TrAILCo Rejoinder Statement No. 2-RJ
Witness: Lawrence A. Hozempa

BEFORE THE

PENNSYLVANIA PUBLIC UTILITY COMMISSION

IN RE: APPLICATION OF TRANS-ALLEGHENY INTERSTATE LINE COMPANY FOR (I) A CERTIFICATE OF PUBLIC CONVENIENCE TO OFFER, RENDER, FURNISH AND/OR SUPPLY TRANSMISSION SERVICE IN THE COMMONWEALTH OF PENNSYLVANIA; (II) AUTHORIZATION AND CERTIFICATION TO LOCATE, CONSTRUCT, OPERATE AND MAINTAIN CERTAIN HIGH VOLTAGE ELECTRIC TRANSMISSION LINES AND RELATED ELECTRIC SUBSTATION FACILITIES; (III) AUTHORITY TO EXERCISE THE POWER OF EMINENT DOMAIN FOR THE CONSTRUCTION AND INSTALLATION OF AERIAL ELECTRIC TRANSMISSION FACILITIES ALONG THE PROPOSED TRANSMISSION LINE ROUTES IN PENNSYLVANIA; (IV) APPROVAL OF AN EXEMPTION FROM MUNICIPAL ZONING REGULATION WITH RESPECT TO THE CONSTRUCTION OF BUILDINGS; AND (V) APPROVAL OF CERTAIN RELATED AFFILIATED INTEREST ARRANGEMENTS	**:**	**Docket Nos. A-110172** **A-110172F0002** **A-110172F0003** **A-110172F0004** **G-000721229**

REJOINDER TESTIMONY OF LAWRENCE A. HOZEMPA

Re: Reliability Needs and TrAILCo Planning Process

March 19, 2008

REJOINDER TESTIMONY OF LAWRENCE A. HOZEMPA

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is Lawrence A. Hozempa and my business address is 800 Cabin Hill Drive, Greensburg, Pennsylvania.

Q. HAVE YOU PREVIOUSLY FILED TESTIMONY IN THIS PROCEEDING?

A. Yes. I have filed written Direct Testimony on behalf of Trans-Allegheny Interstate Line Company (“TrAILCo”), which has been designated as TrAILCo Statement No. 2. I also filed written Rebuttal Testimony on behalf of TrAILCo, which has been designated as TrAILCo Statement Nos. 2-R and 2-R-1.

Q. PLEASE DESCRIBE THE PURPOSE OF YOUR REJOINDER TESTIMONY.

A. This Rejoinder Testimony addresses various assertions contained in surrebuttal testimony from opponents, concerning the reliability need for the Prexy Facilities and the 502 Junction Facilities, and TrAILCo's planning process. Specifically, my rejoinder addresses surrebuttal filed by Office of Consumer Advocate ("OCA") witness Peter Lanzalotta in OCA Statement No.1-SR and Energy Conservation Council ("ECC") witness George Loehr in ECC Statement SR-1.

Q. WILL THE USE OF VARIOUS TERMS IN YOUR REJOINDER TESTIMONY BE CONSISTENT WITH THE DEFINITIONS ASSIGNED TO THOSE TERMS IN THE TABLE OF NOMENCLATURE ATTACHED TO TRAILCO WITNESS FLITMAN'S DIRECT TESTIMONY AS TRAILCO EXHIBIT DEF-1?

A. Yes. In addition, I may define other specific terms in my rejoinder.

Q. ECC AND OCA SURREBUTTAL SUGGEST THAT TRAILCO'S REBUTTAL WITH RESPECT TO POST-2009 REQUIREMENTS, IF IMPORTANT, COULD HAVE BEEN ADDRESSED EARLIER. DO YOU HAVE A RESPONSE?

A. Yes. I mentioned these other reliability violations in my rebuttal testimony because the transmission models being used for future analyses, years beyond 2009, include the Prexy Facilities. The only way I could thoroughly test Mr. Lanzalotta’s proposal from his rebuttal was to remove the Prexy Facilities from these future models and insert Mr. Lanzalotta’s proposed facilities in the model. My rebuttal testimony is simply a summarization of my findings.

