

**Testimony provided to the PUC at the Bushkill, Pennsylvania Public Hearing
On the Susquehanna Roseland Transmission Line (Line B) proposal**

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Thank you for the opportunity to submit this testimony, and for providing a forum for the public to express concerns. We respectfully recommend that PPL's application to construct the Susquehanna Roseland Transmission Line be denied because PPL and PJM have **failed to prove** that:

- 1) There is a need for the project;
- 2) The studies used to justify the project were comprehensive;
- 3) The long term cost to Pennsylvania residents, consumers and the environment outweigh the benefits;
- 4) The new transmission line is consistent with Pennsylvania and regional legislative initiatives to reduce demand and greenhouse gas emissions;
- 5) The motivation to construct the line is reliability and not economics;
- 6) Alternatives to the construction of this traditional, costly line have not been exhausted;
- 7) A comprehensive regional assessment was made of the current need for energy production and transmission, specifically with goal to utilize best practices in integrated resource planning to significantly reduce greenhouse emissions and maximize the use of regional nonpolluting, renewable energy resources.

With these questions remaining, we recommend that 1) there should be no new transmission lines approved in Pennsylvania until such comprehensive, regional plans are developed and the costs and benefits to the Commonwealth are fully understood 2) any public funding for new energy grid improvements is not squandered, but rather reserved to support nonpolluting, renewable energy transmission for the benefit of the Commonwealth and the northeast region.

Questionable Need for the line: Reliability and Alternatives to Transmission Lines

Anticipated electricity demand for PJM territory fell short of their predictions.

While the rationale for the project was an anticipated 1.4% increase in peak demand in 2008, PJM Interconnection reported that actual demand for electricity was down, and would continue to decline. In their November 12, 2008 report, actual unrestricted peak demand reported for the summer of 2008 was 10,591 megawatts lower than the summer 2007 peak demand and 7,156 megawatts (or 5.2%) lower than the forecast for 2008 that PJM had previously forecasted. In January, 2009, PJM released a 2009 Load Forecast, which assumes a 4,929 megawatt decrease in the projected electric load for the region. In addition, the now questionable estimates had also shown peak demand in PSE&G's entire service area rising by only 2000 MW by 2020, yet the line would be overbuilt to accommodate a 3000 MW increase in transmission capacity.

The reliability and congestion studies used to justify the necessity of line are flawed. Maintaining reliability of the grid system was another justification of the project, based on PJM's 2006 RTEP (Regional Transmission Expansion Plan) study for reliability. Yet two Pennsylvania Administrative Law Judges recommended that the PA Public Utility Commission completely deny a similar application for the TrAILCo transmission line, in part because PJM's RTEP study for reliability was "designed to consider only transmission solutions," ...and "did not consider viable alternatives to transmission." PG 22, November 13, 2008 PUC Public hearing minutes.

Congestion studies have not been comprehensive. PJM's justification for the line also includes anticipated increases in grid congestion, forecasted in the Department of Energy 2006 Congestion Study. As reported by the Pennsylvania Land Trust Association, (PALTA) the study was flawed, as it lacked clarity in defining the scope of its analysis, did not address non wire contributions or solutions such as demand side management and efficiency programs, omitted a full accounting of generation resources, PJM's resource auctions, or the impacts of federal, state and regional energy policies in the analysis.

According to PALTA , "the findings of congestion were based upon power price differentials and the number of hours a location is constrained. This congestion study documented a *commerce* problem rather than a reliability problem....Since publication, the market reality is that further investments in non-transmission options that have brought new capacity on line, particularly in the eastern zones, "are rendering the 2006 projections increasingly unrepresentative of the true state of the mid-Atlantic grid."

The prices for Appalachian coal are climbing, according to Lee Buchsbaum, reported in New Coal Economics, December 24, 2008, published in Energy Biz. "This trend would wipe out a portion of the power price differential (read: congestion costs) across the PJM grid. And since congestion costs are the justification for the Corridor and since the DOE is required to redo its analyses in 2009, this trend could yield some interesting adjustments in congestion projections - *IF* the 2009 Congestion study revisits the 2006 corridor analyses and re-estimates congestion costs in our region."

The line is currently not needed for nonpolluting, renewable energy, and may not be in the future.

PJM's 2006 Regional Transmission Expansion Plan, and "Project Mountaineer" and several new transmission line proposals, including lines from Kammerer to Three Mile Island, to NJ, through Keystone, Sunbury, and into NJ, were proposed and approved based on "peak load" modeling. In the recently published Joint Coordinated System Plan, they are now being justified to serve the wind industry.

