wind portfolio, which increases that portfolio's overall capacity.[313] The Project (including the Calumet-Comanche Segment and the Calumet-Walsenburg Segment) serves Colorado's public policy goal of developing economic renewable resource generation in all GDAs/ERZs.

525. No existing transmission facilities are available to meet the identified needs that the Calumet-Comanche Segment will meet.

526. No existing transmission facilities are adequate to meet the identified needs that the Calumet-Comanche Segment will meet.

527. The Calumet-Comanche Segment is sized appropriately (a) to accommodate the physical needs of the transmission necessary to address the reliability issue and (b) to provide space for the future interconnection of additional resources.

528. No Intervenor identified an alternative to the Calumet-Comanche Segment.

529. No Intervenor objected to the Calumet-Comanche Segment.

530. There is no reasonable alternative to the Calumet-Comanche Segment.

531. As a transmission line that is jointly planned and owned by Public Service and Tri-State, the Calumet-Comanche Segment (a) reduces costs to Applicants' Members, ratepayers, and customers (for reasons previously discussed); (b) reduces environmental impacts (because there is one transmission line to be sited, constructed, and maintained instead of two or more

[313] Any decrease in solar acquisition and shift in emphasis to the acquisition of wind resources may make the Project (including the Calumet Substation, the Calumet-Comanche Segment, and the Calumet-Walsenburg Segment) more important because it allows delivery of more wind generation from ERZ 5 to serve load. This assumes that issues surrounding integration of intermittent resources (such as wind) are resolved.

lines); and (c) reduces local land use and siting issues (because there is one transmission line to be sited instead of two or more lines and because there is efficient use of the new transmission corridors).

532. Additional findings of fact are contained in the remainder of the Decision.

2. Discussion and Conclusions.

533. To meet their burden of proof with respect to the requested CPCN to construct and to operate transmission facilities, Applicants must establish by a preponderance of the evidence that (a) there is a present or future need for the facilities and (b) existing facilities are not reasonably adequate and available to meet the identified need. Section 40-5-101(1), C.R.S. In addition, Applicants must provide, where applicable, the Rule 4 CCR 723-3-3102(b)(VIII) information.

534. In conjunction with other Project components, the Calumet-Comanche Segment significantly reduces, if not eliminates, one of the principal existing reliability issue in southern Colorado. The existing transmission cannot address this existing reliability need. Thus, there is a demonstrated present need for the Segment.

535. In conjunction with other Project components, the Calumet-Comanche Segment will assist Applicants in meeting their obligations and in their implementation of important state policies concerning increased use of renewable resources for the generation of electricity. In addition, it will assist Tri-State Members to serve their additional planned loads. The existing transmission cannot address these needs. Thus, there is a demonstrated future need for the Segment.

536. The evidence that there are no existing facilities that can meet the identified needs is uncontroverted. In addition, the evidence of Applicants' study of alternatives is unrebutted.

537. Based on the record and for the reasons discussed, the ALJ finds that Applicants have met their burden of proof. The ALJ finds that the present or future public convenience and necessity requires or will require the construction and operation of the Calumet-Comanche Segment *provided* Applicants construct and operate the Calumet-Comanche Segment as described in the Applications, as described in this Decision, and subject to the conditions discussed in this Decision.

I. Calumet-Walsenburg Segment.

1. Findings of Fact.

538. The facts contained in this discussion are not disputed.

539. The facts found with respect to the Project (including the San Luis Valley-Calumet Segment, the Calumet Substation, and the Calumet-Comanche Segment) are incorporated here by reference.

540. No existing transmission facilities are available to meet the identified needs that the Calumet-Walsenburg Segment will meet.

541. No existing transmission facilities are adequate to meet the identified needs that the Calumet-Walsenburg Segment will meet.

542. Calumet-Walsenburg Segment is sized appropriately (a) to accommodate the physical needs of the transmission necessary to address the reliability issue and (b) to provide space for the future interconnection of additional resources.

543. No Intervenor identified an alternative to the Calumet-Walsenburg Segment.

544. No Intervenor objected to the Calumet-Walsenburg Segment.

545. There is no reasonable alternative to the Calumet-Walsenburg Segment.

546. As a transmission line that is jointly planned and owned by Public Service and Tri-State, the Calumet-Walsenburg Segment (a) reduces costs to Applicants' Members, ratepayers, and customers; (b) reduces environmental impacts (because there is one transmission line to be sited, constructed, and maintained instead of two or more lines and because the new transmission can be built in the existing transmission corridor); and (c) reduces local land use and siting issues (because there is one transmission line to be sited instead of two or more lines and because there is efficient use of the existing transmission corridor).

547. Additional findings of fact are contained in the remainder of the Decision.

2. Discussion and Conclusions.

548. To meet their burden of proof with respect to the requested CPCN to construct and to operate transmission facilities, Applicants must establish by a preponderance of the evidence that (a) there is a present or future need for the facilities and (b) existing facilities are not reasonably adequate and available to meet the identified need. Section 40-5-101(1), C.R.S. In addition, Applicants must provide, where applicable, the Rule 4 CCR 723-3-3102(b)(VIII) information.

549. In conjunction with other Project components, the Calumet-Walsenburg Segment significantly reduces, if not eliminates, one of the principal existing reliability issue in southern Colorado. The existing transmission cannot address this existing reliability issue. Thus, there is a demonstrated present need for the substation.

550. In conjunction with other Project components, the Calumet-Walsenburg Segment will assist Applicants in meeting their obligations and in implementing important public policies concerning increased use of renewable resources for the generation of electricity. In addition, it

will assist Tri-State Members to serve their additional planned loads Thus, there is a demonstrated future need for the substation.

551. The evidence that there are no existing facilities that can meet the identified needs is uncontroverted. In addition, the evidence of Applicants' study of alternatives is unrebutted.

552. Based on the record and for the reasons discussed, the ALJ finds that Applicants have met their burden of proof. The ALJ finds that the present or future public convenience and necessity requires or will require the construction and operation of the Calumet-Walsenburg Segment *provided* Applicants construct and operate the Calumet-Walsenburg Segment as described in the Applications, as described in this Decision, and subject to the conditions discussed in this Decision.

J. Conditions on Grant of CPCN for Project.

1. Commission's authority to place conditions on CPCN.

553. Applicants have raised an issue with respect to the Commission's authority to attach conditions to the requested CPCNs. Thus, the first condition-related issue the ALJ addresses is the scope of the Commission's authority to place conditions on CPCNs. For the reasons discussed below, the ALJ concludes that the Commission has broad discretion with respect to placing a condition on a CPCN, provided the conditions are found to be in the public interest (that is, needed for the public convenience and necessity).

a. Parties' Positions

554. WRA asserts that the Commission's authority to place conditions on CPCNs is broad, citing Article XXV of the Colorado Constitution and Colorado Supreme Court decisions that affirm the Commission's broad authority. *Mountain States Telephone and Telegraph Company v. Public Utilities Commission*, 763 P.2d 1020, 1025 (Colo. 1988) ("The PUC's

authority under article XXV is not narrowly confined but extends to incidental powers which are necessary to enable it to regulate public utilities."); *Miller Brothers, Inc v. Public Utilities Commission*, 525 P.2d 443, 451 (Colo. 1974) ("until the General Assembly restricts it, the Commission has as much authority as the legislature possessed prior to the adoption of Article XXV in 1954").

555. WRA also relies on §§ 40-5-101(1), C.R.S.,[314] and 40-5-103(1), C.R.S., as authority for the Commission's ability to attach condition to CPCNs. WRA asserts that § 40-3-101(2), C.R.S.,[315] provides a basis for the Commission to adopt and to place on CPCNs reasonable and limiting conditions that further the objectives stated in that statutory provision.

556. Trinchera Ranch argues that the Commission may place a condition on a CPCN even if the condition is not provided for by rule or statute.[316] Rule 4 CCR 723-3-3002(b)(XI)(B) requires each CPCN application to include an "[a]cknowledgement that, by signing the application, the applying utility understands that: ... if the application is granted, the applying utility shall not commence the requested action until the applying utility complies with applicable Commission rules and *any conditions established by Commission order granting the application*." (Emphasis supplied.) Trinchera Ranch maintains that this provides authority to attach conditions to CPCNs. In the Applications, both Public Service and Tri-State acknowledge this Rule provision. Hearing Exhibit No. 1 at 10; Hearing Exhibit No. 2 at 11.

[314] As pertinent here, that statute, which applies to both Applicants, states: "No public utility shall begin the construction of a new facility ... without first having obtained from the commission a certificate that the present or future public convenience and necessity require or will require such construction."

[315] That statute states: "Every public utility shall furnish, provide, and maintain such service, instrumentalities, equipment, and facilities as shall promote the safety, health, comfort, and convenience of its patrons, employees, and the public, and as shall in all respect be adequate, efficient, just and reasonable."

[316] WRA supports Trinchera Ranch's position.

557. Applicants agree that, as a general matter, the Commission has the authority to place appropriate conditions on CPCNs. They assert, however, that granting a CPCN in this case is governed by a specific statute (*i.e.*, § 40-5-101, C.R.S.) and a specific Commission rule (*i.e.*, Rule 4 CCR 723-3-3102), neither of which addresses whether the Commission may attach the conditions that some Intervenors seek to place on the CPCN. Applying the principle of statutory construction that the specific controls the general, Applicants assert that statutes concerning the Commission's general authority cannot grant to the Commission the authority to place conditions on a CPCN if the CPCN-specific statutes and rules do not do so.

558. Applicants assert that § 40-5-103(1), C.R.S., does not support the Commission's ability to attach conditions to a CPCN. They state that § 40-5-103(1), C.R.S., requires an applicant for a CPCN to have its articles of incorporation or charter on file with the Commission and also requires an applicant for a CPCN to have on file with the Commission evidence that the applicant may operate within the boundaries of the local governmental authority within whose limits it desires to operate. Applicants assert that it is in this context that § 40-5-103(1), C.R.S., declares that nothing in that subsection limits or restricts the power and authority of the Commission to issue CPCNs under § 40-5-101, C.R.S. According to Applicants, § 40-5-103(1), C.R.S., is not a separate grant of authority to issue or to condition CPCNs because § 40-5-101, C.R.S., gives that authority to the Commission. Instead, according to Applicants, § 40-5-103(1), C.R.S., is a statement that nothing in that subsection limits the existing powers that the Commission may exercise under § 40-5-101, C.R.S.

559. Applicants also express concern that some of the Intervenors' proposed conditions may be inconsistent with Colorado Supreme Court precedent that prohibits rule-making in an adjudicatory proceeding.

560. Applicants observe that, while broad, the Commission's authority to place conditions on CPCNs is not boundless. They point out that the Colorado Supreme Court has invalidated Commission decisions in adjudicatory cases when the Court determined that the Commission had engaged in rule-making but failed to follow rule-making procedures. *Colorado Office of Consumer Counsel v. Mountain States Telephone & Telegraph Company*, 816 P.2d 278, 284 (Colo. 1991) (*Mountain States*); *Home Builders Association of Metropolitan Denver v. Public Utilities Commission*, 720 P.2d 552, 560 (Colo. 1986) (*Home Builders*).

561. Applicants urge the Commission, as it considers the Intervenors' recommended conditions, to bear in mind the difference between an adjudication, which "involves a determination of rights, duties, or obligations of identifiable parties by applying existing legal standards to facts developed at a hearing conducted for the purpose of resolving the particular interests in question" (*AviComm, Inc. v. Colorado Public Utilities Commission*, 955 P.2d 1023, 1030 (Colo. 1998) (*AviComm*),[317] and a rule, which is "the whole or any part of every agency statement of general applicability and future effect implementing, interpreting, or declaring law or policy or setting forth the procedure or practice requirements of an agency" (§ 24-4-102(15), C.R.S.; *Mountain States*, 816 P.2d at 284).[318] Applicants respectfully counsel the Commission to be careful not to engage in rule-making in this proceeding when the Commission decides to attach a condition to the CPCN.

562. Applicants argue that some of the Intervenors' proposed conditions are unrelated to the Applications and the Project and, thus, are contrary to the requirement that any new or

[317] *See also* § 24-4-102(2), C.R.S. (an adjudication is "the procedure used by an agency for the formulation, amendment, or repeal of an order").

[318] Applicants note that, in order to promulgate a rule, "the [Commission] must follow the notice, publication, and content requirements detailed in" § 24-4-103, C.R.S. *AviComm*, 955 P.2d at 1030.

amended requirement created and imposed in an adjudicatory proceeding "must be 'peculiar' to the particular case" at issue (*Home Builders*, 720 P.2d at 562 (internal citation omitted)). They assert that other Intervenor-proposed conditions are of general applicability and have a future effect so that the imposition of those conditions would be deemed to be rule-making, which cannot occur in the context of this adjudication. *Home Builders*, 720 P.2d at 561 (reversing Commission decision because it was "nothing less than 'an agency statement of general applicability and future effect implementing [and] declaring policy'" (internal citation omitted)).

b. Discussions and Conclusions

563. The ALJ finds persuasive WRA's argument concerning Article XXV of the Colorado Constitution. WRA correctly points out that Article XXV gives the Commission broad authority to regulate public utilities. That authority, however, is subject to restrictions that the General Assembly may impose. Once the legislature acts, the scope of the Commission's authority is controlled by the applicable statute. *Peoples Natural Gas Division of Northern Natural Gas Company v. Public Utilities Commission*, 626 P.2d 159 (Colo. 1981).

564. The ALJ finds unpersuasive the argument that the Commission cannot attach one or more conditions to a CPCN because § 40-5-101, C.R.S. (the statute that addresses the granting of a CPCN), does not contain an affirmative grant of that specific authority. That argument ignores the well-established legal principles that, in the regulation of utilities, (a) the Commission has authority unless the General Assembly restricts that authority (*Colorado-Ute Electric Association, Inc. v. Public Utilities Commission*, 760 P.2d 627, 638-39 (Colo. 1988) (*Colorado-Ute*)), and so there is no need for the legislature to grant authority to the Commission to attach conditions to a CPCN; and (b) a restriction on Commission's authority must be specific

and must be imposed by the General Assembly. Examination of the Public Utilities Law reveals no statutory provision that limits the Commission's authority to attach conditions to CPCNs.

565. Section 40-5-103(1), C.R.S., supports the Commission's authority to place conditions on the grant of CPCNs. That statute states, as pertinent to this proceeding:

> Nothing contained in [§ 40-5-103(1), C.R.S.,] shall be construed to limit or restrict the power and authority of the commission: To regulate, issue, or refuse to issue certificates of public convenience and necessity for construction of a new facility ... as provided in section 40-5-101; and *to attach to the exercise of the rights granted by such certificate such terms and conditions as in the commission's judgment may be required by the public convenience and necessity*.

(Emphasis supplied.) *See also* § 40-3-102, C.R.S. (Commission has authority and duty "to generally supervise and regulate every public utility in this state; and *to do all things, whether specifically designated in articles 1 to 7 of [Title 40] or in addition thereto,* which are necessary or convenient in the exercise of such power[,]" subject to restrictions that are not relevant to this proceeding) (emphasis supplied); *Integrated Network Services, Inc. v. Public Utilities Commission*, 875 P.2d 1373, 1377 (Colo. 1994) (the Commission "has broad constitutional and legislative authority to regulate public utilities in Colorado"). The plain statutory language affirms the Commission's authority to attach conditions that are in the public interest.

566. Equally unavailing is Applicants' argument based on the statutory construction principle that the specific prevails over the general. That principle applies in the event there is an irreconcilable conflict between a statute of general applicability and a statute of specific applicability.[319] Section 2-4-205, C.R.S.; *Colorado-Ute,* 760 P.2d at 635-36. In this case, there is

[319] If a conflict exists between two statutory provisions, then one construes (if possible) the two statutes in a way that permits both statutes to be given effect. Only if such a construction is not possible does one apply the principle that the specific applies over the general.

no conflict between the statutory provisions applicable in this proceeding, let alone an irreconcilable conflict. The cited principle of statutory construction does not apply.

567. Finally, the ALJ finds unpersuasive Applicants' argument, based on *AviComm*, *Home Builders*, and *Mountain States*, that the Commission cannot attach a condition to a CPCN unless there is a statutory or rule basis for the condition. Applicants read too much into those decisions. In a decision decided subsequent to *Home Builders* and that discusses *Home Builders*, the Colorado Supreme Court stated:

> Policy making in the adjudicatory setting serves principally to provide a guide to the agency's position in future adjudicatory proceedings. ... Establishment of policymaking through adjudication is justified in circumstances where an agency must treat matters neither anticipated nor dealt with previously by the agency or matters that are extremely complex and incapable of being reduced to a formalized statement of policy. ... Policy making is done through adjudication when "it is doubtful whether any generalized standard could be framed which would have more than marginal utility."

Charnes v. Robinson, 772 P.2d 62, 66 (Colo. 1989) (quoting National Labor Relations Board v. Bell Aerospace Company, 416 U.S. 267, 294 (1974)) (internal citations omitted); *see also* Decision No. C10-1053 at ¶20 (the Commission can grant relief in a formal complaint proceeding in the absence of a statute or a rule because "[r]atepayers are entitled to safe and reliable service, even in unique circumstances not fully contemplated by ... existing rules").

568. In considering the Intervenors' recommended conditions, the ALJ will be mindful of the admonitions in *AviComm*, *Mountain States*, and *Home Builders*. The ALJ will be mindful of the Commission's duty to act in the public interest, which includes attaching conditions to a CPCN if those conditions are in the public interest (*see, e.g.*, §§ 40-5-103(1) and 40-3-102, C.R.S.; *City of Montrose*).

2. Conditions Recommended by Parties and Public Commenters, Responses, and Discussion and Conclusions.

569. The ALJ informed the Parties that, if an Intervenor that both supported the Project and recommended a condition did not state in its Statement of Position that its support for the Project was unconditional, the Commission would assume that imposition of the Intervenor's requested condition(s) is required for that Intervenor to support the Project. The following discussion addresses the Intervenors' requested conditions.

a. Bar Nothing

570. Bar Nothing generally supports the CPCN Applications but recommends that the Commission attach two conditions to the CPCN for the Project: (a) a condition that protects Public Service's ratepayers in the event that future events establish that Public Service's assumptions about development of renewable resource generation in southern Colorado are overly-optimistic and, as a result, the Project is over-built;[320] and (b) a condition that protects the environment of the area and the safety of the users of the land.[321]

571. Both Bar Nothing and Trinchera Ranch recommend that the Commission place on the CPCN a condition that protects ratepayers. In doing so, Bar Nothing and Trinchera Ranch are the proponents of a Commission order and bear the burden of proof (by a preponderance of the evidence) with respect to the recommended condition. Section 24-4-105(7), C.R.S.; § 13-25-127(1), C.R.S.; Rule 4 CCR 723-1-1500. This includes establishing that the recommended

[320] To accomplish this end, Bar Nothing urges the Commission to place the following condition on the CPCN: in the future, the Commission will examine the prudence of the size of the Project (*i.e.*, whether it is sized appropriately for the amount of generation that develops in southern Colorado) and, if the Project is determined to be too large, will remove the excess costs from Public Service's rate base. This condition would apply only to Public Service because PSCo is rate-regulated by the Commission and Tri-State is not. Trinchera Ranch recommends a similar condition, which is discussed here.

[321] This condition would apply to both Applicants.

condition is in the public interest. The same is true with respect to Bar Nothing's recommended condition to address the environment and public safety.

572. In support of its *first recommended condition*, Bar Nothing asserts that building transmission to deliver energy from anticipated, to-be-developed generation facilities is consistent with, and implements, Colorado statutes and public policy designed to encourage the development of renewable resource generation. Bar Nothing has no disagreement with constructing transmission now to areas in which renewable resource generation may be constructed in the future.

573. Bar Nothing asserts that the statutes and public policy that encourage the development of renewable resource generation and encourage building transmission in advance of (and to foster) development of renewable energy generation create an attendant ratepayer-protection issue: the premises that support the finding of future need on which the CPCN is granted (*i.e.*, future development of generation) may be overly-optimistic and, if that proves to be the case, ratepayers will overpay in their rates for the transmission (in this case, the Project). To address this issue, Bar Nothing recommends that the Commission state, clearly and unambiguously, that it reserves its right to remove the cost of the entire Project, or a portion of the cost of the Project, from Public Service's rate base if, in the future, the assumptions about future development of renewable resource generation that will interconnect with the Project prove to be incorrect.

574. If the Commission determines that a CPCN should be issued for the Project (a determination with which Trinchera Ranch disagrees), Trinchera Ranch agrees with Bar Nothing that the Commission should place a condition on the CPCN to protect Public Service's ratepayers. Trinchera Ranch observes that previous CPCN applications for transmission sought

to interconnect a new but known and proven generation source (*i.e.*, one owned by a utility and subject to a CPCN or one owned by a third party and the subject of a PPA or other contractual commitment) with an existing load center. Because there was a high degree of certainty that the transmission would be used to deliver the generation from the known and proven generation source to the load center, the Commission's granting a CPCN for transmission facilities traditionally carried with it a Commission finding that the utility's investment in those facilities was prudent.

575. Trinchera Ranch asserts that the CPCN Applications in this proceeding are fundamentally different from, and thus cannot be treated the same as, previous transmission CPCN applications because Applicants seek to build transmission to foster future renewable resource generation. Trinchera Ranch asserts that (a) there is no assurance that generation that will interconnect with the Project will be built;[322] (b) the Section 123 solar thermal generation with storage that the Commission authorized Public Service to acquire in the 2007 CRP is, by definition, a commercially unproven technology; and (c) Applicants' studies supporting the Project are incomplete, are deficient, and, in several instances, were completed months after the Applications were filed. In Trinchera Ranch's view, these factors, taken together, raise serious questions about whether the Project will be used, and (if it is used) the extent to which it will be used and the year in which it will be needed, to deliver renewable resource generation from southern Colorado to the Denver Metropolitan area load center and other areas in Colorado. Trinchera Ranch argues that, in light of the demonstrable uncertainty about whether the Project will be used and the Project's significant cost, Public Service's shareholders should bear the

[322] This is the same argument that Trinchera Ranch made when it asserted that Applicants have not met their burden of proof with respect to need. It is offered, however, for a different purpose.

financial risk associated with Public Service's portion of the Project until the Commission has additional information and can determine whether Public Service's investment in the Project is, in fact, prudent. In support of its argument, Trinchera Ranch relies on two Commission decisions in which the Commission determined that issuance of a CPCN did not carry with it a finding that the investment in the facility was prudent: Decision No. 71104 (Hearing Exhibit No. 31 at Exhibit MJM-5) (*Fort St. Vrain CPCN Decision*) and Decision No. C98-0556 (Hearing Exhibit No. 31 at Exhibit MJM-4) (*Front Range Pipeline CPCN Decision*).[323]

576. Trinchera Ranch recommends that the decision in this case make it clear that: (a) in issuing the CPCN, the Commission is not making a finding that the investment in the Project is prudent; (b) subsequent proceedings will be required to determine whether Public Service's investment in the Project was, in fact, prudent;[324] and (c) until such time as there has been a finding that the investment in the Project was prudent and that the costs were prudently

[323] In the *Fort St. Vrain CPCN Decision*, the Commission granted to Public Service a CPCN authorizing construction and operation of a nuclear-powered generating unit. Trinchera Ranch asserts that, because the technology was unproven as Public Service proposed to use it, the Commission placed the risk of the generating unit's underperforming on Public Service's shareholders until such time as Public Service could demonstrate that the investment in the generating unit was prudent. Trinchera Ranch asserts that this decision is applicable to this transmission proceeding because the Section 123 solar thermal with storage technology that Public Service plans to acquire in the San Luis Valley is commercially-unproven.

In the *Front Range Pipeline CPCN Decision*, the Commission granted to Public Service a CPCN authorizing construction and operation of an intrastate natural gas pipeline. Trinchera Ranch asserts that, because at the time of the CPCN proceeding there were no existing contracts or firm commitments that established that the pipeline would be used once constructed, the Commission placed the risk of the pipeline's being underused on Public Service's shareholders until such time as Public Service could demonstrate that the investment in the pipeline was prudent. Trinchera Ranch asserts that this decision is applicable to this transmission proceeding given the absence of CPCNs and PPAs for generation that will interconnect with the Project.

[324] In addition, and as is the usual case when a utility seeks to put investment into rate base, Public Service would need to establish that the Project-related costs were prudently incurred.

incurred, Public Service's shareholders (and not PSCo's ratepayers) bear the financial risk associated with the Project.[325]

577. In response to Bar Nothing, Applicants note that Bar Nothing's first condition cannot apply to Tri-State because Tri-State is not rate-regulated by the Commission.

