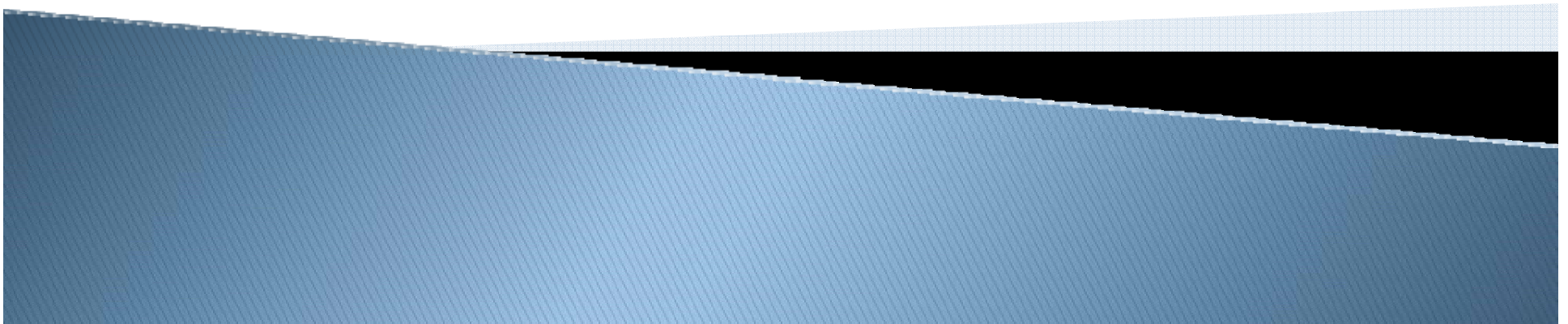


# Transmission Siting in Pennsylvania: Current Issues

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PA Public Utility Commission  
Harrisburg, PA

February 14, 2010



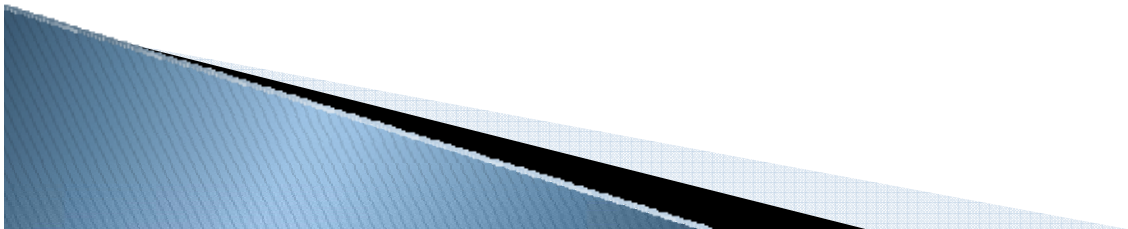
# Transmission Siting Has Become An Increasingly Controversial Topic in PA as is the Case Nationally.

## ▶ Regional and Federal Factors:

- Ongoing PJM initiatives under the RTEP process to upgrade and expand transmission facilities.
- For example, in October 2009, PJM Board approved an annual grid upgrade plan of \$1.4B. PJM's regional plan reaffirms the need for four major transmission backbone projects.
- These include:
  - Trans-Allegheny Interstate Line (TrailCo Project).
  - Potomac-Appalachian Transmission Line (PATH) (Allegheny Energy/AEP ).
  - Susquehanna Roseland Line (PPL/PSE&G).
  - Mid-Atlantic Power Pathway (MAPP).
  - Energy Policy Act of 2005 and the DOE designation of PA as part of the Mid-Atlantic National Interest Corridor.
  - Increased frequency of multi-state transmission projects TrailCo (VA/WV/PA); Susquehanna-Roseland (PA/NJ).

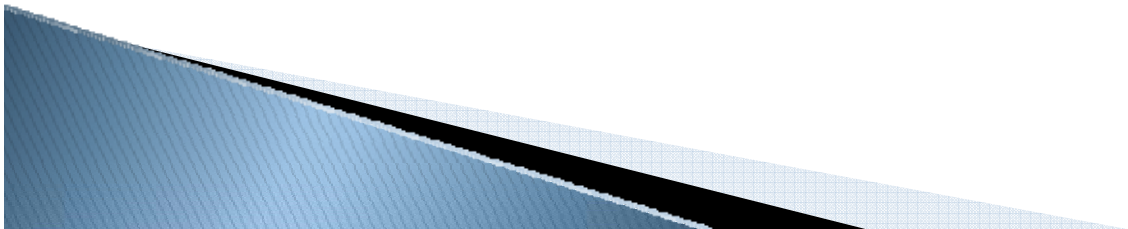
## ▶ Pennsylvania-Specific Factors:

- Increases in demand in areas such as northern NJ and the DC/VA/MD area.
- Aging transmission infrastructure.
- Prevention of overloads on existing lines and alleviation of congestion issues.
- Development of merchant generation primarily gas fired generation in central and western PA.
- Development of renewable resources triggered by PA's alternative energy portfolio standard.
- Two jurisdictional utilities that have been particularly active in PA are Allegheny Energy located in the southwestern part of the state and PPL in the northeast.



