COMMONWEALTH OF PENNSYLVANIA

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October 5, 2009

James J. McNulty
Secretary
Pennsylvania Public Utility Commission
Commonwealth Keystone Building
400 North Street
Harrisburg, PA 17120

RE: Application of PPL Electric Utilities Corporation Filed Pursuant to 52 Pa. Code Chapter 57, Subchapter G, for Approval of the Siting and Construction of the Pennsylvania Portion of the Proposed Susquehanna-Roseland 500 kV Transmission Line in Portions of Lackawanna, Luzerne, Monroe, Pike and Wayne Counties, Pennsylvania
Docket Nos. A-2009-2082652, *et al.*

Dear Secretary McNulty:

Enclosed for filing is the Main Brief on behalf of the Office of Consumer Advocate, in the above-referenced proceeding.

Copies have been served as indicated on the enclosed Certificate of Service.

Respectfully Submitted,

Dianne E. Dusman
Senior Assistant Consumer Advocate
PA Attorney I.D. # 38308

Enclosure
cc: Honorable Susan D. Colwell

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BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

Application of PPL Electric Utilities Corporation Filed Pursuant to 52 Pa. Code Chapter 57, Subchapter G, for Approval of the Siting and Construction of the Pennsylvania Portion of the Proposed Susquehanna-Roseland 500 kV Transmission Line in Portions of Lackawanna, Luzerne, Monroe, Pike and Wayne Counties, Pennsylvania	:	Docket No.	A-2009-2082652
Petition of PPL Electric Utilities Corporation for a Finding that a Building to Shelter Equipment at the 500-230 kV Substation to be Constructed in the Borough of Blakely, Lackawanna County, Pennsylvania is Reasonably Necessary for the Convenience or Welfare of the Public	:		A-2009-2082832
Application of PPL Electric Utilities Corporation Under 15 Pa. C.S. §§1511(c) for a Finding and Determination that the Service to be Furnished by the Applicant Through Its Proposed Exercise of the Power of Eminent Domain to Acquire a Right-Of-Way and Easement Over and Across the Lands of the Property Owners Listed Below For the Proposed Susquehanna-Roseland 500 kV Transmission Line In Portions of Lackawanna, Luzerne, Monroe, Pike and Wayne Counties, Pennsylvania is Necessary or Proper for the Service, Accommodation, Convenience or Safety of the Public	:		
Chaudari Family Limited Partnership, David Murphy, and Marguerite T. Kranick	:		A-2009-2088297
HaRa Corporation	:		A-2009-2088337
Richard Coccodrilli, Jr., Jeffrey J. Coccodril, Jr, Ryan T. Coccodrilli, and Joseph Williams	:		A-2009-2088327
D&L Realty Company	:		A-2009-2088340
Kenneth Powell and Linda Powell	:		A-2009-2088359

Rudolph Saporito and Maria Saporito	:	A-2009-2088312
David Murphy	:	A-2009-2088360

MAIN BRIEF
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Dated: October 5, 2009

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I. INTRODUCTION

The instant Application for a Certificate of Public Convenience and Necessity submitted by PPL Electric Utilities Corporation (PPL) proposes 101 miles of 500-kilovolt high-voltage transmission line through five counties in northeast Pennsylvania, the Pennsylvania portion of the Susquehanna to Roseland line. The line would start at the Susquehanna substation in Berwick, PA extend through the Delaware Water Gap National Recreation Area on an existing right-of-way and cross the Delaware River into New Jersey, where it will extend another forty-five miles to the PSE&G Roseland Substation.

Since the 1990s, much has changed with respect to the federal law, policy and ratemaking relevant to enhancements to the interstate transmission grid, in part by virtue of the enactment of the Energy Policy Act of 2005, Pub. L. No. 109-58, 119 Stat. 5594 (2005) (EPAct05). PPL attempts to support its request to this Commission with the Federal Energy Regulatory Commission (FERC) tariffs, orders and regulations governing the transmission grid; the PJM Interconnection, LLC (PJM) regional transmission organization's (RTO) determination of need for enhanced interstate transmission through its Regional Transmission Expansion Planning Process; and the Department of Energy (DOE) creation of the National Interest Electric Transmission Corridors (NIETC), which encompass most of the Commonwealth. Moreover, the FERC, pursuant to the EPAct05, has created sizeable financial and ratemaking incentives for transmission owners to construct "backbone" extra-high voltage (EHV) lines to alleviate congestion in the mid-Atlantic region. PPL attempts to portray its proposed EHV line as lawful, timely and appropriate against the backdrop of these federal regulatory and RTO activities.

The Office of Consumer Advocate (OCA) urges this Commission to recognize that, despite these federal and regional developments in the last decade, state law governing the

need for and siting of high-voltage transmission lines in our Commonwealth still controls the Commission's ultimate decision in this matter. 52 Pa. Code § 57.71, *et seq.* Under pertinent provisions of the Public Utility Code, PPL must meet all state regulatory and eminent domain requirements including, among others, proof of the necessity of the specific proposed facilities to serve the public, in order to receive approval to exercise eminent domain and to construct the proposed facilities. 66 Pa. C.S. § 1101, *et seq.* As seen in this Commission's most recent EHV line application proceeding, PPL must prove not only that its proposed infrastructure is needed, but also that the specific facility proposed is commensurate with any existing need. In re Application of Trans-Allegheny Interstate Line Co., Docket No. A-110172, Recommended Decision at 79-80, *available at* www.puc.state.pa.us//PCDOCS/1019983.pdf (TrAILCo R.D.); In re Application of Trans-Allegheny Interstate Line Co., Docket No. A-110172, Final Order (Entered December 12, 2008), *available at* www.puc.state.pa.us//pcdocs/1028423.doc (TrAILCo Order) . In addition, PPL must show that it has considered available alternatives considering the electric needs of the public and available technology. 52 Pa. Code § 57.76(a)(1)-(4).

The OCA submits that this Commission must apply relevant state law and regulation independent of PJM's "directive" to PPL concerning the project proposed. Pursuant to the terms of the FERC Open Access Transmission Tariff (OATT), Regional Transmission Expansion Planning (RTEP) Protocol—Schedule 6, any such PJM directive is subject to the transmission owner meeting all requirements of state law and regulation. *See* www.pjm.com/planning/rtep-development/stakeholder-process/~/media/documents.agreements/oa/ashx. State eminent domain law, the Public Utility Code and Commission regulations must govern the outcome of this proceeding.

As set forth below, the Applicant has failed to meet its burden of proving the need for the proposed Susquehanna-Roseland 500 kV (SR500) line to meet the projected reliability concerns as early as 2012. Given the unusual severity of the economic downturn not reflected in the January 2009 load forecast, PPL's baseline need analysis, as well as its March 2009 "retool" analysis, are outdated. Moreover, PJM has not incorporated the results of the 2012 Reliability Pricing Model auction (held in May, 2009), in which over 1,000 megawatts (MW) of demand response resources "cleared," or were made available for use in 2012 in the area of claimed need for enhanced transmission, eastern MAAC.[1] In addition, PJM and PPL have included *none* of the future energy efficiency and demand response resources that will result from Pennsylvania's Act 129 and the New Jersey Energy Master Plan, two major statutory and policy initiatives intended to substantially reduce peak load in the area of claimed need.

The evidentiary record reflects that taking these three elements into account would postpone the claimed peak loads in eastern MAAC by roughly eight years. While PJM and PPL insist that this would not be the case, neither has refuted this conclusion with a current updated study, as they were challenged to do, in the course of this case. Essentially, PJM asserts that, in its normal course of planning, it will update the RTEP and make it public in February 2010, which will demonstrate whether the Susquehanna-Roseland line appears to be needed as now claimed or in a later year. By that time, however, this proceeding will be over and there will be no opportunity for the affected parties to conduct an in-depth examination of the modeling that led to the result. The notion that this Commission should approve the project and then just "wait and see" what the 2010 RTEP shows is unacceptable and entirely inconsistent with applicable regulations and the state regulatory process itself.

[1] "MAAC" stands for "Mid-Atlantic Area Council"; PJM uses the phrase eastern MAAC to describe all four New Jersey utilities, PECO (Philadelphia Electric Company) and the Delmarva Peninsula, a historically transmission-congested sub-region of PJM. OCA St. 2 at 2, n. 1.

Moreover, contrary to the Pennsylvania siting regulations, neither PJM nor PPL has considered less expensive and less environmentally intrusive non-transmission alternatives to the proposed Susquehanna-Roseland line, such as future demand response and increased generation. While it is entirely within its ability to calculate requisite amounts of demand response and increased generation in particular locations, and while it would be entirely consistent with its publicly stated policies, PJM has not done so. In addition, neither PPL nor PJM has conducted a cost-benefit analysis specific to the proposed Susquehanna-Roseland line. Without such an analysis, it is impossible for this Commission to meaningfully compare the proposed line with potential non-transmission alternatives.

Given the state of the record in this case, the OCA has proposed that PJM and PPL submit a new "retool" analysis that reflects the major developments that have occurred since the plan for the proposed line was first developed in 2007. Without such additional information, the Commission does not have a sufficient evidentiary basis on which to decide this Application.

Pursuant to applicable Pennsylvania law and the Commission's siting regulations, 52 Pa. Code § 57.71, *et seq.*, the Commission cannot approve PPL's Application for permission to site and construct the proposed Susquehanna-Roseland line at this time. The Commission must either deny the Application outright or, if PPL is willing to voluntarily waive its right to invoke FERC "backstop authority" if this Application is not acted on within a one-year time frame, the Commission should hold it in abeyance until a current study, incorporating new peak load projections, the results of the RPM auction and the peak load reductions expected to occur through statutory and policy initiatives in Pennsylvania and New Jersey, is produced for consideration. Moreover, any approval of this Application that may be forthcoming must be (1) conditioned upon PPL's rerouting the proposed line to avoid construction in the Saw Creek

Estates Community and (2) conditioned on PPL's receipt of all federal permits required to construct the SR500 Line through the Delaware Water Gap National Recreation Area (DEWA) prior to commencing construction of the line.

II. STATEMENT OF THE CASE

On January 6, 2009, PPL filed an Application pursuant to 52 Pa. Code Chapter 57, Subchapter G, for approval of the siting and construction of the Pennsylvania portion of the proposed SR500 line in portions of Lackawanna, Luzerne, Monroe, Pike and Wayne counties in Pennsylvania (Susquehanna-Roseland or SR500 Line). The Company's filing consisted of the Siting Application and Exhibit A: the Necessity Statement; Exhibit B: the Study Area and Route Development; Exhibit C: the Siting Analysis; Exhibit D: the Engineering Description, and Exhibit E: Appendices E-l through E-l 0. Also filed was Appendix E-l: PUC Regulation Cross-Reference Matrix; Appendix E-2: Bibliography of Data Sources Used; Appendix E-3: PPL Electric Vegetation Management Specification; Appendix E-4: Governmental Agencies, Municipalities and Other Public Entities Contacted; Appendix E-5: List of Property Owners within the Proposed Right-of Way; Appendix E-6: Local, State, and Federal Governmental Agencies Requirements; Appendix E-7: PPL Electric Design Criteria and Safety Practices; Appendix E-8: PPL Electric Magnetic Field Management; Appendix E-9: List of Involved Governmental Agencies, Municipalities and Other Entities Receiving Copies and Notice of Application; and Appendix E-10: Cultural Resources within 2 Miles of the Alternative Routes. PPL also filed a petition for a finding that a building to shelter control equipment at the 500-230 kV substation to be constructed in the Borough of Blakely, Lackawanna County, Pennsylvania is reasonably necessary for the convenience or welfare of the public at Docket No. A-2009-2082832.

On January 12, 2009, the Office of Consumer Advocate (OCA) filed a Notice of Intervention and Public Statement and, on January 27, 2009, the OCA also filed a Protest.

On January 26, 2009, PPL submitted the Direct Testimony and Exhibits of the following witnesses: Gregory J. Smith (PPL St. 1); Kenneth B. Kuhns (PPL St. 2); Peter Sparhawk (PPL St. 3); Steven Olinick (PPL St. 4); Jay A. Keeler (PPL St. 5, Exh. JAK-1 through JAK-5); Patrick J. McMackin (PPL St. 6, Exh. PM-1 through PM-4), Steven R. Herling (PPL St. 7); Paul F. McGlynn (PPL St. 8, Exh. PFM-1); John M. Reynolds (PPL St. 9, Exh. JMR-1 through JMR-4); Robert J. Farley (PPL St. 10); Joseph M. Kleha (PPL St. 11, Appendix A); Steve Olinick (PPL St. 12), and Kenneth B. Kuhns (PPL St. 13). PPL later filed the Revised Direct Testimony of Peter Sparhawk (PPL St. 3) on February 2, 2009 and Supplemental Direct of Peter Sparhawk (PPL St. 3 Supplemental) on March 10, 2009.

The matter was assigned to the Office of Administrative Law Judge and subsequently assigned to Administrative Law Judge Susan D. Colwell.

On February 5, 2009, the Office of Trial Staff (OTS) filed a Petition to Intervene. On February 26, 2009, Saw Creek Estates Community Association, Inc. (SCECA) filed a Protest. Petitions to Intervene were also filed by the following: Donna Davis; the Energy Conservation Council of Pennsylvania (ECC); Exelon Corporation; Lehman Township; the Pennsylvania-American Water Company (PAWC); Patrick Lavelle, Esquire on behalf of D. Scott and Patrice Haan; PP&L Industrial Customer Alliance (PPLICA); UGI Utilities, Inc.; and Winona Lake Property Owners Association. Over five hundred (500) individual Protests, the vast majority of them by residents and supporters of the interests of Saw Creek Estates Community Association, were also filed on February 27, 2009.

A prehearing conference was convened on March 6, 2009, and the Prehearing Order was subsequently issued on March 10, 2009 (Fourth Prehearing Order). The Fourth Prehearing Order created a service list; established issues to be addressed in the proceeding; created an initial procedural schedule; established a procedure for requesting a site view and established discovery rules. The Fourth Prehearing Order granted Petitions to Intervene of Winona Lake Property Owners Association, UGI Utilities, Inc., Pennsylvania American Water Company, Exelon Generation, the PP&L Industrial Customer Alliance, and attorney Donna Davis.

On March 9, 2009, a Fifth Prehearing Conference Order was entered ordering SCECA to provide a copy of its membership list to the presiding officer on or before Wednesday, March 11, 2009. On April 14, 2009, a Seventh Prehearing Conference Order was entered granting the petition of Winona Lakes Property Owners Association to withdraw. On April 16, 2009 an Initial Decision was entered denying the Petition to Intervene of Lehman Township and dismissing the Protest of Lackawanna River Corridor Association and its Affiliate, the Lackawanna Valley Conservancy. On May 15, 2009 a Final Order was entered dismissing the forty-five protests for failure to provide an address. Thirty-two protests were dismissed for failure to provide an address or a reason for protesting. By Opinion and Order of the Commission entered June 12, 2009, in this proceeding, the Commission affirmed the dismissal of the late-filed Lehman Township Petition to Intervene, but reinstated the Protest of the Lackawanna River Corridor Association and the Lackawanna Valley Conservancy.

On July 8, 2009, a Protective Order was issued in the proceeding establishing the requirements for the treatment of proprietary and Critical Energy Infrastructure Information.

Two public input hearings were held in Bushkill, Pa, and two public input hearings were held in Clarks Summit, Pa. The Bushkill public input hearings were convened on

March 20, 2009 at 1:00 and 7:00 p.m. at the "Top of the World," a facility within the Saw Creek Estates Community in Bushkill, PA. The Clarks Summit public input hearings were held on May 21, 2009 at 6:30 p.m. at the Newton Ransom Fire Hall and July 2, 2009, at 5:00 p.m. at the Abington Community Library. Approximately ninety-three (93) witnesses testified at the four public input hearings.

On-site hearings were scheduled at Delaware Water Gap National Recreation Area (DEWA) (at various locations within DEWA), Bushkill, Pennsylvania on May 5, 2009 and at SCECA on May 6, 2009, to allow affected property owners to testify. Sworn testimony was offered at each of the site visits, by a total of nineteen witnesses.

Direct testimony and exhibits of other parties were submitted on June 30, 2009 by OCA witnesses Peter J. Lanzalotta (OCA St. 1, Exh. PJL-1-3) and Robert M. Fagan (OCA St. 2, Exh. RMF-1); OTS witness Gary L. Yocca (OTS St. 1, OTS Exh. 1); Saw Creek witnesses David W. Fugate, Ph.D (SCECA St. 1, Attachment DWF-1 through DWF-2, and Appendix DWF-1), David O. Carpenter, M.D. (SCECA St. 2, Exh. DOC-1 through DOC-3, and Appendix DOC-1), and Andrew R. Haakenson, MAI (SCECA St. 3, Exh. ARH-1 through ARH-4, and Attachment ARH-1 through ARH-2).

On August 8, 2009, PPL submitted the rebuttal testimony and exhibits of Gregory J. Smith (PPL St. 1-R), Peter Sparhawk (PPL St. 3-R, Exh. PS-1), Jay A. Keeler (PPL St. 5-R), Steven R. Herling (PPL St. 7-R), Paul F. McGlynn (PPL St. 8-R, Exh. PFM-2), Robert J. Farley (PPL St. 10-R, Exh. RJF-3), Joseph M. Kleha (PPL St. 11-R), J. Michael Silva, P.E. (PPL St. 14-R, Exh. JMS 1 through JMS-2), Mark A. Israel, MD (PPL St. 15-R), Nancy C. Lee, MD (PPL St. 16-R), Jeffrey Tranen (PPL St. 17-R, Appendix A), Douglass Krall (PPL St. 18-R), James M.

Hogan (PPL St. 19, Exh. JMH-1), Mark F. Bates (PPL St. 20-R, MFB-1 through MFB-3), David Ray Dominy (PPL St. 21, Exh. DRD-1), and Jonathon E. Busby (PPL St. 22-R, Exh. JED-1).

Surrebuttal testimony and exhibits were submitted on August 24, 2009 by OCA witnesses Peter J. Lanzalotta (OCA St. 1-S, Exh. PJL-4) and Robert M. Fagan (OCA St. 2-S); OTS witness Gary L. Yocca (OTS St. 1-SR, OTS Exh. 1-SR); Saw Creek witnesses David W. Fugate, Ph.D (SCECA St. R-1), David O. Carpenter, M.D. (SCECA St. R-2), Andrew R. Haakenson, MAI (SCECA St. R-3), Albert M. Spinelli (SCECA St. R-4, Appendix AS-1 through AS-2), and Daniel A. Moscovici, Ph.D. (SCECA St. R-5, Appendix DAM-1 through DAM-3).

PPL submitted rejoinder testimony of Gregory J. Smith (PPL Rejoinder St. 1-RJ, Exh. GJS-3 through GJS-4), Peter Sparhawk (PPL Rejoinder St. 3-RJ, Exh. PS-2 through PS-3), Steven R. Herling (PPL Rejoinder St. 7-RJ), Robert J. Farley (PPL Rejoinder St. 10-RJ), Mark A. Israel, MD (PPL Rejoinder St. 15-RJ), Nancy C. Lee, MD (PPL Rejoinder St. 16-RJ), Douglass Krall (PPL Rejoinder St. 18-R), and Jason Cabral (PPL Rejoinder St. 23-R) on August 31, 2009. The testimonies of Albert M. Spinelli and Jason Cabral were later withdrawn.

Technical evidentiary hearings were held at the Public Utility Commission in Harrisburg on September 1, 2, 4, 8, 9 and 10, 2009.

III. SUMMARY OF THE ARGUMENT

A. Burden of Proof.

Under Section 332 of the Public Utility Code, the proponent of a rule or order in any Commission proceeding has the burden of proof. 66 Pa. C.S. § 332; TrAILCo Order at 6-7. As it seeks an order approving an application, PPL has the burden of proof in the instant case. Moreover, PPL must demonstrate not only that it has met all of the requirements for obtaining a certificate of public convenience and necessity, but also those set forth in the Commission's

transmission line siting regulations and in all other applicable statutes and regulations. 66 Pa. C.S. §§ 1101, 1102(a)(1), 1103; 52 Pa. Code §§ 57.75, 57.76. The Pennsylvania Supreme Court held that the party with the "burden of proof" has a duty to establish material facts by a preponderance of the evidence. Se-Ling Hosiery, Inc. v. Margulies, 364 Pa. 45, 50, 70 A.2d 854, 857 (1950). The "preponderance of the evidence" means that one party has presented evidence which is more convincing, by even the smallest degree, than the evidence presented by the other party. Id. at 48-49, 70 A.2d at 856; TrAILCo R.D. at 57-58.

As will be discussed fully in Section IV., *infra*, PPL has failed to meet its burden of proving, on this evidentiary record, that there is a need for the proposed Susquehanna-Roseland 500 kV transmission line at this time. Re West Penn Power Co., 54 Pa. PUC 319, 320 (1980) (West Penn) (Order adopted the reasoning and conclusions of the Administrative Law Judge's Initial Decision, with the exception of technical issues unrelated to this case); Applications of West Penn Power Co., Initial Decision, Docket Nos. 100200, *et al.*, at 18-19 (January 16, 1980) (Initial Decision).[2] The Commission adopted the ALJ's Initial Decision which stated that the applicant must present proof of present, not future or speculative, need for the proposed facility. West Penn, 54 Pa. PUC at 320-27; Initial Decision, Docket No. 100200 at 18. The Initial Decision also stated that "[a]t a minimum, it must be determined that the public will benefit from the construction and operation of the proposed facilities more than the public will be harmed by them." Initial Decision, Docket No. 100200 at 19. It is worth noting that the Commission based its 1980 West Penn Order, in addition to acceptance of the ALJ's reasoning, on the following flaws in West Penn's evidence:

[2] To clarify, the West Penn Order is the Commission's 1980 Final Order approving the Applications of West Penn Power Co. Initial Decision. A copy of the unpublished Applications of West Penn Power Co. Initial Decision appears in Appendix B attached to this Main Brief.

- West Penn had not updated its load forecast, where the most recent data indicated a de-accelerated growth in peak load (West Penn, 54 Pa. PUC at 321-322);

- The load flows submitted failed to reflect additional generation that may become available to meet the forecasted peak loads when they occur (Id. at 322-323);

- The peak load data included all the loads of interruptible customers, even though those loads could have been used to reduce the forecasted peaks (Id. at 323);

- The assumption in the load flows that *only* the most economic generation would be used, even though overloads or outages caused by the double contingencies might easily be resolved if slightly more expensive generation were used. (Id.).

The Commission in West Penn thus found that, among others, the above combination of circumstances relied upon by the Applicant in its load flow studies to substantiate the evidence of need for its proposed line were incomplete, too remote and too extreme to support a finding that West Penn had met its burden of proving the need for the 500 kV line to serve the public, under the standards set forth in the Public Utility Code. Id.

As also noted by the ALJs in the TrAILCo Recommended Decision, the Company also has the burden of demonstrating that it has minimized the adverse impacts the proposed transmission lines would have on the public and the environment. TrAILCo R.D., at 190; Re West Penn Power Co., 54 Pa. PUC 319, 328-30 (1980).[3] PPL has failed to demonstrate both the need for the proposed transmission lines and that it has minimized the adverse impacts of the proposed line on the public and the environment.

In proposing the siting regulations, the Commission addressed the importance of protecting the environment as well as Pennsylvania citizens. Through promulgating the siting regulations, the Commission imposed a burden on any applicant to demonstrate the effects of the proposed transmission line on the environment, public health and safety -- and to demonstrate

[3] The Commission's siting regulations became final in 1978. Re Overhead Electric Transmission Lines, 51 Pa. PUC at 682 (1978). Apparently, the Commission did not apply the regulations in Re West Penn Power Co. because the regulations were not final when the application initiating that case was filed.

that it has minimized such adverse effects. Re Proposed Electric Regulation, 49 Pa. PUC 709, 709-10 (1976); *see also* Re Overhead Electric Transmission Lines, 51 Pa. PUC 682 (1978) (Final Order). The Commission stated that transmission lines "cannot be constructed without substantially affecting the environment and without impacting upon the public health and safety." Re Proposed Electric Regulation, 49 Pa. PUC at 709. In its Final Order, the Commission stated that "in every siting proceeding the environmental impact will be an issue which the applicant must address affirmatively and completely in order to be granted a siting certificate." Re Overhead Electric Transmission Lines, 51 Pa. PUC at 687. Therefore, as in this case, a higher standard for proving public necessity should be imposed where the Commission may grant a certificate that would result in burdens upon the public, as well as benefits to the public. West Penn, 54 Pa. PUC at 320; Initial Decision, Docket No. 100200 at 18-19.

As discussed below in Section IV., PPL has not met its burden of proof and has not demonstrated that it has met the requirements under Sections 57.75 and 57.76 of the Public Utility Code. 52 Pa. Code §§ 57.75, 57.76. Since PPL has not met its burden of proving a need for the proposed transmission line, its Application for permission to exercise the power of eminent domain in order to construct the line cannot be approved at this time.

B. Summary of the Argument.

PPL has failed to meet its burden of proving that the proposed SR500 transmission line is necessary or proper for the service, accommodation, convenience, or safety of the public. 66 Pa. C.S. § 1101, *et seq.* This Commission has stated that it is not sufficient for an Applicant for a Certificate of Public Convenience merely to show a general need for new facilities to meet reliability concerns; rather, the Applicant must show as well that the proposed new facilities are reasonably responsive to the need that exists. Re West Penn Power Co., 54 Pa.

PUC at 326; TrAILCo R.D. at 234. In the instant case, the Applicant has shown only that the proposed SR500 line would resolve the reliability concerns that it projects to occur from 2012 to 2020. It has failed to demonstrate through a current study that incorporates the major factors that have occurred since the need for the line was initially identified in 2007, that its proposed line is reasonably responsive to the need that PPL claims exists.

The evidentiary record is clear that PPL has presented *only* transmission solutions for its claimed reliability concerns in 2012. Pennsylvania siting regulations make clear that in order for the Commission to approve an EHV line, the Applicant must prove not only need, but also that 1) it will not create an unreasonable risk of danger to the health and safety of the public; 2) that it is compliance with applicable statutes and regulations providing for the protection of the natural resources of the Commonwealth and 3) that it will have a minimum adverse environmental impact, considering the electric power needs of the public, the state of available technology and the available alternatives. 52 Pa. Code § 57.76 (a).

Specifically, the evidence presented in support of the need for the line failed to incorporate three major factors that will impact the need for new transmission in the Roseland area in 2012. First, economic growth drives peak load forecasts and the US economy has experienced an unusually severe downturn in the last twelve months. PPL's baseline need analysis and March 2009 Retool Study do not capture any economic data more recent than the final quarter of 2008. Second, the Reliability Pricing Model Auction (RPM) cleared a far higher amount of Demand Response Resources for the summer of 2012 in eastern MAAC than in any prior year (over 1,000 megawatts) – and cleared Energy Efficiency Resources for the first time. PPL's analyses do not take these future resources into account. Third, PPL has failed to take into account the Pennsylvania and New Jersey initiatives to substantially reduce peak load.

Pennsylvania's Act 129 mandates peak load reductions by 2013 and New Jersey's "Energy Master Plan" directs a series of energy efficiency initiatives with specified peak load reductions by 2020.

As to Saw Creek Estates, while PPL's planned use of existing transmission ROWs for this Project is generally consistent with best practices, in this community, PPL's plan must give way to common sense and the need to ensure public safety. The SCE community has substantially built up and around the existing 230kV transmission lines and the current 150 foot cleared ROW, on terrain that is steep, rocky, and heavily wooded. Planning to build a 500kV transmission powerline through this tightly-packed community is simply not reasonable.

In addition, the Commission held evidentiary hearings in the Delaware Water Gap National Recreation Area (DEWA), through which PPL has proposed to construct the SR500 line. Witnesses testifying on behalf of this federally protected area raised multitude of concerns over the impacts of construction on the environment within DEWA. Assuming that the Commission is able to decide the Application on this record, the OCA submits that as a condition of commencing actual construction of any portion of the proposed line, PPL demonstrate to this Commission that all permits required to engage in construction within DEWA have been obtained.

In summary, on this evidentiary record, PPL has not met its burden of proving the necessity for the Susquehanna-Roseland 500 kV line, nor it has met all of the other regulatory criteria set forth within the Commission siting regulations., 52 Pa. Code §§ 57.71-57.77. Therefore, the Commission cannot approve PPL's Application for a Certificate of Public Convenience and Necessity pursuant to 66 Pa. C.S. § 1101, *et seq.*, at this time. As such, the Commission must either deny the Application outright or, in the alternative, request that PPL

waive the federally-imposed one-year timeframe for a decision and hold this proceeding in abeyance while the required retool study is performed and made available for the Commission's and the parties' review.

IV. PROPOSAL FOR NEW FACILITIES

A. Legal Standards.

The genesis of the Commission's extra-high voltage line siting regulations was the adoption by the General Assembly of Article 1, Section 27 of the Pennsylvania Constitution, which states that the public has the right to clean air, pure water and the preservation of the environment.[4] Pa. Const., Art. 1, § 27. The Commonwealth's obligations in preserving the environment were further expressed in a three-part test by the Commonwealth Court in the case of Payne v. Kassab, in which the Court stated:

> The court's role must be to test the decision under review by a threefold standard: (1) Was there compliance with all applicable statutes and regulations relevant to the protection of the Commonwealth's public natural resources? (2) Does the record demonstrate a reasonable effort to reduce the environmental incursion to a minimum? (3) Does the environmental harm which will result from the challenged decision or action so clearly outweigh the benefits to be derived therefrom that to proceed further would be an abuse of discretion?

11 Pa. Commw. 14, 29-30, 312 A.2d 86, 94 (Pa. Commw. Ct. 1973). The Order proposing the regulations specifically stated that the Commission, when considering the exercise of eminent domain, "has a constitutional responsibility pursuant to Article I, Section 27 of the Constitution of Pennsylvania to ensure the protection of the environment whenever the issue of damage to the

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[4] Article 1, Section 27 states in full:

> The people have a right to clean air, pure water, and to the preservation of the natural, scenic, historic and esthetic values of the environment. Pennsylvania's public natural resources are the common property of all the people, including generations yet to come. As trustee of these resources, the Commonwealth shall conserve and maintain them for the benefit of all the people.

Pa. Const., Art. 1, § 27.

environment is raised." Re Proposed Electric Regulation, 49 Pa. PUC at 712. The Commission also stated that "overhead electric transmission lines cannot be constructed without some adverse effect upon the environment. Therefore, the review required by Article I, Section 27 is being incorporated into our siting regulation." Id.; *see also* Re West Penn Power Co., 54 Pa. PUC at 328-30; Re Pennsylvania Power & Light Co., 50 Pa. PUC 480, 491 (1977) (PPL 1977) (citing Payne v. Kassab, 312 A.2d at 94). The 1978 final Commission transmission siting regulations include an articulation of the Payne v. Kassab three-part standard. Re Overhead Electric Transmission Lines, 51 Pa. PUC at 687; 52 Pa. Code §§ 57.75, 57.76.

Thus, pursuant to the Pennsylvania Constitution and applicable appellate precedent, the Commission's regulations require a determination of the impact of the proposed 500 kV transmission line on the environment. Specifically, Section 57.75(e)(3) requires an evaluation of "impact and the efforts which have been and will be made to minimize the impact, if any, of the proposed HV line" upon land use; soil and sedimentation; plant and wildlife habitats; terrain; hydrology; landscape; archeological areas; geologic areas; historic areas; scenic areas; wilderness areas; and scenic rivers. 52 Pa. Code § 57.75(e)(3). Moreover, the regulations require that the proposed HV transmission line not "create an unreasonable risk of danger to the health and safety of the public" and that any proposed line "have a minimum adverse environmental impact, considering the electric power needs of the public, the state of available technology and the available alternatives." 52 Pa. Code § 57.76(a)(2), (4).

Although the ALJ and the Commission did not specifically apply the regulations in the 1980 West Penn Application, the principles on which they relied are completely consistent with the letter and spirit of the regulations. The Administrative Law Judge's decision stated transmission lines "cannot be constructed without substantially affecting the environment and

without impacting the public health and safety." Initial Decision, Docket No. 100200 at 19 (quoting the Commission's Order in Re Proposed Electric Regulation, 49 Pa. PUC at 709) (Initial Decision is attached to this Main Brief as Appendix B). In that case, witnesses at public hearings expressed concerns regarding impact to land use and development, the displacement of wildlife, impact on clean streams and watershed pollution, damage to trees due to herbicide spraying, the proximity of the line to towns and residences, electrical interference, electric shocks, collapse of towers and danger of fire or other harm to animals or humans near the proposed line. Id. at 8-9; West Penn, 54 Pa. PUC at 328-30. These concerns are substantially similar to those expressed at the public input hearings and site visits in the instant case. ALJ Michael A. Nemec's Initial Decision stated "[t]he cumulative effect of all these legitimate concerns is that a high-voltage line is, minimally, an offensive intrusion in our environment, in many cases a nuisance, and, in foreseeable instances, a real danger." Initial Decision, Docket No. 100200 at 9; *see also* West Penn, 54 Pa. PUC at 328-30.

Moreover, in order to be able to construct transmission lines if approved by this Commission, public utilities may exercise the power of eminent domain to take, occupy and condemn property under Section 1511 of the Business Corporations Code. 15 Pa. C.S. § 1511(a). Section 1511 also places the burden of proving that the "service to be furnished by the corporation through the exercise of those powers is necessary or proper for the service, accommodation, convenience or safety of the public." 15 Pa. C.S. §1511(c). Thus, in order to exercise the power of eminent domain, PPL must prove, by a preponderance of the evidence, that it has met every element of every applicable statute and regulation of this Commission.

Subsequent to the 1980 West Penn case and the promulgation of the siting regulations, the Commonwealth Court vacated the Commission's denial of a siting application

because the Commission forced the company to show that the proposed line was a necessity from an "engineering perspective." Pa. Power & Light Co. v. Pa. PUC, 696 A.2d 248, 250 (Pa. Commw. Ct. 1997) (PPL).[5] The Commonwealth Court rejected the Commission's imposition of the "engineering need" burden, and instead, refocused the siting inquiry on Section 1501 of the Public Utility Code. That section requires, in pertinent part, every utility to make improvements "as shall be necessary or proper for the accommodation, convenience and safety of its patrons, employees and the public." 66 Pa. C.S. § 1501; PPL, 696 A.2d at 250. The Court emphasized language in the siting regulations as well that requires that the Commission, prior to granting approval of an application, find that the proposed line will have a minimum environmental impact "considering the electric power needs of the public, the state of the available technology and the available alternatives." PPL, 696 A.2d at 250 (quoting 52 Pa. Code § 57.75(a)(4)). The Court remanded the case for consideration of the "statutory standards specified in the Code and the regulations promulgated thereunder." Id. at 248.

More recently in the TrAILCo proceeding, Administrative Law Judges Nemec and Hoyer, based in part upon the Commonwealth Court's holding in PPL, expressed the standard as follows:

> The inquiry to determine whether a public need for a transmission project exists depends on the specific facts presented regarding each project and upon the future impacts or consequences within a broad context. The impacts and consequences of approving the project and the impacts and consequences of not approving the project, both beneficial and adverse, must be weighed. The Commission must determine, for planning and policy purposes, whether a proposed transmission project is ultimately necessary or proper for the accommodation, convenience and safety of patrons, employees and the public.

[5] The Supreme Court denied the petition for allowance of appeal of this Commonwealth Court Order. PPL v. Pa. PUC, 719 A.2d 748, 553 Pa. 709 (1998).

TrAILCo R.D. at 80-81. The Commission determined that the ALJs applied the appropriate legal standards in consideration of that application, stating:

> The ALJs applied the appropriate statutory and regulatory standards in their consideration of [the] matter. In doing so, it was entirely appropriate for the ALJs to examine federal policy and national issues revolving around the transmission grid. Similarly, we find that the ALJs properly examined issues such as the potential costs of green house emissions, DSM and energy efficiency alternatives and whether the proposal was built to facilitate west-to-east transfers of generation.

TrAILCo Order at 29. The Commission rejected the ALJs' Recommended Decision in part, however, and determined that TrAILCo had met its burden of proving that one of the proposed projects, the 502-to-Loudoun line, was needed. This part of the TrAILCo Order was appealed by the Energy Conservation Council of Pennsylvania and is currently pending before the Commonwealth Court.[6]

As for the second project proposed in TrAILCo, known as the "Prexy Facilities,"[7] the Commission directed the active parties to the proceeding to engage in a collaborative process as set forth in a Partial Settlement Agreement among TrAILCo, West Penn Power Company and the Greene County Board of Commissioners. TrAILCo Order at 68. Consideration of the Applications with regard to the Prexy Facilities was stayed pending the outcome of the collaborative.

