

STATE OF NEW JERSEY  
BOARD OF PUBLIC UTILITIES

BPU DOCKET NO. EM09010035

IN THE MATTER OF THE PETITION OF  
PUBLIC SERVICE ELECTRIC AND GAS  
COMPANY FOR A DETERMINATION  
PURSUANT TO THE PROVISIONS OF  
N.J.S.A. 40:55D-19

(SUSQUEHANNA- ROSELAND)

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POST-HEARING BRIEF OF THE MUNICIPAL INTERVENORS

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## PRELIMINARY STATEMENT

On or about January 12, 2009, Public Service Electric and Gas Company ("PSE&G") filed a Verified Petition with supporting testimony and exhibits (the "Petition") with the New Jersey Board of Public Utilities (the "Board" or "BPU") seeking approval of its Susquehanna-Roseland Transmission Project (the "Project"). PSE&G filed the Petition pursuant to N.J.S.A. 40:55D-19, which requires it to show, by a preponderance of the evidence, that the Project is reasonably necessary for the service, convenience or welfare of the public. A finding of need will preclude PSE&G from having to obtain land use approvals at the local level.

The Municipal Intervenors submit that PSE&G's evidence in this matter, including its testimony at the recently concluded Evidentiary Hearings, fails to meet the applicable burden of proof. PSE&G's documentary evidence demonstrates that upon accepting PJM's order to build the Project, PSE&G proceeded at breakneck speed have this Project approved by the necessary State agencies, heedless of local concerns and even of changes in the market that seriously call into question the need for this Project, which was inspired by PJM's 2006-2007 forecast models. Since January 2009, there have been such significant changes in the energy markets, the national and regional economy and in the Project itself, that the Petition and PSE&G's testimony in support of it are outdated, incomplete, and in some cases, incorrect. The demand for electric power that PJM forecast in 2007 no longer exists in 2009-2010; economic indicators note the decrease in electric consumption is expected to continue at least into the near future. The projections that led PJM to predict future transmission reliability violations in Northern New Jersey have not been borne out. In fact, pursuant to the most recent forecast models, the 23 violations predicted for the Northern New Jersey transmission systems that PJM cited in 2007 as justification for the Project fell to 13 when the forecast was retooled in 2009.

PSE&G's evidence also shows that it completely ignored state and federal energy policies, dismissed alternatives to the Project out of hand, and made it clear that PSE&G will settle for nothing less than this Project unaltered and certainly not minimized. As ludicrous as it may seem, it is, sadly, true that at the present time, the nation is watching the events at the international Climate Conference in Copenhagen devoted to curtailing carbon emissions and stemming global warming, while this Board is being asked to permit a new 500kV transmission Project that will be largely dependent on fossil-fuels, and, in particular, coal. Indeed, it appears that this PSE&G Project, which will move energy from its generation source along 135 miles (approximately 45 miles in New Jersey and 80 miles in Pennsylvania) of transmission lines, is inconsistent with PSE&G's own, publicly proclaimed "green" attitude. Recently, Ralph Izzo, Chief Executive of Public Service Enterprise Group, PSE&G's parent, indicated that getting energy from "remote areas regardless of transmission costs is like saying if only we had access to free refrigerated freight trains, we should get all our ice cubes from the North Pole.....Wouldn't it be cheaper to make the ice locally." Mr. Izzo continued by stating that long-distance lines invariably would cross regions where power is produced by coal, and once the lines are built, it is unlikely the power plants will be barred from using them. Such lines, Mr. Izzo concluded, are "economically unjustified and environmentally self-defeating."<sup>1</sup>

It is beyond disingenuous for PSE&G to argue that because there is already a transmission line in the Right of Way ("ROW") it intends to utilize for this Project, the Project is simply an "upgrade" and will not devalue nearby properties or impact the health, welfare or aesthetic sensitivities of those living, traveling, working, schooling, and vacationing nearby. Unique in its scope and size, the Project is so massive that it will forever alter the physical landscape of Morris and Sussex Counties. It will substantially enlarge the easement rights

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<sup>1</sup> [http://www.northjersey.com/news/Power\\_struggle\\_over\\_towers.html?c=y&page=1](http://www.northjersey.com/news/Power_struggle_over_towers.html?c=y&page=1)

property owners sold to PSE&G in the 1920's and 1930's to build the current 230kV transmission line. By no stretch of the imagination is the Project a simple replacement for the current line.

In addition, the Project will cost the ratepayers of New Jersey alone at least \$750 million. PSE&G just recently requested a rate hike for its electric customers of 4.05 percent in electric rates.<sup>2</sup> This rate increase request follows the 12 percent increase in electric bills that took effect in June 2009. Surely, other requests will be forthcoming if the Project is approved. PSE&G made no attempt to quantify the financial impact on ratepayers in New Jersey in connection with these proceedings. PSE&G, in fact, is unable to estimate the rate increases that may be required for the Project because there is no cost allocation formula in place for the Project; thus, PSE&G is unable to anticipate the cost that will be borne by the ratepayers of PSE&G for this Project.

When this Board gives due and ample consideration to the evidence that argues against the Project, and the myriad of negative consequences the Project will engender, its only response to this Petition must be to deny it. In the alternative, and because the Petition is not, in any case, ripe for adjudication, the Board should dismiss it without prejudice and allow PSE&G to refile it in the future, based on accurate, updated forecasting data, a thorough examination of the alternatives to the Project, and due regard for the energy policies that are taking shape in New Jersey and our country to battle climate change and reduce carbon emissions.

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<sup>2</sup> PSE&G Rate Hike Requests Draws Heat, Dec. 11, 2009 available at <http://www.printthis.clickability.com/pt/cpt?action=cpt&title=Rate+hike+request+generation>

## PROCEDURAL HISTORY

On or about January 12, 2009, PSE&G filed a Petition with the Board pursuant to N.J.S.A. 40A:55D-19, seeking the Board's permission to construct the New Jersey portion of the proposed Susquehanna Roseland Transmission Line. In the Petition, PSE&G asserted that the Project is "reasonably necessary for the service, convenience or welfare of the public." (Ex. 1 at 1). The Project will extend from the Delaware Water Gap National Recreation Area in Warren County to the Borough of Roseland in Essex County and will involve the installation of a new 500kV transmission line within PSE&G's existing 150-foot wide ROW that presently contains a 230 kV transmission line. The line would extend 45 miles, passing through 16 municipalities in Warren, Sussex and Morris Counties. The Pennsylvania portion of the Project is separately before the Pennsylvania Public Utilities Commission.

Construction includes the replacement of all existing transmission towers. The current 65 to 85-foot high lattice-type towers that hold the current 230kV transmission line will be replaced in part by monopoles and in part by new lattice towers, which will range in height from 145 feet to 190 feet tall. The majority of the proposed 250 new towers will be 190 feet high. PSE&G estimates the Project will cost \$1.2 – 1.3 billion. (Ex. 310).

PSE&G submitted the pre-filed testimony of its experts on routing, construction, need and electromagnetic fields ("EMF") with its Petition as follows:

- Steven Herling of PJM on project need.
- Paul McGlynn of PJM on project need
- John Reynolds of PJM on PJM load forecasting process
- Esam Khadr of PSE&G on project need
- Richard Crouch of PSE&G on the design and engineering
- Robert Millies of Commonwealth Associates on civil engineering

- Rich Jacober of Black & Veatch on the design and engineering of switching stations.
- Kyle King of K&R Consulting on EMF calculations
- Robert Gibbs of PSE&G on real estate issues.
- Robert Pollock of Environmental Resource Consulting on environmental issues
- John Ribardo of PSE&G on public outreach.
- Jack Halpern of Louis Berger Group on routing
- William H. Bailey, Ph.D of Exponent on EMF

The Board conducted a pre-hearing conference in February 2009, and thereafter proposed a Procedural Schedule for the matter, which called for Evidentiary Hearings to be conducted in May 2009. After accepting comments to the schedule by interested and affected entities, the Board entered a Pre-Hearing Order on March 12, 2009 that established a Procedural Schedule with Evidentiary Hearings to be held the week of October 19. The Board made some further modifications to the Schedule, but the Evidentiary Hearings remained scheduled for October throughout most of this truncated proceedings.

In April 2009, seven (7) municipalities Andover Township, Byram Township, East Hanover Township, Fredon Township, Hardwick Township, Montville Township and Parsippany Township) (the "Municipal Intervenors"), the Montville Board of Education and the Fredon Board of Education, the Environmental Intervenors (the New Jersey Highlands Coalition, Sierra Club-New Jersey Chapter, Environment New Jersey, and the New Jersey Environmental Federation), Stop the Lines!, Willow Lake Day Camp and Exelon Corporation moved to intervene in the matter. By its Order of April 30, 2009, the Board granted all movants the right to intervene. Separately, PSE&G agreed to give the Municipal Intervenors a \$300,000 escrow fund to be used by them alone, subject to an Escrow Agreement, for legal fees and expert witness fees required for this matter.

In June, 2009, the Board conducted three public hearings on the Project. Two of these were held at Sussex County Community College in Newton, New Jersey, and the third in Morristown. These hearings were attended by hundreds of residents opposed to the Project. (Ex. 131-133). So many more individuals wished to voice their opposition to the Project than the hearings could accommodate, that the Board accepted written comments at the hearings and e-mailed comments about the Project thereafter. All of the public comments, recorded and written, are included in the record of this matter. (Ex. 132).

Discovery proceeded from June through September 2009 in accordance with the Board's Scheduling Order. In July 2009, the Municipal Intervenors' submitted the pre-filed testimony of Dr. Benjamin Sovacool, who countered PSE&G's needs testimony; of Dr. Martin Blank, an EMF expert, who countered PSE&G's EMF testimony; and of an environmental expert.<sup>3</sup> In August, the Board personally conducted site visits to three locations along the ROW to view, first-hand, the physical reality of the Project on residential neighborhoods (East Hanover), pristine forest and school property (Fredon Township) and a United States National Park (Delaware Water Gap National Recreation Area). (See Ex. 131).