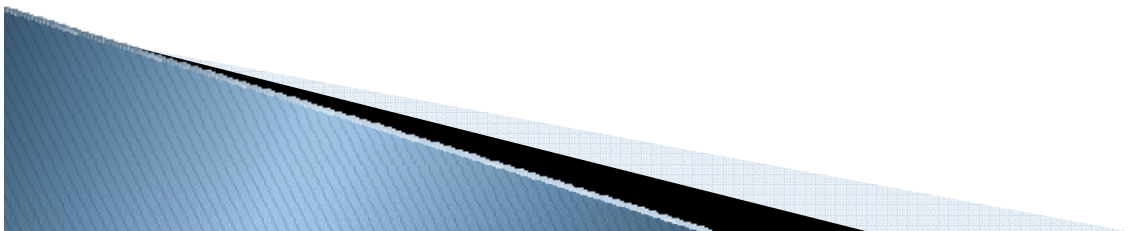
# Major Challenges to Transmission Siting

- ▶ PAPUC application process can take from 12 to 18 months.
- ▶ A very document intensive process with large initial filings, massive discovery and multiple parties.
- ▶ Approvals required from other agencies-federal, state and local.
- ▶ Additional timing pressures resulting from the availability of federal backstop authority.
- ▶ Public notification can be an issue especially where eminent domain authority is sought.
- ▶ Political involvement including county and municipal governments and local legislators.
- ▶ Land availability.



# The Regulatory Process

- ▶ Importance of pre-filing consultation with governmental entities: PAPUC, other governmental advocates and impacted municipalities/counties.
- ▶ Timing is everything especially coordination of PUC approval with other state and federal agencies.
- ▶ Eminent domain can be a source of controversy.



# Dominant Themes in Siting Cases

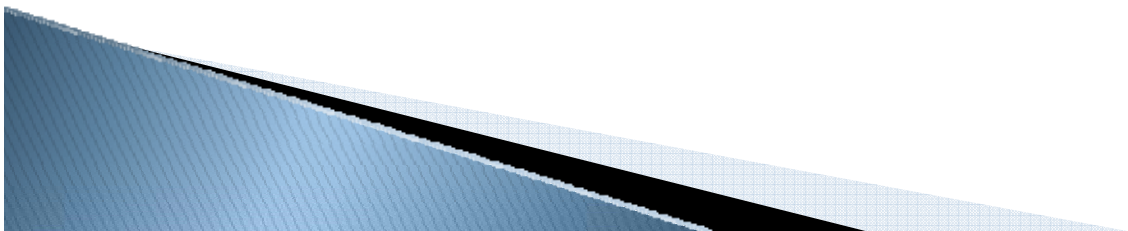
- ▶ Is need for the line predicated on PA-specific factors or regional concerns?
- ▶ Route selection-is the final route ultimately selected the least intrusive?
- ▶ Land-use concerns-proximity to populated areas.
- ▶ Environmental impacts.
- ▶ Health and safety issues (herbicides/pesticides/EMF).
- ▶ Aesthetic considerations.

# Recommendations for Expediting the Siting Process

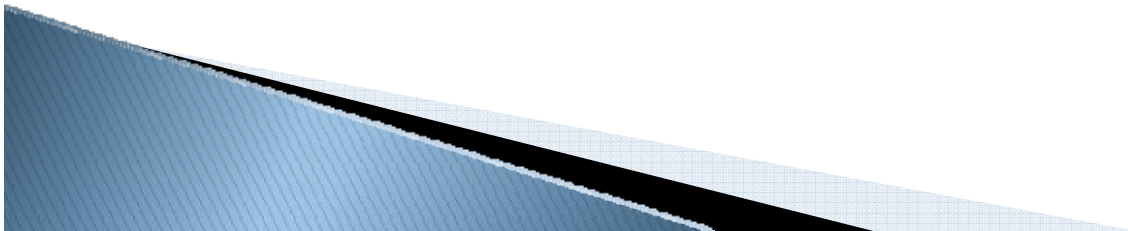
- ▶ Early consultation with regulatory agencies and local governments.
- ▶ Ensure that information presented to the agencies is timely and consistent.
- ▶ Provide timely and complete responses to discovery and other data requests.
- ▶ Provide a balanced presentation that demonstrates PA-specific as well as regional need for the project.
- ▶ Do not view the PAPUC CPC process as the first step-other regulatory approvals should be well underway at the time the application is filed.

# Recommendations for Expediting the Siting Process

- ▶ Outreach to local governments and impacted landowners is critical. These parties can be extremely contentious.
- ▶ Misunderstandings can arise if close control over third-party contractors is not maintained .
- ▶ Avoid or minimize eminent domain litigation if possible.
- ▶ Utilize existing corridors to the extent possible.
- ▶ Make sure all siting alternatives are thoroughly considered.