I believe this information is relevant because as we conduct transmission planning studies, planned solutions become part of the loadflow model. The current version of the Prexy Facilities proposal was planned in 2001, with an in-service date of July 2011. Since 2001, the Prexy Facilities have been incorporated into our long-range planning model. As we perform our transmission assessments,

sensitivity analyses are also conducted on planned solutions to determine if the in-service date is acceptable, needs advanced, or can be delayed as the planning model is updated from year-to-year.

As more analyses were conducted, it became apparent that the Prexy Facilities will provide significant reliability improvements not only to the transmission system in the Prexy area but also to the surrounding area in future years. However, that does not change or invalidate that the primary reason for the Prexy Facilities is the thermal and voltage reliability violations in the Prexy area. While the proposed solution has reliability benefits beyond the Prexy area, they are secondary benefits and not the primary driver.

Furthermore, this is not new information. In a response to the first set of interrogatories from the West Penn Power Industrial Intervenors regarding future transmission constraints in the West Penn Power service territory, TrAILCo provided Allegheny Power's 2006 Assessment of Transmission System Performance as supporting data. This response was available to the intervenors in this proceeding in August 2007. The number of reliability violations that will be corrected by the Prexy Facilities in this assessment is far more than the four primary violations in TrAILCo Exhibit LAH-3 that are driving the immediate need.

For example, if I need to replace the tires on my car because my existing tires are worn, I will replace my tires. Once I replace my tires, it is likely my gas mileage will improve and my car will handle better. That doesn't mean I am primarily replacing my tires to get better gas mileage or better handling; those are secondary benefits.

Q. MR. LANZALOTTA ASSERTS THAT, IF A KEY FACTOR WHEN CONSIDERING THE PROJECT'S 138 KV LINES IS THE NUMBER NEEDED TO ADDRESS THE RELIABILITY VIOLATIONS, TRAILCO'S PROPOSED SOLUTION INVOLVES FIVE 138 KV LINES AS OPPOSED TO MR. LANZALOTTA'S FOUR NEW 138 KV LINES. DO YOU HAVE ANY COMMENT?

A. Yes. I agree there will be five 138kV lines or circuits constructed from the Prexy substation under the TrAIL proposal. Four of these lines will be constructed on double circuit poles, which means they will only take the same amount of right-of-way as two circuits. Also, the total line mileage of the TrAILCo 138kV lines is approximately 15 miles as opposed to over 63 miles of 138kV lines for Mr. Lanzalotta's proposal, which will also require nearly seven miles of new right-of-way.

Q. MR. LANZALOTTA CLAIMS THAT HIS LOAD FLOW STUDIES CONFIRM THAT "T" JUNCTIONS ARE IN FACT THE CAUSE OF MANY RELIABILITY ISSUES. MR. LOEHR CLAIMS THAT ELIMINATING THE "T" JUNCTIONS WILL ADDRESS THE RELIABILITY ISSUES FOR THE COST OF ONLY SIX 138 KV CIRCUIT BREAKERS. DO YOU HAVE A RESPONSE?

A. Yes. First of all, let's make the assumption that there are substations at the "T" junctions. For this discussion I'll call the new "T" junction substations Union Jct SS for the substation at Union Junction and Buffalo Jct SS for the substation at Buffalo Junction. I have shown this assumed network configuration on a single-line sketch (TrAILCo Exhibit LAH-6) to show what the Prexy area would look like with these assumed substations at the "T" junctions. Note I grouped the substations in the immediate Prexy area together in the circle titled "Prexy area substations."

Using this assumed network configuration, the description of the electrical occurrences shown in TrAILCo Exhibit LAH-3 would be slightly different due to the new line names; however, the electrical result would be the same. A modified version of TrAILCo Exhibit LAH-3 is included as TrAILCo Exhibit LAH-7.