As noted earlier, in any application for a certificate of public convenience and necessity to construct a high-voltage transmission line, the applicant must show not simply that some kind of additional transmission facilities are needed to continue to provide reliable service,

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[6] Energy Conservation Council of Pennsylvania v. Public Utility Commission, 51 C.D. 2009. Appellant argues on appeal, *inter alia*, that the Commission applied incorrect legal standards, contrary to PPL, *supra*.

[7] The "Prexy Facilities" consisted of a 500/138-kv substation, a 36-mile long 500 kV transmission line to connect the substation to the 502 substation and three 138-kv lines to connect the substation to surrounding facilities. TrAILCo R.D. at 2, n.2.

but rather whether the specific facilities proposed are necessary or proper for the service, accommodation, convenience or safety of the public. Re Pennsylvania Power & Light Co., 50 Pa. PUC 480, 484 (1977); West Penn, 54 Pa. PUC at 327. Proposed facilities must be reasonably responsive to the need that exists. West Penn, 54 Pa. PUC at 320-27; Initial Decision, Docket No. 100200 at 18-19. As will be discussed further below, PPL has failed to meet this standard.

In addition, the Company must meet the Commission's substantive requirements in the transmission line siting regulations. 52 Pa. Code §§ 57.75, 57.76. Under Section 57.75, PPL must show the: (1) present and future necessity of the proposed line; (2) safety of the line; and (3) "impact and the efforts which have been and will be made to minimize the impact, if any," on land use, soil sedimentation, plant and wildlife habitats, terrain, hydrology, landscape, archaeological areas, geologic areas, historic areas, scenic areas, wilderness areas and scenic rivers. 52 Pa. Code § 57.75(1)-(3).

Further, Section 57.76 requires a determination of the following factors for the approval of a proposed transmission line: (1) that the line is needed; (2) that it will not create an "unreasonable risk of danger to the health and safety of the public"; (3) that it is in compliance with statutory and regulatory requirements for the protection of Pennsylvania's natural resources; and (4) that it will "have a minimum adverse environmental impact, considering the electric power needs of the public, the state of available technology and the available alternatives." 52 Pa. Code § 57.76(a)(1)-(4). The Commission's approval of the siting application would also include a grant of authority to use of eminent domain power "to locate and construct the proposed HV transmission line within a corridor consisting of the area of 500 feet on each side of the centerline of the proposed HV transmission line." 52 Pa. Code § 57.76(b); *see also* 52 Pa. Code § 57.75(i) (eminent domain siting application requirements).

The Commonwealth Court stated that the "PUC, upon application, must determine if a requested exercise of the powers of eminent domain by a public utility corporation is *necessary or proper for the service, accommodation, convenience or safety of the public*." PPL, 696 A.2d at 250. As discussed above, the Commonwealth Court determined that the PUC "erroneously required that PP&L demonstrate a 'need' for the installation of the transmission line from an 'engineering' prospective [sic]." Id. It follows that engineering factors alone are not sufficient to determine whether there is a need for the proposed line. Instead, the Commission must determine whether the line is necessary based upon the factors identified in 52 Pa. Code § 57.76(a). Id.

In the 1980 West Penn case, the Commission denied the Company's application for a proposed Harrison-Prexy-Yukon 500 kV transmission line that would have extended 38 miles from West Virginia to a proposed Prexy substation in Washington County and then 23.3 miles east through the Yukon Substation. West Penn, 54 Pa. PUC at 320; Initial Decision, Docket No. 100200 at 53. Therein, ALJ Nemec observed that, traditionally, many of the cases that established the standard of need for a certificate of public convenience were motor carrier cases; but in a transmission line proceeding "a higher standard for proving public necessity should be imposed where the granting of a certificate will burden as well as benefit the public." Initial Decision, Docket No. 100200 at 18-19. The Commission affirmed ALJ Nemec's decision in virtually every respect. West Penn, 54 Pa. PUC at 320.

In conclusion, PPL must demonstrate by a preponderance of the evidence that its proposed facilities are reasonably responsive to the public need that exists and that it has met the requirements of the siting regulations, as noted above. PPL must also show that the benefits to the public outweigh the burdens of its proposed facilities. As more fully set forth below, based

upon the evidence of record in this case, PPL has failed to meet these legal and regulatory standards, and the Application therefore cannot be approved at this time.

B. Need.

1. PPL Has Not Proved That The Susquehanna-Roseland Line Is Needed To Serve The Public.

a. Introduction.

In PPL's Application, the need for the SR500 Project was based on twenty-three potential reliability violations that were projected to occur in the future, ranging from the years 2012 to 2022. These twenty-three potential reliability violations were projected to occur based on load flow studies incorporating a complex set of modeling assumptions, tests, and most importantly, a peak load forecast. The peak load forecast (issued by PJM in January, 2008) that was used as part of these modeling assumptions, however, was created prior to the current economic recession. Due to the current recession, a sea change has taken place over the last twelve months as to the demand for electricity, with a concomitant effect on the peak load projections underlying the Company's claims that the SR500 line is needed to serve the public. This rapidly-changing landscape requires that the most current data available be included for the Commission to consider in this proceeding.

Through the discovery process, the OCA requested that the Company update its analysis with the latest load projection data available. The Company responded with a retool study that was performed during January, 2009, and reviewed with PJM's Transmission Expansion Advisory Committee (TEAC) during March, 2009 (referred to on this record as the "March 2009 Retool Study"). The March 2009 Retool Study used the PJM Peak Load Forecast issued in January 2009, which was based on 2008 economic growth data and thus, incorporated no data more recent than the final quarter of 2008. Even so, based on this revised study, the

twenty-three potential reliability violations had shrunk to only thirteen potential reliability violations.

The March 2009 Retool Study, using the January 2009 Peak Load Forecast information showed a substantial change in the number and the timing of potential reliability violations from PPL's filed case. And, not only did the number of potential reliability violations decline, but also the severity diminished because the only projected 500kV overload from the original 23 potential violations was no longer included in the list of the remaining 13 potential violations. Moreover, several of the remaining potential reliability violations' projected year of occurrence had been pushed out to a later timeframe. The March 2009 Retool Study showed a significantly changed set of potential reliability violations from the original projections made by PPL in its filed case. Other external events that would also bear directly on the need for the SR500 Project, however, had not been included in the analysis, as the OCA had requested.

OCA witness Robert Fagan incorporated the results of the March 2009 Retool Study in his Direct Testimony to show the impact that the economic recession has had on the demand for electricity, especially peak demand which is critical to the analysis of need here. Mr. Fagan testified to the results of the May 2009 Reliability Pricing Model (RPM) Auction, in which a significantly increased amount of Demand Response resources cleared, compared to prior years, and thus become available as a capacity resource in the areas prone to congestion, including northern New Jersey, where the SR500 Line is to terminate. Mr. Fagan testified as well to PA Act 129, the resulting Pa electric utilities' plans and New Jersey Energy Master Plan initiatives to curb the growth of peak demand, specifically illustrating how those programs could substantially postpone the claimed year of need (2012) for the SR500 Project.

Neither PPL nor PJM had included the results of the May 2009 RPM Auction in their analyses. Neither PPL nor PJM performed any sensitivity analysis using the PA Act 129 or New Jersey Energy Master Plan peak load growth reduction estimates. Recognizing these shortcomings of the March 2009 Retool Study, and recognizing that the January 2009 Peak Load Forecast was created from data compiled in the fourth quarter of 2008, Mr. Fagan testified that a current retool study was necessary in order for the parties to accurately assess the need for the SR500 project in such a rapidly-changing environment. OCA witness Peter Lanzalotta also echoed these thoughts in his Direct Testimony.

Mr. Lanzalotta testified that, only assuming PPL/PJM's load projections valid and with twenty-three potential reliability violations, the Company's proposed 500kV project may make sense from an engineering perspective. Mr. Lanzalotta also testified, however, that as the number of violations shrinks it may well be more cost-effective and less environmentally intrusive to consider individual solutions on lower voltage lines that do not involve a new $1.2 billion 500kV line. A current retool study incorporating *all* relevant data would prove to be a valuable tool to this Commission in the analysis of whether a 500 kV line is a "right-sized" solution, considering the timing and number of the anticipated reliability issues. Indeed, it is the only way that this Commission can determine whether the proposed 101-mile $1.2 billion SR500 line is commensurate with the need that exists in accordance with the relevant regulatory standards, as discussed above. The OCA's Direct Testimonies were clear on the absolute need for a current retool study for this Commission to consider in determining whether to grant or deny this Application.

PPL and PJM have access to this information and the ability to rerun the analysis with this information; yet, neither entity has provided this as part of the record evidence here.

For all the reasons discussed below, a retool study incorporating the most recent data which would impact the outcome is needed for the Commission to reach a decision under current regulatory standards in this important matter involving a $1.2 billion transmission line that would traverse 101 miles of northeast Pennsylvania, including three miles through a community of 3000 homes and six miles of the Delaware Water Gap National Park, an area protected by federal law.

Without a current retool analysis, the OCA submits that this Application should be denied, as PPL has failed to carry its burden of proof that this line is needed to be in service by June 2012. Alternatively, PPL could waive the federally-imposed one year decisional timeframe and request that this proceeding be held in abeyance, while the required retool is performed and made available for the parties' and the Commission's review.

b. A Retool Study, Using the Most Current Data Available Is Necessary in Order For This Commission to Determine Whether This Project or Some Lower-Cost, Less Intrusive Project Is Required for Reliability.

i. Predicted, Potential Reliability Violations.

In his Direct Testimony, OCA witness Lanzalotta discussed the Company's initial list of twenty-three potential reliability violations of planning criteria as the starting point for the OCA's analysis of the claimed need for the line:

> These are potential violations of transmission system planning criteria promulgated by NERC and others. NERC planning criteria require that the transmission system be capable of supplying projected loads with no transmission line or transformer loaded at higher than normal ratings and with all substations within normal voltage limits, under normal system conditions with all system components in service. NERC planning criteria also require that, under a single contingency, the transmission system be capable of supplying generally all projected loads with no transmission line or transformer loaded at higher than emergency ratings and with all substations within emergency voltage limits.

OCA St. 1 at 6-7 (footnote omitted). Mr. Lanzalotta described that a "contingency" is simply a situation in which one component of the system, such as an individual line, substation or generation unit is forced out of service. As Mr. Lanzalotta explained:

> Typically, when a component of the transmission system is forced out of service, the rest of the system becomes more heavily loaded. In order to provide reliable electric service, NERC requires that transmission system planners have to **plan for a system that will deliver reliable service, even if individual components of that system suffer an unplanned outage**.

OCA St. 1 at 7 (emphasis added). Mr. Lanzalotta went on to explain that such "contingencies" are modeled for system planning purposes and defined further what is meant by PPL's use of the term "reliability violation," as follows:

> A reliability violation occurs, for planning purposes i) when the projected loading of any transmission line or transformer is above the normal rating of that component, or when the voltage level at any substation falls outside normal limits, assuming that all system components are in service, or ii) when the projected loading of any transmission line or transformer is above the emergency rating of that component, or when the voltage level at any substation falls outside emergency limits, assuming any single contingency. In fact these are potential violations, since the system planning process hopefully finds these violations in time for them to be remedied before they actually occur.

OCA St. 1 at 7-8. It is through "load flow studies" that potential line overloads or low-voltage levels are shown years in advance of their possible occurrence. For purposes of this proceeding, it is important to be clear about this terminology and the nature of these claimed "reliability violations."

In brief, the North American Electric Reliability Corporation (NERC) establishes certain planning standards that must be met to ensure reliability of the transmission system. PJM, PPL and all transmission owners periodically test their transmission systems through load

flow studies to ensure compliance with these NERC planning criteria during future time periods. The different test procedures discussed herein, such as the Generator Deliverability Test or the Load Deliverability Test,[8] must proceed from some prediction (forecast) of what peak loads will be placed on the transmission system in a future year. Thus, these "violations" or "contingencies" are projections of the future state of the transmission system based on the forecasted loads for that future peak period and do *not* represent the normal day-to-day operations of the transmission system in real time, either presently or during the future period. The following cross-examination of PJM witness Steven Herling provides some clarity on this important point:

> Q. …When you use the word violations, what are you saying is being violated?
>
> A. [W]ithin the NERC planning standards, there are criteria that must be satisfied. For example, when you have a single contingency, no other facilities can be loaded above their emergency ratings, following that single contingency.
>
> Q. …[W]hen you say single contingency, that means as a result of the modeling that you do, not, in fact, a contingency, correct?
>
> A. I'm not sure I understand the distinction, but in the planning context, we modeled contingency. **It's not a function of them actually happening during operational conditions. It's a function of the fact that they could happen.** And in planning, we

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[8] During cross examination PJM witness Herling described these tests as follows:

Q. Now… does the generator deliverability test assess whether transmission capacity is sufficient to get power from a particular generation area to the remainder of PJM?

A. To clarify, when we test for generator deliverability, we turn up a particular cluster of generators based on their impact on an individual transmission line. So, the test is to ensure that the excess generation in that area can be delivered to the remainder of PJM, not all the generation, just the excess.

Q. …[T]hen in contrast, the load deliverability test would do the opposite, it would determine whether in a particular load area, the generation can get into that area under emergency conditions, correct?

A. Correct, if a particular area is experiencing higher than normal loads and less generation availability than normal will the transmission system support the delivery of energy from the rest of PJM.

Tr. at 1271-72.

> have to test each and every contingency. And if a line were to overload, meaning, load above its emergency rating, that would be a violation of the criteria that underlie the NERC planning standards. A violation of the standards would be if we were to ignore a violation of the criteria that standards require us to develop a plan to mitigate the violation of the criteria.
> I realize it's a little perhaps confusing, but, the point is, **when we identify criteria violations, the standards require us to fix them. If you don't fix them, that's a violation of the standard.**
>
> Q. Right. So, you're not subject to a fine if a contingency actually occurs, you're subject to a fine it you don't react to a prospective contingency that you identified?
>
> A. … I agree with what you said, the first part of it is an operational concept. If there is a contingency in day-to-day operations and a line overloads, there is… no violation of standards and no fine. **But if that happens in our planning studies and we ignore it, that's a violation of the standards.**

Tr. at 1288-90 (emphasis added). As a point of further clarification, ALJ Colwell questioned PPL witness Olinick as follows:

> JUDGE COLWELL: … Now…what we're talking about is an actual violation of a planning standard, is that correct? Is that what these 23 violations are? Actual violations of planning standards, it's not that the overruns are right now, they are projected to be in the future, but they're recognized now, and that's a violation of a planning standard.
>
> …
>
> THE WITNESS: … Yes, I would use the term potential. You're doing system planning, you're looking at the system in the future, you're applying the principles and practices, the rules on how you evaluate the system. When you do that evaluation and the analysis, these 23 overloaded 230 kV and 500 kV lines appear in your analysis. They show up ------as exceeding in the emergency rating of the conductor.
>
> JUDGE COLWELL: But that overload is projected for a future date?

> THE WITNESS: Yes. And that's why in tables that have been prepared, PJM has showed what line will be overloaded at what earliest date.

Tr. at 1773-74. It is potential reliability planning standard violations based on the projected future state of the transmission grid that are in question here. Importantly, these potential reliability violations change as different assumptions are modeled, in particular, what peak load forecast is used. As Mr. Lanzalotta noted, the initial twenty-three violations were based on peak load forecasts prepared before the economic downturn. OCA St. 1 at 10. In his Direct Testimony, OCA witness Robert Fagan succinctly described the importance of the peak load forecast as a driver for the need for proposed transmission system enhancements, as follows:

> PJM's transmission analyses use peak demand data, not energy usage data. The claimed need for the SR500 line arises from peak, not average, use of the transmission system. Peak use occurs in the summer period in the PJM region.

OCA St. 2 at 5. Although there are other factors that are included in a retool analysis, other factors that can certainly have an effect on the future state of the transmission grid and the presence of potential reliability violations, the magnitude of the forecast peak load and the forecast peak load net of "demand side" resources that reduce load, is of critical importance, as will be discussed in detail below.

ii. The March 2009 Retool Study.

The peak load forecast is of critical importance to this proceeding, in that it drives all other aspects of the planning process. A higher peak load forecast in future years, all other factors constant, will result in more demands being placed on the transmission system and could result in a need for more planned transmission system upgrades. A lower forecast, again with all other variables held constant, will result in lower loads on the transmission system and a lesser need for system upgrades. Forecasting anything accurately, even during ordinary economic

times is challenging. The current proceeding is taking place during a time that is anything but ordinary in terms of the economy, evolving technology and the law and policy governing the electric industry brings great focus to this peak load forecast. Current and accurate data on forecasted peak demands on the transmission system, prior to making a decision that will involve spending more than $1.2 billion of the PJM ratepayers' funds, must be a priority in this Commission proceeding.

As previously discussed, the peak load forecasts that were used to support the initial list of twenty-three potential reliability violations found in PPL Exhibit PFM-1 were prepared before the current economic recession and the resulting downturn in demand for electricity. OCA St. 1 at 10; OCA St. 2 at 22-24. The "demand destruction" that has occurred in the electric industry as a result of the recession is well-known. This fact has certainly not been lost on many of the consumers who turned out to the Public Input Hearings in this matter, as the following excerpts show:

> Most specifically, I want to share my concern about the need for this line. PPL chief executive James Miller was quoted [as saying]… that the usage of the energy has actually gone down. The demands dropped by .05 percent. And they projected an increase.
>
> What's important about this, he says in there, if the recession gains steam, and I think it will, we will see demand destruction. I would like to go on the record of showing my full support for Mr. Miller's courage to be transparent. Many executives who seek to grow their businesses wouldn't show such valor. And I believe his statements. So I would like to ask if PPL's own executive asserts demand destruction, then why are we even here?
>
> Now, don't get me wrong. I acknowledge PPL's middle level managers took the time to gather projection data. And now I beg you, I beg you to compel them to go back and redo their work. Those studies were conducted prior to this recession. I believe consumers have changed their electricity consumption behavior.

> And **before any approval is given to increase capacity unnecessarily, PPL should be forced, and I say forced, to prove and reprove that demand exists.**

Christopher Irwin-Dudek, Tr. at 113-14 (emphasis added).

> …the most important [thing is] whether there is a demonstrated need for improvement, whether it be done smartly, AKA, smart grid and, lastly that it be done safely. Unfortunately, in my opinion, PPL [has] not met the burden of proof on any of these issues so far. PPL, based on PJM Interconnection load forecasting models, claims that this line is needed to address reliability issues in future overloads in the grid. The PJM load energy forecasting model study that PPL has used as proof of the need for this upgrade forecast an annual expected growth of 1.5 percent. This study is being dated February 22, 2007. I certainly do not need to point out to Your Honor, as well as the people in this room, how much our country and its economy have changed since February of 2007.
>
> …
>
> Suffice to say, if PPL's own CEO [James Miller] says the demand is dropping, how can PPL claim that there is a need for this line?

Albert Spinelli, Tr. at 134-35.

> In fact, our regional ratepayers will pay for the costs of this project in increased transmission fees, but PPL and I'm speaking to PPL, not to the New Jersey version, I'm speaking to our PPL, because I believe they failed to prove there is a need for this project.
>
> The rationale given to construct this transmission line, I've read, was reliability. I've read too because it's to meet an anticipated 1.4 percent demand increase. But, in fact, **demand for electricity in this region was actually down last summer, not up.**
>
> **And, recently, the Pennsylvania Legislature has passed the Pennsylvania Energy Conservation Bill, Act 129. And that requires Pennsylvania's electric utilities to reduce peak demand by four and a half percent by 2013.**
>
> This bill emphasizes efficiency rather than investing in infrastructure to accommodate expensive new nuclear generation proposed in Berwick.

> PPL has failed to prove that the motivation for the construction of this line is reliability and not economics. As demand has declined, declined and even some workers have been laid off.

Frank Muraca, Tr. at 545-46. As many of the consumers accurately testified, the initial peak load forecasts and estimates of future demand growth relied on by the Company were quickly outdated by the onslaught of the economic recession in the final quarter of 2008. OCA witness Fagan further elaborated on these significant changes:

> **The January 2009 load forecast report reflects significantly lower PJM zonal peak demands than the January 2008 load forecast report.** For example, the January 2009 PJM Mid-Atlantic Area ("MAAC") coincident peak[2] forecast for summer 2009 (62,452 MW) is 3.5% lower than the previous year's forecast for summer 2009 (64,724 MW). It is 4.1% lower for the summer 2010 period. The first part of Table 1 below contains the 2008 and 2009 extreme peak load forecast for MAAC. It also shows the difference in MAAC peak load between the January 2008 load forecast and the January 2009 load forecast. The remainder of the table shows similar comparative forecasts for two subsets of the MAAC region, i) eastern MAAC, consisting of the New Jersey utilities, the Delmarva peninsula, and the PECO service territories; and ii) New Jersey. **The peak load in the eastern MAAC region, and especially the New Jersey service territories, is a key driver of the claimed need for the proposed SR500 line.**
>
> [2] Coincident peak refers to the actual peak load seen across several or many regions or zones, and it accounts for the fact that not all zones will experience their own peak demand at the same time as other zones. Coincident peak load across a series of zones is usually lower than the sum of the non-coincident peak loads for those same zones.

OCA St. 2 at 5-6 (emphasis added). As Mr. Fagan discussed, there are significant differences between the January 2008 peak load forecast and the January 2009 peak load forecast. The newer forecast shows much lower peak demand then what was originally forecast by PJM for the area of concern in the study that initially supported the claimed need for the SR500 line. In his Direct Testimony, Mr. Lanzalotta explained why this information is so critical to the assessment

of need here -- and why even the March 2009 Retool is inadequate to determine whether the claims of need are credible:

> As part of PJM's RTEP process, last March it prepared what is called a "retool" study that looked at changes in load forecast, in available generation, and in other factors that affect the need for system reinforcement. This March 2009 PJM Retool Study claims to reaffirm the need for the S/R line in 2012. However, the Company did not update the list of 23 potential reliability violations that was filed in this proceeding until June 25, and then only after inquiries by the OCA. **This updated list of potential reliability violations shows that the effect of this Retool Study was to substantially reduce the number of potential reliability violations in support of the S/R line.** Table 1 below reflects the transmission system facilities that were reflected in the 23 reliability violations filed with the Company's Application, and compares the year of overload from the Company's Application with the year of overload from the March 2009 PJM Retool Study.

Table 1

		Testimony	2009 Retool
		Date of	Date of
	Facility	Overload	Overload
1	Greystone Q-Whippany 230 kV	2012	2013
2	Branchburg-Readington 230 kV	2012	2012
3	Readington-Roseland 230 kV	2012	2012
4	Bushkill-Kittatinny 230 kV	2013	
5	Montville-Roseland 230 kV	2014	2016
6	Whippany-Roseland 230 kV	2014	2013
7	Martins Creek-Portland 230 kV	2014	2016
8	Richmond-Camden 230 kV	2015	2017
9	W.Wharton-Greystone 230 kV	2016	2018
10	Kittatinny-Pohatcong 230 kV	2016	2018
11	**Kittatinny-Newton 230 kV**	**2017**	**2021**
12	Martins Creek-Morris Park 230 kV	2017	
13	East Windsor-Smithburg 230 kV	2017	
14	Waneeta-Richmond 230 kV	2017	
15	**Newton-Lk Iliff 230 kV**	**2018**	**2022**
16	Portland-Kittatinny 230 kV	2019	
17	Lk Iliff-Montville 230 kV	2019	
18	**Hosensack-Elroy 500 kV**	**2019**	
19	Glen Gardner-Chester 230 kV	2019	2019
20	Portland-Greystone Q 230 kV	2020	
21	**Coxcorner-Lumberton 230 kV**	**2021**	**2022**
22	Gilbert-Mornstown 230 kV	2021	
23	Bridgewater-Middlesex 230 kV	2021	

OCA St. 1 at 11-12 (footnote omitted; emphasis added). The PJM March 2009 retool study essentially updated the last RTEP analysis by using the PJM 2009 peak load forecast (incorporating data up to the final quarter of 2008), and by using the most recent information available to PJM as to generator availability and retirements in the future years. Table 1 above was prepared by PJM as a response to OCA discovery. OCA witness Lanzalotta discussed the significance of the retool study and Table 1, as follows:

> Of the 23 original violations, only 13 remain. Of these 13 remaining violations, three occur after 2019.

> It is relevant to note that the retool study eliminates the 500 kV overload, that was one of the original 23 reliability violations, moving it out past the 15 year planning horizon used by PJM.
>
> This leaves ten 230 kV system overloads, driven by single contingencies, in or before the year 2019, as the prime justification for the S/R Line.

OCA St. 1 at 12.[9] As is readily apparent from Table 1, the effects of the recession and a lower peak load forecast drastically changed the potential reliability violations supporting the claimed need for the SR500 Project. OCA witness Fagan explained the importance of the peak load forecast changes from 2008 to 2009 by providing the specific load reductions:

> At a high level, it illustrates that the extreme summer peak forecast reduction between the forecast vintages 2009 and 2008 in MAAC, Eastern MAAC, and New Jersey is such that the extreme peak load has been "pushed out" one to three years.
>
> …
>
> [T]he coincident peak load forecast (summer extreme, 90/10) for 2012 for the MAAC region from the 2008 PJM Load Forecast is 67,617 MW. The 2009 PJM Load Forecast projects a 2012 value of 66,416 MW, or a 1,201 MW decline from the 2008 Forecast.
> For the eastern MAAC region, the 2008 Forecast projection for non-coincident peak load in 2012 was 37,974 MW; using the 2009 Forecast, the equivalent value is 36,928 MW, a 1,046 MW decline from the 2008 Forecast value.
>
> The "declines" in earlier years – 2011, 2010, and 2009 – are even steeper, as the table shows.
>
> Yet another way to view this is that the extreme coincident peak load level projected for MAAC for the summer of 2010, for example (65,811 MW) will not be met or exceeded until 2012 (projected peak = 66,416 MW). This same conclusion – i.e., year 2010 extreme peaks will not be met or exceeded until 2012 - applies to the Eastern MAAC and New Jersey zone forecasts as well.

[9] As listed on Table 1, potential reliability violation #18 was a 500kV transmission line overload projected to occur in 2019. It is important that the retool analysis removed this potential overload, because a projected 500kV component overload would generally be addressed by a 500kV reinforcement of some type, such as a new 500kV transmission line. *See* general discussion at Tr. 1609-16; *see also,* TrAILCo, Docket No. A-110172, Recommended Decision at 147-48 (August 21, 2008), *available at* www.puc.state.pa.us//PCDOCS/1019983.pdf.

OCA St. 2 at 6.[10] To sum up the impact of the peak load assumptions being pushed out further into the future, Mr. Fagan added:

> Roughly speaking, it means that the timing of most modeled claimed reliability violations would also tend to get "pushed out" by a similar amount, if all other assumptions are held constant, since peak load is a key driver of transmission system need.

OCA St. 2 at 8. As Table 1 above shows, this is exactly what happened. Of the original twenty-three potential reliability violations that the Company asserted as the basis of need for the SR500 line, ten of them have been pushed out beyond even the 15-year planning horizon and thus are no longer relevant to this proceeding. Many of the remaining 13 potential reliability violations are now projected to occur at a later date than was originally forecast; most significantly the 500 kV reliability standard violation was "pushed out" even beyond the fifteen-year planning horizon. In his Direct Testimony, Mr. Lanzalotta explained how these results should lead to giving further consideration to lower-cost, less intrusive "fixes":

> These [remaining 10] 230 kV system overloads can be addressed by system reinforcement using a new 500 kV line and transformers to tie to the 230 kV system, as proposed by the Company in this proceeding, or they can be addressed by providing reinforcement at the 230 kV voltage level. Such reinforcement techniques typically include reconductoring existing circuits with higher-capacity conductors or adding additional circuits or transformers. This type of response to a single 230 kV system overload, or even to several 230 kV system overloads, is typically less expensive and less intrusive than a new 500 kV line, and associated substations, would be. However, when one new 500 kV line, with associated substations, can address 10 (or more) 230 kV system overloads, then costs and impacts are typically more in favor of system reinforcement at the 500 kV voltage level.
>
> However, the 2009 Retool Study on which these ten remaining violations are based was performed on or before March 2009. As pointed out in the Direct Testimony of Robert Fagan, there are factors that affect projected load levels, and other elements

[10] Mr. Fagan's reference to a "table" here is to Table 1. PJM 2008 and 2009 Load Forecast Comparisons – Extreme Summer Peak (90/10) Load Forecast for Mid-Atlantic Region and Sub-Regions, found in OCA St. 2 at 7.

> relevant to the need for transmission system reinforcement, that have changed substantially since this Retool Study was prepared. The Retool Study reduced the overall number of reliability violations supporting the need for the S/R line from 23 to 13, and it eliminated the only 500 kV violation, leaving only 230 kV violations. A new, completely up-to-date Retool Study might reduce this number of 230 kV violations even further. As I discuss above, the fewer 230 kV violations that need to be addressed, the more likely it becomes that a 230 kV solution to the remaining overloads will become feasible.

OCA St. 1 at 13. As Mr. Lanzalotta testified, fewer potential reliability violations would enable the universe of possible alternative solutions to expand and, as discussed earlier in this Brief, it is incumbent upon PPL to demonstrate that its proposed SR500 line is preferable to other alternatives "considering available technology and the needs of the public." 52 Pa. Code § 57.75(a). The March 2009 Retool Study has shown that more current information can make a dramatic difference in the timing, number and severity of potential reliability violations, allowing for more time to consider and study a broader array of alternatives, including non-transmission alternatives, none of which have been presented by PPL on this evidentiary record. The OCA submits that a more current retool study is necessary, as the following section discusses.

iii. A Current Retool Study is Needed.

(1) Introduction.

As discussed above, the latest peak load forecast evidence in this proceeding is from January, 2009. The latest retool study by PJM, using the January 2009 peak load forecast, was prepared on or about March, 2009. Significant changes have taken place in the macroeconomic environment, and also within PJM during the intervening timeframe. There are at least four reasons why PPL/PJM should be required to submit a current retool as part of the review process in this proceeding: (1) the current economic recession has created a rapidly changing landscape and has drastically affected consumers' demand for electricity, which

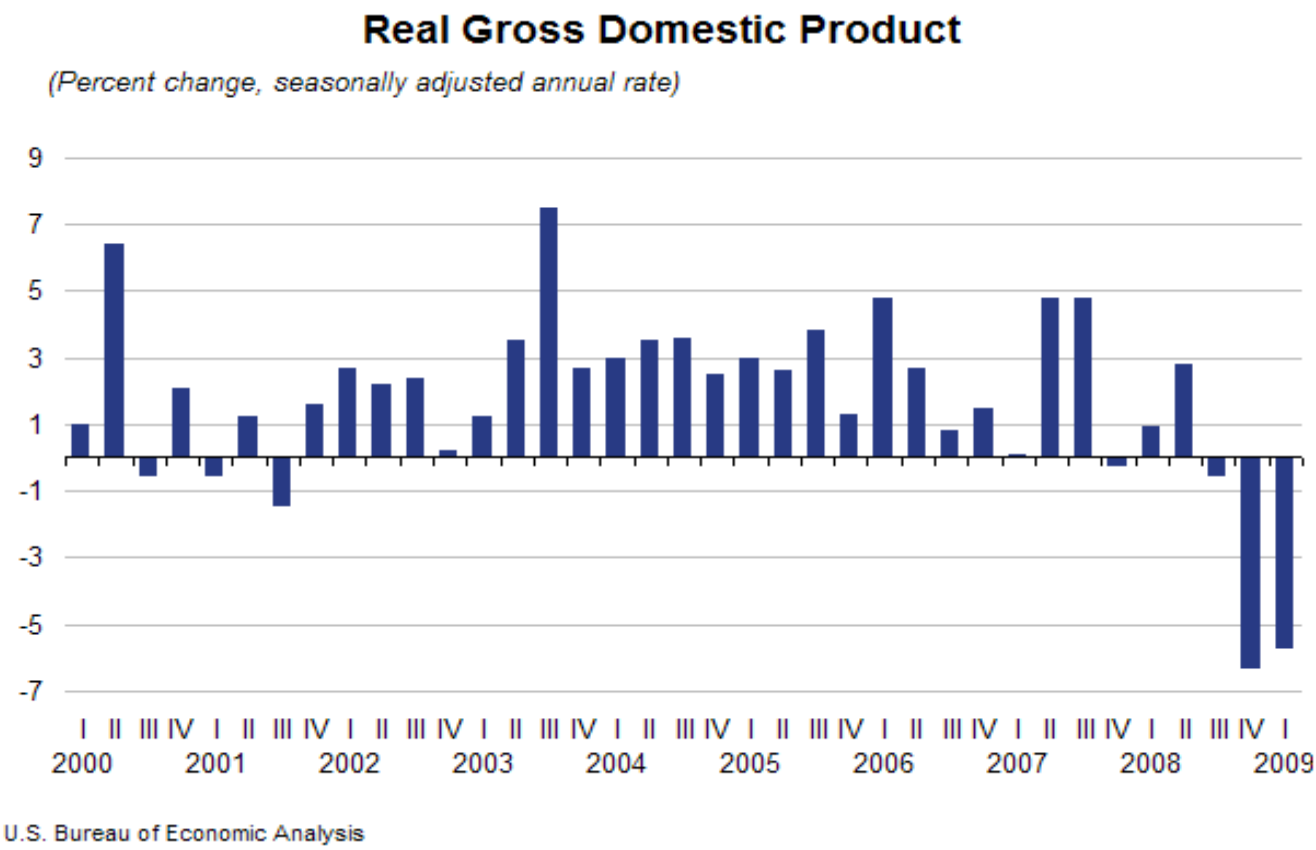
requires a current peak load forecast; (2) significant quantities of Demand Response and Energy Efficiency resources cleared the May 2009 RPM Auction; (3) PA Act 129 and New Jersey Energy Master Plan peak load reduction initiatives need to be considered; and (4) any change in the year of need enables a whole new mix of non-transmission alternatives, such as generation and demand resources, to become available as means to address the potential reliability violations.

(2) A Current Peak Load Forecast is Needed.

OCA witness Fagan explained and graphically illustrated the drastic downturn in the Gross Domestic Product data, which drives the PJM peak load forecast, in his Direct testimony:

> It is important to use a current forecast because the general downturn in the US economy has been extremely severe since the last quarter of 2008, when PJM's 2009 load forecast was developed. The following Figure 1 from the US Bureau of Economic Analysis illustrates the severity and the timing of the downturn.

Figure 1. Real US GDP, by Quarter, 2000-2009



Source: US Bureau of Economic Analysis, http://www.bea.gov/briefrm/gdp.htm, May 29, 2009 update.

> This chart illustrates in a general manner the timing and severity of the economic downturn on a national basis. As can be seen, the 3rd quarter of 2008 begins a recent trend of depressed economic activity, with the last quarter of 2008 and the first quarter of 2009 showing unprecedented steepness of decline of activity since the year 2000.

OCA St. 2 at 8-9. As Mr. Fagan discussed, PJM created its January 2009 Peak Load Forecast sometime during the 4th quarter of 2008, which represented only a fraction of the downturn that was to develop in 2009. As Figure 1 above shows, GDP continued to decline well into the first quarter of 2009 and, from all indications, the economic downturn has continued. This GDP chart is particularly relevant to show the staleness of the peak load forecast used in support of the claimed need for the SR500 line. Mr. Fagan explained that a forecast developed now would

incorporate more information on the state of the economy. OCA St. 2 at 10. As Mr. Fagan discussed, PJM uses local area GDP values in developing its load forecasts. The last updates we have in the record of this case are from the 4th quarter of 2008. Id. An update as proposed by the OCA's witnesses would be far more relevant to this Commission's decision on whether this proposed $1.2 billion is needed or whether some less costly transmission alternative or set of non-transmission alternatives would be more commensurate with any demonstrated need. It is not reasonable that PPL/PJM have not made more current information available,[11] and have not been willing to update the record with a current retool.

(3) May 2009 RPM Auction Results.

The second reason why a current retool is needed relates to the changed conditions in PJM since the January 2009 timeframe as to energy efficiency and demand response. OCA witness Fagan explained how PJM modeled Demand Response and Energy Efficiency resources in relation to the need for the SR500 line, as follows:

> PJM uses demand response and energy efficiency resources based on the information in the PJM 2009 Load Forecast Report (January, 2009). These resources include a combination of DR cleared in the 2011/12 RPM auction and interruptible load resources (ILR); energy efficiency resources are listed as zero in the report for all PJM regions (Table B-8), since the incorporation of these resources into PJM's planning framework only commenced with the May 2009 RPM auctions. Table 2 below shows demand response values for the MAAC, EMAAC, and New Jersey regions.

