TrAIL Frequently Asked Questions

Revised: August 8, 2006

What is TrAIL?

TrAIL stands for the Trans-Allegheny Interstate Line. In June 2006, PJM directed construction of $1.3 billion in electric transmission upgrades, including a 240-mile, 500-kilovolt transmission line extending from southwestern Pennsylvania to existing substations at Mt. Storm, W.Va., and Meadow Brook, Va., along with an interconnection with Dominion Virginia Power and continuing east to Dominion's Loudoun Substation.

The portion of the PJM region served by a company's transmission facilities is known as its transmission zone. Allegheny and Dominion will each construct the line in their respective transmission zones; approximately 210 miles of the new line will be within Allegheny's zone. In addition to the customers served directly by Allegheny, several municipal and rural electric cooperative systems are located within Allegheny's zone.

What is PJM?

PJM Interconnection is a Regional Transmission Organization (RTO) that manages electricity transmission services for a region that includes approximately 51 million people in all or parts of Delaware, Illinois, Indiana, Kentucky, Maryland, Michigan, North Carolina, New Jersey, Ohio, Pennsylvania, Tennessee, Virginia, West Virginia and the District of Columbia. Allegheny Power's service territory lies within the PJM region. Allegheny owns and operates the transmission system in its zone, but PJM has "functional" control of the grid across the region.

Briefly stated, PJM: coordinates the movement of electricity; ensures the reliability of the transmission grid; and plans transmission and generation expansion in 13 states and the District of Columbia.

Regional transmission organizations were established by FERC Order 2000 and are federally regulated entities with operational authority for all transmission facilities under their functional control. RTOs have planning authority for maintaining the short- and long-term reliability needs of the grid that it controls.

What did PJM approve?

In June, the PJM Board approved a 5-year regional electric transmission plan, which is designed to maintain the reliability of the region's transmission system.

As part of the plan, PJM authorized construction of $1.3 billion in electric transmission upgrades, including a 240-mile, 500-kilovolt transmission line from southwestern Pennsylvania to Virginia. The total plan upgrades will ensure continued grid reliability through 2011 and are estimated to reduce congestion costs by $200 million to $300 million annually.

To meet long-term needs through 2021, PJM directed additional studies and evaluation of 13 significant transmission line proposals totaling $10 billion of potential new investment, including the high-voltage transmission line projects proposed by American Electric Power, Allegheny and Pepco Holdings Inc. Those proposals build on the solutions identified in PJM's Project Mountaineer concept, unveiled in May 2005, for new transmission lines and potential corridors for transmission in the eastern half of the PJM region.

Why did PJM develop this plan?
PJM has the responsibility to ensure the reliability of the region's transmission system. Part of that responsibility includes planning for transmission expansion to address reliability issues.

The PJM planning group's report indicated a need for a new line connecting Prexy - 502 Junction - Mt. Storm - Meadow Brook - Loudoun. The line from 502 Junction to Loudoun will mitigate overloading on the Pruntytown-Mt. Storm, the Mt. Storm-Doubs and the Black Oak-Bedington 500kV lines, which are significant reliability issues. Not only does this route significantly increase transfers across the PJM region, but it also will strengthen the region's existing 500-kV system and reinforce its underlying transmission system, which will improve reliability.

What is reliability?
Electric reliability is affected by all four segments of the electricity delivery chain: generation, transmission, distribution, and end-use.

Transmission expansion specifically affects transmission system reliability, which is the collective performance of all of the elements of the electric transmission system that results in electricity being delivered to customers. The transmission system moves electricity at high voltages from power stations to substations. Reliability is enhanced when additional lines are added to the grid, proper maintenance occurs in a timely manner, and when grid operators are able to make adjustments, in real-time, to address fluctuations in system conditions, particularly during periods of peak demand.