578. As to Public Service, Applicants oppose Bar Nothing's recommended condition because: (a) the condition cannot be implemented due to lack of specifics;[326] (b) transmission is a long-term infrastructure investment, and one expects that it will be sized with extra capacity so that it can accommodate both current and future transmission needs,[327] but the condition does not take this into account; and (c) a condition that is identical to (or that has the same effect as) Bar Nothing's recommended condition would discourage Public Service or other rate-regulated utilities from constructing transmission to ERZs, and such a result would be contrary to the mandate in § 40-5-101(4), C.R.S.

579. Concerning Trinchera Ranch's recommended condition, Applicants observe that Trinchera Ranch did not propose its condition until its Statement of Position and that Trinchera Ranch's proposal is designed to make the Project more difficult and more costly to implement.

580. Trinchera Ranch's argument in support of the condition rests on the *Fort St. Vrain CPCN Decision* and the *Front Range Pipeline CPCN Decision*. In Applicants' opinion, those

[325] Trinchera Ranch proposes that Public Service ratepayers would be responsible for the investment in that portion of the Project's thermal capacity that is actually used. As an example, if ten percent of the Project's thermal capacity is actually used, then Public Service's ratepayers would be responsible for ten percent of the investment. Public Service shareholders would be responsible (or bear the financial risk) for the remaining 90 percent of the investment.

[326] As examples of essential specifics that are missing, Applicants state that Bar Nothing fails to indicate how far into the future the Commission should wait to determine whether Public Service's assumptions underlying the Project's planning and construction prove to be incorrect and that Bar Nothing Ranch fails to specify the standard that the Commission should use to demonstrate that Public Service's assumptions were incorrect.

[327] According to Applicants, this is the reason that a transmission line or facility does not need to reach full capacity before it can be considered used and useful and can be placed in rate base.

Decisions do not support the recommended condition because they are factually distinguishable from this transmission proceeding.[328]

581. Further, Applicants argue that adopting Trinchera Ranch's proposed condition would be punitive. They assert that the proposed condition runs directly counter to established public policy.

582. Lastly, Applicants assert that, if the Commission imposes

> a condition that allow[s] for the investment to be removed from rate base, the condition itself would undercut the finding of need (and most assuredly such an argument would be made on appeal by any party opposing the Project). Further, as a practical matter, Public Service would not proceed with such a large investment unless the CPCN [has] conditions acceptable to the Company. A condition that jeopardizes recovery of the Company's investment in the facility would not be an acceptable condition.

Public Service Supplemental SOP at 16-17. They point out that a utility obtains a CPCN because the CPCN provides "the conclusive determination that it is prudent to construct the facility." *Id*. at 17 (emphasis supplied).

---

[328] The Commission issued the *Fort St. Vrain CPCN Decision* in a proceeding to obtain a CPCN for a nuclear power plant. Applicants agree with Trinchera Ranch that, in that Decision at 13, the Commission informed Public Service that, in future proceedings involving rates or valuation, the Commission might disallow portions of the investment and operating expenses because the plant was nuclear powered. Applicants disagree with Trinchera Ranch about the applicability of the *Fort St. Vrain CPCN Decision* to this proceeding because: (a) the Project in the instant proceeding will be constructed to provide transmission to the underserved ERZ 4 and ERZ 5; (b) studies establish that there are significant renewable resources available for development in those ERZs; and (c) the General Assembly enacted § 40-2-126, C.R.S., to encourage construction of transmission lines to underserved ERZs. Therefore, according to Applicants, the concerns that led the Commission to place the cited cautionary language in the *Fort St. Vrain CPCN Decision* do not exist in this docket.

The Commission issued the *Front Range Pipeline CPCN Decision* in a proceeding to obtain a CPCN for a natural gas pipeline and related facilities. Applicants disagree with Trinchera Ranch's argument that the Commission placed conditions on the CPCN due to the speculative nature of the gas supplies that would use the pipeline. Applicants argue that the conditions had nothing to do with the presence or absence of existing contracts or firm commitments for use of the pipeline. According to Applicants, the Commission had evidence that KN Wattenberg planned to build the Front Runner Pipeline, which KN Wattenberg contended could present a serious bypass challenge to Public Service's pipeline. In Applicants' view, the Commission placed conditions on the CPCN because it was concerned that Public Service's postage stamp rate for gas transportation service would give it an unfair competitive advantage over KN Wattenberg. There is no evidence that anyone plans to construct a transmission facility that would compete with the Project. In view of this factual distinction between the instant transmission proceeding and the Front Range Pipeline CPCN proceeding, Applicants assert that the *Front Range Pipeline CPCN Decision* does not support the recommended condition in this case.

583. Interwest also opposes this proposed condition. According to Interwest, the record is clear that the San Luis Valley is highly desirable for solar development and that there is a strong public policy that favors development of both renewable resource generation and the transmission required to deliver that generation to load centers. Thus, in Interwest's opinion, the strong likelihood that the San Luis Valley solar resources will be developed eliminates the risks that Bar Nothing and Trinchera Ranch identified. In addition, Interwest states that there is no record support for a CPCN condition that requires Public Service, in the future, to establish that its investment in the Project was prudent or that limits Public Service's recovery of its prudently-incurred Project-related investment and costs to the portion of investment that is proportional to the use of the Project's total capacity. Finally, Interwest argues that placing an investment and cost recovery restriction on the CPCN would discourage utility transmission investment and construction in the future, thus thwarting implementation of Colorado public policy. Interwest argues that it is unnecessary and unwise to place restrictions on, or to create impediments to, Public Service's investment and cost recovery, as Bar Nothing and Trinchera advocate.

584. The ALJ finds the arguments advanced by Bar Nothing and Trinchera Ranch concerning the need to protect Public Service's ratepayers to be persuasive. Based on the record and for the following reasons, the ALJ finds that Bar Nothing and Trinchera Ranch have each met the burden of proof with respect to attaching to the CPCN a condition to protect Public Service's ratepayers. Based on the record and for the following reasons, the ALJ finds that

granting to Public Service a CPCN in this case should not carry with it an unconditional finding that construction of the Project to meet the export need is prudent.[329]

585. As detailed above, (a) there is a substantial possibility that considerable amounts of renewable resource generation will be developed in ERZ 4 and ERZ 5 within the next ten years *if* transmission is available to those ERZs; (b) there is a substantial possibility that Applicants will acquire a substantial amount of renewable resource generation in ERZ 4 and ERZ 5 within the next ten years *if* transmission is available in southern Colorado; and (c) there is a substantial possibility that any generation (whether or not renewable resource generation) developed in ERZ 4 and ERZ 5 will interconnect with the Project in order to deliver energy to the Denver Metropolitan area load center and other areas in Colorado. The facts establishing a substantial possibility provided a sufficient basis on which to determine that the CPCN for the Project should be granted.

586. Facts that establish a substantial possibility, however, do not provide a sufficient basis on which to determine that the future events in fact will occur. It is a fact of life that substantial possibilities are not always realized. In addition, even in the wake of statutory changes that encourage construction of transmission in advance of, and to foster, construction of

[329] In Decision No. C04-0051 (Hearing Exhibit No. 91) (*Midway-Daniels Park Transmission Rebuild Decision*), the Commission deleted from Decision No. R03-1308 a footnote that called into question whether the CPCN authorizing the rebuild (granted in Decision No. R03-1308) carried with it a finding that investment in that rebuild was prudent. The Commission stated that "the prudence of the investment is properly determined at the time the [CPCN] decision is made" (Decision No. C04-0051 at ¶ 11) and struck the footnote because the Commission "agree[d] with Public Service and [Decision No. R03-1308] that construction is prudent" (*id*.). The *Midway-Daniels Park Transmission Rebuild Decision* predates enactment of §§ 40-2-126 and 40-5-101(4), C.R.S. Thus, it was not written in the context of the statutes that encourage construction of entire and expensive transmission lines in order to foster the subsequent development of generation that will interconnect with the transmission. In addition, unlike the *Midway-Daniels Park Transmission Rebuild Decision*, this Decision does not unconditionally find all the investment in the Project to be prudent. The ALJ finds the *Midway-Daniels Park Transmission Rebuild Decision* is neither controlling nor persuasive on the issue of whether the CPCN issued in this transmission proceeding, *ipso facto*, carries with it an unconditional determination that the entire investment in the Project is prudent.

renewable resource generation, the Commission has a duty and responsibility to ensure that ratepayers pay rates that are just and reasonable.[330] Further, Public Service seeks the CPCN in order to have a conclusive determination that its investment in the Project is prudent.[331] If the CPCN will not carry with it an unconditional finding that Public Service's entire investment in the Project is prudent, Public Service should be made aware of that fact as soon as possible so that it can make an informed decision about whether to proceed with the Project. For these reasons, it is imperative that a determination be made in this CPCN proceeding about what will happen if the substantial possibilities on which the issuance of the CPCN is based fail to materialize within a reasonable period of time.

587. It is the *future* realization of the substantial possibilities that establishes that the investment in the Project made today in order to meet the export need is prudent.[332] This is the crux of the risk allocation dilemma[333] created when a utility obtains Commission authorization to construct (at significant expense) and to operate large transmission facilities in advance of the

[330] This includes the Commission's taking action to protect ratepayers against the possibility that the investment in facilities for which a CPCN has been issued based on substantial possibility over time proves *not* to be prudent.

[331] Public Service cites *City of Boulder v. Colorado Public Utilities Commission*, 996 P.2d 1270, 1278 (Colo. 2000) (*City of Boulder*), for the proposition that the "grant of a CPCN affords the utility the *conclusive determination* that it is prudent to construct the facility." Public Service Supplemental SOP at 17 (emphasis supplied). Public Service's reading of *City of Boulder* is overly-broad, and its reliance on *City of Boulder* is misplaced. In *City of Boulder*, the Court observed in *dicta* that a utility must obtain a CPCN prior to initiating construction of a facility if that utility wishes to be sure that it will be able to recover its investment through rates and charges and that, if the utility does not obtain a CPCN prior to commencing construction, the utility "proceeds at its own risk." *City of Boulder*, 996 P.2d at 1278. The Court did not address or comment on whether the Commission may issue a CPCN that is subject to a condition that the prudence of the investment will be determined at a later time or subject to a conditional finding on the prudence of the investment. Nothing in *City of Boulder* limits or addresses the conditions that the Commission may place on a CPCN.

[332] This is the reason that the record does not provide a basis for an unconditional determination in this proceeding that Public Service's investment in the Project for the purpose of meeting the export need is prudent.

[333] The risk allocation dilemma or issue is: who (shareholders or ratepayers) should bear the risk that the substantial possibilities are *not* realized?

development of generation that will interconnect with the transmission facilities. The ALJ finds that Public Service's shareholders should bear the risk.[334]

588. First, the prudence of the investment in the Project made to meet the export need depends on the realization of the substantial possibilities discussed above. These substantial possibilities, in turn, depend on factors that may change over time. Among these factors are (a) whether the Section 123 solar thermal generation with storage will prove to be able to generate electricity to the level assumed when it was selected as a resource[335] and (b) Applicants' future resource acquisition plans. The fact that the substantial possibilities may not be realized lends a degree of uncertainty to the decision to construct the Project to meet an export need from ERZ 4 and ERZ 5 before generation is developed. It is Public Service's management that will make the decision to construct and to operate the Project in the face of this uncertainty. Consequently, "any risk should be borne by [Public Service] if such decision should adversely affect the consumer" or ratepayer. *Fort St. Vrain CPCN Decision* at 9. It is appropriate to place on Public Service's shareholders the risk that the substantial possibilities will not be realized within a reasonable period.

589. Second, there are no CPCNs or PPAs on which Applicants rely to establish that (a) the Project is sure to be used to deliver generation from southern Colorado to the Denver Metropolitan area load center and other areas in Colorado and (b) the investment in the Project made to meet the export need is prudent. Instead, the prudence of the investment in the Project made to meet the export need depends on whether the substantial possibility that subsequently-

[334] Placing the risk that the substantial possibilities will not be realized on Public Service's shareholders addresses, in part, WRA's recommendation (discussed below) that there should be a guarantee or showing that the Project fulfills Applicants' stated export need.

[335] This is a question similar to that in the Fort St. Vrain nuclear generating unit CPCN proceeding.

constructed generation in southern Colorado interconnects with the Project will be realized. The fact that substantial possibilities may not be realized lends a degree of uncertainty to the decision to construct and to operate the Project to meet an export need in advance of the development of generation that will interconnect with the Project. It is Public Service's management that will make the decision to construct and to operate the Project in the face of this uncertainty.

590. In addition, in the future (*e.g.*, 2011 and 2015) Public Service will file resource acquisition plans with the Commission. Public Service's management will determine the content of the resource acquisition plans filed in the future. The resource plans will include Public Service's preferred acquisition plan, including the general location of the generation to be acquired. The Commission authorizes the acquisition of the resources in a resource acquisition plan. Nonetheless, by shaping the plans that are filed, it is Public Service's management that determines, to a degree, whether generation located in southern Colorado is acquired such that the Project is used. It is appropriate to place on Public Service's shareholders the risk that the Project will not be used to meet the export need within a reasonable period.

591. For the foregoing reasons, the ALJ finds it is in the public interest to attach to Public Service's CPCN a condition that protects Public Service's ratepayers and that establishes a standard concerning prudent investment that Public Service has a reasonable opportunity to meet.[336] The ALJ finds that the CPCN granted to Public Service should be subject to the

[336] The record establishes that no more than 14 percent of the transfer capability of the San Luis Valley-Calumet Segment can be used in the absence of significant (but undefined) regional transmission upgrades. As discussed above, Trinchera Ranch proposes that Public Service's ratepayers be responsible only for the investment for the percentage of the Project's thermal capacity that is actually used and that Public Service's shareholders would be responsible for the remainder of the investment. The practical effect of adopting that proposal is to limit Public Service's recovery of its investment in the San Luis Valley-Calumet Segment to a maximum of 14 percent for the foreseeable future. In addition, the record is unclear about what percentage of the Calumet-Comanche Segment transfer capability and of the Calumet-Walsenburg Segment transfer capability would be used. Finally, Trinchera Ranch suggested no end-point for its proposal. For these reasons, the ALJ will not adopt the Trinchera Ranch proposal.

following condition:

> Within 10 years of the date on which the Project is placed in service, at least 700 MW of generation must be interconnected with Project. The generation is not required to be renewable resource generation; the generation may be located anywhere in ERZ 4 or ERZ 5; and the generation may be owned by any entity.
>
> If at least 700 MW of generation are not interconnected with Project at end of ten years from the date on which the Project is placed in service, then Public Service will file an application containing a plan to refund to ratepayers 50 percent of the monies that Public Service collected from its ratepayers (through the Transmission Rate Adjustment Clause, through base electric rates, or through any other mechanism or method) for (a) Public Service's investment in the Project, including any authorized return, and (b) Public Service's costs associated with the Project, including any authorized return. The Public Service plan will include interest paid at the interest rate that Public Service pays on customer deposits.
>
> In consultation with Staff and OCC, Public Service will establish a mechanism to track and to account for the Project-related monies collected from ratepayers. Within 90 days of the date of the final Commission decision in this transmission proceeding, Public Service will make a compliance filing that explains the method, and shows the accounts, that it will use to track Project-related monies collected from ratepayers.

592. First, the condition requires that generation must be located in ERZ 4 and ERZ 5 and must interconnect with the Project. This is based on Applicants' export need and advances the public policy that transmission be built to ERZs. The generation may use any fuel (not just a renewable resource); may be added for any purpose; and may be owned by any entity. This addresses the concerns (discussed below) raised by Applicants in response to WRA's second recommended condition.

593. Second, the condition establishes a reasonable and attainable target: a minimum of 700 MW that interconnects with the Project within ten years from the date the Project is in service. Spring 2015 is the likely in-service date for the Project. Public Service's 2007 CRP, even if it is amended, authorizes Public Service to acquire up to 250 MW in ERZ 5. If Public Service acquires 250 MW of ERZ 5 generation, then the condition would be met if there is a

minimum of 450 MW of generation located anywhere in ERZ 4 or ERZ 5 and interconnected with the Project by 2025 (assuming the Project's in-service date is in 2015). In addition, even if the ERZ 5 resources in Public Service's 2007 CRP are not acquired, the 700 MW target by (roughly) 2025 is reasonable and attainable because the Project would provide transmission that is missing at present between southern Colorado and the Denver Metropolitan area load center and, thus, should attract generation.

594. Third, the condition does not predetermine, restrict, or control Public Service's future resource acquisition plans. It is merely one factor that may be taken into consideration, and it does not restrict the type of generation that can be acquired. Finally, § 40-6-112, C.R.S., is available to be used if necessary.

595. Fourth, there is a condition component that requires PSCo to file an application to refund to ratepayers 50 percent of monies PSCo collected for Project (from Transmission Rate Adjustment Clause; from rates, assuming Project is in base rates; and from any other mechanism).[337] Applicants consistently testified, and it is unrebutted, that (a) each Applicant needed the Project to address both a reliability need and an export need and (b) those purposes are intertwined, are mutually re-enforcing, and are equally important. On this basis, the ALJ finds that, from Public Service's perspective, 50 percent is a reasonable estimation of the percentage of the Project (and, thus, of the investment in the Project) that is export need-related.

596. Fifth and finally, there is a condition component that establishes ten years from the in-service date of the Project as the point at which Public Service must file an application to refund monies to its ratepayers if at least 700 MW of generation are not interconnected with the

[337] This occurs in the event that at least 700 MW of generation is not interconnected with the Project at the end of ten years from the in-service date of the Project.

Project. The ten-year period from the Project's in-service date is based on allowing time for the acquisition of resources under at least two Public Service resource plans; for the acquisition of resources under at least two Tri-State resource plans; and for the construction of generation that will interconnect with the Project even if the generation is not acquired by Applicants.

597. The ALJ finds that the record supports both the imposition of the ratepayer-protection condition stated above and the components of that condition.

598. Finally, the ALJ does not find persuasive Public Service's not-so-veiled threat to walk away from the Project if the CPCN has a condition that places any financial risk on Public Service's shareholders. Public Service Supplemental SOP at 16-17.

599. First, when it receives a CPCN to construct a facility, a utility may choose not to go forward with the facility. This always is the utility's prerogative. A CPCN is Commission authorization, subject to conditions that are in the public interest, for the utility (if it elects to do so) to construct and to operate facilities. A CPCN is not a Commission order requiring the utility to construct and to operate a facility.[338]

600. Second, it will be Public Service alone that determines whether to proceed with the Project in light of CPCN conditions that the Commission has determined to be in the public interest. If it decides not to proceed with the Project because it does not like one or more of the conditions, it will be Public Service (not the Commission) that will be responsible for making a decision that runs counter to (or disregards) the evident and strong public policy that encourages transmission construction to ERZs.

601. Third, as discussed above, the condition is predicated, in part, on Applicants'

[338] The CPCN does require the utility, if it elects to proceed, to meet any conditions placed on the CPCN.

(particularly, Public Service's) testimony about plans for future resource acquisitions in ERZ 4 and ERZ 5, testimony offered to establish the future export need for the Project. Public Service has stated repeatedly and earnestly that it can, and will, acquire considerable generation in southern Colorado that will interconnect with the Project. For Public Service now to state unequivocally that it finds unacceptable any condition that holds Public Service to its testimony about future resource acquisitions is puzzling. Simply put and in the vernacular, the condition simply requires Public Service to put its money where its mouth is.

602. Fourth and finally, the Commission cannot and will not walk away from its duty to protect, and to regulate in, the public interest simply because Public Service threatens to walk away from a highly-desirable transmission project for which there are demonstrable needs and for which it has received a CPCN. Caving to the not-so-veiled threat is tantamount to letting the regulated utility dictate to the Commission what is and what is not in the public interest. In the ALJ's opinion, this is both unacceptable and intolerable.

603. In support of its *second recommended condition*, Bar Nothing states that there is no dispute that, from the San Luis Valley to Calumet to Comanche, the Project will run through a widely-diverse and beautiful area of Colorado. Bar Nothing states that the Commission can provide protection for this area for generations to come and that this protection begins with the environmental and public safety conditions that the Commission places on the CPCN in this proceeding. Bar Nothing urges the Commission to take action.

604. Applicants agree with Bar Nothing that the Project must be constructed in a manner that protects both the environment and public safety. Nonetheless, Applicants oppose the second Bar Nothing condition. They assert that: (a) in the context of a CPCN proceeding, environmental and public safety issues are addressed in Rules 4 CCR 723-3-3102(c) (2009)

(prudent avoidance techniques addressing cost-effective noise mitigation) and 723-3-3102(d) (2009) (prudent avoidance techniques addressing magnetic field exposure); (b) the proposed condition lacks definition and is vague, ambiguous, and overly broad; (c) the proposed condition addresses issues that are more properly considered in the RUS EIS process[339] and in the local government permitting processes;[340] (d) as a practical matter, Applicants are taking measures to ensure minimal impacts on the people and the environment in the areas surrounding the Project; and (e) Bar Nothing's environmental concerns do not relate to the Project's purpose, and placing on the CPCN a condition that pertains to those concerns would violate the principle that an adjudication-imposed condition must be peculiar to the case in which it is imposed.

605. As to the second recommended condition, the ALJ finds that Bar Nothing failed to meet its burden of proof. This condition will not be imposed. Bar Nothing did not provide specifics about its proposal. Consequently, the recommended condition lacks definition. In addition, for the reasons discussed below with respect to WRA's recommended condition containing proposed environmental protections and in the context of this transmission proceeding, the ALJ finds that a condition to protect the environment is unnecessary, is not in the public interest, and should not be placed on the CPCN.

b. Interwest Energy Alliance

606. Interwest generally supports the Project. Interwest recommends that the Commission attach two conditions to the CPCN: (a) require Applicants to provide a long-term (at least 20 years) master plan or transmission conceptual plan before they file for approval of

[339] Applicants note that the record clearly establishes, and that there is no dispute that, the RUS EIS process is required to address direct, indirect, and cumulative environmental effects as well as mitigation measures.

[340] Applicants argue that the Commission can approve the CPCN Applications with the knowledge that Bar Nothing's environmental concerns are being addressed, and will continue to be addressed, in the context of the RUS EIS and local government permitting processes.

additional transmission lines[341] and (b) require Applicants to obtain ROW for each of the three transmission line components that is wide enough either to accommodate additional lines or to upgrade the lines within those components to meet the transmission needs for the long-term future.[342] In doing so, Interwest is the proponent of a Commission order and bears the burden of proof (by a preponderance of the evidence) with respect to its recommended conditions. Section 24-4-105(7), C.R.S.; § 13-25-127(1), C.R.S.; Rule 4 CCR 723-1-1500. This includes establishing that each recommended condition is in the public interest.

607. In support of its *first recommended condition*, Interwest states that the November 2009 PSCo 10-Year Plan/20-YearScenario Assessment (Hearing Exhibit No. 67) is a positive step that Public Service has taken toward the goal of more definite long-term transmission planning in the context of renewable resource generation. Interwest asserts, however, that it is not enough and that the recommended condition for longer-range and more comprehensive transmission planning will help to avoid unnecessary disputes in future transmission CPCN dockets. Interwest states that the transmission master plan should comply with the public policy directives of the Commission, the General Assembly, and the Governor. Interwest notes that § 40-2-126, C.R.S., requires long-term transmission planning to encourage the development of renewable resource generation in each GDA/ERZ. It is Interwest's position that stakeholder input is required to achieve this goal and that the transmission long-term master plan should be developed in an open forum.

[341] This is the condition about which there is uncertainty *vis-à-vis* whether it is a condition precedent to Interwest's support for the CPCN.

[342] Interwest is clear that it supports the Project even if the Commission does not place this condition on the CPCN.

608. Applicants oppose Interwest's first condition because (a) long-term transmission planning is the subject of another Commission proceeding (Docket No. 09M-616E[343]) and should not be a CPCN condition; (b) as to Tri-State, the proposed condition is duplicative of the requirements established in Decision No. C10-0101, pursuant to which Tri-State's future resource plans filed with the Commission will include a 20-40 year planning period and pursuant to which, for the same planning period, Tri-State will report its need for transmission facilities of 115kV and above;[344] and (c) requiring long-term transmission plans to be filed as a condition precedent to the granting of all future CPCNs filed by Applicants for the construction of transmission lines would violate the principles in *Home Builders* and *Mountain States* because that requirement is a rule of general applicability that is not developed in a rulemaking proceeding and because the proposed condition is not related to, or peculiar to, the case at issue.

