

## **THE AEP INTERSTATE PROJECT – FAQs**

### **What is the AEP Interstate Project?**

The proposed AEP Interstate Project consists of a 765 kilovolt (kV) line connecting AEP's Amos 765 kV station to Allegheny Power's Doubs 500 kV station in Maryland, and terminating at Public Service Electric & Gas' Deans 500 kV station in New Jersey. The total proposed line length is approximately 550 miles. The project will greatly improve power transfer capability from the Midwest to the Mid-Atlantic states. Transfer capability improvements are expected to be approximately 5,000 megawatts (MW) with transmission line loss reductions of approximately 280 MW at peak loading conditions.

### **What is the timing for this project?**

We expect the project to be in service in 2014. It will take about three years to obtain certification, with the process beginning later this year or early next. Construction is expected to take approximately five years after certification is complete.

### **In what states will the AEP Interstate Project be located?**

AEP has identified a potential route for the proposed line that will start in West Virginia, traverse Maryland and Pennsylvania, and end in New Jersey.

### **What are the benefits of this project?**

The AEP Interstate Project also will:

- Improve market efficiency with reduced congestion and lower consumer costs in the East.
- Improve peak West-East transfer capability by approximately 5,000 MW.
- Reduce network losses by approximately 280 MW at peak loading conditions.
- Allow high cost areas in the East to access more competitive generation in the Midwest.
- Improve economic conditions in the East due to lower prices.
- Provide a strong and reliable transmission platform to improve reliability of major metropolitan areas in the East, including Washington, D.C.; Baltimore, MD; Philadelphia, PA; and Wilmington, DE.
- Provide more flexibility and opportunity to locate new and environmentally friendly generation to meet future demand growth or to replace generation retirements.
- Midwest generation surplus that is transported east as a result of this project benefits Midwestern customers who have cost-based rates.

### **What will it cost?**

The project is expected to cost \$3 billion, assuming overhead construction and excluding any necessary related upgrades that may be made by AEP or existing transmission owners. This is an estimate and is subject to change based on a detailed investigation to be conducted as part of the PJM Regional Transmission Expansion Plan (RTEP) Process. This cost does not include potential upgrades by incumbent transmission owners to integrate fully with the line.

### **Who pays for transmission lines?**

All electricity consumers pay for transmission services. In some states, those costs are itemized on a customer's bill while in other states these costs are bundled into the total price of electricity. Transmission costs typically constitute around 10 percent of a customer's bill.

### **Who will build the line?**

American Electric Power has formed a separate transmission company that will build, own and operate the line. This new company, AEP Transmission Company, LLC, will be operated as an affiliated transmission company. While AEP has put forth this proposal, it is possible that other utilities may participate in the project.

### **Why is this transmission line needed?**

The nation's transmission system has failed to keep up with the growing demand for electricity, the surge of generation additions in the past few years and the growing number of generation retirements. As demand grows, additional transmission lines must be built to move power from where it is generated to where it is used. Transmission reinforcements are needed to:

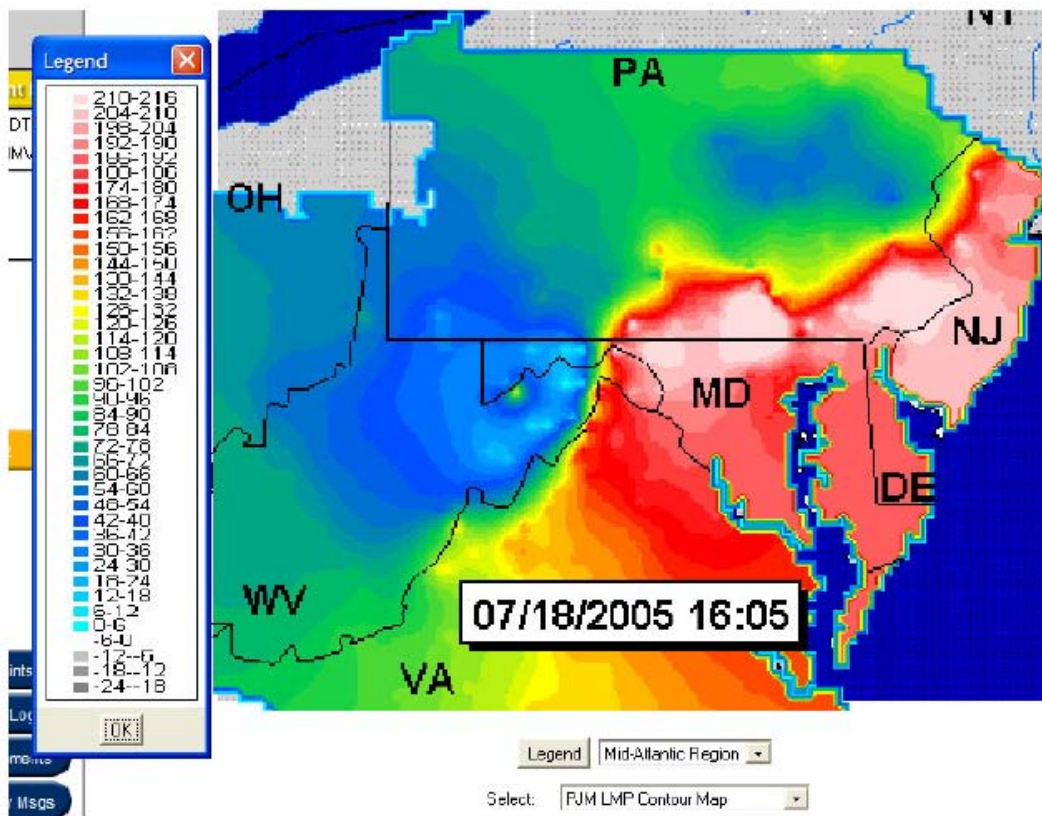
- Allow generators to compete head-to-head,
- Enable siting of more fuel-diverse, environmentally friendly generators with newer technology to achieve a stronger national energy position, and
- Provide a high degree of reliability to foster enhanced national security.

In the case of the need for the AEP Interstate Project, the demand for electricity has increased significantly, while the transmission infrastructure that supports movements of bulk power has not increased at an adequate pace. This has led to higher prices for consumers and subjected them to greater reliability risks. The AEP Interstate Project should reduce transmission congestion, improve economics for consumers, increase overall reliability and foster a climate of improved economic development throughout the region.

### **What is congestion?**

Congestion is the term used in electric markets to describe the situation in which the transportation of electricity between producer and consumer is constrained by inadequate transmission capacity, which leads to higher prices for the consumer.

The map below (excerpted from PJM's website) shows locational marginal prices for the PJM markets on the afternoon of July 18, 2005. The scale on the left of the image shows the price gradient for this snapshot in time. The highest energy prices are depicted by light pink and red colors, while lower prices are the lightest blue color. These drastic differences over relatively short distances are due to congestion.



**Why does this situation exist?**

The U.S. transmission grid was largely constructed to meet local need with limited flexibility to transfer power to neighboring regions. This was not a matter of negligence, but a reflection of the needs of an earlier era. The transmission system has since evolved into a network where wholesale markets and bulk transfers of power from one region to another have begun to overload the modular structure of the grid. This dramatic increase in the use of the transmission system has led to a situation where it no longer meets the nation’s capacity needs.

**How big is this problem?**

Currently, due to the deficiencies of the transmission grid, congestion is impeding the development of competitive wholesale markets. In its *2005 State of the Market Report*, dated March 8, 2006, PJM states that congestion costs for 2005 were \$2.09 billion, or 179 percent more than the \$750 million reported for 2004. This is much higher than initial estimates. Nationally, the gross congestion cost is even higher.

**Will AEP’s proposed line conflict with the line that Allegheny Power announced it will build?**

No. The AEP and Allegheny Power projects are complementary. Even though the routes are roughly parallel, the demand is large enough to justify both lines. PJM, in a March

2006 filing with the U.S. Department of Energy, requested that corridors it has identified, the Allegheny Mountain Path and the Delaware River Path, be designated as National Interest Electric Transmission Corridors. The AEP line will address both these corridors and the Allegheny line will address the Allegheny Mountains path. Allegheny's route also is within its own service territory and will not serve an area as broad as AEP's line. Both lines are expected to be approved by PJM. In fact, PJM initially estimated that up to four lines would be needed to correct congestion in this area.

**Does the public have any say in the line route?**

Public opinion will be solicited during the routing studies, and will be considered as one of the impacts. The public also will have the opportunity to participate in proceedings at state and local levels as certificates and permits are being obtained.