Electric transmission system reliability can be addressed by considering two basic aspects of the electric system:

1. Adequacy—the ability of the electric system to supply the aggregate electrical demand and energy requirements of the customers at all times, and
2. Security—the ability of the electric system to withstand sudden disturbances (unanticipated loss of system elements).

The distribution system is the final stage in delivering electricity to consumers. It moves electricity at lower voltages from the substations to homes and businesses. Most momentary and sustained power outages result from disturbances on the distribution system such as weather, trees, animals and automobile accidents.

What is the timing for this project?
These lines are included in PJM's 5-year plan, which anticipates a completion date in 2011.

In what states will the new lines be located?
The line route has not been selected. Allegheny's portion of the proposed line is currently expected to run through Maryland (10 miles), Pennsylvania (40 miles), Virginia (40 miles) and West Virginia (120 miles).

What are the benefits of this project?
Benefits of the proposed transmission expansion include:

- improving transmission system reliability;
- meeting the growing demand for electricity;
- increasing west-to-east transfer capability, making cost-effective generation available to more consumers; and
- economic benefits for West Virginia and Southwestern Pennsylvania, including expanding markets for local coal, more jobs and the potential for new generation projects including clean-coal technologies and renewables, such as wind and hydro.

What will the new line cost?
A preliminary estimate of Allegheny's portion of the transmission expansion is approximately $820 million.

Who pays for transmission lines?
All electricity consumers ultimately pay for transmission services. In regulated states, such as West Virginia, these costs are included in the total price of electricity. In states that have adopted deregulation, those costs are itemized on a customer's bill. Typically, transmission represents about 10 percent of a customer's bill.

Who will pay for the new transmission project?
Under current cost allocations proposed by PJM in filings with the Federal Energy Regulatory Commission (FERC), costs associated with the 502 Junction – Mt. Storm – Meadowbrook – Loudoun portion of the line will be allocated to customers outside of the Allegheny Zone. All of the costs associated with the 502 Junction – Prexy portion of the line will be allocated to wholesale customers within the Allegheny Zone. This allocation would also include customers of municipal and rural electric cooperative systems within Allegheny's zone.

Under FERC rules, Allegheny is both a transmission owner and a wholesale customer of the services provided by the PJM transmission system. FERC sets the rates that PJM, on behalf of transmission owners, may recover from wholesale customers using the transmission system. Wholesale customers, such as Allegheny must then seek to recover those costs through retail rates that are approved by state commissions. Municipal and rural electric cooperative systems may not be subject to state regulation.

What will be the rate impact of these cost allocations on Allegheny customers?
Because the cost allocations have not been approved by FERC and remain subject to change during the approval process, we do not know the rate impact to Allegheny's customers at this time.

Why is this transmission expansion needed?
The line addresses imminent reliability problems and PJM's approval directs immediate action by Allegheny and Dominion to construct the line. PJM's planning process indicated a need for a new line to mitigate overloading on the Pruntytown-Mt. Storm, the Mt. Storm-Doubs and the Black Oak-Bedington 500kV lines.

Throughout the PJM region, the demand for electricity has increased significantly, while the transmission infrastructure has not increased at a proportional pace. This has led to greater reliability risks and higher prices for consumers.

Each utility's transmission system was originally constructed to meet its needs with limited capability to transfer power to neighboring utilities. Now, the combined PJM system serves as an integrated transmission network connecting generators to local distribution systems. Due to the growth in the demand for electricity, additional transmission lines are needed to improve the grid's reliability and reduce congestion so power can be transferred from where it is generated to where it is needed.

What is congestion?
The points in the transmission grid at which operations cannot take place are known by many terms: transmission constraints, "bottlenecks" or congestion points. Congestion describes the situation when the flow of electricity on the transmission system is constrained by the physical capacity of the line or associated equipment, such as transformers. These congestion points can limit the flow of power from one region to another, in much the same way that a three-lane highway reduced to two lanes will restrict the flow of traffic.

Is congestion really a problem?
PJM estimates the cost of congestion in 2005 to be more than $1 billion, which is ultimately paid by consumers.