In September 2009, PSE&G offered rebuttal to the testimony of the Municipal Intervenors' witnesses on need and EMF. On September 10, 2009, the Board modified the Scheduling Order again, moving the Evidentiary Hearings from October 19 to the week of November 16, 2009, in the interest of the Board's "continuing needs . . . and the desire for a full and complete record of this matter."

On or about November 10, 2009, the Municipal Intervenors filed a Motion to the Dismiss the Petition without prejudice. On November 12, only days before the Evidentiary Hearings

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<sup>3</sup> Although the Municipal Intervenors submitted the testimony of Steven Balzano, an environmental expert, the Intervenors later withdrew the testimony, and it is no longer on the record for purposes of this proceeding.

commenced, PSE&G submitted amended discovery responses and advised the parties that it was further revising the Project. The Municipal Intervenors objected to having to proceed with the hearing in this manner with an incomplete understanding of the Project's scope and design. Despite those objections, on November 13, 2009, PSE&G continued to provide new information regarding the Project, providing revised discovery responses to the requests made by the Board's Staff, which included PSE&G's "leakage impact assessment" of the Project.

On November 16, 2009, in his remarks opening the Evidentiary Hearings, Commissioner Fiordaliso stated that the Board would not entertain the Municipal Intervenor's motion to dismiss prior to the Hearings, but invited them to refile their motion after the Hearings concluded. Council for the Municipal Intervenors placed an objection on the record regarding the commencement of the proceedings due to the lack of specificity regarding the Project, ongoing discovery disputes and abused by PSE&G, and the belated notice to the parties by PSE&G regarding the changes with the Project's plans. Nonetheless, the Evidentiary Hearings proceeded over five days on November 16, 18, 19, 20 and 23. PSE&G presented 13 witnesses, in four panels: routing, construction, need, and EMF. The Municipal Intervenors offered their experts on need and EMF for cross-examination. All parties except Willow Lake Day Camp participated in the Hearings through counsel.<sup>4</sup>

This post-Hearing brief is submitted by the Municipal Intervenors. At the Board's invitation, the brief incorporates their motion to dismiss, now supported also by the record made at the Evidentiary Hearings.

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<sup>4</sup> The Fredon Board of Education settled its opposition to the Project with PSE&G in August 2009 and withdrew from the case at that time.

## STATEMENT OF FACTS<sup>5</sup>

To provide the Board with context in which to assess whether the Project is reasonably necessary for the service, convenience or welfare of the public, *see* N.J.S.A. 40:55D-19, the Municipal Intervenors will first summarize the role of PJM Interconnection, LLC (“PJM”) with this Project, and then provide an overview of how PSE&G planned the Project in an attempt to carry out PJM’s directive to construct the Project. Then, the Intervenors will set forth the facts in evidence, categorized by the same groupings as the testimony was presented at the Hearings: routing, construction, need and EMF.

### A. Background.

1. PJM’s Role. PJM is a regional transmission organization (“RTO”) that coordinates the movement of wholesale electricity in all or parts of Delaware, Illinois, Indiana, Kentucky, Maryland, Michigan, New Jersey, North Carolina, Ohio, Pennsylvania, Tennessee, Virginia, West Virginia and the District of Columbia. As discussed more fully *infra*, this Project is part of PJM’s “Project Mountaineer,” which PJM created in 2005 to expand transmission capacity from midwestern coal fields to eastern electricity markets.<sup>6</sup> (Ex. 142; *see also* Docket No. AD05-3-00, May 13, 2005). Current statistics bear out PJM’s promise to bring more coal-fired energy to the east: of PJM’s total installed capacity at the end of September 2009, 40.7

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<sup>5</sup> When citing to the Hearing Transcripts, the Municipal Intervenors will use the following citation references:

T1: Morning Session of November 16	T2: Afternoon Session of November 16
T3: Morning Session of November 18	T4: Afternoon Session of November 18
T5: Morning Session of November 19	T6: Afternoon Session of November 19
T7: Morning Session of November 20	T8: Afternoon Session of November 20
T9: Morning Session of November 23	T10: Afternoon Session of November 23

<sup>6</sup> Coal-fired generation accounted for 50.3 percent of the electricity generated for PJM members in the period January – September 2009. 2009 Quarterly State of the Market Report for PJM: January through September at 46. Available at [http://www.monitoringanalytics.com/reports/PJM/State\\_of\\_the\\_Market/2009/shmtl](http://www.monitoringanalytics.com/reports/PJM/State_of_the_Market/2009/shmtl)

percent was coal; 29.2 percent was natural gas; 18.4 percent was nuclear; 6.4 percent was oil; 4.7 percent was hydroelectric; 0.4 percent was solid waste, and 0.2 percent was wind.<sup>7</sup>

PJM maintains that during its 2006 “Regional Transmission Expansion Plan” (commonly referred to as “RTEP”) process (which is a planning process undertaken to identify transmission system upgrades, expansions and enhancements to ensure the reliability of the PJM transmission system), it identified 23 reliability criteria violations that will occur within the 15-year study period in the transmission lines that serve Northern New Jersey and Eastern Pennsylvania. Some of these violations, according to PJM, would occur as early as 2012. (Ex. 13 at 12; Ex. 2 at 8-9, 16, 20-21; Ex. 12 at 24). PJM maintains the Project will prevent the alleged reliability criteria violations it forecast in 2007. However, some of the data relied upon by PJM in preparing its 2006 RTEP were incorrect, and therefore call into question the alleged risk of the PJM-identified reliability criteria violations actually occurring. *See* discussion, *infra*, at 29-34. More recent data indicate that many, possibly as many as 13, of the reliability violations will not occur. (T6 at 8; Ex. 126 and 127)

To address PJM’s reliability concerns, in October 2007, PJM directed PSE&G to undertake the New Jersey portion of the Susquehanna-Roseland Project, and complete the Project by June 2012. (Ex. 1 at 9) The Project is one of PJM’s backbone projects, so called because each is a major inter-state “backbone” project in furtherance of PJM’s Project Mountaineer goals. (Ex. 12 at 18) Project Mountaineer comprises four major interstate projects for the construction and installation of transmission facilities that will operate at or above 500kV. Those projects are the Trans-Allegheny Interstate Line (TrAIL), Potomac-Appalachian Transmission Highline (PATH), Susquehanna-Roseland, and Mid-Atlantic Power Pathway

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<sup>7</sup> [http://www.monitoringanalytics.com/reports/PJM\\_State\\_of\\_the\\_Market/2009.shtml](http://www.monitoringanalytics.com/reports/PJM_State_of_the_Market/2009.shtml) at 46.

(MAPP). (*Id.*) Current economic conditions have caused PJM to abandon or delay some of its backbone projects, thereby suggesting the RTEP data relied upon when authorizing these projects are no longer reliable. (T5 at 23; Ex. 80) On December 22, 2009, PATH-VA moved before the Virginia State Corporation Commission to withdraw its application to build the Virginia portion of a 735kV transmission line running from West Virginia to Maryland. In its motion, PATH indicated that it would refile the application in 2010, based on the most recent load information, which would be available in May 2010.<sup>8</sup>

The backbone projects represent well over \$5 billion in investment. These projects were approved following the Federal Energy Regulatory Commission's ("FERC") approval of a cost-allocation plan that called for the costs for the backbone projects to be borne by the members of PJM on a region-wide basis, rather than the "beneficiary pays" approach that had long been used for regional transmission projects. *See Commerce Commission, et al., v. Federal Energy Regulatory Commission*, 576 F.3d 470 (7th Cir. Aug. 6, 2009), *rehearing denied*, 2009 Lexis 24192 (7<sup>th</sup> Cir., Oct. 20, 2009). In August 2009, however, the United States Court of Appeals for the Seventh Circuit dismantled the cost-allocation system PJM established for the backbone projects, including this Project. *Id.* Thus, there is no cost allocation plan for the Project, which means that none of the PJM member utilities presently know how much they will be assessed for the Project costs.

There is no evidence in the record that PSE&G conducted its own study to confirm the alleged reliability violations predicted by PJM, nor is there any record evidence that PSE&G seriously considered alternatives to this Project to address the violations predicted by the RTEP. (Ex. 1 at 8) Instead, PSE&G unequivocally accepted PJM's order to build the Project without

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<sup>8</sup> See <http://www.leesburg2day.com/articles/2009/12/22/news/9939/path122209.prt>

first determining whether there are less costly and less intrusive ways to address the alleged reliability criteria violations.

2. **PSE&G's Role in Project:** In June 2007, PSE&G publicly endorsed the Project. See PSE&G Press Release, dated June 8, 2007.<sup>9</sup> PSE&G acknowledged that the Project is still in the planning stages, but recognized a significant investment would be required for the \$1 billion Project costs assessed (at that time) to PSE&G. PSE&G assured its customers that the cost would be shared among members of the PJM network rather than passed along to the New Jersey ratepayers:

PSE&G expects its portion of the cost to be about \$1 billion, which would be shared by all customers in the PJM territory. The utility's 2.1 million electric customers would pay about 7.5 percent of the costs under transmission rates approved by the Federal Energy Regulatory Commission (FERC). If selected and approved by PJM, these lines would be built over five to eight years. (*Id.*)

On October 9, 2007, PJM directed PSE&G by notice to have the Project in service by June 2012. (Ex. 1 at 10) Relying solely on the information provided by PJM from its 2006 RTEP, PSE&G claimed that without this Project, catastrophes would ensue as early as 2013. (Ex. 1 at 11) These include, *inter alia*, overheated and sagging lines, reductions in voltage, brownouts and rolling blackouts. (*Id.*; Ex. 2 at 9)

PSE&G retained The Louis Berger Group ("Berger Group") to conduct a routing study for the purpose of selecting a route for the Project. (Ex. 1 at 19-20 and Ex. 45). John Halpern at the Berger Group directed the route selection process. (*Id.*) Mr. Halpern also directed the route selection process for the Pennsylvania portion of the Project, which would be conducted by PPL Electric Utilities ("PPL"). (Ex. 9 at 11) Not surprisingly, the route the Berger Group selected for

