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## **PJM GRID OPERATOR PLANS BILLIONS IN TRANSMISSION IMPROVEMENTS TO MEET MASSIVE GENERATOR FUEL SHIFT**

*750 transmission projects authorized in 2012*

(Valley Forge, Pa. – March 7, 2013) – Massive shifts in the fuels used to generate electricity are requiring major investments for electric transmission grid improvements, a recent study by PJM Interconnection reveals. In 2012, PJM, which plans improvements to the regional power grid, authorized more than 750 electric transmission improvement projects with a total cost of more than \$5 billion.

PJM's recently published report on electric transmission planning details how electric grid upgrades and construction maintain reliable electric supplies while meeting the challenges of power plant retirements, the rapid switch to natural gas, the growth of wind power and states' renewable energy requirements. PJM operates and plans the transmission grid serving 60 million people in 13 states and the District of Columbia.

Between Nov. 1, 2011, and Dec. 31, 2012, PJM received 104 retirement requests for 13,868 megawatts of generation – about enough electricity to supply Indiana's needs for a year. Most of the retirements were related to more stringent environmental regulations combined with low natural gas prices. The trend continues in 2013 with formal notice in January of the retirement of an additional 1,697 megawatts of generation.

"We've never had to cope with generation retirements or fuel shifts on this scale," said Steve Herling, PJM vice president of transmission planning. "The fact that we're able to respond to these changes so efficiently shows the strength of the planning process and the skills of planners both in PJM and the 14 transmission owners within the PJM region."

PJM's analysis identified the need for more than 130 grid updates to avoid reliability problems resulting from the power plant retirements. The \$2.4 billion in solutions include equipment upgrades, new substations and substation additions, rebuilding existing lines and construction of new transmission lines.

For example, about \$174 million worth of major projects are required in the Mid-Atlantic region to solve reliability problems caused by the retirement of generating units in Pennsylvania and New Jersey.

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## PJM PLANS BILLIONS IN TRANSMISSION IMPROVEMENTS / Page 2 of 2

Most generator retirements were in the western region of PJM, including western Pennsylvania, Ohio, West Virginia, western Maryland and Indiana. In particular, retirement of generators along Lake Erie in Ohio will require significant transmission upgrades in and around Cleveland. About \$341 million in major projects were authorized to resolve generator-retirement problems in the PJM western region. In total, 137 transmission upgrades were approved.

In Virginia, PJM authorized \$293 million in major transmission projects to solve reliability problems caused by retiring generators.

As some generation retired, PJM saw a record amount of new generation in one year, most of it natural gas-fired.

Meanwhile, PJM continues to study the effects of existing wind power on the grid and to plan transmission changes to handle it. The PJM report identified nine grid stability problems at eight locations in Delaware, Illinois and Virginia resulting from conditions related to wind power on the grid. PJM planned and authorized \$97 million in transmission projects to ensure that energy from generators, such as wind power, that typically run during overnight “light-use” hours can be delivered without causing stability problems.

Wind power on the grid is expected to grow because many states require a certain amount of electricity sold in the state to come from renewable sources. PJM continues to evaluate the new transmission lines and improvements that will be necessary to add the wind power needed to meet state renewable energy requirements. The study includes off-shore wind and imports of wind-powered electricity from other regions.

PJM’s 1,000-page report on transmission planning, the [PJM Regional Transmission Expansion Plan in Review](#), documents these and other grid needs and related construction and upgrade projects throughout the PJM region.

*PJM Interconnection, founded in 1927, ensures the reliability of the high-voltage electric power system serving 60 million people in all or parts of Delaware, Illinois, Indiana, Kentucky, Maryland, Michigan, New Jersey, North Carolina, Ohio, Pennsylvania, Tennessee, Virginia, West Virginia and the District of Columbia. PJM coordinates and directs the operation of the region’s transmission grid, which includes 59,750 miles of transmission lines; administers a competitive wholesale electricity market; and plans regional transmission expansion improvements to maintain grid reliability and relieve congestion. Visit PJM at [www.pjm.com](http://www.pjm.com).*

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