609. As to Interwest's first recommended condition, the ALJ finds that this transmission CPCN proceeding is not the appropriate forum in which to consider this proposal.[345] This condition will not be imposed.

610. The Commission has opened Docket No. 10R-526E, *In the Matter of the Proposed Rules Related to Electric Transmission Facilities Planning, 4 Code of Colorado Regulations 723-3* (2010 transmission rulemaking). In the 2010 transmission rulemaking, the Commission proposes a rule that "set[s] forth the general objectives underlying the filing of the

[343] The Commission opened Docket No. 09M-616E in order to investigate and to review transmission-related issues, and that proceeding remains open. The Commission subsequently opened Docket No. 10R-526E, *In the Matter of the Proposed Rules Related to Electric Transmission Facilities Planning, 4 Code of Colorado Regulations 723-3*. Decision No. C10-0797 (opening docket); *see also* Decision No. R10-1228-I (inviting additional comments in docket).

[344] Tri-State's first resource plan is to be filed with the Commission on or before November 30, 2010. Decision No. C10-0101.

[345] As a result, the ALJ does not reach or address the merits of the proposed condition.

ten-year transmission plans, twenty-year conceptual plans, and associated economic studies that the jurisdictional electric utilities will develop through" the Colorado Coordinated Planning Group. Decision No. C10-0797 at ¶ 18; *see also* Attachment A (proposed Rule 4 CCR 723-3-3627). In addition, the 2010 transmission rulemaking is addressing the role of, and outreach to, interested stakeholders.[346] Decision No. C10-0797 at ¶¶ 27-30. Because the 2010 transmission rulemaking will address long-term transmission planning issues, it is the forum in which Interwest should offer its proposal for inclusion in any new transmission planning rule.

611. In support of its *second recommended condition*, Interwest states that Colorado energy policies, the Commission's decisions approving significant amounts of solar and wind energy in the most recent resource acquisition dockets, and Applicants' testimony about plans to acquire renewable resource generation in southern Colorado establish that generation is likely to be developed that will interconnect with the Project. Interwest believes that the demand for renewable resource generation that would interconnect with the Project will be large enough, and will manifest itself soon enough, to justify a condition that requires Applicants to secure at this time adequate ROW for future needs.

612. Applicants oppose this recommended condition because, in their view, it presents a number of practical and legal problems. The practical problems result from Interwest's failure to investigate its proposed condition and include: (a) Interwest's failure to specify the expected long-term future needs, without which it is not possible to determine how much ROW would be required to meet those needs; (b) Interwest's acknowledged failure to study the costs associated with larger ROW, which means that the impact of acquiring the larger ROW on the total cost of

[346] Paragraph 29 of Decision No. C10-0797 provides guidance as to the interested stakeholders that should be included.

the Project is unknown; and (c) there is no certainty that the Project transmission lines will be upgraded or that additional lines will be added, which means that there is no certainty that the larger ROW (and its associated financial investment) will be needed or used. Applicants' legal concern is: the issue of ROW acquisition is a subject in another Commission proceeding addressing transmission issues. Applicants argue that, because its subject is part of a rulemaking, the condition should not be placed on the CPCN.

613. As to Interwest's second recommended condition, the ALJ finds that Interwest did not meet its burden of proof. This condition will not be imposed. There is no evidence with respect to (a) how wide the proposed ROW should be; (b) the expected long-term future needs that the ROW should be sized to meet; and (c) the cost of a larger ROW. In the absence of this information, there is insufficient evidence to support imposition of the condition. In addition, the issue of ROW acquisition should considered in the 2010 transmission rulemaking.

c. Staff of the Commission

614. Staff supports the Project and recommends that the Commission place two conditions on the CPCN: (a) construct the San Luis Valley-Calumet Segment[347] as double-circuit 345kV transmission using larger conductor bundles than Applicants propose to use and (b) require Applicants to perform (for the Project and for Staff's alternative construction of the San Luis Valley-Calumet Segment) both additional powerflow studies and final transient stability studies. In doing so, Staff is the proponent of a Commission order and bears the burden of proof (by a preponderance of the evidence) with respect to its recommended conditions. Section 24-4-

[347] Staff witness Dominguez discussed constructing the entire Project as 345kV transmission, but Staff's Statement of Position discussed constructing only the San Luis Valley-Calumet Segment as 345kV transmission. In this Decision, the ALJ takes Staff's position to be that stated in its Statement of Position. If Staff's position is that the entire Project should be constructed as 345kV transmission, that fact would not change either the discussion or the conclusion with respect to Staff's first condition.

105(7), C.R.S.; § 13-25-127(1), C.R.S.; Rule 4 CCR 723-1-1500. This includes establishing that each recommended condition is in the public interest.

615. In support of its *first recommended condition*, Staff states that constructing the San Luis Valley-Calumet Segment as double-circuit 345kV transmission using larger conductor will have two benefits: (a) increase the transmission capacity of that Segment (to export additional generation from the San Luis Valley) and (b) reduce the levels of transmission line-related noise and EMF in the Project.[348]

616. Staff asserts that its modification is supported by the evidence: (a) Applicants acknowledge that there is a need to meet long-term objectives for the reduction of CO_2 emissions and for an increase in renewable energy generation; (b) there is a need for transmission to mitigate the transmission constraints to ERZ 4 and to ERZ 5, in compliance with § 40-2-126, C.R.S.; (c) Applicants state that there will be up to 1129 MW of additional generation in the San Luis Valley by 2018 and concede that the San Luis Valley-Calumet Segment cannot export more that 925 MW from the San Luis Valley;[349] and (d) constructing the Segment as proposed by Staff would reduce transmission line losses, assuming the addition of 800 MW of generation in the San Luis Valley, and the savings from the reduction of the line losses would justify the double-circuit 345kV construction for the Segment.[350]

617. Staff acknowledges that upgrades to the regional transmission system are necessary in order to obtain the full benefit of the San Luis Valley-Calumet Segment built as

[348] This asserted benefit is discussed in the section on EMF and noise, below.

[349] This assumes zero generation injection at Calumet Substation.

[350] Staff estimates that a 8.58 MW reduction in line losses will occur if the San Luis Valley-Calumet Segment is double-circuit 345kV transmission and that this reduction will yield annual savings of $5.64 million as compared to the Project as proposed. Staff observes that the savings increase as the amount of additional generation increases. Hearing Exhibit No. 37 at Exhibit IGD-6 at 3.

double-circuit 345kV transmission. Staff asserts that one must begin somewhere to address the regional reliability issue, and Staff's preferred approach is to construct the San Luis Valley-Calumet Segment as double-circuit 345 kV using large conductor bundles, given the level of generation expected to be added in southern Colorado by 2018 or 2020 and given the cost to upgrade the San Luis Valley-Calumet Segment to double-circuit 345kV transmission in the future.[351]

618. Interwest supports Staff's recommended condition. Interwest states that Colorado's energy policies, Commission decisions approving significant amounts of solar and wind energy in the most recent resource acquisition proceedings, and Applicants' testimony about plans to acquire significant renewable resource generation in southern Colorado establish that generation that will interconnect with the Project is likely to be developed. Interwest believes that the demand for the renewable resource generation that would interconnect with the Project will be large enough, and will manifest itself soon enough, to justify constructing the San Luis Valley-Calumet Segment as recommended by Staff. Because the increased transmission capacity available from double-circuit 345kV transmission will be necessary to export renewable energy generation from the San Luis Valley, Interwest asserts that the expenditure now of an additional $54 million for additional capacity on the San Luis Valley-Calumet Segment is likely to be less costly than upgrades that will be required in the future.

619. Responding to both of Staff's proposed conditions, Applicants note that Staff has

[351] The record contains no estimate of the cost to upgrade the San Luis Valley-Calumet Segment to a double-circuit 345kV line if it is constructed initially as a double-circuit 230kV line. Public Service stated that the cost to do this subsequent upgrade likely would be significantly higher than the estimated additional $54 million it would cost to construct the Segment initially as double-circuit 345kV transmission.

stated clearly and unambiguously that, if the Commission does not adopt Staff's proposed conditions, Staff recommends that the Commission grant the CPCN as proposed by Applicants.

620. Applicants oppose Staff's recommended condition. They state that they did not apply for a CPCN for double-circuit 345kV transmission in the San Luis Valley-Calumet Segment because such a line would exceed their need for the Project. Applicants request that the Commission reject Staff recommended condition because the condition would result in the construction of transmission with capacity that exceeds the known and reasonably foreseeable need for the Project.

621. Applicants also assert that Staff failed to meet its burden of proof with respect to the recommended condition. Applicants state that the 2009 Study evaluated constructing and operating the San Luis Valley-Calumet Segment as double-circuit 345kV transmission (Alternative 5) and found no significant increase in transfer capacity as compared to the Segment built as proposed by Applicants (Alternative 1) due to regional contingency issues. They point out that the regional contingency issues must be addressed in order to obtain any transmission capacity benefit from constructing the Segment as double-circuit 345kV transmission.[352] Applicants assert that Staff presented no valid studies to establish (a) what regional upgrades would be required, (b) when the regional upgrades would be required, or (c) the cost of the required regional transmission upgrades. Thus, Applicants argue, Staff has failed to establish that the additional cost for double-circuit 345 kV transmission would be worth the expenditure.

[352] For example, the 2009 AE results show that, for the conditions modeled, the Alternative 5 lines were loaded at approximately seven percent of their thermal rating. With respect to Alternative 5, the 2009 AE concluded that, "[s]imilar to [the Project], in order to utilize the potential transfer capability afforded by the San Luis Valley-Calumet double-circuit 345kV line, significant unplanned transmission additions in the San Luis Valley, Pueblo, Colorado Springs, Denver metropolitan area, and western Colorado areas are required." Hearing Exhibit No. 42 at 3-10. The necessary transmission additions are not identified, and the owners of the affected transmission facilities are not identified.

622. In addition, Applicants assert that the Commission should not adopt Staff's proposal because (a) studies indicate that the transfer capacity of double-circuit 345kV transmission is not needed at present, the Project can be expanded in the future if necessary,[353] and constructing the San Luis Valley-Calumet Segment as double-circuit 345kV transmission would increase the cost of the Project by at least an estimated $54 million; (b) constructing the San Luis Valley-Calumet Segment as proposed by Staff likely would have significant implications with respect to siting, ROW, tower and structure designs, environmental concerns, EMF, noise, and other issues that have not been evaluated; and (c) constructing the San Luis Valley-Calumet Segment as proposed by Staff would be a fundamental change in the Project that is likely to affect the RUS EIS process and, consequently, to result in additional delay in the Project's in-service date.

623. Finally, Applicants state that there is a practical problem associated with Staff's recommendation: if the Commission were to place this condition on the Project, Tri-State would need to re-evaluate its level of participation in the Project in light of the increased cost. The Applicants assert that, if Tri-State were to reduce its level of participation, Public Service and its ratepayers would bear a greater share of the Project's increased costs.

624. As to Interwest's support for Staff's proposal, Applicants assert that Interwest's acknowledged failure to investigate the effects of double-circuit 345kV transmission on, among other things, the height of the support structures, EMF levels, and transmission line-related noise

[353] As a general matter, Applicants agree with the proposition that high-voltage transmission lines should be built to accommodate reasonably foreseeable future needs. Applicants argue that, in this case, it is not necessary to build the Project as Staff recommends because the Project provides flexibility to address future needs through, for example, rebuilding transmission lines in existing corridors.

levels undercuts Interwest's support for Staff's proposed construction of the San Luis Valley-Calumet Segment.

625. As to Staff's first recommended condition, the ALJ finds that Staff did not meet its burden of proof. This condition will not be imposed.

626. The evidence establishes that, if the San Luis Valley-Calumet Segment were to be constructed as proposed by Staff: (a) the cost would be approximately $54 million higher than the cost of the San Luis Valley-Calumet Segment proposed by Applicants; (b) the lines would be loaded at approximately seven percent of their thermal rating; (c) significant unplanned regional transmission additions would be required to use the Segment's potential transfer capability;[354] and (d) renewable resource generation in the San Luis Valley and Calumet area would have an impact on the double-circuit 345kV San Luis Valley-Calumet Segment because, due to the intermittent nature of some of that generation and its

> minimal voltage control capacity[, ...] the 345kV option will introduce operational issues such as high voltage. Studies indicate approximately 80 MVAR of switched reactors at both San Luis Valley and Calumet Substation are required to maintain voltage within limits for the 345kV option. The addition of reactors increases initial capital costs, operational complexity, and maintenance cost, and could lead to an overall decrement in system availability.

2009 AE (Hearing Exhibit No. 42) at 3-12. In addition, as pointed out by Applicants, constructing the San Luis Valley-Calumet Segment as double-circuit 345kV transmission (a) could have significant implications for a number of issues (*e.g.*, siting, ROW, tower and structure designs, environmental concerns) that have not been evaluated and (b) would be a fundamental change in the Project that is likely to affect the RUS EIS process and, consequently, to result in additional delay in the Project's in-service date.

[354] This is also true for the Project as proposed.

627. In support of its *second recommended condition*, Staff asserts that additional power flow studies and final transient stability studies are necessary (a) to determine what additional transmission facilities the Project would require to accommodate, or whether the Project as modified by Staff can accommodate, an additional 1129 MW of generation in the San Luis Valley;[355] and (b) to test the transmission to identify where to construct additional transmission facilities given Applicants' assertion that there will be a need to transport up to 1129 MW of generation from the San Luis Valley to the Denver Metropolitan area load center (a distance of more than 200 miles).[356]

628. As to Staff's second recommended condition, the ALJ finds that Staff did not meet its burden of proof. This condition will not be imposed. Because Staff's proposed construction of the San Luis Valley-Calumet Segment is not adopted, there is no reason to impose a condition based on that alternative. With respect to the Project, the record is clear that Applicants plan to do the required analyses and studies before construction of the Project. Consequently, Staff failed to establish a need for its second recommended condition.

d. Trinchera Ranch

629. In the event the Commission grants the CPCN Applications, Trinchera Ranch requests that the Commission attach conditions to the CPCN that (a) protect Public Service's ratepayers from potentially speculative and imprudent investment in the Project and (b) ensure

[355] Staff maintains that Applicants must perform power flow studies to analyze both the Project and the Project as modified by Staff in order to identify transmission facilities in the region and in Colorado as a whole that need to be constructed and the costs associated with the upgrades. Applicants would then perform transient stability studies to test whether the proposed regional system can accommodate 1129 MW of generation in the San Luis Valley by 2018.

[356] No final transient stability study has been done or is in the record. In addition, Applicants have not performed power flow and transient stability studies to identify the transmission facilities necessary to accommodate an additional 1129 MW of generation in the San Luis Valley.

that renewable resource generation will be in place to use the Project and that the Project can accommodates that generation.[357]

630. Concerning Trinchera Ranch's two proposed conditions, Applicants observe that Trinchera Ranch did not propose any conditions until its Statement of Position and that each of Trinchera Ranch's proposals is designed to make the Project more difficult to implement and more costly to construct.

631. The first Trinchera Ranch recommended condition (*i.e.*, protect Public Service's ratepayers) and Applicants' response were discussed above in conjunction with Bar Nothing's first recommended condition. As to its second recommended condition (*i.e.*, require proof that the Project will be used by renewable resource generation), Trinchera Ranch supports WRA's first recommended condition. For this reason, Trinchera Ranch's second condition and Applicants' response are discussed in conjunction with WRA's recommended condition.

e. Western Resource Advocates

632. In its Statement of Position at 1, WRA states that it supports the Project provided the Commission places WRA's conditions on the CPCN.

633. WRA recommends that the Commission place WRA's recommended conditions on the CPCN. In doing so, WRA is the proponent of a Commission order and bears the burden of proof (by a preponderance of the evidence) with respect to its recommended conditions. Section 24-4-105(7), C.R.S.; § 13-25-127(1), C.R.S.; Rule 4 CCR 723-1-1500. This includes establishing that each recommended condition is in the public interest.

[357] Trinchera Ranch proposes additional conditions that address EMF levels and transmission line-related noise levels. These conditions are discussed in the section on EMF and noise.

634. In support of its proposed conditions, WRA starts from the premise that this transmission CPCN proceeding is the appropriate proceeding in which to ensure that the Project's purpose is aligned with Colorado's energy policy. In addition, according to WRA, in this proceeding the Commission can perform a benefit/cost analysis of the need for the Project and the Project's impact on the environment, each of which is a matter of public interest. WRA asserts that its proposed conditions are aligned with the State's energy policy and are within the scope of the Commission's authority to promote the public interest.

635. Applicants present an argument that addresses all of WRA's conditions. WRA acknowledges that, in its SOP, it presents for the first time modified and new recommended conditions. Applicants assert that: (a) WRA's four conditions either are variations on the conditions discussed in its testimony or contain new components; (b) the second part of WRA's third condition is new; and (c) WRA suggests a new (and fifth) condition in its Statement of Position at 17 & note 30. Applicants argue that the timing of WRA's presentation of its modified and new conditions is prejudicial because they and other Parties have not had an opportunity to examine witnesses or to create a record on the revised and new conditions. Consequently, Applicants argue that, at a minimum, the Commission (a) must reject WRA's third and fifth conditions because they are new conditions as to which no evidence has been presented and (b) must disallow WRA's modifications of its original conditions.

636. The ALJ finds that this argument is not persuasive. It is not uncommon for a party to present new or modified recommended conditions in its statement of position based on the evidence presented or on the party's further reflection on the issues. In addition, the ALJ finds that there is no prejudice to the parties in this case if WRA's new or modified conditions are

considered. Finally, as to new or modified conditions, WRA must meet the above-stated burden of proof.

637. WRA's *first recommended condition* is:

> Before construction begins, the Applicants shall demonstrate that at least 280 MW of Section 123 concentrating solar thermal with thermal energy storage resources, that were approved in the Commission's Phase II Decision in Docket No. 07A-447E, will be developed and interconnect with the proposed transmission facilities.

WRA SOP at 15 (footnote omitted).[358] WRA proposes that Applicants can demonstrate, through either signed PPAs or a self-build commitment (such as a CPCN), that the level of renewable resource generation authorized by the Commission in the Public Service 2007 CRP will be developed and will interconnect with the Project. WRA states that this condition (a) provides legal assurance that, at least for the immediate future, the Project will be used for its intended purpose (*i.e.*, export of renewable resource generation from the San Luis Valley) and (b) protects Colorado ratepayers with a minimal guarantee that the Project fulfills Applicants' stated export purpose and need.

638. Trinchera Ranch supports this condition because (a) development of the 355 MW of renewable resource generation resources in Public Service's 2007 CRP is uncertain[359] and (b) the Project's capacity should be used to export renewable resource generation from the San Luis Valley, which Applicants have identified as the purpose and need of the Project.

639. Applicants oppose this recommended condition. Applicants assert that (a) the condition disregards entirely Applicants' present and immediate need to implement the Project to

[358] The referenced Phase II decision is Decision No. C09-1257 (Hearing Exhibit No. 59) at ¶¶ 42-51, as modified and clarified by Decision No. C09-1434 (Hearing Exhibit No. 55). WRA also points to the amended public version of Public Service's 120-Day Report (Hearing Exhibit No. 56) at 79 as support for this condition.

[359] This is the same argument that Trinchera Ranch made when it argued that Applicants had not met their burden of proof with respect to need. It is offered here for a different purpose.

address reliability issues in southern Colorado; (b) placing the condition on the CPCN will delay, for an unknown period of time, construction of the Project and, thus, remediation of the acknowledged and undisputed reliability issue; and (c) the condition places restrictions on the type of future generation that could use the Project, which could impact Applicants' ability to use the Project to remedy future reliability issues. Applicants argue that the condition inappropriately ties construction of the Project, which is needed for southern Colorado reliability improvements, to Public Service's acquisition of specific renewable resource generation in the San Luis Valley. In addition, Applicants point out that, if those within the pool of bidders the Commission approved in PSCo's 2007 CRP know that Public Service must sign contracts before the Project can be built, those bidders' negotiating leverage would increase significantly, to the detriment of Public Service's ratepayers.

640. As to WRA's first recommended condition, the ALJ finds that WRA failed to meet its burden of proof. This condition will not be imposed.

641. First, this recommended condition is similar to the Trinchera Ranch approach that, to establish need for the Project, Applicants must produce hard evidence that there will be renewable resource generation and that the generation will interconnect with the Project.[360] For the reasons discussed above with respect to the hard evidence approach advocated by Trinchera Ranch, this recommended WRA condition is not consistent with, and placing the condition on the CPCN would thwart implementation of, Colorado statutes and energy policy.

642. Second, this recommended condition completely disregards the reliability issues in southern Colorado that the Project will resolve. By making a signed PPA or a CPCN for a

[360] The difference between the two is the point in time at which it applies. Trinchera Ranch took the position that hard evidence was necessary to grant the CPCN while WRA takes the position that the hard evidence is a precondition to beginning construction of the Project once a CPCN has been granted.

specific type of renewable resource generation the condition precedent to commencing Project construction, the recommended condition leaves Applicants with no ability to start construction of any Project component and thus with no way to remedy the reliability issues. In essence, the recommended condition gives primacy to the export need for the Project; this is not supported by the record and is inappropriate.

643. Third, this recommended condition focuses on, and makes construction of the Project contingent on the development of a stated amount of, only one type of renewable resource generation: solar thermal with storage. This ignores the other renewable resource generation to be acquired in ERZ 4 and ERZ 5 in accordance with the Public Service 2007 CRP. It also disregards the fact that the Project fosters the development of, and is necessary for the acquisition of, several types of renewable resource generation in ERZ 4 and ERZ 5.

644. Fourth and finally, WRA urged adoption of this recommended condition in its SOP filed following the February 2010 hearing. This recommended condition is based on Public Service's acquisition of resources in accordance with the PSCo 2007 CRP and predates the Application to Amend. WRA did not file a Supplemental SOP following the July 2010 hearing. Consequently, one does not know WRA's position with respect to whether amendment of the PSCo 2007 CRP impacts, and (if it does) how it impacts, this proposed condition.[361]

645. WRA's *second recommended condition* is:

> The Commission will apply a rebuttable presumption in a future CPCN application against a finding of need for a non-renewable resource that would interconnect with the [Project].

[361] The recommended condition requires proof that at least 280 MW of Section 123 solar thermal generation with storage will be acquired. As a practical matter, if the Commission amends the PSCo 2007 CRP, Applicants cannot meet this recommended condition because the maximum amount of Section 123 solar thermal generation with storage that would be acquired as a result of the PSCo 2007 CRP would be 125 MW. Depending on the option selected by the Commission, it is possible that 0 MW of that type of generation would be acquired.

WRA SOP at 16. WRA asserts that (a) the primary purpose for the Project is to deliver renewable energy resources to load; (b) this recommended condition is tailored to that stated purpose for the Project; and (c) this recommended condition safeguards the Applicants' current intentions into the future while preserving the flexibility and discretion of future commissions with respect to resource acquisition decisions. WRA argues that this condition does not violate federal law and does not disturb or interfere with FERC's policy objectives.[362] WRA asserts that, at the very least, adoption of its rebuttal presumption condition can help overcome the dominance of fossil-fueled generation.

646. Trinchera Ranch supports this condition because (a) one of Applicants' primary justifications for the Project is their need to export significant new renewable resource generation from ERZ 4 and ERZ 5, and (b) Applicants never contended that the Project is needed for the export of non-renewable resource generation. As an alternative to WRA's recommended condition, Trinchera Ranch proposes the following condition: Public Service cannot contract for and cannot construct generation that would interconnect with the Project if that generation is not renewable resource generation.

647. Interwest supports WRA's recommended condition because it makes it clear that the Project must be used, and must be available to be used, to provide transmission for renewable resource generation. Interwest states this condition is important because the San Luis Valley-Calumet Segment will have transmission capacity that will exceed the capacity needed for

[362] WRA argues that the condition respects and maintains the FERC's jurisdiction over transmission lines and markets and the Commission's jurisdiction over CPCNs for generation facilities. Because the condition is limited to future generation facilities, WRA asserts that it comes within the Commission's traditional CPCN authority over generation.

reliability purposes and that available transmission should be used to deliver renewable resource generation to load centers.