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<sup>9</sup> [http://www.pseg.com/media\\_center/pressreleases/articles/2007/2007-06-08](http://www.pseg.com/media_center/pressreleases/articles/2007/2007-06-08).

the New Jersey portion of the Project works best with the route selected by the Berger Group for the Pennsylvania portion. (*Id.*)

In connection with the route-selection process, PSE&G held a number of “open houses” in New Jersey to inform the public about the Project and the alternative routes being considered for it. Three of these information sessions were held in June 2008. (Ex. 45 at 90) PPL, by comparison, held 8 open houses in Pennsylvania regarding its portion of the Project. (*Id.*) PSE&G also solicited comments from the public, which the Berger Group took into consideration during its analysis. (Ex. 45 at 90-91) At the conclusion of an eight-month study period, on August 15, 2008, the Berger Group released the “Alternative Route Identification Report for the Susquehanna to Roseland Project” (the “Routing Report”). (Ex. 45). The Routing Report considered three alternative routes and concluded that “Route B” was the preferred route. (Ex. 45 at 2-3, 95) Route B is essentially the existing ROW on which PSE&G’s 230kV transmission line runs now. (Ex. 45 at 2, 95)

A significant portion of Alternative B traverses land protected under the Highlands Water Protection and Planning Act, N.J.S.A. 13:20-1, *et seq.* Therefore, on or about September 5, 2008, PSE&G filed an application for a Highlands Applicability Determination (“HAD”) with the New Jersey Department of Environmental Protection (“NJDEP”), seeking an exemption from the Highlands Act, or, alternatively, permission to apply for a Highlands Preservation Area approval. (Ex. 193) The initial staff review conducted by The Highlands Water Protection and Planning Council found the Project was “not consistent” with the goals and policies of the Highlands Act, and the Council denied an exemption. PSE&G thereafter amended its HAD filing to propose a mitigation plan. (Ex. 194) Pursuant to the mitigation plan, PSE&G proposed altering the route of the line, relocating one of the switching stations from Jefferson Township to Hopatcong Township, reducing the number of towers, pledging to create a mitigation bank

backed by a \$4 million bond and offering an \$18.6 million fund to the Highlands Council for future land preservation needs. On June 25, 2009, the Highlands Council, by an 8 to 2 vote, determined that PSE&G was entitled to the exemption.<sup>10</sup>

3. **Amendments to the Project:** As noted, *supra*, PJM's determination that the Project is necessary relies on 2006 RTEP data. Since 2006, there have been significant shifts in the economy and energy markets that discredit the data on which the alleged need for the Project was based. In late 2007, an historic and record-breaking downturn in the general economy of the United States began. (See, e.g., The Conference Board Economic Forecast for the U.S. Economy, Dec. 8, 2009;<sup>11</sup> Congressional Budget Office, The Budget and Economic Outlook: Fiscal Years 21009 to 2019, Jan. 2009) As a result, the use of electric energy has markedly declined.<sup>12</sup> In addition, over the past few years, state and federal policies have been evolving that urge a move away from the use of non-renewable fossil fuels and in the direction of energy conservation and renewable energy sources. Although PSE&G has amended its Petition informally and without Board approval, it has never acknowledged these sea changes. Instead, PSE&G just repeats the mantra that no matter what occurs in the market or the real world, the Project is essential to the future's electric power need.

PSE&G never moved before the Board for permission to amend the Petition to reflect the changes it imposed on the Project. Thus, the pleadings in this matter (Petition and all

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<sup>10</sup> For a summary of the Highlands Council proceedings, see Highlands Council Press Release, dated June 25, 2009 ([http://www.highlands.state.nj.us/njhighlands/news/pres/pseg\\_project\\_062509.pdf](http://www.highlands.state.nj.us/njhighlands/news/pres/pseg_project_062509.pdf))

<sup>11</sup> [http://docs.google.com/viewer?a=v&q=cache:ryZ3sD0Zth4J:www.conference-board.org/pdf\\_free/economics/2009\\_12\\_08.pdf+Conference+Board+Economic+Forecast+for+the+U.S.+Economy,+December+2009&hl=en&gl=us&sig=AHIEtbQnXg2Uj7xhlf3gRmB03qKjaavHQ](http://docs.google.com/viewer?a=v&q=cache:ryZ3sD0Zth4J:www.conference-board.org/pdf_free/economics/2009_12_08.pdf+Conference+Board+Economic+Forecast+for+the+U.S.+Economy,+December+2009&hl=en&gl=us&sig=AHIEtbQnXg2Uj7xhlf3gRmB03qKjaavHQ)

<sup>12</sup> See, e.g., PSEG's Net Income Falls 26% at [http://www.northjersey.com/news/environment/local\\_environment/67127387.html](http://www.northjersey.com/news/environment/local_environment/67127387.html)

attachments, which included the pre-filed testimony and exhibits) were outdated in a number of ways as of the date the Evidentiary Hearings began.

For example, to gain an exemption from the Highlands Act regulations, PSE&G advised the Highlands Council that it would relocate the switching station planned for Jefferson Township to the Borough of Hopatcong (even though PSE&G had expended nearly \$1 million to purchase the Jefferson site). However, PSE&G never amended its Petition accordingly. Instead, it waited until August 21, 2009 -- almost a month after the Highlands Council determination -- to advise the Board and the parties, by letter, of the changes that had been made to the Project's plans. (Ex. 133). The maps provided, however, to reflect the alterations made to the Project were prepared in April 2009.<sup>13</sup> To have kept the Board and the parties in the dark for that period of time and wait until approximately two months before the hearings were to begin in these proceedings to advise this Board and the parties of the changes was inexcusable.

Similarly, PSE&G informed the Board and the parties just four days before the Hearings began that it intended to relocate the switching station scheduled to be built in East Hanover to Roseland. Again, no attempt was made to revise its Petition to account for this change in its design plans (which would include references in the Petition, pre-filed testimony and exhibits to the Petition). While the Municipal Intervenors do not take issue with this relocation because it will require utilizing an existing switching station location, this "switch" underscores the preliminary nature of PSE&G's plans for the Project. PSE&G continues to tinker and revise the Project plans, even as the hearings were getting underway.

Another revision to the Project plan occurred in August 2009, as part of PSE&G's agreement to settle with former intervenor Fredon Board of Education in which PSE&G agreed

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<sup>13</sup> <http://www.pseg.com/companies/pseandg/powerline/pdf/hopatcongmap.pdf>.

to relocate a few towers further away from the Fredon School. This plan revision, too, never was presented to the Board in the form of a motion to amend the Petition.

Amendments to the Petition did not end there. On November 16, 2009, the first day of the BPU Hearings, PSE&G presented new site plans to the Board and the parties illustrating new construction access roads and new tower locations. (T2 at 3) No open houses or public meetings were ever conducted to address any of PSE&G's amendments to its Project plans; the public had no knowledge of them, and the Board and the Municipal Intervenors were especially taken by surprise by the most recent revisions described above. PSE&G's only response to the Municipal Intervenors' consternation with these last-minute changes was that the parties would have the opportunity to cross-examine the PSE&G witness about them during the Hearings. As discussed *infra*, at Point Two, this is simply an unacceptable practice under this Board's administrative rules, and accordingly constitutes a gross violation of basic principles of due process.

**B. The Evidentiary Hearings**

The hearings in this matter began on November 16, 2009. PSE&G's provided four panels of witnesses for cross-examination on the following topics: routing, construction, need and EMF. The Municipal Intervenors presented their need witness Christopher Cooper,<sup>14</sup> and their EMF witness, Dr. Martin Blank, for cross-examination. Stop the Lines! presented its witness, Helene Jarvos, who pre-filed testimony regarding property values and mortgage approvals.

**1. PSE&G's Routing Testimony.** PSE&G relied upon the testimony of Jack Halpern in support of the route selected for the Project. (Ex. 1 at 19-20) Mr. Halpern is the Project Director for the Berger Group, which conducted the routing study for the Project. (*Id.*)

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<sup>14</sup> Mr. Cooper assisted Dr. Benjamin Sovacool with the preparation of the latter's pre-filed testimony on need. Mr. Cooper was presented by the Municipal Intervenors for cross-examination on the topic of need in lieu of Dr. Sovacool who was unavailable due to the Board's adjourning the Hearing from October 19 to November 16.

PSE&G also presented John Riberto, manager for the Project, to testify about public outreach for the Project. (Ex. 1 at 17-18) Robert Pollock, President of Environmental Resource Consulting, LLC, testified regarding environmental and construction permitting. (Ex. 1 at 18) Robert Gibbs submitted pre-filed testimony related to real estate matters for the project (Ex. 1 at 18); at the hearing, however, Richard Franklin of PSE&G was presented for cross-examination regarding Mr. Gibbs' pre-filed testimony. (T1 at 15)

John Halpern directed the route selection process for the New Jersey and Pennsylvania portions of the Susquehanna-Roseland Project. Not surprisingly, the route selected by the Berger Group for the New Jersey portion of the project works best with the route recommended to be used in Pennsylvania. (Ex. 9 at 11) Mr. Halpern testified that "there was a strong interest" by PSE&G in the selection of Route B from the start of the Project. (T2 at 43) Indeed, six months prior to the issuance of the routing report, PSE&G submitted a map to the National Park Service (a map with the Berger Group logo) that identified Route B as the route for the Project. (T2 at 74)

Following an eight-month study period, on August 15, 2008, PSE&G published the report prepared by the Berger Group, which recommended Route B as the preferred route. (Exh. 45) The factor that weighed heavily in the selection of Route B was the use of existing ROW. (*Id.* at 2, 93, 95) PSE&G maintained that by using the existing ROW, the Project would have less of an impact on the environment than the other routes studied. (*Id.*; Ex. 9 at 9-10) Also, Route B would be less costly than the other alternatives because PSE&G would not need to acquire additional properties to construct the Project. (Ex. 45 at 95; T2 at 73) During cross-examination of the hearing, the shortcomings of the route selection process were evident.

