

BEFORE THE
NEW JERSEY BOARD OF PUBLIC UTILITIES

In The Matter of the Petition)	Docket No. EM09010035
of Public Service Electric and)	
Gas Company for a Determination)	
Pursuant to the Provisions of)	
N.J.S.A. 40:55D-19)	
(SUSQUEHANNA-ROSELAND))	

INITIAL BRIEF OF
THE NEW JERSEY DIVISION OF RATE COUNSEL

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INTRODUCTION

On January 12, 2009, Public Service Electric and Gas Company (“PSE&G”, “the Company” or “Petitioner”) filed a Petition with the New Jersey Board of Public Utilities (“the Board”) seeking a determination that, pursuant to N.J.S.A. 40:55d-19, their proposed 500,000 volt (“500 kV”) Susquehanna-Roseland transmission system upgrade is “reasonably necessary for the service, convenience or welfare of the public” and that the Municipal Land Use Ordinances of the affected municipalities shall not apply to the Project.

The proposed Project is a transmission system upgrade consisting of a new 500 kV line that will extend approximately 145 miles across two states at an estimated cost of \$932 million.¹ The transmission line will begin at the Susquehanna switching station in eastern Pennsylvania, cross the Delaware River in the vicinity of the Delaware Water Gap and then join the 45 mile, \$750 million New Jersey segment, to be constructed entirely on existing rights-of way and spanning 15 municipalities and finally terminating at the Roseland switching station.² In addition to the 500 kV circuit, there are proposed to be two 500/230 kV transformers and two switching stations (“the Project”). In New Jersey, the Project will cross approximately two miles of federal land operated by the National Park Service, freshwater wetlands, the Picatinny Arsenal, the Kittatinny Mountains and the New Jersey Highlands Region.

In June 2007, PJM’s Board of Managers approved the Project for inclusion in the PJM Regional Transmission Expansion Planning (“RTEP”) process. PJM is expected to

¹ PJM 2007 Regional Transmission Expansion Plan (“RTEP Report”), Item #395, S-100, p. 10.

² The RTEP Report also noted that: “In addition, the line could also be extended from Susquehanna at its western end to integrate with a cluster of new coal-fired generation resources in central Pennsylvania, currently under development through PJM’s interconnection process.” *Id.* at p. 10.

issue a new Load Forecast Report in early 2010 which is expected to show slowing load growth in the PSE&G zone in both the 2009-2011 time period and beyond. It is noteworthy that PSE&G will abide by any changes that PJM ultimately determines are necessary regarding the timing for this Project, or the underlying need for the Project itself, and will only construct this Project if it continues to be needed to maintain reliability in the region.³

In its Petition, PSE&G sought expedited treatment: Board approval in five and a half months. The Company claimed that it needed such extraordinarily expedient approval to construct the Project in two and a half years to meet claimed projected electric reliability criteria violations that might occur starting in 2012. The New Jersey Department of the Public Advocate, Division of Rate Counsel (“NJ Rate Counsel”) respectfully submits that an updated load forecast should be reviewed before any approval is granted and that without such a study, for the reasons set forth herein, the Petitioner has failed to meet its burden of proof regarding the necessity of the Project for its customers.

LEGAL ARGUMENT

I. Petitioner must use current data to establish that the Project is reasonably necessary for its customers

As Petitioner is relying upon the stale load forecast data it submitted with its Petition, PSE&G has failed to meet its burden of proving that the proposed Project is “reasonably necessary for the service, convenience, or welfare of the public”. N.J.S.A.

³ Petition at p. 14.

40:55D-19. In the instant case, Petitioner has shown only that the proposed Project would resolve the reliability concerns that it projects to occur from 2012 to 2020.⁴ 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 PSE&G claims exists. The evidentiary record is clear that PSE&G has presented *only* transmission solutions for its claimed reliability concerns in 2012.

N.J.S.A.40:55D-19 provides, inter alia, that a Municipal Land Use Act, and any Ordinance or regulations made under the authority thereof shall not apply to a project development proposed by a public utility for installation in more than one municipality for the furnishing of service if, upon petition to the Board, this Board shall, after hearing, decide the proposed installation of the development in question is “reasonably necessary for the service, convenience or welfare of the public”. There is no relevant case law interpreting N.J.S.A. 40:55D-19, but there are cases which interpret the substantially similar predecessor statute, N.J.S.A. 40:55-50.