# Appendix

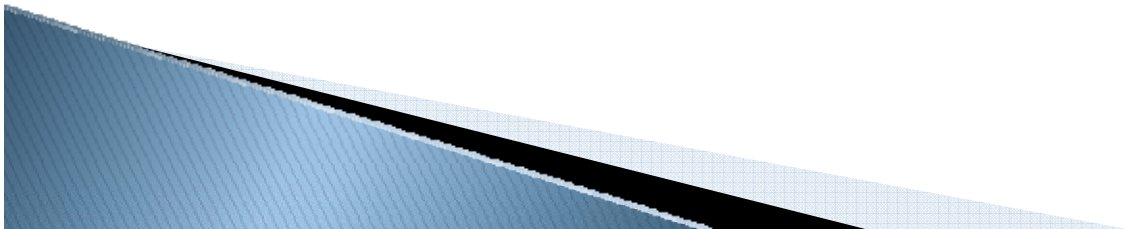


# Description of the Susquehanna-Roseland Project

- A 500-kV transmission line starting at PPL's Susquehanna-substation in Salem Twp. Luzerne County, running north and east to the Delaware River where it will cross into New Jersey. The line will run in a southeastern direction terminating at Roseland, NJ.
- The PA portion of the line will be constructed by PPL.
- The NJ portion of the line will be constructed by PSE&G.
- Total line length is 146 miles and total cost is \$1.2B.
- PA portion is 101 miles long and will use mostly existing ROW (97 of 101 miles). Cost is \$510M.
- PJM 2007 RTEP identified the need for the project and directed PPL and PSE&G to construct with an in-service date of 6/1/12.

# Description of the Susquehanna–Roseland (S–R) Project

- The S-R Line will replace an existing 230 kV line along portions of the route.
- The S-R Line designed to resolve multiple violations of NERC reliability standards, meet PJM load and deliverability criteria and PPL's electric reliability criteria.
- S-R Line designed to serve large numbers of generation facilities in NE PA.
- The PAPUC has preliminarily approved the line at a January 2010 public meeting. A final order is being prepared.
- NJBPU decision is expected soon.



# Susquehanna-Roseland Project



[home](#) [project overview](#) [project benefits](#) [project updates](#) [faq](#) [about us](#) [media inquiry](#)

## Project Overview

In the interconnected electric system, transmission lines act like interstate highways. They transfer large amounts of power throughout the region to ensure that electricity is available to meet growing demand – particularly at peak times like searing hot summer days and freezing winter nights.

After an exhaustive study process that included 10 public input workshops throughout the region, numerous meetings, and contacts with residents, elected officials and others, PPL Electric Utilities has chosen [Route B](#) from among the three possible routes announced in June 2008.

Route B runs north from Berwick, Pa., past Wilkes-Barre and Scranton, then east to Hawley and southeast to Bushkill, where it crosses the Delaware River. The New Jersey portion of the line, from the river to Roseland, will be built by Public Service Electric & Gas Co.

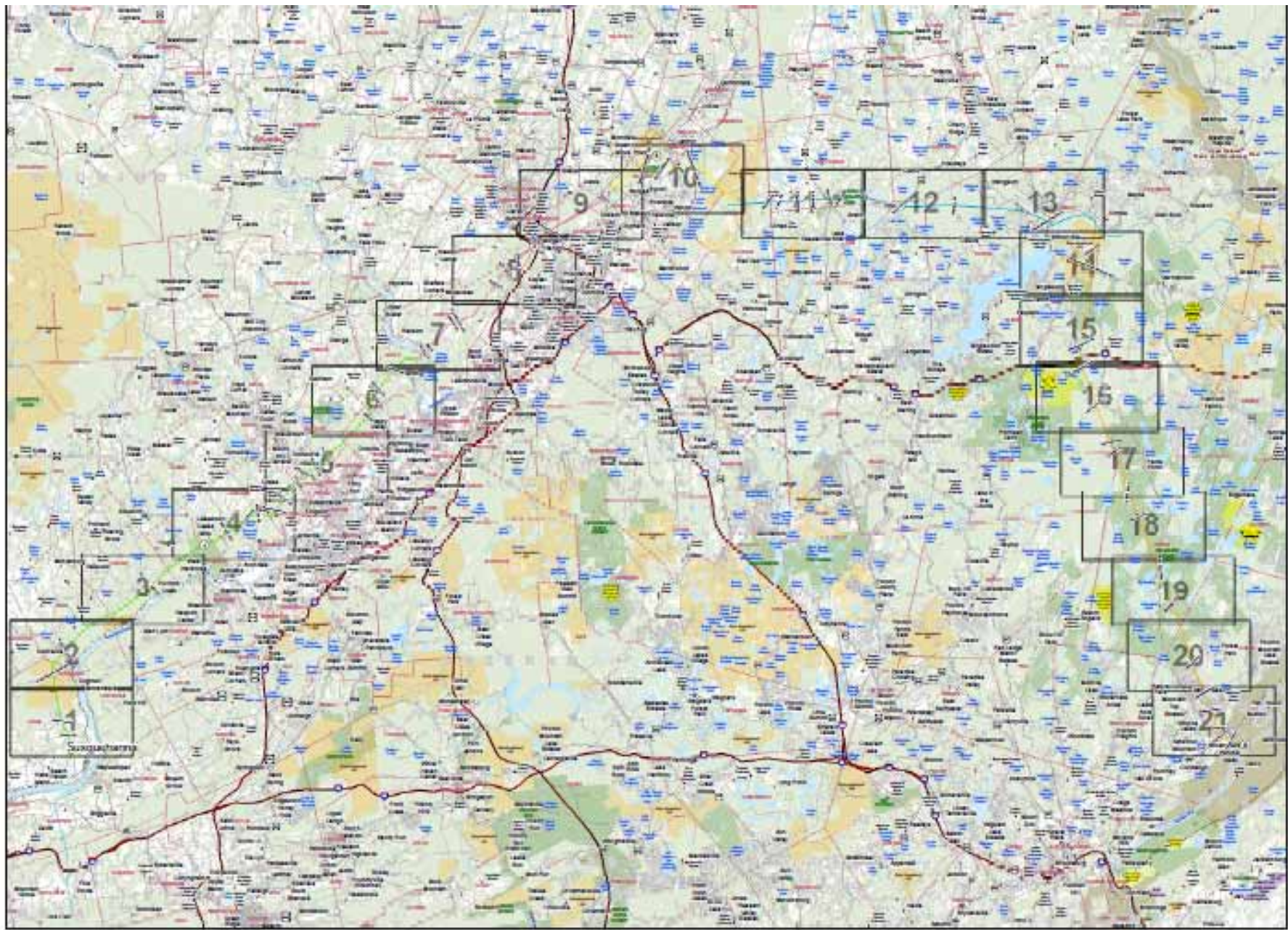
PPL will now focus its attention on working with residents, officials and groups along Route B to incorporate their input into our construction plans whenever we can.

