

1 **BEFORE THE PUBLIC UTILITIES COMMISSION**
2 **OF THE STATE OF COLORADO**
3

4 Docket No. 09A-324E

5 IN THE MATTER OF THE APPLICATION OF TRI-STATE GENERATION AND
6 TRANSMISSION ASSOCIATION, INC. (A) FOR A CERTIFICATE OF PUBLIC CONVENIENCE
7 AND NECESSITY FOR THE SAN LUIS VALLEY-CALUMET-COMANCHE TRANSMISSION
8 PROJECT, (B) FOR SPECIFIC FINDINGS WITH RESPECT TO EMF AND NOISE, AND (C) FOR
9 APPROVALS OF OWNERSHIP INTEREST TRANSFER AS NEEDED WHEN PROJECT IS
10 COMPLETED.

11 _____
12 AND
13 _____

14 Docket No. 09A-325E

15 IN THE MATTER OF THE APPLICATION OF PUBLIC SERVICE COMPANY OF COLORADO
16 (A) FOR A CERTIFICATE OF PUBLIC CONVENIENCE AND NECESSITY FOR THE SAN LUIS
17 VALLEY-CALUMET-COMANCHE TRANSMISSION PROJECT, (B) FOR SPECIFIC FINDINGS
18 WITH RESPECT TO EMF AND NOISE, AND (C) FOR APPROVAL OF OWNERSHIP INTEREST
19 TRANSFER AS NEEDED WHEN PROJECT IS COMPLETED.

20 _____
21 **REBUTTAL TESTIMONY AND EXHIBITS OF NICOLE C. KORBE**
22 _____

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1 **I. INTRODUCTION AND QUALIFICATIONS**

2 **Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.**

3 **A.** My name is Nicole C. Korbe. My business address is 1100 West 116th
4 Avenue, Westminster, Colorado, 80234.

5 **Q. BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?**

6 **A.** I am employed by Tri-State Generation and Transmission Association, Inc. ("Tri-State") as
7 a Senior Environmental Planner for transmission projects.

8 **Q. PLEASE DESCRIBE YOUR RESPONSIBILITIES AS SENIOR**
9 **ENVIRONMENTAL PLANNER.**

10 **A.** I am responsible for coordination of environmental compliance for Tri-State's transmission
11 projects under a variety of federal laws and regulations, including the National Environmental
12 Policy Act ("NEPA"), the Clean Water Act ("CWA"), the Endangered Species Act ("ESA"),
13 and the National Historic Preservation Act ("NHPA"). I also provide support on project siting
14 efforts and environmental issues for local government permitting, and coordinate with state
15 agencies as needed. Much of the compliance work is prepared or performed by consultants
16 and I oversee those efforts and ensure that Tri-State complies with environmental laws and
17 regulations.

18 **Q. HAVE YOU PREPARED A STATEMENT OF YOUR EXPERIENCE AND**
19 **QUALIFICATIONS?**

20 **A.** Yes. It is included as **Exhibit No. NCK-1** to this testimony.

21 **Q. ON WHOSE BEHALF ARE YOU TESTIFYING IN THIS DOCKET?**

22 **A.** I am testifying on behalf of Tri-State, however, I understand that my testimony may also be
23 used in support of Public Service Company of Colorado's ("Public Service") companion
24 Certificate of Public Convenience and Necessity ("CPCN") application.

25 **Q. ARE YOU FAMILIAR WITH THE SAN LUIS VALLEY-CALUMET-**
26 **COMANCHE TRANSMISSION PROJECT (THE "PROJECT") THAT**

1 **IS THE SUBJECT OF THIS PROCEEDING?**

2 **A.** Yes, I am.

3 **Q. PLEASE DESCRIBE YOUR INVOLVEMENT IN THE PROJECT.**

4 **A.** As Senior Environmental Planner, for this project I am responsible for coordination of Tri-
5 State's siting process, and environmental compliance with applicable environmental laws and
6 regulations. This includes working with federal, state and local agencies, consultants and Tri-
7 State and PSCo team members to identify a range of reasonable alternatives for consideration
8 in the NEPA process. It also involves coordination of information that Tri-State will provide
9 to the NEPA process and to other processes related to environmental compliance.