This alternative justification of the transmission lines does not make sense. According to PJM's Steven Herling, because wind-generated power is not often available at peak demand times (i.e., during the afternoon on the hottest days of the summer), PJM initially discounted wind generation to 20% of its total capacity for its load flow modeling. However, because even less wind generation was available at peak times than they expected, PJM has further reduced this number to 14%. That means that a 100 MW wind farm only counts as a 14 MW wind farm for purposes of resolving reliability violations (i.e., through redispatch of generation following the first contingency in a double contingency modeling analysis).

The recently released Joint Coordinated System Plan calling for new transmission lines for renewables does not account for efficiency or off shore wind, and should be revised. ISO New England and the NYISO, The regional grid operators in New England and New York have taken exception to the recently released Joint Coordinated System Plan in a letter dated February 4, 2009, which they expressed concern that: “the plan cannot be viewed as a “plan” to be relied upon for decision-making purposes and we believe its publication is premature.” ... “Until additional scenarios that include the development of local resources are analyzed, we do not believe any single transmission plan can be presented as a solution to the integration of additional renewable energy resources in the United States.” Further, they expressed concerns the report does not account for “the transmission for offshore wind resources,” or their states’ own “energy efficiency and smart grid technology” initiatives, and assumes the development of new coal-fired generation in the Midwest, which is less desirable and ignores costs associated with carbon emissions.

The Susquehanna Roseland Transmission Line is inconsistent with legislation to reduce demand and global warming

The Susquehanna Roseland Transmission Line is inconsistent with PA Act 129, the Energy Efficiency and Conservation Act. Pennsylvania’s energy consumption is likely to decline, not increase, since under the Act, utilities must reduce electricity consumption by 1 percent by May 31, 2011, and by 3 percent by May 31, 2013. The Act also requires a 4.5 percent reduction in peak demand by May 31, 2013. As this could have a significant impact on regional, transmission needs, the approval of Susquehanna Roseland Transmission Line is premature and inconsistent with the Act, especially given that energy efficiency and conservation plans must be filed with the Commission by July 1, 2009. To comply with the new act, the PUC will also oversee consumption forecast guidelines, the analysis of the reductions and compliance, smart meter technology; time-of-use rates; real-time pricing plans; default service procurement; market misconduct; alternative energy sources; and cost benefit analysis, so it is in the public interest that any new transmission line proposals be delayed until impacts and opportunities of these measures are fully understood.

In addition, The American Recovery and Reinvestment Act requires Governors to certify their states are taking steps to adopt incentives to promote decoupling before states are allowed to spend energy conservation funding authorized in the recovery program (Section 410 of the federal Act). Policies aimed at decoupling the industry could have additional significant impacts on demand.

The proposal is also inconsistent with the northeastern state’s Regional Greenhouse Gas Initiative (RGGI) to reduce global warming, which Pennsylvania is NOT participating in. PPL can export cheaper dirty electricity into New Jersey, a RGGI state, a practice known as “leakage” and undermine efforts to reduce demand and greenhouse gases.

The Susquehanna-Roseland line will likely incorporate coal-produced electricity instead of sustainable energy sources, forcing Pennsylvanians to subsidize the reckless abandonment of clean and green technologies and inherit a dirtier and unhealthier future. Burning coal is the leading cause of smog, acid rain, global warming and air toxics. According to the Union of Concerned Scientists, in an average year, a typical coal plant generates 3.7 million tons of carbon dioxide (CO₂). In 2007, Pennsylvania ranked 4th highest in the country in CO₂ emissions, emitting 136 million tons that year (Source: ScienceDaily.com, “Carbon Dioxide Emissions from Power Plants Rated Worldwide”, Nov 15, 2007)

Motivated by economics and not reliability

PJM is conducting its own reliability studies and planning, yet has a vested interest in the outcome so is not likely to complete a comprehensive analysis that might decrease their own profits. The load forecast is also the major determinant of the quantity and price of capacity that PJM will procure through the Reliability Pricing Model. The cost of a 1.5% error in the forecast could exceed a billion dollars. (December 11, 2008 RE: Draft 2009 PJM Load Forecast and Report Letter to PJM's Reynolds and Herling)

In February, PPL Corp. announced it would eliminate 6 percent of its management and staff positions. According to Ron Bartizek, Business & Consumer Editor reporting on February 25, 2009, PPL Chief Executive James H. Miller cited "ongoing financial pressures" due to reduced industrial and residential consumption. "A bigger hit is in the wholesale electricity markets" where prices have fallen with lower demand, substantially reducing profit margins, McCarthy said.)

According to the Public Advocates Office, there is a 12.7% or better guaranteed rate of return for investors of the transmission line. While ratepayers assume the risks associated with the project, PPL has a great financial incentive to construct and overbuild transmission lines. In addition to rate increases related to the proposed powerline, rate payers will also be expected to absorb rate increases of 36% or more due to deregulation.