First, the selection of Route B completely ignores the concerns communicated to PSE&G by members of the public. (Ex. 45 at 91-92) As noted by Mr. Halpern during cross-

examination, concerns of citizens at the open houses for the Project during the route selection process varied “depending on the distance from the line” for each person that commented. (T2 at 44) The routing selection process purports to take into account public comments “by attempting to maximize the distance of the centerline [for the Project] from residences and other sensitive resources such as schools and churches to the greatest sense possible.” (Ex. 45 at 1; Ex. 9 at 8) However, Route B does not deviate from the existing location of the existing ROW; thus, by deciding to use Route B, PSE&G made no attempt to maximize distances to surrounding communities and residences or be considerate of the citizen concerns. Even after the route was selected, PSE&G would not alter the route in the East Hanover section of the Project, as suggested by township officials, to limit the impact on residential and environmentally sensitive areas. (T2 at 50, 52: discussion regarding Ex. 198)

Nor did PSE&G even consider moving the towers away from the Lazar Middle School. Instead, PSE&G proposes to increase the voltage and height of the towers that are located directly behind the school’s property. The current structures are less than 200 feet from the edge of the ball fields. If the school wished to expand its facilities, it would have to place the school building itself several hundred feet closer to the power lines and the towers, thereby impacting the school and its occupants even more directly. *See* Post-Hearing Brief of Montvale Board of Education at 1-4 (dated December 24, 2009).

The disadvantages associated with the selected route are apparent when considering the distances of residential structures to the centerline of Routes A and B:

<u>Location</u>	<u>Route A</u>	<u>Route B</u>
Residences within 75 feet of centerline	7	8
Residences within 100 feet of centerline	34	49
Residences within 284 feet of centerline	284	405

Clearly, Route B has a greater impact on residential areas than Route A. This factor is not emphasized in the routing report as a “con” when identifying the pros and cons of each alternative route. (Ex. 45 at 93-94). In response to questions posed during discovery on this issue, PSE&G maintains that the environmental advantages associated with selecting Route B outweighed the impact this route will have on residential areas.<sup>15</sup> (Munis-Halpern-1). However, the testimony provided in response to cross-examination at the hearing revealed the shortcomings of the environmental analysis undertaken in conjunction with the routing selection process.

PSE&G maintains that it assessed the “environmental impacts” associated with each alternative route in its selection process. (Ex. 9 at 5). PSE&G’s use of this term of art was misleading (most likely to defend any challenge to its route selection). When pressed during cross-examination about the environmental impact analysis conducted by PSE&G for the routing selection process, Mr. Halpern relented and described the environmental assessment he undertook as an “environmental comparison” or an identification of the environmental areas impacted by the Project. (T2 at 62). Mr. Halpern’s candid response is telling because there the routing selection process did not include the type of environmental impact assessment that is generally undertaken for large-scale projects. (T2 at 62).

Indeed, in response to discovery requests, PSE&G indicated that it had not prepared certain environmental studies. (ENV-11). For instance, the routing selection process did not take into account the impact it the Project will have on rare, threatened and endangered birds. (ENV-44). The impact on the nesting habits of bald eagles or the likelihood of night strikes of

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<sup>15</sup> It is likely that PSE&G will assert that the impact imposed on residences by Route B is justifiable because those residents already reside near an existing power line. This argument would have merit, as would the selection of Route B, if an effort was made to deviate from locations along the existing ROW to try to maximize distances to existing residential areas in constructing this Project. PSE&G made no attempt to minimize the impact its existing ROW has on residential areas located nearby its centerline.

birds migrating through the study area was unknown to the members of the panel presented to testify at the hearings in this matter. (T2 at 70-71). PSE&G witnesses also acknowledged that studies and surveys regarding threatened and endangered species are incomplete. (T2 at 86). Environmental impacts such as contamination to groundwater, aquifers and wellhead protection zones were also not considered during the routing selection process. (ENV-36). Further, in calculating the acreage of environmental sensitive areas impacted by each alternative route, the report did not consider all designated NJDEP buffer zones for surface water and wetlands (ENV-3), nor was the data regarding green acre properties complete (T2 at 62).

While the Report did include a calculation (by feet) of the amount of area traversed by each alternative route for the Highlands Region (Ex. 45 at 29; T2 at 72-73), the Master Plan for the Highlands Region “was not a factor in the route evaluation and selection process.” (ENV-39). If PSE&G waited a month longer before publishing its Routing Report, the Highlands Regional Master Plan could have been included in the routing analysis. The Report also underestimates the amount of airport buffer zones impacted by the proposed project. (*Compare* Ex. 45 at 29 with T1 at 16). The Routing Report provides an example as to how incomplete PSE&G’s planning for the Project.

The route selection process also did not take into account the impact causes by the construction of access roads for the construction phase of the Project. In fact, as of the date of the hearing, the location of all access roads needed for the Project was still a work in progress; consequently, the impact that will be caused by the construction of access roads for the Project is still unknown. (T2 at 63). Indeed, PSE&G’s witnesses acknowledged at the hearing that they are not aware of all the permanent and temporary environmental impacts that will be caused by constructing access roads for the Project. (*Id.*) However, when asked during cross-examination whether the cutting down of a mature tree to widen the roadway to provide access to the

Project's construction site would be considered a temporary impact on the environment, the panel answered in the affirmative. (T2 at 61-62) Thus, to tout the benefits of the selection of Route B as the best route for the Project because of its limited environmental impact rings hallow.

It is obvious that cost was an overriding consideration during the route selection process. According to its own witnesses, Route C (the third alternative considered for the Project) would have been viable if PSE&G was willing "to throw enough money at it and enough time," because it would have required the taking of a number of properties. (T2 at 68-69) By utilizing an existing ROW, PSE&G has minimized its real estate costs and the time and effort to acquire properties, when necessary, by condemnation.

Since the route selected does not maximize distances to surrounding residential areas and does not take into account all of the environmental impacts associated with the Project, the conclusions of the routing selection process are suspect. Indeed, no efforts were made to revise the analysis to take into account the change in switching station locations. (T2 at 47-48) Nor does PSE&G intend to provide an adequate opportunity for the public to be heard on the changes to the Project since the filing of the Petition.

The intent of the routing study was to choose a route that would minimize impact on the residential areas and the environment. *See, e.g.* PSE&G Press Release, dated June 5, 2008.<sup>16</sup> In PSE&G's announcement regarding the routing study, Ralph LaRossa assured its customers that PSE&G "will do our best to select the route that has the least impact on communities and residents." (*Id.*) The routing analysis prepared for the Project falls short of its stated goal, as does PSE&G's consideration of the public's interests and concerns.

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<sup>16</sup> [http://www.pseg.com/media\\_center/pressreleases/articles/2008/2008-06-05.jsp](http://www.pseg.com/media_center/pressreleases/articles/2008/2008-06-05.jsp)

2. **PSE&G's Construction Testimony.** PSE&G presented the following individuals to testify regarding the design, engineering and construction aspects of the Project: Richard Crouch, Richard Jacober and Robert Millies.

Mr. Crouch is employed by PSE&G and is providing construction management services for the Project. (Ex. 6 at 1-2). His direct testimony involves the design and engineering of the utility structures to be used for the Project, which was to include the identification and location of each new structure for the Project, as well as the identification of access roads for the Project. (Ex. 6 at 1, 3). As discussed *infra*, Mr. Crouch was unable to testify with precision regarding those topics because the design and engineering plans are not yet final. Mr. Millies testimony supports "the preliminary design and engineering testimony of Mr. Richard F. Crouch." (Ex. 8 at 2). The testimony of Mr. Crouch and Mr. Millies were not amended prior to the hearing to account for the changes made to the Project since the filing of their testimony.

Mr. Jacober was offered to testify regarding the conceptual designs for the proposed switching stations. (Ex. 7 at 2-3, 7-10). His original testimony focused on the East Hanover 500kV gas insulated switchgear switching station and the Jefferson 500kV open-air switching station. (*Id.*) Mr. Jacober also sponsored exhibits of the conceptual designs for the switching stations. (Exhs. 37-44). Mr. Jacober's testimony was not amended after PSE&G changed the location of the switching stations, nor was the exhibits he sponsored amended to reflect the change in design for the switching stations for the Project. Instead, Mr. Jacober testified generally regarding those design changes at the Hearings.

PSE&G also advised the parties in discovery that the final design of the switching stations would not be complete until August 2010. (Ex. 310). The changes with the location of the switching stations for the Project will likely adversely impact the design schedule for the switching stations. In light of the fact that the construction phase for the switching stations will

take approximately 18 months, PSE&G is unlikely to meet its 2012 construction goals even if this Board was willing to issue a ruling in January 2010 based upon PSE&G's conceptual and preliminary designs.

In addition, the construction plans for the Project are largely unknown. For example, PSE&G does not have a formal clearing plan in place. Engineering for the access roads (including equipment to be use, location and width of access roads) is ongoing. Lay-down planning for the construction areas is not complete. Construction techniques and sequencing have not been determined for the Project (which includes plans for blasting, installation of foundations, and relocation of existing structures). PSE&G has not even finalized its plans for the rehabilitation, restoration or repair of the access roads. *Source:* (ENV-16, -26; MONT-BOE-11; PAL-174; STL-D-CROUCH-13, -17).

The testimony of PSE&G's construction witnesses at the hearing further amplified the preliminary nature of the design and construction plans for the Project. On the first day of the hearing, PSE&G presented the parties with revised site plans to identify new access roads and tower locations. Mr. Millies testified at the hearing on cross-examination that the final designs for the Project are not complete. (T4 at 39). As of the last day of the hearings, the PSE&G witnesses testified that the precise location of the switching stations is still not known. (T10 at 6). Foundation designs for the Project will not be finalized until soil boring studies are complete. PSE&G's construction site plans still do not account for all the necessary environmental areas of the Highlands Region (T10 at 24), and additional planning is necessary to address the multiple environmental issues associated with the Project (T10 at 26-27).