10 **II. PURPOSE OF TESTIMONY**

11 **Q. WHAT IS THE PURPOSE OF YOUR REBUTTAL TESTIMONY?**

12 **A.** The Commission's CPCN process and the NEPA compliance process are separate and distinct
13 processes. However, answer testimony submitted on behalf of various intervenors,
14 particularly Mr. Apostol's testimony on behalf of Western Resource Advocates and Mr. Pike's
15 testimony on behalf of Colorado Open Lands, Inc., raised issues regarding environmental
16 impacts that will be addressed as part of the NEPA process. Therefore, I will provide the
17 Commission some background and context regarding the federal NEPA process.

18 In addition, I am adopting a portion of the Direct Testimony of Mark J. Murray, filed in this
19 matter on May 14, 2009, because Mr. Murray is no longer with Tri-State. Specifically, I am
20 adopting the portion of Mr. Murray's Direct Testimony that pertains to the siting and NEPA
21 processes which is located in his Direct Testimony, from page 5, line 15 to page 8, line 10,
22 page 8, line 19 to page 9, line 5, and page 9, line 17 to page 10, line 11.

23 **III. THE FEDERAL NEPA PROCESS**

24 **Q. WHY DOES THE NEPA PROCESS APPLY TO TRI-STATE'S PROJECT?**

25 **A.** NEPA is a federal statute that applies to actions that federal agencies may take. As Mr.
26 Murray noted in his Direct Testimony, Tri-State has applied to the Rural Utilities Service

1 (“RUS”) to borrow money or obtain loan guarantees in connection with this Project. *See*
2 Direct Testimony of Mark J. Murray at p. 5, lines 17-20. RUS is a federal agency within the
3 U.S. Department of Agriculture. RUS has determined that its decision regarding Tri-State’s
4 funding request requires review under NEPA, and that it will prepare an Environmental
5 Impact Statement (“EIS”) to evaluate the potential environmental impacts of its funding
6 decision.

7 **Q. HAS THE NEPA PROCESS STARTED ALREADY?**

8 **A.** Yes. On August 3, 2009, RUS published a Notice of Intent to Hold Public Scoping Meetings
9 and Prepare an Environmental Assessment (**Exhibit No. NCK-2**). RUS held six public
10 scoping meetings in August 2009 to inform the public about the Project and RUS’s NEPA
11 process, and to receive input and comment from the public. Based, in part, on this input,
12 RUS decided to prepare an EIS. RUS intends to hold additional public meetings in early 2010
13 to assist in scoping the alternatives and issues to be addressed in the EIS.

14 **Q. IS THIS THE KIND OF PROJECT THAT NORMALLY REQUIRES AN EIS?**

15 **A.** No. Under RUS’s regulations implementing NEPA, which can be found at 7 Code of Federal
16 Regulations (“CFR”) Part 1794, proposals normally requiring an EIS include projects that
17 may be expected to result in significant environmental impacts, such as new electric
18 generation facilities of more than 50 MW and new mining operations. RUS regulations
19 indicate that the type of project Tri-State proposes normally would require an Environmental
20 Assessment (“EA”) with scoping. An EA is intended to be a shorter process to assist the
21 federal agency in determining whether a project may result in significant environmental
22 impacts. If the EA determines that significant impacts are expected, the RUS must prepare an
23 EIS before coming to a decision on the project proponent’s funding application. If not, the
24 RUS may prepare a Finding of No Significant Impact (“FONSI”) and proceed to make its
25 decision regarding the proponent’s funding application. In this case, RUS decided to prepare
26 an EIS without first completing an EA.

1 **Q. WHY DID RUS DECIDE TO PREPARE AN EIS IN THIS CASE?**

2 **A.** I cannot speak for RUS, however, it is my understanding that RUS decided to prepare an EIS
3 due to the heightened level of public interest in the Project.