## project timeline

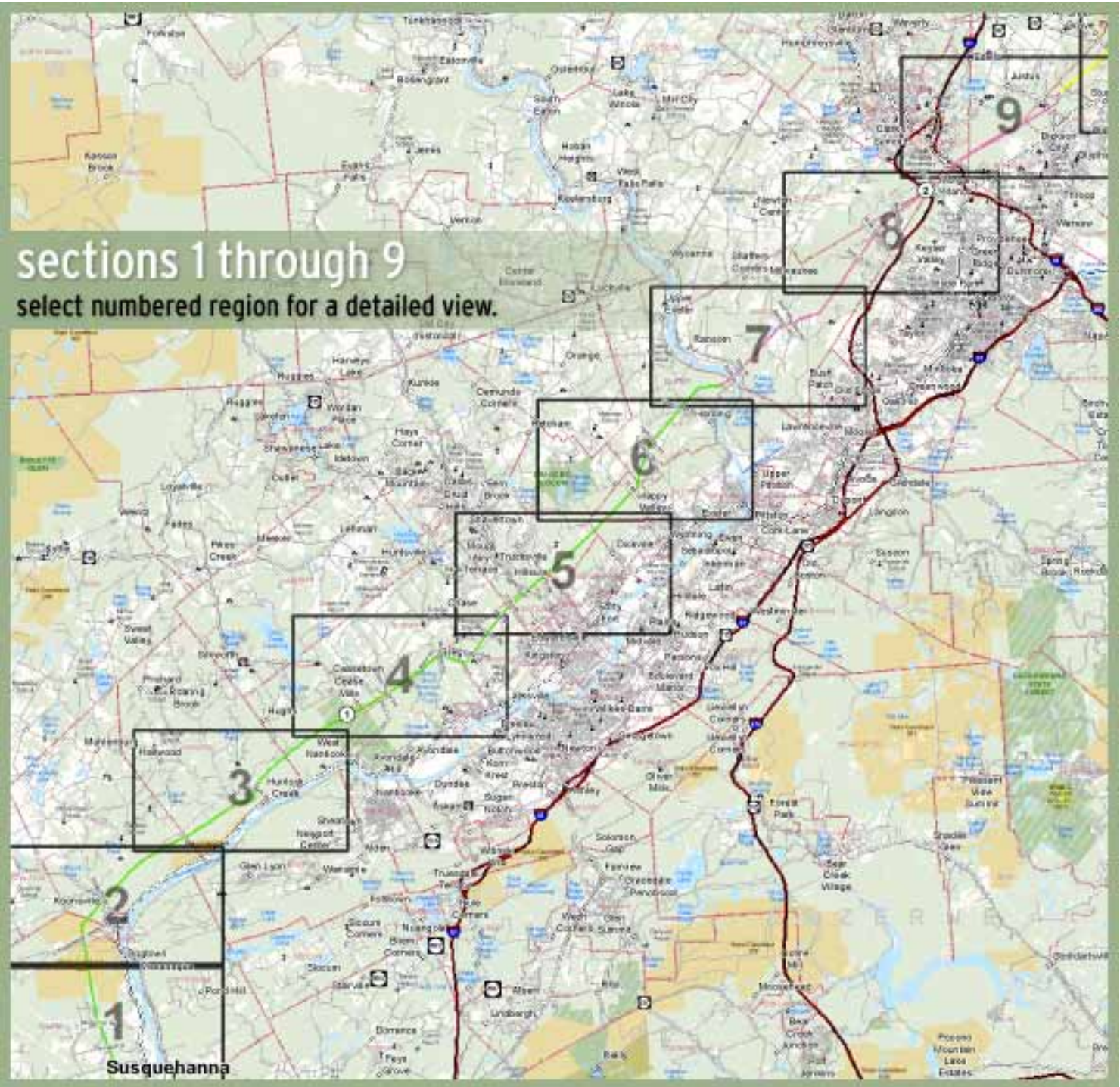
- Selected route submitted to the Pennsylvania Public Utility Commission for approval Jan. 6, 2009.
- Design and survey work will take place along the route during 2009.
- PUC review process takes about a year.