The pre-filed testimony of PSE&G construction witnesses and the discovery confirms that the Project is still in the preliminary design stages and final design for the Project has not yet commenced. For instance, PSE&G cannot identify the location for all the transmission

structures for the Project. It is also unable to identify the type of materials to be used for the structures for the Project. PSE&G admits that other structures may be used for the Project, but it is unable to provide specifics regarding those structures. Witnesses also testified regarding the changes made to the bundle configuration for a portion of the proposed line. More detailed design work will be necessary before a realistic construction schedule can be prepared. *Source:* (MUNIS-STAFF-1; STL-MILLIES-2; MUNIS-CROUCH-1, -5 -6, -7, -12, -13-14).

In light of the changes made to the Project since the filing of the Petition in January 2009, the likelihood that the design will continue to evolve for the Project is more likely than not. It also became clear during the hearing that the design of the Project would permit for future expansion of the transmission line to allow for the installation of an additional 500kV line. (T10 at 10) The Board cannot utilize its authority under N.J.S.A. 40:55D-19 to make a need determination based upon an evolving design; it should act when PSE&G is prepared to present a final plan (design, construction, environmental) for the Project.

### **3. Need Testimony.**

a. PSE&G's Need Testimony. PSE&G's evidence of the alleged need for the Project was presented by Steven Herling, Vice President of Planning for PJM; Paul McGlynn, Manager of Transmission Planning Department at PJM, and John Reynolds, Senior Economic Analyst at PJM, and its own employee Esam Khadr, Director of Electric Delivery Planning, all of whom were made available for cross-examination at the Hearings. The Municipal Intervenors relied upon the testimony of Benjamin K. Sovacool, PhD. Due the changed dates of the Evidentiary Hearings, and Dr. Sovacool's inability to attend, his business partner, Christopher Cooper, adopted Dr. Sovacool's testimony and responded to cross-examination by the parties.

The PJM witnesses testified that PJM determined the need for the Project in 2007 based on 2006 RTEP data. (T5 at 13-14) PJM advised that it performs long-term reliability planning

on a 15-year horizon, meaning that it evaluates electric power needs from 6 to 15 years in the future. (Ex. 13 at 4; Ex. 2 at 16) According to PJM, it conducts generator deliverability tests and load deliverability tests, both of which are performed by simulating the transmission system and the load growth anticipated in the near and long term. (Ex. 2 at 12) The purpose of the tests is to comply with NERC reliability standards, which, PJM stated, require PJM to establish procedures that “stress” the transmission system by applying NERC Category B contingencies. (T5 at 25-26, 28-29; Id. at 9, citing NERC Standard TPL-002-0). These contingencies are double circuit line violations and single circuit violations. There is an open question as to whether PJM’s continued support of the Project, despite reductions in peak demand and decreases in electric energy consumption is based on testing protocols revised to achieve the desired, but not necessarily correct, reliability violations, which are, of course, the basis for PSE&G’s Petition.

At the Hearings, PJM was unable to testify as to whether revisions to PJM Manual 14B, Attachment C, which sets forth the testing protocols, (Ex. 78), might have affected PJM’s 2007 decision that the Project was needed. (T6 at 41) Also, PSE&G itself had questioned the testing protocols, and in particular, the manner in which PJM calculates load deliverability criteria violations. (T6 at 44; Ex. 214) When pressed, PJM claimed that had the revisions to the protocols PSE&G recommended been made, the testing would be identified additional reliability violations. (T6 at 45-46) Yet, neither PSE&G nor PJM performed tests using PSE&G’s recommended revisions, thus leaving uncertain whether the number of violations actually would have increased or decreased.

PJM testified that in 2007, it identified 23 potential reliability violations in the PSE&G transmission zone occurring beginning in 2012. (Ex. 2 at 20; PFM-1) Two of these violations are predicted under normal operating conditions. The other 21 are single contingency events.

(T7 at 13). PJM was satisfied that the only way in which to mitigate these potential violations was to add a 500kV transmission line to the current 230kV line that runs across Morris and Sussex counties, from Roseland to the Delaware Water Gap. (T7 at 12; Ex. 2 at 10, 12) The alleged violations essentially comprise overloads which can be either loading that exceeds normal conditions or loading that exceeds emergency conditions. (T7 at 16). PJM claimed that if the Project is not built, these potential overloads would cause PJM will be in violation of the NERC standards. (Ex. 13 at 19; Ex. 2 at 21-22).

Although PJM testified that it updated the forecasted load through January 2009 (which was based on Fall 2008 model loads), it remained steadfast in its claim that decreased peak loads in 2007, 2008 and 2009 do not alter its decision that the Project is needed. (T5 at 18; PFM-1; PFM-2, PFM-3; T6 at 25). Even after acknowledging that for 2006, 2007 and 2008, the unrestricted load exceeded the forecasted peak for a total of only 44 hours (39 of which occurred on six days in 2006 and the remaining five on one day in 2007), (T7 at 11), PMJ minimized the notion that decreased power needs obviate the need for the Project. Instead, PJM continued to defend the Project on the basis that it is required to meet “all manner of operating conditions,” no matter how plausible or likely to occur they may be. (*Id.*)

PJM admitted that it relies on forecasted loads that are weather normalized, but not on historic actual loads to develop its predictions. (Ex. 228; T6 at 19; T5 at 18) Also, PJM does not consider historic trends, except to the extent historical data is incorporated in projections. (Ex. 334) When questioned as to whether actual demand for electric power decreased since 2007, PJM reluctantly agreed that it did. (T5 at 19) Testimony revealed that PJM’s forecasting model can only determine after the fact how actual weather affected the forecasted peak load, and whether or not the model contains errors. (T6 at 18) Because actual historic loads are not used to predict future loads (T6 at 19), unusual weather conditions are not built into PJM’s

forecast model. Moreover, PJM utilizes data from only two weather stations in New Jersey, and failed to institute a recommendation from the Brattle Group (*see* Ex. 77) to use alternative weather information in its forecasting. (T7 at 9). PJM's load predictions are further made suspect by its lack of analysis of any kind of the customers it is serving. In other words, PJM does not review or analyze individual or aggregated load for commercial, industrial or residential customers. (T7 at 10)

PMJ admitted that the Project will alleviate or eliminate the physical constraints on west to east movement of energy, which is obviously an economic consideration for PJM. PJM cannot move low-cost coal produced energy eastward if there is no transmission line to carry the power. (*See* Ex. 112 at 5; T7 at 25)

Incredibly, PJM relies on only a single source for the econometric data it utilizes to predict future economic growth. (T6 at 21, 22) Thus, while many economic indicators are far from confident that general economic growth, and, therefore, energy consumption, will return to pre-recession levels in the near future or ever, PJM prefers to depend upon a source that predicts an economic, and, therefore, energy consumption, surge in 2012. (*Id.*) And, of course, PJM insists that even if loads are down, the 23 predicted reliability criteria violations will still occur. (T6 at 20)

One of the more remarkable aspects of PSE&G's need testimony was PJM's blatant dismissal of possible alternative measures that could be taken to counter the predicted violations. PJM did admit to considering a 230kV line from Stanton Pennsylvania, and also a line from Bossards to Roseland. (T6 at 23) However, energy efficiencies were not taken into account. (Discovery Response S-PP-1) Allegedly, they will be included in PJM's forecasting in the future, built into PJM's RPM auctions as a product, but they are not included in the forecasting PJM relies upon to substantiate the need for the Project. (T6 at 28) Load shifting and Smart

Grid initiatives, and conservation policies and mandates, according to PJM were not considered either. (T6 at 21, 24; T7 at 9) Also, PJM disregarded the New Jersey Energy Master Plan. (T5 at 38). With respect to demand response, PJM claims that it considers future demand response, but not historic demand response. (T6 at 10; *see also* T6 at 39-40; Ex. 339; Ex. 12 at 32-25; Ex. 14 at 7-8) But, PJM also testified that it does not implement demand response, so any assumptions about increases in demand response are not relevant to the forecast re-tools. (T8 at 13). In fact, PSE&G disregards discounts the applicability of demand response altogether. (Ex. 2 at 28-29).

Although PJM claimed it examined the use of capacitors to address alleged voltage problems in the Northern New Jersey transmission systems that would be cured by the implementation of the Project, PJM rejected this possibility, stating that “what we need is more energy, not just voltage support.” (T5 at 13) PJM testified that the increased power the Project will bring to Northern New Jersey is “substantially” for the benefit of New Jersey residents. (T5 at 13) However, PJM also admitted, near the end of the need testimony, that there are at least two merchant transmission projects to which 1015MW of the power from the 3005MW expected to be produced by the Project, will be directed. (T10 at 35; T6 at. 54-55; *see also* Ex. 146: tariffs for b0487 (Susquehanna-Roseland, PA), b489 (Susquehanna-Roseland, NJ), b0490 (Amos-Bedington 765kV), b0491 (Amos to Bedington 765kV), b0492 (Bedington-Kempton 500kV) This means that PJM will direct one-third of the power from the Project to two merchant transmission projects – 685MW to Neptune and 330MW to ECP. The fact that one-third of the power that will be transmitted across Pennsylvania and New Jersey to serve these two projects calls into question the economic benefits of the Project to PJM, which, given the substantial amount of power it wants to generate and sell to merchant transmission stations, appears to be as important to PJM as the alleged reliability issues. Indeed, PSE&G was not

forthcoming with information about the merchant transmission stations, which were not included in any of its testimony. The projects came to light in PSE&G's November 13, 2009 discovery update on leakage. (Ex. 391).