4 **Q. WHAT WILL THE EIS COVER?**

5 **A.** With respect to EISs, RUS's regulations refer to the Council on Environmental Quality's
6 ("CEQ") regulations implementing NEPA. *See* 7 CFR §§ 1794.60 and 1794.61. The CEQ is
7 the federal agency tasked by Congress to promulgate the overall federal regulations
8 Implementing NEPA. Those regulations are found at 40 CFR Parts 1500 through 1508.
9 Pursuant to the CEQ regulations, an EIS will identify the project purpose and need,
10 evaluate alternatives including the proposed action and the no action alternative, discuss the
11 affected environment, and analyze environmental consequences, including direct, indirect and
12 cumulative impacts and proposed mitigation measures. The EIS will also provide a
13 summary of public and agency coordination on the project, and will respond to public
14 comments. RUS will issue a draft EIS for public and agency review and comment, will
15 consider the comments it receives, and then issue a final EIS.

16 **Q. HOW WILL THE EIS ADDRESS PROJECT PURPOSE AND NEED?**

17 **A.** The EIS will identify the project purpose and need for RUS's action on Tri-State's funding
18 request. In its August 3, 2009 Notice of Intent, the RUS framed the project purpose and need
19 as follows: "The primary purpose for the proposed action is to improve the electric service and
20 increase reliability for Tri-State and Public Service customers in the San Luis Valley and
21 Front Range areas. The proposed action would also provide a transmission outlet for
22 renewable energy generation in the San Luis Valley. The proposed action will assist Tri-State
23 and Public Service in meeting their respective transmission needs in the region by using one
24 common corridor instead of two separate corridors." *See* Exhibit No. NCK-2.

25 **Q. HOW WILL THE EIS ADDRESS ALTERNATIVES?**

1 **A.** The CEQ regulations implementing NEPA require the alternatives section of an EIS to: (a)
2 rigorously explore and objectively evaluate all reasonable alternatives, and briefly discuss the
3 reasons for elimination of alternatives; (b) devote substantial treatment to each alternative
4 considered in detail including the proposed action so that reviewers may evaluate their
5 comparative merits; (c) include reasonable alternatives not within the jurisdiction of the lead
6 agency; (d) include the no action alternative; (e) identify the agency's preferred alternative(s);
7 and (f) include appropriate mitigation measures not already included in the proposed action or
8 alternatives. *See* 40 CFR § 1502.14.

9 **Q.** **HAVE THE ALTERNATIVES THAT WILL BE EVALUATED IN DETAIL IN THE**
10 **EIS BEEN IDENTIFIED?**

11 **A.** No, the alternatives evaluation process is still in progress. For example, since the preliminary
12 corridors were presented to the public at the NEPA scoping meetings in August, more analysis
13 and data gathering has been completed, resulting in additions, deletions and modifications of
14 routes for consideration. The current routes under consideration are shown in **Exhibit No.**
15 **NCK-3**, but these are subject to change as the routing process continues.

16 **Q.** **HOW WILL THE EIS ADDRESS THE AFFECTED ENVIRONMENT?**

17 **A.** The CEQ regulations require the EIS to succinctly describe the environment of the area(s) to
18 be affected, avoiding bulk and concentrating effort and attention on important issues. Data
19 and analyses are to be commensurate with the importance of the impact, with less important
20 material summarized, consolidated or simply referenced. *See* 40 CFR § 1502.15.

21 **Q.** **HOW WILL THE EIS ADDRESS ENVIRONMENTAL CONSEQUENCES?**

22 **A.** The CEQ regulations require EISs to discuss direct, indirect, and cumulative effects, as well as
23 mitigation measures. *See* 40 CFR § 1502.16.

24 **Q.** **HOW WILL RUS DETERMINE WHAT ALTERNATIVES, ISSUES, AND IMPACTS**
25 **TO ADDRESS IN THE EIS?**

1 **A.** RUS will consider input it receives from the public and agencies, information about the
2 project and information from the project proponents to determine the scope of the EIS. RUS
3 will apply its own judgment to determine what issues should be addressed in the EIS and what
4 information, analyses, and input it needs to inform its decision-making on Tri-State's funding
5 request. RUS is still in the scoping process and will set the direction for EIS preparation once
6 scoping is complete.