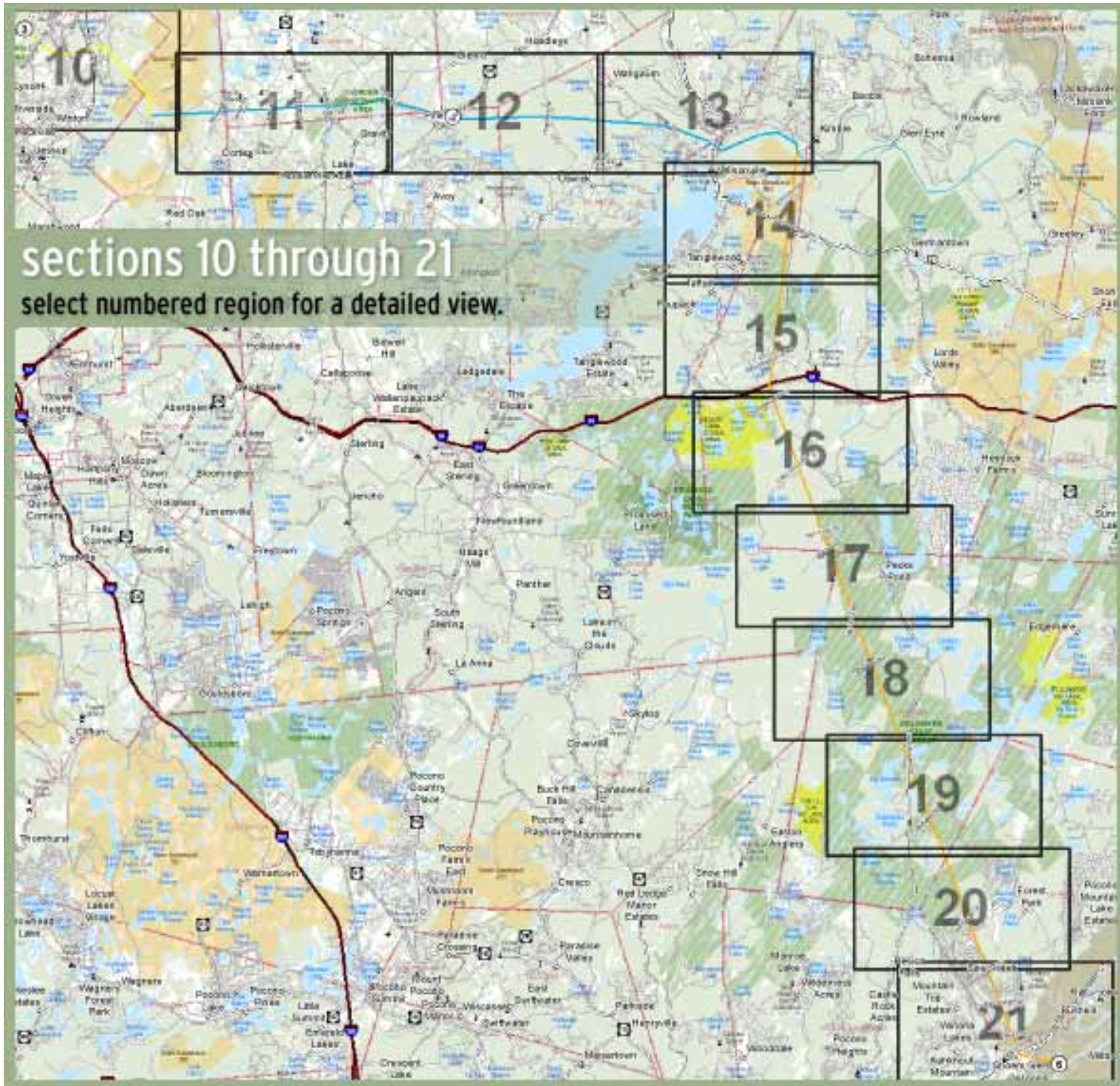
## Route B Chosen





<p><b>Legend</b></p> <ul style="list-style-type: none"> <li>• Population</li> <li>• Airport</li> <li>• Highway</li> <li>• Water</li> <li>• Interstate</li> <li>• State Road</li> <li>• Local Road</li> </ul>	<p>— Acquisition Fee</p> <p>— Utility</p> <p>— Water</p> <p>— Sewer</p> <p>— Gas</p> <p>— Fiber Optic</p>	<p>• New Year</p> <p>• New Year</p> <p>• White Landfill</p> <p>• Landfill</p> <p>• Landfill</p> <p>• Landfill</p>	<p>• Landfill</p> <p>• Landfill</p> <p>• Landfill</p> <p>• Landfill</p> <p>• Landfill</p>	<p><b>SR Line Segments</b></p> <ul style="list-style-type: none"> <li>• SR Line Segment</li> <li>• SR Line Segment</li> <li>• SR Line Segment</li> <li>• SR Line Segment</li> <li>• SR Line Segment</li> <li>• SR Line Segment</li> </ul>	<p>0 1000 2000 3000 Feet</p> <p>Map of the State of California, showing the location of the project area in the Central Valley region.</p> <p>Project: [Project Name]</p> <p>Map Date: [Date]</p> <p>Map Scale: [Scale]</p>		<p><b>LBG</b> LAND BANKING <b>CAI</b></p>	<p>The Overview Supplement to Record Plan Number 11, 2016</p>
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# Major Issues

## ▶ Need

- PPL made a strong case that the S-R Transmission Line was needed to provide reliable service and to comply with mandatory NERC Reliability Standards.
- Principal “need” factor related to numerous NERC reliability violations identified in PJM’s 2007 and 2008 RTEP process.
- These reliability violations were identified on critical 230 kV and 500 kV circuits in eastern PA and northern NJ.
- Three route alternatives were identified. The S-R alternative was selected as it involved using the most existing ROW, resolved all reliability problems and provided the most reduction of congestion in the region.