Table 2. Demand Response Used in PJM/PPL Modeling for the Proposed SR500 Line

DR + EE, MW	2009	2010	2011	2012	2013	2014
MAAC	2,311	1,863	1,996	1,996	1,996	1,996
EMAAC	1,033	684	613	613	613	613
NJ	562	364	278	278	278	278

[11] *See* Tr. at 1295 (PJM receives monthly peak load forecast updates). The OCA would also note that PPL's load forecast expert, Mr. Reynolds, did not provide rebuttal testimony in this case.

> Source: PJM, Table D-1, 2009 Load Forecast Report. MAAC values taken directly. EMAAC values based on sum of values for NJ, DPL, and PECO territories. NJ values based of sum of values for NJ service territories. The response to OCA-2-1(a) also contains these same 2012 values for EMAAC and MAAC.

OCA St. 2 at 10-11. Since the March 2009 Retool Study, however, the levels of demand response and energy efficiency resources that will be available within the eastern PJM region have substantially increased in the exact area where PPL claims that the SR500 line is needed for reliability. Simply put, a higher amount of non-transmission alternatives in the area of claimed need means that less generation would have to be imported from elsewhere in PJM to that area during peak periods in 2012, thus reducing the need for increased transmission to that area. As OCA witness Fagan explained, the increased Demand Response, and now Energy Efficiency resources as well, are factors that are highly relevant to the need for increased transmission to the area where such resources are available:

> In May of 2009 (subsequent to the re-tool conducted by PJM in March of 2009) **the most recent RPM auction cleared a significant increase in the amount of demand response – and for the first time in an RPM auction, energy efficiency – available for use as a capacity resource throughout PJM**. This includes substantial increases over the values in Table 2 above for the MAAC, EMAAC and NJ areas.

OCA St. 2 at 11(emphasis added). Mr. Fagan then went on to examine the difference between the level of Demand Response and Energy Efficiency Resources that PJM used in its initial modeling of the need for the SR500 line, and the level of resources that will now be available in the area of concern using the latest data, as follows:

> Table 5 below shows the increase. In 2012, there is an increase of 2,908 MW of demand side resources compared to the level PJM/PPL has included in its modeling of transmission line need. There is an increase of over 1,000 MW available in eastern MAAC, the regions encompassing New Jersey, the Delmarva Peninsula and the PECO service territory. And there is 587 MW of additional resources for the New Jersey territories alone. There

> is no change to available DR and EE in 2009 through 2011 because the RPM results are for three years ahead. The values modeled subsequent to 2012 (shown only through 2014 here) are the same as the 2012 levels until PJM conducts the next RPM auction.

Table 5. Increase in Available DR and EE for 2012 Compared to PJM/PPL Modeled Levels

Delta (DR + EE), MW	2009	2010	2011	2012	2013	2014
MAAC	0	0	0	2,908	2,908	2,908
EMAAC	0	0	0	1,046	1,046	1,046
NJ	0	0	0	587	587	587

Source: Computed from the difference between the values in Tables 3 and 4 above.

OCA St. 2 at 13 (footnote omitted). This dramatic increase in demand side resources in the area of concern could substantially reduce the number and severity of potential reliability violations that PPL is alleging provide the basis of need for the SR500 Project. As confirmed during cross-examination of Mr. Herling, however, PJM has not included any of these new resources in its modeled need for the SR500 Project. Tr. at 1272-73.

On the other hand, PJM agrees that Demand Response resources can supplant the need to build new infrastructure, as the testimony of PJM witness Herling on OCA Cross Exhibit 17, a PJM website publication explaining the relationship between generation, transmission and demand response, demonstrates:

> A. [Witness reading from the exhibit] To a degree, generation, transmission and demand response are substitutes, depending on the location of generation or demand response. As a substitute for generation, demand response can serve as a local peaking resource and thereby assist resource adequacy. As a substitute for transmission and distribution infrastructure, demand response can reduce the need for new transmission or distribution expansion to bring generation to a local area. At minimum, demand response can provide relief for an overloaded transmission system, and can defer the need for infrastructure.

> Q. …I believe it's noted that these were the benefits of demand response pointed out by the FERC in its 2006, Assessment of Demand Response and Advanced Metering proceeding?
>
> A. I see that.
>
> Q. …[Has] PJM … calculated any amount of generation or any amount of demand response or identified locations that would delay or obviate the need for the Susquehanna-Roseland line…?
>
> A. I agree we haven't calculated the number of megawatts, but we are clearly sending a lot of signals out into the marketplace to facilitate the implementation of the demand response.
> If you look at the RPM auctions that you referenced earlier, they're clearly providing an indication to demand response providers as to where their resources will be more valuable.

Tr. at 1322-23. Beyond doubt, increased Demand Response resources in the claimed area and year of need could lessen or even eliminate some of the forecasted potential reliability violations. And, as Mr. Lanzalotta testified, fewer violations may support the conclusion that alternatives involving individual 230kV solutions, as opposed to the Company's proposal for a 500kV solution, would be preferable and more cost-effective to maintain reliability.

The siting regulations that the Commission must apply in this case require an examination of all alternatives, both transmission and non-transmission alternatives, to proposed high-voltage lines. Such an examination is rendered impossible without a retool study that would incorporate current peak load forecasts and the increased demand resource and energy efficiency resources in the area and year of need for the SR500 line. The Commission simply cannot decide, on the current evidentiary record, whether the proposed 500 kV line is needed to serve the public under relevant statutory and regulatory standards.

(4) The PA Act 129 and New Jersey Energy Master Plan Initiatives Should Also Be Considered.

PPL witness Paul McGlynn also testified about the interrelationship among generation, demand reduction and transmission as means to prevent future reliability problems:

> New or upgraded transmission lines must be constructed before the reliability problems occur. Alternatively, new generating plants can be constructed in the load pocket. Consumers within the load pocket could also reduce their demand. As indicated previously, it is very difficult to build new generating plants in urban areas. Demand reduction initiatives which are largely voluntary cannot guarantee the mitigation of the relevant reliability risks. Demand Response resources located within the load pocket that make a financial commitment to PJM's capacity market through its Reliability Pricing Model (RPM) can also help to avoid reliability problems.

PPL St. 8 at 18. In the previous section of this Brief, the OCA discussed the Demand Response resources that have become available through the RPM auction process which PJM itself, deeming this type of Demand Response resource to be sufficiently reliable, incorporates in its load studies for load deliverability testing purposes. PJM witness Herling testified in his Direct Testimony as to the important role that Demand Response programs could play in helping to lessen the load on the transmission network. PPL St. 7 at 36. Mr. McGlynn testified, *voluntary* reductions in consumer demand could also alleviate the need to build new transmission infrastructure, but cannot guarantee mitigation of reliability risks.

On the other hand, as OCA witness Fagan testified, state law and policy in the area of need have changed such that non-voluntary reductions in peak demand will likely effect a level of stress relief for the transmission system in the year PPL claims the SR Roseland line is required. Mr. Fagan testified to the connection between the recent state initiatives aimed at reducing peak loads in Pennsylvania and New Jersey and PPL's claims of need for the SR500 line in 2012:

> New Jersey is in the process of implementing energy efficiency programs arising from the state's Energy Master Plan, issued in October 2008, which seeks to dramatically reduce peak load growth by 2020 net of energy efficiency, demand response and some distributed generation.[12] The NJ EMP provision will affect the peak load growth of PSEG, JCPL, AECO and RECO, New Jersey's electric utilities. Pennsylvania utilities must meet the energy efficiency and demand response provisions of Act 129, which requires them to reduce their average peak load in the top 100 hours of the summer of 2007 to levels 4.5% below that average by the summer of 2012.[13] These provisions affect PA utilities, including MetEd, PPL, and PECO.
>
> [12] "New Jersey Energy Master Plan", October 2008, available at http://nj.gov/emp/docs/pdf/081022_emp.pdf.
>
> [13] The provision states that the reduction must be in place by May 31, 2013.

OCA St. 2 at 16. As to the possible effects of the New Jersey Energy Master Plan (NJ EMP) on the need for the SR500 Project, Mr. Fagan testified:

> New Jersey plans to reduce peak load by 3,300 MW between its base year of 2004 and 2020, solely from energy efficiency resources.[14] Peak demand for 2020 is projected to be approximately 21,900 MW, exclusive of the effect of intended incremental distributed generation and demand response. PJM currently projects a non-coincident peak of 25,717 MW for the four New Jersey utilities (PJM 2009 Load Forecast Report; see Table 1 above). Thus there is a difference of roughly 3,800 MW of peak load (in 2020) between what PJM projects for New Jersey, and what New Jersey is aiming for with its Energy Master Plan. New Jersey also plans for additional peak load reduction of 900 MW from demand response resources and 1,500 MW from distributed generation, by 2020.
>
> **Depending on the "ramp rate" of such efficiency and demand response gains, New Jersey could see energy efficiency and demand response peak savings in 2012 of anywhere from tens of MW to hundreds of MW, and most if not all of these savings are not considered in PJM's modeling of the need for the SR500 line.**
>
> [14] The Energy Master Plan also projects demand response savings of 900 MW over this time frame, and distributed generation of 1,500 MW. See "Modeling Report for the Energy Master Plan, Appendix A: BAU vs. Alternative Scenarios", October 21, 2008, available at http://www.nj.gov/emp/docs/pdf/10122208ceeepModEMP.pdf (downloaded June 5, 2009).

OCA St. 2 at 17. As to the possible peak load reductions from Pennsylvania's Act 129, Mr. Fagan provided the following:

> Table 6 below is reproduced from the Pennsylvania Public Utility Commission's Order from March 26, 2009. It summarizes the level of peak demand reduction that must be attained by May 31, 2013 (the end of the PJM 2012/2013 planning period.) The statute illustrates that the state is aiming to achieve a 1,193 MW peak demand reduction.

Table 6. Reproduction of Peak Demand Savings Table from PA PUC Order Implementing Act 129

Table 2. Average Historical Peak Loads and Act 129 Mandated Peak Demand Reductions as Measured in Megawatts		
EDC	Load	4.5% Reduction
Duquesne	2,518	113
Met-Ed	2,644	119
Penelec	2,395	108
Penn Power	980	44
PPL	6,592	297
PECO	7,899	355
West Penn	3,496	157
Total	26,524	1,193

> Source: PA PUC Order, Docket No. M-2008-2069887, "Energy Consumption and Peak Demand Reduction Targets," March 26, 2009.

OCA St. 2 at 19. As shown above, Pennsylvania and New Jersey are both embarking on programs that could bring about significant peak load reductions in the eastern PJM region in the time period relevant to this case. Reductions in peak load growth could help to relieve some of the stress on the transmission system and, in turn, could lead to fewer, less costly and less intrusive transmission system upgrades. As Mr. Fagan also testified, however, that the effects of these new state initiatives on PPL's claims of need for the SR500 line cannot be determined through examination of the evidence of record as it stands in this case:

> PJM does not model the projected effect of these programs, either directly or as a sensitivity analysis to determine the effect on peak load if such programs achieve their aims. PJM states:
>
> > "…The timing and quantity of any of the proposed energy efficiency programs which may ultimately be implemented is inherently uncertain, cannot be relied upon in planning for a reliable transmission system and therefore are not incorporated in the PJM analysis."

OCA St. 2 at 19 (footnote omitted). Thus, yet another substantial factor that could affect this Commission's examination of the claimed need for the SR500 line is missing from this evidentiary record.

In his Rebuttal Testimony, PPL witness Krall also attempted to defend the lack of any PJM recognition of the Act 129-mandated peak load reductions, testifying that it would be premature to include any possible peak load reductions from Act 129 in the PJM planning process, as the implementation of Act 129 is "uncertain." PPL St. 18-R at 4. In his Surrebuttal Testimony, Mr. Fagan explained why it is not valid to ignore the statutorily-mandated peak load reductions for planning purposes:

> All planning includes assessment of uncertainties. To completely ignore even a fraction of the PA Act 129 peak demand reduction standards is not appropriate planning. Mr. Krall offers no evidence on why PPL fully discounts the statutory requirement now in place on PA utilities. Notably, not achieving the standards for energy conservation and demand reduction will lead to penalties of between $1 and $20 million on these PA utilities.

OCA St. 2-S at 7. During cross-examination, Mr. Fagan was questioned about the relevance of PECO's Act 129 355 megawatt reductions during its top one hundred peak hours to the asserted need for the SR500 line. Tr. at 1792. Counsel for PPL suggested through the questioning that even if PECO met its 355 megawatt reduction in peak demand through reductions in its top one hundred hours, that this period might not occur at the same time as the PJM Eastern MAAC peak

and that, thus, the statutorily mandated reduction could really have no effect on the need for the SR500 Project. Mr. Fagan explained during redirect examination, however, why the Act 129 PECO peak demand reductions are critical to the need argument here:

> The reason I created this [OCA Exhibit RMF-3 redirect], after reading Mr. Krall's rejoinder testimony and listening to his cross-examination, it became clear that there was a certain amount of misinformation. I believe the Pennsylvania Act 129 law happened to use the top 100 hours as a way to compute a target for PECO. That target essentially says that PECO do[es] things to reduce your load during the peakiest times of the year. For PECO, that's the summer months, that's particularly hot days. That happens to also be exactly when the PJM Mid-Atlantic system experiences its peakiest load.
>
> **Those are the times that you see the peak loads that are used in the [power flow] models that are used to test for reliability violations. I thought that it was important to at least do the analysis to make sure that the result of the Pennsylvania law would be for PECO, in particular, because it's in the Eastern MAAC portion, that the energy efficiency and/or the demand response programs that PECO undertakes to comply with the law will have the effect, if they comply and they reach their target will have the effect of also reducing the peak loads seen on Mid-Atlantic portions of PJM's system, such that if you were to do a planning study, it would recognize that PECO's Act 129 peak load reductions, indeed, help the system during the tightest times of the summer.**

Tr. at 1796-97 (emphasis added). As Mr. Fagan testified in Direct, the peak load in the eastern MAAC region, and especially in the New Jersey service territories, is a key driver of the claimed need for the proposed SR500 line in 2012. OCA St. 2 at 6. With PECO in the eastern MAAC region, its Act 129 peak load reduction mandates by 2012 are important considerations and directly relevant to the need for the SR500 line; without them, the record before this Commission on the evidence of need is incomplete.

PPL witness Krall also testified that the Act 129 mandated peak load reductions are "very aggressive in comparison with what has been achieved in other states." PPL St. 18-R at 6. Mr. Fagan provided the following information to rebut this unfounded assertion:

> A recent report by the American Council for an Energy Efficient Economy ("ACEEE") identified the fourteen leading states in electric utility sector energy efficiency performance. Those states achieved, in 2006, incremental annual energy efficiency savings that ranged from 0.1% to 1.9% of state kWh sales (each year, the "incremental annual" savings continue to accumulate, so that over time the cumulative savings from a benchmark year continues to rise). The top four states achieved 0.7% (CA), 0.8% (MA), 1.0% (CT), and 1.9% (VT) in incremental, annual reductions. Pennsylvania's standard is for a cumulative 3% gain by 2013, or on the order of a 1% incremental annual gain depending on exactly when the benchmark period begins.
>
> Future plans by these states and the other ten leading states indicate incremental annual savings goals on the order of 1.0% to 1.5% of annual retail kWh sales. The detailed "Energy Efficiency Resource Standard" requirement is listed in the report and includes different timeframes, targets and specific requirements, but **generally PA's standard is not extraordinary in comparison to these states. Rather, the PA standard is on par with these states.**

OCA St. 2-S at 7-8 (footnote omitted; emphasis added).

As Mr. Fagan pointed out, Mr. Krall offered no firm, factual evidence as to why the peak load reductions mandated by Act 129 should be completely ignored for planning purposes. Further, Mr. Krall's opinion as to the aggressive nature of the Act 129 mandates, in comparison to other states, is incorrect. Perhaps, most telling is Mr. McGlynn's testimony, noted earlier, that "Demand reduction initiatives which are **largely voluntary** cannot guarantee the mitigation of the relevant reliability risks." PPL St 8 at 18 (emphasis added). In contrast, the mandates of Act 129 are not discretionary; rather they are directed by state law, with stiff monetary penalties for non-compliance. Yet PPL advocates for their total disregard in the

transmission planning process. The NJ Energy Master Plan (EMP) received similar, erroneous treatment by PPL in testimony.

For example, Mr. Krall testified that New Jersey recognizes the need for the SR500 Project in its EMP. PPL St. 18-R at 12. Mr. Fagan rejected this notion in surrebuttal testimony, as follows:

> The NJ EMP does not state that the proposed SR500 line is needed, nor that it is a critical part of New Jersey's plan. In fact, the New Jersey EMP makes the opposite point. **The modeling conducted by New Jersey included the line not because New Jersey made an independent determination that the line was needed, but because they utilized PJM's RTEP document.** The New Jersey EMP is not an exercise in transmission planning. New Jersey conducted production cost modeling (not load flow modeling, which is what PJM undertakes for reliability assessment) in part to determine the locational energy prices that would arise from their plan. They also wanted to take into account planned transmission facilities. That in no way indicates either that the SR500 line is a "critical" part of their plan, or that New Jersey "recognizes the need for the line."

OCA St. 2-S at 5 (emphasis added). Mr. Fagan then went on to testify as to how the SR500 Project actually runs contrary to the public policy goals and initiatives in New Jersey, on several different levels:

> Q. DOES NEW JERSEY'S EMP FAVOR PREDOMINANTLY COAL-FIRED IMPORTS FROM WESTERN PJM?
>
> A. No. In fact, the body of the NJ EMP states the following, indicating that New Jersey's preference is *not* to import more electricity from predominately coal-fired resources. Rather its preference is to rely on in-state supply and demand reduction:
>
> > "Help to shape PJM's planning of the electric transmission system to better protect New Jersey's economy and the environment. PJM has determined that the reliability of our supply of electricity will be jeopardized over the next several years, unless steps are taken to address the state's energy demand and supply. Since PJM is responsible for planning and operating the transmission grid reliably, it is in the

> process of directing upgrades to the grid that will enable New Jersey to import more electricity. These imports will come primarily from coal production regions where coal-based electric generation is prevalent. *In other words, our efforts to cut greenhouse gas emissions within New Jersey's borders will be undermined if the shortage of electricity supply is solved by importing more coal-based electricity*.
>
> The prospect of increased greenhouse gas emissions is only one reason to avoid increasing our reliance on imports of coal-based electricity. Just as importantly, hopes that these imports would bring us greater reliability and lower prices are likely to be dashed. The prospect of federal limits on power plant emissions of greenhouse gases is creating major uncertainty about what coal-based power will cost. In addition, demand for coal is increasing, as coal is becoming more difficult and expensive to mine and transport, and recent history has featured disruptions in coal supply and spikes in coal prices. *All of these factors suggest that it would be irresponsible to stake our energy future on increased imports of coal-based electricity*.
>
> New Jersey will continue to work closely with PJM, *to ensure that the transmission planning will reflect real State actions to increase in-state supply and reduce demand, and that transmission planning does not undermine the State's economic and environmental goals*."
>
> Source: New Jersey Energy Master Plan, pages 93-94 (italicized emphasis added).

OCA St. 2-S at 5-6. In addition to the NJ EMP, New Jersey has recently passed a statute with some very aggressive greenhouse gas reduction initiatives that would also appear to be at odds with the SR500 Project, as Mr. Fagan explained:

> New Jersey passed a "Global Warming Response Act" in 2007 that details targets for reducing greenhouse gas emissions. In December of 2008, New Jersey released a draft "Global Warming Response Act Recommendation Report." This information is available at http://www.state.nj.us/globalwarming.
> …
> The statute, enacted in 2006, mandates that the state:
> "…limit the level of Statewide greenhouse gas emissions, *and greenhouse gas emissions from electricity generated outside the*

> *State but consumed in the State*, to the 1990 level or below, of those emissions by the year 2020, and to reduce those emissions to 80% below the 2006 level by the year 2050." (italicized emphasis added).

OCA St. 2-S at 6 (footnote omitted). New Jersey's public policy objectives and recently-enacted laws thus appear to directly contradict PPL's position that New Jersey recognizes a need for this project. PPL's contention should thus be disregarded.

(5) In Later Years Additional Capacity Resources May be Available.

"Pushing out" a few of the violations for another year or two, as Mr. Herling testified is possible (PPL St. 7-R at 9), leads to the fourth reason why PJM should perform a current retool – the ability to model supply-side resources that may be available in eastern PJM in those "out years." In essence, if the potential reliability violations are projected for 2014 instead of 2012, a whole new contingent of generation resources may be includible in the modeling. Mr. Fagan explains the importance of modeling new generation in eastern PJM, as follows:

> The claimed reliability violations are mostly load deliverability violations to New Jersey zones or to the overall Eastern MAAC zone. **Generation capacity added to the transmission planning model in these zones will tend towards reducing the severity of claimed reliability violations, either shifting the timing of the violation to a future year, or possibly eliminating the violation.**

OCA St. 2 at 22 (emphasis added). Mr. Fagan explained further that PJM's inclusion of new generation in its modeling is very conservative, as it used *only* the generation that has progressed to the final step in the interconnection process:

> …important synergies arise if the year of need for the line is pushed out due to the combination of increased energy efficiency, demand response, and the economy's effect on the underlying gross load forecast. Additional capacity resources that have not yet signed an interconnection service agreement ("ISA")[16] and

> therefore were not used by PJM/PPL in the original modeling may become available.
>
> [16] An interconnection service agreement between a generator and PJM is an important milestone in a generator's process of obtaining final connection to the grid. PJM uses the existence of an ISA as a key indicator in its assessment of generation resources to include in transmission planning models.

OCA St. 2 at 21; s*ee also* Tr. at 1367-1368. Mr. Fagan went on to testify that there is some evidence to support the suggestion that additional resources will be available in the area of concern, as follows:

> In response to OCA-2-1 Attachment 1 and OCA-2-2, Attachment 1, PJM/PPL indicated that the 2012 load deliverability analysis uses a total of 0 MW of new generation in the JCPL zone, and 20 MW of new generation in the PSEG zone. For the generation deliverability analysis, there is 0 MW of new generation in both of these zones. There are additional generation resources currently in PJM's generation queue that seemingly were not modeled in the 2012 deliverability analyses by PJM.[17] Those include the following New Jersey resources:
>
> - JCPL zone, queue Q8, Q11, R11 – natural gas - 50, 300, and 440 MW = 790 MW total; and
> - PSEG zone queue T42, T43, T44 – natural gas - 79, 178, and 205 MW = 462 MW.
>
> [17] The response to OCA-2-2 c. states that "existing and new generators (2,570 MW) in queues R through T were modeled online in the load deliverability case and not in the generator deliverability case as the generation deliverability case is the base case to be used for these interconnection studies". However, that statement appears to conflict with the table provided as Attachment 1 to OCA-2-1, which includes 0 MW and 20 MW of new generation, respectively, for JCPL and PSEG zones.

OCA St. 2 at 21. Changing the year of need for the project even by one or two years, as Mr. Fagan discussed above, could have profound impacts on whether a project of the magnitude proposed is needed in 2012.

In sum, since PJM completed its March 2009 Retool Study the landscape has significantly changed. The entirety of this new data, as discussed above, should be incorporated into a current retool study and made a part of this record. The evidence of record as to peak load

forecasts and the availability of capacity resources in the area of concern is stale. The OCA submits that it would not be reasonable to base a decision of this magnitude, involving a project estimated to cost $1.2 billion, on less than current data – especially when PPL/PJM already possess the raw information that is needed to supply the parties and the Commission with a current, accurate portrayal of the need, if any, for the SR500 Project.

iv. Conclusions on the Need for a Current Retool Study.

As discussed above, the peak load forecast in evidence for this proceeding is stale. Large quantities of Demand Response and Energy Efficiency resources that cleared the May, 2009 RPM Auction have not been incorporated into the need analysis for this project. Pennsylvania and New Jersey state initiatives aimed at reducing the growth of peak demand in eastern PJM have been ignored by PJM and PPL in their analysis of need for this project. In his Direct testimony, OCA witness Fagan provided conservative estimates for peak load growth in the area of concern once all current and relevant information has been included, as follows:

> Table 7 below shows how the overall pattern of "net peak load", or peak load minus demand response resources and energy efficiency resources would change when considering these resources, for the eastern MAAC region. The table also includes, for illustrative purposes, a 300 MW decrement to the base load forecast that might be seen with a more current forecast than the one from the January 2009 Load Forecast Report. For the PA Act 129 reductions, the full level of statutory reductions for the PECO territory is used, since they are the only PA utility in PJM's designation of eastern MAAC. For New Jersey, a conservative 50% of the EMP goals for energy efficiency and demand response was used, along with a projected ramp rate for installation of the resources.

Table 7 Revised. Illustration of Shift of Year of Need Based on Updated Modeling Assumptions

	2012	2013	2014	2015	2016	2017	2018	2019	2020
Eastern MAAC NCP 90/10 Load Forecast, 2009	36,928	37,735	38,405	38,855	39,218	39,686	40,076	40,531	41,062
Increase in DR Resources from 2012/13 Auction	1,046	1,046	1,046	1,046	1,046	1,046	1,046	1,046	1,046
Incremental EE/DR Act 129 - PECO - Flat after 2013	355	355	355	355	355	355	355	355	355
Incremental EE/DR NJ - 50% of Goal, and Assumed Ramp	275	525	788	1,050	1,313	1,575	1,838	2,100	2,100
Illustrative EMAAC Load Reduction - Updated Forecast	300	300	300	300	300	300	300	300	300
Net Peak Load Difference for Planning	1,976	2,226	2,488	2,751	3,013	3,276	3,538	3,801	3,801
Illustrative Revised Net Peak Load Forecast	34,953	35,510	35,917	36,105	36,205	36,411	36,538	36,731	37,262

OCA St. 2 at 25-26. Mr. Fagan explained that the results of a more inclusive and current analysis of the need for the SR500 Project, as shown in Table 7, could greatly affect the Commission's determination on this issue:

> The table shows that in general, the combination of an updated load forecast, recognition of demand response and energy efficiency resources from the 2012/13 RPM results, and inclusion of at least a portion of the energy efficiency and demand response targets from PA Act 129 and the NJ EMP leads to a shift in the Eastern MAAC "net peak load" of **eight years**, from 2012 to 2020. In other words, the "net peak load" currently forecast for 2012 for eastern MAAC would not be met or exceeded until 2020 if the assumed DR and EE resource levels were attained, and if an updated load forecast resulted in the lower peak load illustrated here. All else equal, this implies that most of the claimed reliability violations could also be pushed out from 2012 to 2020.

OCA St. 2 at 27 (emphasis added). As demonstrated, using the best information available to the OCA and also using conservative estimates of energy efficiency and demand response inputs, the net peak load that is driving the need for the SR500 Project is pushed out from 2012 to 2020.

In rebuttal, PJM witness Herling attempted to discredit Mr. Fagan's analysis by claiming that the OCA witnesses want to selectively change only certain inputs into the RTEP

process. PPL St. 7-R at 5-6. This contention is not correct, as Mr. Fagan responded in surrebuttal:

> I do not advocate a piecemeal approach. I explicitly recommend a "retool" using PJM protocol, which does not address assumptions piecemeal but rather uses the most up-to-date information available on all relevant assumptions. I focus on demand-side assumptions because the purported year of need for SR500 is 2012, and PJM just completed an RPM auction that resulted in significant 2012 demand-side resources. To the extent that those resources push back the year of need, then PJM should reassess the project – using the retool analysis mechanism – and as appropriate, incorporate updated assumptions relevant to any revised year of need. In particular, this means that if the effect of the RPM auction alone is to shift the year of need from 2012 to 2013 or 2014, then PJM must re-evaluate whether the SR Line is a proportionate response to the need that exists. Accordingly, PJM should also use 2013 or 2014 assumptions for the other critical modeling elements – namely, additional RTEP transmission that is likely to be in place in those years, and an updated assessment as to the mix of generation resources to use in the model. **I think the PA PUC deserves nothing less than the best and most timely information available, especially considering that the Company is requesting to spend approximately $1.2 billion of the ratepayers' money.**

OCA ST. 2-S at 11-12 (emphasis added).

As discussed in detail above, the March 2009 Retool Study reduced the number of potential reliability violations from twenty-three to ten. As Mr. Lanzalotta testified, a larger number of potential reliability violations may indicate that a 500kV solution is reasonable. Conversely, a handful of potential reliability violations may be more efficiently addressed through less costly and less intrusive alternative means. Mr. Fagan and Mr. Lanzalotta have both testified that more current and inclusive data is needed in order to assess the true nature of the need for this project. PPL, who bears the burden of proof here, has failed to provide such data. The OCA submits that the Company has failed to carry its burden of proof to show that the SR500 kV line is needed to be in service by June 2012.

c. Alternatives to the SR500 Project.

i. Introduction.

It is clear from the record that PJM only meaningfully studied transmission solutions to address the original twenty-three potential reliability violations. It is also clear that once the March 2009 Retool Study showed that only thirteen of the original twenty-three potential reliability violations remained, PJM took no further actions to ascertain if a non-transmission solution was possible based on this new information. In fact, not only did PJM fail to reassess possible non-transmission solutions after the March Retool, it also failed to reassess whether the size and scope of the $1.2 billion SR500 Project was a reasonable response to the newly-identified need. In this matter, however, it is not PJM but rather PPL that bears the burden of proof. PPL must prove that it has satisfied the Commission's standards as to possible alternatives, regardless of what PJM has or has not considered.

This Commission has stated that it is not sufficient for an Applicant for a Certificate of Public Convenience merely to show a general need for new facilities to meet reliability concerns; rather, the Applicant must show as well that the proposed new facilities are reasonably responsive to the need that exists. Re West Penn Power Co. 54 Pa. PUC at 326; TrAILCo R.D. at 234. In addition, the Applicant must show that it has considered available alternatives in light of the electric needs of the public and available technology. 52 Pa. Code §57.76(a)(1)-(4). The OCA submits that PPL has not shown that the SR500 Project is reasonably related to the need that exists, because without a current retool study there is no way to accurately ascertain what the level of need really is.

Moreover, even if the March 2009 Retool Study fairly represents the actual need that exists, PPL has failed to show whether other less-intrusive options would remedy the

potential violations. There is also record evidence to indicate that even if the SR500 Project is deemed to be necessary, additional 500kV infrastructure may be needed in the near future to support this line, all at additional costs that are not reflected in this proceeding. The OCA submits that PPL has failed to adequately show a need for the SR500 Project in relation to the need that actually exists, and has also failed to consider available alternatives, specifically after the March 2009 Retool Study showed significantly lower peak demand than the original Application contained.

ii. PJM Only Considered Transmission Solutions.

In his Direct Testimony, PJM witness McGlynn discussed the reasons why new transmission lines, such as the one proposed here, are sometimes needed to maintain the reliability of the grid. PPL St. 8 at 17-18. According to Mr. McGlynn, areas that have high electric usage but lack adequate generation become what is called a "load pocket." Id. Because these areas are generation-deficient, existing transmission lines that bring power into these areas are prone to overloads. Thus, the potential for reliability issues arise if one or more of these existing lines are unavailable. Id. As Mr. McGlynn also testified, however, there are other ways besides just building new transmission lines to address these potential reliability issues created by load pockets. Id.

In simple terms, if the demand for electricity within the load pocket exceeds the available supply of electricity then one of two things must happen in order to keep the system in balance, supply must go up or demand must go down. Increasing the supply of power involves either building more generation within the load pocket or building new transmission lines to deliver power into the load pocket. Id. Reducing demand involves some form of demand side management, such as energy efficiency or demand response programs. Of course, any

combination of these strategies can be implemented to achieve the desired result of keeping supply and demand in balance. In this case, however, the only option being forwarded for consideration is to build new transmission. As PJM witness Herling testified during direct and affirmed during cross-examination, PJM can only direct transmission construction and not generation and demand response. PPL St. 7 at 35; Tr. at 1293. Mr. Herling testified further during cross-examination that PPL and PSE&G suggested no non-transmission alternatives to the SR500 line and that the only non-transmission alternatives that are considered are those that "come after the markets through either the interconnection process or RPM." Tr. at 1388.

It is undisputed that PJM has no authority to order any entity to build generation in or near the Roseland area in order to address these potential reliability violations. PJM also has no authority to order any type of demand side management programs that could help to address the lack of generation in the Roseland area. PJM must wait for the market to provide these types of solutions, and if no solutions of this type are offered – then PJM must look to a transmission solution, as Mr. Herling further testified:

> Q. So, PJM didn't determine how much generation could alleviate the need from the Susquehanna-Roseland line placed in New Jersey or some other place, is that correct?
> A. That's correct.
>
> Q. And, so, is it fair to state that once PJM ran its modeling and determined there was a potential reliability issue, it only looked at potential transmission upgrades as alternatives for solutions, correct?
> A. Correct. Once we determined that the market solutions were not sufficient to resolve the reliability violations, we proceeded with a transmission solution.

Tr. at 1389. Yet, in a 2007 PJM RTEPP document, PJM had committed to providing an analysis of the amount of generation that would be required to obviate the need for major transmission projects. OCA Cross Exh. 13, at 4. Mr. Herling testified that there would be "no downside" to

providing such an analysis (Tr. at 1292-93), yet this has not been done. Moreover, as the record also shows, it is also clear that demand response or energy efficiency measures were not considered as possible solutions nor were any analyses done of the amounts or locations where such measures would reduce the need for increased transmission.

As to the possible use of demand response, Mr. Herling was asked during cross examination to read a document from the PJM website into the record as to the importance of Demand Response resources. Tr. at 1322-23; s*ee also* OCA Cross Exh. 12. Demand Response resources were not considered as part of the original solution set for the need in the Roseland area as such resources were apparently not available in sufficient quantities to supplant or forestall the need for the SR500 Project. *See* Tr. at 1389. As the discussion above indicates, however, Demand Response resources can be a valuable asset in responding to reliability issues. In this case, as indicated, only transmission solutions were studied.

As the Applicant here, PPL has relied on PJM to create the possible universe of alternatives. PJM, however, only has one way to deal with potential reliability issues – build new transmission infrastructure. The OCA submits that without any analysis of the level of Demand Response resources that could alleviate the need for this line, the Applicant here, PPL, has failed to carry its burden of proof as to the analysis of "all available alternatives."

iii. <u>The 500kV Option May Be Unnecessary</u>.

PPL/PJM only studied transmission options as possible solutions to the potential reliability violations identified in this case. PPL witness McGlynn briefly described the transmission solutions that were evaluated, as follows:

> In addition to the Susquehanna - Roseland solution that was selected, consideration was also given to a new 500 kV line from a new substation called Bossards in eastern Pennsylvania to Jefferson to Roseland and a new 230 kV line from Stanton substation in Pennsylvania to Roseland. PJM staff evaluated each of these

> alternatives to determine the impact of the alternative on the loading of overloaded facilities throughout the 15-year planning horizon. The 230 kV line from Stanton to Roseland was not a robust enough solution as violations on many of the lines were only resolved for two to three years. The Bossards to Roseland 500 kV line and the Susquehanna – Roseland 500 kV line provided similar relief on the overloaded facilities throughout the 15-year planning horizon with the Susquehanna - Roseland line providing more relief on the East Windsor to Smithburg 230 kV line and the Larrabee to Atlantic 230 kV line. In addition, the Susquehanna to Roseland line will reduce the loading on the underlying 230 kV system.

PPL St. 8 at 25-26. From Mr. McGlynn's testimony it is apparent that PJM considered the SR500 Project the better solution of the two 500kV options studied. PJM also considered and rejected a 230kV option, but that particular option may have deserved further attention.

Mr. McGlynn testified that the 230kV Stanton to Roseland option was not considered to be robust enough as "violations on many of the lines were only resolved for two to three years." PPL St. 8 at 25. It is important to note, however, that the original analysis which led to the SR500 Project being approved by the PJM Board of Directors in the 2007 RTEP relied on peak load forecasts that were created long before the current economic downturn. While the original analysis, with much higher peak load forecasts, may have shown only a short-term solution, the same 230kV solution may have fared much better if the analysis was re-done after the results of the March 2009 Retool Study. In his Direct Testimony, Mr. Lanzalotta discussed this issue, as follows:

> There is no indication that the Company considered any alternatives to the proposed S/R Line following the retool study. This is significant. One such alternative was a 230 kV line from Stanton, PA to Roseland NJ. According to the Direct Testimony of Mr. Herling, the S/R project was chosen because of a greater positive impact on line loadings throughout the 15-year planning horizon. However, the recent reduction of projected peak loads within PJM, as well as other changes, would have the result of increasing the period of time over which a lower-voltage reinforcement, such as a 230 kV line, could be effective in dealing with potential reliability concerns. I note also that a new line from Stanton to Roseland would cover much of the old 230 kV circuitry

> that would have to be replaced regardless of what happens with the S/R Line.
>
> It's almost always possible to say that a larger, higher-capacity system reinforcement, such as the S/R 500 kV Line, will have a greater positive impact on line loadings over a longer period of time than a lower-voltage reinforcement, such as a 230 kV line, would be expected to have. However, if the lower-voltage option deals with the reliability violations in a less expensive and less intrusive manner, it can be the preferred alternative. In reviewing the impact of reduced peak load forecasts and other changes on the need for S/R, this review should also consider whether a less expensive alternative will suffice.