7 **Q. WHO WILL PREPARE THE EIS?**

8 **A.** Under RUS's and CEQ's regulations and guidance, a contractor, selected and supervised by
9 the RUS and funded by Tri-State (called a "Third-Party Contractor"), will prepare the EIS.
10 RUS will supervise and oversee the contractor and the process, and Tri-State will assist as
11 needed.

12 **Q. WHAT IS TRI-STATE'S ROLE IN THE EIS PROCESS?**

13 **A.** Tri-State will provide RUS and its Third-Party Contractor with background information on the
14 Project and alternatives, and may provide environmental information and analyses for
15 consideration by RUS and its contractor. Pursuant to RUS regulations, Tri-State has already
16 provided RUS with a combined Alternative Evaluation Study ("AES") and Macro Corridor
17 Study ("MCS") for the San Luis Valley to Walsenburg portion of the Project, and an AES and
18 MCS for the Calumet to Comanche portion of the Project. RUS may require Tri-State to
19 provide additional information to address questions it may have and in response to comments
20 raised in scoping. While Tri-State (and others) may provide background information, the
21 NEPA process and contents of the EIS are ultimately the responsibility of RUS, and RUS will
22 supervise, oversee and independently evaluate the Project and the environmental analyses,
23 and come to its own conclusions regarding the Project and environmental impacts.

24 **Q. HOW LONG WILL IT TAKE TO COMPLETE THE NEPA PROCESS?**

25 **A.** There is no prescribed deadline for completion of the NEPA process. The CEQ has indicated
26 12 months should be adequate for an EIS, but the process may take more or less time than

1 that. At this point, we expect RUS may issue its draft EIS in late 2010. Under federal
2 regulations, the RUS will release the draft EIS for review for a minimum of 45 days and hold
3 public comment hearings. Once the RUS has considered the comments it receives and
4 prepares its final EIS, it will release the final EIS for a minimum 30-day review period. RUS
5 may then consider all the comments and information it has collected when making its decision
6 on Tri-State's funding request.

7 **Q. FROM TRI-STATE'S PERSPECTIVE, WHAT IS THE RELEVANCE OF THE EIS**
8 **PROCESS TO THE COMMISSION'S CONSIDERATION OF THE CPCN**
9 **APPLICATIONS FOR THE PROJECT?**

10 **A.** It is my understanding that the CPCN process is not intended to be a siting process or to
11 otherwise supplant the local governments' permitting processes related to the Project. From
12 Tri-State's perspective, environmental considerations relevant to the Project will be properly
13 addressed through the EIS process and such local government processes. Therefore, the EIS
14 process is relevant to the Commission's consideration of the CPCN applications only in that it
15 assures the Commission that environmental impacts of the Project are being addressed by the
16 appropriate processes and agencies. Furthermore, as mentioned previously, certain
17 intervenors in this docket have commented on the possible environmental impacts of the
18 Project. Therefore, information regarding the EIS process is useful in responding to these
19 comments to the extent the Commission believes that environmental issues are relevant to its
20 CPCN decision at all.

21 **Q. WITH REGARD TO SUCH COMMENTS BY INTERVENORS, WILL THE EIS**
22 **ADDRESS VISUAL IMPACTS SUCH AS THOSE WESTERN RESOURCE**
23 **ADVOCATES RAISED IN MR. APOSTOL'S TESTIMONY?**

24 **A.** Yes, it will.

1 Q. WILL THE EIS ADDRESS VISUAL, VEGETATION, WILDLIFE, HABITAT, AND
2 LAND USE CONCERNS SUCH AS THOSE COLORADO OPEN SPACE RAISED IN
3 MR. PIKE'S TESTIMONY?

4 A. Yes, it will.

5 IV. RESPONSE TO WRA TESTIMONY AND RECOMMENDATIONS

6 Q. DID YOU REVIEW THE ANSWER TESTIMONY SUBMITTED BY MR. APOSTOL
7 ON BEHALF OF WESTERN RESOURCE ADVOCATES?

8 A. Yes.

9 Q. IN GENERAL, DO YOU HAVE ANY CONCERNS REGARDING THE ISSUES
10 DISCUSSED IN MR. APOSTOL'S TESTIMONY OR THE RECOMMENDATIONS
11 HE OFFERS?

