



AEP INTERSTATE PROJECT ADDRESSES THE GOALS OF THE ENERGY POLICY ACT OF 2005 TO STRENGTHEN THE NATION'S ENERGY POSITION

The United States economy demands a robust electric transmission interstate system for the 21st century. When President George W. Bush signed the Energy Policy Act on August 8, 2005, he said, "We have a modern interstate grid for our phone lines and our highways. With this bill, America can start building a modern 21st-century electricity grid, as well."

AEP believes that electric transmission can and should be developed into our nation's next interstate system. We believe our highly efficient and reliable 765 kilovolt (kV) network is the logical foundation for this effort. The goal for transmission development must be a higher degree of transparency to enable our nation:

- To allow generators to compete head-to-head, lowering costs to consumers;
- To encourage siting of more fuel-diverse, newer technology, and environmentally friendly generators to achieve a stronger domestic energy position; and
- To provide a higher degree of reliability to foster enhanced national security.

Toward this goal, AEP is proposing that AEP Transmission Company, LLC, develop a 765 kV transmission line and associated facilities originating at our Amos 765 kV station in West Virginia through Allegheny Power's Doubs Station in Maryland, and terminating at Public Service Electric and Gas' Deans Station in New Jersey. The line will be approximately 550 miles long and will employ all available technological advancements to optimize corridor performance. It will cost approximately \$3 billion nominally (if built overhead, excluding necessary related upgrades by incumbent utilities). The projected in-service date is 2014, assuming three years to site and obtain certifications, and five years to construct.

The benefit of this major transmission development will be substantial congestion relief as indicated by the following:

1. Midwest-to-East transfer capability improvement of approximately 5,000 MW, the published goal of PJM's Project Mountaineer;
2. Approximately a 280 MW peak-hour loss reduction. The line also will encourage the development of interim transmission investment by incumbents that eventually will integrate into the 765 kV transmission line once in service.

According to the PJM *2005 State of the Market Report*, PJM congestion costs in 2005 were \$2.09 billion, or 179 percent more than the \$750 million reported for 2004. Congestion is the term used 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.

Congestion is an unnecessary burden to consumers and creates an unacceptable market condition that is far from efficient. We expect the AEP Interstate Project to provide significant congestion relief, while improving reliability in a region of the country that exceeds 50 million in population.

The AEP Interstate Project will reduce transmission losses by approximately 280 MW during peak loading conditions. This reduction in losses produces two forms of savings to the system. First, the system needs less connected capacity to operate reliably. The loss savings over all hours would be similar to avoiding approximately \$175 million (nominal) in capital investment for a combined cycle plant. Second, energy savings from the reduced losses should exceed \$30 million annually. These savings are estimated by multiplying the reduced loss amounts by the average quantity saved from losses by PJM's average Locational Marginal Prices in the zones the losses primarily occur within. Using a 30 percent loss factor for the 280 MW peak (essentially 84 MW for all hours of the year), and the PJM Market Monitor's report for 2004 value of \$42.40 per MWh, consumers would save more than \$30 million annually. The eastern portion of PJM will experience the bulk of reduced losses. This area has historically experienced higher energy prices than those used in this calculation.

The AEP Interstate project will also encourage the siting of more fuel-diverse, newer technology, and environmentally friendly generators to achieve a stronger domestic energy position. Also, older generating plants that are uneconomical for environmental control retrofits can be retired if there is transmission support (thus avoiding reliability-must-run contracts).

The blackout of August 14, 2003, affected more than 50 million people and had societal costs of from \$6 billion to \$10 billion, based on industry and government assessments. The blackout stopped at the threshold of AEP's strong 765 kV network. The AEP Interstate Project will help to improve reliability to reduce the probability of future occurrences or mitigate the spread of a blackout should it occur.

The AEP Interstate Project will enable a significant part of the United States to achieve lower costs, better reliability, and better development of future generation technology.