# Major Issues

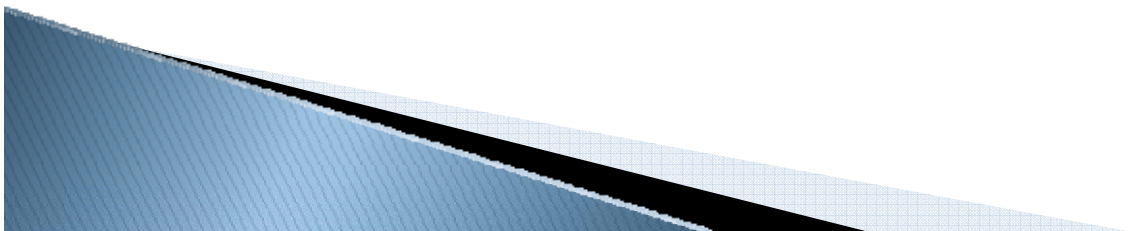
## ▶ Need

- Opposing parties criticized PPL's "need" presentation because: (1) did not consider current peak load (which showed a decline); (2) did not consider PJM demand response proposals and conservation plans being implemented in PA; and (3) that a cost-benefit analysis needed to be performed.
- The ALJ, upon consideration of all arguments, agreed with PPL's presentation and rejected the positions put forth by opposing parties.
- Another argument raised by PPL was that the line was designed with regional reliability considerations in mind. Certain parties argued that the focus should be more on PA specific benefits.

# Major Issues

## ▶ Need

- ALJ rejected the notion that “need” is satisfied only by consideration of PA specific concerns without consideration of the needs of the region.
- Rejected a consideration of all alternatives (both transmission and non-transmission related).
- Rejected application of a strict cost-benefit analysis.



# Major Issues

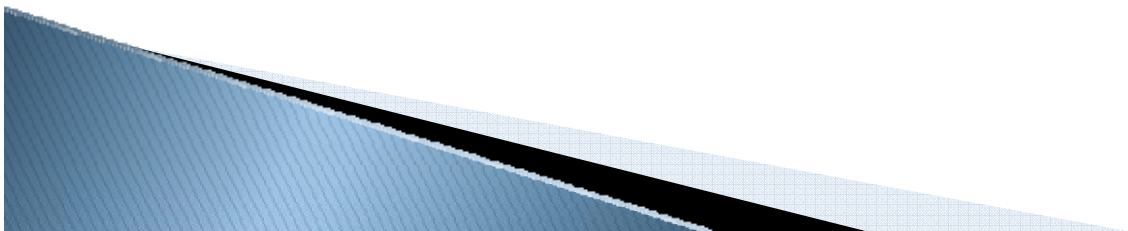
## ▶ Siting

- PPL did a commendable job of complying with the detailed requirements relating to impacts of the line on land use, soils and sedimentation, sensitive habitats, archeologic and historic areas.
- Issues raised by environmental groups relate to the degree to which wetlands and natural areas were impacted as well as proximity to residential structures. One group alleged that the chosen route, Alternative B, was “pre-selected.”
- However, the thorough nature of the presentation by PPL negated this concern.
- EMF and aesthetic considerations were an issue for one large residential vacation community in the Poconos region.