12 A. Yes. First of all, I am concerned that most of the issues discussed by Mr. Apostol relate more
13 to siting the transmission lines rather than the purpose of or need for the transmission lines.
14 While Mr. Apostol's comments may be of interest to RUS or appropriate when Tri-State and
15 PSCo apply to the various local governments for permits to site and construct the Project, such
16 testimony does not seem relevant to the Commission's decision as to whether the Project is
17 needed.

18 That said, from an environmental perspective, I am concerned that his analysis and the
19 conclusions based thereon are somewhat limited and do not adequately address the full range
20 of considerations necessary when evaluating the possible environmental impacts of the
21 Project. These considerations will be properly evaluated through the EIS process.
22 Finally, with regard to Mr. Apostol's recommendations, some of his recommendations are
23 consistent with Tri-State's typical practices regarding the design and siting of transmission line
24 projects. However, Tri-State cannot agree with some of Mr. Apostol's other
25 recommendations.

1 **Q. WITH WHICH ASPECTS OF MR. APOSTOL'S ANALYSIS ARE YOU MOST**
2 **CONCERNED?**

3 **A.** Mr. Apostol's testimony primarily focused on methods of minimizing impacts to the scenic
4 resources viewed by travelers on Highway 160. While this is an important consideration in
5 siting the project, one also must consider visual impacts in other portions of the project area,
6 including residential subdivisions and communities. Likewise, in addition to impacts to visual
7 resources, impacts to other resources, both natural and cultural, as well as land use impacts
8 must also be considered along with access and engineering constraints such as topography and
9 vegetation. I am concerned that Mr. Apostol's analysis is narrowly focused on visual impacts
10 and does not adequately consider these other resources and factors.

11 **Q. DOES THE SITING PROCESS FOR THIS PROJECT UTILIZE VISUAL ANALYSIS**
12 **SIMILAR TO MR. APOSTOL'S?**

13 **A.** Yes, a viewshed analysis is underway and visual simulations have and will continue to be a
14 tool used in the siting process. Visual simulations based on the structure types and siting
15 considerations proposed for the project were presented at the public scoping meetings in
16 August 2009 that showed a range of representative shots in different terrain throughout the
17 project area. Photographic simulations based on the structure types and alternative routes
18 under evaluation for the Project continue to be developed. Visual Simulations in the vicinity of
19 the area discussed by Mr. Apostol are included as **Exhibit No. NCK-4**. This exhibit contains
20 original simulations that are still valid from the August 2009 simulations as well as new
21 simulations from two locations that compare alternative routes on the north side of Highway
22 160 with those considered on the south side of the highway.

23 **Q. DO TRI-STATE'S VISUAL SIMULATIONS DIFFER IN ANY SIGNIFICANT WAY**
24 **FROM THE SIMULATIONS DESCRIBED IN MR. APOSTOL'S TESTIMONY?**

25 **A.** Yes. Mr. Apostol explained that WRA "photo-shopped" simulated transmission towers and
26 lines into the view at approximate locations based on a map showing the proposed corridor. In

1 generating these simulations, Mr. Apostol has explained that he was not concerned with
2 spatial accuracy, instead his goal was simply to get an idea of how new lines and towers might
3 look in the landscape. It is my understanding that by comparison, the visual simulations
4 prepared by Tri-State's environmental contractor utilize a software and technology that
5 provide greater perspective accuracy than that produced by Mr. Apostol's "photo-shopping"
6 method. Tri-State believes that these simulations more accurately depict the proposed
7 transmission line, including actual structure design, height, and spacing, in the project
8 landscape.