648. Applicants oppose this condition. Applicants assert that WRA has ignored the reliability purpose and need for the Project. Because WRA focuses exclusively and too-narrowly on their export need, Applicants assert, WRA asks the Commission to attach a condition to the CPCN that places restrictions on the future use of the Project (*i.e.*, the type of generation that can interconnect with the Project). Applicants argue that adopting this condition could have the unintended consequence of restricting Applicants' ability to address future reliability issues in southern Colorado.

649. In addition, Applicants assert that the recommended condition may violate FERC Order No. 888 and FERC's open access rules.[363] Applicants state that the condition would force them, as owners of the transmission, to discriminate against potential non-renewable resource generation users of the Project transmission lines (for example, not place them in the large generator interconnection queue).[364] In addition, Applicants state that the condition would apply only when the non-renewable resource generation that will interconnect with the Project

[363] FERC Order No. 888 and FERC's open access rules require transmission owners to provide open, non-discriminatory access to transmission services. At present, FERC is considering whether to change its existing policy in order to provide transmission advantage to renewable energy generation.

[364] Applicants disagree with WRA's assertion that this is a matter of jurisdiction and that the Commission has jurisdiction over CPCNs for generation facilities. Applicants assert that the plain language of WRA's condition is inconsistent with FERC Order No. 888, which prevents undue discrimination and preference in the provision of transmission services.

requires a CPCN, which discriminates against non-renewable resource generation that requires a CPCN in favor of non-renewable resource generation that a utility acquires by PPA.[365]

650. Finally, Applicants oppose the condition because, in their estimation, it seeks to have the Commission promulgate a rule of general applicability (*i.e.*, a rebuttable presumption that will apply in future CPCN application proceedings) without the Commission's following the required rulemaking procedures. They argue that this violates the principles, stated in *Home Builders*, *Mountain States*, and *AviComm*, concerning what is appropriate for the Commission to order as the result of an adjudication.

651. As to WRA's second recommended condition, the ALJ finds that WRA failed to meet its burden of proof. This condition will not be imposed.[366]

652. First, the recommended condition suffers from legal infirmities. The recommended condition applies to any application, filed by any person, for a CPCN for non-renewable resource generation that will interconnect with the Project. It creates a rebuttable presumption that has general applicability (that is, affects persons other than, and in addition to, Applicants) and has future effect (that is, applies to all applications for CPCNs for non-renewable resource generation that are filed in the future). The Commission must promulgate

[365] Applicants observe that this is a loophole because the condition would apply only to generation for which a CPCN is required. WRA agrees that its proposal contains a loophole that permits the interconnection of fossil-fueled generation obtained through a PPA because a CPCN is not required for a PPA transaction. In its SOP, WRA suggests a new or modified condition that could address the identified loophole. Applicants oppose that condition (which Applicants refer to as the WRA's fifth condition), in part, because they and other Parties have not had an opportunity to present evidence relating to it. Assuming that this proposal to address the loophole is accepted (which they argue it should not be), Applicants state that it would apply when Public Service seeks Commission approval of a PPA with a third party developer of non-renewable resource generation. Applicants assert that, for the reasons discussed with respect to WRA's second recommended condition, this new condition may violate FERC Order No. 888 and FERC's open access rules.

[366] As discussed above, in its SOP, WRA suggests a new or modified condition that could address a loophole created by focusing only on applications for CPCNs; and Applicants oppose that condition (which Applicants refer to as the fifth WRA condition). The ALJ finds that this new or modified condition should not be imposed for the reasons discussed with respect to WRA's second recommended condition.

such a rebuttable presumption in a rulemaking proceeding. If WRA believes that the Commission should create a rebuttable presumption that will apply to future non-renewable resource generation that will interconnect with the Project, WRA may petition the Commission to commence a rulemaking to promulgate a rule that creates such a rebuttable presumption.

653. Second, the recommended condition focuses on the export need for the Project and disregards the reliability need for the Project. By making it more difficult for non-renewable resource generation that will interconnect with the Project to receive a CPCN, the recommended condition makes it more difficult for Applicants to obtain a CPCN for generation that they may need in the future to address reliability issues either in southern Colorado or in the region.[367] In addition, the recommended condition makes it more difficult for any person to obtain a CPCN for non-renewable resource generation in southern Colorado. The recommended condition gives primacy to the export need; this is not supported by the record and is inappropriate.

654. Third, the condition creates an impediment to implementation of a future resource acquisition plan in which the Commission authorizes a utility to self-build non-renewable resource generation that interconnects with the Project. The affected utility would have Commission authorization to build the non-renewable resource generation but would be faced with a rebuttable presumption against granting a CPCN for that generation.

655. Fourth and finally, there is the question concerning whether placing the condition on the CPCN violates FERC Order No. 888 and FERC's open access rules that require transmission owners to provide open, non-discriminatory access to transmission services. Given

[367] For example, additional non-intermittent generation may be necessary to address regional contingency issues that must be remedied in order to make greater use of the Project's transfer capability. This generation is likely to be non-renewable resource generation.

the other difficulties with the recommended condition, the ALJ does not reach or decide this question.[368]

656. WRA's *third recommended condition* is:

> When routing, siting and designing the line, Applicants will employ the principles and tools provided by WRA witness Dean Apostol in his Answer Testimony and the environmental protection impact avoidance and mitigation measures recommended by the environmental consultant firms hired by Public Service for [the] Project.

WRA SOP at 17-18.[369] In addition, WRA requests that the Commission make it clear that Public Service's investment to comply with the condition is prudent and that Public Service will receive cost recovery for the costs it prudently incurs to comply with this condition.

657. WRA states that there is no dispute that much of the area that the Project will cross contains high-value scenic resources and that, as a general matter, scenic impacts can be minimized, and conservation values preserved, if care is taken in ROW selection, corridor design, and tower design and if Project developers use other mitigation measures. According to WRA, it is critical that the Commission make it clear that Applicants must implement environmental protection strategies in the most scenic, relatively undisturbed portions of Project's route.

---

[368] The ALJ notes that FERC is considering whether to change its existing transmission open access policy in order to give renewable energy generation an advantage with respect to access to transmission. Thus, this issue is receiving attention in another forum.

[369] The referenced recommendations made by WRA witness Apostol address ROW selection, corridor design, and tower design and include other mitigation measures that Applicants could use. Hearing Exhibit No. 26 at 2:18-3:14. As described by WRA witness Apostol in his testimony, the recommended measures are: (a) using the south edge of the Project's proposed corridor; (b) to the extent practicable, taking advantage of micro topography to hide the Project from key viewpoints; (c) co-locating the Project within existing utility and railroad corridors to avoid crossing highly-visible undisturbed natural areas; (d) weighing the short-term higher costs that may be required to mitigate scenic impacts against the longer-term benefits of preserving "sense of place, high-quality scenic views, and the local/regional tourist and recreation economy" (*id*. at 3:1-2); (e) keeping the transmission line away from the highest quality scenic views; (f) focusing mitigation strategies in the areas that are seen by the largest number of people; (g) choosing tower designs that best fit the surrounding conditions; (h) using dark, low-reflective towers and attachments to minimize color contrast; (i) minimizing ground and clearing disturbances; (j) to the extent practicable, straddling low-growing vegetation to avoid massive clearing and resulting clear-cut effect; and (k) where possible, consolidating existing utility poles with the new towers to eliminate the existing poles. WRA witness Apostol identified preferred mitigation measures based on specific areas along Applicants' preferred corridor for the Project. *Id*. at 14-20.

658. WRA argues that its recommended condition is necessary to assure that the Project does not cause irreparable harm to the acknowledged, relatively-undisturbed, unique resources in the areas through which the Project will run. In addition, WRA argues that the condition is necessary because it is not clear that Applicants will implement environmental protection strategies in the particularly environmentally-sensitive San Luis Valley-Calumet Segment.[370] Further, WRA points out that its recommended measures and techniques are consistent with, and are founded on, generally-accepted principles of landscape architecture, visual mitigation, and landscape aesthetics. Finally, it states that the recommended condition balances the need for renewable energy generation and the need to minimize environmental impacts.[371]

659. Concerning cost recovery for Tri-State, WRA acknowledges that the Commission cannot authorize cost recovery for Tri-State because it is not rate-regulated by the Commission. WRA asserts that, because it will have no assurance of cost recovery, Tri-State will have little incentive to spend money to implement WRA witness Apostol's recommendations. For this reason, in WRA's view, it is important that the Decision contain a specific, prescriptive condition to ensure that Tri-State will spend the money necessary to implement the recommendations.

660. Concerning cost recovery for Public Service, WRA argues that the Commission can, and must, authorize cost recovery in this proceeding because removing uncertainty about cost recovery will assure that Public Service implements the condition. As to whether there is an upper limit or clear boundary on the costs, and on the potential financial impact on PSCo ratepayers, of implementing the visual impact mitigation measures and techniques, WRA asserts that (a) statutes, Commission review of the Transmission Rate Cost Adjustment and other adjustment

[370] This Segment contains, for example, La Veta Pass and the conservation easements on Trinchera Ranch.

[371] *See, e.g.*, Smart Lines: Transmission for the Renewable Energy Economy (Hearing Exhibit No. 78), a 2008 WRA study.

clauses, and other standard Commission procedures will protect ratepayers because the Commission must determine that costs were prudently incurred before costs can be recovered from ratepayers; (b) Applicants' $180 million (plus or minus 30 percent) cost estimate for the Project establishes the parameters for cost recovery or at least the cost recovery floor; and (c) given that Applicants have included, or are considering the inclusion of, a number of WRA witness Apostol's recommended measures with respect to the construction and siting of the Project, it is likely that Applicants' $180 million cost estimate for the Project already includes some costs for visual impact mitigation and environmental impact mitigation.

661. Interwest supports this recommended condition.

662. Applicants oppose this recommended condition.[372] As support for that opposition, Applicants state that (a) the record does not establish that the condition is necessary to assure that Applicants will use the WRA-recommended tools and measures (or something similar), and the record does establish that Applicants will consider, and take steps to mitigate, the Project's environmental impacts; (b) the evidence establishes that Applicants have used, and will use, many of the visual mitigation and environmental measures suggested by WRA in their construction of the Project, a point that WRA concedes; (c) while WRA witness Apostol's recommendations and suggestions concerning mitigation of visual impact are consistent with Applicants' typical practices, the Commission should not require implementation of his

[372] Concerning the particulars of the analytical tools and measures that WRA recommends be implemented, Applicants state that WRA's SOP contains a description of those tools and measures that is more detailed than, and differs in some ways from, those included in WRA witness Apostol's testimony. They point out that some of the measures are entirely new and were not subject to examination by Applicants and other Parties in this proceeding. Applicants urge the Commission to reject the modifications to this condition.

Because this recommended condition asks the Commission to attach to the CPCN a condition requiring Applicants to "employ the principles and tools provided by WRA witness Apostol in his Answer Testimony" (WRA SOP at 17), the ALJ considers those principles and tools as stated in the witness's testimony and not the restatements of those principles and tools in WRA's SOP. This addresses Applicants' concern about not having had an opportunity to examine the modifications.

recommendations because cost, topography, engineering, access, environmental, and other considerations may preclude implementation;[373] and (d) because this transmission proceeding is neither a siting proceeding nor a routing proceeding, this is not the appropriate proceeding in which to raise these issues.[374] As a result, Applicants argue that this condition, which pertains principally to the Project's siting, is inappropriate.

663. There are generally-accepted principles within the field of landscape aesthetics, visual mitigation, and landscape architecture. Applicants state that they have retained highly-regarded landscape architect firms to address the issues raised by WRA witness Apostol. Given the existence of generally-accepted principles that can be applied, Applicants urge the Commission to reject WRA's recommended condition and to allow the landscape architecture professionals that Applicants have retained to resolve, in consultation with the engineering and other professionals responsible for the Project's construction, the landscape aesthetics, visual mitigation, and landscape architecture issues.

664. The OCC also opposes this condition. OCC argues that WRA has failed to meet its burden of proof. Assuming that WRA has met its burden of proof with respect to imposition of the condition (which OCC disputes), OCC argues that WRA has failed to meet its burden of

[373] As an example, Applicants point to WRA witness Apostol's recommendation -- which, if adopted, would be a condition on the CPCN and a construction requirement -- that the Project be located on the south edge of the Project's corridor. Applicants state that the record establishes that implementation of this condition would be problematic due to the existence of subdivisions, the area's topography, the existence of dense vegetation, and the steep terrain.

[374] Applicants point out that some of WRA's proposed measures include very specific requirements (*e.g.*, use the south edge of the Project's proposed corridor; where practicable, take advantage of micro topography to hide the Project from key viewpoints; co-locate the Project within existing utility and railroad corridors to avoid crossing highly-visible undisturbed natural areas). Applicants state that (a) it is too early in the process to determine the exact alignment of the Project; (b) the Project's siting will be examined critically in, and will be determined as part of, the RUS EIS process and the local government permitting processes; and (c) the environmental and other impacts of the Project will be an important consideration in those other proceedings (for example, RUS EIS process is required to identify and to address direct, indirect, and cumulative environmental effects as well as mitigation measures) so that the Commission and interested Parties can be assured that these impacts and issues will receive careful and full attention and review.

proof that Public Service's implementation of the condition is a prudent investment so that Public Service will recover in rates its prudently-incurred costs to implement the condition.

665. Concerning WRA's failure to meet its burden of proof that the condition should be attached to the CPCN, OCC states: (a) Applicants demonstrated their visual mitigation measures in the testimony of Applicants witness Korbe (Hearing Exhibit No. 17); (b) a viewshed analysis of the Project will be conducted and its results will be considered in the Project's construction and siting; and (c) Applicants are investigating visual mitigation issues and are considering implementation of several of the mitigation tools that WRA witness Apostol recommends. OCC contends that, in view of this evidence, WRA has not demonstrated that its recommended condition is warranted.

666. OCC states that WRA failed to address the practical implications of the Commission's placing the recommended condition on the CPCN. OCC notes that attaching this condition carries the implicit requirement that the Commission be able to monitor and to enforce the condition. OCC observes that WRA proposed no monitoring component. It asserts that the absence of a monitoring component is an important factor for the Commission to consider as it evaluates WRA's proposal. According to OCC, there is no direction as to whether, and (if so) how, the Commission will monitor and will determine Applicants' compliance with the condition. OCC observes that WRA's recommendation that the Commission determine in this proceeding that the implementation investment is prudent makes the absence of a monitoring component even more problematic.[375] OCC asserts that it would be bad public policy to require Applicants to implement WRA witness Apostol's recommendations, which go farther than

[375] According to OCC, without monitoring and a determination that Applicants complied with the condition, a determination with respect to whether Public Service prudently incurred its costs to implement the condition becomes difficult, if not impossible, to make.

Applicants' current plans, without first developing and specifying how one determines compliance with the condition.

667. OCC opposes the cost recovery portion of WRA's condition because: (a) there is no evidence that bounds the potential cost of the investment that Public Service must make to implement the recommendations;[376] (b) some of the recommendations are imprecise (*e.g.*, "to the extent practicable" and "where possible"), and others are very subjective (*e.g.*, "highest quality scenic views"), with the result that there is no standard for determining whether an implementation cost is prudently incurred; and (c) this creates the potential for very subjective costs and a large degree of variability. In addition, OCC asserts that, given the uncertainty created by the lack of standards, both Public Service and its ratepayers are at risk: Public Service is at risk that it may incur costs that it will not recover; ratepayers are at risk that they may pay for unnecessary investment. Finally, because the cost recovery recommendation is not developed, OCC is concerned that, in a subsequent cost recovery proceeding, it and other intervenors could be required to overcome a burden shift and the issue of whether the implementation costs were prudently incurred would be vigorously litigated.

668. Pole Canyon notes Colorado Open Lands' concerns about the possible impacts on conservation easements and the environment associated with the San Luis Valley-Calumet Segment. In Pole Canyon's opinion, in this proceeding the Commission should consider concerns about the Project's impacts on protected or environmentally-sensitive areas. With respect to the Project, Pole Canyon believes that the Commission can address Colorado Open

[376] WRA acknowledges that it has done no cost analysis of its recommended condition. OCC asserts that the record contains no information from which the Commission could determine either a range of reasonableness for, or the bounded range of, Public Service's implementation costs.

Lands' specific concerns by instructing Applicants to route the San Luis Valley-Calumet Segment so that it does not cross any conservation easement.

669. As to WRA's third recommended condition, the ALJ finds that WRA failed to meet its burden of proof. The condition will not be imposed.

670. First, the condition may impede, almost certainly will impinge on, and may duplicate the RUS EIS process and the county siting processes in that the condition requires Applicants to take specific steps and to implement specific measures when constructing and siting the Project. For the reasons discussed with respect to Colorado Open Lands' recommendation that the Commission order an environmental analysis of the Project, WRA's condition is both beyond the scope of this transmission proceeding and inappropriate.

671. Second, the record establishes that Applicants have agreed to do the following (all of which are WRA witness Apostol's recommendations): (a) to extent practicable, co-locate the Project within existing utility and railroad corridors; (b) use dark, low-reflective towers and attachments to minimize color contrast; (c) to the extent practicable, avoid massive clearing and resulting clear-cut effect; and (d) where possible, consolidate existing utility poles with the new towers to eliminate the existing poles (*e.g.*, Calumet-Walsenburg Segment). In addition, when routing, siting, and designing the Project, Applicants have agreed to use, to the extent possible, the environmental protection impact avoidance and mitigation measures recommended by Applicants' environmental consultants hired for the Project. These facts undercut any need for the condition.

672. Third, the ALJ finds persuasive OCC's arguments about the vague language of the WRA witness Apostol's recommendations and the lack of standards against which to assess (a) whether Applicants have met the condition and (b) whether Public Service has prudently

incurred the costs to comply with the condition. The Commission should not impose WRA's recommended condition without first developing and specifying how one will determine compliance with the condition. In this case, however, there is no or little evidence on which to make that determination because (a) many of the measures, tools, and strategies recommended by WRA witness Apostol are to be taken "where possible" or "where practicable" and (b) there is no record of the measures recommended by Applicants' environmental consultants, recommendations which Applicants would be required to use. Finally, the record contains no information that the Commission can use to determine the range of reasonableness or the bounds for the cost to implement the WRA witness Apostol's recommendations and, once they are known, to implement the measures recommended by Applicants' environmental consultants.

673. Fourth, attaching the condition to the CPCN creates the possibility that construction of the Project will be delayed if it develops that Applicants cannot implement WRA witness Apostol's recommendations or the measures recommended by Applicants' environmental consultants, or both. If one or more of these recommendations are inconsistent with a RUS or a county requirement, Applicants could not proceed with construction of the Project until the inconsistency was removed by formal action of the relevant agency.

674. WRA's *fourth proposed condition* is:

> Within three months of receiving the Nexant and Cadmus report on the demand-side management potential in its service territory, Tri-State will report to the Commission its plan on how it will implement the cost-effective measures and programs in the San Luis Valley that are identified in that study. Tri-State will annually update the San Luis Valley report, to ensure that end-use efficiency and other demand-side management efforts are being implemented in the [San Luis] Valley.

WRA SOP at 20. WRA asserts that this condition is appropriate for these reasons: (a) as a matter of transmission planning policy, utilities should use energy efficiency and DG to the

maximum extent practicable in order to avoid or to delay construction of transmission lines with the attendant adverse environmental impacts; to that end, this condition is necessary to assure that Tri-State implements end-use efficiency and other demand-side management (DSM) efforts in the San Luis Valley;[377] (b) one purpose of the Project is to increase reliability in the San Luis Valley, and this condition is directly tied to that purpose; and (c) one purpose of the Project is to provide export capability from southern Colorado, and, if the transmission line is at or near capacity, this condition has the potential, on a day-to-day basis, to increase the export capability available on-peak.[378]

675. Interwest supports this condition because it implements Colorado public policy goals related to increased use of DSM and energy efficiency.

676. Applicants oppose this condition.

677. Applicants assert that WRA has not established that this condition is related to the Project, the need for the Project, or how the Project will be used. As a result and citing *Home Builders*, Applicants argue that the Commission should not place this condition on the CPCN. Applicants also argue that this condition seeks to regulate Tri-State's future conduct; citing *Mountain States*, they urge the Commission not to place a condition on future conduct where, as here, the condition is unrelated to the Project.

678. In addition, Applicants observe that conditions that require future reporting to the Commission also require future monitoring by the Commission. They point out that WRA

[377] WRA notes that Tri-State provides financial incentives to its Members for implementation of energy efficiency. Thus, WRA believes that reporting would not be burdensome.

[378] WRA does not explain why this condition would apply only to the San Luis Valley-Calumet Segment. WRA's arguments in support of the condition appear to apply to all three transmission line Segments.

admits that it did not consider how the proposed reporting requirements would be monitored or supervised by the Commission.

679. Finally, Applicants state that this condition is duplicative of the requirements established by the Commission in Docket No. 09I-041E. In that proceeding the Commission accepted an agreement between Tri-State and WRA pursuant to which Tri-State must include energy efficiency and DSM scenarios in its resource modeling and must address how it is working with its Members to develop DSM resources. Decision No. C10-0101 at Attachment A at ¶¶ 8 and 12. Accordingly, Applicants argue that this condition is unnecessary.

680. As to WRA's fourth recommended condition, the ALJ finds that WRA failed to meet its burden of proof. This condition will not be imposed.

681. To a large degree, this condition duplicates the requirements established in Decision No. C10-0101. In addition, Tri-State provides financial incentives to encourage its Members to implement energy efficiency programs in their service areas. The financial incentive likely will result in the implementation of cost-effective end-use efficiency and other DSM efforts throughout Tri-State's service area, including the San Luis Valley. Finally, WRA does not explain, and the record does not reveal, how the Commission would monitor or supervise the reporting requirements or the use to which the Commission would put the reported information.[379]

[379] WRA may wish to know whether Tri-State implemented, and (if it did) how Tri-State implemented, the cost-effective measures and programs in the San Luis Valley that are identified in the Nexant and Cadmus report. Assuming that is the case, it appears that WRA (or any other interested person) may participate in the public participation process described in Decision No. 10-0101 and may inquire about those issues in that process.

f. Commenters from Hearings to Take Public Comment

682. The map at Exhibit RLP-1 to Hearing Exhibit No. 14 shows the transmission corridors that Applicants originally considered for the Project.[380] Corridor S is the corridor referred to as the Southern Route during the Walsenburg public comment hearing. Many commenters during the hearings to take public comment recommended that the Commission order Applicants not to site the Project using the Southern Route over La Veta Pass. This condition will not be imposed.

683. With the understanding that events may prompt further consideration of this corridor, Applicants have removed Corridor S (and, thus, the Southern Route) from consideration. This change in the possible siting of the San Luis Valley-Calumet Segment addressed the recommendations pertaining to siting. In addition, as discussed above, this transmission CPCN proceeding will not determine the Project's route.

3. Additional Conditions on Grant of CPCN.

684. In its SOP Response at 7, Tri-State states that Colorado Springs Utilities supports the Project and that CSU's stated concerns about adverse impacts on its system "will be further evaluated in the relevant studies to be conducted ... and appropriate mitigation measures will be addressed if needed." To assure that this evaluation occurs, to address the possibility that the Project may have an impact on the CSU system, and to assure that identified impacts are mitigated, the ALJ finds the following condition to be in the public interest:

> Prior to construction of the Project, Applicants will conduct the technical studies (for example, and without limitation, powerflow studies) necessary to determine whether the Project will have an impact on the CSU system. If the studies reveal

[380] During her oral testimony, Applicants witness Korbe modified Exhibit NCK-3 to identify the Project's Northern Route and Southern Route, as those terms were used during the public comment hearings. In addition, she modified Exhibit NCK-3 to show the approximate location of the existing 115kV transmission line owned by Intervenor Oxy.

> that the Project will have an adverse impact on the CSU system, Applicants must take the appropriate measures to mitigate the identified adverse impact or impacts.

This condition will be attached to the CPCN.[381]

685. To assist the Commission in following the progress of the Project, the ALJ finds that compliance reporting requirements are in the public interest. Compliance reporting requirements will be placed on the CPCN as conditions. These reporting requirements are found in the Compliance Appendix to this Decision.

VIII. EMF AND NOISE

686. In this proceeding, Applicants ask the Commission to find reasonable: (a) an EMF level of 150mG for the three transmission line segments; and (b) the levels of transmission line-related noise that are projected to occur when the Project is built and operated as proposed.