Interestingly, PSE&G had brought to FERC's attention its concerns that the manner in which the RPM auctions were conducted by PJM was sending incorrect price signals and discouraging the construction of new generation in PJM's eastern region. Discouraging new generation and a lack of new generation also impacts available and planned reactive power in the area for voltage regulation, because long-line transmission of power results in voltage drops. (T6 at 14; *See, infra*, at 33). PSE&G's arguments at FERC for economic signals to stimulate new generation further undercuts its contention that the Project is needed because no new generation is in the queue, and, therefore, no new generation will connect to this Project. (T6 at 15-16; Ex. 220) Assuming this is true, and if it is also the case that PJM's auction process is flawed to discourage new generation, then PJM has exactly what it wants: a Project that will transmit energy produced solely in the west, predominantly fueled by coal.

b. The Municipal Intervenors Need Testimony. Dr. Sovacool found PSE&G's justification for the Project unsound because the Project is not needed due to the reductions in electricity demand and diminished economic growth. For instance, PSE&G's original rationale for the Project was based upon PJM's claim that there is an immediate need to address demand, including a projected 4 percent increase in peak demand in 2008 over 2007. (Ex. 58 at 2) In fact, actual demand for electricity declined in 2008, and continues to do so. (*Id.*) Peak demand in 2008 was down 7.8 percent, and for the first three quarters of 2009, PJM reported a 4.4% drop in demand. Dr. Sovacool also noted that PJM assumes a financial recovery will begin in 2010 and return by 2012 to pre-recession levels of electricity consumption. (Ex. 58 at 5; *see also* T5

at 19-20) Other important economic indicators are not so optimistic. (*See, e.g.*, n. 11 and n. 12, *supra*)

The Intervenors' testimony brought to the surface the notion that underlying PJM's insistence on the Project's construction regardless of the recession, decreased demand and the effects of energy conservation, is PJM's desire to capitalize on the possible growth (not merely recovery) of the economy and attendant increases in consumer demand. (Ex. 58 at 6) Clearly, this is risky business, not for PJM or PSE&G, but for New Jersey rate payers. The widespread drop in electricity demand may be indicative of a shift in consumption rather than a mere byproduct of the economic recession. (Ex. 58 at 7) Throughout the nation, power companies have been witnessing unprecedented decreases in demand, yet PJM continues to claim that this Project is needed. (Ex. 58 at 7)

Dr. Sovacool testified that PJM's data is incomplete and the results derived from it are flawed. The data does not consider reduced consumption due to the recession, energy efficiencies, expanded demand response and real-time metering. PJM's also does not factor in the probability of required energy efficiency and conservation efforts in the near and longer term. (Ex. 58 at 8) Indeed, in 2006 the Brattle Group evaluated PJM's demand forecasting model after its 2006 forecast fell short of the actual demand that year. The Brattle Group used actual weather and actual economic conditions to isolate the flaw in the PJM forecast, and found that flawed data input into the model led to an inaccurate result. (Ex. 72 at 25) Thereafter, the Brattle Group made recommendations to PJM to eliminate forecasting errors. PJM, however, has not adopted the suggestions. (Ex. 58 at 9) Thus, PJM's forecasting methods and data is, at bottom, suspect.

In addition, there are disparities in PJM's reliability criteria tests that call into question PJM's decision that the Project is needed. (Ex. 58 at 31) PJM testified that the disparity is

addressed by updating the baseline analysis to reflect the removal of any planned generator that drops out of the queue after it executes a Facility Study Agreement, but before it executes the Interconnection Service Agreement. (Ex. 58 at 31, citing Discovery Response STL-McGlynn-38) PJM's modeling disparity does not take into account the removal of the network upgrades required by these planned generators. Thus, the basic model is skewed. (Ex. 58 at 32) Dr. Sovacool testified that by ignoring the reliability benefits of planned generators and the network upgrades they required, PJM employs skewed deliverability tests to justify transmission solutions to reliability problems which are not likely to occur. (Ex. 58 at 33) In other words, PJM excludes the protective characteristics of planned generation and considers planned generation facilities only to the extent they contribute to generator deliverability problems. This discounting for the contribution of planned generation to system stability results in an inaccurate calculation of projected reliability criteria violations and violates NERC Standard TPL-002, which requires transmission planners to consider existing and planned generation facilities when testing reliability under contingency conditions. (*Id.*)

Flaws in the PJM forecasting methods and data are very significant because the number and severity of the alleged projected reliability criteria violations used to justify the Project depend exclusively upon the accuracy of PJM's load forecasting. More accurate modeling caused PJM to delay the in-service date of the PATH project and entirely eliminate a portion of the MAPP Project, because the modeling indicated that low consumer demand would reduce congestion and avoid projected reliability criteria violations. (Ex. 58 at 12; Exs. 79 and 80).

PJM's forecasting also fails to adequately assess the contribution of demand response to its load management resources. (Ex. 12 at 33) Despite this error, the PJM 2008 retool, which utilized more recent data for forecasting load, and available load management resources, excluded 12 reliability criteria violations identified in earlier RTEP's. (Ex. 58 at 13) The

testimony showed that the 2009 load forecast report predicted ten fewer violations than anticipated in the 2007 load forecast report. (T6 37-39). PJM's reliance on questionable weather-adjusted forecasting models in reaching its demand conclusions also appears to have contributed to its miscalculation. (Ex. 58 at 13; *see also* T6 at 17-19)

Dr. Sovacool identified several alternatives to the Project, which, especially when implemented in combination, can be utilized to eliminate the need for the Project, at least in the near term. (Ex. 58 at 13-14) Dr. Sovacool pointed to this Board's own involvement with renewable energy programs it manages. (Ex. 58 n. 34) Estimates are that New Jersey could save 19,000 GWh per year through utilization of energy efficiency and demand side management programs. (Ex. 58, n. 35) At the Hearings, Mr. Cooper confirmed that the potential reliability violations that are the genesis of the Project can be better addressed by energy efficiency and demand side management along with the deployment of distributed generation, and that these processes can obviate the need for the Project. (T8 at 28-29)

In 2008, PSE&G offset only 0.6 percent of potential electricity generation with energy efficiency. (Ex. 58 at 16) This paltry effort to bring energy efficiencies to bear is unfortunate, because one kWh saved is more valuable and reliable than one kWh generated and transmitted (Ex. 58 at 16) While PJM contended that demand side management is unreliable, (*see, e.g.*, Discovery Response Munis–McGlynn–2), PJM's own data show that energy efficiency and demand side management programs reliably offset all load growth from 2008 to 2009 in the PJM service area, and displaced the need for more than 7000MW of supply. (Ex. 58 at 17)

In addition, Dr. Sovacool identified distributed generation, i.e., small-scale power supply devices that produce electricity close to the point of consumption, as a means of improving grid reliability, decreasing the need to build additional transmission lines, reducing congestion, and improving reliability. (Ex. 58 at 19) Distributed generation means building small power

generators such as solar photo-voltaic arrays along the transmission line. PJM asserted that it is very difficult to site generators in populated (urban) areas, but offered no specifics to support this allegation. (Ex. 12 at 32) Distributed generation is a cheaper alternative to building a new transmission line. When power is generated by dispersed solar photo-voltaic resources, power transfers and losses are reduced, voltage support is enhanced and uncontrolled events (such as the 2003 blackout PJM claims will occur again if the Project is not built) would not occur. (Ex. 58 at 21)

Another benefit of distributed generation is reactive power, which is created when current and voltage in an alternating current system are not in phase due to interactions with electric and magnetic fields around circuit components. (Ex. 58 at 22) Power transfers along long transmission lines depress voltage, and more reactive power is required than in a system in which generation is distributed evenly. (*Id.*) The result is commonly known as “line loss.” When reactive power is generated remotely, there is a reduction in the generating unit’s real power-generating capacity. This reduces profit margins for generators. PJM’s standards require generators to supply an additional 1.7 percent of load for every 5 percent reduction in voltage. (*Id.*) Distributed generation can provide reactive power locally, and eliminate the need for additional reactive power supply altogether. (Ex. 58 at 24)

Line loss has its own special consequences. The larger the transmission line, the greater the line loss. If transmission is not distributed equally, such as when it is generated remotely, reactive power losses increase exponentially with the distance transmitted. (Ex. 58 at 25) More current is needed to make up for the reactive power losses. But, greater current also risks larger voltage drops. (Ex. 58 at 26) As voltage drops, current must increase to maintain the power supplied, causing lines to consume more reactive power and the voltage to drop further.

If current increases too much, the transmission lines will trip, overload other lines and potentially cause cascading failures. (*Id.*)

#### 4. EMF Testimony

a. PSE&G's EMF Testimony. PSE&G offered William H. Bailey, Ph.D. as its witness on the potential health risks associated with exposure to electrical facilities, including exposure to electric and magnetic fields ("EMF"). PSE&G also relied upon the testimony of Kyle G. King, President of K&R Consulting, LLC, an engineering consulting firm.

Mr. King testified that he conducted analyses of the EMF's and noise associated with the Project for the purpose of quantifying the levels of EMF, corona effect, and noise that would be produced by the Project. (Ex. 10 at 2-3). He explained that transmission lines cause both Electric Fields and Magnetic Fields (EMF's). Electric currents generate magnetic fields, which are measured in terms of magnetic lines of force per unit, which are expressed as milligauss (mG). (Ex. 10 at 4) Electric fields close to transmission lines can create coronas, which generate audible noise, radio noise and ultraviolet light. (Ex. 10 at 4; T10 at 26) Mr. King testified that EMF's are present in most environments, including inside buildings and homes, and, therefore, individuals are routinely exposed to some levels of EMF. (Ex. 10 at 5)

Mr. King modeled the existing and proposed transmission line configurations to determine the expected levels of electric and magnetic fields for the year 2013. (Ex. 48) He stated that his model utilized historical current loads and, later, projected current load to find a median current level in the existing and proposed lines. (Ex. 10 at 7-8) Then, he proceeded to measure the EMFs at three locations near the ROW in December 2008. (*See generally* Ex. 48; T9 at 29) Later, in August 2009, at the request of Board Staff (*see*

Discovery Response SRTT-99), Mr. King measured EMF levels at seven additional locations on the ROW, at one meter above ground level. (Ex. 117 at 4-5; Ex. 125; T9 at 29, 32, 53) Mr. King asserted that as planned, the electric fields produced by the Project would meet the State of New Jersey's electric field requirements at the edge of the ROW. However, the State has no EMF requirements. (Ex. 10 at 10-11) He also maintained that the August 2009 measurements were consistent with those recorded in December 2008. (See Ex. 48 and Ex. 125). With respect to noise levels, Mr. King testified that the Project noise will not exceed the levels set forth in N.J.A.C. 7:29-1.2(a)(2)(i). (Ex. 10 at 11). He calculated audible noise levels for the maximum voltage (230kV and 500kV) the lines do/will carry. (Ex. 49 at 32) According to Mr. King's measurements, maximum audible noise, which occurs just off center of the ROW, is approximately 43 dBA. New Jersey noise standards set the limit at 50 dBA. (N.J.A.C. 7:29-1.2(a)(2)(i); Ex. 49 at 33).