In re Public Service Electric and Gas Co., 35 N.J. 358 (1961), the Supreme Court of New Jersey explained the Board’s powers and duties with regard to appeals from local governing body decisions, setting forth the following criteria:

1. The statutory phrase “for the service, convenience and welfare of the public” *refers to the whole “public” served by the utility* and not the limited local group benefited by the zoning ordinance.
2. The utility must show that the proposed use is reasonably, not absolutely or indispensably, necessary for public service, convenience and welfare at some location.
3. It is the “situation”, i.e., the particular site or location, which must be found “reasonably necessary,” so the Board must consider the community zone plan and

⁴ The RTEP Report noted that the Project would alleviate the North American Electric Reliability Corporation (“NERC”) criteria violation overloads beginning in 2015 (p. 222).

zoning ordinance, as well as the physical characteristics of the plot involved and the surrounding neighborhood, and the effect of the proposed use thereon.

4. Alternative sites or methods and their comparative advantages and disadvantages to all interests involved, including cost, must be considered in determining such reasonable necessity.

5. The Board's obligation is to weigh all interests and factors in the light of the entire factual picture and adjudicate the existence or non-existence of reasonable necessity therefrom. If the balance is equal, the utility is entitled to the preference, because the legislative intent is clear that the broad public interest to be served is greater than local considerations.

Id. at 376-377, (emphasis supplied), cited in I/M/O Atlantic City Electric Company, 96 N.J.A.R. 2d. (BRC) 6 (1994).

N.J.A.C. 14:5-7.1 provides the requirements for when an electric distribution company ("EDC") constructs electric transmission lines:

(a) Whenever an EDC constructs an overhead transmission line, it shall:

1. Make use of available railroad or other rights-of-way whenever practicable, feasible and with safety, subject to agreement with the owners;
2. Locate towers whenever practicable and feasible in accordance with the topography *so as to minimize their appearance*; and
3. Establish a program of *painting towers initially and periodically in order to camouflage their appearance as much as possible* and to the extent consistent with the need for protection.

(b) An entity that conducts vegetation management under an overhead transmission line shall comply with the standards for vegetation management set forth in N.J.A.C. 14:5-8. (emphasis supplied).

The New Jersey Rate Counsel submits that this Board must apply relevant state law and regulations independent of PJM's "directive" to PSE&G concerning the project. Pursuant to the terms of the FERC Open Access Transmission Tariff (OATT), RTEP Protocol-Schedule 6, any such PJM directive is subject to the transmission owner meeting all requirements of state law and regulation.⁵ State law, regulations and Board precedent must govern the outcome of this proceeding.

⁵ See www.pjm.com/planning/rtep-development/stakeholder-process/~media/documents/oa/ashx.

In PSE&G's Petition, the need for the Project was based on twenty-three potential reliability violations that were projected to occur in the future, ranging from the years 2012 to 2022, although the NERC violations did not occur until 2015. 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.⁶

According to the RTEP Report, the PJM Load Forecast Model incorporates three classes of variables: 1) calendar effects such as day of the week, month, and holidays; 2) a forecast of baseline economic conditions; and 3) weather conditions across the RTO. Specifically, PJM uses Gross Metropolitan Product (GMP) in the econometric component of its forecast model, which allows for a localized treatment of economic effects within a zone. PJM has contracted with an outside economic services vendor to provide economic forecasts for all areas within the PJM footprint on an ongoing basis.⁷

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 major change has taken place over the last twelve months regarding the demand for electricity, with an accompanying effect on the peak load projections underlying the Company's claims that the Project is needed to serve the public. This rapidly-changing economic environment demands that the most current data available be included for the Board to consider in this proceeding.

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

⁶ Petition at pp. 11-12.

⁷ RTEP Report at p. 151.