**How will land be acquired for this project?**

Utilities typically negotiate agreements with private property owners to acquire rights-of-way. AEP's experience has generally been positive in reaching acceptable agreements with property owners. If negotiations fail to result in an agreement, utilities have the ability to use eminent domain proceedings to acquire right-of-way.

**What environmental impacts will be considered with siting this route?**

All appropriate environmental impact assessments will be conducted after the route is determined, and the route selection will be directly related to the least-impact options.

The line itself will yield improvements in overall system efficiency, reducing the need for generation by approximately 280 MW and net generation by 1-2 million MWh annually. This will reduce fossil generation and emissions.

**Will the construction of this line result in regulated emissions increasing from coal burning power plants?**

No. Two related issues would prevent this line from resulting in increased regulated emissions from coal-burning power plants. First, the line will not be in service until 2014. All existing and future power plants are subject to individual emissions limits and an overall cap that will result in reduced emissions in the future. Second, existing Midwestern coal plants supply native load in the Midwest. This line will provide generation deficient Eastern markets with ready access to greater fuel diversity from a variety of generation sources that will be built in coming years, including clean-coal technologies such as Integrated Gasification Combined Cycle (IGCC), renewables such as wind and hydro, and natural gas.

## **REGULATORY AND GOVERNMENT POLICY**

### **Who will have to approve this route?**

Approval will come from PJM, and the regulatory commissions of states that the line crosses. In addition, approvals from other federal, state and local authorities may be required to the extent that the line is subject to their jurisdictions.

### **Who will set the rates for the project?**

The Federal Energy Regulatory Commission will set the rates that the line owners can charge for transmission services.

### **Why should the federal government be involved in the development and maintenance of the U.S. transmission grid?**

In order to assure system reliability and security, the federal government needs to promote and encourage capital investment in expansion, improvement and operation of all facilities for the transmission of electric energy. The federal government needs to promulgate rules and policies to attract capital investment in the electric energy infrastructure for interstate commerce.

### **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 that adversely affects consumers. The Energy Policy Act provides the Federal Energy Regulatory Commission authority to make sure these “National Interest Electric Transmission Corridors” receive priority treatment. We believe the AEP Interstate Project should be designated as one of those corridors. It was first identified by PJM in conceptual form, in PJM’s “Project Mountaineer” proposal.

## **TECHNOLOGY**

### **Why are you proposing a 765 kV transmission line?**

The 765 kV transmission line represents the most efficient type of transmission for moving power the long distances needed to meet the economic benefits described above. More power can be moved with lower losses and less siting impact than if multiple lower voltage transmission lines were used to reach the same capacity.

In an effort to develop an advanced interstate transmission system, it is essential to leverage the existing 765 kV transmission infrastructure. The 765 kV system can provide effective connectivity across states and to lower voltage transmission systems. Also, the existing 765 kV system provides an opportunity to build upon the knowledge and experience gained while meeting the goals of national transmission reliability and security enhancement.

### **What are the advantages of 765 kV?**

Larger capacity lines allow for greater flow of electricity from generation plants in a broader area. This means low-cost generators in a much broader area can actually

compete head-to-head, providing access to lower cost generation to customers currently isolated from it. Additionally, an expanded 765 kV network will increase opportunities for green power, such as wind farms located in remote areas far removed from load centers. From a siting standpoint, 765 kV is much more efficient in terms of economies of scale and right-of-way than lower capacity lines. A 765 kV line requires a much narrower right-of-way than multiple smaller lines needed to transmit the same amount of power.

## **SUPPLY/ENVIRONMENTAL**

### **How will this line help environmental considerations?**

By easing congestion, the line will yield improvements in overall system efficiency, reducing capacity and generation needs, and therefore air emissions.

In the longer run, we expect the line will help further development of new, environmentally friendly technologies such as Integrated Gasification Combined Cycle or renewable power, as it eliminates current congestion problems. Less congestion will help new clean coal technologies such as IGCC near low-cost coal resources and help in the siting of wind plants in the most windy areas of PJM. Because broader market penetration of these technologies depends on 'learning curve' improvements that only occur as more generation facilities are constructed, a less congested transmission grid also will play an important role in reducing costs and improving efficiencies of these technologies over time.