On the first day of the Hearings, PSE&G advised the parties that they had decided to alter the quad-bundle design of the conductors to a tri-bundle, i.e., three conductors per bundle instead of four. Mr. King testified that the change from quad-bundled conductors to tri-bundled conductors would have no effect on the magnetic field. (T9 at 16-17) He also testified that EMF levels are not affected by the type of substation (open air v. non open air) or the equipment housed in the substation. (T9 at 33) Voltage also does not affect the magnetic field. (T9 at 26)

Dr. Bailey testified that he has conducted research on EMF for 25 years. (Ex. 11 at 4) With respect to the Project, he stated that the existing 230kV line and the proposed 500kV line are/will be sources of extremely low frequency ("ELF") EMF. (Ex. 11 at 6) Dr. Bailey cited to guidelines for exposure to EMF published by two international organizations. The International Committee on Non-Ionizing Radiation Protection (ICNIRP)

recommends a “screening” value of 833mG, and 4.2kV/m for the public. These recommendations are utilized by the European Union for public areas. (Ex. 11 at 8-9) The International Committee on Electromagnetic Safety (ICES) also recommends limiting magnetic and electric field exposures at high levels. Its guidelines permit 9040mG for screening value and 5kV/m for public areas. (Ex. 11 at 9) Based on the existing and predicted EMF levels reported by Mr. King in his January 2009 Report (Ex. 48) and his September 2009 Report (Ex. 125), Dr. Bailey concluded that the Project would produce no ill health effects. (Ex. 11 at 22; see also S-PP-14)

Dr. Bailey also testified about research conducted to determine the health risks of exposure to EMF. He cited to several studies concerning EMF exposure, and, in particular, the World Health Organization’s 2007 Report, which proclaimed that EMF is a possible human carcinogen, and that chronic low-intensity ELF EMF exposure is associated with an increased risk of childhood leukemia. (Ex. 11 at 15-16; T9 at 21) Further, Dr. Bailey admitted that although there is no proven causal link between EMF exposure and childhood leukemia, there is a possibility that a nexus exists. (Ex. 11 at 16). When the results of some 35 studies conducted throughout the world are pooled, the result is a statistical association between EMF exposure greater than 3 – 4mG and childhood leukemia. (Ex. 11 at 18)

b. The Municipal Intervenors EMF Testimony. The Municipal Intervenors relied on the testimony of Dr. Martin Blank, a professor of Physiology and Cellular Biophysics at Columbia University, who has lectured and published extensively on the effects of magnetic fields on living organisms. (Ex. 56 at 4) Dr. Blank testified that the apparent epidemiological link between EMF and childhood leukemia is currently understood in terms of EMF interactions with DNA. (Ex. 56 at 6) Because magnetic fields pass easily

into cells and are biologically active, Dr Blank testified that it is critical to consider EMF safety when planning a project such as the one at issue in this matter. (Ex. 56 at 6-7) Dr. Blank stated that studies produced in the past 12 years have shown that there is a statistically significant doubling of the risk of childhood leukemia at EMF's exceeding 3 – 4mG. (Ex. 56 at 7) In fact, in May 1999, the National Institute of Environmental Health Sciences Report to Congress recommended that the power industry site power lines to reduce exposures to EMF and also continue to explore new methods of reducing the creation of magnetic fields altogether. (*Id.*)

Dr. Blank pointed to studies in which he participated himself, and in which it was determined that exposure to EMF results in a stress response in cells, which in turn causes stimulation of DNA and the synthesis of stress proteins. He stated that various biological systems would be stimulated by the EMF from the Project and could undergo fundamental cellular processes of energy production and utilization and activation of DNA. (Ex. 56 at 8) Significantly, Dr. Blank asserted that the 3 – 4 mG level cited by the World Health Organization does not indicate that lower EMF levels are safe; there is still a risk unless the EMF level is zero. (Ex. 56 at 9)

Dr. Blank testified that recent studies of the effects of EMF on Alzheimer's disease and dementia indicate an increased incidence of these illnesses with exposure extending over time. (Ex. 56 at 10, 13) However, the peak incidence of leukemia in children of three to four years old indicates that EMF can cause health effects in a much shorter periods of time. (Ex. 56 at 9-10) EMF is also associated with greater growth of breast cancer cells. Also, if a child does not carry the genes needed to repair DNA, the child has a four-fold greater incidence of leukemia from exposure to EMF as low as 1.4mG. (Ex. 56 at 14)

Dr. Blank concluded that at the very least, peak EMF levels should not exceed 3 – 4 mG. A recent study linking the absence of DNA repair genes to EMF-induced leukemia suggests that 1.4 – 1.8mG would be a more prudent peak limit. (Ex. 56 at 15)

## LEGAL ARGUMENT

### STANDARD OF PROOF

To obtain the relief requested in the Petition, PSE&G has the burden of showing that the Project is necessary for the service, convenience and welfare of the public. N.J.S.A. 40:55D-19. PSE&G was required to provide proofs to meet the applicable legal principles set forth in *In re Public Service Electric & Gas Co.*, 35 N.J. 368 (1961):

1. The phrase “for the service, convenience and welfare of the public” refers to the whole public served by the utility and not the limited group that benefits from the local zoning ordinance;
2. The proposed use must be reasonably, not absolutely or indispensably, necessary for the service, convenience and welfare of the public;
3. The particular site or location must be found to be “reasonably necessary” and so the Board must consider the community zoning plan, the physical characteristics of the site, and the surrounding neighborhood;
4. Alternative sites and their competitive advantages and disadvantages, including cost, must be considered in determining reasonable necessity; and
5. The Board must weigh all interests and factors in light of all the facts, giving the utility preference if the balance is equal, because the legislative intent is clear that the broad public interest is greater than local considerations.

As noted by the New Jersey Supreme Court in *State v. Jersey Central Power & Light Co.*, 55 N.J. 363, 369-70 (1970), the Board’s obligation “is not a perfunctory one,” and the Board shall accommodate the local interests in its evaluation of the broader public welfare concerns. The record demonstrates that PSE&G did not meet its burden of proof. Accordingly, the Petition should be dismissed.

## POINT ONE

### **AS A THRESHOLD ISSUE, THE BOARD MUST DISMISS THE PETITION BECAUSE IT IS NOT RIPE FOR REVIEW.**

To meet its burden of demonstrating that the Project is reasonably necessary for the service, convenience or welfare of the public, PSE&G's Petition to the Board must be ripe for review. *See, e.g., Pittsburgh Mack Sales & Service, Inc. v. International Union of Operating Engineers*, 580 F.3d 185 (3d Cir. 2009)(quotation omitted) (the ripeness doctrine determines “whether a party has brought an action prematurely, and counsels abstention until such time as a dispute is sufficiently concrete”); *Robert Trombmeta v. The Mayor and Commissioners of Atlantic City*, 181 N.J. Super. 203, 223 (App. Div. 1981) (requiring issues in dispute to be “thoroughly developed, clearly defined, and not merely speculative, conjectural or premature”). The ripeness principles apply with equal force in administrative proceedings. *See, e.g., In re Petition of Cablevision Systems Corp.*, 2007 N.J. PUC Lexis at \*12 (Sept. 13, 2007: BPU Docket No. CM07060389) (finding that Rate Counsel will have an opportunity to be heard regarding Cablevision's rates when the issue is ripe for review).

This Petition is not ripe for several reasons. First, the cost apportionment scheme to allocate the Project costs among PJM members has been nullified by the court, thus leaving the Project effectively stranded, with no plan in place that establishes the percentage of the Project costs for which each of them will be responsible. Second, the Project is still in the preliminary design and planning stages and it is likely that the Project will continue to refine its plans. Third, the evidence shows that PSE&G did not act rationally or responsibly with respect to, among other things, designing a project that incorporated energy-saving methods, alternative forms of energy, local generation, and accurate electricity-usage forecasts. It should be required

to heed these issues and incorporate them in this or any other new transmission Project PSE&G seeks to build.

**A. There is No Cost Allocation Scheme in Place for the Project.**

The cost apportionment scheme is an integral part of any transmission project because it directs who will pay for the project and how the contributing utilities will recover their costs. Indeed, PSE&G has represented that the cost for this \$1 billion project will not be imposed upon its ratepayers but shared in accordance with the cost apportionment formula approved by PJM and later by FERC. See FERC Order No. 494, *PJM Interconnection, L.L.C.* 119 FERC Par. 61063 (2007); PSE&G Press Release, dated Jan. 12, 2009 (announcing filing of Petition and noting that “the cost of the Project will be shared by the 51 million people who live in the PJM territory ... New Jersey electric customers will pay about 14%”).<sup>17</sup> See also (Ex. 2 at 29: PSE&G customers will pay approximately 7.5% of the costs of the Project, and all customers in New Jersey will pay approximately 14% of the costs).

PSE&G and PJM are legally and factually incorrect. In a comprehensive and significant decision, the Seventh Circuit Court of Appeals (Posner, J) struck down PJM’s scheme of cost apportionment for this Project. *Illinois Commerce Commission, et al., v. Federal Energy Regulatory Commission*, 576 F.3d 470 (7th Cir.), *rehearing denied* 2009 Lexis 24192 (7<sup>th</sup> Cir., Oct. 20, 2009) (the “Decision”).<sup>18</sup> Even though there is no cost apportionment scheme in place to pay for the Project, PSE&G continues to demand that this Board make a need determination under N.J.S.A. 40:55D-19. Neither PJM nor PSEG has submitted any evidence of another, amended cost apportionment scheme designed to comply with the Seventh Circuit’s directives.