Roseland area in 2012. First, economic growth drives peak load forecasts and the U.S. economy has experienced an unusually severe downturn in the last fifteen months. PSE&G's baseline need analysis does not capture any economic data more recent than the final quarter of 2008. Second, the Reliability Pricing Model ("RPM") Auction 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. PSE&G's analyses do not take these future resources into account. Third, PSE&G has failed to take into account the New Jersey initiatives to substantially reduce peak load. Upon the evidence of record in this case, PSE&G has failed to meet these legal and regulatory standards, and the Petition therefore should not be approved at this time.

As set forth below, as it has relied upon stale data, Petitioner has failed to meet its burden of proving the need for the proposed Susquehanna-Roseland 500 kV line to satisfy the projected reliability concerns as early as 2012. Given the unusual severity of the economic downturn not reflected in the January 2009 load forecast, PSE&G's baseline need analysis is 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.⁸ In addition, PJM and PSE&G have included *none* of the future energy efficiency and demand response resources that will result from New Jersey's Energy Master Plan, a

⁸ "MAAC" stands for "Mid-Atlantic Area Council". PJM uses the phrase eastern MAAC to describe all four New Jersey electric utilities, PECO (Philadelphia Electric Company) and the Delmarva Peninsula, a historically transmission-congested sub-region of PJM.

major statutory and policy initiative intended to substantially reduce peak load in the area of claimed need.⁹

Moreover, PSE&G has Board approved demand response and energy efficiency programs which should further reduce demand for electricity within the Company's service territory. For example, the Company received approval in November 2008 for a four-year, \$46 million program intended to help customers curb energy consumption. Over the lifetime of the energy savings measures the program is projected to save 458 gigawatt hours of electricity -- approximately the equivalent of providing electricity to 130,000 homes. Moreover, PSE&G has a \$105 million solar loan energy pilot program approved by the Board and the Company claims to be fully committed to helping the State achieve the goals set forth in its Energy Master Plan.¹⁰

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 Project 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 Board 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.

One underlying factor requiring additional transmission to northern New Jersey that was not discussed in great detail in this proceeding was the effect of merchant transmission facilities that would send power from New Jersey to New York. The 2007

⁹ <http://www.nj.gov/emp>.

¹⁰ Petition at p. 4.

RTEP Report stated that "...the impact of internal New Jersey load growth is compounded by the stresses on the transmission system of potentially having to accommodate more than 2,800 MW of planned exports of power from eastern PJM to New York City and Long Island."¹¹ The Report mentioned a since-dropped PSEG project:

The Bergen HVDC (066) project (Hudson Transmission Project) proposal would interconnect PSEG and New York City, from PSEG's Bergen 230 kV substation in northern New Jersey to Consolidated Edison's W. 49th Street 345 kV substation. This project would consist of high voltage DC back-to-back facilities plus AC underground and submarine cables. Firm Transmission Withdrawal Rights of 670 MW are requested. A late 2010 in-service date is currently targeted. RTEP interconnection process status as of December 31, 2007 shows that a facilities study is underway. System Impact study results have revealed that the 670 MW withdrawal would cause almost two dozen overloads, requiring \$450 million of network upgrades throughout the AEP, AP, PSEG, JCPL, METEd, PENELEC, PPL, PEPCo and Dominion TO zones. Half of these overloads would be expected to occur prior to 2015.¹²

The Company witness in this area, Esam A. F. Khadr, head of both the transmission planning and the distribution planning groups for PSE&G, clarified that both are part of the regulated utility.¹³ He stated that the Company was just supporting PJM and developing the RTEP plan when it was determined that the existing 230 kV line should be upgraded and paired with an additional 500 kV line, to go from a 75 year-old one lane road to a three and a half lane road.¹⁴ He clarified that PS Power, the unregulated affiliate, would make the future decision when it might withdraw the Bergen 2 generating unit from PJM as it is only now committed through May 31, 2013, the end of the auction

¹¹ RTEP Report at p. 78.

¹² *Id.* at p. 91.