Another way to look at this situation is to picture the Prexy area substations, as shown in TrAILCo Exhibit LAH-6 as a bowl suspended from the ceiling by four bungee cords. The bungee cords represent the four lines shown in TrAILCo

Exhibit LAH-6. Load in the Prexy area would be represented by adding weight to the bowl. Voltage problems would be analogous to the bowl sagging to the floor; and thermal loading problems would be analogous to a bungee cord breaking.

Allow me to use this analogy to describe the Electrical Occurrence 2 in TrAILCo Exhibit LAH-6. Someone comes along and cuts the bungee cord between Buffalo Jct SS and Cecil SS. The bowl will sag a little closer to the ground as the weight shifts to the remaining three bungee cords and they stretch a little more. Then someone else comes along and cuts the bungee cord between Union Jct SS and Peters SS. At this point the bungee cord between Wylie Ridge SS and Smith SS is stretched to the point of breaking and 11 substations in the bowl are touching the floor.

This argument about installing substations at the "T" junctions is simply a 'straw man' to detract from the magnitude of the reliability violations in the Prexy area. If the reliability violations could be addressed by constructing substations at the "T" junctions, TrAILCo would be proposing that as a solution; however, that solution is no solution at all.

Q. MR. LANZALOTTA AND MR. LOEHR ARGUE THAT THE PREXY FACILITIES WILL PROVIDE TOO MUCH SYSTEM CAPACITY. DO YOU HAVE A RESPONSE?

A. Yes. I addressed this issue in my Rebuttal on page 17. However, in view of the

continuing challenge to this point by these witnesses, I want to add to what was already stated. The expected life of these facilities is over 40 years. It would not be prudent from a transmission planning perspective to fail to provide adequate capacity for the expected life of the facilities. It is likely that the 500 kV line from 502 Junction to Prexy will be extended some time in the future. Once the line is extended, it will become part of the EHV backbone of the transmission system and will require the same capacity as other EHV backbone facilities.

Q. MR. LANZALOTTA CONTENDS THAT THE 2009 AND BEYOND OVERLOADING COULD BE ADDRESSED BY ADDING ADDITIONAL 138 KV TRANSFORMERS AT THE WYLIE RIDGE SUBSTATION. DO YOU HAVE A RESPONSE?

A. Yes. Adding additional transformers at Wylie Ridge Substation will alleviate any capacity problems at Wylie Ridge Substation. It will not, however, address the problems in the Prexy area unless that additional capacity can be made available through the transmission lines into the Prexy area.

The Prexy area is approximately midway between the 500/138 kV substations Wylie Ridge and Yukon. Since the load in the Prexy area has developed to the level where the existing transmission system is no longer able to serve the area reliably, it is more efficient to install the additional capacity closer to where it is needed, the Prexy area, than to install the capacity at substations further away.

Q. MR. LOEHR'S SURREBUTTAL ASSERTS THAT HIS SUGGESTED ALTERNATIVES WOULD SOLVE THE CLAIMED RELIABILITY PROBLEMS AT CONSIDERABLY LOWER COST THAN THE TRAILCO PROJECT. DO YOU HAVE A RESPONSE TO THIS ASSERTION?

A. Yes. Several specifics of the weaknesses and failures in Mr. Loehr's suggestions are set forth below. It is very difficult for me to evaluate his suggestions since he has provided literally no details or supporting analysis for his claims. Mr. Loehr has admitted, in response to TrAILCo's Set Seven Interrogatory addressed to him that he did not conduct any load flow studies to establish that any of his alternatives should be considered. He admitted, further, that he did not attempt to calculate either a cost estimate or any construction schedule for any of his alternatives, and that he is not an expert in either area.

Q. MR. LOEHR ARGUES THAT THE SOLUTION FOR ANY VOLTAGE PROBLEMS IN THE PREXY AREA IS TO INSTALL REACTIVE POWER SOURCES SUCH AS SHUNT CAPACITORS – NOT TO BUILD A 500 KV LINE WHICH, IN MR. LOEHR'S VIEW, IS OVERKILL. DO YOU HAVE A RESPONSE?