OCA St. 1 at 5 (footnote omitted). We know from the testimony in this case that after the March 2009 Retool Study was completed PJM did not go back and reexamine the 230kV Stanton to Roseland alternative when the number of potential violations was reduced. Tr. at 1384-1385.

As Mr. Lanzalotta testified, the reduced need shown in the March Retool Study may have shown that a 230kV option was possible. Moreover, a current retool study as the OCA has recommended, with a complete reevaluation of the current need could provide even further insights into the effectiveness of a 230kV solution. The fact is, once the SR500 Project was approved by PJM, all other possible solutions were disregarded. The OCA submits that PPL has failed to show that "all available alternatives" were thoroughly examined.

iv. Conclusion.

PPL bears the burden of showing that its project is reasonably responsive to the need that exists, and also must show that it is a reasonable choice among the available alternatives. The OCA submits that the Applicant has failed to prove either of these requirements. The need that exists is not supported by the record, as PPL has not provided a current retool for review in this record. Even if the March 2009 Retool Study is accepted as the relevant proxy, the Company has failed to show how its Project is reasonably responsive to the

lower level of need found therein. Moreover, as the discussion above illustrates, various other alternatives may have been available had the Company taken the time to investigate those options after the March Retool was completed. The OCA submits that the available alternatives studied by PPL here falls short of what should be expected by an Applicant before this Commission seeking approval for a project of this size and scope.

d. The Company's Reliability Justifications for the SR500 Project Changed Over the Course of the Proceeding.

i. Introduction.

The Company filed this Application in January, 2009, and provided the parties with testimony later that month. This initial Direct Testimony from the Company established the claimed need for the SR500 Project based on 23 potential reliability violations that were projected to occur during future time periods. The OCA began its analysis and investigation, retaining outside experts and propounding volumes of discovery to the Company based on its filed case. As this case has progressed, however, the Company's claimed need for this Project has not only been updated with new data – it has substantially changed.

The original 23 potential violations shrank to 13 during March, 2009. Based on this new data, the OCA pursued further discovery and based its case going forward on the results thereof. Then, in August, 2009, the remaining 13 potential violations turned back into 23. The Company then added 10 brand new double circuit tower contingencies to the claimed justifications for the SR500 Project in Mr. McGlynn's Rebuttal Testimony. Less than 3 weeks later, the Company's Rejoinder testimony alleged that these double circuit tower contingencies had been there all along, they were just "inadvertently omitted" from any of the served testimony. PPL St. 7-RJ at 2.

The OCA does not object to updating the record with current data. The OCA is concerned, however, that the Company has altered its basic need argument for this project, while at the same time refusing to update the record with a current retool study.

ii. The Original 23 Potential Reliability Violations.

PPL witness McGlynn testified that the need for the SR500 Project is based on 23 potential reliability violations discovered by PJM during its process of NERC-required testing. PPL St. 8; Exh. PFM-1. These 23 potential reliability violations were listed in Mr. McGlynn's Exhibit PFM-1, which showed that several of the potential reliability violations were based on the results of PJM's Generator Deliverability Test (GDT). Exh. PFM-1. The remainder of the 23 potential reliability violations were based on the results of PJM's Load Deliverability Test (LDT). Id.

Early in the discovery phase of the proceeding, the OCA requested that the Company update this list of potential reliability violations by using the most current peak load forecast available. The Company responded in March, 2009, by providing the results of the March 2009 Retool Study. The original list of 23 potential reliability violations as found in Exhibit PFM-1, which the OCA also requested an update for, was not supplied until June 25, 2009, just days before the OCA's Direct Testimony was due. This update showed that the original 23 potential reliability violations had shrunk to 13 potential reliability violations, as found in Table 1 of OCA witness Lanzalotta's Direct Testimony. OCA St. 1 at 12.

The OCA's analysis of the Company's filings and its original 23 potential reliability violations led the OCA to propound a significant amount of discovery as to the assumptions and testing processes used to arrive at these 23 potential reliability violations. Recognizing that the original filings in this matter, and the studies underlying the 23 potential

reliability violations were all completed prior to the start of the economic downturn in the Fall of 2008, the OCA requested and received the updated analyses discussed above. The March 2009 Retool Study proved what the OCA analysis pointed to – the new peak load forecasts with much lower peak demand numbers as a result of the recession had substantially driven down the number of potential reliability violations.

iii. A Completely New and Different Set of Potential Reliability Violations.

On August 7, 2009, PPL served the Rebuttal Testimony of Mr. McGlynn. PPL St. 8-R. Included with this piece of testimony were two new exhibits, PFM-2 and PFM-3. Id. Exhibit PFM-2 was essentially a reproduction of the results from the March 2009 Retool Study, which showed that the original 23 potential reliability violations had now shrunk to 13 potential reliability violations. Exhibit PFM-3, however, was based on new information.

Exhibit PFM-3 listed 10 new potential reliability violations based on NERC category C5 violations. As Mr. McGlynn explained, these potential violations result from the failure of two transmission lines located on a single structure/tower (double circuit tower contingencies). In his Surrebuttal Testimony, OCA witness Lanzalotta responded to these new, alleged violations, as follows:

> I would add to that the question about PJM's apparent decision to try to add supposed NERC Category C reliability violations midway through the process, after seeing the number of NERC Category A and Category B violations, which were originally offered in support of the S/R Line, substantially decrease in volume. These alleged violations weren't even offered in support of the S/R Line in the Company's direct case. Given NERC's position that load shedding and/or generation rejection can be permitted under Category C events, it's not even clear to what extent these events are even potential reliability violations.

OCA St. 1-S at 11-12. Mr. Lanzalotta went on to further explain this apparent development in the Company's need case, a full 8 months after its Application was filed, as follows:

> Company rebuttal witnesses Herling and McGlynn testify that, even with the Retool analysis, there are still 23 potential violations of NERC reliability standards. But, these 23 potential violations are significantly different from those that the Company presented in its Application. In the Company's initial filing in support of the S/R Line, prior to the Retool Study, it presented a list of 23 potential reliability violations under conditions with zero contingencies or single contingencies. However, the Retool Study reduced the potential violations, under conditions with zero contingencies or single contingencies, from 23 potential violations to 13 violations, as I testified in my Direct Testimony. The 23 potential violations that Messrs. Herling and McGlynn now talk about in their rebuttal testimonies include ten potential violations that supposedly result from simultaneous outages to two transmission lines sharing the same transmission tower. These double-circuit tower contingencies were *not* included in the 23 potential reliability violations addressed in the Company's application, and for good reason.

OCA St. 1-S at 1-2. Mr. Lanzalotta testified how these double circuit tower contingencies, Category C-5, are treated differently by NERC than the Category A and B violations that were listed in Exhibit PFM-2, as follows:

> Yes, double-circuit transmission tower contingencies are treated differently in that, under such contingencies, NERC permits firm loads and firm power transfers to be curtailed, in an effort to maintain thermal loading and voltage performance on the elements remaining in service within specified limits. Specifically, NERC standards state:
>
> > Depending on system design and expected impacts, the controlled interruption of electric supply to customers (load shedding), the planned removal from service of certain generators, and/or the curtailment of contracted Firm (non-recallable reserved) electric power transfers may be necessary to maintain the overall reliability of the interconnected transmission systems.

OCA St. 1 at 3-4 (footnote omitted); s*ee also* Exhibit PJL-4.

These double circuit tower contingencies are treated differently by NERC because they are very unlikely to occur, as Mr. Lanzalotta discussed:

> Double circuit tower contingencies are treated differently from single contingencies because they are typically much less likely events, compared to single contingencies. Also, it is expensive to design the electric system to have enough redundancy to withstand contingencies that affect two or more system elements with no loss of load.

OCA St. 1-S at 2. These double circuit tower contingencies are very unlikely events and planning the transmission system in such a way as to account for all possible contingencies could be prohibitively expensive, but the Company treated these contingencies just like they treated the Category A and B violations. Mr. Lanzalotta testified:

> In response to discovery on this matter, the Company states that no load loss was considered acceptable for double circuit tower contingencies when it developed the list of apparent violations presented in Exhibit PFM-3. So, in effect, the Company is using a more stringent standard than is required by NERC standards to increase the number of apparent potential reliability violations in its attempt to continue to demonstrate the need for the S/R Line.[9]
>
> [9] The Company conditions its response by saying that system operators wouldn't have time to react to a double-circuit tower outage by shedding load or rejecting generation. This ignores the fact that transmission system controls are typically designed to address such problems automatically, especially if such problems threaten system stability --and that such capabilities would likely be enhanced as smart grid functions are more fully developed.

OCA St. 1-S (first footnote omitted). The NERC standards recognize that these double circuit tower contingencies are improbable events, and thus allow for a certain level of load to be curtailed. PPL/PJM in this case, however, do not consider any load loss acceptable. PJM witness Herling was asked about this apparent inconsistency during cross examination.

Mr. Herling testified that he was in agreement with what the NERC regulations provided as to load shedding for all Category C contingencies. Tr. at 1306-07. As the NERC

language provides in relation to this issue, "Depending on system design" load shedding "may be necessary." OCA St. 1 at 3-4. Mr. Herling's agreement, however was conditioned on a fine distinction that would not become completely apparent until later questioning on the language of the NERC regulations, as follows:

> Q. … I'm looking at the language of footnote C, to the column that said, controlled loss of demand or curtailment transfers are permitted for all the category C contingencies. And it says, for the curtailment of contracted firm, non-recallable reserved electric power transfers may be necessary to maintain the overall reliability of the interconnected transmission systems.
> A. But all of those are based on system design, as I am aware, the universal interpretation of that footnote is that the system can be designed in a manner to dump customers, to dump generation, or to interrupt transfers, but you cannot use operator actions to facilitate those actions.

Tr. at 1311; s*ee also* OCA Cross Exhibit 15. What Mr. Herling said on the witness stand, for the first time, is that the double circuit tower contingencies listed in Exhibit PFM-3 could be addressed by shedding load, as the NERC regulations allow, but in this case that is not possible based on PJM's interpretation of the NERC regulations. Mr. Herling seizes on the introductory language of footnote (c) in OCA Cross Exhibit 15, "Depending on system design" to argue that such load shedding must be done automatically – there can be no operator intervention. And, apparently, the parts of the transmission grid owned by PPL and PSE&G are not designed to shed load in the event of a double circuit tower contingency.

The double circuit tower contingencies listed in Exhibit PFM-3 were not a part of the Company's case-in-chief. In fact, these double circuit tower contingencies were not included in either the 2007 or 2008 RTEP as justifications for the SR500 Project. ECC Cross Exhibit 14 contains a copy of parts of the 2007 RTEP. At page 58 there are 17 single contingency violations provided as a basis of need for the SR500 Project. ECC Cross Exhibit 15 contains a

copy of parts of the 2008 RTEP. At page 65 there are 23 single contingency violations provided as a basis of need for the SR500 Project. ECC Cross Exhibits 14, 15. The double circuit tower contingencies only came to light in this proceeding after the March 2009 Retool Study substantially reduced the number of single contingency violations that were claimed to provide support for the SR500 Project. Even so, the NERC Regulations provide a reasonable means for dealing with these unlikely occurrences by allowing the temporary curtailment of load. PJM, however, in its interpretation of the NERC Regulations does not recognize this potential solution.

PJM witness Herling testified in his Rejoinder testimony that the double circuit tower contingencies listed in Exhibit PFM-3 were not new, but rather had always been identified by PJM in other materials – it is just that these contingencies were not included in any of the testimony filed in this case until Mr. McGlynn's Rebuttal, on August 7, 2009. PJM St. 7-RJ at 2. Mr. Herling testified that these contingencies were "inadvertently omitted." Id. The Rebuttal testimony filed in August, 2009 was the first time that the OCA was aware that the Company was now relying on a completely new set of contingencies to justify the need for the SR500 project. *See* Exhibit PFM-3. But these double circuit tower contingencies do not support the Company's claim as OCA witness Lanzalotta explained.

iv. Conclusion.

The Company's need justifications for this project have changed over the course of this case. As the OCA has discussed in other areas of this Brief, the modification needed here is a current retool study that properly considers all of the relevant and current data.

e. OCA Proposed Resolution.

The Commission cannot approve PPL's Application at this time. The Commission must either deny the Application outright, or, alternatively, the Commission could

give PPL the opportunity to submit a current retool study inclusive of the relevant data, as discussed above, if the Company agrees to a waiver of the federally-imposed 12 month decision timeframe.

The Energy Policy Act of 2005 (EPAct05) granted the FERC, for the first time, "backstop" siting authority for interstate transmission lines in certain limited situations. Of relevance here, EPAct05 authorized the FERC to assume jurisdiction over the permit process for certain transmission line projects when a state commission had "withheld" approval for more than one year. Energy Policy Act of 2005, Pub. L. No. 109-58, 119 Stat. 5594 (2005) (EPAct05). The FERC initially interpreted the term "withheld" to include when a state commission denied the application. Numerous parties appealed to the Federal courts over this interpretation. On February 18, 2009, the United States Court of Appeals for the Fourth Circuit held that FERC's interpretation of the word "withheld" is incorrect. Piedmont Environmental Council v. FERC, 558 F.3d 304 (4th Cir. 2009). The Court held that if a state commission denies an application to build an interstate transmission line within the required one-year timeframe, the FERC does not have backstop authority to approve construction of such a line in that instance. Id. at 309-10, 312-15. The Court affirmed the FERC's backstop authority only in situations where the state commission did not act in a timely manner, *i.e.,* failed to decide on the application within the one-year timeframe. Id. at 312-15. The Supreme Court of the United States has been asked to review the Fourth Circuit's Decision. Edison Elec. Institute v. Piedmont Environmental Council, 2009 WL 3022142, at *1 (Appellate Petition, Motion and Filing) (U.S. Sept. 17, 2009) Petition for a Writ of Certiorari. That Petition is still pending.

Based on federal law, the Commission must approve or deny this Application within the one-year timeframe or risk losing jurisdiction over this matter. Based on

the evidence of record, the OCA submits the Commission cannot approve the Application at this time. The Commission must either deny the Application, or alternatively, PPL could agree to waive the one-year requirement and agree to hold its Application in abeyance until it provides a current retool study for the parties' and the Commission's consideration.

2. Need For the Proposed Lackawanna Substation.

N.A. (The OCA is not addressing this issue)

C. SITING

1. Route Selection.

N.A.

2. Safety.

(Covered in Section C.6.)

3. Health – Electric and Magnetic Fields.

N.A.

4. Environmental Impacts.

N.A.

5. Protection of Natural Resources.

N.A.

a. Rare, Threatened and Endangered Species.

b. Wetlands.

c. Tree Trimming.

d. Other Natural Recourses.

6. Assuming *Arguendo* that PPL Demonstrates Need and the Commission Grants This Application, PPL Should Be Required To Reroute the Line to Avoid Saw Creek Estates.

a. Introduction.

Saw Creek Estates (SCE) is a densely-packed community of approximately 3000 homes, where 10,000 people live. SCE is located in the Pocono Mountains area of Pennsylvania, an area of great scenic beauty accompanied by steep, rocky, heavily-wooded mountainous terrain. An existing 230kV transmission line that was built in the 1920s currently bisects the SCE community. The line predates SCE. The community, once more of a weekend getaway destination, has increasingly become a year-round home for many. The planned SR500 Project would displace the existing 230kV transmission line, with its 80-foot towers, and in its place construct a 500kV transmission line with approximately 190-foot towers. The OCA submits that, if the Commission approves this project, PPL must reroute this line around SCE.

SCE has grown up around the existing 230kV transmission line and the cleared right-of-way (ROW) of approximately 150 feet in width. As SCE expanded over the years, many homes were built very close to, or even on the edge of the existing ROW. It is a fact that many homes in SCE are extremely close even now to the existing 230kV transmission lines and the existing transmission towers. To remove the 230kV infrastructure, and replace it with much larger and more intrusive 500kV conductors and towers, in this tightly-packed area, is simply unreasonable and may pose unnecessary safety risks.

The OCA does not doubt PPL's commitment to safety, but it is a simple fact that building the SR500 Project through SCE, in a heavily-congested community of 10,000 people, on steep, rocky, mountainous, heavily-wooded terrain is not an optimal plan. While the OCA agrees that every effort should be made to utilize existing transmission ROWs for new

transmission expansion projects wherever possible – the situation at SCE is an exception to this general principle. The Company has rerouted the line in at least one other area to respond to safety concerns. The residents of SCE, many of whom came forward to testify at public hearings about grave safety concerns, deserve no less consideration.[12]

b. Safety First.

The 230kV transmission line that currently runs through SCE was built in the 1920s and was in place long before SCE was developed. As SCE was originally built and expanded over the years, many homes were built in very close proximity to the existing transmission lines. As State Senator Lisa Baker testified at the public input hearings held at SCE:

> While using an existing right-of-way is more convenient and less costly for the company, the impacts to this community are unacceptable.
>
> …
>
> It may not be easy for PPL to …[find] a route comparable in cost. There are many areas off limits because of environmental considerations. But I believe the company must find an alternative route as a matter of fairness to the public …

Tr. at 91-92. As the Senator alluded to, it is simply unacceptable for a project the size and scope of the SR500 to be built on the existing ROW through SCE. Saw Creek Resident Peter Derrenbacher accurately summed up the situation when he testified at the SCE public input hearing, as follows:

> It seems incredulous to us that given today's advanced technologies, PPL plans to route above-ground lines, with no serious evaluation of other options. Is this truly what is meant by a smart grid? Why have other utilities buried or rerouted their lines around densely populated areas[?]

[12] For proposed Findings of Fact based upon the Saw Creek residents' testimony, see Appendix C.

> In closing, clearly, the existing lines have been here long before the community was. But having said that, the reality is there is now a city built on and around the lines.

Tr. at 107-108. Mr. Derrenbacher made the key point in this whole discussion, between the time the original transmission lines were built and now, a community of 10,000 people has evolved "on and around the lines." Id.

After viewing the SCE community firsthand, OCA witness Lanzalotta also expressed concerns over the Company's proposal. In his Direct Testimony, Mr. Lanzalotta discussed some of what he observed at SCE, as follows:

> SCE is located close to the DWG [Delaware Water Gap] and along the existing 230 kV transmission line ROW that has been proposed as the route of the S/R Line through this area. SCE has approximately 3,000 homes and 10,000 residents. I viewed the placement of a number of these homes in relation to the ROW during the May site visit that were identified as being immediately alongside the boundary of the existing ROW, with back yards and/or decks extending into the existing ROW.

OCA St. 1 at 14-15. As to his specific concerns related to the placement of homes in SCE in relation to the existing ROW and the proposed SR500 Project, Mr. Lanzalotta testified:

> There are homes that would apparently be within reach of a tower or a conductor, should one of the proposed transmission line towers in SCE experience a failure. The same would be true should there be a construction accident while towers and/or conductors are being installed. This is a concern for the safety of those living in those homes. With a transmission line tower that is 195 feet tall, on the centerline of a ROW that is 200 feet wide, there is 95 feet of depth outside either side of the ROW that is potentially within reach of that tower. If a dwelling is right on the edge of the ROW, a 195 foot tall transmission line structure need not be immediately adjacent to the structure to potentially threaten it.

> Given the apparent relative location of some of the dwellings in SCE to the boundaries of the ROW, this is a danger that should be considered in this instance.

OCA St. 1 at 16. This issue of having a safe "fall zone" area was expressed by numerous SCE residents during the public input hearings there. SCE resident Robert Long put it this way:

> I also find that rather disturbing that our local township and many other townships throughout the United States felt it very important that ordinances be put in place for safety reasons for safe fall zones.
>
> Our township feels that it is appropriate that it be set at the height of the tower, plus an additional 50 foot. This is to ensure the safety of the public of the surrounding towers.
>
> PPL does not have to follow these ordinances, thus safety is overlooked.

Tr. at 110. During the site visit conducted at SCE, the issue of how close homes are to the ROW once again made up a large part of the testimony.

Mr. Robert Long also provided testimony during the on-site hearing at Saw Creek, as follows:

> MR. LONG: What I wanted to show you here is the boundary of the property line. This big tree right here to the right, following it straight up on the angle is the property line. The corner of my house, actually, that far corner is four and three quarter inches off of the right-of-way.
>
> JUDGE COLWELL: Of your house.
>
> MRS. LONG: Of our house, four inches.
>
> MR. LONG: 4 and three-quarter inches. That's done by survey. I have the survey.

JUDGE COLWELL: So your yard is actually in the right-of-way?

MR. LONG: Part of that corner of the yard is.

Tr. at 482-83. There is no question that the record evidence shows the close-quarter nature of the homes in SCE to the existing ROW. This fact raises some serious questions as to the safety of proceeding with large-scale construction in such an area. PPL has certainly recognized the public outcry over the safety issues presented by the construction and operation of its proposed SR500 line.

PPL witness Smith attached as an exhibit to his Rebuttal Testimony an entire manual regarding safety practices during the construction phase of the project entitled "PPL Susquehanna-Roseland Project Safety & Health Program, 4/7/2009." The following is from the introductory portions of the manual:

> On the Susquehanna-Roseland Project, safeguarding the safety and health of project personnel and the public we serve is of the utmost importance and considered a core value. No job we do is so urgent that we cannot take the necessary time to preplan and perform the work, and to use the proper equipment to perform the work safely.

PPL St. 1-R, Exhibit GJS-1, p. 1. The OCA does not doubt PPL's stated commitment to safety, but considering all the facts surrounding the routing through SCE, the Company should clearly reevaluate its position on siting here. As the record shows, PPL recognizes the direct relationship between people being near this type of construction and the attendant safety risks.

During cross-examination, PPL witness Smith was asked about the Company's stated plans to ensure safe construction of this project through the Delaware Water Gap National Park, in relevant part, as follows:

> Q. Now, …specifically, you essentially state that less people or less park visitors, shall we say, being in the area during construction would equal less of a public safety risk. Is that an accurate synopsis of what you're saying there?

A. Yes, it is.

Tr. at 796. Yet, when asked about these same safety factors in SCE, Mr. Smith could not agree that routing the line around Saw Creek where there would be fewer people would present less of a safety risk. Tr. at 797-98. It is clear from Mr. Smith's Direct Testimony that PPL's position in general is that where, during construction, there are fewer people, there is less of a safety risk to the public. And yet, when confronted with that fact on cross, Mr. Smith clearly equivocated on his statements about the relationship of safety to the number of people in the area of construction.

This is not the only place where PPL's positions on safety in general seem to be called into question when it comes to constructing this project through SCE. During further cross- examination of Mr. Smith, another particular safety issue was explored, as follows:

> Q. Mr. Smith, …is it common practice for PPL to use helicopters in the construction phase of [a] project such as this?
>
> A. …yes, we will use helicopters in transmission construction.
>
> Q. Is it also common practice for PPL to use helicopters to routinely perform aerial surveys of transmission lines as far as maintenance, spotting potential problems?
>
> A. That is a common practice, yes.

Tr. at 799. Mr. Smith was then asked to identify and read a portion of a document into the record, OCA Cross Exhibit 1, Rebuttal Testimony of Gallus F. Wukitsch, in Docket No. A-2008-2022941, as follows:

> A. "Can this method of inspecting transmission lines be used along Route 309? No, it could not be used due to the congested nature of the area. Under PPL Electric's safety practices, helicopters may not be used for inspecting transmission lines where they would be unable to perform an emergency landing quickly and safely in the event of an unexpected mechanical failure of the helicopter.

> Along Route 309 would be virtually impossible to land a disabled helicopter without endangering persons on the ground."

Tr. at 802-803. In Mr. Smith's Rebuttal Testimony, however, he discussed the Company's plans to use helicopters for various purposes having to do with the SR500 Project in and around the area of SCE. *See e.g.*, PPL St. 1-R at p. 8, l.5; page 9, l. 16; p. 12, l. 10. Based on the testimony of PPL employee Mr. Wukitsch in the other application docket, Mr. Smith was questioned further about the safe use of helicopters in the area of SCE, as follows:

> Q. …However, from what Mr. Wukitsch has testified here, all I'm asking you is, from your perspective and your understanding as you've already said, you have an understanding of the Saw Creek terrain and that it is heavily wooded, how would a helicopter be able to make an unexpected emergency landing in that type of terrain?
>
> A. That's beyond my expertise to answer, sir.

Tr. at 806. With all due deference to Mr. Smith, anyone who read Mr. Wukitsch's testimony asserting that PPL has a safety policy as to where helicopters can be used, would have to agree that in the heavily-wooded, heavily-populated SCE area, helicopters would apparently pose a safety risk. There are real safety concerns at issue here that should lead to a reroute of this line around SCE, just as the Company has rerouted the line elsewhere based on safety concerns.

c. Reroute Around Silver Brook Mine.

The Company already has rerouted a three-mile section of the line based on safety concerns. Mr. Lanzalotta discussed this reroute in his Direct Testimony, as follows:

> The originally proposed route followed an existing right of way and easement that crossed the property of the Silverbrook Anthracite Coal Mining ("Silverbrook") and would have interfered with Silverbrook's permitted mining operations. Mr. Sparhawk testifies that "(t)he relocated line would eliminate safety concerns for both the Company and for Silverbrook regarding the movement of large mining equipment for mining operations near to the originally proposed line and structures." If mining equipment,

> such as large dump trucks, excavators, or the like were to be operating in the vicinity of high voltage transmission lines, either the equipment would have to be kept clear of the line, or the line would have to be designed with clearance under the conductors and clearance around the support structures, with such equipment in mind.

OCA St. 1 at 19 (footnote omitted). This reroute added approximately 800 feet to the original length of the line. Id. In his Supplemental Direct Testimony, PPL witness Sparhawk discussed the Company's reroute of the SR 500 Project around the Silver Brook Mine. PPL St. 3 Supp. During cross-examination, Mr. Sparhawk was questioned about this reroute as follows:

> Q. Could you please elaborate for the Court for what or whom are your concerns, in other words, what was the safety concerns?
>
> A. I'll elaborate. I should add that the safety concerns were not developed by me nor my routing team. They were … a concern raised with PPL. I don't recall actually the particular group [of] PPL and the landowners in that area. So, the safety concerns, my knowledge of the safety concerns here were knowledge of the large equipment that the mine uses relative to the transmission facilities that were proposed to come through at that particular location at the time.

Tr. at 961-62. It is clear from the transcript that the reroute of the line involved approximately a three-mile stretch, roughly the same distance as the SR500 Project is expected to run through SCE. Tr. at 961. It is also clear that safety issues were the driving force for the reroute, although Mr. Sparhawk testified that safety for infrastructure and resulting potential damage to equipment were the safety concerns that he was aware of. Tr. at 962.

PPL recognizes the risks associated with building this project in the middle of a community of 10,000 people. At other places along the line accommodations have been made for safety reasons. The residents of SCE should receive the same level of concern, and ultimately action. As OCA witness Lanzalotta testified:

> The proposed replacement of the existing transmission line towers through SCE with such large transmission line towers with dwellings located so close to the proposed line presents a safety risk to the people in those dwellings. The people in those dwellings deserve no less consideration than the mine equipment operators at Silverbrook. Due to these safety concerns, routing of the proposed S/R transmission line through SCE should be avoided.

OCA St. 1 at 20.

d. Conclusion.

The usual preference for using existing transmission ROWs must give way in this instance to common sense and regard for the safety of the public. The SCE area is simply too congested and contains too challenging a terrain for this Commission to conclude that building a 500kV transmission project through that community is reasonably safe. The OCA submits that, if indeed the SR500 Project is approved by the Commission at any time, it should be on condition that PPL develop a reroute plan to avoid construction through SCE.

7. Real Estate Values.

N.A.

8. Undergrounding.

N.A.

9. Delaware River National Recreation Area.

a. Background and Legal Standard.

The Commission's regulations contain specific requirements that a proponent of an HV line must meet for Commission approval. In this proceeding, PPL has proposed a HV line that will traverse the Delaware Water Gap National Recreation Area, the Middle Delaware National Scenic and Recreational River (DEWA), following PPL's existing 100 foot wide right-of-way through these areas. Tr. at 399. The record is unclear of the length of PPL's proposed

right-of-way through the DEWA -- the Application provides that it is 1.5 miles long, but PPL witness Smith testified on cross-examination that it is 4 miles long. PPL Exhibit C Siting Analysis at C-74; Tr. at 817. DEWA lands are United States lands within our federal National Park system.

While representing a relatively short segment of the proposed line, the DEWA segment has a critical strategic import well beyond its relation to the overall length of the SR500 line. Any failure to obtain necessary state or federal approvals for this segment of the line would likely change the route contained in the Pennsylvania and New Jersey regulatory filings since the DEWA is where the SR500 line will cross from Pennsylvania into New Jersey. This location is also sensitive because if the National Park Service (NPS) were to issue the appropriate permits, but on the condition that SR500 be re-routed outside PPL's proposed corridor, this may also cause state regulatory approvals to fail. 52 Pa. Code § 57.76(b); Tr. at 831. In addition, PPL's proposed expansion of its project on the DEWA presents special concerns under the Commission's siting regulations. PPL's choice to route the SR500 line through the DEWA creates significant risks, both regulatory and practical, that PPL has not yet adequately addressed. The Commission must consider these in deciding if, or how, it may approve the construction of the SR500 line. The OCA will explain below how these legal and practical considerations require the Commission to condition any approval of the Application on PPL's not beginning actual construction unless and until it receives all necessary federal approvals.

PPL seeks approval to begin construction immediately upon Commission approval. PPL Witness Smith explains how, even though PPL does not yet know the appropriate scope of federal review of the project, the Commission should permit PPL to begin construction nevertheless. In response to a suggestion that it would be imprudent to begin construction of the

line before receiving the federal approvals, PPL witness Smith testified:

> Mr. Lanzalotta states that it would be imprudent to start construction on the Susquehanna Roseland line before all necessary approvals and permits are obtained. I disagree with this statement. It is true, as Mr. Lanzalotta states, that the National Park Service (NPS) will have to undertake an analysis of the environmental effects of the proposed action and reasonable alternatives. However, PPL Electric is evaluating alternative designs that would stay within its existing right-of-way in the Park. Also, the extent of the environmental analysis has not been defined. We are working with DEWA, NPS, and Department of the Interior personnel in Washington D.C. to reduce the time required for DEWA approvals. However, we do not expect that PPL Electric will receive these approvals in the same time period as the expected Commission Order. For this reason alone, it is imperative that PPL electric receive early approval to begin construction of the section of the Wallenpaupack to Bushkill segment in Pike County in the first quarter of 2010. Also, as explained in my rebuttal testimony, approval is also required due to the deteriorated condition of this 1920's vintage facility.

PPL Electric St. No. 1-RJ at 6-7. Clearly, PPL seeks Commission approval to break ground in the immediate vicinity of the DEWA as soon as possible, but there is no assurance that such approvals will be granted in a timely manner.

Pertinent Commission HV line siting regulations from Section 57.72 provide:

> (c) An application shall contain:
>
> …
>
> (7) A description of studies which had been made as to the projected environmental impact of the HV line as proposed and of the efforts which have been and which will be made to minimize the impact of the HV line upon the environment and upon scenic and historic areas, including but not limited to impacts, where applicable, upon land use, soil and sedimentation, plant and wildlife habitats, terrain, hydrology and landscape.
>
> (8) A description of the efforts of the applicant to locate and identify archaeological, geologic, historic, scenic or wilderness areas of significance within 2 miles of the proposed right-of-way and the location and identity of the areas discovered by the applicant.

…

(11) A list of the local, State and Federal governmental agencies which have requirements which shall be met in connection with the construction or maintenance of the proposed HV line and a list of documents which have been or are required to be filed with those agencies in connection with the siting and construction of the proposed HV line.

52 Pa. Code § 57.72. Section 57.72(c)(11) provides for Commission examination of pertinent federal issues within the context of HV transmission line applications. Section 57.75(e)(3) provides additional guidance on the affirmative showing that applicants are to make regarding the matters addressed in 57.72. Expanding on this, the pertinent provisions of Section 57.75(e)(3) are as follows.

(e) At hearings held under this section, the Commission will accept evidence upon, and in its determination of the application it will consider, *inter alia*, the following matters:

(3) The impact and the efforts which have been and will be made to minimize the impact, if any, of the proposed HV line upon the following:

(i) Land use.

(ii) Soil and sedimentation.

(iii) Plant and wildlife habitats.

(iv) Terrain.

(v) Hydrology.

(vi) Landscape.

(vii) Archeologic areas.

(viii) Geologic areas.

(ix) Historic areas.

(x) Scenic areas.

(xi) Wilderness areas.

(xii) Scenic rivers.

52 Pa. Code § 57.75(e)(3). Finally, to approve an application under these sections, Section 57.76(a) directs that the Commission must find and determine that the proposed project will be in compliance with all applicable statutes and regulations providing for the protection of all these categories of resources, and that the proposal will have a minimal adverse environmental impact. 52 Pa. Code § 57.76(a)(3), (4).

In its review of the TrAILCo transmission line Application, the Commission provided instruction on its interpretation of this section of its siting regulations. The Commission reasoned that while its regulations do not require the creation of a NEPA-style environmental assessment as a part of its siting regulations, the Commission does require an affirmative and complete environmental impact evaluation. TrAILCo Order at 188. The Commission added that under these sections, the scope of its requirements, and the scope of its analysis and review could vary with the magnitude of the proposed HV project. Id. at 189.

The Commission is required to examine PPL's proposed routing of the SR500 line through the DEWA through the lens of these Sections, and PPL has an affirmative obligation to show how it meets all applicable state and federal requirements under the same. To meet its burden regarding the DEWA, PPL provided the following from Appendix E-6 *Local, State, and Federal Governmental Agency Requirements* in its Application.

> Application and permit approvals for portion of line through the Delaware Water Gap National Recreation Area (DEWA); data, input, and coordination with NPS toward compliance with its requirements under the National Environmental Policy Act (NEPA)

PPL Application, Appendix E-6. PPL also addressed the need for federal approvals related to the DEWA in its testimony. PPL witness Smith provided:

> At the federal level, approvals that are necessary include construction permits for the portion of the line through the Delaware Water Gap National Recreation Area (DEWA), data, input, and coordination with DEWA toward compliance with its requirements under the National Environmental Policy Act (NEPA), regulated waters/wetlands encroachment permitting, and Delaware River and Susquehanna River crossing permits. In addition, bog turtle screening and reporting and compliance with the Endangered Species Act are required as part of federal permitting.

PPL Electric St. No. 1 at 13. While Mr. Smith's testimony also indicates that PPL Witness Sparhawk discusses federal permitting requirements, Mr. Sparhawk's testimony simply suggests that the SR500 line would have minimal effects on the areas in question. Id.; PPL Electric St. Nos. 3 (rev.) at 36-37; 3R at 17-18.

While this testimony does acknowledge that NEPA compliance is required, this discussion is inadequate given the magnitude of what this means for the SR500 line project. In terms of Sections 57.72, 57.75, and 57.76 matters concerning the DEWA are entitled to the highest level of Commission concern. While acknowledging that serious issues surrounding federal DEWA approvals exist, PPL has presented no credible proof that it can or will satisfy these federal requirements. Without such critical approvals, however, it would be highly inappropriate for PPL to commence construction of this line.

b. The DEWA Portion of the SR500 Line Raises Serious Concerns at the Federal Level.

The Department of the Interior (Department) has described the path of the SR500 line stating that it will "cross the lands of the United States within the Delaware Water Gap National Recreation Area, the Middle Delaware National Scenic and Recreational River

(DEWA), and on the New Jersey continuation of the proposed route, the Appalachian National Scenic Trail." OCA Cross Exhibit No. 3 at 1 (February 27, 2009 Letter from the United States Department of the Interior, National Park Service, to the Pennsylvania Public Utility Commission). PPL proposes that the SR500 line would follow the route of PPL's existing 100 foot wide right-of-way, currently occupied by a 230 kV line, through these areas with its Pennsylvania terminus at the Delaware River crossing into New Jersey. PPL Aerial Exhibit Sheet 21 of 21, Exhibits and Appendices in Support of the Certification Application (binder 3 of 3).