¹³ Cross examination of Khadr, 11/19/09, afternoon session, T768, l. 16 to T769, l. 3

¹⁴ *Id.* at T769, l. 14 to T770, l. 10.

year.¹⁵ He also clarified that while this Project will move power into Roseland, the recently PJM approved latest 500 kV transmission line from Branchburg to Roseland to Hudson will move the power further east.¹⁶ NJ Rate Counsel submits that the Board should carefully examine the need for this Project to determine if it is really necessary or if it is serving the economic demands of the unregulated Company affiliate.

Pursuant to applicable New Jersey law and regulations, the Board should not approve PSE&G's Petition for permission to site and construct the proposed Project at this time. The Board must either deny the Petition outright or, if PSE&G is willing to voluntarily consent, the Board should hold it in abeyance until a current load study is produced for consideration. This study must incorporate the new peak load projections, the results of the RPM auction and the peak load reductions expected to occur through statutory and policy initiatives in New Jersey.

II. Petitioner must establish that its Project protects the welfare of the public

During the Public Hearings and in the course of this proceeding, concerns were raised about the safety of the electromagnetic fields ("EMF") emanating from high voltage electric transmission lines. In the previously cited Atlantic City Electric Company case, there was a discussion regarding the Board's policy towards EMF:

Given the uncertainty surrounding the EMF issue, as well as the continued need for new electric utility facilities to ensure the delivery of safe, adequate and proper service, the Board has followed a policy known as "prudent avoidance" (also known as "prudent field management"), which permits facilities to be built while imposing

¹⁵ *Id.* at T774, l. 7 to l. 13.

¹⁶ Direct Testimony of Khadr, P-1, #2, p. 24, l. 3 to l. 11.

requirements that should minimize EMF levels. In In the Matter of the Application of Jersey Central Power and Light Company, BRC Docket No. EE89020154 (1991), the

Board articulated this policy stating:

With regard to “prudent avoidance,” there appears to be a consensus that such policy should be limited to matters involving the construction of new facilities or the proposed upgrading of an existing line, as was the case in the matter before the Colorado Commission. A clear statement of this position appears in the aforementioned publication of Carnegie Mellon University¹⁷ ... State regulators who wish to exercise prudence about the exposures that people receive from power lines should, until more is known, limit their concern to new facilities. This is because even under the most pessimistic assumptions it is hard to justify the costs of modifying old facilities so as to keep people out of fields, but only up to some practical limit. Spending amounts as high as a few thousand dollars to avoid exposing someone might be justified. Much larger expenditures can almost certainly not be justified.

Specifically, the Board has suggested that prudent avoidance/prudent field management requires “reasonable efforts by the utility to manage electric and magnetic field exposure at modest cost such as by designing the line phasing to reduce field levels, utilizing existing rights-of-way where possible and practicable, by avoiding highly populated concentrations of residential development where practicable, by using vertical rather than horizontal configuration; and by compressing distance between the conductors....” In the Matter of the Petition of Atlantic City. Electric, BRC Docket No.EE90121362 (1991).

In this case, while the Company has presented testimony regarding its efforts to construct the Project, it also hired an expert to testify that: “...on balance, the weight of the scientific evidence does not support the conclusion that power-frequency EMF causes any long-term adverse health effects”¹⁸ and that if residents had a concern about EMF

¹⁷ The above referenced Carnegie Mellon University publication is a pamphlet entitled “Electric and Magnetic Fields from 60 Hertz Electric Power: What do we know about possible health risks?”

¹⁸ Direct Testimony of William H. Bailey, Ph.D., P-10, #11, p. 22, l. 12-14.

they should report it to the Department of Health.¹⁹ In contrast, the witness for the Protestors, Dr. Martin Blank, testified regarding studies regarding exposure to EMF: “What we see here is the more we get exposed the more likely you are to get into trouble. And the longer you are exposed the more likely you are to get into trouble. The quick answer is that it’s like anything else, the more you get of it the worse it is for you but we cannot tell a sharp difference between acute and prolonged [exposure]”.²⁰ When questioned about what might be a safe distance from electric transmission lines, he replied: “I really don’t know. As I was saying, all I know is that the further away you can get, the better off you are, at least with our level of knowledge. And the other thing is that not everybody has the same susceptibility. I think children are far more vulnerable than adults, and I think if we have an installation like a school, I think there is a good reason to be careful, far more careful than we are with adults. I think we must do the best one can.”²¹

NJ Rate Counsel submits that the Board must follow its precedent and be satisfied that the Project’s EMF is within permitted levels and that the Project be located so that it is as far away from any schools or habitations as possible. The Board may wish to retain jurisdiction over the Project to ensure that the Company follows these guidelines if it is constructed.