A. Yes. Mr. Loehr continues to ignore the totality of problems addressed by the proposed facilities. As clearly stated in TrAILCo Exhibit LAH-3, the problems being addressed are related to more than voltage. They also include thermal loading of the 138 kV lines. Three of the four 138 kV lines serving the Prexy area exceed their emergency ratings and overload under certain contingencies. Mr.

Loehr's suggested capacitor bank band-aid would not alleviate the overloads on the 138 kV transmission lines at all, which are NERC reliability criteria violations.

Q. MR. LOEHR REJECTS YOUR TESTIMONY THAT THE PREXY FACILITIES WERE DRIVEN BY RELIABILITY CONSIDERATIONS. MR. LOEHR CLAIMS THAT THE PROJECT IS PURELY ABOUT ECONOMICS AND BRINGING LOW-COST COAL SOURCES TO MARKET. HE ALSO CONTENDS THAT ANY CONGESTION CONCERN IS "ECONOMIC CONGESTION", AND HAS NOTHING TO DO WITH RELIABILITY, AND THAT "TRANSMISSION CONSTRAINED DISPATCH" IS A WAY OF ELIMINATING THE NEED FOR NEW TRANSMISSION LINES WITHOUT VIOLATING RELIABILITY STANDARDS. DO YOU HAVE A RESPONSE?

A. Yes. It is clear that Mr. Loehr has not sufficiently reviewed the facts relating to this project. If he had, he would know there are not any “trapped” low-cost coal generating facilities in the area that will be served by the Prexy Facilities. Furthermore, “economic congestion” has not been claimed or alluded to by any TrAILCo witness as a reason justifying the construction of the Prexy Facilities. If the problem was economic congestion then transmission constrained dispatch would only be a solution to relieve the problem if there was generation in the area available for dispatch. Mr. Loehr’s incorrect conclusions are based upon flawed assumptions.

Q. MR. LOEHR CONTINUES TO CLAIM THAT YOU FAIL TO UNDERSTAND THAT RELIABILITY DEPENDS ON THE RELIABILITY STANDARDS USED AND NOT ON THE *AMOUNT OF TRANSMISSION*. HE CHALLENGES YOUR "WHEEL AND SPOKES" ANALOGY BY SUGGESTING THAT EVEN THOUGH YOU MAKE THE WHEEL STRONGER, IT COULD LEAD TO DRIVING FASTER AND RESULTING IN A MORE DEADLY ACCIDENT. DO YOU HAVE A RESPONSE?

A. Yes. Mr. Loehr is making a faulty assumption that PJM and TrAILCo will always push the existing transmission system to its reliability limits. If this was true, the transmission system would constantly need reinforcement; however, the transmission system has been relatively unchanged for nearly 30 years.

TrAILCo and PJM are planning to the applicable NERC standards. It is now mandatory, not voluntary, that the transmission system meets the NERC reliability standards. Historic data indicates the system is reaching its limits. The transmission system modeling also shows the future reliability of the transmission system cannot be maintained without reinforcement.

Q. MR. LOEHR DISPUTES THAT THERE ARE NO GENERATORS IN THE AREA WHERE THE VIOLATIONS OCCUR TO RE-DISPATCH, CLAIMS THAT THERE ARE MANY OPTIONS FOR MANUAL SYSTEM ADJUSTMENTS, AND CONTENDS THAT ONCE REDISPATCH WAS REJECTED, NO ONE CONSIDERED ANY MANUAL SYSTEM

ADJUSTMENTS OTHER THAN LOAD SHEDDING. MR. LOEHR ALSO CONTINUES TO ARGUE THAT THE LOADING PROBLEMS CITED AREN'T REAL, BUT RESULT SOLELY FROM THE MISAPPLICATION OF THE NERC STANDARDS. DO YOU HAVE ANY FURTHER RESPONSE?