On May 5, 2009, the Commission conducted a site visit at the DEWA and obtained testimony regarding the impact of the SR500 line on the DEWA and on issues that would be considered by the Department in the SR500 line DEWA application and permit process. During that visit, Superintendent John Donahue, a co-author of the Department letter, emphasized practical, environmental, and cultural factors that the Department would take into account when considering the PPL project. Tr. at 375-79. Mr. Donohue was clear that the SR500 line would have a significant impact on DEWA and that a project of this magnitude required a full and complete examination - particularly regarding its environmental effects. Tr. at 381. For example, Superintendent Donohue and NPS biologist Shriner described that construction along any easement would amount to a logging operation within the park, and that the true width of PPL operations along the proposed right-of-way "indicates a staging area of about 350 feet would be necessary." Tr. at 399, 404.

Scientists and representatives from the NPS provided additional details on the value of the resources likely affected and described the NPS concerns with the PPL Proposal. Mr. Lynch, Chief of Resource Management and Science with DEWA, outlined four major

components of its consideration of how the project may impact the DEWA. Mr. Lynch described that the NPS would look at how the proposal would affect the natural and scientific resources of the national park, visitor resources, and also cultural and scenic value of the DEWA as "the last vestige of naturalness, while we're trying to preserve our cultural heritage in this area for native Pennsylvanians." Tr. at 372-73.

Mr. Brinnen Carter, DEWA cultural resource manager, testified to the historic and cultural resources jeopardized by the construction and operation of the SR500 line. Tr. at 364-68. In particular, Mr. Carter focused on NPS efforts to bring areas near the proposed line closer to their natural condition prior to human habitation and to preserve culturally significant aspects of human habitation -- homesteading and farming structures -- that have long existed within the DEWA. Tr. at 393-95.

DEWA biologist Mr. Shriner explained how the construction of the SR500 line could disturb imperiled biological resources within DEWA, particularly the unique (in the true sense of the word) hydrology of the Arnott fen. Tr. at 382-390. He testified that PPL has been advised by NPS, the U.S. Fish and Wildlife Service, the Fish and Boat and Game Commissions of this Commonwealth, and the Natural Heritage Program that special concerned species may be on site or affected by its proposed project. Tr. at 396. An additional concern was the construction of access roads where none now exist, and PPL's proposed use of now-defunct road beds that the NPS is successfully rehabilitating into native woodland. Tr. at 389-94, 409. Mr. Shriner and Mr. Donohue also discussed the proposed expansion of the existing 100 foot right-of-way, and the 350-foot width of the staging and logging operation necessary for construction, how this may impact rare, threatened, or endangered species, and how PPL's proposal would require consideration of all these issues for necessary permits. Tr. at 397-400. NPS also raised

the issue of whether additional new rights-of-way in the form of access roads would be required for maintenance of the line. Tr. at 400, 404. Mr. Lynch added that these additional access roads would serve to further fragment the ecosystem of the park and that this would harm the very foundation of the ecological processes within the park. Tr. at 400.

NPS biologist Mr. Ambler discussed how PPL proposes to create a multi-strand installation of wires and towers well above tree level. Tr. at 413. Mr. Ambler testified that the SR500 line would lie within the largest bald eagle wintering area east of the Mississippi and described how the SR500 line would effectively create a "fence" separating the area where bald eagles roost and where they feed within DEWA along the Delaware River during the winter. Tr. at 410-13. Mr. North, the River District Ranger testified to how the proposed SR500 line may have long-term negative consequences regarding the experience of large numbers of persons traversing the Delaware with watercraft and camping within DEWA along the banks of the Delaware River. Tr. at 424-27.

In addition, Superintendent Donohue was a signatory to the February 27 Department of the Interior letter submitted into the record as OCA Cross Exhibit No. 3. The Superintendent described differences between PPL's operation of the existing 230 kV line and outlined the federal permitting and approval process that construction of the proposed 500 kV line would entail.

> While PPL does indeed own an easement across the lands of the United States within DEWA, the rights it currently holds are not sufficient in width to support the expansion from the existing 230 kV line to the proposed 500 kV line. PPL's use of its existing easement over federal land will require issuance of a permit by the NPS to ensure that this use is conducted in a manner least harmful to park resources. Additional permits for temporary occupancy for construction purposes will also be required. It will, in addition, require a Right of Way permit under 36 C.F.R. part 14 to permit the use of additional federal lands to support the proposal. PPL

> has not yet applied for the Right-of-Way permit although it has applied for the permits to use its existing easement. Consideration of these permit applications will require the National Park Service to conduct an analysis under the National Environmental Policy Act (NEPA), which we believe will result in the need to prepare an Environmental Impact Statement (EIS). The NPS has already communicated with the U.S. Army Corps of Engineers, and the U.S. Department of Energy (DOE), and determined that it will be the lead agency for NEPA purposes. In addition, the NPS will have to consult with the U.S. Fish and Wildlife Service under Section 7 of the Endangered Species Act, with the respective State Historic Preservation Officers in both States and Tribal Historic Preservation Officers under the National Historic Preservation Act, and other state and local agencies as necessary. There will be opportunity for public input and comment.

OCA Cross Exhibit No. 3 at 2. In addition to providing details on the federal regulatory requirements and multi-jurisdictional agency involvement in this project, the letter lists specific NPS concerns with the construction of the SR500 line.[13] This list of regulatory requirements is instructive when read with the May 5 site visit testimony in mind. These requirements include:

- PPL must acquire additional property rights under federal law to construct the line through the DEWA;
- PPL use of the existing easement will require additional permits;
- An unknown number of temporary occupancy permits for construction are required;
- An unknown number of maintenance access roads may be required and these will likewise require permitting;
- An Environmental Impact Statement is required;
- NPS must consult with the with the U.S. Fish and Wildlife Service under Section 7 of the Endangered Species Act;

[13] Under federal law, the Secretary of the Department of the Interior has discretion to authorize the use of enduring easements on NPS land of up to 50 feet on each side of the center line of a transmission line. 36 C.F.R. § 14.70(a). The PPL right-of-way discussed in the DOI Letter and at the DEWA site visit is in excess of 50 feet from the center line. Tr. at 399. DOI has the discretion to grant easements of larger size, but these are not enduring and cannot exceed a 50-year period. 36 C.F.R. § 14.70(b). Such easements may be renewed for additional 50 year terms, but only subject to the holder's compliance with all laws existing at the time of renewal. 36 C.F.R. 14.76(b). Thus, it cannot be predicted how PPL's choice to obtain these limited easements may affect future operations.

- NPS must consult with Pennsylvania and New Jersey State Historic Preservation Officers;
- NPS must consult with Tribal Historic Preservation Officers under the National Historic Preservation Act;
- NPS will provide opportunity for public input and comment on all relevant issues.

Id.; s*ee also* Tr. at 379-381. As of this date, PPL has shown little by way of how it will meet these federal requirements.

On April 29, 2009, PPL responded to the issues outlined in the February 27 Department letter via a letter transmitted to the Commission by PPL counsel on that date. PPL Electric Ex. 3. The PPL Letter offered assurances that PPL's "open house" public input process provided input into the issues raised by the Department. PPL Letter at 2. The PPL Letter also discussed PPL's concern with the Department's conclusion that PPL's failure to include DEWA as a large area constraint illustrated PPL's overall failure to properly consider the magnitude of the Department's approval process in PPL's proposed plans. Id. The PPL Letter also pointed out that PPL initiated its SR500 line discussions with the NPS on March 10, 2008. Id.

All this testimony shows that the Department has demonstrated concerns that the construction and operation of the SR500 line would have serious and substantial long-term effects on the DEWA on a number of fronts, and that it is obligated under federal law to consider all these in its evaluation of PPL's request to expand its power line on additional DEWA resources. Based on this testimony, one cannot reasonably conclude that the Department has "minimized" or otherwise limited its review of the SR500 line as PPL has requested. Indeed, from the DEWA site visit, it is clear that the scope of the NEPA review for the DEWA will be broad.

The OCA acknowledges that the Commission cannot determine whether PPL should receive the required federal approvals related to the DEWA. The Commission must be concerned, however, that the lack of such federal approvals could result in PPL incurring substantial costs for construction that would be rendered useless.

PPL's choice to route the SR500 line along its existing easement within DEWA brings Commission regulations 57.72, 57.75, and 57.76 into sharp relief. Here, PPL compliance with federal regulations goes to the heart of whether construction should be permitted to commence before federal approvals are granted. Indeed, Section 57.75 obligates PPL to make an affirmative showing on most, if not all, the issues touched on in the DEWA testimony, and which will be the subject of any environmental review. And, Section 57.76 requires that the Commission find that the proposed project will be in compliance with all applicable statutes and regulations providing for the protection of the all these categories of resources, and that the proposal will have a minimal adverse environmental impact. While PPL's proposal raises many serious questions regarding the DEWA, the PPL Application provides little by which the Commission may be assured that the required federal approvals will be granted. For these reasons, the Commission, at a bare minimum, must condition any approval of the Application on PPL's not beginning actual construction unless and until it receives all necessary federal approvals.

i. The Commission's Regulations Preclude a Finding in Favor of Beginning Constructing of the SR500 Line Immediately Following a Commission Order.

A key aspect of analyzing how the SR500 line would affect the DEWA, and the determination of whether PPL will obtain necessary permits and easements, is whether or when compliance with the National Environmental Policy Act (NEPA) will occur. This is not clear

under the record in this proceeding. Tr. at 381. Based on years of experience with NPS administration of the NEPA, Superintendents Donohue and Underhill recommended to PPL that it should forgo the year-long process to determine whether an EIS was required and simply move to perform an EIS to comply with the NEPA. They made this recommendation because "we determined that we could not, because of the scope and magnitude of the project, forward the findings of no significant impact under any scenario that we could imagine." Tr. at 380. It is noteworthy that as of May 5, 2009, nearly three months into the Commission's review process, the NPS had no response from PPL on whether PPL intended to act on the NPS recommendation on how PPL might accelerate the SR500 line review process. Tr. at 381. PPL has not yet demonstrated that an EIS for the SR500 line has been completed, or that the relevant federal agencies have acted in response to it.

As discussed above, the Commission has reasoned that, standing on its own, a Commission review of a siting application would not trigger the need for a NEPA-style environmental review, but that its regulations require an affirmative and complete environmental impact analysis and that the level of this requirement may vary depending upon the proposed project. TrAILCo Recommended Decision at 188-89. In this instance, however, a NEPA review will be necessary because it is required by federal law. And, as the OCA explained above, the regulations require Commission review of whether compliance with federal law has or will occur.

There can be no serious argument over whether the SR500 line project is subject to NEPA requirements, and it is clear that PPL has been discussing these issues with the Department of the Interior since early 2008. PPL Electric Ex. 3. In addition, Superintendent Donahue testified that it was his conclusion that an EIS was required under the DEWA in this

instance because of the substantial effects the SR500 line may have on the DEWA. Tr. at 380-81. Likewise, as is discussed above, PPL recognizes that NEPA compliance is required here. In the record of this proceeding, however, PPL has not shown how, when, or even if, this will occur. The OCA submits that NEPA compliance has an effect on the timing of the construction of the SR500 line. In fact, NEPA compliance issues make what PPL asks of the Commission -- to permit construction to begin immediately in the absence of federal approvals -- at odds with federal law.

The PPL Application describes the required NEPA compliance as a matter for the Department of the Interior in that PPL states that it will engage in "coordination with NPS toward compliance with its [the Department of the Interior] requirements under the National Environmental Policy Act." PPL Application, Appendix E-6. PPL is correct that NEPA review focuses on decision making within federal agencies. It would be incorrect, however, for PPL to imply that NEPA compliance has no significant effect on its ability to proceed with actual construction of the SR500 line, and that it may begin construction upon Commission approval of its Application. PPL Electric St. No. 1-RJ at 6-7.

Where applicable, the purpose of NEPA review is to inject environmental considerations into federal decision making. Weinberger v. Catholic Action of Hawaii/Peace Education Project, 454 U.S. 139, 143, 70 L. Ed. 2d 298, 102 S. Ct. 197 (1981); Macht v. Skinner, 916 F.2d 13, 14 (1990) (Skinner). The private projects of non-federal actors (such as PPL) are also subject to NEPA requirements when federal agency involvement in the outcome of a project rises to a level determinative of the outcome of the project. Skinner, 916 F.2d 13, 14 (1990) (citing Maryland Conservation Council, Inc. v. Gilchrist, 808 F.2d 1039 (4th Cir. 1986)(Gilchrist); Winnebago Tribe of Nebraska v. Ray, 621 F.2d 269 (8th Cir. 1980); Sierra

Club v. Hodel, 544 F.2d 1036 (9th Cir. 1976)); *see also* Foundation on Economic Trends v. Heckler, 756 F.2d 143, 155 (D.C. Cir. 1985). It is the federal exercise of discretionary decision making over the project's outcome that implicates NEPA review. Gilchrist at 1043. ("The district court was in error when it failed to consider whether the authority of the Secretary of the Interior over the project made it "federal.") Courts have applied this point in a number of cases involving both power transmission lines and national forests. *See, e.g.,* Greene County Planning Board v. Federal Power Commission, 455 F.2d 412 (2d Cir.), cert. denied, 409 U.S. 849, 34 L. Ed. 2d 90, 93 S. Ct. 56 (1972) (transmission lines could not be strung without Federal Power Commission license); West Virginia Highlands Conservancy v. Island Creek Coal Co., 441 F.2d 232 (4th Cir. 1971) (timber-cutting and mining activity in Monongahela National Forest could not proceed without NPS permission); *see also* Biderman v. Morton, 497 F.2d 1141, 1147 (2d Cir. N.Y. 1974).

Here, PPL's choice to route the line along its existing easements through the DEWA has effectively conditioned the outcome of the project, as filed, on the Department of the Interior's exercising its authority and discretion in favor of PPL's preferred route. In effect, PPL opted for the outcome of NEPA control over the start of actual construction by selecting this particular route.[14]

The 1986 Gilchrist case explains how all this is important to a project like the SR500 line. In Gilchrist, Montgomery County, Maryland proposed to build a highway through Seneca Creek State Park and discretionary Department of the Interior approval was required. Gilchrist at 1041. The highway construction was challenged, in part, on the grounds that NEPA

[14] In addition, in its Appendix E-6 Local, State, and Federal Governmental Agency Requirements, PPL provided a list of all those federal agencies from which it believed permits are required for the SR500 line. In addition to the permits required by DOI, PPL lists the need for multiple permits from the United States Army Corps of Engineers, United States Fish and Wildlife Service, United States Environmental Protection Agency, and the National Marine Fisheries Service.

applied, and an EIS was required, and that no part of construction of the project could proceed until federal action on the EIS had been finalized. Gilchrist at 1042-43. The Gilchrist court concluded as follows.

> Because the highway, wherever located, must cross Seneca Creek State park, a park established with a grant of substantial federal funds, the approval of the Secretary of the Interior for conversion of the park land to other than public outdoor recreation uses will be required.
>
> …
>
> Because it is inevitable that the construction of the highway will involve a major federal action, it follows that compliance with the NEPA is required before any portion of the road is built. This conclusion effectuates the purpose of the NEPA. The decision of the Secretary of the Interior to approve the project, and the decision of any other Secretary whose authority may extend to the project, would inevitably be influenced if the County were allowed to construct major segments of the highway before the issuance of a final EIS.
>
> …
>
> It is precisely this sort of influence on federal decision making that NEPA is designed to prevent. Non-federal actors may not be permitted to evade the NEPA by completing a project without an EIS and then presenting the responsible federal agency with a *fait accompli*.

Gilchrist at 1042.

Whether or not prior federal approval is mandated by law, however, as a practical matter, it makes no sense for PPL to commence construction of the Pennsylvania portion of the line unless and until PPL has the requisite authority to complete the line to New Jersey. Pennsylvania residents and consumers should not be required to bear the environmental and economic costs of a transmission line to nowhere. The Commission must condition any approval such that PPL is prohibited from beginning *any actual construction on its proposed route* unless and until PPL has acquired all necessary federal approvals regarding the SR500 line.

10. Viewshed.

N.A.

11. Tourism.

N.A.

12. Construction Issues.

(Covered in Section C.6.)

13. Project Costs And Rate Recovery.

In the Company's initial filing, the Direct Testimony of PPL witness Joseph Kleha described the proposed SR500 project costs, rate recovery and allocations of the costs of the proposed SR500 project. As a project that is 500 kV or higher, the SR500 line was subject to "postage-stamp rate" treatment at the time of the filing, to be allocated among all PJM transmission zones based upon the annual peak load of each zone. PPL St. 11 at 3. The reconductored Wallenpaupack-to-Bushkill dual 230 kV line is included in this rate treatment as the lower-voltage lines are considered supporting structure for the 500 kV line. Tr. 1946-47.

Prior to the PPL Application filing, the FERC had issued orders directing that new facilities within PJM that are 500 kV and above be fully allocated on a PJM region-wide "postage-stamp" basis. Re PJM Interconnection LLC, 111 FERC ¶61,308 (Docket Nos. EL05-121-000, *et al.*). That Order was appealed and the Seventh Circuit Court of Appeals recently determined that the "postage-stamp" rate method had not been adequately explained and remanded the case to the FERC.[15] Ill. Commerce Comm'n v. Fed. Energy Regulatory Comm'n, 2009 U.S. App. LEXIS 18311. Specifically, the Court queried, in response to FERC's argument that its Order approving "postage-stamp rates" should be affirmed:

[15] With the "postage stamp ratemaking" method, each transmission zone pays its proportionate share of the 500 kV or above project, based upon its annual peak load. Tr. 1952.

> Why, we wonder, would a different method of refunds, based more closely on cost-causation principles, jeopardize desirable price signaling or be infeasible?...
>
> FERC is not authorized to approve a pricing scheme that requires a group of utilities to pay for facilities from which its members derive no benefits, or benefits that are trivial in relation to the costs sought to be shifted to its members.

Id. at **11, **13. The Court remanded the matter to the FERC for further proceedings.

Thus, whether PPL customers will be paying 5% or $60 million of the project costs, as testified to by Mr. Kleha, or some other share of the costs, is now uncertain. PPL St. 11 at 5; Tr. 1954. Every zone pays a proportionate share of the project costs based upon its annual peak load, but PPL does not know how much of the remaining $1.14 billion will be borne by other Pennsylvania electric utility customers. Tr. 1951; OCA Cross Exhibit 18. OTS witness Yocca, however, estimates that other Pennsylvania electric utility customers within PJM will bear approximately 15% of the project costs, or $180,000,000, plus operation and maintenance expenses associated with it for the forty-two year life of the SR500 line. OTS St. 1 at 34 (referencing Pa. PUC Order adopted March 26, 2009, at Docket No. M-2008-2069887, at 5).

As Mr. Kleha testified, the FERC determines the revenue requirement based on filings submitted by PPL for the proposed SR500 facilities, pursuant to the PJM Open Access Transmission Tariff. PPL St. 11 at 3. In addition, FERC has approved "incentive rate" treatment for the SR500 facilities. Tr. 1944. During hearings, Mr. Kleha explained the meaning of the phrase "incentive rates." Tr. 1944-46. Due to the financial risks and other challenges presented by the SR500 Project, FERC has allowed a 125 basis-point adder (of the 150 basis point adder requested by PPL) to the Company's rate of return. Tr. 1945. Among the risks FERC considered were the high cost of the project, the multiple governmental approvals required and the difficult construction terrain. Tr. 1945. For PPL's "continued membership" in PJM

Interconnection, LLC, FERC allowed another 50 basis point adder. Tr. 1944. Thus, the rate of return applied to the SR500 project will range from 12.6 to 12.68% over a three-year period. Tr. 1958.

Through incentive rates, PPL is able to recover 100% of the prudently incurred transmission-related construction work in progress. Tr. 1945-46, 1958. All capital costs and expenses incurred associated with the SR500 Project are recoverable through FERC formula rates, even if the project were to be abandoned for reasons beyond PPL's control. Tr. 1946. The incentive rates apply to both the 500 kV and 230 kV portions of the project, because the 230 kV line is considered to be a supporting facility for the 500 kV circuit. PPL St. 11 at 4-5.

The formula rates approved by FERC associated with the SR500 line are based upon estimated costs for the year ahead. Tr. 1956. Those estimated costs are subject to annual true-up the following year. Tr. 1956-57. Through the FERC-approved rates, the Company recovers dollar-for-dollar its actual costs expended. Tr. 1958-59. This dollar-for-dollar recovery applies to interest and the cost of debt; the cost of equity is the only fixed element in the formula. Tr. 1960. No matter what the level of transmission service sales, PPL will receive its authorized rate of return on the capital investments associated with the projects, unless such rate of return is successfully challenged through a complaint to the FERC. Tr. 1960-62.

PPL pays PJM for transmission service, then PPL recovers the cost of that service through its transmission service charge; the Commission has no authority to change the FERC-approved rate. Tr. 1962-64. The $1.2 billion in estimated costs of the SR500 Project do not include any estimate of the operation and maintenance costs associated with the proposed project. Tr. 1969-70; OCA Cross Exam Exh. 8.

As noted in this Commission's most recent transmission line proceeding, the Commission must weigh the impacts and consequences of approving or not approving a proposed line such as the SR500 project. TrAILCo R.D. at 80-81. The $1.2 billion in costs of the SR500, exclusive of operations and maintenance expenses, are an obvious cost to the ratepayers within PJM that must be considered in this case. Indeed, in the most recent proposed transmission line proceeding, Commission Chairman James Cawley expressed great concern over the fairness of the FERC allocation methods that apply to lines such as the 500 kV proposed in the instant case and called for a full and thorough cost-benefit analysis of such projects. Statement of Commissioner Cawley, Nov. 13, 2008, In Re TrAILCo, Docket No. A-110172. The record is clear in this case that no specific cost-benefit analysis of the Susquehanna Roseland line has been performed. Tr. ___-___; OCA Cross Exhibit __. The Commission should give no less consideration to the substantial costs that will be imposed on PJM ratepayers both within and outside Pennsylvania, in the instant proceeding.

14. Other Economic Impacts Of The Proposed Line.

N.A.

D. Eminent Domain.

The OCA is not briefing the eminent domain issues presented by the instant Applications separately in this case. The OCA incorporates herein by reference, however, all of the arguments set forth in Section IV.A.-IV.B., *supra*, that demonstrate that PPL has not sustained its burden of proving that the proposed Susquehanna-Roseland line is needed at this time to serve the public, pursuant to the standards set forth in the Public Utility Code, specifically 66 Pa.C.S. § 1101, *et seq*. and § 1501, and the Commission siting regulations set forth at 52 Pa. Code § 57.71, *et seq.*

To the extent that the proposed Susquehanna-Roseland line is not needed and should not be approved, PPL's request for authority to exercise eminent domain should also not be approved for all of the same reasons.

E. ZONING EXEMPTION.

N.A.

F. OTHER RELEVANT ISSUES.

N.A.

V. CONCLUSION

Applicant PPL Electric Utilities Corporation has failed to meet its burden of proving that its proposed Susquehanna-Roseland 500 kV facility is necessary and proper for the accommodation, convenience and safety of the public, pursuant to the Public Utility Code and the Commission's Regulations.

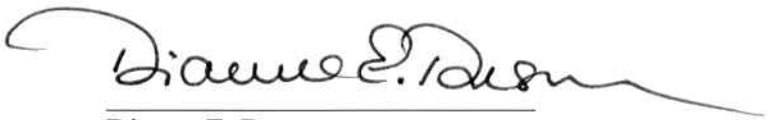
The Office of Consumer Advocate submits that the Commission cannot approve the instant Application on this evidentiary record; rather the Commission must either deny the Application outright or, in the alternative, request that PPL (1) further waive its right to invoke FERC transmission siting authority if a final decision is not made by this Commission within one year of PPL's Application filing date, and (2) submit a current retool analysis incorporating an updated peak load forecast, the results of the 2009 RPM auction and peak load reductions resulting from Pennsylvania Act 129 and the New Jersey Energy Master Plan.

If, upon further consideration of the updated analysis, the Commission determines that the proposed Susquehanna-Roseland facility is needed to serve the public pursuant to the standards of the Public Utility Code and pertinent regulations, the Commission should require, as a condition of commencing construction of the proposed line, that PPL:

(1) Develop a reroute of the proposed Susquehanna-Roseland line to avoid the Saw Creek Estates Community, and

(2) Demonstrate that it has obtained all permits required to construct and operate the proposed Susquehanna-Roseland line, including those required by federal law and regulations to route the line through the Delaware Water Gap National Recreation Area, prior to commencing construction of any portion of the line.

Respectfully Submitted,



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CERTIFICATE OF SERVICE

Applications of PPL Electric Utilities Corporation Filed Pursuant to 52 Pa. Code Chapter 57, Subchapter G, for Approval of the Siting and Construction of the Pennsylvania Portion of the Proposed Susquehanna-Roseland 500 kV Transmission Line in Portions of Lackawanna, Luzerne, Monroe, Pike and Wayne Counties, Pennsylvania	:	Docket Nos. A-2009-2082652, *et al.*

I hereby certify that I have this day served a true copy of the foregoing documents, the Initial Brief on behalf of the Office of Consumer Advocate, upon parties of record in this proceeding in accordance with the requirements of 52 Pa. Code Section 1.54 (relating to service by a participant), in the manner and upon the persons listed below:

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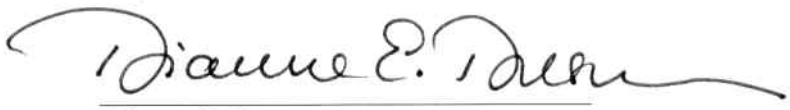

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APPENDIX A

Glossary of Terms and Abbreviations
(10/5/2009)

AC	Alternating Current
ACSR	Aluminum Conductor Steel Reinforced
APE	Architectural Areas of Potential Effect
APLIC	Avian Power Line Interaction Committee
APP	Avian Protection Plan
CCD	County Conservation Districts
CDC	Center for Disease Control and Prevention
CFL	Compact Florescent Lamp
COE	U.S. Army Corps of Engineers
CRGIS	Cultural Resources Geographic Information Systems
CSA	Construction Services Agreement
DBD	Design Basis Document
DC	Direct Current
DCNR	Pennsylvania Department of Conservation and Natural Resources
DCPC	Division of Cancer Prevention and Control
DEP	Pennsylvania Department of Environmental Protection
DEWA	Delaware Water Gap National Recreation Area
DOE	Department of Energy
DOI	Department of the Interior
DR	Demand Response
DSM	Demand Side Management
EDC	Electric Distribution Company
EEC	Energy Conservation Council

EE&C	Energy Efficiency and Conservation
EHV	Extra-High Voltage
EMAAC	Eastern Mid-Atlantic Area Council
EMF	Electric and Magnetic Fields
EMP	New Jersey Energy Master Plan
EPA	United States Environmental Protection Agency
EPRI	Electric Power Research Institute
EV	Exceptional Value
FERC	Federal Energy Regulatory Commission
GDT	Generator Deliverability Test
GIS	Geographic Information Systems
HQ	High Quality
HVTLs	High Voltage Transmission Lines
Hz	Hertz
IEEE	Institute of Electrical and Electronics Engineers
ILR	Interruptible Load Resources
ISA	Interconnection Service Agreement
JCPL	Jersey Central Power & Light
JD	Jurisdictional Determination
kV	Kilovolt
LDT	Load Deliverability Test
LMP	Locational Marginal Pricing
MAAC	Mid-Atlantic Area Council
MOD	Motor Operated Disconnect
MW	Megawatts

NCI	National Cancer Institute
NEPA	National Environmental Policy Act
NERC	North American Electric Reliability Corporation
NESC	National Electric Safety Code
NIEHS	National Institute of Environmental Health Sciences
NIH	National Institute of Health
NIETC	National Interest Electric Transmission Corridors
NPDES	National Pollutant Discharge Elimination System
NPS	National Park Service
NRHP	National Register of Historic Places
NTP	National Toxicology Program
OATT	Open Access Transmission Tariff
OCA	Office of Consumer Advocate
OTS	Office of Trial Staff
OSHA	Occupational Safety and Health Administration
PAWC	Pennsylvania American Water Company
PECO	Philadelphia Electric Company
PFBC	Pennsylvania Fish and Boat Commission
PGC	Pennsylvania Game Commission
PJM	PJM Interconnection, LLC
PPL	Pennsylvania Power and Light
PPLICA	Pennsylvania Power and Light Industrial Customer Alliance
PNDI	Pennsylvania Natural Diversity Inventory
PSE&G	Public Service Electric & Gas Company
RPM	Reliability Pricing Model

RTEP	Regional Transmission Expansion Plan
RTO	Regional Transmission Organization
SCE	Saw Creek Estates
SCECA	Saw Creek Estates Community Association, Inc.
SR500	Susquehanna-Roseland 500 kV
TBG	The Brattle Group
TEAC	Transmission Expansion Advisory Committee
TLR	Transmission Loading Relief
TNC	The Nature Conservancy
TRM	Technical Resource Manual
USFWS	United States Fish and Wildlife Service
WHO	World Health Organization
XLPE	Cross Linked Polyethylene

BEFORE THE

PENNSYLVANIA PUBLIC UTILITY COMMISSION

Applications of West Penn Power Company for approval of the exercise of the power of eminent domain to acquire right-of-way for the construction, operation and maintenance of the Harrison-Prexy-Yukon 500 KV transmission line and associated 138 KV transmission lines over properties located in Greene, Washington, Allegheny and Westmoreland Counties.	:	Application Docket Nos. 100200-100242, inclusive 100552-100556, inclusive 100898

Before: Michael A. Nemec
Administrative Law Judge

Date: January 16, 1980

INITIAL DECISION

(Subject to Commission Approval)

History of the Proceeding

On February 22, 1977, West Penn Power Company (West Penn), a wholly owned operating subsidiary of the Allegheny Power System (APS), filed with the Pennsylvania Public Utility Commission (Commission) 50 applications for certificates of public convenience for authority to exercise the power of eminent domain across property of designated property owners, all in connection with the construction of the proposed Harrison-Prexy-Yukon 500 KV transmission line (HPY) and four (4) associated 138 KV transmission lines. The applications were made pursuant to the Act of May 21, 1921, P.L. 1057 (15 P.S. §3272, renumbered from §1182) and docketed at Application Docket Nos. 00100200-00100249. On August 22, 1977 and March 29, 1978 West Penn

filed six (6) additional applications which were docketed at Application Docket Nos. 00100552-00100556 and 00100898, respectively. West Penn moved for consolidation of these applications and all applications were consolidated on March 17, 1977 and November 16, 1978. Commission Trial Staff stated and West Penn has not disputed, that the following applications were withdrawn at various times during the proceedings: A. 00100243 through A. 00100249, A. 00100204, A. 00100210, A. 00100214, A. 00100216, A. 00100218, A. 00100222, A. 00100224, A. 00100234, A. 00100236, A. 00100240, A. 00100242, A. 00100554.

On July 19 and 28, 1977, Commission Trial Staff, represented by Larry Smukler, formally intervened in the proceeding; Louise A. Russell and Allison K. Turner subsequently entered appearances in June, 1978. Formal intervention was also sought and obtained by North Bethlehem Township and Union Township, Washington County, Pennsylvania. During the course of these proceedings, all affected landowners have been allowed to participate as parties even if they did not file formal petitions to intervene.

Interrogatories were served on West Penn by Commission Trial Staff. The Interrogatories and the Answers to these Interrogatories were incorporated into the record, although not all the Interrogatories and Answers were marked with exhibit numbers for identification.

Pre-hearing conferences were held on July 21, 1977, November 15, 1977 and March 3, 1978, in Harrisburg before Administrative Law Judges Chiovero and Ludwig. The first pre-hearing on July 21, 1977, before ALJ Chiovero resulted in an apparent agreement between Trial Staff and West Penn to cooperate in discovery and the orderly presentation of the

case. At the second pre-hearing conference, on November 15, 1977, before ALJ Ludwig, West Penn committed itself to answering Trial Staff's interrogatories by February 17, 1978, and providing prepared testimony of its witnesses at least ten days prior to hearing. The hearing on March 3, 1978, originally scheduled for the taking of testimony, was converted to a pre-hearing conference by ALJ Ludwig as interrogatories had not been answered by West Penn to the satisfaction of Trial Staff. At West Penn's request, evidentiary hearings scheduled for April, 1978, were cancelled and the first evidentiary hearings set for May, 1978. Upon commencement of the hearings, the case was reassigned to me and I conducted all the hearings. Hearings were held in Pittsburgh on the following dates: May 4 and 5, 1978; June 16, 17, 22, 23, 29 and 30, 1978; July 13, 14, 20, 21 and 31, 1978; August 1, 10, and 11, 1978; December 20, 1978; March 7 and 8, 1979; and April 11, 1979. I also conducted an on-site view of the proposed transmission line right-of-way on October 19 and 20, 1978. Notice of this inspection was given to all parties, but West Penn declined to participate.

The record in this matter was closed on April 11, 1979. Main briefs were timely filed by Commission Trial Staff, participating property owners by counsel and a separate statement by property owner R. J. Beinlich. West Penn filed a "Reply Brief of the Applicant" which was received in Pittsburgh on August 15, 1979, some 20 days after the due date for briefs. Trial Staff's motion to strike West Penn's brief was denied by Interim Order dated August 22, 1979, which also permitted Trial Staff and property owners an opportunity to reply. Trial Staff duly filed a reply brief. Pursuant to a request by counsel for various property owners, oral argument was held on September 19, 1979, in Pittsburgh. Trial Staff and various property owners participated but counsel for West Penn did not appear.

The record consists of a transcript in excess of 2153 pages plus numerous exhibits, interrogatories and answers to interrogatories.

Introduction

For many years, the burden on the electric company applicant for a certificate of public convenience to exercise the power of eminent domain was merely to establish that there was a need for the proposed service. Once public need was acknowledged, the actual properties to be condemned was a matter within the discretion of the company, absent arbitrary or capricious selection. On this matter, the Commission was passive:

> The record fails to disclose either that applicant's selection of the proposed route was wanton, arbitrary, or capricious, or that the rights of the property owner were unreasonably disregarded. In the absence of such showing, the Commission will not interfere with the reasonable exercise of applicant's prerogative. . . Application of West Penn Power, 38 Pa. P.U.C. 642 (1961)

In other words, utility companies were not required to make the best, or even a good decision regarding routing in order to receive eminent domain powers; it was only necessary that they not make a very bad decision. And, the reasonableness of the utilities' decision was presumed absent affirmative proof that such decision was arbitrary, capricious, or in disregard of an individual's rights. Application of Pennsylvania Power & Light Co., 45 Pa. P.U.C. 760 (1971). The Commission was instructed by the Superior Court not to withhold approval "merely because another route might have been adopted, which would damage the owners less," Byers v. Pa. P.U.C., 176 Pa. Super. 620 (1954); Biddle v. P.S.C., 90 Pa. Super. 570 (1927). Cf. Application of West Penn Power, 38 Pa. P.U.C. 642 (1961).

Thus, the burden on a protestant to overcome the presumption in favor of the utility's decision was almost insurmountable. In case after case, the Commission held that property owners had failed to demonstrate that the utility's routing was arbitrary or capricious, e.g. Application of Metropolitan Edison Co., 48 Pa. P.U.C. 310 (1974); Application of Philadelphia Electric Company, 42 Pa. P.U.C. 540 (1966); Application of West Penn Power Co., 41 Pa. P.U.C. 133 (1963). Cf. Phillips v. Pa. P.U.C., 181 Pa. Super 625, 124 A. 2d 625 (1956). (The inability of protestants to point out another, more feasible route is in itself sufficient proof of the company's ability and competency in selecting the route.) Understandably frustrating to any protesting property owner was the fact that his or her complaint would likely be heard by the Commission long after rights-of-way had been negotiated with neighboring property owners and the utility could logically add to its already heavy presumption the impracticability of rerouting around an individual parcel, Re West Penn Power, 49 Pa. P.U.C. 1 (1975). The Commission recently recognized this when, considering proposed regulations for transmission line siting, it wrote:

> [R]eview occurs too late. In many cases, the application for certification is not filed until a final route has been selected, most of the needed rights of way have been purchased, and some construction begun. Although these actions do not alter our standard of review, they do create substantial restraints with respect to modifying the location and construction of the proposed line.
> 49 Pa. P.U.C. 706 at 710.