9 **Q. MR. APOSTOL MAKES VARIOUS RECOMMENDATIONS CONCERNING**
10 **CERTAIN SEGMENTS OF THE SAN LUIS VALLEY – CALUMET SEGMENT OF**
11 **THE PROJECT. DO YOU HAVE ANY CONCERNS REGARDING THESE**
12 **RECOMMENDATIONS?**

13 **A.** Yes. Mr. Apostol did not identify a specific route that he feels would best minimize impacts
14 to scenic resources from Highway 160; however, it appears that he generally favors a route
15 located south of Highway 160. Our analysis thus far indicates that locating the line far enough
16 south of Highway 160 to “hide” it from those traveling on the highway is not a good option
17 due to the presence of residential subdivisions and engineering constraints.

18 Mr. Apostol’s testimony neglected to mention that it is also possible to minimize scenic
19 impacts to those traveling on Highway 160 by placing the line on the north side of the
20 highway in many areas. In much of the area east of Fort Garland, a northern placement would
21 accomplish the shielding effect while also minimizing impacts to many subdivided areas with
22 homes. Shielding opportunities on the north side of the highway are illustrated in the
23 photographic simulations included in Exhibit No. NCK-4.

24 Mr. Apostol suggests use of the railroad corridor as an alternative to potential routes under
25 evaluation in the vicinity of La Veta Pass. This was, as pointed out by Mr. Apostol,
26 encompassed by one of the preliminary corridors considered for that reason but ruled out after

1 further investigation including site reconnaissance. The portion of the railroad corridor in the
2 vicinity of the pass is highly constrained due to steep topography that rises sharply on either
3 side of the railroad, leaving little room on either side of the right of way for structure
4 placement. Construction and operations in this circumstance would cause severe ground
5 disturbance from both structure installation and the associated access roads. Tri-State does not
6 consider construction along the railroad near the pass to be practical or prudent.

7 In addition, the railroad alignment has significant curves along its alignment. Placing the
8 structures within the confines of the railroad corridor in attempts to follow the railroad
9 alignment is impractical due to the expense caused by the number of angle structures that
10 would be required. If Tri-State were to attempt to follow the general alignment of the railroad,
11 Tri-State would need a straighter alignment that would place the line outside the confines of
12 the railroad right-of-way and would require larger amounts of tree clearing and road
13 construction. For those reasons, Tri-State does not view this as a reasonable siting alternative.
14 Tri-State, however, has identified alternative routes that where possible make use of straighter
15 sections of the railroad corridor in areas with fewer topographic constraints.

16 **Q. AT THE END OF HIS TESTIMONY, MR. APOSTOL LISTS SIX**
17 **RECOMMENDATIONS AS TO WAYS TO MINIMIZE OR AVOID THE**
18 **POTENTIAL IMPACTS ASSOCIATED WITH THE PROJECT. DOES TRI-STATE**
19 **AGREE WITH THESE RECOMMENDATIONS?**

20 **A.** Tri-State agrees that there are ways to avoid and/or minimize impacts to scenic resources.

21 Specific methods to minimize impacts to visual resources such as those suggested by Mr.

22 Apostol will be considered in the siting process and addressed in the EIS. With regard to Mr.

23 Apostol's specific recommendations:

24 1) Mr. Apostol suggests that impacts to the greatest number of people and the tourist economy

25 may be minimized by locating the transmission line right-of-way as far south of Highway 160

26 as possible. Tri-State agrees that one consideration in siting the project is to minimize

1 potential impacts to residents and tourists as a result of the line. However, this consideration
2 must be balanced against other equally important siting considerations. As discussed
3 previously, the feasibility of locating the line far enough south to minimize impacts to those
4 traveling on Highway 160 is limited due to other considerations such as the location of
5 residences and subdivisions, topography, dense vegetation, and steep terrain.

6 2) Mr. Apostol suggests using low stature poles made of natural wood or weathering steel
7 where crossing open vegetation and flat terrain. Tri-State agrees that structure materials and
8 height are valuable measures in mitigating potential visual impacts of the line. Consideration
9 of structure type is one mitigation measure regularly utilized by Tri-State to minimize visual
10 resource impacts. Structure types proposed for this Project do not include any wood
11 structures, as they are not adequate to support the double circuit configuration of the proposed
12 Project, however, the use of weathering steel structures is an option being considered. While
13 shorter structures may lessen the perceived visual impacts associated with the height of the
14 transmission line, my understanding is that such structures generally require a shorter span
15 length and, therefore, more structures per mile which may, in turn, increase the visual impacts
16 of the transmission line. Accordingly, there are trade-offs associated with the use of shorter
17 structures and these will be considered in the siting and design of the Project.