A. Yes. Mr. Loehr refers to our response to ECC Interrogatory VII-28 in arguing that generation in the area where violations occur can be re-dispatched. However, only two generators among those listed in the response to Interrogatory ECC-VII-28 are connected to the 138 kV transmission system. Furthermore, those two generators (Elrama Power Station and Mitchell Power Station) are on the other side of Union Junction from the area where the reliability criteria violations are occurring. Electrical Occurrences 2, 3 and 4 are contingencies of the Union Junction line and isolate those two generators from the area.

It is apparent that Mr. Loehr has not even reviewed a single-line diagram of the transmission system. Otherwise, he would not continue to consider redispatch of these generators a viable option, even though it is not a viable option to alleviate any of the reliability criteria violations.

It is interesting to note that OCA’s witness, Mr. Lanzalotta, who actually conducted a load-flow analysis, proposed construction of four 138 kV lines to resolve the reliability criteria violations. He did not propose manual system adjustments, including any generator redispatch, as a solution to the reliability criteria violations.

Q. DO YOU AGREE WITH MR. LOEHR'S ASSERTION THAT IF THE GROUND CLEARANCE ISSUES ON THE MT. STORM-DOUBS LINE WERE CORRECTABLE BY RETENSIONING THE CONDUCTORS, THE INCREASED RATING OF THE LINE WOULD OBVIATE THE NEED FOR THE 502 JUNCTION-LOUDOUN LINE?

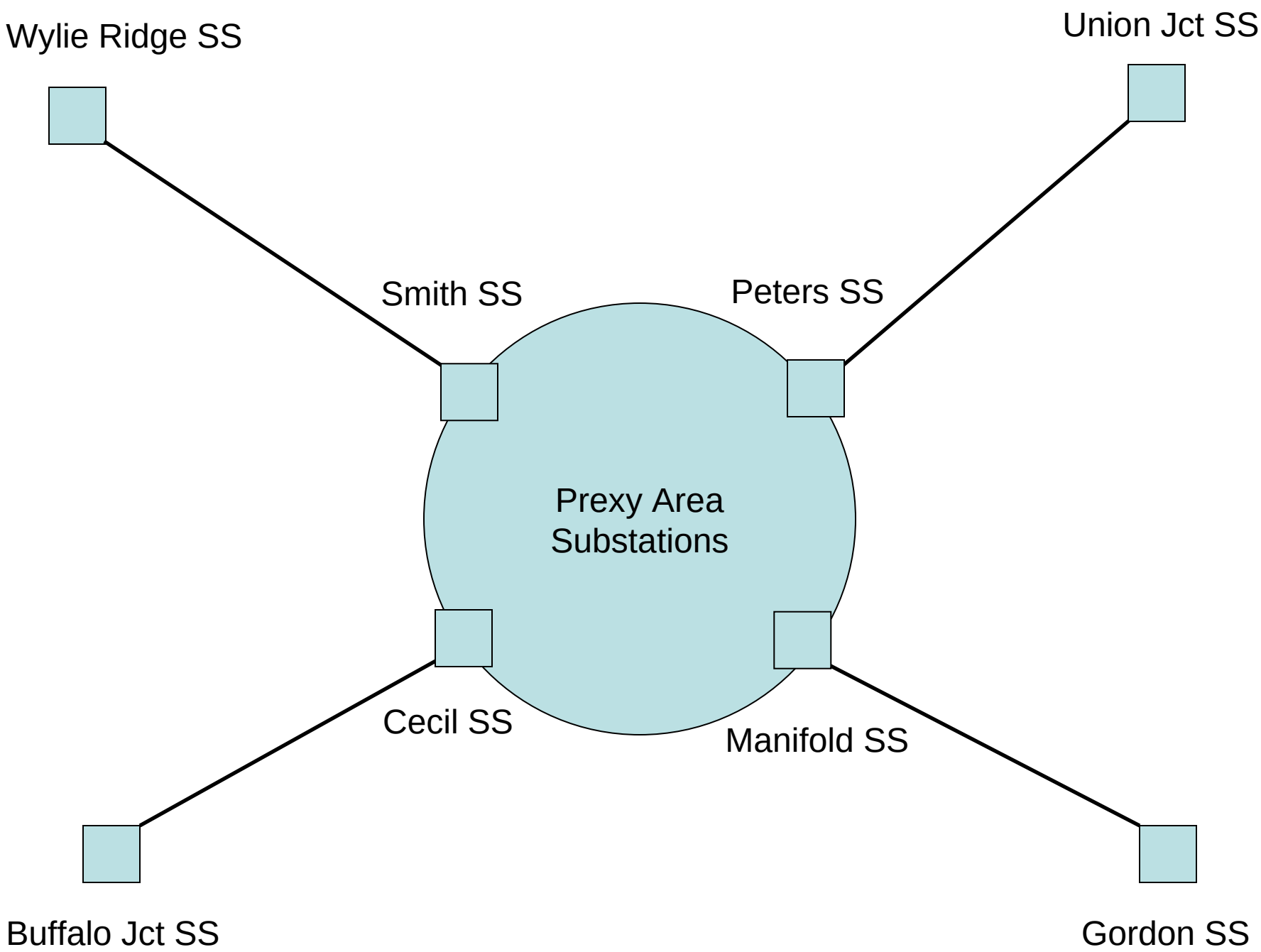
A. No. I would first point out that the rejoinder testimony of Mr. Allen shows that retensioning the conductors is not feasible. Additionally, even if the ground clearance issues on this line could be resolved, the reliability issues on this line that have been identified in the transmission planning studies would still exist.