# Major Issues

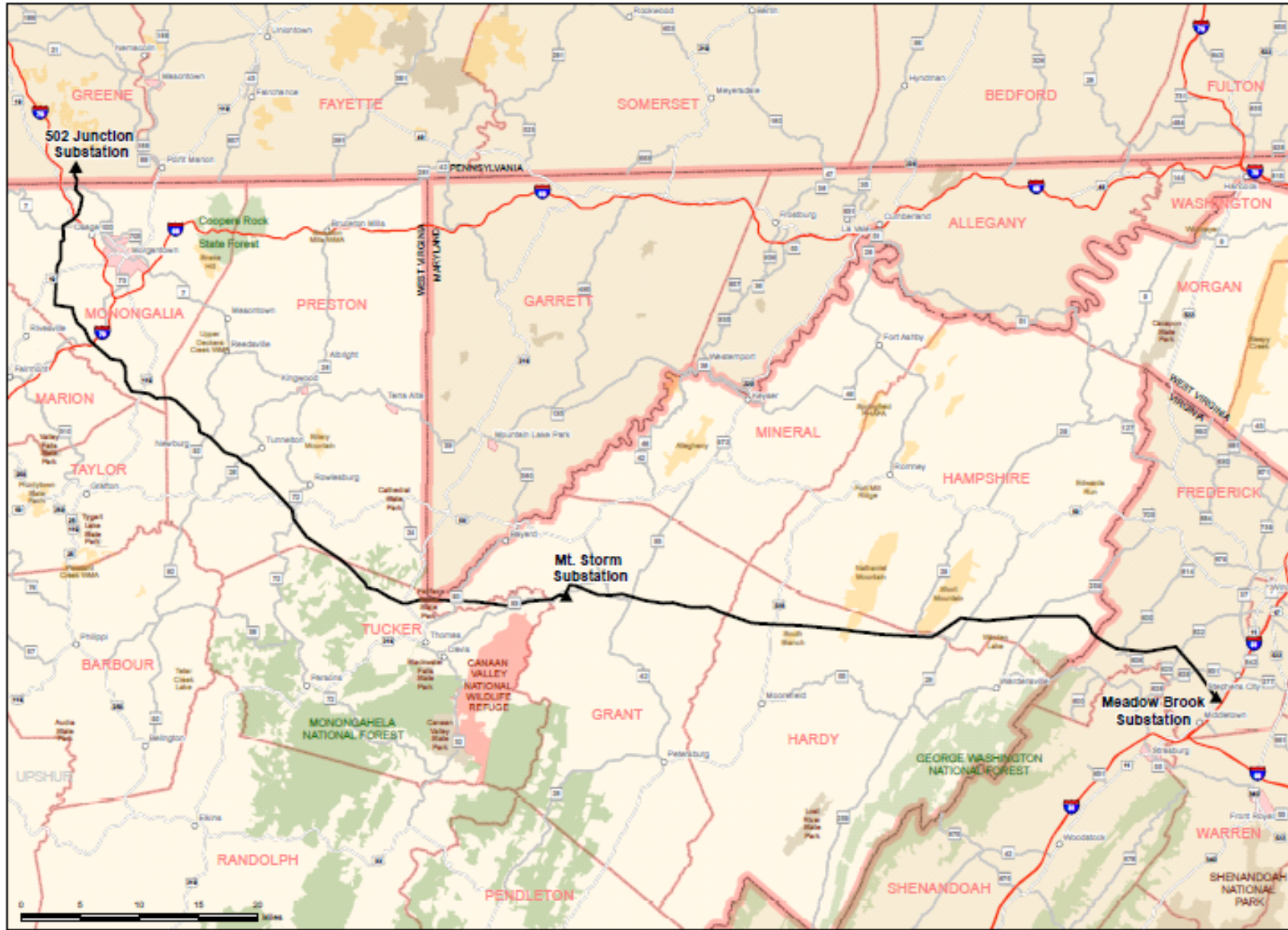
## ▶ Siting

- Concern over impacts on the Delaware River National Recreation Area and need for an EIS.
- Other issues: aesthetics, tourism, real estate values, cost allocation (retail vs. wholesale).
- ALJ recommended approval. Commission agreed with considerations.



# Description of the TrAILCo Project (PA Section)

- The Trailco Line proposed by Allegheny Power (AP) involves three segments located in PA, WV and VA. Three state commissions required to rule on three applications.
  - PA portion consisted of two pieces: (1) a 1.2 mile 500 kV junction segment starting in Greene County in southwest PA to the WV line (502 Junction Line) and (2) a 500 kV line connecting two substations and three 138 kV lines totaling about 31 miles (the Prexy Line).
  - The line would only impact two PA counties.
  - The PA portion was only one segment of the larger Trailco Line traversing eight counties in WV and several counties in VA. PA application involved request for a CPC, eminent domain authority and affiliated interest approvals.



