

# SUSQUEHANNA-ROSELAND TRANSMISSION PROJECT



**Sargent & Lundy Services:**

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

PPL Electric Utilities  
Allentown, PA

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.

**Route B Chosen**

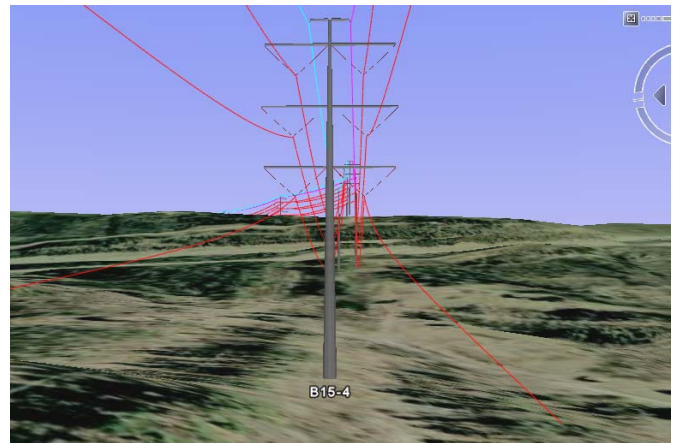


Transmission Line Route

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 of the state 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 transmission line, which was designed for two 500-kV circuits, but will be initially energized as one

500-kV circuit and one 230-kV circuit. 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. PJM reaffirmed the need for the line in September 2009 and a Pennsylvania PUC administrative law judge recommended approval of the project in November 2009. Engineering, material procurement and construction contracting will continue through most of 2010 as the permitting process is completed. PJM's required in-service date for the project is May 2012.

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