The Costs to Pennsylvania residents and ecosystems far outweigh the benefits of the construction of the line.

- 1) Regional ratepayers, which include Pennsylvania consumers, will absorb the costs of this \$1.2 billion project in increased transmission fees, just as deregulation of the electricity industry in Pennsylvania removes rate caps. Commonwealth residents will also assume the long term costs of the environmental degradation associated with the construction of the line.
- 2) Our viewscapes across the pristine northeast area will be compromised, as outdoor recreation and the tourism industry will be negatively impacted by these massive 500,000 volt, 190 foot towers cutting through and visually impacting our Pennsylvania landscapes.
- 3) The property values for residents who own property near or along the Susquehanna Roseland Transmission Line would also be negatively affected, adding to their already declining values in the housing market.
- 4) Since coal fired generation costs less, it traditionally gets dispatch priority. The Susquehanna Roseland Transmission Line is in close proximity to PPL's Montour coal plant in nearby Washingtonville, which would facilitate an increase in mining and or greenhouse gas emissions here in the Commonwealth.
- 5) Susquehanna Roseland Transmission Line proposal coincides with a petition to build another nuclear power plant in Berwick, Pennsylvania. The risks and impacts associated with this new nuclear power generation would also be assumed by Commonwealth residents.
- 6) **The Barrens** on Moosic Mountain form what federal and state agencies have argued is the most threatened, unique ecosystem in Pennsylvania. It includes a 6,000 acre, 12 mile long contiguous ridge top area extending from I-380 in Dunmore in the south to Archbald Borough, Carbondale Township and Jefferson Township in the north. It is ranked as the top area for preservation by the state and federally supported county natural areas inventory and 2004 bi-county open space plan. Moosic Mountain was identified during the Lackawanna County Natural Areas Inventory (conducted by The Nature

Conservancy, funded by DCNR) as the largest expanse (6,000 acres) of ridge top barrens in Pa., and the only site for ridge top Heath Barrens in the state, graded good to excellent in quality. This habitat area contains four globally rare plant communities upon which at least eighteen rare species (butterflies, moths, birds, etc.) and other substantial wildlife depend.

This rare and sensitive wildland contains fire-adapted plants like scrub oak and pitch pines and low-growing heaths such as huckleberries, blueberries, rhodora and other acid-loving plants that do well in the cold, windy environment. Scrub oak is the dominant canopy species with pitch pine, black gum, chestnut oak, and sassafras occurring in localized patches and infrequently scattered throughout. It is a common stopover for migratory birds, and contains many moth and butterfly species, including the globally rare sallow moth and barrens buckmoth. Migratory songbirds such as the prairie warbler depend on this unspoiled ridge for protection, and a moth and butterfly survey on the ridge cites high levels of biodiversity.

Pennsylvania Game Commission Wildlife Action Plan -priority species associated with ridgetop acidic barrens complex also include Allegheny woodrat, timber rattlesnake, eastern hognose snake, northern copperhead, and Appalachian cottontail.

According to the Pennsylvania DCNR, DEP, the Pennsylvania Game Commission and the Nature Conservancy, the primary threat to the Barrens ecosystem is fragmentation, which invites invasive species and loss of this sensitive habitat. The Barrens form the largest unbroken tract of land in Lackawanna County.

Conservation management plans requiring periodic controlled burning in parts of the Barrens are necessary for regeneration. The county, state and nonprofit organizations and agencies have most recently invested over 5 million dollars to purchase barrens lands. As a result, federal prison and business park development projects were recently relocated to another area.

A full environmental impact study EIS and/or full NEPA review is required to fully understand the fragmentation impacts of the expansion of the transmission line right of way, new tower and line effects on birds and bats, the impacts of construction equipment and access roads, construction activities such as digging between 40 to 60 feet down into the ground to install the towers, herbicide applications for clearing, and limitations, if any, to the conservation management plan needed to maintain the diversity of the area.

- 7) In addition, a full NEPA review is required to assess the impact on 7 major streams affected by the project, which include the Bush Kill (crossed twice), the Delaware National Scenic River, Shohola Creek, Lackawanna River, Wallenpaupack Creek, Middle Creek (crossed twice), and the Susquehanna River.
- 8) Two federally endangered listed wildlife species known to occur in counties crossed by Route B; the federally endangered Indiana bat (*Myotis sodalis*) and the federally threatened bog turtle (*Clemmys muhlenbergii*). Both the Indiana Bat and the bog turtle are listed under the category of Immediate Concern for Pennsylvania by the Pennsylvania Game Commission. A completed environmental impact study would give the state a greater understanding of the impact of the transmission line on their habitat, and avoid the unnecessary destruction of the habitat of these federal endangered and threatened species, which would be in violation of the Endangered Species Act.
- 9) PPL should be made to demonstrate that there is a real need for the new line before any additional habitat is lost in Pennsylvania, especially anticipating that new lines will be needed for local wind and solar. There are also impacts of sprawl, global warming, new wind turbine citing, and other energy drilling activities associated with the Marcellus Shale to be considered.