687. The facts contained in this discussion of EMF and noise levels are not disputed.

A. Modeling of Projected EMF Levels and Projected Noise Levels.

688. In support of their requests, Applicants presented the results of modeling performed using the ENVIRO model, which was developed by the Bonneville Power Administration and the Electric Power Research Institute. The ENVIRO model is a standard model used in the electric industry for EMF and noise analysis of transmission lines.

689. The ENVIRO model predicts transmission line-generated EMF levels and transmission line-related noise levels by considering input variables such as the line phasing, the presence of a parallel transmission line, the load and current expected when the line is in service, the elevation of the line, the weather conditions, and the size of the conductors used. The input

[381] The ALJ finds that a compliance filing with respect to this condition will not be necessary because Staff can follow this process and inform the Commission if Staff has a concern that Applicants are not addressing identified adverse impacts on CSU's system.

variables are transmission line-specific and route-specific. Consequently, if the characteristics of the line being modeled are changed (*e.g.*, larger conductor, taller or lower support structures) or the operational characteristics of the line being modeled are changed (*e.g.*, no reverse phasing) or the route of the line is changed (*e.g.*, elevation reduced or increased), the ENVIRO modeling results furnished in this proceeding would not accurately predict or depict the EMF and noise levels under the changed circumstances. In the event of changes to the assumptions used in the modeling, the ENVIRO modeling would need to be redone.

690. No party objected to or questioned the use of the ENVIRO model for predicting EMF levels and noise levels. The ENVIRO model is an appropriate means to determine expected levels of transmission line-related EMF and noise for the Project.

691. Using the ENVIRO model, Tri-State modeled the San Luis Valley-Calumet Segment and the Calumet-Walsenburg Segment. It provided the EMF and noise results.[382]

692. Using the ENVIRO model, Public Service modeled the Calumet-Comanche Segment. It provided the EMF and noise results.[383]

693. Public Service and Tri-State separately performed ENVIRO modeling for EMF and for noise. Applicants used slightly different versions of ENVIRO. Using its version of the model, each Applicant checked the results of the other by replicating the modeling. Irrespective of the version of the model used, the results were identical. Consequently, the ALJ finds that the use of the slightly different versions of the ENVIRO model had no effect on the comparability and usefulness of the results.

[382] These are found in Hearing Exhibit No. 22 at Exhibit RLP-2

[383] These are found in Hearing Exhibit No. 20 at Exhibit DJP-Case 1 and Exhibit DJP-Case 2.

B. Electromagnetic Fields and Prudent Avoidance Techniques.

694. Public Service and Tri-State request these Commission findings: (a) an EMF level of 150mG is reasonable for the transmission line components of the Project; and (b) in the Project, each uses prudent avoidance techniques with respect to EMF.

1. Findings.

695. Findings of fact contained in the earlier portions of this Decision are incorporated here by reference.

a. Projected EMF levels.

696. In considering whether the Applicants' proposed 150mG EMF level for the Project is reasonable, the Commission is interested principally in the magnetic field generated by the transmission line because the possibility exists that there may be adverse health effects from exposure to magnetic fields.[384] The magnitude of the magnetic field is determined by the current flows through the transmission line and by one's proximity to the transmission line. As the current increases, so does the magnitude of the magnetic field. As one moves closer to the line, the magnitude of the magnetic field increases.

697. Florida has established an EMF limit for transmission lines in the range between 150 and 250mG, depending on the voltage of the line. New York has established the EMF limit for transmission lines at 200mG, irrespective of voltage. In addition, at least two non-governmental groups have set not-to-exceed (or exposure) EMF values that are higher than 150mG.

[384] This is not, and is not intended to be, a finding that, in fact, there are adverse health effects from exposure to magnetic fields. Rather, this statement is simply a statement of the reason for the interest in this particular type of field.

698. Applicants presented evidence of the EMF levels that are predicted to occur when the Project is in service. The Applicants used the ENVIRO model.

699. Tri-State modeled three cases of electrical power flow for the **San Luis Valley-Calumet Segment**: *Case No. 1* models the Segment with no generation injection on the line; *Case No. 2* models the Segment with 2,000 MW of generation injection (1,000 MW at San Luis Valley and 1,000 MW at Calumet); and *Case No. 3* models the Segment with current flowing at the full thermal limit capacity of the conductors.

700. For *Case No. 1 (no generation injection),* the ENVIRO model predicts EMF levels of 1.8mG on the eastern edge and the western edge of the ROW. The levels are lower when measured at 25 feet from the edge of the ROW.

701. For *Case No. 2 (2,000 MW generation injection),* the ENVIRO model predicts EMF levels of 11.0mG on the eastern edge and the western edge of the ROW. The levels are lower when measured at 25 feet from the edge of the ROW.

702. For *Case No. 3 (full thermal limit capacity of conductor),* the ENVIRO model predicts EMF levels of 30.8mG on the eastern edge and the western edge of the ROW. The levels are lower when measured at 25 feet from the edge of the ROW.

703. In each of the three modeled cases, the level of EMF, measured at the edge of the ROW and predicted to occur when the San Luis Valley-Calumet Segment is in service, is significantly below the 150mG level that the Applicants request the Commission to find reasonable.

704. Case No. 3 is the most severe case, and its results cannot be exceeded when the line is in service. Consequently, this Decision relies on the results from Case No. 3. As stated

above, for Case No 3, the ENVIRO modeling predicts an EMF value of 30.8mG, measured at the edge of the ROW and at maximum thermal limit capacity of the conductor.

705. Because the alignment of the ROW is not known, Public Service modeled two cases for the **Calumet-Comanche Segment**. *DLP-Case 1* represents the new double-circuit 345kV line built as a stand-alone line. *DLP-Case 2* represents the new double-circuit 345kV line built parallel to an existing single-circuit 230kV line.

706. For each case, Public Service presented the predicted EMF levels measured at the edge of the ROW under these assumptions: the highest continuous loading for each line under system intact conditions,[385] and highest continuous loading for each line under a N-1 condition.[386] Public Service also presented the projected EMF levels measured at 25 feet from the edge of the ROW under the same assumptions.

707. For *DLP-Case 1 (system intact)*, the ENVIRO model predicts a magnetic field of 49.72mG on the eastern edge of the ROW and on the western edge of the ROW at maximum loading. The levels are lower when measured at 25 feet from the edge of the ROW.

708. For *DLP-Case 1 (N-1 condition)*, the ENVIRO model predicts a magnetic field of 99.62mG on the eastern edge of the ROW and on the western edge of the ROW at maximum loading. The levels are lower when measured at 25 feet from the edge of the ROW.

709. DLP-Case 2 assumes that the Calumet-Comanche Segment is constructed parallel to the existing 230kV line and that there are two transmission lines within a 350-foot wide

[385] This loading is 1450 amps for each circuit in the 345kV line. Public Service does not expect to see these types of flows.

[386] This loading is 1450 amps for each circuit in the 345kV line (a total of 2900 amps) and 1450 amps for the existing 230kV line. Public Service does not expect to see these types of flows.

corridor in the Segment. Due to the configuration of these two lines, the EMF levels predicted to occur at the eastern side of the ROW and at the western side of the ROW are not the same.

710. For *DLP-Case 2 (system intact)*, the ENVIRO model predicts EMF levels of 28.77mG on the eastern edge of the ROW and 33.92mG on the western edge of the ROW at maximum loading. The levels are lower when measured at 25 feet from the edge of the ROW.

711. For *DLP-Case 2 (N-1 condition)*, the ENVIRO model predicts EMF levels of 57.54mG on the eastern edge of the ROW and 67.85mG on the western edge of the ROW at maximum loading. The levels are lower when measured at 25 feet from the edge of the ROW.

712. In each of the four modeled circumstances, the level of EMF, measured at the edge of the ROW and projected to occur when the Calumet-Comanche Segment is in service, is significantly below the 150mG level that the Applicants request the Commission to find reasonable.

713. The stand-alone case (*i.e., DLP-Case 1*) is the more severe case because the 230kV transmission line may cancel, and thus reduce, some of the magnetic field created by the double-circuit 345kV transmission line. As a result, this Decision relies on the EMF results for DLP-Case 1. As stated above, the highest EMF value for DLP-Case 1 is 99.62mG, measured at the edge of the ROW and in an N-1 condition and at maximum loading.

714. Tri-State modeled three cases of electrical power flow for the **Calumet-Walsenburg Segment**:[387] *Case No. 1* models the Segment with no generation injection on the line; *Case No. 2* models the Segment with 2,000 MW of generation injection (1,000 MW at

[387] The modeling assumed the transmission line orientation and configuration within the ROW as shown in Hearing Exhibit No. 22 at Exhibit RLP-2 at Figure 4.

San Luis Valley and 1,000 MW at Calumet); and *Case No. 3* models the Segment with current flowing at the full thermal limit capacity of the conductors.

715. Following construction of the Project, there will be three transmission lines within a 200-foot wide corridor in the Calumet-Walsenburg Segment. Due to the configuration of these three lines, the EMF levels on the eastern side of the ROW and on the western side of the ROW are not the same.

716. For *Case No. 1 (no generation injection),* the ENVIRO model predicts EMF levels of 9.9mG on the eastern edge of the ROW and 4.4mG on the western edge of the ROW. The levels are lower when measured at 25 feet from the edge of the ROW.

717. For *Case No. 2 (2,000 MW of generation injection),* the ENVIRO model predicts EMF levels of 17.5mG on the eastern edge of the ROW and 7.3mG on the western edge of the ROW. The levels are lower when measured at 25 feet from the edge of the ROW.

718. For *Case No. 3 (full thermal limit capacity of conductors),* the ENVIRO model predicts EMF levels of 59.1mG on the eastern edge of the ROW and 35.1mG on the western edge of the ROW. The levels are lower when measured at 25 feet from the edge of the ROW.

719. In each of the three modeled cases, the level of EMF, measured at the edge of the ROW and projected to occur when the Calumet-Walsenburg Segment is in service, is significantly below the 150mG level that the Applicants request the Commission to find reasonable.

720. Case No. 3 is the most severe case, and its results cannot be exceeded when the line is in service. Consequently, this Decision relies on the results from Case No. 3. As stated above, the EMF values for Case No. 3 are 59.1mG (measured on the eastern edge of the ROW)

and 35.1mG (measured on the western edge of the ROW) at maximum thermal limit capacity of the conductor.

721. There was no persuasive or probative evidence presented on actual adverse health effects, or on the potential for adverse health effects, from exposure to magnetic fields at the ENVIRO-projected levels. There was no persuasive or probative evidence presented on actual adverse health effects, or on the potential for adverse health effects, from exposure to magnetic fields at the requested 150mG level for which Applicants seek a finding of reasonableness.

b. Prudent avoidance techniques.

722. To minimize magnetic field levels and to comply with Rule 4 CCR 723-3-3102(d),[388] Applicants plan to use prudent avoidance techniques in constructing the Project. There is no dispute with respect to the proposed techniques or their use in the Project.

723. For the **San Luis Valley-Calumet Segment**, Tri-State will use at least these prudent avoidance techniques: the use of support structures designed with additional ground clearance (Rule 4 CCR 723-3-3102(d)(III)); the use of reverse phasing in such a way as to reduce to the extent possible, or to minimize, EMF levels at the edge of the ROW and at 25 feet beyond the edge of the ROW (Rule 4 CCR 723-3-3102(d)(I)); and the avoidance of populated areas to the extent possible (Rule 4 CCR 723-3-3102(d)(II)). In addition, this Segment will be constructed with vertically-arranged conductor phases that reduce the horizontal spread out from the support structures and, thus, reduce EMF. Finally, the width of the ROW will be greater than the minimum required for National Electric Safety Code electrical clearances.

[388] Unless the context indicates otherwise, reference in the discussion of EMF and noise to Rule 4 CCR 723-3-3102 is to the Rule in effect in May 2009 when the Applications were filed.

724. For the **Calumet-Comanche Segment**, Public Service will use at least these prudent avoidance techniques: the use of support structures designed with additional ground clearance (Rule 4 CCR 723-3-3102(d)(III)) and the use of reverse phasing in such a way as to reduce to the extent possible, or to minimize, EMF levels at the edge of the ROW and at 25 feet beyond the edge of the ROW (Rule 4 CCR 723-3-3102(d)(I)). In addition, this Segment will be constructed with vertically-arranged conductor phases that reduce the horizontal spread out from the support structures and, thus, reduce EMF.

725. For the **Calumet-Walsenburg Segment**, Tri-State will use at least these prudent avoidance techniques: the use of support structures designed with additional ground clearance (Rule 4 CCR 723-3-3102(d)(III)); the use of reverse phasing in such a way as to reduce to the extent possible, or to minimize, EMF levels at the edge of the ROW and at 25 feet beyond the edge of the ROW (Rule 4 CCR 723-3-3102(d)(I)); and the avoidance of populated areas to the extent possible (Rule 4 CCR 723-3-3102(d)(II)). In addition, this Segment will be constructed with vertically-arranged conductor phases that reduce the horizontal spread out from the support structures and, thus, reduce EMF. Finally, the width of the ROW will be greater than the minimum required for NESC electrical clearances.

726. Applicants do not consider underground construction of any Segment (Rule 4 CCR 723-3-3102(d)(V)) to be necessary or appropriate because (a) underground construction costs are significantly higher (at least ten times greater) than the costs of overhead construction;[389] (b) the costs to maintain and to repair an underground transmission line are higher than maintenance and repair costs for overhead transmission lines; (c) the EMF levels predicted to occur are consistent with those that the Commission has previously found to be

reasonable for overhead transmission lines; and (d) the magnetic fields resulting from the proposed overhead design are within typical exposure guidelines. The ALJ finds that underground construction of the transmission line segments is not a necessary prudent avoidance technique for the Project.

2. Relevant Statutes, Commission Rules, and Commission Decisions.

727. To obtain the requested finding on EMF, Applicants must establish that the requested EMF level of 150mG is reasonable. There is neither a federal statute nor a Colorado statute pertaining to the permissible level of transmission line magnetic fields. There is no federal rule that establishes standards or guidelines for, or limits on, the permissible level of transmission line magnetic fields. At the time the Applications were filed (May 2009), there was no Colorado rule that established standards or guidelines for, or limits on, the permissible level of transmission line magnetic fields.[390]

728. To obtain the requested finding on prudent avoidance, Applicants must establish that they have satisfied Rule 4 CCR 723-3-3102(d) on prudent avoidance, which that Rule defines as

> the striking of a reasonable balance between the potential health effects of exposure to magnetic fields and the cost and impacts of mitigation of such exposure by taking steps to reduce the exposure at reasonable or modest cost.

[389] In mountainous terrain (such as La Veta Pass), the cost of underground construction is significantly greater than ten times the cost of overhead construction.

[390] As pertinent here, the Commission recently amended the Rules Regulating Electric Utilities, 4 CCR 723 Part 3, and added Rule 4 CCR 723-3-3206, which applies to the construction or extension of transmission facilities. Decisions No. R10-0430 and No. C10-0651. Rule 4 CCR 723-3-3206(e) addresses magnetic fields. The instant proceeding began prior to the effective date of the new Rule. Consequently, Rule 4 CCR 723-3-3206(e) does not govern this proceeding. There was no substantive Commission rule concerning magnetic fields in effect at the time the Applications were filed. As a result, there is no substantive Commission rule that governs the determination of the reasonableness of EMF levels in this proceeding.

Unless the context indicates otherwise, reference in this Decision to Rule 4 CCR 723-2-3102(d) is to the Rule in effect in May 2009 when the Applications were filed.

Rule 4 CCR 3102(d) requires the applying public utility to describe its actions and techniques for incorporating the concept of prudent avoidance in planning, siting, constructing, and operating transmission facilities.[391]

729. Although not bound by them, the ALJ looks for guidance on these EMF-related issues to Decisions No. C08-0444 and No. C09-0048 (*Pawnee-Smoky Hill Decisions*). These are recent decisions on transmission lines and were issued in a litigated proceeding that involved a request for a finding that an EMF level of 150mG was reasonable.

3. Positions of the Parties.

730. Concerning the *requests for reasonableness findings*, Applicants seek findings with respect to the reasonableness of a 150mG EMF level to avoid the consequences of the decision in *Public Service Company of Colorado v. Van Wyk*, 27 P.3d 377, 393 (Colo. 2001) (*Van Wyk*).[392] Neither Public Service nor Tri-State wishes either to create a nuisance by constructing or operating its transmission facilities or to construct a transmission line that could subject it to future lawsuits based on complaints of nuisance. To avoid these results, Applicants seek the requested reasonableness finding.

731. Applicants state that they determined the predicted EMF values using the ENVIRO model, which is the model that has been used in past transmission proceedings and that

[391] The Rule lists five actions that a utility might take to reduce exposure at modest or reasonable cost and, thus, meet the prudent avoidance criterion. These include using reverse phasing, routing the line to avoid concentrated population and group facilities, using higher structure, widening the ROW, and constructing the line underground. The list is not all-inclusive, and the listed steps are not mandatory.

[392] In that decision, the Colorado Supreme Court ruled that, although the Commission had granted Public Service a CPCN to construct and to operate the 230kV transmission line at issue in that case, the plaintiffs nonetheless could maintain a claim against Public Service for intentional nuisance founded on both the EMF levels and the noise levels associated with the continued operation of that 230kV transmission line, which was adjacent to their property. The Court determined that plaintiffs could maintain the intentional nuisance action because, in granting the CPCN, the Commission had made no finding of fact that quantified the reasonable level of EMF and noise that was expected in connection with operation of the transmission line.

the Commission has accepted for EMF modeling. They rely on the ENVIRO modeling results discussed above and note that every modeled case predicts an EMF level, measured at the edge of the ROW, that is lower than 150mG. They state that the EMF levels, measured at the edge of the ROW, predicted in this proceeding are consistent with, or lower than, the predicted EMF levels, measured at the edge of the ROW, found to be reasonable in the *Pawnee-Smoky Hill Decisions*.[393] Applicants argue that the circumstances modeled in the most severe cases (*i.e.*, Tri-State's Case No. 3 and PSCo's DLP-Case 1 (N-1 condition)) will rarely, if ever, occur. They point out that, given that the highest predicted EMF exposure levels are those measured at the edge of the ROW, the potential EMF exposure for persons who are outside of the ROW will be substantially less.

732. Applicants ask the Commission to make a finding that an EMF level of 150mG is reasonable. They state that such a finding is consistent with the findings in Docket No. 05A-072E (PSCo's Comanche-Daniels Park 345kV Transmission Project; Decisions No. C06-0786 and No. C06-1101) and Docket No. 07A-156E (PSCo's Midway-Waterton 345kV Transmission Project; Decision No. C07-0750) that an EMF level of 150mG is reasonable.

733. Staff, Trinchera Ranch, and Ron Velarde address the requested EMF reasonableness finding. Each Intervenor's position is discussed below.

734. There is an interplay between EMF levels and transmission line-related noise such that taking steps to decrease one may result in an increase in the other. Aware of, and sensitive to, that interplay, Staff is concerned that Applicants will compromise (*i.e.*, increase) the EMF levels in an effort to meet a 50 dB(A) noise level (measured 25 feet from the edge of the ROW) in residential areas. To address this possibility, Staff requests that the Commission order

[393] In the *Pawnee-Smoky Hill Decisions*, the Commission found to be reasonable magnetic field levels,

Applicants to construct the Project (or at least the San Luis Valley-Calumet Segment) using a conductor size that is large enough to reduce EMF levels while also reducing noise levels.[394]

735. Applicants oppose Staff's recommendation that the Project (or at least the San Luis Valley-Calumet Segment) be constructed using larger conductors to reduce EMF from the transmission lines. Applicants assert that there is no evidence that the Project as proposed by Applicants exceeds the applicable noise levels and EMF exposure levels such that the Staff-proposed change would be needed.[395] Applicants state that they must balance the benefits and costs of noise and EMF mitigation measures and that, because the Project as proposed meets the standards for noise and EMF, incurring additional costs to use larger conductors is not warranted by the evidence presented in this case.

736. Trinchera Ranch opposes the request for a finding that a 150mG EMF level is reasonable because: (a) the evidence establishes that, in the most severe cases, the highest predicted EMF levels are 31mG for the San Luis Valley-Calumet Segment and 100mG for the Calumet-Comanche Segment;[396] (b) there is continued public concern about possible adverse health impacts from exposure to transmission line-related EMF; and (c) the Commission should require the lowest possible EMF at the edge of the ROW, assuming the use of prudent avoidance techniques. Trinchera Ranch asks that, for each Segment, the Commission find to be reasonable the highest EMF levels predicted by the ENVIRO modeling.

737. The evidence establishes that the ENVIRO model was developed in a geographic area that is different from Colorado and that has lower elevations than Colorado. Consequently,

measured at the edge of the ROW, ranging from 22.71mG to 34.58mG. Decision No. C09-0048 at ¶¶ 72-77.

[394] Staff provides information about available conductors that would address Staff's concerns.

[395] Applicants state that the evidence is clear and unrebutted that the Project as proposed results in noise and EMF levels that are below levels approved by the Commission in other transmission proceedings.

Trinchera Ranch asserts that the ENVIRO EMF results should be verified to determine whether the model's results are valid in Colorado. To accomplish this, Trinchera Ranch recommends that the Commission require Applicants to verify the ENVIRO EMF results for the Project.[397] Trinchera Ranch also recommends that the Commission delay ruling on the request for a finding of reasonableness regarding EMF until the Applicants have verified that the ENVIRO model accurately projects EMF levels in Colorado.

738. Applicants oppose Trinchera Ranch's recommendations.

739. First, Applicants reiterate that they used the ENVIRO model, which has been accepted by the Commission in past transmission dockets, and that the requested finding that the 150mG EMF level is reasonable is consistent with similar findings made in previous transmission dockets. Thus, they argue, there is no reason to adopt Trinchera Ranch's recommendation that the Commission find to be reasonable the lower EMF levels projected by the ENVIRO model.

740. Second, Applicants address Trinchera Ranch's argument that the lower EMF levels it recommends should be adopted because there is continued concern over health impacts from substantial levels of EMF. Applicants observe that these same concerns existed when the Commission established 150mG as a reasonable EMF level in earlier transmission proceedings and that nothing in the record suggests that there has been a change in the concerns.

741. Third, Applicants urge the Commission not to adopt Trinchera Ranch's proposed verification condition. They present these arguments: (a) the ENVIRO model is recognized by

[396] The evidence establishes that, for the Calumet-Walsenburg Segment, the highest predicted EMF levels are 59.1mG (measured on the eastern edge of the ROW) and 35.1mG (measured on the western edge of the ROW).

[397] To confirm the ENVIRO results, Applicants would verify the results by comparing the predicted levels of EMF for each Segment with the actual levels of EMF for each Segment, measured when the Project is in service.

the Commission; (b) the ENVIRO model is commonly used in the industry; (c) there is no evidence that the magnetic field projections should not be accepted as accurate; and (d) the verification would be difficult, if not impossible, to conduct because, by definition, the projected EMF levels that Trinchera Ranch urges the Commission to adopt are based on the most severe cases under conditions that may never occur or that would exist for only short periods of time.

742. Fourth and finally, Applicants oppose the Trinchera Ranch recommendation that the Commission delay its ruling on the request for an EMF reasonableness finding pending completion of verification of the ENVIRO modeling results. They argue that this delay would expose them to the very risks of lawsuits that they are attempting to avoid by seeking the reasonableness findings requested as part of the Applications.

743. Mr. Velarde expresses concern about possible adverse health effects from exposure to EMF from the transmission line. He is concerned that, because the Applicants have stated repeatedly that the route over La Veta Pass (in the San Luis Valley-Calumet Segment) is not yet known, the transmission line may pass close to his property and his family's property.[398]

744. Applicants respond to Mr. Velarde. They state: (a) despite his stated concern, Mr. Velarde has not reviewed the EMF studies for the Project; (b) Mr. Velarde testified that only one of his family's properties has a residence on it and that the residence is located more than one-half mile from the now-preferred transmission line route (*i.e.*, the Northern Route); and

[398] Hearing Exhibit No. 101 are maps that show the location of the Velarde family properties relative to the Applicants' preferred route for the San Luis Valley-Calumet Segment.

(c) Applicants' prudent avoidance techniques (*e.g.*, the avoidance of residential areas) address the Velardes' concerns.

745. Concerning *prudent avoidance techniques*, Applicants state that the record evidence establishes that they will employ prudent avoidance techniques as set out in Rule 4 CCR 723-3-3102(d). They state that this evidence is undisputed and unrebutted. No Intervenor addressed the prudent avoidance techniques issue.