18 3) Mr. Apostol suggests using tall steel mono pole structures in woodlands or forests and
19 retaining shorter stature trees underneath the lines to the greatest practicable extent. In
20 general, Tri-State agrees that retaining existing vegetation where reasonable and utilizing
21 appropriate structure types are useful mitigation measures to be considered in siting the line to
22 best minimize potential visual impacts while maintaining safe and appropriate engineering
23 design. Structure types and vegetation treatment within the ROW will be addressed on a site
24 specific, case-by-case basis.

25 4) Mr. Apostol suggests removing local poles and using new poles for local lines to minimize
26 visual impacts. In general, Tri-State does not agree that the practice of installing distribution

1 lines on the same structures as the transmission line is always a good practice. However, Tri-
2 State will consider the need for and viability of co-location with a 115 kV line as a possible
3 mitigation measure. Tri-State does not own any distribution lines so the co-location would
4 need to be agreed upon by two different utilities. My understanding is that operational,
5 maintenance, safety, and reliability issues can arise out of such a co-location. Therefore, use
6 of this measure must be considered on a case specific basis. Due to such concerns, I
7 understand that Tri-State will not co-locate distribution on lines that have operation voltages
8 of over 115 kV, and will not do so in cases where the line has a double circuit high voltage
9 configuration.

10 Co-locating distribution lines on transmission structures typically requires a shorter span
11 length and taller structures in order to obtain proper ground clearance and circuit separation.
12 For example, span lengths may be reduced to approximately 400 feet instead of 800 to 1000
13 feet. That would require many more structures per mile, which would increase the visual
14 impacts of the transmission line. As a result, distribution underbuild may not be a desirable
15 measure.

16 5) Mr. Apostol suggests using the railroad grade instead of following Highway 160 to get
17 across La Veta Pass. As discussed previously, Tri-State evaluated this alternative and
18 concluded it was not reasonable due to steep topography and other constraints.

19 6) Mr. Apostol suggests minimizing vegetation clearing and ground disturbance. The amount
20 of vegetation clearing required is based on site specific conditions and safety requirements. In
21 general, Tri-State agrees that locating the line in areas that would require less vegetation
22 clearing and ground disturbance is an important consideration in siting the line to minimize
23 potential environmental impacts that result from vegetation removal. Access roads are
24 typically the source of most ground disturbance associated with a transmission line. Siting the
25 transmission line where overland access is practicable or in the vicinity of existing roads is an

1 example of one way to minimize ground disturbance and vegetation clearing necessary for
2 access road construction.

3 **V. RESPONSE TO COLORADO OPEN LANDS TESTIMONY**

4 **Q. DID YOU REVIEW THE TESTIMONY OF MR. DANIEL PIKE SUBMITTED ON**
5 **BEHALF OF COLORADO OPEN LANDS?**

6 **A.** Yes.

7 **Q. DO YOU HAVE ANY CONCERNS REGARDING MR. PIKE'S TESTIMONY?**

8 **A.** Yes. The majority of Mr. Pike's testimony relates to conservation easements held by Colorado
9 Open Lands on Trinchera Ranch and other properties that may be crossed by the Project. I
10 have two primary concerns regarding this testimony.

11 First, Mr. Pike's comments relate primarily to siting issues rather than the purpose and need
12 for the Project. Since the final alignment for the Project has not yet been determined, no one,
13 including Mr. Pike, knows for certain whether any of these properties will be crossed by the
14 Project. It is my understanding that at this point there are no alternatives under consideration
15 that cross known existing conservation easements. Such concerns will be appropriately
16 considered in the local government permitting process as well as the federal NEPA process.
17 Second, to the extent any of the properties identified by Mr. Pike are ultimately to be crossed
18 by the Project, or it is likely that they cannot be avoided, Mr. Pike offers no analysis or
19 support for his conclusions regarding impacts on such properties and the underlying purposes
20 of the conservation easements. Therefore, Mr. Pike's concerns are, at best, speculative.