**Proposed Route**

- Legend**
- Populated Place
  - ▲ Substation
  - Proposed Route
  - Interstate
  - US Highway
  - State Highway
  - State or National Park
  - US Census Urban Areas
  - State or National Forests
  - Wildlife Mgt. Area/Game Lands
  - National Wildlife Refuge



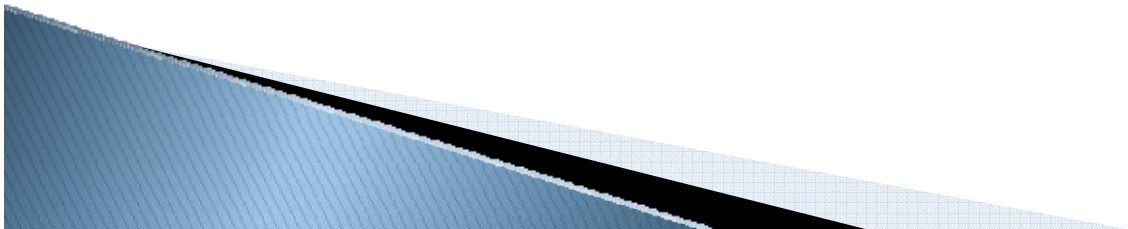
Geographic Coordinate System:  
 Universal Transverse Mercator (UTM)  
 Datum: North American Datum of 1983 (NAD83)  
 Zone: 17N  
 Projection: Transverse Mercator  
 Linear Unit: Meter  
 Ellipsoid: Geoidetic Reference System 80



Sources: WV Department of Natural Resources, MD Department of Natural Resources, VA Department of Conservation and Natural Resources, WV GAP Analysis, etc.

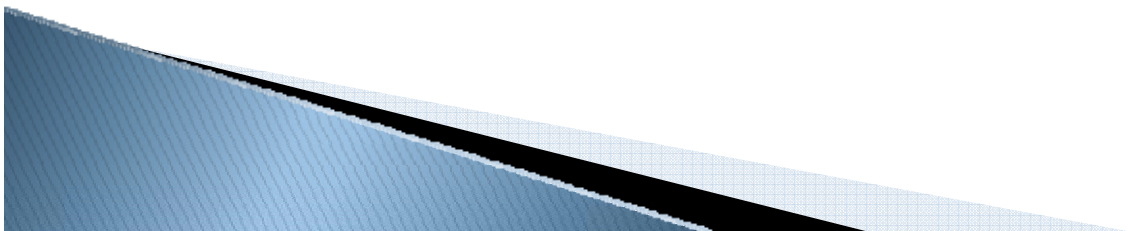
# Major Issues

- ▶ Need for the line- PA vs. regional reliability concerns.
- ▶ Route evaluation and siting- very contentious with organized opposition from two counties and a coalition of environmental groups.
- ▶ EMF and herbicide/pesticide use.
- ▶ Eminent domain issues.
- ▶ Customer outreach methods.



# Major Issues

- ▶ Consideration of alternatives to constructing the line such as upgrading existing lines, demand response and recognition of conservation and energy efficiency measures.
- ▶ Parties ultimately settled the case resulting in a proposal to construct only the 1.2 mile segment, modifications to existing interconnections and agreement to forgo the Prexy Line.



# Statutory Authority For Transmission

- ▶ Primary statutory authority emanates from the Public Utility Code, 66 Pa. C.S. § 101, et seq.
  - Section 102 (Definition of Public Utility).
  - Section 1102 (Certificate of Public Convenience Statute – requires a showing of technical and financial fitness and public need).
  - Section 1501 – (Establishes requirements for services and facilities of a public utility).
  - Section 2805 – (Regional reliability must be considered in determining “need” for a transmission line).
  - Section 1511(c) of the PA Business Corporation Law – (Establishes standards for eminent domain determinations).
  - Section 10619 of the Municipalities Planning Code governs siting of a public utility structure in a municipal setting.

# Regulatory Requirements

- ▶ Regulatory Requirements are at 52 Pa. Code § 57.71-57.76
  - Regulations require provision of large amounts of information.
  - Particular attention to routes and route alternatives; location of population centers; location of areas of archeological/geologic/historic/scenic/wilderness areas; environmental, health and safety considerations.
  - Filing and service requirements.
  - Requirements for hearing and notice including efforts to minimize impact on the environment, including land use, plant and wildlife, terrain, hydrology, and areas of scenic and wilderness concerns.

# Regulatory Requirements

- ▶ Regulatory Requirements are at 52 Pa. Code § 57.71-57.76
  - Specific requirements re: standards for granting eminent domain authority.
  - Findings required by the Commission including a determination of:
    - Need for the line.
    - No unreasonable risk of danger to public health and safety.
    - Compliance with applicable statutes and regulations providing for protection of state resources.
    - Minimal environmental impact, considering public need, available technology and available alternatives.