4. Discussion and Conclusions.

746. To the end that EMF levels are minimized, Rule 4 CCR 723-3-3102(d) (2009) requires a public utility to include the concept of prudent avoidance with respect to planning, siting, constructing, and operating transmission facilities. While no statute or applicable rule directly addresses the Commission's authority to determine the reasonableness of a given EMF level, as discussed above, the Commission has broad authority to regulate public utilities.

747. Whether to make a finding with respect to the reasonableness of a given EMF level is within the Commission's discretion. In this proceeding, the issue was fully litigated. Accordingly, the ALJ finds it appropriate to make a finding as to the reasonableness of an EMF level with respect to the Project.

748. The question is: should the Commission find to be reasonable for the Project the 150mG EMF level advocated by the Applicants? Whether a given level of EMF is reasonable is a factual determination that is made on a case-by-case basis. Under the facts of this case, the ALJ finds that the requested 150mG EMF level is too high and, thus, unreasonable. Thus, the answer to the question is: no.

749. Applicants extol the ENVIRO model and the validity of its results. They repeatedly point out that the Commission has found to be reasonable the ENVIRO-based

projections of EMF levels in previous transmission proceedings. They state that the EMF levels projected to occur under the most severe circumstances (*i.e.*, Tri-State's Case No. 3 and Public Service's DLP-Case 1 (N-1 condition)) either cannot be exceeded or are highly unlikely to be exceeded when the transmission line is in service. Yet, Applicants ask the Commission to ignore the ENVIRO EMF projections in this case and to ignore their own witnesses' testimony concerning the improbability that the projected EMF levels will ever be exceeded. Notwithstanding that 150mG is significantly higher than the highest EMF level predicted to occur when the Project is in service, Applicants ask for a finding that 150mG is the reasonable EMF level for the Project. The basis for this request is that, in previous transmission proceedings, the Commission has found a 150mG level of EMF to be reasonable.

750. Applicants' advocacy is contradictory, confusing, and unpersuasive. The ALJ finds that, under the circumstances of this case, the appropriate course is to use the ENVIRO results as the basis for a finding of reasonableness with respect to EMF. No party disputes the appropriateness of using the ENVIRO model to determine the projected EMF levels for the Project, and the record supports using the ENVIRO EMF results. In addition, this approach is consistent with the Commission's approach in Decision No. C03-0946 (PSCo's Denver Terminal-Dakota-Arapahoe 230kV Transmission Project) (an uncontested application proceeding); in Decision No. C03-1055 (PSCo's Chambers 230/115kV Transmission Intertie Project) (an uncontested application proceeding); in Decision No. R03-1308 (PSCo's Midway-Daniels Park Transmission Rebuild Project (an application proceeding in which the reasonableness of EMF levels was litigated); and in Decision No. C09-0048 (PSCo's Pawnee-

Smoky Hill 345kV Transmission Project), the most recent application proceeding in which the reasonableness of EMF levels was litigated.[399]

751. The ALJ has found that a finding that an EMF level is reasonable should be made but has determined that the requested 150mG EMF level is unreasonable. The question then becomes: what level(s) of EMF should be found to be reasonable? The ALJ finds: (a) as among and between the Segments, there are differences in elevation and other factors that affect EMF levels; (b) due to these differences, designation of a single EMF level for the entire Project is not reasonable and, thus, that a reasonable EMF level must be established for each Segment; and (c) for each Segment, the reasonable EMF levels are those projected to occur under the most severe circumstances (*i.e.*, Tri-State's Case No. 3 and Public Service's DLP-Case 1 (N-1 condition)).[400]

752. The ALJ finds the following EMF levels to be reasonable:[401] (a) for the **San Luis Valley-Calumet Segment**: 31mG (measured at the edge of the ROW); (b) for the **Calumet-Comanche Segment**: 100mG (measured at the edge of the ROW); and (c) for the **Calumet-Walsenburg Segment**: 60mG (measured at the eastern edge of the ROW) and 36mG (measured at the western edge of the ROW). The ALJ also finds that these reasonableness findings should be subject to the following provisos: (a) for each Segment, the stated EMF level is found to be reasonable *provided and only if* that Segment is constructed and operated using the prudent

[399] In the Pawnee-Smoky Hill 345kV Transmission Project proceeding (Docket No. 07A-421E), Public Service sought a Commission finding that an EMF level of 150mG was reasonable when the line is in operation. In that case, Public Service argued, as Applicants argue in this proceeding, that 150mG was reasonable because the Commission had found 150mG to be reasonable in other transmission proceeding. The Commission did not adopt PSCo's position; denied PSCo's request; and found to be reasonable the ENVIRO-predicted EMF levels.

[400] This finding reflects PSCo's position that DLP-Case 1 is the case on which the Commission should focus and rely.

[401] The EMF values are rounded up to the next whole number from the ENVIRO-projected EMF levels.

avoidance techniques that Applicants propose to use in that Segment as discussed in this Decision; and (b) for each Segment, the stated EMF level is found to be reasonable *provided and only if* that Segment is constructed within the corridors preferred by Applicants during the February 2010 evidentiary hearing.[402]

753. The ALJ will not adopt the conditions advocated by Trinchera Ranch because Trinchera Ranch has failed to meet its burden of proof with respect to the conditions it seeks.

754. The ALJ finds that verification of the ENVIRO-projected EMF levels is unnecessary because (a) the levels found to be reasonable are the highest projected values and will occur rarely, if at all; (b) Applicants' point regarding the extreme difficulty, if not impossibility, of verifying the projected EMF levels is well-taken; and (c) the expenditure of ratepayer money to verify the ENVIRO EMF results is unreasonable given the promulgation of Rule 4 CCR 723-3-3206(e)(III) (2010), which deems reasonable (by rule) magnetic fields levels of 150mG and below.

755. The ALJ finds that withholding the EMF reasonableness finding pending verification of the EMF results is unnecessary because (a) there will be no verification of the ENVIRO EMF results; and (b) the record establishes the reasonable EMF levels (as found above). Thus, there is no reason to withhold from Applicants the reasonableness finding they seek.

756. The last issue with respect to EMF is whether Applicants have shown that they will employ prudent avoidance techniques with respect to the planning, siting, construction, and

[402] The Commission does not make a siting decision when it grants a CPCN for a transmission line. Thus, this limitation on the reasonableness finding is necessary in order to recognize the possibility that, as a result of the Applicants' changing their minds, of the RUS EIS process, of a county's siting decision, or of some other reason, the corridor within which a given Segment will be sited may be different from the corridors discussed by Applicants witnesses during the February 2010 hearing.

operation of the Project. Rule 4 CCR 723-3-3102(d) (2009). The undisputed facts establish, and the ALJ finds, that Applicants will employ prudent avoidance techniques, *provided* they use the prudent avoidance techniques discussed above with respect to each Segment.

C. Projected Noise Levels and Noise Mitigation Actions and Techniques.

757. Applicants request a Commission finding that the transmission line-related noise levels projected to occur when the Project is operated as described in the Applications are reasonable. Applicants ask that the Commission make this finding pursuant to § 25-12-103(12)(a), C.R.S. If made, the finding gives each Applicant the protections of § 25-12-103(12)(b), C.R.S.

1. Findings.

758. Findings of fact contained in the earlier portions of this Decision are incorporated here by reference.

a. Projected transmission line-related noise levels.

759. To understand the importance of the projected noise levels, one should have an understanding of noise measurement; the causes of transmission line-related noise; and the characteristics of corona-generated transmission line noise. The Commission has discussed transmission-line related noise and the noise-related ENVIRO modeling:

> Audible noise is produced by sound pressure and, for the purpose of determining the human response to sound, is measured in units of sound pressure level called decibels (dB). The frequency (*i.e.*, pitch) of a sound is also a component of audible noise.
>
> The decibel scale is logarithmic, and the ratio scale is linear. Thus, as the decibel levels increase, the ratio compounds at a higher rate. This means, for example, that an increase from 50 dB(A) to 53 dB(A) (an increase of 3 dB(A)) is perceived as a 37% increase in noise level and that the perceived noise increases 10 fold for every 20 dB(A) increase.

> There are several scales used to rate both frequencies and sound pressure levels discerned by the human ear. The most commonly used is the A-weighted scale (dB(A)). This is the scale used to report the ENVIRO results.
>
> Measuring audible noise is not precise because, when recorded, noise levels produce a fuzzy line, which line is approximately two dB in width. Conceivably, although stated at a specific dB level, measured audible noise from a particular source can fall anywhere within this two dB bandwidth. To address this lack of precision, noise is said to be a certain level "on average" and is reported using the L-level, which is the statistical descriptor for an exceedance level. For each case presented in this proceeding, the ENVIRO model reports two L-scale results: L_{50} Rain and L_5 Rain. Of these, L_{50} Rain is the relevant measure.
>
> L_{50} Rain is the sound level, expressed in dB(A), which is *exceeded 50 percent* of the time for an hour survey, when measured using an approved test procedure. Although this result is labeled rain, it appears to incorporate all three types of wet weather modeled (*i.e.*, rain, fog, and snow).
>
> Transmission line-related noise is most often associated with corona, the small electrical discharge which surrounds an electric transmission line. Generally speaking, the higher the voltage on a line, the greater is the corona activity on that line. Corona-generated noise consists of buzzing, humming, hissing, random crackling, and random popping sounds and is the most common audible noise associated with high-voltage transmission lines. Corona-generated noise increases one dB(A) for every 1,000-foot gain in elevation. Corona-generated noise is most apt to occur when the line is damp or has droplets on it. Wet lines may have noise levels as much as 25 dB(A) higher than dry lines.
>
> Because corona-generated transmission line noise is most noticeable when a line has droplets on it, weather data can be useful in predicting the likely frequency and duration of corona-generated noise. The ENVIRO model contains a screen which allows the modeler to input specific values (for example, duration, precipitation rate, time of day) for fog, rain, and snow.

Decision No. C08-0444 at ¶¶ 135-41 (emphasis in original) (footnotes omitted).

760. Tri-State modeled one case for the **San Luis Valley-Calumet Segment**.[403] This case was modeled using an elevation of 9,413 feet, which is the highest elevation of La Veta Pass, and assuming that the transmission line is constructed and operated as proposed and discussed above.[404] For this case, the ENVIRO model predicts a *Fair L_{50} noise level* of

[403] The width of the ROW in this Segment is assumed to be 150 feet.

[404] The modeling inputs are found in Hearing Exhibit No. 22 at Exhibit RLP-2 at Appendix A.

25.5 dB(A) when measured on the western and eastern edges of the ROW; (b) a *Rain L_{50} noise level* of 50.5 dB(A) when measured on the western and eastern edges of the ROW; and (c) a *Rain L_{50} noise level* of 49.3 dB(A) when measured 25 feet from the western and eastern edges of the ROW.

761. The audible noise levels at lower elevations of the Segment will be lower. The nearest home to the currently-proposed route over La Veta Pass is 1,770 feet away from the edge of the ROW. The noise levels at all homes along the San Luis Valley-Calumet Segment, assuming the route now proposed, will be below 50 dB(A).

762. Because the alignment of the ROW is not known, Public Service modeled two cases for the **Calumet-Comanche Segment**. *DLP-Case 1* represents the new double-circuit 345kV line built as a stand-alone line. *DLP-Case 2* represents the new double-circuit 345kV line built parallel to an existing single-circuit 230kV line.

763. For *DLP-Case 1 (stand-alone line)*, the ENVIRO model predicts (a) a *Fair L_{50} noise level* of 24.5 dB(A) when measured on the western and eastern edges of the ROW with maximum loading, and (b) a *Fair L_{50} noise level* of 23.5 dB(A) when measured 25 feet from the western and eastern edges of the ROW with maximum loading. The ENVIRO model predicts (a) a *Rain L_{50} noise level* of 49.5 dB(A) when measured on the western and eastern edges of the ROW with maximum loading, and (b) a *Rain L_{50} noise level* of 48.5 dB(A) when measured 25 feet from the western and eastern edges of the ROW with maximum loading.

764. If the Segment is constructed parallel to the existing 230kV line,[405] there will be two transmission lines within a 350-foot wide corridor in the Calumet-Comanche Segment. Due

[405] This is DLP-Case 2.

to the configuration of these two lines, the noise levels predicted to occur at the eastern edge and at the western edge are not the same.

765. For *DLP-Case 2 (two parallel lines)*, the ENVIRO model predicts (a) a *Fair L_{50} noise level* of 20.9 dB(A) when measured on the eastern edge of the ROW with maximum loading, (b) a *Fair L_{50} noise level* of 20.4 dB(A) when measured 25 feet from the eastern edge of the ROW with maximum loading, (c) a *Fair L_{50} noise level* of 23.5 dB(A) when measured on the western edge of the ROW with maximum loading, and (d) a *Fair L_{50} noise level* of 22.75 dB(A) when measured 25 feet from the western edge of the ROW with maximum loading. The ENVIRO model predicts (a) a *Rain L_{50} noise level* of 45.9 dB(A) when measured on the eastern edge of the ROW with maximum loading, (b) a *Rain L_{50} noise level* of 45.4 dB(A) when measured 25 feet from the eastern edge of the ROW with maximum loading, (c) a *Rain L_{50} noise level* of 48.5 dB(A) when measured on the western edge of the ROW with maximum loading, and (d) a *Rain L_{50} noise level* of 47.75 dB(A) when measured 25 feet from the western edge of the ROW with maximum loading.

766. Tri-State modeled one case for the **Calumet-Walsenburg Segment**.[406] That case was modeled using an elevation of 5,600 feet, which is the average elevation of the Segment, and assuming that the transmission line is constructed and operated as proposed and discussed above.[407]

767. Following construction of the Project, there will be three transmission lines within a 200-foot wide corridor in the Calumet-Walsenburg Segment. Due to the configuration of these

[406] The modeling assumed the transmission line orientation and configuration within the ROW as shown in Hearing Exhibit No. 19 at Exhibit RLP-2 at Figure 4.

[407] The modeling inputs are found in Hearing Exhibit No. 22 at Exhibit RLP-2 at Appendix A.

three lines, the noise levels predicted to occur on the eastern side of the ROW and on the western side of the ROW are not the same.

768. For this case, the ENVIRO model predicts a *Fair L_{50} noise level* of 19.5 dB(A) when measured on the eastern edge of the ROW and a *Fair L_{50} noise level* of 19.9 dB(A) when measured on the western edge of the ROW. The ENVIRO model predicts (a) a *Rain L_{50} noise level* of 44.5 dB(A) when measured on the eastern edge of the ROW, (b) a *Rain L_{50} noise level* of 43.3 dB(A) when measured 25 feet from the eastern edge of the ROW, (c) a *Rain L_{50} noise level* of 40.9 dB(A) when measured on the western edge of the ROW, and (d) a *Rain L L_{50} noise level* of 40.4 dB(A) when measured 25 feet from the western edge of the ROW.

769. In accordance with the provisions of § 25-12-103(12)(a), C.R.S., the municipalities and counties in which Applicants propose to locate the Project were notified of the Applications, including the requests for reasonableness findings as to the projected noise levels. No municipality or county intervened, or sought permission to intervene, in this proceeding. In addition, representatives (*i.e.*, Commissioners) authorized to speak on behalf of the Alamosa County Board and the Huerfano County Board testified in support of the Project at the public comment hearings. Finally, no municipality or county in which the Project is proposed to be located has expressed a concern about the transmission line-related noise levels projected to occur when the Project is in service and operated as proposed.

770. The projected transmission-related noise levels (stated as Rain L_{50} values) are within the range of transmission-related noise levels that the Commission has found to be reasonable in similar transmission projects. In Decisions No. C06-0786 and No. C06-1101, the Commission determined that a Rain L_{50} value (measured at the edge of the ROW) of 55 dB(A)

was reasonable for PSCo's 345kV Comanche-Daniels Park transmission line.[408] In the *Pawnee-Smoky Hill Decisions*, the Commission determined that Rain L_{50} values (measured 25 feet from the edge of the ROW) in the range of 47.4 dB(A) to 51.5 dB(A) were reasonable for PSCo's 345kV Pawnee-Smoky Hill transmission line.[409]

771. Based on zoning of the area and time of day, § 25-12-103(1), C.R.S., establishes acceptable noise levels for certain general activities. While the noise levels set forth in § 25-12-103(1), C.R.S., do not apply to the Project, the Commission has found them to be a useful reference when determining the reasonableness of predicted transmission line-related noise levels. The Project's transmission-related noise levels are within the range of acceptable noise levels stated in § 25-12-103(1), C.R.S.

b. Noise mitigation actions and techniques.

772. There is no dispute with respect to the proposed noise mitigation actions and techniques or their use in the Project.

773. To address transmission line-related noise in the **San Luis Valley-Calumet Segment**, Tri-State proposes to use various techniques commonly employed in the industry to mitigate transmission-related noise. These include: the use of large conductors (*i.e.*, 1272 kcmil ACSR); the use of appropriate quality conductor; the use of corona-control attachment hardware; and the use of proper construction techniques such as careful handling of conductors during

[408] For portions of the Comanche-Daniels Park 345kV transmission line, residences were located close to the edge of the ROW. For the Project under discussion, however, the nearest residences are located an appreciable distance from the proposed transmission line routes.

[409] For portions of the Pawnee-Smoky Hill 345kV transmission line, residences were located within 100-120 feet of the edge of the ROW. For the Project under discussion, however, the nearest residences are located at a much greater distance from the proposed transmission line routes.

installation.[410] In addition, Tri-State will use a ROW of adequate width and, where possible, will route the Segment away from residences.

774. To address transmission line-related noise in the **Calumet-Comanche Segment**, Public Service proposes to use various techniques commonly employed in the industry to mitigate transmission-related noise. These include: the use of high quality bundled 1272 kcmil ACSR conductors; the adequate spacing of phases to avoid creation of excessive voltage gradient;[411] the use of corona-free attachment hardware; the proper line tension;[412] and the use of proper construction techniques such as careful handling of conductors.[413]

775. To address transmission line-related noise in the **Calumet-Walsenburg Segment**, Tri-State proposes to use various techniques commonly employed in the industry to mitigate transmission line-related noise. These include: the use of large conductors (*i.e.*, 1272 kcmil ACSR); the use of appropriate quality conductor; the use of corona-control attachment hardware; and the use of proper construction techniques such as careful handling of conductors during installation.[414] In addition, Tri-State will use a ROW of adequate width and, where possible, will route the Segment away from residences.

[410] The ENVIRO model assumes that techniques such as these are used; thus, any noise mitigation effect created by the use of these techniques is already accounted for in the ENVIRO results. Taking these measures will not reduce the estimated noise levels below those predicted by the ENVIRO model, but Tri-State's failure to use the specified techniques most likely would result in higher noise values than those predicted.

[411] Excessive voltage gradient could generate constant and excessive corona and, thus, noise.

[412] A loose conductor emits higher sound levels than does a conductor that has proper tension.

[413] The ENVIRO model assumes that techniques are used, and any noise mitigation effect created by the use of these techniques is already accounted for in the ENVIRO results. Taking these measures will not reduce the estimated noise levels below those predicted by the ENVIRO model, but Public Service's failure to use the specified techniques most likely would result in higher noise values than those predicted.

[414] The ENVIRO model assumes that techniques such as these are used; thus, any noise mitigation effect created by the use of these techniques is already accounted for in the ENVIRO results. Taking these measures will not reduce the estimated noise levels below those predicted by the ENVIRO model, but Tri-State's failure to use the specified techniques most likely would result in higher noise values than those predicted.

2. Relevant Statutes, Commission Rules, and Commission Decisions.

776. To obtain the requested finding regarding noise, Applicants must establish that the noise levels that are projected to occur when the transmission line components of the Project are in service are reasonable.

777. On this issue, one must consider § 25-12-103(12), C.R.S., and Rule 4 CCR 723-3-3102(c) (2009).[415] In addition, although not bound by them, the ALJ looks for guidance to Decisions No. C06-0786 and No. C06-1101 (*Comanche-Daniels Park Decisions*);[416] Decision No. C07-0750 (*Midway-Waterton Decision*); and the *Pawnee-Smoky Hill Decisions* because each of these proceedings involved a request, pursuant to § 25-12-103(12), C.R.S., for a reasonableness finding as to noise levels projected to occur when a proposed transmission line was in service. In addition, the *Comanche-Daniels Park Decisions* and the *Pawnee-Smoky Hill Decisions* were issued in dockets in which the reasonableness of the projected noise levels was litigated. Finally, the ALJ relies on other Decisions, as cited below.

778. Section 25-12-103(12), C.R.S., addresses the issue of transmission line-related noise and provides:

> (a) Notwithstanding [§ 25-12-103(1), C.R.S.], the [Commission] may determine, while reviewing utility applications for [CPCNs] for electric transmission facilities, whether projected noise levels for electric transmission

[415] As pertinent here, the Commission recently amended the Rules Regulating Electric Utilities, 4 CCR 723 Part 3, and added Rule 4 CCR 723-3-3206, which applies to construction or extension of transmission facilities. Decisions No. R10-0430 and No. C10-0651. Rule 4 CCR 723-3-3206(f) addresses projected levels of transmission line-related noise. The instant proceeding began prior to the effective date of the new Rule. Consequently, Rule 4 CCR 723-3-3206(f) does not govern this proceeding. There was no substantive Commission rule concerning projected levels of noise in effect at the time the Applications were filed. As a result, there is no substantive Commission rule that governs the determination of the reasonableness of the projected noise levels in this proceeding.

Unless the context indicates otherwise, reference in this Decision to Rule 4 CCR 723-2-3102(c) is to the Rule in effect in May 2009 when the Applications were filed.

[416] These decisions were the Commission's first decisions issued pursuant to § 25-12-103(12), C.R.S. In them, the Commission examined the issues surrounding transmission noise-related reasonableness findings pursuant to that statute. Decision No. C06-0786 is Hearing Exhibit No. 90.

> facilities are reasonable. Such determination shall take into account concerns raised by participants in the commission proceeding and the alternatives available to a utility to meet the need for electric transmission facilities. When applying, the utility shall provide notice of its application to all municipalities and counties where the proposed electric transmission facilities will be located. The [Commission] shall afford the public an opportunity to participate in all proceedings in which permissible noise levels are established according to the "Public Utilities Law," articles 1 to 7 of title 40, C.R.S.
>
> (b) Because of the statewide need for reliable electric service and the public benefit provided by electric transmission facilities, notwithstanding any other provision of law, no municipality or county may adopt an ordinance or resolution setting noise standards for electric transmission facilities that are more restrictive than [§ 25-12-103(12), C.R.S.] The owner or operator of an electric transmission facility shall not be liable in a civil action based upon noise emitted by electric transmission facilities that comply with [§ 25-12-103(12), C.R.S.]
>
> (c) For purposes of this section:
>
> (I) "Electric transmission facility" means a power line or other facility that transmits electrical current and operates at a voltage level greater than or equal to 44 kilovolts.
>
> (II) "Right-of-way for electric transmission facilities" means all property rights and interests obtained by the owner or operator of an electric transmission facility for the purpose of constructing, maintaining, or operating the electric transmission facility.

779. Rule 4 CCR 723-3-3102(c) requires an applying utility to describe its cost-effective noise mitigation actions and techniques pertaining to planning, siting, construction, and operation of a proposed transmission line.[417] In addition, the applying utility must provide computer studies that are "the output of utility standard programs" and that "show the potential noise levels expressed in dB(A) and measured at the edge of the" ROW. *Id*.

[417] The Rule lists examples of steps and techniques that the utility might employ to mitigate transmission line-related noise. These include, for example, the use of bundled conductors, the use of larger conductors, the use of corona-fee attachment hardware, the use of conductor of an appropriate quality, the appropriate handling and packaging of conductor, and the use of appropriate line tension. The list is not all-inclusive, and the listed steps are not mandatory.

3. Positions of the Parties.

780. Concerning the *requested reasonableness findings* and relying on the authority given to the Commission by § 25-12-103(12), C.R.S., Applicants seek findings with respect to the reasonableness of the projected levels of transmission line-related noise in order to avoid the consequences of the *Van Wyk* decision.[418] Neither Public Service nor Tri-State wishes either to create a nuisance by constructing or operating its transmission facilities or to construct a transmission line that could subject it to future lawsuits based on complaints of nuisance. To avoid these results, Applicants seek the requested reasonableness findings with respect to the predicted levels of transmission line-related noise.