The growing concern of the Commission with the practices and procedures of transmission line siting is reflected in several recent cases preceding the new siting regulations. This concern has affected the Commission's consideration of need for the facilities as well as the reasonableness of the route selection. The test of necessity was integrated with the management decision of methods in a 1977 case:

> The record clearly indicates that the applicant's Blooming Glen service area is experiencing significant electric load growth and that the applicant's existing facilities are operating at or near design capacities. However, these facts alone are not sufficient for a finding of the necessity or propriety of applicant's proposed facilities. The proposed facilities are not the sole or exclusive means of providing additional electric supply for the Blooming Glen area. The question to be decided here is not simply whether some kind of additional transmission facilities are needed, but rather whether the facilities as proposed are necessary or proper. Thus, we must ascertain whether or not applicant has acted unreasonably in selecting the proposed facility as the means of providing load relief for the Blooming Glen service area. Re Pennsylvania Power & Light Co., 50 Pa. P.U.C. 480 (1977).

Thus, the applicant's burden was increased beyond a mere showing of need for new facilities to add a showing that the proposed facilities are reasonably responsive to the need that exists.

Additionally, the applicant's burden has been increased by the recently enacted Article I section 27 of the Pennsylvania Constitution and court decisions construing its impact on agency review of exercises of eminent domain. The Commission has adopted the standards set by the Commonwealth Court (affirmed by the state Supreme Court) in Payne v. Kassab, 312 A. 2d 86 (1973), aff'd 323 A. 2d 407 (1974):

> The Court's role must be to test the decision under review by a threefold standard: (1) Was there compliance with all applicable statutes and regulations relevant to the protection of the Commonwealth's public natural resources? (2) Does the record demonstrate a reasonable effort to reduce the environmental incursion to a minimum? (3) Does the environmental harm which will result . . . so clearly outweight the benefits to be derived there - from that to proceed further would be an abuse of discretion?

In endorsing this test, the Commission has added that once a protestant adequately raises the issue of adverse environmental impact, the burden on the applicant is intensified and it must affirmatively meet the Payne test. Re Pennsylvania Power & Light Co., 50 Pa. P.U.C. 480 (1977); Pa. D.E.R. v. Pa. P.U.C., 335 A. 2d 860, 865 (1975). Another case has made the requirements more specific, instructing that where property owners demonstrate with particularity how the use of their properties may be adversely affected by the construction and maintenance of proposed transmission lines, the applicant must show, on the record and in detail, the steps it has taken and will take to minimize the effects of the line on individual properties. Re West Penn Power, 50 Pa. P.U.C. 283 (1976).

It may reasonably be said that the requirements for granting of a certificate have been changed by changing case law; on the other hand, it might be said that existing law has simply been made more explicit. A showing of public necessity has always required a consideration of the public good; the public good is now seen (by the Pa. Constitution, by the Commission, and probably by most of the members of the public itself) as including jealous protection of our environmental resources. Line routing has been vulnerable if arbitrary or capricious; now, perhaps, a failure to comply with environmental guidelines or to choose an environmentally preferable route may be defined as arbitrary on its face. However these new cases are characterized - as revolutionary changes in the law or as conservative (in the true sense, measures true to the original purposes of a P.U.C.), they reflect a definite mandate for deciding a case involving application for eminent domain powers. Even if the siting regulations were determined not to apply, the applicant would still be required to meet the burden of proof outlined above.

As a trustee of the resources of this state, under Article I, section 27, this Commission must take its position seriously. It must recognize

the speed with which land use patterns are changing, the speed with which natural resources are diminishing, and the slowness of business or industry to police themselves. It must also realize the practical consequences of granting applications for the power of eminent domain, and their relationship to past consequences. In a 1948 case, Pennsylvania Power & Light Company sought permission to condemn a right-of-way across one individual landowner's property for construction of a 66 KV transmission line. Although the individual property owner may have personally opposed the line as much, or found it as intrusive, as the property owners involved herein, the Commission had little difficulty deciding that the utility needed the line.[1] Justifiably, the individual's interest was sacrificed to the public good. However, when the application involves an extra-high voltage transmission line, more than an individual's property interest must be sacrificed. Trial Staff and property owners in this case have brought out, through their questioning, a wide range of interests affected. It is obvious that a line of this size and length will be seen by countless individuals who live, or pass through, southwestern Pennsylvania. Some of the property owners and two representatives of townships involved have expressed fears that the construction of the line will adversely affect development and land use in their areas. Some fear that wildlife will be displaced or clean streams and watersheds polluted during construction. One property owner complained of damage to trees from herbicide spraying on an already existing right-of-way. Staff questioning brought out that the line will cross in close proximity to several towns and numerous residences. There was much questioning by property owners on possible

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[1] Application of Pennsylvania Power & Light Co., 27 Pa. P.U.C. 418 (1948).

electrical interference, electrical shocks, collapse of towers, and danger of fire or other harm to farm animals or humans near the line. The cumulative effect of all these legitimate concerns is that a high-voltage line is, minimally, an offensive intrusion in our environment, in many cases a nuisance, and, in foreseeable instances, a real danger. This underlying premise shall affect both the consideration of need for the line and the consideration of whether the applicant has reasonably routed the line to minimize its adverse consequences.

The position of West Penn throughout the proceeding and in its "Reply Brief" has been consistently that it is the best judge of the reasonableness of both the need for the proposed transmission lines and the correctness of its route selection. E.g. See the Introduction to West Penn's "Reply Brief." Trial Staff has correctly characterized West Penn's presentation here as a series of statements of ultimate conclusions without adequate factual basis to support them. West Penn's "Reply Brief" is but an example as it states numerous legal conclusions but does not contain a single citation to statutory or case law. I, however, go beyond the position of Trial Staff and find that West Penn's presentation lacks credibility and the reasonableness of its judgment, when closely scrutinized, is subject to doubt. Because of the size of the record, it is not practical to summarize all the testimony and exhibits. Instead I have summarized the material by issues presented and then provided proposed findings of fact and conclusions of law.

I

Necessity

West Penn at page 3 of its "Reply Brief" states that it ". . . has met its burden in (sic) proof of necessity by clear evidence, the only evidence of record." To the contrary, I find the "evidence" to be anything but clear and adopt the position of Trial Staff as ably set forth in its brief at pps. 14 through 29 and its reply to West Penn's "Reply Brief," pps. 1 through 3. What follows is in addition to Trial Staff's analysis on necessity.

The lack of clarity is exemplified by page 1 of West Penn's Exhibit 1 which purports to be a graphical representation of the ability of the system to meet future projected peak northern load obligations during four specific periods of time. With all present transmission lines in operation the transmission capability would be 4690 MW which is far in excess of the largest projected peak load depicted. However, with one 500 kv transmission line out of service, the resulting south to north transmission capability (2612 MW) would fall far short of that necessary to serve the four peak future loads in their entirety.

With the addition of coal and oil generation in the north, the peak loads can be supported through the first two time periods (with a slight positive margin). However, even with the northern coal and oil generation on line, the capacity margin would be negative (i.e. not enough capacity to meet the load) for the last two time periods shown.

The validity of Exhibit 1 depends upon the accuracy of West Penn's load forecast. Making the assumption that the forecast is reasonably accurate this exhibit by itself shows that some form of reinforcement will be necessary. This exhibit does not show that additional transmission

capacity is necessarily the best means of reinforcement since additional generation in the north might also be considered as a possibility. Further, West Penn mixes MW with MVA in page 1 of Exhibit 1. The power output of generating units (and the power necessary to meet the customer's load) are measured in MW or megawatts (one megawatt equals 1,000,000 watts). Watts, kilowatts, megawatts etc., are sometimes referred to as "real" power since this commodity has the ability to do useful work and is the basis for the customer's bill. The MVA (megavolt-ampere) includes both megawatts and MVAR (megavolt-amperes reactive) sometimes referred to as "reactive" power. MVA is the unit of measurement assigned to the capacity of existing 500 KV lines. It is sufficient to point out at this point that MW and MVA are not directly comparable without additional information, which is not provided anywhere in this record. See transcript of oral argument at page 11.

Page 2 of Exhibit 1 discloses that the APS northern peak load obligation includes West Penn, the Monongahela Power Panhandle region (West Virginia), a firm commitment to UGI through 1981 and Duquesne Light Company's 276 MW share in the Fort Martin power station. Northern generation listed on page 2 includes Mitchell No. 3, but Mitchell No. 3 is excluded on page 1.

Exhibit 1 is supposed to show the impact of the loss of one 500 KV transmission line with, implied, the entire APS system operating at its yearly peak, with the first deficiency occurring in 1981/82. However, none of the load flow studies offered by West Penn showed any adverse effect on the APS system from the loss of one 500 KV line. The load flow studies did show some problems resulting from the loss of two 500 KV lines.

Exhibit Nos. 2, 3 and 4 show the load flows in the summers of 1982, '84 and '86 based on the applicant's forecasts with the H-P-Y line in service. These exhibits simply demonstrate that no transmission or other problems are projected during these periods with the H-P-Y facility installed. Note that the Lower Armstrong generating station is projected to be in operation by the summer of 1984.

Exhibit Nos. 5 and 6 make the assumption that the H-P-Y is not in service at the time of the 1980 summer peak load. Each further assumes the simultaneous outage of two specific 500 kv lines and shows that one of the remaining 500 KV lines, the Fort Martin-Pruntytown line, located entirely within West Virginia, will be overloaded under these test conditions. This is to say that the overloaded line in each case would also go out of service almost immediately since automatic protective equipment (installed on all transmission lines) would cause the appropriate circuit breakers (at one or more substations) to open.

It is recognized that the resultant forced outage portrayed in each of these two exhibits could not be tolerated on a system design basis and it would be in the public interest to provide some means to prevent such an occurrence. However, I am not convinced that the overloading depicted would actually occur under these test conditions.

The reason for my skepticism is the note at the bottom of pp. 3 on both Exhibits 5 and 6. It indicates that the 5755 MW peak load forecast on which these exhibits are based was subsequently adjusted downward. This in my opinion invalidates the conclusions reached in these two exhibits since we do not know what changes the revised forecast will produce.

Focusing on Exhibit No. 5 for a bit, it is interesting to note that the load rating of the Fort Martin-Pruntytown line is given as 1905 MVA.

Thus it is overloaded when required to carry 1944 MVA (1925 MW). However, the two 500 KV lines listed on pp. 3 of Exhibit No. 1 are rated at 2078 MVA. The point is, that if the Fort Martin-Pruntytown line were also rated at 2078 MVA (or even 1944 MVA for that matter) the problem in Exhibit No. 5 would not exist and upgrading this line would be a possible consideration (for this particular alleged problem only).

Exhibit Nos. 7 and 8 are simply the same test cases respectively as Exhibit Nos. 5 and 6 with the addition of the H-P-Y line and assume the 1982 summer peak load. These exhibits show that no transmission or other problems result under the test conditions. They also point up the load forecast difference mentioned previously. Namely, the 1982 summer forecast is 5724 MW while the earlier 1980 summer forecast (from Exhibits 5 and 6) is 5755 MW.

Exhibit 9 demonstrates slight overloading on the 138 KV system resulting from what is labeled a double contingency outage, outage of the Hatfield-Yukon and Yukon-Keystone 500 KV lines, without the H-P-Y line in service. The effect is to remove all 500 KV service from the Yukon substation located near New Stanton, Pa. The problems specifically noted occur, however, on two short 138 KV lines located in the vicinity of Weirton, West Virginia. Exhibit 10 appears identical to 9 except that H-P-Y is assumed in service and the result is that no problems are noted.

Exhibits 14 and 15 are noteworthy for the lack of any explanatory information.

Exhibit 16 supplies the basis for Mr. Hamrick's calculations of savings from reduced line losses. The Exhibit is specious on its face. First listed are APS summer peak line losses as calculated by load flows

for the years 1982, 1984 and 1986, both with and without H-P-Y. A mathematical average of loss savings, quantity unspecified, is calculated and listed as the Average Summer Peak Loss savings expressed in MW. Somehow that is translated into an Average Annual Energy Loss Savings expressed in MWH. However, the division of the Average Annual Energy Loss Savings figure, 65,437 MWH, by the Average Summer Peak Loss Savings, 11.03, gives the incredible result of 5933 hours for which West Penn is claiming a savings of 11.03. The result is incredible because:

1. 365 days times 24 hours/day equals 8760 hours/year.

2. line losses are greatest in the summer because of the higher ambient air temperatures and the consequent lower thermal efficiency of transmission lines.

3. The result assumes the APS system operating at its Summer Peak for more than half of the test year.

Then comes the slide into absurdity. The Average Summer Peak Loss Savings is translated into an "Average Capitol (sic) Savings" by the slick but simplistic multiplication of the Average (11.03 MW) times the capital cost of new generation times a factor of 18.8% labeled "fixed charge rate." The absurdity arises from the fact that APS (and West Penn) are winter peaking which requires, by definition, more generation than the summer peak. The plot thickens with the calculation of the Average Annual Energy Savings which results magically from the multiplication of the aforecondemned Average Annual Energy Loss Savings multiplied by the supplied price per MWH or Energy Cost for New Generation. The bottom lime, or Total Estimated Annual Savings is arrived at by the addition of the "Average Capitol (sic) Saving" and "Average Annual Energy Savings." However, the simple sum ignores

the fundamental point, made by both various property owners and Trial Staff, that generation closer to the area served would reduce the need, if any, for H-P-Y and would also reduce line losses.

West Penn in its "reply brief" at p. 4 states:

> The Commission Staff chooses to ignore the testimony of Mr. Hamrick that proved the favorable economics of the Harrison-Prexy-Yukon project. Mr. Hamrick demonstrated, by West Penn Exhibit 16, that the project could provide an estimated average annual saving of $2,775,490 in reducing system power losses (N.T. 55, 1327). The Commission Staff asked for an explanation of the method used in calculating the loss savings, but they did not challenge the estimate (N.T. 115).

Trial Staff, however, asked only one question:

BY Mr. Smukler:

> Q You have said in your testimony that the effect of reducing that power loss will be a savings of approximately $2,775,000 a year. How was that calculated?
>
> A (Mr. Hamrick) The sample calculation is included as part of Exhibit 16, page one.
>
> Mr. Smukler: I have no further questions at this time. (Tr. 115)

In deciding to give no weight to the alleged favorable economics, I further note that Mr. Hamrick in his bald assertion based on Exhibit 16 takes no account of the effect on rates of the capital expenditure of $52,000,000. for H-P-Y. E.g. 8% overall rate of return times $52 million equals $4.16 million, nearly double the alleged savings.

It thus appears that West Penn's entire case for the need for H-P-Y hinges on its allegation that H-P-Y provides system support in the event of a double outage on the APS 500 KV system. West Penn alleges that

its case for H-P-Y is consistent with the reliability criteria used by the East Central Reliability Coordination Agreement (ECAR) of which APS is a member. However, the bald assertion is not supported by the reliability criteria as set forth in West Penn's Exhibit 17. APS may well be in violation of the principle set forth on page 1 of Exhibit 17 which requires the ". . . avoiding (of) excessive concentrations of generating capacity in one unit, at one location, or in one area." (emphasis supplied) However, the record developed here by West Penn demonstrates compliance with the other requirements including ". . . the provision of transmission capability within the bulk power supply net work well in excess of that required for normal transportation of power from generating sources to load centers, . . ." Cline's Exhibit A provides an enlightening view of the bulk power capacity by demonstrating the increased capacity resulting from the addition of H-P-Y. (See Tr. 1325-1326; 1390)

West Penn was unable to demonstrate the likelihood of an unplanned double outage. (Tr. 1387-1388) Further, the ECAR reliability criteria require West Penn to anticipate a second line outage at any time one circuit is out of service (no. 8 on p. 2 of Exhibit 17). Such anticipation could include insuring availability of power from neighboring utilities through interconnections, scheduling less economic generation, and notifying interruptible customers to be prepared to shut down. As trial staff has pointed out very clearly, the information presented in behalf of the double contingency scenario is so speculative as to be entitled no weight.

At oral argument I questioned whether West Penn is the proper party applicant as most of its case points to benefits accruing to APS in West Virginia and Ohio. Trial Staff stated that its review of prior

commission decisions indicated that West Penn is a proper party applicant. Subsequently, trial staff supplied, under date of September 26, 1979, copies of cases dealing with the point. In pertinent part trial staff's cover letter states:

> These cases (Dunk v. Pa. P.U.C., 434 Pa. 41, 252 A.2d 589 (1969); App. of Met. Ed., 48 Pa. P.U.C. 310 (1974)) support the proposition that the needs of and benefits to an integrated electric system will be sufficient to sustain the Applicant's burden of proving engineering need for a proposed transmission line. In the Dunk case the Supreme Court does seemingly subscribe to (a) "primary use" test and, indeed, that may be a pertinent consideration in this case.

The reference to the Dunk case is, I believe, to the following language:

> We believe that a primary, "corporate use," as this record discloses, is sufficient and that the statute does not require that the appropriation be for the sole corporate use of the condemning company. (emphasis in original) Dunk v. Pa. P.U.C. 434 Pa. 41, 252 A.2d 589 at 592 (1969).

In general, an applicant must present proof of present, not future or speculative, need for the proposed service, Dublin Water Co. v. Pa. P.U.C., 213 A. 2d 139 (1965). Beyond this, the standard of need has been vague but flexible. Many cases have held that the standard of need is not one of "absolute" or "indispensible" necessity, The Pennsylvania R.R. Co. v. Pa. P.U.C., 184 A. 2d 111 (1962); Highway Express Lines, Inc. v. Pa. P.U.C., 63 A. 2d 461 (1949); Ruettger v. Pa. P.U.C., 64 A. 2d 675 (1949); John Benkart & Sons Co., et al. v. Pa. P.U.C., 7 A. 2d 584 (1939). The standard is now often described as one of "reasonable" necessity, e.g., C.R. Bieber, Inc. v. Pa. P.U.C., 281 A. 2d 351 (1971); Zurcher v. Pa. P.U.C., 98 A. 2d 218 (1953), although at times a higher standard is required. "Substantial and compelling" need was the language in Johnstown-Pittsburgh Express, Inc. v. Pa. P.U.C., 291 A. 2d 545, 548 (1972), but it appears to reflect a higher standard of evidence presented rather than required by the Commission. In recent cases involving fixed utilities, the standard of reasonable necessity - generally established by testimony of the utilities' own employees - has been accepted, Application of Philadelphia Elec. Co., 45 Pa. P.U.C. 142 (1971); Re Montgomeryville Industrial Sewer Co., 49 Pa. P.U.C. 299 (1975). Although these fixed utility cases adopt the "reasonably necessary" language, it should be noted that many - probably a vast majority - of cases dealing with standards of need or sufficiency of proof of need have been motor carrier cases, and the standards established have been responsive to the nature of carrier service. In those cases, although the public interest is a paramount concern, the granting of certificates has directly affected narrow interests; the right granted is intangible; the general public is marginally affected.

In an application for the right to exercise the power of eminent domain for transmission line construction, many and broad interests are touched. Obviously individual property owners are affected, often disadvantaged. But the general public, too, - although ultimately to be benefitted by the condemnations and the construction - must likewise bear the societal burdens of changing land use patterns, visual and ecological intrusion, possible increases in energy use and probable increase in utility rates. The Commission itself has said that transmission lines "cannot be constructed without substantially affecting the environment and without impacting upon the public health and safety." Re Proposed Electric Regulation, 49 Pa. P.U.C. 709 (1976). Therefore, a higher standard for proving public necessity should be imposed where the granting of a certificate will burden as well as benefit the public.

Earlier cases have held that the standard to be met is directly related to the nature and extent of the rights sought. Modern Transfer Co. v. Pa. P.U.C., 115 A. 2d 887 (1955); The Pennsylvania R.R. Co. v. Pa. P.U.C., 125 A. 2d 624 (1956). It is also supported by cases instructing that the good of the public to be considered by the Commission is the good of the public as a whole and not the good of particular segments of the public or the applicant itself. Beaver Valley Service Co. v. P.S.C., 122 Pa. Super. 221 (1936); Armour Transp. Co. v. Pa. P.U.C., 154 Pa. Super. 21 (1943). At a minimum, it must be determined that the public will benefit from the construction and operation of the proposed facilities more than the public will be harmed by them. The standard of need to be met in an application for the power to condemn right of way across about 39 properties for construction of extra high voltage transmission lines through

four counties in southwestern Pennsylvania must be a sufficient standard to justify such an extensive grant of authority. That is a difficult standard to quantify, but should be a higher standard than that required in carrier cases. A standard of "compelling" need seems more proportionate to the magnitude of the authority sought. Or, if the term "reasonable necessity" is to be applied, the reasonableness of need in this type of case must be defined in terms of the authority sought; what is reasonably sufficient proof to establish need for carrier service may very well be logically insufficient to establish public need for extra high voltage electrical transmission systems.

In Modern Transfer, supra, the Superior Court stated that the sufficiency of evidence is directly related to the nature and extent of rights sought. The nature here is the power of eminent domain, a power of such importance that the authors of the United States Constitution included in our government's blueprint a protection for citizens against taking of property by the government without just compensation; the extent here covers thirty-nine properties and involves a project over 60 miles in length and $28 million in initial costs alone. In Modern Transfer, an application for what the court termed "extensive" rights was denied because the evidence to support need was "equivocal" and "inconclusive." Adopting those terms, it is suggested that the evidence required to establish need for an EHV transmission line affecting a large number of individual properties and arguably affecting the general public in so many ways must be unequivocal and conclusive evidence of a degree sufficient to justify such a grant of authority.

However, after hearing West Penn's witnesses and reviewing the exhibits, it is evident that West Penn's proof is insufficient even

under a lesser standard. The preceding discussion mandates that I recommend the dismissal of West Penn's applications. Because of the size of the record and the time spent already, the remaining issues presented are discussed in the following pages.

II. Route Selection

The general route chosen by West Penn, the impact on the parcels of real estate subject to West Penn's applications and the environmental assessment question will be covered here. At the outset it is simply incredible to me that, in our age of consumerism with its emphasis on disclosure of rights to individuals, an owner of real estate in Pennsylvania in the recent past need receive no notification of his or her rights regarding an electric utility's exercise of eminent domain. This Commission's regulations on Disclosure of Eminent Domain Power of Electric Utilities (52 Pa. Code §57.91 et seq.) adopted May 19, 1978, is a giant step forward but was of no aid to the protesting property owners here. For examples of the need for disclosure guidelines, see Tr. 1085-1090. Similarly, this Commission's regulations on Siting and Construction of Electric Transmission Lines (52 Pa. Code 57.71 et seq.), also adopted May 19, 1978, which apply to H-P-Y, will better provide notice to local organizations and governments of the plans of an electric utility. It is distressing to me, however, that the siting regulations do not contemplate notice to individual property owners. It is apparent that once a route is chosen it would be a simple matter to identify the property owners affected and provide them with notice. Obviously the electric utility will have to identify the owners in order to negotiate with them.

Inferentially West Penn has questioned the authority of this Commission to inquire beyond the point of engineering necessity for any power line. The authority, it is clear to me, is as broad as can be derived from the mandate that this ". . . commission shall find or determine that the granting of such certificate is necessary or proper for the service, accommodation, convenience or safety of the public." (emphasis supplied) (66 Pa. C.S. §1103 made applicable by §1109.) The broadness of this Commission's permissive authority has been recognized by the Pennsylvania Supreme Court. E.g. Redding v. Atlantic City Electric Co. et al, 410 Pa. 533 at 538-540 (1970).

A. Routing

Trial Staff's brief at pps. 30-36 adequately summarizes the route selection process testified to by West Penn's witnesses. However, I find West Penn's case on route selection to be similarly defective to its case on need; that is, West Penn has presented a list of areas in which it states it has made investigations but gives insufficient information to weigh the value of the inquiry. Further, the record provides clear examples to either contradict or, at least, cause considerable doubt about West Penn's assertions.

In the listing of matters considered in route evaluation given by West Penn's environmental analyst at Tr. 172-173, the first was impact to present and potential future land use. No where does West Penn mention the removal from development of the right of way itself. This thought is developed later. With regard to Greene County, the analyst stated she reviewed a comprehensive land use plan, met with planning representatives and concluded that:

> (T)he transmission line traverses more remote areas, where necessary central services are limited and we do not anticipate any interference with projected growth. (Tr. 187-188)

The analyst is directly contradicted by the testimony of Valerie S. Cole, County Planner, Greene County Planning Commission. Ms. Cole stated that two thirds of Greene County's population lives in the northeast quadrant which also contains the bulk of developable land in Greene County. Western Greene County contains mainly steep terrain not suitable for residential development. She stated that the proposed H-P-Y line would bisect the northeast quadrant. (Tr. 1981-1982) Ms. Cole stated that the Planning Commission anticipates, conservatively, a doubling of Greene County's population by 2000 due to the opening of new coal mines. (Tr. 1983-1984). See also the Comprehensive Plan for Greene County, entered here as Lucinda Minor Marella Exhibit A, esp. at pp. 5-7.

Trial staff faults but ultimately reluctantly approves West Penn's planning process because present law does not require "open planning".

> Consequently, Ms. Shaw's (West Penn's environmental analyst) sometimes sketchy recollections regarding encounters with local officials prior to selection of the proposed route do not necessarily reflect a defective planning process so long as appropriate, accurate information was gathered and assessed. (parenthetical material and emphasis supplied) Trial Staff brief p. 35.

Much of West Penn's "information" is based on "contacts" with local officials. The "information" obtained is primarily non-opposition which has been translated by West Penn into tacit approval of its project. E.g. testimony of Ms. Shaw at Tr. 1735:

> Ms. Shaw: No, I considered that the public officials had no interest in the project or they would have made an attempt to contact (West Penn) regarding it and so to us showed

they were just not interested in receiving information regarding the project.
Mr. Scott: That was your conclusion, is that right?
Ms. Shaw: That is correct. (Tr. 1753)
Also see: (Tr. 204)

The testimony on West Penn's contacting local municipalities, planning commissions and local historical and environmental groups is contradicted at several points. As to the Greene County Historical Society, Mrs. Denny, the president during all relevant times, stated she received no contact from West Penn. (Tr. 2092) Also see rebuttal of Ms. Shaw at Tr. 2128. Ms. Shaw showed an awareness of the existance of the Warrior trail and the need to minimize any impact on it. (Tr. 191-192) The knowledge and ability to act appropriately, however, appear to be separated by a great gulf in West Penn's case, as highlighted by the testimony of W. Bertram Waychoff, Esq., present District Attorney of Greene County and president of the Warrior Trail Association since its organization more than 12 years ago. (Tr. 1945) He stated he was aware of West Penn's H-P-Y line by rumor only but stated his certain knowledge of West Penn's past practice with regard to the trail:

> In the line that crossed Shinston in the western end of the county, it (West Penn) picked a route which could not have interfered more with the Warrior Trail, which I know most of you don't have the slightest idea what it is, but it is a one ridge walking trail from the Monongahela River to the Ohio River used by prehistoric people back for five thousand years to Flintridge, Ohio, and the intersection of where the West Penn line crossed was at the only definite, definitive point shown by the footprints of man for five thousand years and up over a knuckle where no car or no motor bike ever traveled or even horses. This was a manmade foot path and West Penn put their huge tower and destroyed the entire evidence of that beginning of the trail. (Tr. 1948-1949)

There is no assurance in this record that West Penn will not repeat its prior act of destruction. Further, Mr. Waychoff testified he had no recollection of meeting Ms. Shaw concerning H-P-Y and the Warrior Trail, although Ms. Shaw testified to such a meeting. (Tr. 1952) As to the importance of the Warrior trail, Mr. Waychoff stated that the association has 150 members and the trail has accommodated up to 5000 hikers per year. (Tr. 1951)

As to Ms. Shaw's opinion as to lack of organized opposition, it is unfounded in this record as regards Forward Township, located in eastern Allegheny County. See statement of Stephen A. Zappala, Esq. appearing as counsel for the Forward Township Board of Supervisors. (Tr. 1403-1405) Mr. Ronald J. Beinlick, who is an affected property owner, was chairman of the Forward Township Planning Commission from 1961 to 1977. (Tr. 1899) He testified he first learned about a proposed transmission line from a West Penn surveyor in 1967. (Tr. 1900) Mr. Beinlick further stated that he requested a public meeting with West Penn by letter dated March 25, 1975, because of concern generated by West Penn's surveyors. (Tr. 1903-1905) According to Mr. Beinlick, West Penn's representatives attended a public meeting and provided a general description of the power line, its purpose,characteristics and routing with no discussion of any alternate options. (Tr. 1905) On cross, Mr. Beinlick stated he addressed his request for a meeting to Ms. Shaw because of a discussion he had with a West Penn real estate representative. (Tr. 190)

The reason for providing the preceding detail is that West Penn's process of gathering information is supported only by testimony. West Penn has produced no documents showing actual notice. If all the groups and

individuals alleged to have seen contacted were so contacted, it can fairly be concluded from the record here that the import of the contact was not made known. For example, a general request for information on the Warrior Trail is not the same thing as advising of the clearing a swath of 200 feet across the trail, especially considering Mr. Waychoff's prior experience with West Penn.

It is well that West Penn will have to proceed under this Commission's regulations on siting of electrical transmission lines. 52 Pa. Code §§57.71 et seq. However, in so doing, West Penn should be required to provide notice to all affected property owners. For the standards used in routes selection used by Philadelphia Electric Co. see Re Phila. Elec. Co., 52 Pa. P.U.C. 198 at 202-203 (1978)

B. Individual Parcels

A. 100200 Thomas A. Scott property, H P Section, Jefferson County, West Penn property no. 56, drawing no. 403-250.

Mr. Wilford Russell, Jr. testified to negotiations he conducted with property owner Thomas A. Scott, Esq. Mr. Russell stated in part that Mr. Scott explained his property contained the highest point in Jefferson County, that he wanted the line relocated and generally objected to the line. (Tr. 1072-1077) Mr. Russell also testified as follows:

> On February 3, 1976, I called Attorney Scott and informed him we were unable to move the line because of the construction cost and additional right-of-way that would be required from owners who already signed agreements. (emphasis supplied) (Tr. 1075)

On cross examination, Mr. Russell was, however, unable to recall the sequence of purchasing of rights of way of adjoining properties. (Tr. 1079)

Mr. Scott then crossed-examined Mr. Charles Shields, an engineer in the engineering services of Allegheny Power Service Corp. (See Tr. 149) who participated in routing H-P-Y. Mr. Scott showed Mr. Shields one sheet from the APS engineering manual marked T.A. Scott Exhibit A, entitled "Surveying and Rights of Way" with the subject listed as Guidelines-Transmission Line design and location, dated 1/6/71. The exhibit depicts three poor examples and three preferred examples of routing a power line over hilly terrain with the preferred examples minimizing visual impact. Mr. Shields stated that the exhibit showed ". . . a general outline or procedure that you would attempt to follow . . . ." He further stated that:

> We would attempt to make our original routing stay down on the side, and attempt not to cross the highest point in the area. (Tr. 1082-1083)

While West Penn's drawing 403-250 shows a 40' wide access road and the application requests two access road easements equal to about 2.3 acres, I can find no factual support in the record. Mr. Shields indicated he was not the appropriate person to testify on access roads. (Tr. 1093)

Mr. Scott testified in his own behalf regarding his contacts with West Penn. The first contact occurred, according to Mr. Scott, on a Sunday when a representative of West Penn asked for permission to enter the land to check out the area for development. Mr. Scott stated he presumed the gentleman wanted to view the surrounding area from the high hills on the Scott property. (Tr. 2017-2018)

Mr. Scott stated he was next contacted:

> ". . . about two years later when they told me that they wanted to construct a power line and they wanted to put it across our farm and they pointed out the spot that they wanted to build the power line, and I said that I thought that spot was singularly inappropriate in that it was a mountain peak and the visibility in the surrounding area to and from that mountain peak is very extensive, approximately a seven-mile radius if you stand on top of the hill and look around. If you were to construct a seventy or eighty foot tower, you would be approaching the highest ground attached edifice in the whole county, and you would have a visibility factor of that tower over an extraordinary large area as great -- Well, when you are standing up there, if you go to the next peak, which is only forty feet higher, you can see fity miles away to Chestnut Ridge in Fayette County.
>
> I explained to him what I thought was the inappropriateness of the site selection. I asked him if it were not possible to take the land and build it some place else, and he said it was not. I said well, if they have to come over the ridge, could they not do it at a supression in the ridge to minimize the impact of the line. He said no he could not, the line was laid out in a perfectly straight line from point A to point B and there could be no variations in the line.
>
> I asked him -- He said further that the property on either side of me was already purchased and it would involve the repurchase of the property on either side of me. I checked with at that time Mr. Raymond Bruckner, his property was not purchased at that time.
>
> I have since learned that the Scott Minor property, which is adjacent to mine, was also not purchased at that time" (Tr. 2018-2019)

My view of the proposed crossing of the Scott property substantiated Mr. Scott's testimony as to the impact of the line. Further, Mr. Scott accompanied the viewing party to the town of Jefferson, then a quarter mile generally east on Route 188 on

the town's outskirts where the hilltop tower site was clearly visible. (Tr. 1839-1840)

The route across the Scott property clearly violates the APS siting guidelines. It also offends considerations 2, 7, 8, 9, 10 and 11 stated by Ms. Shaw (Tr. 172-173) in that the proposed tower would become the visibly foremost and topmost man made structure in northeastern Green County. While the peak chosen for the structure is 40 feet lower than the highest peak in Greene County, the higher peak is to the east and provides no screening from the town of Jefferson and route 188 which lie generally northwest.

A. 100201 Peter F. and Louis Vaira; P-Y, Allegheny County; West Penn Prop. no. 99 Drawing no. 302-634.

Mr. Howard Keefer testified for West Penn on his negotiations for the right of way across the Vaira property. He stated that the property owners had stated an objection to the line. (Tr. 1031-1034). On cross, he agreed that West Penn was seeking an access road easement but could not state why. (Tr. 1034-1035) Mr. Keffer was also unable to state whether a tenant resided on the property and, if so, in which building, although West Penn Exhibit 35 indicates a tenant.

A. 100202 Edwin C. and Marjorie J. Morris, and/or Charles N. and Hazel B. Williams; P-Y, Washington County, West Penn Prop. 51 Drawing no. 201-195.

Mr. John Hartley testified for West Penn on his negotiations for the Morris property. He stated that the property owners objected to the line. (Tr. 1424-1427) No access road easement is requested. (Tr. 1427-1428) Exhibit 35 states the house here is 550' away <u>from the centerline</u>.

On the drawing the house is within 400 feet and four other buildings are within 300 feet of the edge of the right-of-way.

A. 100203 George Lewis Wall and Katherine Wiley Wall, P-Y, Allegheny County West Penn Property no. 86 Drawing 201-304.

Mr. Hartley testified for West Penn concerning his negotiations for the George Lewis Wall property. He stated that the property owners objected to the location of the proposed line across their property. (Tr. 1430-1432) On cross, Mr. Hartley stated that the dwelling was not depicted on the drawing. (Tr. 1432-1433)

A. 100204 Franklin J. and JoAnn Cortese. Withdrawn and dismissed on oral motion of West Penn. (Tr. 10-11); Trial Staff brief p. 1

A. 100205 Des Moine and Catherine V. Field, P-Y, Washington County, West Penn Property no. 45, Drawing 303-094.

Walter L. Pegram, Jr. appeared for West Penn to testify to negotiations for the Field property. He stated that the property owners objected to the location of the proposed line across their property. (Tr. 1598-1602)

A. 100206 David Lloyd Weatley and Joyce A. Weatley, P-Y, Washington County West Penn Property nos. 18 and 20 Drawing no. 303-093

Mr. John H. Hartley testified for West Penn concerning negotiations for the Weatley property. He stated that the owners objected to the line. (Tr. 1435-1438) On cross, Mr. Hartley stated that no structures would be located on the property but wires would overhang. He also located on West Penn's drawing a new house not shown in the southeastern corner of the property. Ms. Shaw stated Exhibit 35 showed the distances to the house as 700 feet north at the nearest point and 1500 feet east of the centerline of the 290 foot right-of-way. (Tr. 1439-40)

A. 100207 J. Howard Leyda and Flora E. Leyda, P-Y, Washington County, West Penn property no. 36 Drawing no. 201-314.

Mr. Walter L. Pegram testified for West Penn regarding negotiations for the Leyda property. He stated that the owners had objections, to the line. (Tr. 1604-1609) On cross, Ms. Shaw stated the 40 foot access road easement requested was necessary so that ". . . the line can be built." (Tr. 1610)

A. 100208 Frank R. and Bonita A. Roskov, P-Y, Washington County, West Penn property no. 50A Drawing no. 201-194.

Mr. Hartley testified for West Penn concerning negotiations for the Roskov property. He stated that the owners objected to the line. (Tr. 1485-1488)

On cross, Ms. Roskov developed an alternate route across what she alleges is basically industrial property. (Tr. 1488-1492; Roskov Exhibit A) Ms. Roskov asked Ms. Shaw whether West Penn had considered her proposed alternate and was told no. (Tr. 1493-1494) Ms. Roskov also cross examined on an alternate route through the near-by Mingo Park which would have avoided her property. Mr. Hartley and Ms. Shaw stated the park alternative was seriously considered but ultimately rejected. (Tr. 1504-1511) Mr. Roskov further cross-examined on the number of pole anchors to be placed on her property and the effect of the anchors on pastured animals. Ms. Shaw did not know the number but stated West Penn took no special precautions to prevent injury to animals as the anchors were not deemed a hazard. (Tr. 1496-1501. Finally, Ms. Roskov asked Ms. Shaw whether West Penn had considered the visual impact on the Roskov property resulting from adding the proposed line running north and south on the west side of the property with the existing 138 KV line that runs generally

northwest to southeast through the eastern 1/3 of the property. Ms. Shaw answered in the negative. (Tr. 1519-1522) It should be noted that at least one of the farm buildings on the property is within 300 feet of the proposed right-of-way. See drawing 201-194. My view from the Roskov property indicated that both the proposed line and the present portion of the Cecil-Charleroi line on the Roskov property would virtually surround their hilltop home with transmission lines. (Tr. 1844)

In her direct testimony, Ms. Roskov stated that, during negotiations, she was not advised that 10 anchors would be placed in their pasture. (Tr. 2086) She further submitted Roskov Exhibit B, which was admitted without objection, that, she stated, shows a change of routing across parcel 58. In addition to the routing, Ms. Roskov provided information on maintenance of right-of-way and safety which will be recounted later. (Tr. 2086-2087) Also see the statement of her husband Frank Roskov, at Tr. 2109-2111 and Roskov Exhibit C.