On August 8, the U.S. Department of Energy released the National Electric Transmission Congestion Study authorized under the Energy Policy Act, which provides analysis of generation and transmission capacity across the U.S. and identifies critical areas that need attention to meet growing demand. "Electricity congestion increases consumer bills and challenges the reliable delivery of power to our homes. To ensure electricity reliability across the country, it is important that we do everything we can to facilitate investment in new generation and transmission capacity," Director of the Office of Electricity Delivery and Energy Reliability Kevin Kolevar said.

What is a "National Interest Electric Transmission Corridor"?
The Energy Policy Act of 2005 requires the Department of Energy to identify the areas that are experiencing electric energy transmission capacity constraints, or congestion. The Act provides the FERC authority to make sure these *National Interest Electric Transmission Corridors* receive priority treatment.

Why should the federal government be involved in the development and maintenance of the U.S. transmission grid?
Congress has charged FERC with overseeing the reliability and security of this critical national infrastructure. One of several ways they are doing this is by promoting and encouraging investment to expand and improve the electric transmission system. Other methods such as encouraging participation in regional transmission organizations such as PJM and review of reliability standards are other areas being considered by them.

When will the precise line route be determined?
Important: the line route has not been selected. The lines on the map are only showing the points that PJM determined to link electrically and the actual line route will probably be much different.

Initial engineering and line siting planning is underway with the lines targeted for completion in 2011. Construction of the line will make effective use of existing facilities, properties and rights-of-way.

Where are the two new substations?
Prexy is located in Washington County, Pa., northeast of the community of Eight Four. Allegheny has owned the property for more than 30 years.

502 Junction will be located in Greene County, Pa., east of the community of Mt. Morris. It will be located near the junction of two existing 500 kV lines that connect Kammer, Harrison and Fort Martin.

What agencies will have to approve this route?
Approvals will come from the regulatory commissions of states that the line crosses. In addition, approvals from some federal agencies, as well as various state and local authorities may be required to the extent that the line is subject to their jurisdictions.

Each of the four states where the project will be constructed has a Certificate of Public Convenience and Necessity (CPCN) requirement. Consequently, Allegheny expects to seek a CPCN from the West Virginia Public Service Commission, the Pennsylvania Public Utility Commission, the Virginia State Corporation Commission and the Maryland Public Service Commission.

When obtaining the necessary governmental authorizations to site and construct the project, Allegheny is committed to working with landowners, neighboring residents and business owners, and regulators to balance all interests in an effort to minimize environmental and land use impacts.

Does the public have any say in the line route?
We understand that siting a transmission line will be controversial. We will solicit public opinion during the routing studies. In addition, the public also will have the opportunity to participate in informational meetings at local levels and proceedings before state commissions as part of the regulatory approval process.

How will environmental impacts be considered with siting this route?
Environmental impact assessments will be conducted once the route is determined, and the final route selection will be a result of the least-impact alternatives. Establishment of a transmission line that results in minimal effect on the environment requires extensive engineering and planning on the part of Allegheny engineers and environmental specialists. The objective of the evaluation is to identify a route that minimizes, to the extent possible, the impact to the study area while maintaining the ability to construct a safe and reliable transmission line.

How will land be acquired for this project?
Utilities typically negotiate agreements with private property owners to acquire rights-of-way. Allegheny's experience has generally been positive in reaching acceptable agreements with property owners. In fact, a portion of the proposed line's right-of-way in southwestern Pennsylvania that has already been obtained as part of a previous transmission line project may be used. Allegheny will endeavor to minimize the use of eminent domain.

Will the construction of this line result in increased emissions from coal-fired power plants?
No, the proposed line will not be in service until 2011 when new EPA CAIR and CAMR rules will be in place. We do envision that this line may improve the transmission grid's ability to add new generation sources, including clean-coal technologies, renewables such as wind and hydro, and natural gas.