781. Applicants rely on the noise levels that the ENVIRO model projects will occur when the Project is in service and operated as proposed. Applicants use the noise levels contained in § 25-12-103(1), C.R.S., as a guide with respect to whether the projected noise levels are reasonable. They point out that, when the transmission line is wet, the ENVIRO-predicted audible noise levels for each Segment are equal to or less than 50 dB(A), which is the most stringent limits set for residential zone use, when measured 25 feet from the edge of the ROW. They also point out that the ENVIRO-predicted noise levels in wet conditions exceed 50 dB(A), when measured at the edge of the ROW, only in the San Luis Valley-Calumet Segment and that the exceedance is less than one dB(A). They argue that, for all Segments and given the distances the residences are from the edge of the ROW, the transmission line-related noise levels at all residences along the proposed route of the Project will be well below 50 dB(A).

782. Applicants assert that the projected noise levels are within the range of noise levels the Commission has found to be reasonable in similar transmission projects. They cite

[418] The *Van Wyck* decision is discussed *supra*.

Decision No. C06-1101, in which the Commission determined that a 55 dB(A) noise level, measured at the edge of the ROW, was reasonable for PSCo's Comanche-Daniels Park 345 kV Transmission Project even though residences were located very near the edge of the ROW. They also cite the *Pawnee-Smoky Hill Decisions* in which the Commission determined that noise levels in the range of 47.4 dB(A) to 51.5 dB(A), measured at a point 25 feet from the edge of the ROW, were reasonable for PSCo's Pawnee-Smoky Hill 345kV Transmission Project. They note that the Project's ENVIRO-predicted noise levels are consistent with the default noise levels the Commission has found to be reasonable in recently-promulgated Rule 4 CCR 723-3-3206(f) (2010), although Applicants concede that Rule is not controlling here.

783. Staff, Trinchera Ranch, and Ron Velarde address the requested noise reasonableness findings. Each Intervenor's position is discussed below.

784. Staff recommends that the Commission require Applicants to construct the Project (or at least the San Luis Valley-Calumet Segment) as double-circuit 345kV transmission using conductor that is large enough to meet, under wet conditions and measured 25 feet from the edge of the ROW, a 50 dB(A) noise level in residential areas that abut the Project ROW and to keep EMF levels as low as possible.

785. Applicants oppose Staff's recommendation that the Project (or at least the San Luis Valley-Calumet Segment) be constructed using larger conductors to reduce noise from the line while keeping EMF as low as possible. Applicants assert that there is no evidence that the Project as proposed by Applicants exceeds the applicable noise and EMF exposure levels such that the Staff-proposed change would be needed.[419] Applicants state that they must balance

[419] Applicants state that the evidence is clear and unrebutted that the Project as proposed results in noise and EMF levels that are below levels approved by the Commission in other transmission proceedings.

the benefits and costs of noise and EMF mitigation measures and that, because the Project as proposed meets the standards for noise and EMF, incurring additional costs to use larger conductors is not warranted by the evidence presented in this case.

786. Trinchera Ranch agrees with Applicants that a reasonableness determination with respect to noise should be guided by § 25-12-103(1), C.R.S., which establishes 55 dB(A) during the day and 50 dB(A) at night, measured at 25 feet beyond the property line, as the maximum permissible noise levels in a residential area. Trinchera Ranch also agrees with Applicants that the record establishes that these noise levels can be achieved, even under the most severe conditions (*i.e.*, moisture on the line at high elevation).

787. Trinchera Ranch urges the Commission to find to be reasonable a 50 dB(A) noise level, measured at the edge of the ROW, for each Segment of the Project. This recommendation is based on: (a) the length of the Project's transmission line, (b) the number of residences potentially impacted by the Project, (c) the concern about transmission line-related noise voiced by the Velardes and by speakers at the public comment hearings, and (d) the impact of a reasonableness finding on the legal rights of adjacent landowners.[420]

788. The evidence establishes that the ENVIRO model was developed in a geographic area that is different from Colorado and that has lower elevations than Colorado. Consequently, Trinchera Ranch asserts that the ENVIRO transmission line-related noise results should be verified to determine whether the model's results are valid in Colorado and for this Project. To accomplish this, Trinchera Ranch recommends that the Commission require Applicants to verify

[420] Trinchera Ranch here refers to the fact that a reasonableness finding may preclude or limit a lawsuit based on nuisance. *See* § 25-12-103(12)(b), C.R.S. (quoted above); discussion of *Van Wyk*, *supra*.

the ENVIRO transmission line-related noise results for the Project.[421] Trinchera Ranch also recommends that the Commission delay ruling on the request for a finding of reasonableness regarding the ENVIRO projections of transmission line-related noise until the Applicants have verified that the ENVIRO model accurately predicts transmission line-related noise levels in Colorado.

789. Applicants oppose Trinchera Ranch's recommendations.

790. First, Applicants reiterate that they used the ENVIRO model, which has been accepted by the Commission in past transmission dockets, and that the requested reasonableness findings are consistent with similar findings made in those previous dockets.

791. Second, Applicants address Trinchera Ranch's assertion that the Commission should set noise levels at 50 dB(A), measured at the edge of the ROW, for the entire Project. They argue that Trinchera Ranch has not supported its proposal and has presented no persuasive reason to deviate from past Commission reasonableness findings related to transmission line-related noise. Applicants point out that the noise level findings that they seek are well within the average noise levels that people experience in their daily lives.

792. Third, Applicants argue that Trinchera Ranch's proposed verification condition lacks merit because the ENVIRO model is recognized by the Commission; the ENVIRO model is commonly used in the industry; and there is no evidence that the transmission line-related noise projections should not be accepted as accurate.

793. Fourth and finally, as to the recommendation that the Commission delay ruling on

[421] To confirm the ENVIRO results, Applicants would verify the results by comparing the predicted levels of transmission line-related noise for each Segment with the actual levels of transmission line-related noise for each Segment, measured when the Project is in service.

the request for a finding of reasonableness regarding the projected transmission line-related noise levels until such time as the Applicants verify the noise modeling projections, Applicants argue that this delay would expose them to the very risks of lawsuits that they are attempting to avoid by seeking the reasonableness findings requested as part of the Applications.

794. Mr. Velarde expresses concern about levels of transmission line-related noise and their possible impact on his and his family members' quality of life.[422] He identifies these concerns: (a) because Applicants repeatedly have represented that the route over La Veta Pass is not yet known, the transmission line may pass close to property owned by him or his family members; (b) Applicants have not addressed the fact that the elevation of the family's properties and the amount of moisture received by those properties may increase the transmission line-related noise; and (c) the ENVIRO noise modeling was done assuming an elevation of 9,413 feet and some of the property owned by the Velarde family is situated at an elevation higher than 9,413 feet. Mr. Velarde urges the Commission to require Applicants to comply with the noise levels stated in § 25-12-103(1), C.R.S.

795. Applicants respond to Mr. Velarde. They assert: (a) despite his stated concern, Mr. Velarde has not reviewed the transmission line-related noise studies for the Project; (b) Mr. Velarde testified that only one of his family's properties has a residence on it and that the residence is located more than one-half mile from the now-proposed transmission line route (*i.e.*, the Northern Route); and (c) the record establishes that Applicants' noise mitigation actions and techniques address Mr. Velarde's concerns about transmission line-related noise.

796. Concerning *cost-effective noise mitigation actions and techniques*, Applicants state that the record evidence establishes that they will employ cost-effective noise mitigation

actions and techniques as set out in Rule 4 CCR 723-3-3102(c). They state that this evidence is undisputed and unrebutted.

4. Discussion and Conclusions.

797. Section 25-12-103(12)(a), C.R.S., gives the Commission broad discretion with respect to determination of the reasonableness of the projected levels of transmission line-related noise. The Commission may choose to make, or not to make, a reasonableness determination. In this proceeding, the issue was fully litigated; and the statutory notice requirements were satisfied. Accordingly, the ALJ finds it appropriate to make a finding concerning the reasonableness of the Project's ENVIRO-projected transmission line-related noise levels.

798. Section 25-12-103(12)(a), C.R.S., requires the Commission to take into consideration the concerns raised by the parties in a proceeding in which the reasonableness of transmission noise is an issue. Based on the record in this proceeding, the ALJ finds that this requirement has been met.

799. Section 25-12-103(12)(a), C.R.S., requires the Commission to consider the alternatives available to meet the need for the transmission line at issue. Based on the record in this proceeding and for the reasons discussed in detail above, the ALJ finds that there is no alternative to the Project's transmission lines. Thus, this requirement has been met.

800. In this case, there is no disagreement that the § 25-12-103(1), C.R.S., noise values should be used as a guide for determining the reasonableness of the projected noise levels. The ALJ finds this approach to be reasonable and will adopt it in this proceeding. This approach is consistent with that used by the Commission in previous transmission proceedings.

[422] Hearing Exhibit No. 101 are maps that show the location of the Velarde family properties relative to the Applicants' preferred route for the San Luis Valley-Calumet Segment.

801. In determining the reasonableness of projected transmission line-related noise levels, the Commission has taken into consideration the land uses adjacent to the preferred ROW corridors in order to examine the potential for noise intrusion on residential customers. The ALJ finds this to be an appropriate factor and one that she will consider in making the reasonableness determination in this proceeding. The ALJ finds that there are few, if any, residences located adjacent to, or near to, the Applicants' preferred proposed ROW corridors for the Project.[423] The ALJ finds that, based on the current proposed ROW corridors for each Segment, there is minimal to no potential for noise intrusion on residential customers from the Project. This is only one factor in the reasonableness determination.

802. No party disputes the appropriateness of using the ENVIRO model to determine projected noise levels for the Project. Based on the evidence in this proceeding, the ALJ finds that the use of the ENVIRO model is appropriate. This approach is consistent with that used by the Commission in previous transmission proceedings.

803. Applicants ask the Commission to find reasonable the highest level of noise projected to occur when the Project is in service. It is appropriate, therefore, to determine the reasonableness of the projected noise levels assuming the conditions under which transmission line-related noise is most likely to be the loudest. The ALJ finds that the appropriate ENVIRO findings to examine are the projected levels of transmission line-related sound, measured as Rain L_{50} dB(A), that originate from each Segment when it is in service and operated as proposed in the Applications. No party expressed serious opposition to this approach. This approach is consistent with that used by the Commission in previous transmission proceedings.

[423] The land uses in the areas that abut the proposed transmission corridors are described above.

804. Using ENVIRO results as the starting point, the Commission has used several methods to determine the reasonableness of predicted noise levels. In Decision No. C04-0051 (PSCo's Midway-Daniels Park Transmission Rebuild Project, Docket No. 03A-276E), the Commission found to be reasonable the ENVIRO-predicted noise levels plus a 15 percent margin of error. In Decision No. C06-0786 (PSCo's Comanche-Daniels Park 345kV Transmission Project, Docket No. 05A-072E) at ¶ 273, the Commission made a conditional finding that "a 55 dB(A) noise level, stated as L_{50} dB(A), and measured at the edge of the ROW[,]" was reasonable for a segment of the transmission project at issue notwithstanding that this value was lower than one of the noise levels predicted to occur in the segment. In Decision No. C09-0048 (PSCo's Pawnee-Smoky Hill 345kV Transmission Project, Docket No. 07A-421E), the Commission found to be reasonable the ENVIRO-predicted noise levels, measured at 25 feet from the edge of the ROW.

805. Section 25-12-103(1), C.R.S., measures noise levels at a minimum distance of 25 feet from the property line of the property from which the noise is emitted (in this case, the edge of the transmission ROW). There are not existing residences located within 25 feet of the preferred ROW corridors for the Project. The ALJ finds that the noise levels can be measured 25 feet from the edge of the ROW without increasing the potential for noise intrusion into existing residences. Thus, the noise levels will be measured 25 feet from the edge of the ROW.

806. Based on the evidence in this proceeding, the ALJ finds to be reasonable, for each Segment, a transmission line-related Rain L_{50} noise level of 50 dB(A), measured at 25 feet from the edge of the ROW.[424] The ALJ also finds that this reasonableness finding should be subject to

[424] The ENVIRO modeling shows that, when in service and operated as proposed in the Applications, each Segment of the Project can meet this noise level. In addition, this finding meets the condition requested by Mr. Velarde.

the following provisos: (a) for each Segment, the stated noise level is found to be reasonable *provided and only if* that Segment is constructed and operated using the cost-effective noise mitigation actions and techniques that Applicants propose to use in that Segment and that are discussed in this Decision; and (b) for each Segment, the stated noise level is found to be reasonable *provided and only if* that Segment is constructed within the corridors preferred by Applicants during the February 2010 evidentiary hearing.[425]

807. The ALJ will not adopt the conditions advocated by Trinchera Ranch because Trinchera Ranch has failed to meet its burden of proof with respect to the conditions it seeks.

808. Verification of the ENVIRO-projected noise levels is unnecessary because, in 2006, the Commission ordered Public Service

> to test the [Comanche-Daniels Park 345kV Transmission Project] when it is operated at 345kV to verify the ability of the ENVIRO model to predict actual noise levels emitted from [that project] in residential areas [and ordered] Public Service [to] make public the results of the verification testing. ... [The Commission ordered this testing, in part, because] PSCo intends to build and to operate other transmission lines at 345kV. Having PSCo-specific data about the ability (or inability) of the ENVIRO model to predict actual noise levels on PSCo's system will assist the Commission, PSCo, and other parties in future transmission project noise-related proceedings.

Decision No. C06-0786 (Hearing Exhibit No. 90) at ¶ 277. The Commission established the conditions under which PSCo would perform the verification testing. Ordering additional verification testing would be redundant and a waste of ratepayer monies.

809. The ALJ finds that withholding the noise reasonableness finding pending verification of the noise results is unnecessary because (a) there will be no verification of the

[425] The Commission does not make a siting decision when it grants a CPCN for a transmission line. Thus, this limitation on the reasonableness finding is necessary in order to recognize the possibility that, as a result of the Applicants' changing their minds, of the RUS EIS process, of a county's siting decision, or of some other reason, the corridor within which a given Segment will be sited may be different from the corridors discussed by Applicants witnesses during the February 2010 hearing.

ENVIRO noise results ordered in this proceeding; and (b) the record establishes the reasonable noise levels (as found above). Thus, there is no reason to withhold from Applicants the reasonableness finding they seek.

810. The last issue with respect to noise is whether Applicants have "describe[d their] actions and techniques relating to cost-effective noise mitigation with respect to the planning, siting, construction, and operation of" the Project. Rule 4 CCR 723-3-3102(c) (2009). The undisputed facts establish, and the ALJ finds, that Applicants have described these actions and techniques for each Segment. In addition, the ALJ finds that, by providing the ENVIRO result, Applicants met that Rule's requirement to provide computer studies with respect to transmission line-related noise levels.

IX. TRANSFER OF OWNERSHIP INTERESTS

811. Applicants ask the Commission, in this proceeding, to "authorize the transfer of ownership interests in components of the Project as necessary to achieve the ownership shares of the different components of the Project contemplated by the" Applicants. Hearing Exhibit No. 2 at 6.

812. The facts set out in this discussion are not in dispute.

A. Findings.

813. On October 29, 2008, Applicants entered into a Memorandum of Understanding (2008 MOU). Hearing Exhibit No. 1 at Exhibit A. This document was signed after Tri-State had submitted its preliminary planning documents to the RUS with respect to the San Luis Valley Electric System Improvement Project.[426]

[426] This was Tri-State's proposed single-circuit 230kV transmission line between the San Luis Valley Substation and the Walsenburg Substation.

814. At the time the 2008 MOU was signed, Public Service and Tri-State were

> conducting technical transmission studies to determine the feasibility of joint participation in the construction of new transmission facilities in southern Colorado as alternatives to the [Tri-State San Luis Valley Electric System Improvement Project] and [a proposed Tri-State 500kV transmission line from the Boone Substation to the proposed Energy Center Substation (Boone-Energy Center Project)]. These studies include additional transmission from the vicinity of the San Luis Valley Substation to the vicinity of the Walsenburg Substation, additional transmission from the Comanche Switchyard to the Lamar Energy Center Substation, and additional transmission from the vicinity of the Lamar Energy Center to the Denver Load Center (the "SLV-Boone Double Circuit 230kV Project," the "Comanche-Energy Center 500kV Project," and the "Lamar Energy Center to the Denver Load Center," respectively, and collectively the "Projects").

Hearing Exhibit No. 1 at Exhibit A at 1.

815. The 2008 MOU

> represents a mutual commitment and sets forth a process for jointly participating in technical studies to determine the feasibility of transmission projects in Southern Colorado, which may lead to the ultimate configuration of the Projects and subsequent negotiations of a joint project participating agreement between the [Applicants]. *As studies are completed and the [Applicants] agree on details, the [Applicants] may, in their individual sole discretion, enter into one or more definitive joint project participation agreements, but until then, no binding agreement will exist between them relating to the construction of any of the projects addressed [in the 2008 MOU]. The [Applicants] are free to elect not to consummate an agreement.* Nothing in this MOU shall prevent [either Public Service or Tri-State] from negotiating with or entering into arrangements relating to the projects with any other person or entity without prior notice to the other [Applicant].

Hearing Exhibit No. 1 at Exhibit A at 2 (emphasis supplied); *see also id*. at Exhibit A at 3 (provisions reiterating, and providing specifics with respect to, the effect of entering into the 2008 MOU). The 2008 MOU also contains a provision addressing costs incurred prior to the date on which the Applicants enter into a joint project participation agreement for any of the projects identified in that MOU. Hearing Exhibit No. 1 at Exhibit A at 3.

816. Public Service and Tri-State subsequently agreed to the April 16, 2009 Draft Term Sheet (Draft Term Sheet). Hearing Exhibit No. 1 at Exhibit B. Broadly speaking, that document (a) sets out the interests of Public Service and Tri-State with respect to the Project's ownership, operations, maintenance and replacement responsibilities, capacity rights, and contract path; and (b) sets out each entity's responsibility for the Project's design and engineering, construction, siting and environmental permitting, land rights and ROWs, and permitting. The Draft Term Sheet is the basis for the Applicants' preliminary assignment of responsibility and costs for the Project's construction, operation, and maintenance.

817. The Draft Term Sheet is preliminary and is subject to change.

818. Neither the 2008 MOU nor the Draft Term Sheet is a joint project participation agreement for the Project. There is no joint project participation agreement for the Project. Applicants intend to negotiate that agreement at an unspecified time in the future.

819. Applicants envision that they will jointly own and operate the Project as a whole in a way that is similar to the agreements they reached concerning operating facilities they acquired as a result of the Colorado-Ute bankruptcy in the early 1990s. The specifics of the referenced agreements governing the acquired Colorado-Ute facilities are not in the record.

820. Given the absence of a final agreement between Public Service and Tri-State, the specifics of the final joint ownership of the Project are not known.

821. A change in the ownership interests in the Project, if it were to occur, would be outside the normal course of business.

822. Applicants witness Stellern testified that, given the absence of a final joint project participation agreement, "the mechanisms for achieving the joint ownership of facilities have not yet been established. It is possible that it may be necessary for Public Service (and Tri-State) to

transfer an ownership interest in facilities that are part of the project to achieve the contemplated ownership arrangements." Hearing Exhibit No. 8 at 13:20-14:2. To avoid filing an application for approval of such a transfer of ownership interest, Applicants seek, in this proceeding, Commission authorization for a future transfer of ownership interest.

823. The record is unclear, and from the record the ALJ cannot determine, whether the referenced possible but necessary transfer of ownership interest is limited to a transfer of ownership interest between the two Applicants or whether it may include a transfer of an ownership interest to a third party.

B. Relevant Statutory Provisions and Commission Rules.

824. Section 40-5-105(1), C.R.S., addresses the sale, assignment, and lease of public utility assets. Subject to exceptions that do not apply in this case, that statute provides that the

> assets of any public utility, including any certificate of public convenience and necessity or rights obtained under any such certificate held, owned, or obtained by any public utility, may be sold, assigned, or leased as any other property, but only upon authorization by the commission and upon such terms and conditions as the commission may prescribe[.]

825. Rule 4 CCR 723-3-3104(a) requires that a public utility file an application to transfer assets subject to the Commission's jurisdiction if the transfer is outside the normal course of business. Rule 4 CCR 723-3-3104(b) sets out the information to be contained in such an application. That Rule requires the applicant utility or utilities to provide data to allow the Commission to assess the impact of the proposed transaction on customers and ratepayers.[427]

[427] Rule 4 CCR 723-3-3104(b)(I) requires the filing of a "statement showing accounting entries ... including any plant acquisition adjustment, gain, or loss proposed on the books of each party before and after the transaction[.]" Rule 4 CCR 723-3-3104(b)(III) requires the filing of the agreement "pertinent to the transaction[.]" Rule 4 CCR 723-3-3104(b)(V) requires an "evaluation of the benefits and detriments to the customers of each party and to all other persons who will be affected by the transaction[.]" Rule 4 CCR 723-3-3104(b)(VI) requires the filing of a "comparison between the kinds and costs of service rendered before and after the transaction[.]"

The transferor utility and the transferee entity may file either a joint application or separate applications.

C. Positions of the Parties.

826. Applicants ask the Commission to grant, in this proceeding, approval of a possible future ownership transfer. Applicants state the following bases for their request: (a) it is premature to expend the considerable effort and associated expense to negotiate those agreements prior to obtaining the necessary CPCN for the Project; and (b) it is not in the public interest to require a later filing for approval of ownership interest in components of the Project because this would require the expenditure of additional time and resources for parties and the Commission for no beneficial reason.

827. Staff recommends that the Commission grant the requested approval. In Staff's opinion, Applicants will make the final determination of ownership interest (and of cost allocation or assignment as between the Applicants) in the final Project in one of two ways: (a) each participant will determine its capacity needs in the Project and that determination will become the participant's ownership interest, or (b) each participant will determine how much it is willing to spend on the Project and that determination will become the participant's ownership interest. Staff is comfortable with the Commission's authorizing, in this proceeding, a future ownership transfer provided Applicants make an after-the-fact informational filing to explain the final ownership shares in the Project and the basis or bases on which they determined those final ownership shares.[428]

[428] Staff does not recommend making this informational filing a condition of granting the requested approval.

828. Intervenors Bar Nothing and Trinchera Ranch address -- and each opposes -- the request for authorization.

829. Bar Nothing opposes the requested approval because there would be no formal Commission review of any future change in the Project's ownership because the issue would be decided between the Applicants alone. Bar Nothing points out that there is a significant difference between the Commission's oversight of Public Service, which is a fully rate-regulated utility, and its oversight of Tri-State, which is not rate-regulated by the Commission. As a result, Bar Nothing argues that there is, and should be, a recognized, important, and continuing role for the Commission in the event there is a future change in Public Service's ownership interest in the Project. That role is: a Commission determination of whether the proposed change in ownership interest is in the public interest (including the interests of Public Service's ratepayers). Bar Nothing asserts that, if the requested authorization is granted, the two utilities could effectuate a major ownership change, which would affect Public Service and its ratepayers, without any oversight. In Bar Nothing's opinion, Applicants and Staff do not provide a clear basis or sufficient support for granting the requested authorization.

830. Trinchera Ranch opposes the requested approval for these reasons: (a) there is no persuasive evidence supporting either the transfer authority request or the Commission's authority to approve it, particularly as it is a completely undefined transfer of assets; (b) Applicants have abandoned their request as neither addressed it in a Statement of Position or in a Response SOP; and (c) the Applications do not conform to the requirements of law, citing § 40-5-105, C.R.S., and Rule 4 CCR 723-3-3104. Trinchera Ranch states that the Project is unquestionably a utility asset and that, given the nature and size of the Project, transfer of an ownership interest in that asset would be outside the normal course of business. Trinchera Ranch

points out that Applicants have provided no evidence that meets the Rule 4 CCR 723-3-3104 requirements; that, at this time, Applicants cannot comply with the cited Rule because Applicants have not signed a final agreement that addresses ownership shares in the Project; and that, in the absence of a final ownership agreement, Applicants cannot provide the necessary accounting entries and cannot have conducted the mandated evaluation of benefits and detriments.

