

**Sargent & Lundy Services:**

- ❑ Preliminary Engineering & Design Criteria
- ❑ Transmission Line Engineering & Design
- ❑ Technical Specifications for Material & Construction
- ❑ Constructability Reviews

At the direction of PJM Interconnection, the independent company that operates the electric power grid for a 13-state region including Pennsylvania, PPL Electric Utilities (PPL) will construct the Pennsylvania portion of the Susquehanna-Roseland 500 kV Transmission Line. The project is needed to maintain reliability and avoid overloading existing power lines in the region. After extensive studies and public workshops, a route was chosen for the new line that will maximize the utilization of existing rights-of-way.

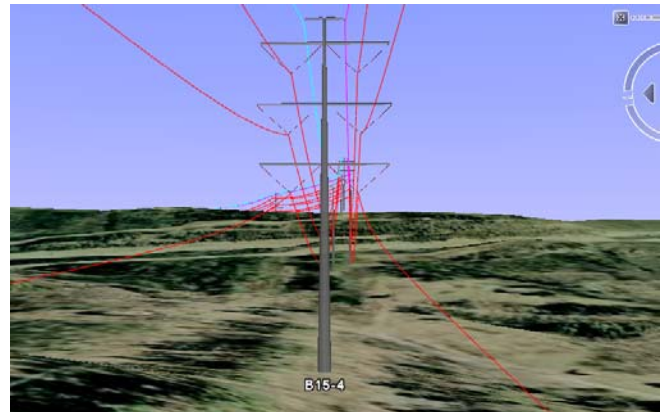
The selected route is approximately 100 miles long and runs north from Berwick, Pa., past Wilkes-Barre and Scranton, then east to Hawley and southeast to Bushkill where it crosses the Delaware River.



Existing River Crossing Span

Various structure types and configurations were evaluated to select the most cost-effective design for the mountainous terrain, while mitigating environmental and other concerns in forested areas and established residential developments. Conductor types were selected based on the required ampacity, audible noise criteria, and wide range of span lengths. Constructability was also an important consideration, since the line is located in the Pocono Mountains region with steep slopes, long valley crossings and a Delaware River crossing span.

Sargent & Lundy's scope of work included complete engineering of 100 miles of double-circuit 500-kV transmission line. Several miles of 230-kV transmission line were also designed as an extension to an existing line.



Computer Simulation of 500-kV Structures

As detailed engineering proceeded, structure lists, bills of material and specifications were developed for procurement of material. Specifications were also developed to obtain construction bids.

Siting, preliminary engineering and public outreach for the project began in 2008. PPL selected Sargent & Lundy to perform the engineering in January 2009. The Pennsylvania PUC issued the final decision approving the project in February 2010. PJM reaffirmed the need for the line in March 2011. The project is currently under review by the National Park Service (NPS) because it crosses – using an existing power line corridor – the Delaware Water Gap National Recreation Area, the Appalachian National Scenic Trail, and the Middle Delaware National Scenic and Recreational River. Final engineering, material procurement and construction contracting is expected to resume in 2012, once the NPS review is completed.

PPL Electric Utilities serves 1.4 million customers in 29 counties in eastern Pennsylvania, including the cities of Harrisburg, Allentown, Bethlehem, Lancaster and Scranton.