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<sup>17</sup> [http://www.pseg.com/media\\_center/pressreleases/articles/2009/2009-01-12.jsp](http://www.pseg.com/media_center/pressreleases/articles/2009/2009-01-12.jsp)

<sup>18</sup> To date, there have been no additional filings in the matter. The Decision is final once the time expires for the filing of a petition for writ of certiorari with the United States Supreme Court. Under Rule 13 of the United States Supreme Court Rules, the aggrieved parties have until January 18, 2010 to file their petition. PSE&G intervened in this matter. It has not advised the parties or this Board whether it plans to appeal the Seventh Circuit’s ruling.

Simply put, there is no cost apportionment scheme for this Project, and in the absence of a definite plan regarding how the Project costs will be apportioned, the Project cannot be built. It is therefore neither reasonable nor prudent for the Board to permit the Petition to proceed at this time. It is impossible for the Board, as a matter of law, to find that the Project is reasonably necessary in the absence of knowing how much it will cost New Jersey ratepayers.

1. The Cost Recovery Scheme for the Susquehanna Roseland Project

PJM's authority to apportion costs for a transmission project, including new projects and upgrades, is derived from FERC's approval and acceptance of PJM's Operating Agreement and Tariff (the "Tariff"). (Ex. 12 at 7, l. 14-15; 13, l. 17-18). Cost apportionment for this Project is reflected in the Tariff. Cost recovery is, obviously, crucial to any transmission project. At a 2005 recent FERC Technical Conference, the President of PJM Interconnection discussed this essential component:

One of the first issues that policymakers raise is "who pays?" In resolving this issue, we have the benefit of a body of existing precedent within PJM. Through our regional planning process and with FERC's oversight, we have addressed the appropriate rules for allocating costs associated both with economic and reliability upgrades to the transmission system. By way of example, as an independent entity with expertise and a proven track record, PJM can identify the portion of these transmission facilities which are attributable to enhancing overall regional reliability (and whose costs would therefore be spread among all customers in the affected areas) vs. those portions of the line which are needed for economics for which identified beneficiaries would shoulder the cost burden, or can be attributed to the interconnection requirements of specific generating facilities.

(Ex. 112 at 7).

The Susquehanna Roseland Project is just one of PJM's "backbone" transmission projects intended to implement the goals of PJM's Project Mountaineer. *Illinois Commerce Commission, supra*, 576 F.3d at 474. PJM submitted its cost apportionment tariff for the

backbone projects to FERC for approval in 2007, and the tariff was approved. (See FERC Docket ER07-1186; see also FERC Order Accepting Cost Responsibility Assignments, January 28, 2009; Ex. 147) In the Tariff for Susquehanna Roseland, which is listed as Project b0489, to build new 500kV transmission facilities from the Pennsylvania – New Jersey border at Bushkill to Roseland, and Project b0487 to build new 500kV transmission facilities from Susquehanna to the Pennsylvania – New Jersey border at Bushkill, the PSE&G share of the cost as a “Responsible Customer” was 7.58% of Project b0489 in New Jersey, and 7.58% of Project b0487 in Pennsylvania. By contrast, ComEd, an Illinois utility, was charged with 16.11% of the cost of the Project, more than twice the share of the cost PSE&G would bear.

Required Transmission Enhancements	Annual Revenue Requirement	Responsible Customer(s)
b0487	Build new 500 kV transmission facilities from Susquehanna to Pennsylvania – New Jersey border at Bushkill	AEC (2.05%) / AEP (16.79%) / APS (5.96%) / BGE (4.91%) / ComEd (16.11%) / Dayton (2.53%) / DL (2.08%) / DPL (2.93%) / Dominion (13.22%) / JCPL (4.57%) / ME (2.04%) / Neptune* (0.47%) / PECO (6.10%) / PENELEC (2.09%) / PEPCO (4.47%) / PPL (5.16%) / PSEG (7.58%) / RE (0.30%) / UGI (0.14%) / ECP** (0.23%)

Required Transmission Enhancements	Annual Revenue Requirement	Responsible Customer(s)
b0489	Build new 500 kV transmission facilities from Pennsylvania – New Jersey border at Bushkill to Roseland	AEC (2.05%) / AEP (16.79%) / APS (5.96%) / BGE (4.91%) / ComEd (16.11%) / Dayton (2.53%) / DL (2.08%) / DPL (2.93%) / Dominion (13.22%) / JCPL (4.57%) / ME (2.04%) / Neptune* (0.47%) / PECO (6.10%) / PENELEC (2.09%) / PEPCO (4.74%) / PPL (5.16%) / PSEG (7.58%) / RE (0.30%) / UGI (0.14%) / ECP** (0.23%)

(PJM Amendments to Schedule 12 – Appendix of the PJM Tariff to reflect the assignments of cost responsibility for five baseline upgrades in RTEP; see also Ex. 112; Ex. 12 at 7).

## 2. The Decision Dismantles the Cost Apportionment Scheme for the Project

At present, the Seventh Circuit decision requires that PJM prepare and submit a new pricing scheme for the Project Mountaineer Projects consistent with the court's directive to allocate costs based on a cost/benefit analysis. In opposing the challenge to the Tariff, PJM argued that "classic" utilities had apportioned costs decades ago by utility consensus, and, therefore, costs should be apportioned in a similar manner now. 576 F.3d at 475. The Court scoffed at this notion, remarking that there is no consensus, and, furthermore, PJM is now a different entity, larger in membership and with wide-ranging geographic scope. *Ibid.* The Court also sharply dismissed FERC's claim that the pricing scheme was appropriate because FERC claimed it was not feasible to measure benefits received in order to apportion according to benefits. *Id.* at 475-76. FERC's claim that a ruling dismantling the scheme underlying the tariff would lead to litigation by and among the utilities, PJM and FERC was similarly rebuked by the Court. *Ibid.* Judge Posner pointed to FERC's complete failure to make any attempt at estimating or calculating benefits, and noted that FERC's claims of infeasibility were unsubstantiated and irrational. *Id.* at 476.

The Court also took issue with FERC's contention that Midwest utilities would benefit from Project Mountaineer, and thus should pay their "fair share":

So utilities and their customers in the western part of the region could benefit from higher voltage transmission lines in the east, but nothing in FERC's opinions in this case enables even the roughest of ballpark estimates of those benefits.

At argument FERC's counsel reluctantly conceded that if Commonwealth Edison would derive only \$1 million in expected benefits from Project Mountaineer, for which it is being asked to chip in (by its estimate) \$480 million, the disparity between benefit and cost would be unreasonable. The concession was prudent. [576 F.3d at 476.]

Judge Posner chastised FERC for apportioning costs in a manner unrelated to benefits:

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. “[A]ll approved rates [must] reflect to some degree the costs actually caused by the customer who must pay them.’

Not surprisingly, we evaluate compliance with this unremarkable principle by comparing the costs assessed against a party to the burdens imposed or benefits drawn by that party.” [576 F3d. at 476 (internal citations omitted)]

The Seventh Circuit also rejected FERC’s contention that its experience with issues of reliability and network needs should convince the Court to take the soundness of its cost apportionment scheme “on faith.” *Id.* at 477. Noting the lack of substantial evidence on the record in support of FERC’s approval of the scheme, the Court declined the offer. *Id.* (citations omitted). Instead, it remanded the matter to FERC with the instruction to undertake an honest, complete comparison of the costs and benefits to all the relevant utilities:

If [FERC] cannot quantify the benefits to the midwestern utilities from new 500 kV lines in the East, even though it does so for 345 kV lines, but it has an articulable and plausible reason to believe that the benefits are at least roughly commensurate with those utilities’ share of total electricity sales in PJM’s region, then fine; . . . the Commission can approve PJM’s proposed pricing scheme on that basis. For that matter it can presume that new transmission lines benefit the entire network by reducing the likelihood or severity of outages. **But it cannot use the presumption to avoid the duty of “comparing the costs assessed against a party to the burdens imposed or benefits drawn by that party.”**

*Id.* at 477 (emphasis added) (internal citations omitted).<sup>19</sup>

The remand ordered by the Court will require yet another “retooling” by PJM, which means that PJM must make a significant effort to compile cost/benefit information and analysis, rework the tariff for this Project, and submit it to FERC for approval. In all likelihood, the

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<sup>19</sup> To hear the spirited oral argument online: <http://www.ca7.uscourts.gov/tmp/Q019G7Q4.mp3>

“retool” will require PJM to rethink its distributive and allocative policy and philosophy. Until this occurs, the distribution of cost for this Project is unknown. Thus, it is impossible, as a matter of law, to ascertain whether the Project is reasonably necessary for the service, convenience or welfare of the residents of New Jersey. See *In re PSE&G*, 55 N.J. at 377-78; *In re PSE&G*, 100 N.J. Super. at 14.

3. PSE&G Filed to Advise the Board and the Parties of the Decision.

Because PJM’s authority derives from the Tariff, the Project cannot move forward without a valid, FERC-approved tariff. At present, no Tariff is in place, and, therefore PJM’s order to PSE&G to build the Project lacks legal or practical authority. PSE&G cannot claim that it is required to comply with PJM’s directive, because there is, at present, no directive that can possibly bind PSE&G to PJM’s 2007 order to build the Project. Interestingly, PSE&G has not addressed the Decision or its impact on the Project. Even though PSE&G itself participated in the arguments before the Seventh Circuit as an intervenor, and actually argued in favor of PJM’s now defunct cost-allocation formula, PSE&G never revealed this or sought to amend its Petition, its testimony or its discovery. At a minimum, PSE&G should have revised its discovery responses regarding the cost of the Project, particularly the ones that reference the Tariff that was invalidated by the Seventh Circuit. (See, e.g., ENV-D-8, ENV-66, RC-1, RC-2, RC-3, RC-4) Furthermore, as a matter of its obligations as a member of the bar, PSE&G should have advised the Intervenors, the Board and everyone involved in this matter of the Decision. See RPC 3.4(a) (“Fairness to Opposing Party and Counsel”) and RPC 3.3(a)(3) (“Candor Toward Tribunal” includes obligation to disclose controlling legal authority). Indeed, in civil litigation matters, lawyers are under a continuing obligation to advise their adversaries of changes with discovery. *McKenney v. Jersey City Med. Ctr.*, 167 N.J. 359, 371 (2001) (“Lawyers have an obligation of candor to each other and to the judicial system, which includes a date of