A. 100209 Francis George Wall, William Charles Wall, Maxwell Donald Wall and Issac Laughlin Wall, P-Y, Allegheny County, West Penn Property no. 90 Drawing no. 303-287.

Mr. Hartley presented testimony on negotiations for the Wall property. He stated that the owner objected to the line. (Tr. 1529-1531) On cross, Commission Trial Staff inquired as to the need for the access road requested. Mr. Shaw responded generally that access roads are needed to construct and maintain the line. (Tr. 1531-1532) Also on cross, Mr. Hartley stated that the L-shaped building near the words "farm buildings" was a dwelling. (Tr. 1532) However, West Penn Exhibit 35 lists an "abandoned farm building." West Penn's drawing indicates a barn well within 300 feet of the edge of the proposed right of way.

A. 100210 Dennis R. and Judith R. Howell, West Penn Property no 91 Drawing no. 303-263.

Withdrawn by West Penn on the basis of a signed agreement. (Trial Staff Brief p. 1; Tr. 10-11)

A. 100211 June F. Riccobelli and Alberta F. Schweitzer, P-Y, Allegheny County, West Penn property no. 87 Drawing no. 302-748.

Mr. Hartley testified for West Penn concerning negotiations for the Riccobelli and Schweitzer property. He stated that the owner objected to the line. (Tr. 1472-1473. Mrs. Felix, mother of the property owners, cross-examined Mr. Hartley. (Tr. 1473-1484) Commission Trial Staff cross examined regarding the requested access road. Ms. Shaw answered she was not familar with the road, the design of the road or the necessity for the road. (Tr. 1484-1485) My view confirmed Mrs Felix's contention that the line crosses one of the higher hill tops in the area.

A. 100212 David M. and Janet White Phillips, H-P, Washington County, West Penn Property no. 132 Drawing 201-371.

Mr. Douglas Wetzel appeared for West Penn and testified regarding negotiations for the Phillips tract. He stated that the property owners did not object to the location of the line but refused to sell an easement. The property owners wanted West Penn to buy the entire property in fee. (Tr. 1547-1549) On cross-examination, by Commission Trial Staff, Mr. Wetzel stated there were no dwellings on the property, only several barns and sheds. (Tr. 1550) Commission Trial Staff cross-examined Ms. Shaw on whether she considered utilization of the nearby abandoned Monongahela Railroad right of way. Ms. Shaw stated she had not. She added that her maps indicated the close proximity of some "dwellings" but admitted she had no personal knowledge. (Tr. 1551-1552 also see Tr. 1555). I questioned

Ms. Shaw regarding use of the railroad right-of-way and she agreed that the abandoned railroad followed a valley and the proposed line route followed a ridge top. In response to my question as to whether consideration was given to avoiding the ridge top, she stated that the valley was not going in the proper direction and that " . . . we did have dwellings located and several road intersections there that we did have to avoid." (Tr. 1553) As to visibility of the line running the previously mentioned ridge top, Ms. Shaw disagreed with me that it would be visible from U. S. Route 40. (Tr.1554-1555) Notes on my view of the Route 40 crossing and the railroad right of way are found at Tr. 1840-1841.

A. 100213 Hannah E. Brown Estate P-Y, Allegheny County, West Penn Property no. 111, Drawing no. 201-165.

Mr. Howard E. Keefer testified regarding negotiations for the Brown tract. He stated that, although the family members he contacted had no objection, he was advised by the legal department that eminent domain would have to be used because of the large number of encumbrances on the property. (Tr. 1039-1041) On cross, Mr. Shields stated that the right of way here is 190 feet in width because the 500 KV line is in a corridor with another line. (Tr. 1041)

A. 100214 D. Bruce Roberts and Maxine Roberts West Penn Property no. 149 and 150, Drawing 303-008.

Withdrawn by West Penn. Trial Staff Brief p. 1; (Tr. 10-11). It is noted that the drawing shows property owned by the West Bethehem School District within 400 feet of the right of way.

A. 100215 Margaret B. Curran and Lawrence Curran, P-Y, Allegheny County, West Penn Property no. 112, Drawing 201-166.

Mr. Howard Keefer testified regarding negotiations for the Curran property. He stated that West Penn's legal department advised eminent domain due to the amount of back taxes and penalties on the property. (Tr. 1054-1056)

A. 100216 Angeline Terpin West Penn Property no. 192 Drawing no. 201-199.

Apparently withdrawn. Commission Trial Staff Brief, p. 1.

A. 100217 Richard W. and Miriam Barnitz, H-P, Washington County West Penn Property no. 175 Drawing no. 302-674.

Mr. T. R. Hincy appeared for West Penn to testify regarding negotiations for the Barnitz property. He stated that the owners objected to the line. (Tr. 1681-1683) On cross, Mr. Hincy located on the drawing a trailer, labeled a building in the middle of the property, which houses a tenant. He stated that the trailer is about 350 feet from the proposed right-of-way. (Tr. 1684-1685)

A. 100218 Alden J. Johnson and Virginia Mason Johnson West Penn Property no. 179 Drawing no. 302-707.

Withdrawn. Commission Trial Staff Brief, p. 1; (Tr. 10-11). The drawing discloses the proposed line would be within 300 feet of five buildings on property 179.

A. 100219 Clyde and Della Eckert, P-Y, Allegheny and Westmoreland Counties, West Penn Property no. 118, Drawing no. 302-613.

Mr. Howard Keefer appeared for West Penn and testified concerning negotiations for the Eckert property. He stated that the property owners did not object to the line but did not explain why eminent domain action was necessary. (Tr. 1056-1059) On cross-examination, Mr. Shields could not explain the need for the requested access road easement on the Eckert

property. (Tr. 1059-1062)

A. 100220 James T., Diane L., Thanna S. and Louise H. Cole, P-Y, Westmoreland County, West Penn Property no. 122, Drawing no. 302-854

Mr. Keefer testified as to negotiation, and stated that the property owners objected to the line. (Tr. 1062-1064) On cross, Mr. Shields stated the proposed line would pass the southeastern corner of the parcel, where a trailer court is located, at a distance of 100 feet. (Tr. 1065)

A. 100221 Jacob Haver heirs and J. Scott Minor heirs, H-P, Greene County, West Penn Property no. 57, Drawing no. 303-116.

Mr. T. R. Hincy testified regarding parcel 57 and stated the owners objected to the line. (Tr. 1647-1651) Mr. Hincy was cross-examined on an alleged "cloud on the title" (Tr. 1651 and 1655) and numerous events occuring during negotiations. (Tr. 1655-1663) Further on cross, Ms. Shaw stated that the proposed line would have no ecologic impact (Tr. 1668) and that it would not seriously affect future development of the tract. (Tr. 1669) She further stated that she met with the Greene County Planning Commission on October 23, 1974, regarding H-P-Y. (Tr. 1673-1674) Ms. Shaw was asked whether, when the Greene County planner stated that West Penn had not contacted his office regarding H-P-Y, the planner was incorrect. (Tr. 1676) Ms. Shaw responded by stating her records indicated she had met with "representatives of the Greene County Planning Commission." (Tr. 1676-1677) Ms. Shaw claimed that the Greene County Planning Commission was invited, along with the County Commissioners for Greene, Washington, Allegheny and Westmoreland Counties, to a meeting on June 3, 1975. She claimed to have a copy of the letter of invitation but did not produce it. (Tr. 1679-1680) During my view I walked the right of way on parcel 57 to the best of my ability to locate it. (No one from West Penn was present). It traverses

across a slight grade that presently contains secondary brush and trees. The parcel to the West of the right of way is level farm land, and, to the East, the grade gradually increases and the tract is generally wooded.

A. 100222 Phillip D. and Lucinda M. Marella West Penn Property no. 59, Drawing 303-121.

Withdrawn. Trial Staff Brief p. 1; (Tr. 10-11).

A. 100223 Ronald J. Beinlick, P-Y, Allegheny County, West Penn Property no. 75, Drawing no. 302-794.

Mr. Walter L. Pegram Jr. testified concerning negotiations for the Beinlick property and stated that the owners objected to the line. (Tr. 1574 - 1579) On cross, Mr. Pegram did not know what costs would be incurred in relocating the line to the southern boundary of the tract (Tr. 1581) and stated he was unaware of a new barn constructed within the proposed right-of-way. (Tr. 1585) He stated that in four years of negotiating with land owners he has never recommended a line change (Tr. 1587) and did not advise Mr. Beinlick of his right to appear at the P.U.C. hearings. (Tr. 1593)

When advised of the possible presence of coal, Mr. Pegram stated that he did not raise his offer but offered to insert a coal clause. He stated that the coal clause would provide that West Penn would have the right to purchase enough of the coal to provide support for its transmission line structures. (Tr. 1596)

Mr. Beinlick testified in his own behalf. He briefly recounted his personal experience with West Penn's line maintenance procedures which will be discussed later. He stated he has developed a freezer beef trade and now owns 80 head. As part of his farm operation he has a barn of metal

construction that is but 27 feet from the proposed right of way. It does not appear on West Penn's map. Further, Mr. Beinlick stated that the barn is essential to his present operation and that he needs to expand it in the direction of the right of way. (Tr. 2076-2085) As the Elrama-Mitchell 138 KV line presently bisects Mr. Beinlick's farm (labeled existing electric line on the drawing), if H-P-Y is built as planned, he stated:

> The presence of the power lines on my farm will be so overpowering that it will be impossible for myself or my family to look out any window of our home without viewing at least one transmission line. At times it probably will not be possible to go anywhere on the farm to escape the humming noise omitted by the power lines.
>
> My children, who are three and five years old will grow up in the electromagnetic field induced by the active power of transmission. On a property the size of ours, the kids will even have trouble finding a safe place to fly a kite. (Tr. 2077-2078)

My view confirmed Mr. Beinlick's testimony as to the proximity of the barn and the effect of H-P-Y combined with the present Elrama-Mitchell line. Further, the drawing indicates that Mr. Beinlick's second barn, the rectangle right at the end of the "farm road," is within 300 feet of the proposed right of way. West Penn's Exhibit 35 states the dwelling is 500 feet but that can not be correct, as the distance on the drawing from the dwelling, the smaller square beyond the barn, to the north edge of the right of way scales at 400 feet.

A. 100224 Stanley K. Harbison, Jr. and Vivian Harbison West Penn Property no. 46 Drawing no. 302-689.

Withdrawn. Commission Trial Staff Brief p. 1; (Tr. 10-11).

A. 100225 Martha George, P-Y, Washington County, West Penn Property no. 4-A Drawing 303-189.

Mr. William Kossler testified concerning negotiations for the George tract. He stated that the owners had not "stated objections to the location of the proposed line" but that they had not agreed either. (Tr. 1702-1705) On cross, Mr. Kossler identified the nature of the buildings shown on the drawing and their distance from the line, all well beyond 300 feet. (Tr. 1705-1707) As to the access road, Mr. Kossler stated it was necessary to avoid a steep bank from the adjacent road identified as T-633 to provide access to the site for construction of a tower. (Tr. 1707-1708)

A. 100226 Joseph Veres, P-Y Washington County, West Penn Property No. 64 Drawing 303-149.

Mr. Wilford M. Russell, Jr. testified to negotiations for the Veres tract. He stated that the owner objected to the route. (Tr. 1103-1105)

A. 100227 John Nosal, P-Y, Washington County. West Penn Property 56 Drawing no. 201-390.

Mr. Hartley testified to negotiations for the Nosal property and stated that the owners objected. (Tr. 1458-1460) The building labeled on the drawing was identified as a dwelling by Mr. Nosal. (Tr. 1484) Exhibit 35 lists the distance of the dwelling from the right of way as a 1000 feet east. While that is correct, the closest point on the property scales off at less than 600 feet. Extending the southern edge of the right of way and then scaling shows that the right of way is within 300 feet of the dwelling. Exhibit 29 shows that the line is straight in the area of property 56. The right of way on the adjoining property where the proposed line is the closest to the Nosal dwelling has been acquired by West Penn.

One of the owners, Mrs. Alice Nosal, has had second throughts about the line. (See Tr. 1970-1973) My view of the property indicated that the proposed lines will be crossing one of the area's higher, more prominent points on parcel 56.

A. 100228 Theodore and Mae E. Ankrom, H-P, Washington County, West Penn Property 154 drawing no. 302-971.

Mr. Russell testified concerning the Ankrom property and stated that the owners objected. (Tr. 1099-1101) On cross, Mr. Shields agreed that the property could be avoided if the associated 138 KV lines were not built. (Tr. 1101-1103)

A. 100229 George J. and Gladys M. Goroncy, H-P, Washington County, West Penn Property 133 Drawing 303-086.

Mr. Wetzel testified concerning the Goroncy property and stated the owners objected. (Tr. 1555-1557). On cross, Mr. Wetzel stated that the rectangle labeled "house" is not the only dwelling on the property. Exhibit 35 lists the distance to the house as 440 feet and that seems right. However, Mr. Wetzel stated that the rectangle under the word buildings is inhabited by a tenant. (Tr. 1558) That structure and two of the other four are at or within 300 feet of the right of way.

A. 100230 Clover Chemical Co., Inc., (now West Agro Chemical Co.) P-Y, Washington County, West Penn Property no. 3 Drawing no. 201-177.

Mr. William R. Kossler testified concerning the West Agro property and stated that the owner objected. (Tr. 1696-1700)

A. 100231 Anna M. and Steve Rychlik and/or Stanley and Marilyn G. Hoffman, P-Y, Washington County, West Penn Property no. 54 Drawing 302-702.

Mr. Hartley testified concerning negotiations for the Rychlik/Hoffman property and stated the owners objected. (Tr. 1533-1536) On cross, Mr. Hartley located the one dwelling unit as being the first square reached along the drive indicated by parallel dashed lines. Exhibit 35 lists the distance from dwelling to right of way as 700 feet, but it scales at 600 feet.

A. 100232 Howard W. and Irene Contie, P-Y, Washington County, West Penn Property no. 52-53 Drawing 303-148.

Mr. Hartley testified concerning negotiations for the Contie property and stated that the owners object. (Tr. 1539-1541) West Penn provided no information on the need for the access road. (See Tr. 1542)

A. 100233 Frances Stoner Rambo and Florence Bertha Stoner Corbett, P-Y, Allegheny, West Penn Property 95 no. Drawing 303-001.

Mr. Hartley testified regarding negotiations for the Stoner property and stated that the owners object. (Tr. 1543-1545) On cross, Mr. Hartley stated that the "house" shown is a dwelling. (Tr. 1546)

A. 100234 Howell Brothers, Inc. West Penn Property 89 Drawing 302-786.

Acquired and withdrawn. Trial Staff brief p.1; (Tr. 10-11)

A. 100235 Joseph S. Wonsettler, H-P, Washington County, West Penn Property 141 Drawing 303-045.

Mr. Russell testified concerning the Wonsettler property and stated the owners objected. (Tr. 1105-1110) Mr. Russell was cross-examined on negotiation techniques and the location of the dwelling unit. Mr. Shields stated that the distance listed in Exhibit 35 (400feet) was from the centerline and not the edge of the right of way. (Tr. 1112). Thus, the

dwelling, one of two under the words Farm Buildings, is well within 300 feet of the edge of the right of way.

A. 100236 James H. Prentice, Sr.; Thomas D. Prentice and Florence H. Prentice West Penn Property no. 81 Drawing 302-899.

Withdraw. Trial Staff Brief p.1; (Tr. 10-11).

A. 100237 Herbert C. and Ruth E. Smith, P-Y, Westmoreland County, West Penn Property no. 123 Drawing 302-772.

Mr. Keffer testified concerning the Smith property and stated that the owners objected. (Tr. 1067-1070). On cross, the following dialogue appears:

> Q. Did you appraise Mr. Smith of his right to appear at this hearing?
>
> A. Sir, to my knowledge, these hearings are entirely different than what I have participated in the past. I would have no knowledge that he would be appearing or that he would be as such, with a group of people being here. (Tr. 1443)

Ms. Shaw was rigorously cross-examined on an alternate route that would involve crossing the Youghiogheny River in the vicinity of parcel 122, thus avoiding the Smith property. She stated that the steepness of the southwest bank of the Youghiogheny militated against the proposal. (Tr. 1449) However, my view (Tr. 1842) and sheet 3 of 4, Exhibit 29, Prexy-Yukon, showed the southwest bank to be quite gradual and, in fact, less steep in the area of parcel 122.

Exhibit 35 lists the distance from the right of way to the dwelling as 500 feet. However, from the drawing, the dwelling (the square near the word buildings) is less than 200 feet from the edge.

Mr. Smith stated his position as follows:

THE WITNESS: My name is Herman C. Smith, Sr., and I am here with my wife Ruth . . . because of the Harrison-Prexy-Yukon line. First, let me make my position clear. I am a World War I veteran, and it would be foolish for me to make answers for any personal gain. . . .

My creator has given me a full, rich and wonderful life, and no power company has anything that could add or distract from that.

It should be seen clear to you then that there must be some other reason for my protest. I protest the destruction of property and a farm, and I repeat so that there will be no misunderstanding, of destruction of property for my reason. It is a jewel without price that we are able to pass on to our children . . . . It is our treasure and in taking up changing of it should be done with extreme care and thoughts beforehand, . . . (Tr. 2005)

A. 100238 Energy Resources Corp., H-P, Greene County, West Penn Property no. 5 Drawing 403-179.

I can not locate information on the Energy Resources Corporation tract presented by West Penn beyond the application and the information provided on West Penn Exhibit 35.

A. 100239 Grover H. and Virginia A. Phillippi, H-P, Greene County, West Penn Property no. 24 and 24a Drawing 303-197.

Mr. Hincy testified concerning the Phillippi tract and stated that the owners object. (Tr. 1685-1689)

A. 100240 Patricia K. Wiley a/d/a Patricia K. Wiley Jack and Phil Jack, West Penn Property 41, Drawing 403-263.

Acquired. Trial Staff Brief p.1; (Tr. 10-11).

A. 100241 Betty Jane Cline and James W. Cline, P-Y, Allegheny County, West Penn Property 80, Drawing 302-732.

Mr.Pegram testified regarding negotiations for the Cline property and stated the owners objected. (Tr. 1624-1628) Mrs. Cline cross-examined Mr. Pegram extensively. (Tr. 1628-1640) Ms. Shaw could not explain the need for the two access roads, whether they were alternates or both requested and why the width of the access roads were 40 feet while township and state roads are 33-1/2 feet. (Tr. 1640-1645)

A. 100242 John N. and Inez Rice, West Penn Property No. 121-122, Drawing 201-366.

Withdrawn. Trial Staff brief p. 1.

A. 100552 Dominick J. and Josephine Betters, P-Y, Westmoreland County, West Penn Property 119 Drawing 302-846.

Mr. Keefer testified on negotiations for the Betters property and stated the owners objected. (Tr. 1042-1045) Mr. Keefer was cross-examined on the element of valuation. (Tr. 1045-1051) West Penn agreed to supply information on the effect, if any, of the "old gas well" listed on the drawing on the edge of the right of way. (Tr. 1051-1053)

A. 100553 Monongahela River Terminals Corporation, P-Y, Allegheny, West Penn Property 71 Drawing 303-066.

Mr. Pegran testified on the negotiations for the Monongahela River Terminals Corporation property and stated the owner objected. (Tr. 1614-1620) One objection noted by Mr. Pegram was that the line might interfere with the operation of cranes. (Tr. 1615) Neither Mr. Pegran nor Ms. Shaw could explain the need for an access road. (Tr. 1620-1621) The drawing discloses no structures on the property. Mr. Pegram did not know but took for granted that West Penn had permission to cross the operating tracks of the P and L E Railroad at this location. (Tr. 1621-1622)

A. 100554 Barron P. McCune, West Penn Property no. 146, Drawing 303-012.

Withdrawn. Trial Staff Brief p. 1; (Tr. 10-11)

A. 100555 William J. and Rosann B. Feliz, P-Y, Washington, West Penn Property no. 44 and 50, Drawing 302-684 and 302-802.

Mr. Pegram testified regarding negotiations for the Felix property and stated the owners objected. (Tr. 1708-1712) On my questioning, he stated that virtually the entire property no. 44 is laid out in trailer lots with most of the trailers located in the northern most section of the property, that nearest the proposed right of way. (Tr. 1712-1714) Neither Mr. Pegram nor Ms. Shaw could provide the distance between the proposed right of way and existing trailers. (Tr. 1714)

A. 100556 George W. and Jean L. Hayden, P-Y, Allegheny County, West Penn Property 92 Drawing 302-756.

Mr. Hartley testified concerning negotiations for the Hayden property and stated the owners objected. (Tr. 1406-1411. Mr Hartley was cross-examined extensively on negotiations. (Tr. 1411-1420) Mr. Hartley stated he was aware that the owners objected to the line because of the restrictions imposed on future development. He also agreed that the two proposed towers were located on the highest part of the property. (Tr. 1415) Mr. Hartley stated he considered the impact of the line beyond the right of way in arriving at a price. (Tr. 1418) Finally, Mr. Hartley agreed that construction of the line would interfere with removal of coal on the property. (Tr. 1419-1420) Attorney Zappalla made a statement for the owners and stated in part that construction of the line would alter existing contractual rights with the Ringgold Coal Company. (Tr. 1422-1423)

A. 100898 William L. and Margaret H. Pollock, H-P, Washington County, West Penn Property no. 152 Drawing 403-175.

Mr. Russell testified on discussions for the Pollock property and stated the owners objected. (Tr. 1093-1097) Neither Mr. Shields nor Mr. Russell could explain the need for the proposed access road. (Tr. 1097-1098)

Trial staff has concluded, in part II of its brief, pp. 30-36, that West Penn has not acted arbitrarily, capriciously or in willful disregard of the rights of any landowner. I reject Trial Staff's position for the following reasons.

West Penn, on this record, made no effort to inform affected land owners of their rights regarding matters such as damages caused by surveyors, the opportunity to participate in proceedings before this Commission or the legal limits on the exercise of eminent domain. Further, several property owners made reasonable requests for relatively slight modifications to line routing which, when refused out of hand by West Penn, created hostility and a strong will to resist all attempts to build H-P-Y.

The affected property owners uniformly viewed West Penn's surveyors as trespassers. Some property owners suffered considerable annoyance and even financial harm. See the testimony of Mr. Cline. (Tr. 1909-1912)

One major limitation on the acquisition of a right of way by eminent domain is the exception that ". . . a dwelling-house or the reasonable curtilage, not to be less than three hundred feet, appurtenant thereto, shall not be appropriated . . ." 15 P.S. §3272. On oral argument (which

West Penn did not attend), I raised the question of the appropriateness of this Commission's consideration of the impact of curtilage. (Tr. 8-10) At the time Trial staff was of the opinion that the question was for the Court of Common Pleas at the time of the condemnation proceedings. However, in a Superior Court decision this Commission's ruling on a curtilage question was approved and thus tacitly sanctioned. Charch v. Pa. P.U.C. 183 Pa. Super. 371, 132 A.2d 894 (1957). The Court in Charch also approved a "more modern definition" of the term:

> Curtilage, in law, means a small piece of land, not necessarily enclosed, around a dwelling house, and generally includes the buildings used for domestic purposes in the conduct of family affairs. Charch, supra, at 896, FN 2.

On refection, Trial staff stated in her letter dated September 26, 1979, that " . . . the case law is largely unsettled but the Commission may be one of the appropriate forums for such considerations."

West Penn consistently measured distances to dwelling places from the center line as opposed to the closest edge of the proposed right of way, even though the law clearly comprehends the edge as being where any "appropriation" would commence. The preceding review of the individual parcels indicate several instances where West Penn may be appropriating curtilage.

To ignore the matter at the Commission level is to face the possibility of significant rerouting of lines at a much later time due to a Common Pleas court decision.

Counsel for West Penn has consistently maintained that the date for valuation purposes in an eminent domain proceedings is the date of the Board of Directors resolution. (Tr. 1512) The not so subtle impact

of this statement is to give a property owner the Hobson choice of settling up with West Penn or facing a condemnation proceeding where the evidence is limited to the property's value just before and after the date of the Board's resolution, here September 2, 1976. Given the recent rapid escalation of real estate values, on first consideration the threat of a loss of a substantial sum in value is a very real one. However, counsel for West Penn has not seen fit to provide legal citation for his position. My review resulted in the conclusion that the point is not at all clear. It may be that the valuation date is the date of this Commission's order granting permission to exercise eminent domain. See e.g. Hassett v. Commonwealth, Pa. Cmwlth., 384 A. 2d 594 at 596 (1978). In any event, the lack of clarity in the law and the lack of candor on the part of West Penn combines to place the property owner in an unfair position. While West Penn would like to portray the entire negotiation process as being an arms length private matter, West Penn has as its ultimate sanction a power that can only be exercised with permission of the public sector. To deal with property owners with anything less than a sense of fairness is to invite growing disrespect for the law, the utility and this Commission. Accord: See this Commission's findings in Re Proposed Electric Regulations 49 Pa. P.U.C. 706-707. For the testimony of land owners who have sold rights to West Penn and are having second thoughts, see Tr. 1963-1973.

Finally, West Penn has not complied with this Commission's regulations on the withdrawal of individual applications, 52 Pa. Code §§ 57.92, 57.93. While I raised the question on the record, (Tr. 1026), I took no position. Should these applications continue, West Penn should be specifically directed to strictly comply.

C. Environmental Assessment

Q. Miss Shaw, had you made a study about the impact that this power line would have on the ecology or the environment?

Ms. Shaw: Yes. . . . It would have no impact.

(Cross-examination of Ms. Sandra Shaw, Tr. 1668)

I agree and adopt Trial Staff's position that West Penn has not made a sufficient showing that it made reasonable efforts to reduce environmental incursions to a minimum. Brief of Commission Hearing Staff, part III, pp. 37-42. However, Trial Staff is unduly kind to West Penn when it states West Penn showed a ". . . certain indifference . . ." to the environmental impact. My opinion is that West Penn's environmental assessment presented in this case was a total charade.

Ms. Shaw's statement above is, I believe, indicative of her view of the entire project. Her view ignores the fact that the 61 miles of 500 KV transmission line alone, with a 200 ft. right-of-way width, will consume some 1479 acres of presently vacant land.[1]

Ms. Shaw's lack of familiarity with the actual route on the ground is clear from her inability to answer with specificity questions on individual parcels. Ms. Shaw testified at length to compliance with "guidelines" and "compilations of data" which she never produced. Ms. Shaw's dismissal of objections to a route requiring repeated crossings of a stream on the grounds the stream is badly polluted ignores the long-term commitment of this Commonwealth to clean streams. (Tr. 345) For a review of various inconsistencies and inaccuracies in Ms. Shaw's testimony, see the brief for various property owners at pp. 57-65.

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[1] Calculation: (61 miles x 5280 ft.) x 200 ft. = 322,080 x 200 = 64,416,000 sq. ft. divided by 43,560 sq. ft./acre = 1478.8 acres.

D. Construction, Maintenance and Safety

As Trial Staff demonstrates in its brief, part IV, pp. 43-49, generally West Penn has adequately addressed the question of the safety of the proposed line in operation. However, unanswered are questions on safety of the line in construction and as constructed (soil sedimentation control; tower support in areas of surface slippage; consideration of adverse atmospheric conditions and consideration of the reoccurrence of a venturi or wind-tunnel effect). Further unanswered are questions concerning the safety and appropriateness of West Penn's methods of clearing and maintaining the line's right-of-way. West Penn appears to approach the problem from a purely economic point of view, which, of course, is consistent with providing service at the lowest possible rates. Helicopter spraying of herbicides is by far the cheapest (to West Penn) method of vegetation control with ground application of herbicides the second cheapest. Manual clearing is by far the most expensive. (Tr. 652-662) The incidence of helicopter spraying is much in question. One witness stated the method would be used only in inaccessible areas, the latter defined as beyond the reach of four wheel drive vehicles. (Tr. 673) Inaccessible terrain was said to amount to 10% of West Penn's rights of way. (Tr. 661, 741-742) Later the same witness agreed that helicopter spraying was used on 40% of West Penn's right-of-ways and not restricted to inaccessible areas. (Tr. 653) The testimony of Mr. Beinlich, however, is uncontradicted and clear that West Penn used a helicopter to spray herbicides on a distribution line that parallels the edge of a public road on one side of his property. (Tr. 701) The result was the destruction of a row of 21 large ornamental trees stretching several hundred feet on his property. The trees I have seen myself. West Penn's response seems to be that damage claims have been low and thus acceptable.

(Tr. 777, 799) However, as the long-term risk of the use of herbicides is a matter of hot dispute, the total real cost to the public of West Penn's maintenance program is uncertain.

Further, the record here raises in question West Penn's ability to adequately supervise right of way maintenance. Most of the work is contracted to private firms and West Penn, while using inspectors, seems to operate on the basis of acting only where it receives complaints. (Tr. 799-800) Further, West Penn, in this area, provides much incentive to individual property owners to sell, as opposed to endure eminent domain. West Penn is willing to insert no spray clauses or similar agreements as to clearing where the owner settles. (Tr. 700) West Penn contends it need not even provide advance notice to property owners of spraying when the right of way has been obtained by condemnation. (Tr. 958-959) The testimony of Peter Spangler supports the proposition that West Penn "supervises" contractors on the basis of complaints received. (Tr. 658, 685-686, 777, 799-800). The uncontradicted and unrebutted testimony of Ms. Roskov on her experience with a West Penn contractor supports the need for Commission supervision of right of way maintenance. Ms. Roskov stated that she observed a West Penn contractor spraying about 15 to 25 feet from Mingo Creek. On questioning the person present, she learned he was spraying Tordon 155. Ms. Roskov stated she had learned from attending these proceedings that the use of Tordon 155 in wet areas is improper. (Tr. 1921-1922, 1928) See Trial Staff Exhibit E, a Dow Chemical Co. specimen label for Tordon 155 which states in part:

> This product is toxic to fish. Keep out of lakes, streams or ponds. Do not apply where runoff is likely to occur.

Also see cross-examination of Peter Spangler, West Penn forester at Tr. 724-725, 734-735.

Ms. Roskov also testified to the lack of maintenance on an existing 138 KV line crossing her property and a consequent tripping out of the line. (Tr. 1923-1926, also photographs admitted as Scott exhibits C, D and E). Her testimony here also is uncontradicted and unrebutted.

The result of the relatively intensive inquiry into right of way maintenance in this proceeding convinces me that this Commission should undertake an investigation into the matter on a state wide basis. The aim of the investigation should be to establish coherent guidelines for the electric utilities and to provide a method for protecting the citizens and environment of the Commonwealth.

Findings of Fact

1. The proposed Harrison-Prexy-Yukon 500 KV transmission line extends from the Harrison Generating Station in Shinnston, West Virginia to the proposed Prexy Substation in North Strabane Township, Washington County, Pennsylvania and then proceeds in an easterly direction to the existing Yukon Substation, near the Borough of Yukon, Pennsylvania; the line from the Pennsylvania state line to Prexy is approximately 38 miles long and the line from Prexy to Yukon is approximately 23.3 miles long; only the portions of this proposed line in Pennsylvania are under consideration in this proceeding.

2. Load flow studies, as presented in this case, are diagrams which represent the end-product of a computer-program which is designed to simulate the APS transmission system in various conditions; critical information to the program is peak load for various years taken from system forecasts, available generation and existing and/or proposed transmission facilities.

3. APS ran at least 150 load flow studies to evaluate and find problems on its bulk power transmission system; only 3 load flows exhibited problems on the 500 Kv transmission line system.

4. None of these load flow studies shows any overload situations or voltage problems in any single contingency situation; this is because interconnections with neighboring utilities provide adequate paths for required power to flow to and supply the northern load.

5. The "negative transmission margin" shown by West Penn does not demonstrate the need for additional 500 KV transmission capability on the West Penn (APS) bulk power system.

6. West Penn produced load flow studies of two different double contingency conditions (West Penn Exhibits 5 and 6) which produce overloads on the APS bulk transmission system: the simultaneous outages of (a) the Harrison-Pruntytown and Hatfield-Black Oak 500 KV lines and (b) the Pruntytown-Ft. Martin and Hatfield-Black Oak 500 KV lines.

7. These load flow studies assume (a) peak loads which are too high for the year in question, (b) peak loads which include 57 MW of load which is interruptible and (c) that only the most economic generation will be used, despite the fact that interconnections with neighboring electric utilities will respond to the requirements of contingency situations.

8. The load flow showing the double contingency situations do not reflect whether or not Mitchell No. 3 is on-line nor the effect of Mitchell No. 3, if it is on-line.

9. West Penn presented a different double contingency load flow study which shows voltage problems and overloads in the APS system when the Keystone 500 KV line and the Yukon-Hatfield 500 KV line are out of service; the assumptions outlined in Findings of Fact 7 and 8 are common to this exhibit as well.

10. The overloads and/or voltage problems protected in Exhibits 5, 6 and 9 do not necessarily reflect conditions within the APS bulk transmission system that have a substantial probability of occurring.

11. The proposed Prexy Substation is necessary, at least in part, because of the past reduction of operation at West Penn's Mitchell No. 3 Generating Station.

12. The Mitchell No. 3 generating unit will be available for future generation.

13. West Penn has never explained nor accounted for the continued future operation of Mitchell No. 3 in its case showing engineering need.

14. West Penn produced a load flow study (West Penn Exhibit 14) which shows voltage problems occurring during a single contingency outage without the Prexy Substation; this situation represents a local area supply problem.

15. West Penn did not consider the engineering alternative of installing a smaller, less costly 138 KV line from Mitchell Generating Station to the Bethel Park area, although such a line would remedy the problem; this consideration was considered not to be feasible because West Penn always assumed that the Prexy Substation would be in-service.

16. West Penn produced a load flow (West Penn Exhibit 15) which showed a possible problem during a double contingency outage of two 138 KV lines if Mitchell is assumed not to be operating.

17. Stability in regard to the operation of electrical generation and transmission facilities is the state of equilibrium or balance between the mechanical input torque of a turbine and the electrical power output of the generator. If the system is unstable, loss of synchronism with the rest of the generators on the system may result; these units must then be taken off the system to avoid damage to other equipment.

18. West Penn showed the conclusions of 1980 Stability Test Results which indicated stability problems with both the Harrison

and Pleasants generating stations if another 500 KV power plant is not available within the bulk power transmission system.

19. On May 31, 1978, a section of 500 KV transmission line was completed between Harrison Generating Plant and the existing Kammer-Fort Martin 500 KV transmission line.

20. The connection between Harrison and the Kammer-Fort Martin 500 KV transmission line provides relief from stability problems.

21. West Penn has not shown that a need exists for the Harrison-Prexy-Yukon 500 KV line.

22. West Penn proposed to build four (4) 138 KV transmission lines associated with the Prexy Substation.

23. Two double circuit 138 KV lines and one single circuit 138 KV line will share the proposed right-of-way with the Harrison to Prexy segment of the proposed 500 KV line from the existing Washington-Charleroi 138 KV transmission line to Prexy, a distance of approximately 5.5 miles in a north-south direction.