III. Petitioner may consent to additional time for an updated load study to justify the claimed need for the Project

¹⁹ Cross-Examination of Bailey, 11/23/09 morning session, T1118 l. 11 to T1119, l. 6.

²⁰ *Id.* at T1174, l. 3-10.

²¹ *Id.* a T1174, l. 22 to T1175, l. 7.

The Energy Policy Act of 2005 (EPA05) granted the FERC, for the first time, “backstop” sitting authority for interstate transmission lines in certain limited situations. Of relevance here, EPA05 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.²² 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.²³ 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.²⁴ 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.²⁵ The Supreme Court of the United States has been asked to review the Fourth Circuit’s Decision and that Petition is still pending.²⁶

Based on federal law, the Board must approve or deny this Petition within the one-year timeframe or risk losing jurisdiction over this matter. Based on the evidence of record, New Jersey Rate Counsel submits the Board should not approve the Petition at this time. The Board must either deny the Petition, or alternatively, PSE&G could agree

²² Energy Policy Act of 2005, Pub. L. No. 109-58, 119 Stat. 5594 (2005) (EPA05). NJ Rate Counsel acknowledges and thanks the Pennsylvania Office of Consumer Advocate for its legal analysis on this point of law.

²³ Piedmont Environmental Council v. FERC, 558 F.3rd 304 (4th Cir. 2009).

²⁴ Id. at 309-10, 312-15.

²⁵ Id. at 312-15.

²⁶ Edison Elec. Institute v. Piedmont Environmental Council, 2009 WL 3022142, at *1 (Appellate Petition, Motion and Filing) (U.S. Sept. 19, 2009) Petition for a Writ of Certiorari.

to waive the one-year requirement and agree to hold its Petition in abeyance until it provides a new load study for the parties' and the Board's consideration.

CONCLUSION

As the data it submitted with its Petition is stale, Petitioner has failed to meet its burden of proving that its proposed Project is reasonably necessary for the service, convenience or welfare of the public, pursuant to the applicable statute and the Board's Regulations and precedent.

The New Jersey Division of Rate Counsel submits that the Board should not approve the instant Petition on this evidentiary record: rather that PSE&G: (1) further waive its right to invoke FERC transmissions siting authority if a final decision is not made by this Board within one year of PSE&G's Petition filing date, and (2) submit a current load analysis incorporating an updated peak load forecast, the results of the 2009 RPM auction and peak load reductions resulting from the New Jersey Energy Master Plan.

If, upon further consideration of the updated analysis, the Board determines that the proposed Project is reasonably necessary for the service, convenience and welfare of the public pursuant to the standards of the statute and pertinent regulations; the Board should require, as a condition of commencing construction of any portion of the proposed line, that PSE&G:

- (1) Construct the proposed Project in accordance with all environmental guidelines including, but not limited to, the Avian Protection Plan and Mitigating Bird Collisions with Power Lines Guidelines²⁷;

²⁷ See: Avian Protection Plan Guidelines, ENV-4, #261 and Mitigating Bird Collisions with Power Lines, ENV-5, #262.

- (2) Relocate or realign any portion of the Project to minimize any electromagnetic effects upon humans;
- (3) Locate any portion of the Project so as to minimize its appearance with the topography;
- (4) Paint all structures of the Project the “Valley Green”²⁸ color so as to camouflage their appearance as much as possible;
- (5) 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 Highlands and the Delaware Water Gap National Recreation Area; and
- (6) Provide a listing of all costs related to this proceeding for review by the Board.

Respectfully submitted,

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DATED: December 28, 2009

²⁸ See: Crouch testimony and 11/18/09 afternoon testimony at T465, lines 18-20; T517, lines 7-18; and the “Truescape” depictions shown in RFC-1, #26.