21 **Q. TO YOUR KNOWLEDGE ARE THERE ANY ROUTE ALTERNATIVES**
22 **CURRENTLY UNDER CONSIDERATION FOR THE PROJECT THAT CROSS**
23 **PROPERTIES SUBJECT TO KNOWN, EXISTING CONSERVATION EASEMENTS?**

24 **A.** No.

25 **Q. MR. PIKE DISCUSSES THE TRINCHERA RANCH CONSERVATION EASEMENT**
26 **AT LENGTH. IS IT CORRECT THAT THERE ARE PRESENTLY NO ROUTE**

**ALTERNATIVES THAT CROSS THE TRINCHERA RANCH PROPERTY THAT IS
SUBJECT TO COLORADO OPEN LANDS' CONSERVATION EASEMENT?**

A. Yes. The deeded conservation easement in question is located to the south of Highway 160 in an area where no project alternatives are located.

**Q. WHAT PORTION OF THE TRINCHERA RANCH PROPERTY IS CROSSED BY
PROJECT ALTERNATIVES?**

A. The portion of the ranch north of Highway 160, called the Blanca Ranch, is crossed by the current project alternatives. This area is not currently under a conservation easement.

**Q: ARE YOU AWARE OF ANY LAND USES ON THE BLANCA RANCH PROPERTY
THAT ARE, IN YOUR OPINION, INCONSISTENT WITH THE CONSERVATION
PRINCIPLES MR. PIKE DISCUSSES IN HIS TESTIMONY?**

A: Tri-State's investigations have confirmed that an airstrip was recently constructed on this portion of the ranch as noted in the attached permit (**Exhibit No. NCK-5**). In my opinion, the activity and noise associated with aircraft takeoffs and landings would be more intrusive than a transmission line once line construction is complete. While I am not a lawyer, I have reviewed the deed of conservation easement covering the Trinchera Ranch and airstrips are prohibited and listed as a restricted use on that property (*see Exhibit No. NCK-6, Trinchera Ranch Deed of Conservation Easement, p. 11, section 5.G*).

**Q. HOW ARE CONSERVATION EASEMENTS NORMALLY TREATED IN THE
SITING PROCESS FOR TRANSMISSION PROJECTS.**

A. If conservation easements are a known constraint in a study area, they would typically be avoided when practicable.

**Q. IN YOUR OPINION, IS THE PROJECT NECESSARILY INCOMPATIBLE WITH
THE VALUES OF A CONSERVATION EASEMENT?**

1 **A.** Again, I am not a lawyer or an expert in land agreements such as conservation easements.
2
3 However, in my opinion as an environmental professional, a transmission line project such as
4 the one proposed here is not necessarily incompatible with conservation values.
5 For example, it is my understanding that many conservation easements allow for the repair,
6 replacement, or installation of electric and other utilities. I have briefly reviewed the deed of
7 conservation easement for the Trinchera Ranch property that Mr. Pike mentions in his
8 testimony. The deed states that the "Grantor may repair and replace existing utilities and may
9 install new utilities. The term "utilities" includes, without limitation, satellite dishes, electric
10 power lines and facilities, sanitary and storm sewers, cisterns, wells, water storage and
11 delivery systems including, but not limited to water pipelines, telephone and communications
12 cable systems, and their respective appurtenant facilities." While the Trinchera Ranch
13 conservation easement does not appear to limit the types of "electric power lines and
14 facilities" that are permitted on the property, at a minimum, this language appears to recognize
15 that such lines and facilities can be constructed on the property without necessarily impairing
16 the conservation values intended to be protected by the easement. In my opinion, by
17 employing proper design and siting considerations, the transmission line can be installed in a
18 manner compatible with conservation values.

18 **Q.** **DOES THAT CONCLUDE YOUR TESTIMONY AT THIS TIME?**

19 **A.** Yes, it does.