24. The other 138 KV line follows the Prexy-Yukon segment of the proposed 500 KV line out of the Prexy Substation; it terminates on the west side of the Monongahela River but does not interconnect with either a substation or an existing line.

25. West Penn produced no independent evidence to substantiate the engineering need for the four (4) 138 KV transmission lines but rather relies on the need for the Prexy Substation to prove the need for the 138 KV lines; West Penn did not show the in-service date for the lines, the terminals for some of the lines, nor the inadequacy in its 138 KV supply system which requires relief.

26. West Penn did not show the need for the four (4) 138 KV lines associated with the Harrison-Prexy-Yukon 500 KV line.

27. West Penn did not demonstrate a material benefit that would accrue to its benefit or to the benefit of its customers resulting from the construction of the proposed lines.

28. West Penn has acted arbitrarily, capriciously and in the willful disregard of the rights of many landowners in that it:

a. Routinely routed the proposed line over areas of high elevation and high visibility;

b. Failed to negotiate in good faith by failing to disclose limitations on the exercise of eminent domain and by failing to disclose the landowner's option to participate in the Commission's proceedings on the application;

c. Routed the proposed line without regard to the curtilage limitation on the exercise of eminent domain;

d. Routed the proposed line without regard to overburdening parcels of land containing existing electrical utility rights of way.

29. West Penn considered alternate routes before arriving at its preferred route.

30. Commission Trial Staff raised the issue of Article I, Section 27 of the Pennsylvania Constitution with regard to the proposed transmission lines.

31. The record in this proceeding does not contain specific, substantial evidence which shows that West Penn made reasonable effort to reduce environmental incursion to a minimum with regard to this proposed project.

32. Right-of-way clearing and maintenance methods practiced by West Penn with regard to vegetation management differ significantly

from practices and procedures outlined in APS general specifications and actual clearing specifications for the Harrison-Prexy-Yukon 500 KV line.

33. The proposed lines if built will be in accordance with the provisions of the National Electric Safety Code 1977 provisions on EHV transmission lines.

34. APS has experienced tower collapses on two different occasions; the cause of these collapses is thought to be high winds enhanced by high valley terrain which produced a venturi or tunnel effect of very high wind pressures.

35. West Penn has made no detailed examination of proposed tower sites to identify and eliminate similar dangero·s locations, if any.

36. The electromagnetic and electrostatic effects which will be produced by the proposed line are within reasonable limits considering the state of available research and technology.

Conclusions of Law

1. Commission jurisdiction over the applications which are the subject of this proceeding is provided for by the Act of May 21, 1921, P.L. 1057 (15 P.S. §3272, formerly numbered §1182).

2. West Penn Power Co. has not met its burden of proving that the applications for certificates of public convenience authorizing the use of the power of eminent domain for the proposed Harrison-Prexy-Yukon 500 KV transmission line and associated 138 KV transmission lines are necessary or proper for the service, accommodation, convenience or safety of the public.

3. West Penn has not met its burden of proving that it made reasonable efforts to reduce to a minimum the environmental incursion to be caused by the proposed transmission lines.

4. West Penn has not met its burden of proving that it has not acted arbitrarily, capriciously or in wanton disregard of the rights of the involved landowners.

ORDER

In consideration of the foregoing discussion, findings of fact and conclusions of law, it is hereby ordered that the applications of West Penn Power Company docketed at Application Docket Nos. A. 100200-100242 inclusive, A. 100552-100556 inclusive and 100898 are dismissed.

Respectfully submitted,

January 16, 1980
Date

MICHAEL A. NEMEC
Administrative Law Judge

APPENDIX C

PROPOSED FINDINGS OF FACT PPL Susquehanna-Roseland

I. Background

1. PPL Electric Utilities Corporation is a Pennsylvania corporation which supplies electric distribution and provider of last resort electric supply services pursuant to the regulatory jurisdiction of the Pennsylvania Public Utility Commission to approximately 1.4 million customers. Application at 1, ¶2.

2. PJM Interconnection, LLC, is the Regional Transmission Organization (RTO) charged by the Federal Energy Regulatory Commission (FERC) under the Federal Power Act, 16 U.S.C. § 791a, *et seq.*, with maintaining the bulk electric transmission system in a 13 state region that includes most of Pennsylvania. App. at 10, ¶¶ 21-22.

3. PPL is a Transmission Owner and a member of the PJM Interconnection, LLC. PPL St. 7 at 10-11.

4. Pursuant to the Energy Policy Act of 2005, FERC designated the North American Electric Reliability Corporation (NERC) as the Electric Reliability Organization for the United States. PPL St. 8 at 5.

5. FERC has adopted many of the NERC standards and made them mandatory for RTOs such as PJM and its transmission owner members such as PPL. PPL St. 8 at 5.

6. The NERC reliability standards require PJM to establish procedures to stress the transmission system as part of the application of NERC Category C contingencies. PPL St. 8 at 6.

7. PJM uses load deliverability tests and generator deliverability tests in power flow modeling to stress the transmission system in its control area. PPL St. 8 at 7-9.

II. Need for the Project

A. Proposed Findings of Fact Based on the Testimony Peter J. Lanzalotta

8. During the transmission planning process, PJM considers no future demand-side or generation alternatives to meet bulk electric system reliability concerns and only considers transmission expansion. PPL St. 7 at 34; OCA St. 2 at 11-22; Tr. 1387-1388.

9. The company initially listed twenty-three potential reliability violations that may occur at varying points in the future if the 500 kV transmission line is not constructed. OCA St. 1 at 6.

10. The twenty-three reliability violations are inherently faulty because they are based on load forecasts prepared prior to the current economic downturn. OCA St. 1 at 10.

11. Two of the initial twenty-three potential violations involve normal operations with no contingencies, and the substations implicated are not expected to load up to a point over their normal operating limits until 2012 and 2014, respectively. OCA St. 1 at 8-9.

12. A contingency is an electric system occurrence that includes forcing a system component to suffer a forced outage. OCA St. 1 at 7.

13. The other twenty-one initial potential violations involve contingencies that require putting either an entire transmission line or part of a substation transformer's capacity out of service, resulting in another transmission line loading up beyond its emergency operating limit. OCA St. 1 at 9.

14. Eight of the initial twenty-three violations are not expected to occur for at least one decade. OCA St. 1 at 9.

15. The Retool Study was provided by the Company to the OCA on June 25, 2009, but had been completed in or before March 2009. OCA St. 1-S at 1.

16. The Retool Study reduced the initial number of potential reliability violations from twenty-three to thirteen. OCA St. 1-S at 1.

17. The only violation involving a 500 kV line in the initial analysis was eliminated by accounting for the Retool Study. OCA St. 1 at 12.

18. Of the thirteen remaining violations, only ten involve single contingency 230 kV overloads expected to occur in or before 2019. OCA St. 1 at 12.

19. 230 kV system overloads can be addressed by providing reinforcement at the 230 kV voltage level, which is typically less expensive and less intrusive than providing reinforcement at the 500 kV level. OCA St. 1 at13.

20. Construction of a new 500 kV line can be justified if it addresses ten or more violations at the 230 kV voltage level. OCA St. 1 at 13.

21. Although accounting for the March 2009 PJM Retool Study leaves exactly ten 230 kV violations projected to occur in or before 2019, the March 2009 Study is dated because it includes elements and factors that have changed substantially since the Study was performed. OCA St. 1 at 13.

22. An up-to-date retool study may reduce the number of 230 kV violations even further, eliminating the need for construction of a new 500 kV line. OCA St. 1 at 13.

23. The testimony of company rebuttal witnesses Herling and McGlynn updated the violation analysis and maintained the initial number of twenty-three violations, but ten of the updated violations include contingencies involving simultaneous outages to two transmission lines sharing the same transmission tower, also known as double-circuit outages. OCA St. 1-S at 2.

24. Double circuit tower contingencies are treated differently than single contingencies because they much less likely to occur. OCA St. 1-S at 2.

25. NERC standards do not permit firm loads and firm power transfers to be curtailed under normal conditions and single contingencies (except in certain circumstances), but NERC standards do permit firm load and firm power transfer curtailment under double contingencies. OCA St. 1-S at 3.

26. The Company stated that it does not allow for any firm load or firm power transfer curtailment for its double contingencies in the updated list of violations, resulting in use of a standard more stringent than the NERC standard. OCA St. 1-S at 4.

27. Only four of the thirteen non-double circuit violations are projected to occur within the next six years, and all four of these violations can be addressed by constructing a new 230 kV line that runs parallel to the existing line running from Greystone to Whippany to Roseland. OCA St. 1-S at 7.

B. Proposed Findings of Fact Based on the Testimony of Robert M. Fagan

28. The load forecasts supporting the Company's application must be updated because the US economic downturn has significantly altered both the January 2008 peak load forecast and the January 2009 peak load forecast. OCA St. 2 at 2.

29. The January 2009 peak load forecast for summer of 2010 is 4.1% lower than the January 2008 peak load forecast for the same time period, suggesting that a current peak load forecast would show an even further reduction in the forecast upon which the Company's analyses depend. OCA St. 2 at 5.

30. The bulk of the application materials depend upon analysis using the 2008 load forecast. OCA St. 2 at 2.

31. Even the materials that depend upon the March 2009 Retool Study are dated because that Study uses a January 2009 vintage load forecast, which does not accurately account for the severity of the US economic downturn. OCA St. 2 at 2.

32. The severity of the US economic downturn from the second quarter of 2008 to fourth quarter of 2008 has been unprecedented in the past eight years. OCA St. 2 at 9.

33. PJM uses quarterly Gross Metropolitan Product values in its analyses, so conducting an analysis using information currently available would be much more accurate than the Company's offered analysis which is based on information from the fourth quarter of 2008. OCA St. 2 at 10.

34. The claimed need for the proposed line arises from peak, not average, use of the transmission system. OCA St. 2 at 5.

35. The March 2009 Retool Study also does not include results from the May 2009 PJM Reliability Pricing Model (RPM) auction. OCA St. 2 at 2.

36. The May 2009 PJM RPM auction showed 1000 MW of demand response and energy efficiency resources would be available across PJM—an amount that has not been accounted for in any of the Company's analyses. OCA St. 2 at 2.

37. Incorporation of the 1000 MW would alone delay the Company's claimed violations by two years. OCA St. 2 at 2.

38. The Company fails to include PA and NJ peak load reduction programs in their analyses supporting their application. OCA St. 2 at 3.

39. PA's Act 129 mandates peak demand reductions by 2013, and NJ's Energy Master Plan directs a series of efficiency initiatives with targeted implementation occurring no later than 2020. OCA St. 2 at 3.

40. Including reductions from PA's Act 129 in forecasts is appropriate planning even before those reductions are realized because the reductions are statutorily mandated and noncompliance could result in severe penalties for utilities. OCA St. 2-S at 7.

41. Even if the programs are only partially successful, this will result in a later "year of need" for the proposed line. OCA St. 2 at 3.

42. The overall effect of updating the load forecasts, including the May 2009 PJM RPM in the analysis, and including PA's and NJ's peak load reduction in the analysis would be to shift the "year of need" for the proposed line from 2012 to 2020. OCA St. 2 at 3.

43. Additional capacity resources may become available that were not accounted for in the analyses the Company used to support the proposed line. OCA St. 2 at 21.

44. Concerns about demand response and energy efficiency leading to generation retirement are unfounded because the PJM RPM has been successful in preventing generation retirement, and PJM could compensate generators to prevent retirement if the generators are needed for reliability reasons. OCA St. 2-S at 2.

45. The PJM Market Monitor expects that if inefficient coal generators are retired, they will be replaced by more efficient gas-fired units. OCA St. 2-S at 3.

46. The New Jersey Energy Master Plan (EMP) does not recognize the need for the proposed line; it simply used PJM's RTEP document (which included the line) when it conducted production cost modeling. OCA St. 2-S at 5.

47. NJ's EMP does not favor coal-fired imports from Western PJM; instead, it favors in-state supply and demand reduction. OCA St. 2-S at 5.

48. Assertions that the proposed line is needed to bring renewable energy sources on-board in PJM are wholly unsupported because PA and NJ could purchase renewable energy credits and other potential "backbone" projects are possible, apart from the proposed line. OCA St. 2-S at 9-10.

III. Re-Routing the Proposed Line

49. Saw Creek Estates (SCE) is a densely packed community of approximately 3,000 homes, where 10,000 people live. Tr. at 447.

50. An existing 230kV transmission line, with 80-foot towers and a 150-foot wide right-of-way (ROW), bisects SCE, and many of the homes in SCE are extremely close to the existing transmission towers. Tr. at 447.

51. A few homes and several backyards and/or decks in SCE physically extend into the existing ROW. Tr. at 482-83; OCA St. 1 at 14-15.

52. The Application proposes to more than double the height of the existing towers. App. at 9, ¶¶ 12, 14.

53. The "fall zone" of the proposed towers extends well into densely populated areas of SCE. OCA St. 1 at 16; Tr. at 110.

54. The terrain in SCE where the existing towers are located is steep, rocky, mountainous, and heavily-wooded. Tr. at 495.

55. PPL's position is that, during construction, in places with fewer people, there is less of a safety risk. Tr. at 796-98.

56. PPL has already rerouted a three-mile section of the proposed line—adding 800 feet to original length—based on safety concerns, which includes concerns about damage to mining and electrical equipment. OCA St. 1 at 19; Tr. at 962.

57. Replacing the existing towers with larger, more intrusive towers in the densely populated and mountainous SCE area poses unnecessary safety risks. OCA Main Brief, IV.C.6.a.

IV. Project Costs and Rate Recovery

58. The Federal Energy Regulatory Commission (FERC) issued orders directing that new facilities within PJM that are 500 kV and above be fully allocated on a PJM region-wide "postage-stamp" basis. Re PJM Interconnection LLC, 111 FERC ¶61,308 (Docket Nos. EL05-121-000, *et al*.) PPL St. 11 at 3-4. "Postage-stamp" rates means that every customer within PJM pays essentially the same proportionate amount toward the cost of the project, as each zone pays a proportionate share based upon its annual peak load. Tr. 1950-1951.

59. Although the Susquehanna Roseland line will consist of both a 230 kV and 500 kV project, all will be allocated among the transmission zones in PJM based upon the annual peak load of each zone because the 230 kV is considered to be a supporting facility for the 500 kV. PPL St 11 at 5.

60. PPL's allocated portion of the total estimated cost of the project, $1.2 billion, is approximately 5% or $60 million. PPL St. 11 at 5.

61. FERC approved incentive rates for the Susquehanna Roseland line at Docket Nos. EL0823000 and EL0823001. Tr. 1944.

62. FERC allowed PPL a 50 basis point adder to its return on equity for the project for its continued membership in PJM Interconnection, LLC. Tr. 1944.

63. PPL requested a 150 basis point adder for the financial risks and challenges associated with the Susquehanna Roseland line; FERC granted a 125 basis point adder. Tr. 1945.

64. The Lackawanna Substation and the 500 kV line, both the proposed Pennsylvania (PPL) and New Jersey (Public Service Electric and Gas Company) facilities, is estimated to cost $1.2 billion. PPL St. 11 at 5; Tr. 1945.

65. Among the risks and challenges associated with the SR500 Project are its high cost, the multiple governmental approvals and permits required and the difficult construction terrain. Tr. 1945.

66. As part of the incentive rates, PPL is permitted to recover the costs of construction work in progress through its annual FERC formula rate filing. Tr. 1946.

67. Even if the SR500 project were abandoned as a result of factors beyond PPL's control, PPL would be able to recover 100% of the expenses associated with the project; FERC approved this as part of the incentive rate treatment. Tr. 1946.

68. PPL customers will bear approximately 5% of the costs of the project or $60 million; all other customers within PJM, including all other Pennsylvania electric utility customers will bear the other 95% or approximately $1.6 billion. Tr. 1947-1949.

69. PPL does not know what portion of the costs of the line will be borne by Pennsylvania PJM customers, other than by those in PPL service territory. Tr. 1947-1948.

70. OTS witness Yocca estimates that, since PPL accounts for approximately 25% of Pennsylvania's peak load, customers of the remaining PA EDCs will be allocated approximately 15% or the costs of the project, or approximately $180,000,000, plus operation and maintenance expenses over the forty-year life of the project. OTS St. 1 at 34, citing Order of March 26, 2009, Docket No. M-2008-2069887, at 5.

71. The Seventh Circuit Court of Appeals held that the FERC had failed to explain how "postage-stamp" rates produce efficient price signals and remanded the case for further proceedings. Tr. 1954. Thus, currently, it is uncertain whether the PPL customers will ultimately bear 5% of the costs or some other fraction. Tr. 1954-1955.

72. PPL files its FERC Form 1 in June of each year, which establishes its annual revenue requirement, inclusive of its capital cost and expenses associated with the SR500 project. Tr. 1956. PPL "trues up" any previously projected expenses to actual expenses. Tr. 1957.

73. Through that June 2009 filing, rates related to the SR500 project went into effect in accord with the FERC Order in Docket No. ER08-1457-000 on August 21, 2009. Tr. 1957.

74. The FERC-approved rate of return is 11.10% for the period November 1, 2008 through May 2009; 11.14% from June 2009 through May 2010; and 11.18% from June 2010 through May 2011. Tr. 1957-1958. With the incentive adders, the rate of return will range from 12.6% to 12.68%. Tr. 1958.

75. FERC formula rates allow for dollar-for-dollar recovery of every expense incurred, as they are incurred. Tr. 1959.

76. No matter what the level of sales, PPL will get its authorized rate of return through the FERC-approved formula rates for the service life of the project. Tr. 1961.

77. The Pennsylvania PUC has no authority to change FERC approved rates. Tr. 1964.

78. PPL will be able to file for and recover the costs associated with the SR500 project even if it is abandoned through no fault of PPL. Tr. 1965-1966.

V. Health and Safety

A. General Health and Safety Concerns

79. Many Saw Creek Estates and other residents are concerned of the health impact the lines will have on affected communities' young children and wildlife. Tr. at 125-26; Tr. at 128, lns. 8-12, 20-22; Tr. at 139, lns. 23-25; Tr. at 140, lns. 3-7; Tr. at 162-64; Tr. at 188, ln. 15; Tr. at 225, lns. 3-12; Tr. at 263, lns. 21-22; Tr. at 264-68; Tr. at 269, ln. 17; Tr. at 270, lns. 1-10; Tr. at 271, lns. 6-18; Tr. at 273, lns. 19-24; Tr. at 283, lns. 2-4; Tr. at 285, lns. 8-14; Tr. at 318, lns. 8-24; Tr. at 344, lns. 16-17; Tr. at 483, lns. 5-6; Tr. at 497, lns. 8-10; Tr. at 500, lns. 8-9; Tr. at 622, lns. 3-4; Tr. at 667, lns. 9-10; Tr. at 673, lns. 9-21; Tr. at 676, lns. 6-21; Tr. at 678-79; Tr. at 688, lns. 23-24.

80. Several residents are concerned over potential tower collapses and tower failures. Tr. at 109, lns. 6-7; *see also* Tr. at 117, lns. 20-21; Tr. at 131, lns. 14-17; Tr. at 186, lns. 11-15; Tr. at 338, lns. 14-20; Tr. at 341, lns. 10-15; Tr. at 497, lns. 5-7.

81. Several homes are "clearly in the fall zone" of the new towers. Tr. at 466, ln. 10; Tr. at 467, ln. 22.

82. Several residents are concerned over how the influx of truck traffic will be accommodated during the one-year project to erect the lines, and the damage the trucks will do to the privately maintained roads in Saw Creek Estates. Tr. at 122, lns. 1-10; Tr. at 127, lns. 20-23; Tr. at 181, lns. 9-10; Tr. at 184, lns. 10-12; Tr. at 271, lns. 22-23; Tr. at 312-13.

83. Peter Derrenbacher, President of the Saw Creek Estates Homeowners Association, explained that the year-long construction project will impact the lives of his association's residents by creating noise and air pollution. Tr. at 106, lns. 22-23; *see also* Tr. at 312, lns. 13-18; Tr. at 500, lns. 19-20.

84. Residents are concerned about the damage that will be caused by the blasting necessary to complete the project. Tr. at 131, lns. 8-11; *see also* Tr. at 312, ln. 1; Tr. at 497, lns. 13-16.

85. Scott Haan expressed concern over how PPL would respond to the increased number of hunters, trappers, ATV riders, and illegal dumpers that would come onto the larger plot of land that will be created below the new lines. Tr. at 273, lns. 3-13; Tr. at 277-280.

86. Residents are concerned about the "higher risk of accidents during construction" because the existing line is near many homes. Tr. at 459, ln. 10.

87. The terrain where construction on the new towers would occur is "[s]everely rocky or hilly" which "poses a lot more challenges in the construction phase." Tr. at 495, lns. 18-24.

88. The "current line . . . cuts directly through [Clayton LaCoe's] property" and "on the right day with the right conditions, under the present 230 kilovolt line, there's a tremendous induced current." Tr. at 630, lns. 3-4, 12-15.

B. <u>EMF Concerns</u>

89. Several residents are concerned over the potential health impacts of EMFs—increased chances of adult and child leukemia, brain cancer, Lou Gehrig's disease, and miscarriage. Tr. at 143, lns. 10-14; Tr. at 144-45; Tr. at 264-68; Tr. at 282, lns. 23-25; Tr. at 288-93; Tr. at 295-96; Tr. at 300, ln. 4; Tr. at 303, lns. 15-23; Tr. at 312, ln. 15; Tr. at 328, lns. 19-23; Tr. at 484, lns. 23-24; Tr. at 500, ln. 10; Tr. at 605, lns. 18-24; Tr. at 626, lns. 8-9; Tr. at 679, lns. 3-19.

90. Several residents suggested that the wires be placed underground. Tr. at 94, lns. 2-4; Tr. at 108, lns. 1-2; Tr. at 197, lns. 22-23; Tr. at 215, lns. 9-10; Tr. at Tr. at 259-261; Tr. at 269, ln. 23; Tr. at 287-88; Tr. at 290-92; Tr. at 300, ln. 18; Tr. at 303, ln. 24; Tr. at 306, lns. 23-24; Tr. at 317, ln. 8; Tr. at 325, ln. 21; Tr. at 734-37.

91. Thomas Dedea expressed concern over voltage contaminating the soil and water supply. Tr. at 147, lns. 15-19.

C. <u>Economic/Environmental Concerns</u>

92. Many Saw Creek Estates and other residents are worried about property devaluation as a result of the new lines. Tr. at 106, lns. 17-20; Tr. at 119, lns. 20-22; Tr. at 123, lns. 17-24; Tr. at 126, lns. 2-6; Tr. at 129-30; Tr. at 131-32; Tr. at 139, ln. 22; Tr. at 186, lns. 16-23; Tr. at 188, lns. 17-19; Tr. at 192, lns. 9-10; Tr. at 199, lns. 19-23; Tr. at 204, ln. 25; Tr. at 209, lns. 8-10; Tr. at 263, lns. 18-19; Tr. at 284, lns. 5-6; Tr. at 286, ln. 6; Tr. at

318-19; Tr. at 322-27; Tr. at 348, lns. 20-24; Tr. at 460, lns. 8-12; Tr. at 503, lns. 17-18; Tr. at 626, lns. 11-12; Tr. at 630, lns. 24-25; Tr. at 667, lns. 15-17; Tr. at 678, lns. 17-20.

93. The new lines will result in "tens of millions of dollars . . . of lost [property] value to [the Saw Creek Estates] community." Tr. at 460, lns. 14-15.

94. The homes near PPL's right of way were built when the current towers were in place. No one anticipated that the height of the towers could double, which would decrease the value of all nearby properties. Tr. at 97-98.

95. Several residents moved to the Saw Creek Estates locality because of the aesthetic beauty of the area, and they are concerned that the towers will ruin the area's beauty. Tr. at 105, lns. 14-15; Tr. at 120, lns. 6-9; Tr. at 188, lns. 10-12; Tr. at 284, lns. 5-6; Tr. at 300, ln. 2; Tr. at 301, lns. 2-3; Tr. at 302-03; Tr. at 304, lns. 6-7; Tr. at 319-20; Tr. at 346, lns. 7-8; Tr. at 349, lns. 19-20; Tr. at 483, lns. 9-10; Tr. at 509-10; Tr. at 603, lns. 15-17; Tr. at 615, lns. 7-8; Tr. at 621, lns. 19-21; Tr. at 688, lns. 21-23; Tr. at 692, lns. 11-22.

96. Tourism is the main source of income for many area businesses, many local residents are employed in the tourism industry, and the "main reason" tourists are attracted to the area is the "natural unspoiled beauty" of the county. Tr. at 99, lns. 4-9.

97. Several Saw Creek Estates and other residents expressed concern over whether or not PPL's demand analysis was accurate and could justify construction of the lines. Tr. at 101, lns. 11-16; Tr. at 102, lns. 23-25; Tr. at 113, lns. 3-10; Tr. at 120, lns. 14-19; Tr. at 134, lns. 10-13; Tr. at 152-58; Tr. at 186-87; Tr. at 287, lns. 1-11; Tr. at 319, lns. 4-9; Tr. at 349, lns. 6-9; Tr. at 669, lns. 13-14; Tr. at 681-82.

98. The towers will "be seen from some of [Saw Creek Estates'] nicest amenities and for miles around." Tr. at 106-07. The amenities are "valued somewhere in the magnitude of 8 million dollars." Tr. at 447, lns. 15-16.

99. In particular, the new towers will be clearly visible from the "VIP area, which is comprised of a pond, outdoor tennis courts, basketball court, ballfield, outdoor pool, and also a small clubhouse." Tr. at 447, lns. 2-5. David Martin testified that the VIP area "is visited daily by virtually half of the community" and that the new towers "would become the predominant feature of the landscape . . . at the VIP location. Tr. at 451, lns. 16-18, 21-22.

100. The new towers will also be visible from the Top of the World facility, which is a ski hill where "manmade snow" is produced that is "utilized extensively" and considered "the premiere amenity location" in Saw Creek Estates Tr. at 475, lns. 10-25; Tr. at 478, lns. 9-10. Mr. Martin testified that the "towers [would] become the predominant feature of the landscape" at the ski facility. Tr. at 478, ln. 21.

101. The "mountain side pool" in Saw Creek estates will have to be closed if the lines are erected. Tr. at 123, lns. 13-16; *see also* Tr. at 506-08.

102. There is concern about the landscape damage that will be done to Saw Creek Estates in order to provide access for the heavy machinery needed to construct the new towers. Tr. at 459, lns. 13-16.

103. There is concern about damage the construction process will cause on the central water and sewer systems—costs that will be incurred by residents. Tr. at 460, lns. 20-25.

104. Rocco Pannozzo explained that the landscape surrounding the current towers has had 80 years to revitalize and that "one would find it hard to believe" that installation of the new towers "wouldn't do major scarring to [the] environment and major damage to Heritage Creek." Tr. at 462, lns. 18-25.

105. During "certain parts of the day and depending on the weather, [one can] actually hear the [current] line humming." Tr. at 492, lns. 2-3.

106. Dr. Janet Melnick testified that the proposed line would adversely impact a creek at the back of her property that empties into the Susquehanna River. Tr. 551, lns. 6-8.

107. Joseph Simon testified that PPL held an open house and proclaimed that the chosen route was initially PPL's "least favorite" route of the four proposed alternatives. Tr. at 575, ln. 24; 574-78.

108. An 800-home gated community project has been halted by the prospect of installation of the new lines. Tr. at 609, lns. 8-16; Tr. at 612-13.

109. Peter Cupple suggested that "an environmental impact study probably should be done, because [the proposed line] is going to cross the Lackawanna River" and "a number of roads and highways and some wetlands and [affect] some [endangered] habitat . . . on Moosic Mountain." Tr. at 634, lns. 11-18; *see also* Tr. at 715, lns. 1-18.

110. Several residents suggested that the chosen route should be the shortest route to New Jersey, in particular along Interstate 80. Tr. at 608, lns. 2-4; Tr. at 615-16; Tr. at 623, lns. 11-12; Tr. at 631, lns. 9-10; Tr. at 631, lns. 17-21; Tr. at 639, lns. 8-9; Tr. at 697-98; Tr. at 705, lns. 23-25; Tr. at 708-09.

111. Tim McCabe testified that "[e]xtraordinary efforts should be taken to install towers that blend with the mountain, perhaps through camouflaging techniques and innovative more organic tower design." Tr. at 685-86.

D. National Park Service (NPS) Concerns

112. John Donahue is the Superintendent of the Delaware Water Gap National Recreational Area (DEWA). Tr. at 374, lns. 23-24.

113. "[O]ver 5 million visitors" come to the park and "any lost use of areas . . . will have a significant impact on the public," according to John Donahue. Tr. at 379, lns. 4-8.

114. The "park is a real tapestry of . . . natural and cultural resources woven together in a way that [one] won't find many places," according to John Donahue. Tr. at 375, lns. 19-22 (test. of John Donahue).

115. A previous trail-altering project was specifically designed to avoid the "hogback" area where the lines presently sit because "it's an important area for biodiversity," according to John Donahue. Tr. at 376-77.

116. NPS "refused to allow [Middle Smithfield] [T]ownship to increase the size of Community Drive and have asked them for several years to make it a one-way road" because the area surrounding the road is very "important," according to John Donahue. Tr. at 378, lns. 8-9.

117. The NPS decided, based on years of experience, to skip preliminary procedures and proceed directly to issuing an Environmental Impact Statement because the preliminary procedures were costly and NPS would not arrive at a finding that the project would have "no significant impact under any scenario . . . imagine[able]," according to John Donahue. Tr. at 379-80.

118. Dr. Binnen Carter is the Cultural Resource Manager for NPS at the DEWA. Tr. at 364, ln. 19.

119. "The primary impact of any change in the transmission size or scale will potentially dramatically impact the viewshed from the [Schoonover Mountain House area] historic resource" according to Dr. Brinnen Carter. Tr. at 367, lns. 6-10.

120. Patrick Lynch is the Chief of Resource Management and Science at the DEWA. Tr. at 372, lns. 1-2.

121. According to Mr. Lynch, "[w]hen you start to fragment your ecosystem, you are cutting away the very base and core and foundation of your ecological process. That is one of our primary concerns." Tr. at 400, lns. 19-22.

122. The DEWA is "the last vestige of naturalness . . . in [the] area for native Pennsylvania" according to Patrick Lynch. Tr. at 372, lns. 22-24.

123. NPS is also concerned of the potential "corona effect" which is "the sound . . . [caused by] high voltage transmission" according to Patrick Lynch. Tr. at 435, lns. 5-7.

124. Jeffrey Shriner is a Biologist at the DEWA. Tr. at 382, lns. 16-17.

125. "[T]he hogback and the wetland complex are very rich in natural resources" and the NPS is concerned of "the impacts to these resources," according to Jeffrey Shriner. Tr. at 383, lns. 8-9, 16-17.

126. The Arnott "fen consists of a very rare type of wetland plant community" that is indigenous "only [to] Northeastern Pennsylvania and Northwestern New Jersey" and that "the State of Pennsylvania ranks it . . . as critically imperial in the state, meaning very

few occurrences at risk," according to Jeffrey Shriner. Tr. at 384, lns. 11-17, Tr. at 385, lns. 5-8.

127. NPS is concerned of the impact the heavy machinery traveling on the access road will have on the Arnott Fen, which "supports a number of rare plants and wildlife species" according to Jeffrey Shriner. Tr. at 385, lns. 9-10, Tr. at 386, lns. 1-5.

128. It has been a "park management goal . . . to let [several] areas revert back from previous human uses" and NPS is concerned that changes to the access road would result in loss of "overhead canopy" which would allow non-native plant species to inhabit the exposed areas, according to Jeffrey Shriner. Tr. at 391-95.

129. Allen Ambler is a Biologist at the DEWA. Tr. at 408-09.

130. The hogback ridge "creates a perfect opportunity for bald eagle winter roost" and is near a bald eagle "foraging area" resulting in as many as 18 counted bald eagles present on the ridge at one time, according to Allen Ambler. Tr. at 411.

131. The current height of the lines gives little resistance to flying eagles because they are "pretty much at tree level along the ridge" and that the new project will require "[t]hree times as many lines, 2 to 3 times as high, building a fence between the bald eagle roost and their foraging area," according to Allen Ambler. Tr. at 413, lns. 3-6, 16-18.

132. "[C]ombined with the upper Delaware system," the DEWA "easily get[s] over 200 winter eagles" and the entire area "is a big wintering bald eagle area . . . considered to be the largest on the east of the Mississippi," according to Allen Ambler. Tr. at 413-414.

133. The DEWA has multiple confirmed bald eagle nesting sites, and that the areas of the park that will be disturbed by the project are believed to contain at least one bald eagle nesting site, according to Allen Ambler. Tr. at 414-15.

134. Arthur North is the River District Ranger at the DEWA. Tr. at 424, lns. 8-9.

135. There is a "cluster of 12 campsites . . . on both sides of the right-of-way" that were established to "allow for . . . extended recreational activity . . . but simultaneously reduce the human impact associated with camping" and that the NPS is concerned of the impact the project will have on "the visitor experience" in terms of "light, sounds, [and] visual things, all associated with" the proposed construction project, according to Arthur North. Tr. at 426-27.

APPENDIX C

PROPOSED CONCLUSIONS OF LAW

1. The Commission has jurisdiction over the subject-matter of and the parties to this proceeding by virtue of Chapter 11 of the Public Utility Code, 66 Pa.C.S. §§1101, *et seq.*, and 15 Pa.C.S. §1511(c).

2. The Applicant, PPL Electric Utilities Corporation, has not met its burden of proving, pursuant to Section 332(a) of the Public Utility Code that the Application for a Certificate of Public Convenience and Authority to exercise the power of eminent domain for the construction and installation of the aerial electric high-voltage transmission line known as the Susquehanna-Roseland Line is necessary or proper for the service, accommodation, convenience or safety of the public. 66 Pa. C.S. § 332(a); 66 Pa.C. S. § 1101, *et seq*.

3. The Applicant, PPL Electric Utilities Corporation, has not met its burden of proving that the proposed facility known as the Susquehanna-Roseland Line is needed, pursuant to 52 Pa. Code § 57.76(a)(1).

4. The Applicant, PPL Electric Utilities Corporation, has not met its burden of proving that the proposed facility known as the Susquehanna-Roseland Line would not create an unreasonable risk of danger to the health and safety of the public, pursuant to relevant Commission siting regulations. 52 Pa. Code § 57.76(a)(2).

5. The Applicant, PPL Electric Utilities Corporation, has not met its burden of proving that the proposed facility known as the Susquehanna-Roseland Line is in compliance with applicable statutes and regulations providing for the protection of the natural resources of this Commonwealth. 52 Pa. Code § 57.76(a)(3).

6. The Applicant, PPL Electric Utilities Corporation, has not met its burden of proving that the proposed facility known as the Susquehanna-Roseland Line would have a minimum adverse

environmental impact, considering the electric power needs of the public, the state of available technology and the available alternatives. 52 Pa. Code § 57.76(a)(4)

PROPOSED ORDERING PARAGRAPHS

It is hereby ORDERED, in consideration of the foregoing discussion, findings of fact and conclusions of law, that the Application of PPL Electric Utilities Corporation filed pursuant to 52 Pa. Code Chapter 57, Subchapter G, for approval of the siting and construction of the proposed Pennsylvania portion of the Susquehanna-Roseland 500 kV transmission line in portions of Lackawanna, Luzerne, Monroe, Pike and Wayne Counties, Pennsylvania, at Docket No. A-2009-2082652 be denied, unless:

(1) PPL voluntarily further waives, for a period of 180 days, its right to invoke FERC transmission siting authority if a final decision is not made by this Commission within one year of PPL's Application filing date; and

(2) PPL agrees to provide, for the Commission's further consideration, a current retool analysis of the need for the Susquehanna-Roseland line incorporating an updated peak load forecast, the results of the 2009 Reliability Pricing Model auction and peak load reductions required by Pennsylvania Act 129 and the New Jersey Energy Mast Plan, consistent with the Office of Consumer Advocate's recommendations in this case, within a thirty (30) day period.

It is FURTHER ORDERED that, if upon further consideration, the Commission determines that PPL has demonstrated through the submission of current analyses, consistent with the recommendations of the Office of Consumer Advocate, that the Susquehanna-Roseland line is needed to serve the public, pursuant to the standards set forth in the Public Utility Code and relevant regulations, the Application may be granted on the following conditions:

(1) that PPL develops a reroute of the line to avoid the Saw Creek Estates Community; and

(2) that actual construction may not commence until PPL demonstrates that it has obtained all permits required to construct and operate the proposed Susquehanna-Roseland line, including those required by federal law and regulations to route the line through the Delaware Water Gap National Recreation Area.

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