Alternative investments would save energy, save consumers money, create more jobs, reduce greenhouse gases and have been proven effective.

- 1) In the Trail Line case, PUC Administrative Law Judges emphasized that consideration of the proposal “requires the consideration of whether the proposed transmission line will have a minimum environmental impact “considering the electric power needs of the public, the state of available technology and the available alternatives.” (November 13th PUC Public Hearing, Trail Co. Pg 21)
- 2) Wind and solar generation does not always require new transmission lines, and can help meet demand. Regulators recently concluded in the CAP X 2020 project report that Minnesota could develop many 10-40 megawatt in state wind farms, generating 600 megawatts--without any new transmission. Residential photovoltaic generation also reduces the need for expensive transmission infrastructure, as rooftops serve much of that purpose. There is little incentive for utilities to promote this low impact resource as the economic benefit is to the consumer, not the utility industry (Reported by *Craig D. Rose* in Think Solar, Think Small, The Nation, *January 28, 2009.*)

According to the Institute for Local Self-Reliance, (ILSR) “half the states could be energy self-sufficient” by harnessing renewables within their borders, and most states can satisfy a considerable fraction of their own energy needs this way.

- 1) Distributed generation has additional benefits, which include increasing the national security of the grid, and avoiding the costs associated with requiring utilities to provide for the worst possible conditions, with a 15% reserve margin needed for massive blackouts.
- 2) In “Building Pennsylvania’s Energy Future: Efficiency Means Real Gains for Security, the Economy, and the Environment “ Penn Future reports that “robust efficiency programs means Pennsylvania could preclude all electricity demand growth, saving the Commonwealth between \$9 and \$12 billion dollars in avoided generation and transmission and distribution costs.”
- 3) When energy is generated and used locally, less energy is lost through expensive, inefficient interstate transmission lines. Amory Lovins and others outlined an alternative energy strategy in: Small is Profitable: The Hidden Economic Benefits of Making Electrical Resources the Right Size, the 2002 ‘Book of the Year’ by *The Economist* magazine.
- 4) The Pennsylvania \$650 million Alternative Energy Investment Act, was passed to increase economic opportunities associated with efficiency, green building and renovation, and nonpolluting, renewable energy markets. These labor-intensive industries create green jobs, distributed across the geographic areas where they are needed in the Commonwealth. According to the Earth Policy Institute, a billion dollar investment in retrofitting buildings creates over 6,090 jobs, and over 3,350 jobs in the wind industry. This is in sharp contrast to the workforce development generated by the Susquehanna Roseland Transmission Line, which would create mostly temporary, imported construction jobs.
- 5) State conservation and efficiency programs are effective at reducing demand. Efficiency Vermont implemented programming established a state ‘efficiency utility,’ which has resulted in the decline of total state electrical. Conservation and efficiency policies have produced *0% per capita growth* in California, as the average Californian now uses about 40 percent less electricity than the average American. ” (*American Council for an Energy Efficient Economy, The Efficiency Scorecard, 2007.*)

Comprehensive Regional Planning is needed before transmission line proposals are approved.

In a March 1, 2009 Letter to Carol Browner, Assistant to the President for Energy and Climate Change, a coalition of over 25 prominent environmental organizations made recommendations for new transmission line policy. They concluded that it would be premature to approve transmission lines in a piecemeal fashion before a truly regional, comprehensive plan for electricity generation and distribution, as part of an integrated resource plan, is developed. Such a plan should include smart grid technology upgrades, off shore wind, community wind, local industrial wind, photovoltaics, combined power and heating, energy storage, energy efficiency and demand side management efforts. “ In particular, broad deployment of small-scale renewable and low carbon distributed generation is a critical component to reducing carbon emissions, as it decreases the need for expensive new transmission lines by facilitating energy production and consumption in the same location and reduce line loadings on existing facilities.”

There is little evidence that such planning has been completed by PPL or PJM to date.

Piecemeal energy policy may have the unintended effect of facilitating *more*, not less, greenhouse gas pollution. In "Importing Pollution: Coal's Threat to Climate Policy in the U.S. Northeast," Union of Concerned Scientists Report in December 2008 concluded that “since the RGGI program does not require local utilities to purchase allowances for electricity imported to the region, its design could trigger more coal electricity imports” -- and significantly more emissions from coal plants in Midwest states as well as those bordering RGGI.