Mr. Allen's rejoinder testimony indicates the maximum operating temperature of this line, if the line was retensioned, is 90° which would make the emergency rating of the line 2910 MVA. PJM recently completed an analysis incorporating the most recent and up-to-date information in the load flow analysis as ordered by the Virginia State Corporation Commission Hearing Examiner. This analysis indicates the loading on the Mt. Storm-Doubs line under contingency is 3144 MVA. This is 121% of the current emergency rating and would be 108% of the emergency rating if the line could be retensioned. The Mt. Storm-Doubs line will continue to be overloaded even if the line could be retensioned. PJM's study also concluded that additional EHV backbone lines will overload as well. This is consistent with the findings in the 2006 and 2007 RTEPs.

The overall conclusion is undeniable. The EHV backbone system is critically lacking capacity. A marginal increase on a single line is not the solution. New EHV transmission capacity needs to be constructed to avoid compromising the reliability of the transmission system in the region.

Q. DOES THIS CONCLUDE YOUR REJOINDER TESTIMONY?

A. Yes. However, I reserve the right to provide such additional testimony as may be necessary or appropriate.



TrAILCo Exhibit LAH-6

TrAIL – Prexy Facilities
Electric Reliability Problems

	Electrical Occurrence	Electrical Result
1	Outage of Buffalo Junction-Cecil and Wylie Ridge-Smith 138 kV lines.	The Union Junction-Peters 138 kV line exceeds its emergency rating and overloads.
2	Outage of Buffalo Junction-Cecil and Union Junction-Peters 138 kV lines.	The Wylie Ridge-Smith 138 kV line exceeds its emergency rating and overloads. Also, the 138 kV voltage at 11 substations drops below acceptable limits and could lead to a voltage collapse in the area.
3	Outage of Union Junction-Peters and Wylie Ridge-Smith 138 kV lines.	The Gordon-Manifold 138 kV line exceeds its emergency rating and overloads. Also, the 138 kV voltage at 15 substations drops below acceptable limits and could lead to a voltage collapse in the area.
4	Outage of Union Junction-Peters and Gordon-Manifold 138 kV lines.	The 138 kV voltage at 10 substations drops below acceptable limits and could lead to a voltage collapse in the area.