D. Discussion and Conclusion.

831. Section 40-5-105(1), C.R.S., requires that the Commission authorize a transfer of an ownership interest in utility assets such as the Project. The Commission promulgated Rule 4 CCR 723-3-3102 to require affected utilities and entities to provide the information that the Commission needs in order to evaluate a request for authorization to transfer utility assets. Notwithstanding the statute and the Rule, Applicants ask the Commission to approve, in this proceeding, possible future changes in the ownership interests in the Project.[429]

832. There is no dispute that Applicant cannot provide, and have not provided, *either* final information about each Applicant's ownership interest in the Project[430] *or* an indication of the differences between their presentations concerning ownership interest in the Project (as set out in the Applications and testimony in this proceeding) and the not-yet-written final Joint Project Participation Agreement for the Project.[431] Without this information, there is no evidence on which to determine whether the proposal to authorize future unknown -- and, at this point, unknowable -- changes in the ownership interests in the Project is reasonable and is in the public

[429] The ALJ agrees with Trinchera Ranch that Applicants appear to have withdrawn this request as they did not address it in their Statements of Position or in their Response SOPs. If the request has been withdrawn, then the ALJ need not address its substance in this Decision. Nonetheless, the ALJ addresses the substance of the request due to uncertainty about whether the request has been withdrawn.

[430] As discussed above, there is no final Joint Project Participation Agreement.

[431] These differences could include, for example, changes in ownership percentage for each component or even changes in the Project participants.

interest. Thus, Applicants have failed to meet their burden of proof with respect to this request. The ALJ will deny the request.

833. There is another, over-arching basis on which the ALJ will deny the request. The essence of the request is that Applicants want Commission authorization that allows them to transfer, as they deem appropriate to effectuate their future determination of their interests, the Project's ownership interests. In other words, Applicants request that the Commission delegate to them (*i.e.*, private parties) the Commission's statutory authority to review and, if in the public interest, to authorize, and to place conditions on, a transfer of the Project's ownership interest. This requested delegation is unlawful; the Commission cannot sanction it. *Colorado Energy Advocacy Office v. Public Service Company of Colorado*, 704 P.2d 298, 306 (Colo. 1985) (*Colorado Energy Advocacy*) (PUC cannot "delegate to PSCo ... the legislative authority of the PUC. Legislative authority may not be delegated to private parties to serve private interests.");[432] *Baca Grande Corporation v. Public Utilities Commission*, 190 Colo. 201, 203, 544 P.2d 977, 978 (1976) ("Regulation -- not non-regulation -- has been declared to be in the public interest." (Internal citation omitted.)). Thus, had Applicants met their burden of proof (which they did not), the ALJ would have denied the requested authorization as an unlawful delegation of the Commission's regulatory authority.

834. The ALJ will deny the request for authorization of future transfers of ownership interest.

[432] The Colorado Supreme Court permitted the tariff provision under review in that case to stand because, through the approved tariff, the Commission had "limit[ed] PSCo's discretion to an administrative calculation of its costs and adjustments each month." *Colorado Energy Advocacy*, 704 P.2d at 306. In sharp contrast, there is no limitation in Applicants' request in this docket. They seek Commission authority to transfer, in the future and as they alone deem appropriate and necessary, ownership interest in the Project.

835. The record is clear that the ownership information available to-date is preliminary and subject to change. The record concerning the *final* ownership interests in the Project is virtually nonexistent. The ALJ finds that it is important for the Commission and interested persons to know the final ownership interests in the Project.[433] The most efficient means by which the Commission can obtain that information is to require that Applicants file in this proceeding, as a compliance filing, the final Joint Project Participation Agreement for the Project. The ALJ will make this filing a condition on the grant of the CPCN in this proceeding.

836. The record contains a significant amount of information about the Applicants' *preliminary* determination of ownership interests in the Project and the *preliminary* assignment of responsibilities and of costs as set out in the Draft Term Sheet.[434] This information is unrefuted. The ALJ finds that the record supports the ownership interests and the assignment of responsibilities and of costs as contained in the Draft Term Sheet; the ALJ finds them to be reasonable. The ALJ finds that the final Joint Project Participation Agreement will be reasonable and in the public interest *provided that and only if* the final Joint Project Participation Agreement for the Project contains (a) the same allocation or assignment of ownership interests in the Project as contained in the Draft Term Sheet and discussed in this Decision and (b) the same assignment of responsibilities and of costs as contained in the Draft Term Sheet and discussed in this Decision. No further proceedings concerning the final Joint Project Participation Agreement will be necessary if that document satisfies these requirements.

837. If the final Joint Project Participation Agreement contains changes from the Draft Term Sheet and the discussion in this Decision, then there is an insufficient evidentiary record on

[433] The ownership interests will affect, for example, the money that Public Service is eligible to collect through the Transmission Cost Adjustment Clause created by § 40-5-101(4), C.R.S.

[434] The section that describes the Project is the section that principally contains this discussion.

which to determine whether the final Joint Project Participation Agreement is reasonable and in the public interest. In that event, at least for the purposes of § 40-5-101(4), C.R.S., the Commission must review and approve the final Joint Project Participation Agreement.

838. The Applicants argue that it is onerous and unnecessary to require them to file an application pursuant to Rule 4 CCR 723-3-3102 simply to obtain Commission review and approval for a change in ownership interests or other responsibilities from those stated in the Draft Term Sheet to those contained in the final Joint Project Participation Agreement. The ALJ appreciates, and is sensitive to, this concern because additional Commission review by means of an application may delay the Project's in-service date. Nonetheless, for the reasons discussed above, there must be Commission oversight and review of such a change given that the ownership interests and the assignment of responsibilities and of costs as contained in the Draft Term Sheet have been found to be reasonable. While the need for review is rigid, the procedure by which that review occurs is flexible.

839. The ALJ finds that Applicants may obtain Commission review of a Joint Project Participation Agreement that is not the same as the Draft Term Sheet *either* by filing an application pursuant to Rule 4 CCR 723-3-3102 *or* by using the alternative procedure described in this paragraph. The alternative procedure is, in the above-captioned dockets, Applicants: (a) file a motion to alter or to amend the decision that finds reasonable the ownership interests and the assignment of responsibilities and of costs as contained in the Draft Term Sheet; (b) support the motion with the final Joint Project Participation Agreement, with an explanation of the changes and the reasons for the changes, and with the relevant and applicable information specified in Rule 4 CCR 723-3-3102; and (c) serve the motion on all Parties, who will have an opportunity to respond to the motion.

840. Under either procedural approach, the Commission will be able to review the final Joint Project Participation Agreement to determine -- with or without an evidentiary hearing, as the Commission may find appropriate -- whether the provisions of the final Joint Project Participation Agreement (for example, the ownership shares, the assignment of responsibilities, the assignment of costs) are just, are reasonable, and are in the public interest.

X. CONCLUSIONS

841. The Commission has jurisdiction over the subject matter of this proceeding and over the Parties to this proceeding.

842. Tri-State is financially fit and is qualified to construct, to operate, and to maintain the Project.

843. Public Service is financially fit and is qualified to construct, to operate, and to maintain the Project.

844. Subject to the conditions below, Public Service has met its burden of proof with respect to its request that the Commission grant a CPCN for the jointly-owned Project.

845. Subject to the conditions below, the Application filed by Public Service for a CPCN for the Project jointly-owned with Tri-State should be granted.

846. Subject to the conditions below, Tri-State has met its burden of proof with respect to its request that the Commission grant a CPCN for the jointly-owned Project.

847. Subject to the conditions below, the Application filed by Tri-State for a CPCN for the Project jointly-owned with Public Service should be granted.

848. The following conditions should be paced on the grant of the CPCN for Tri-State:

a. Applicants will file with the Commission, as a compliance filing, their final Joint Project Participation Agreement for the Project. Applicants will file the final Joint Project Participation Agreement for the Project within 30 days of the date on which the final Joint Project Participation Agreement for the Project is signed, but in no event later than June 30, 2011.

b. Within 30 days of the date on which the RUS issues its Record of Decision on Tri-State's loan application, Applicants will make a filing with the Commission that (i) provides a copy of the Record of Decision; (ii) informs the Commission whether the RUS-preferred Project corridors are consistent or inconsistent with the CPCN; and (iii) if there is an inconsistency, informs the Commission of the action(s) that Applicants propose to take in light of the inconsistency and why. Upon review of the filing, the Commission will determine what, if any, action to take. Applicants will file the RUS Record of Decision within 30 days of the date on which the RUS Record of Decision is issued, but in no event later than January 1, 2012.

c. Prior to commencement of construction of the Project, Applicants will conduct the technical studies (for example, and without limitation, powerflow studies) necessary to determine whether the Project will have an impact on the CSU system. If the studies reveal that the Project will have an adverse impact on the CSU system, Applicants must take the appropriate measures to mitigate the identified adverse impact or impacts.

d. Applicants will make the compliance reports found in the Compliance Appendix to this Decision.

849. The following conditions should be placed on the grant of the CPCN for Public Service:

a. Applicants will file with the Commission, as a compliance filing, their final Joint Project Participation Agreement for the Project. Applicants will file the final Joint Project Participation Agreement for the Project within 30 days of the date on which the final Joint Project Participation Agreement for the Project is signed, but in no event later than June 30, 2011.

b. Within 30 days of the date on which the RUS issues its Record of Decision on Tri-State's loan application, Applicants will make a filing with the Commission that (i) provides a copy of the Record of Decision; (ii) informs the Commission whether the RUS-preferred Project corridors are consistent or inconsistent with the CPCN; and (iii) if there is an inconsistency, informs the Commission of the action(s) that Applicants propose to take in light of the inconsistency and why. Upon review of the filing, the Commission will determine what, if any, action to take. Applicants will file the RUS Record of Decision within 30 days of the date on which the RUS Record of Decision is issued, but in no event later than January 1, 2012.

c. Within 10 years of the date on which the Project is placed in service, at least 700 MW of generation must interconnect with Project. The generation is not required to be renewable resource generation; the generation may be located anywhere in ERZ 4 or ERZ 5; and the generation may be owned or acquired by any entity.

If at least 700 MW of generation are not interconnected with Project at end of ten years from the date on which the Project is placed in service, then Public Service will file an application containing a plan to refund to ratepayers 50 percent of the monies that Public Service collected from its ratepayers (through the Transmission Rate Adjustment Clause, through base electric rates, or through any other mechanism or method) for (a) Public Service's investment in the Project, including any authorized return, and (b) Public Service's costs associated with the

Project, including any authorized return. The Public Service plan will include interest paid at the interest rate that Public Service pays on customer deposits.

In consultation with Staff and OCC, Public Service will establish a mechanism to track and to account for the Project-related monies collected from ratepayers. Within 90 days of the date of the final Commission decision in this transmission proceeding, Public Service will make a compliance filing that explains the method and shows the accounts that it will use to track Project-related monies collected from ratepayers.

d. Prior to commencement of construction of the Project, Applicants will conduct the technical studies (for example, and without limitation, powerflow studies) necessary to determine whether the Project will have an impact on the CSU system. If the studies reveal that the Project will have an adverse impact on the CSU system, Applicants must take the appropriate measures to mitigate the identified adverse impact or impacts.

e. Applicants will make the compliance reports found in the Compliance Appendix to this Decision.

850. Public Service has met its burden of proof with respect to the request that the Commission make a reasonableness finding with respect to EMF levels that are projected to occur when the Project is in service.

851. Tri-State has met its burden of proof with respect to the request that the Commission make a reasonableness finding with respect to EMF levels that are projected to occur when the Project is in service.

852. The following ENVIRO-projected EMF levels for the Project are reasonable: (a) for the proposed San Luis Valley-Calumet Segment: 31mG (measured at both edges of the ROW); (b) for the proposed Calumet-Comanche Segment: 100mG (measured at both edges of

the ROW); and (c) for the proposed Calumet-Walsenburg Segment: 60mG (measured on the eastern edge of the ROW) and 36mG (measured on the western edge of the ROW). These reasonableness findings will be subject to the following provisos: (a) for each Segment, the stated EMF level is found to be reasonable *provided and only if* that Segment is constructed and operated using the prudent avoidance techniques that are discussed in this Decision; and (b) for each Segment, the stated EMF level is found to be reasonable *provided and only if* that Segment is constructed within the corridors preferred by Applicants during the February 2010 evidentiary hearing.

853. Public Service has met its burden of proof with respect to the request that the Commission make a reasonableness finding with respect to the transmission line-related noise levels that are projected to occur when the Project is in service.

854. Tri-State has met its burden of proof with respect to the request that the Commission make a reasonableness finding with respect to the transmission line-related noise levels that are projected to occur when the Project is in service.

855. For each Segment, a transmission line-related Rain L_{50} noise level of 50 dB(A), measured at 25 feet from the edge of the ROW, is reasonable. This reasonableness finding will be subject to the following provisos: (a) for each Segment, the stated noise level is found to be reasonable *provided and only if* that Segment is constructed and operated using the cost-effective noise mitigation actions and techniques that are discussed in this Decision; and (b) for each Segment, the stated noise level is found to be reasonable *provided and only if* that Segment is constructed within the corridors preferred by Applicants during the February 2010 evidentiary hearing.

856. Public Service has not met its burden of proof with respect to its request that the Commission approve, in this proceeding, ownership interest transfer as needed when the Project is completed.

857. Tri-State has not met its burden of proof with respect to its request that the Commission approve, in this proceeding, ownership interest transfer as needed when the Project is completed.

858. The final Joint Project Participation Agreement should be found to be just, reasonable, and in the public interest *provided* that agreement contains the same ownership interests in the Project and the same assignment of responsibilities and of costs as those contained in the Draft Term Sheet and discussed in this Decision.

859. If the final Joint Project Participation Agreement does not contain the same ownership interests in the Project and the same assignment of responsibilities and of costs as those contained in the Draft Term Sheet and discussed in this Decision, Public Service and Tri-State, using one of the procedural options discussed above, will obtain Commission authorization and approval of the final Joint Project Participation Agreement.

XI. ORDER

A. The Commission Orders That:

1. The Tri-State Generation and Transmission Association, Inc., Application for a Certificate of Public Convenience and Necessity for its San Luis Valley-Calumet-Comanche transmission project; for findings with respect to the reasonableness of a 150 mG) level of electromagnetic field when the Project is in service and the reasonableness of the noise levels that Tri-State projects will occur when the Project is in service; and for approval of ownership

interest transfer as needed when the Project is completed is granted, in part, consistent with the discussion above.

2. The Public Service Company of Colorado Application for a Certificate of Public Convenience and Necessity for its San Luis Valley-Calumet-Comanche transmission project; for findings with respect to the reasonableness of a 150 milliGauss (mG) level of electromagnetic field when the Project is in service and the reasonableness of the noise levels that Tri-State projects will occur when the Project is in service; and for approval of ownership interest transfer as needed when the Project is completed is granted, in part, consistent with the discussion above.

3. Subject to the conditions below, Tri-State Generation and Transmission Association, Inc. (Tri-State), is granted a Certificate of Public Convenience and Necessity (CPCN) to construct and to operate the San Luis Valley-Calumet-Comanche transmission line, the Calumet Substation, and the Calumet-Walsenburg transmission line (collectively, these facilities are the Project).

4. Subject to the conditions below, Public Service Company of Colorado (Public Service), is granted a Certificate of Public Convenience to construct and to operate the San Luis Valley-Calumet-Comanche transmission line, the Calumet Substation, and the Calumet-Walsenburg transmission line.

5. The CPCN granted to Tri-State is subject to the following conditions:

a. Tri-State and Public Service (collectively, Applicants) shall file with the Commission, as a compliance filing, their final Joint Project Participation Agreement for the Project. Applicants shall file the final Joint Project Participation Agreement for the Project within 30 days of the date on which the final Joint Project Participation Agreement for the Project is signed, but in no event later than June 30, 2011.

b. Within 30 days of the date on which the Rural Utilities Service (RUS) issues its Record of Decision on Tri-State's loan application, Applicants shall make a compliance filing with the Commission that (i) provides a copy of the Record of Decision; (ii) informs the Commission whether the RUS-preferred Project corridors are consistent or inconsistent with the CPCN; and (iii) if there is an inconsistency, informs the Commission of the action(s) that Applicants propose to take in light of the inconsistency and why. Applicants shall file the RUS Record of Decision within 30 days of the date on which the RUS Record of Decision is issued, but in no event later than January 1, 2012.

c. Prior to commencement of construction of the Project, Applicants shall conduct the technical studies (for example, and without limitation, powerflow studies) necessary to determine whether the Project will have an impact on the CSU system. If the studies reveal that the Project will have an adverse impact on the CSU system, Applicants shall take the appropriate measures to mitigate the identified adverse impact or impacts.

d. Applicants shall make the compliance filings found in the Compliance Appendix to this Decision.

6. The Certificate of Public Convenience granted to Public Service is subject to the following conditions:

a. Applicants shall file with the Commission, as a compliance filing, their final Joint Project Participation Agreement for the Project. Applicants shall file the final Joint Project Participation Agreement for the Project within 30 days of the date on which the final Joint Project Participation Agreement for the Project is signed, but in no event later than June 30, 2011.

b. Within 30 days of the date on which the RUS issues its Record of Decision on Tri-State's loan application, Applicants shall make a compliance filing with the Commission that (i) provides a copy of the Record of Decision; (ii) informs the Commission whether the RUS-preferred Project corridors are consistent or inconsistent with the CPCN; and (iii) if there is an inconsistency, informs the Commission of the action(s) that Applicants propose to take in light of the inconsistency and why. Applicants shall file the RUS Record of Decision within 30 days of the date on which the RUS Record of Decision is issued, but in no event later than January 1, 2012.

c. Within 10 years of the date on which the Project is placed in service, at least 700 MW of generation must interconnect with Project. The generation is not required to be renewable resource generation; the generation may be located anywhere in Energy Resource Zone 4 or Energy Resource Zone 5; and the generation may be owned or acquired by any entity.

If at least 700 MW of generation are not interconnected with Project at end of ten years from the date on which the Project is placed in service, then Public Service shall file an application containing a plan to refund to its ratepayers 50 percent of the monies that Public Service collected from its ratepayers (through the Transmission Rate Adjustment Clause, through base electric rates, or through any other mechanism or method) for (a) Public Service's investment in the Project, including any authorized return, and (b) Public Service's costs associated with the Project, including any authorized return. The Public Service plan shall include interest paid at the interest rate that Public Service pays on customer deposits.

In consultation with Staff of the Commission and the Office of Consumer Counsel, Public Service shall establish a mechanism to track, and to account for, the Project-related monies collected from ratepayers. Within 90 days of the date of the final Commission decision in this

transmission proceeding, Public Service shall make a compliance filing that explains the method, and shows the accounts, that it will use to track Project-related monies collected from ratepayers.

d. Prior to commencement of construction of the Project, Applicants shall conduct the technical studies (for example, and without limitation, powerflow studies) necessary to determine whether the Project will have an impact on the CSU system. If the studies reveal that the Project will have an adverse impact on the CSU system, Applicants shall take the appropriate measures to mitigate the identified adverse impact or impacts.

e. Applicants shall make the compliance filings found in the Compliance Appendix to this Decision.

7. By this Decision, the Commission makes a finding on the reasonableness of electro-magnetic field (EMF) levels for the Project.

8. The following EMF levels are found to be reasonable: (a) for the San Luis Valley-Calumet Segment: 31 mG (measured at each edge of the transmission corridor right-of-way); (b) for the Calumet-Comanche Segment: 100 mG (measured at each edge of the transmission corridor right-of-way); and (c) for the Calumet-Walsenburg Segment: 60 mG (measured on the eastern edge of the transmission corridor right-of-way) and 36 mG (measured on the western edge of the transmission corridor right-of-way). These reasonableness findings are subject to the following provisos: (a) for each Segment, the stated EMF level is found to be reasonable *provided and only if* that Segment is constructed and operated using the prudent avoidance techniques that Applicants propose to use in that Segment; and (b) for each Segment, the stated EMF level is found to be reasonable *provided and only if* that Segment is constructed within the corridors preferred by Applicants during the February 2010 hearing and shown in the Hearing Exhibits referenced in the discussion above.

9. By this Decision, the Commission makes a finding on the reasonableness of transmission line-related noise levels for the Project.

10. For the entire transmission Project, a transmission line-related Rain L_{50} noise level of 50 dB(A), measured at 25 feet from the edge of the right-of-way, is reasonable. This reasonableness finding is subject to the following provisos: (a) for each transmission line Segment (as identified above), the stated noise level is found to be reasonable *provided and only if* that Segment is constructed and is operated using the cost-effective noise mitigation actions and techniques that Applicants propose to use in that Segment; and (b) for each transmission line Segment, the stated noise level is found to be reasonable *provided and only if* that Segment is constructed within the corridors preferred by Applicants during the February 2010 hearing and shown in the Hearing Exhibits referenced in the discussion above.

11. A final Joint Project Participation Agreement between Public Service and Tri-State that contains the same ownership interests in the Project and the same assignment of responsibilities and of costs as those contained in the April 16, 2009 Draft Term Sheet and discussed in this Decision is just, is reasonable, and is in the public interest.

12. If the final Joint Project Participation Agreement between Public Service and Tri-State does not contain the same ownership interests in the Project and the same assignment of responsibilities and of costs as those contained in the April 16, 2009 Draft Term Sheet and discussed in this Decision, Public Service and Tri-State must obtain Commission authorization and approval of the final Joint Project Participation Agreement. To obtain that authorization and approval, Public Service and Tri-State shall use one of the procedures discussed in this Decision.

13. The oral motion to stay the proceedings, made on July 30, 2010, is denied.

14. The Motion for Administrative Notice, filed on July 20, 2010, is denied.

15. The Motion to Reopen the Evidentiary Hearing and Permit Limited Discovery and Request for Leave to File a Reply, filed on August 31, 2010, is denied.

16. This Recommended Decision shall be effective on the day it becomes the Decision of the Commission, if that is the case, and is entered as of the date above.

17. As provided by § 40-6-109, C.R.S., copies of this Recommended Decision shall be served upon the parties, who may file exceptions to it.

a) If no exceptions are filed within 20 days after service or within any extended period of time authorized, or unless the decision is stayed by the Commission upon its own motion, the recommended decision shall become the decision of the Commission and subject to the provisions of § 40-6-114, C.R.S.

b) If a party seeks to amend, modify, annul, or reverse basic findings of fact in its exceptions, that party must request and pay for a transcript to be filed, or the parties may stipulate to portions of the transcript according to the procedure stated in § 40-6-113, C.R.S. If no transcript or stipulation is filed, the Commission is bound by the facts set out by the administrative law judge and the parties cannot challenge these facts. This will limit what the Commission can review if exceptions are filed.

18. If exceptions to this Decision are filed, they shall not exceed 30 pages in length, unless the Commission for good cause shown permits this limit to be exceeded.

(S E A L)

THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF COLORADO

MANA L. JENNINGS-FADER

Administrative Law Judge

ATTEST: A TRUE COPY

Doug Dean,
Director

COMPLIANCE APPENDIX

NOTE: All compliance filings are to be made in Docket No. 09A-324E and are to be served on the Parties.

Within 90 days of the date of the final Commission decision in this transmission proceeding: Public Service shall make a compliance filing that explains the method, and shows the accounts, that it will use to track Project-related monies collected from ratepayers.

June 30, 2011: Applicants shall file, as a compliance filing, their final Joint Project Participation Agreement for the Project. Applicants shall make this filing within 30 days of the date on which the final Joint Project Participation Agreement for the Project is signed, but in no event later than June 30, 2011.

January 1, 2012: Within 30 days of the date on which the Rural Utilities Service (RUS) issues its Record of Decision on Tri-State Generation and Transmission Association's loan application, Applicants shall file, as a compliance filing, (a) a copy of the RUS Record of Decision; (b) a report that informs the Commission whether the RUS-preferred Project corridors are consistent or inconsistent with the CPCN; and (c) if there is an inconsistency, a report that informs the Commission of the action(s) that Applicants propose to take in light of the inconsistency and why. Applicants shall make this filing within 30 days of the date on which the RUS Record of Decision is issued, but in no event later than January 1, 2012.

January 1, 2013: Applicants shall file, as a compliance filing, the final route of the San Luis-Valley-Calumet-Comanche transmission line and the final route of the Calumet-Walsenburg transmission line. Applicants shall make this filing on or before January 1, 2013, but in no event later than 15 days following final siting approval for the Project.

January 1, 2016: Applicants shall file, as a compliance filing, information about any significant change in the Project. Applicants shall make this filing on or before January 1, 2016, but in no event later than 15 days following the Project's in-service date.

January 1, 2016: Applicants shall file, as a compliance filing, all final as-built cost data, including (but not limited to) consulting, engineering labor, construction labor, land acquisition, and materials, broken down for the Project's substation and transmission line components. Applicants shall make this filing on or before January 1, 2016, but in no event later than 15 days following the Project's in-service date.