

PJM Builds for the Future

INVESTING IN TRANSMISSION
BY MICHAEL KORMOS

(GUEST OPINION)

➔ **Peak demand for electricity is forecast to increase by 17.7 percent over the next 10 years.**

The expansion of the high-voltage electric transmission system is critical in meeting this national need. As the nation's largest regional transmission organization, PJM Interconnection is realizing unprecedented growth in transmission investment in its 13-state region.

New backbone transmission infrastructure is required not only to ensure reliability, but to enable the movement of lower-cost power to where it is needed. Through its regional transmission expansion plan, PJM emphasizes both reliability and economics in its coordinated effort to meet the needs of the region, which encompasses states in the Mid-Atlantic and Midwest.

Transmission investments in PJM in recent years have focused on interconnecting generation and upgrading existing equipment to ensure reliability. The existing backbone transmission system, largely completed in the 1960s, has served the region's needs well for several decades. But rising electricity demand, lagging investment to replace retiring generators and the growth of wholesale markets require additional infrastructure to ensure future reliability and improve economic efficiency.

PJM and its members have responded to this need, and four new backbone transmission projects requiring the construction of about 900 miles of transmission lines are now in the development stage. The combined investment will be nearly \$5 billion.



Michael Kormos

Key developments, one internal to PJM and the others at the national level, have driven a renewed emphasis on bulk transmission investment in PJM.

In 2006, PJM gave its regional transmission planning process a broader focus by extending the planning horizon out 15 years to better address the evident need for major transmission investments and for upgrades to maintain grid reliability and improve economic efficiency. PJM's process, which began in 1997, previously had been based on a short-term, five-year planning horizon. The first regional plan was approved by the PJM board in 2000.

Through this long-range regional process, PJM identifies what changes and additions to the grid are needed to ensure reliability and effective markets. PJM's open and extensive review process enables all interested parties, including state regulatory agencies, to have an active role in planning for future electricity supply and reliability needs.

Drawing on the views of stakeholders, members and other parties participating in the transmission expansion advisory committee, the regional transmission expansion plan assesses the overlapping impacts of growth and other developments in the broad, multistate region, rather than in one state or one utility's service territory. In this way, the PJM planning process can determine the most effective and cost-efficient transmission solutions no matter where they are located in the region.

In a key development at the federal level, the energy act of 2005 made the expansion of the transmission system a national energy priority.

The law authorized the Department of Energy to designate national interest electric transmission corridors. In these corridors, backstop siting authority could be used to advance delayed projects needed to deal with transmission congestion. Much of eastern PJM has been designated as a national-interest corridor. Regardless of that designation, PJM and its members will continue to work closely with the states to address transmission-siting issues, as they have done in the past.

Another provision of the energy law authorized the Federal Energy Regulatory Commission to provide rate incentives for transmission investments that benefit consumers by ensuring reliability and lowering the cost of power by reducing congestion.

With these developments as the backdrop, the PJM board has, over the past two years, authorized the four major bulk transmission projects to be included in the regional transmission expansion plan. These lines, both 500- and 765-kilovolt, address reliability and congestion issues and represent an estimated investment by member transmission owners of nearly \$5 billion.

The PJM board has authorized a cumulative \$9.3 billion in transmission improvements since PJM's first regional transmission expansion plan was approved. Through the process, more than 21,100 megawatts of new generation have been interconnected.

PJM's long-term planning process and focus on the grid backbone, combined with the willingness of members to invest in new transmission infrastructure, bode well for the future reliability and economic benefits of the regional transmission grid. ☺

Michael Kormos is PJM senior vice president of operations.

The grid tells you millions of stories every hour.
They're all about your utility's performance.



And you're on top of them all.

A comprehensive suite of the most advanced, reliable, and proven AMI and MDMS technologies in the industry come from Aclara, a new brand built on the strong history of Hexagram, Inc. (STAR® Network), DCSI (TWACS®), and Nexus Energy Software. Aclara solutions deliver uninterrupted data capture, transfer, and processing, plus unprecedented visibility and control of every aspect of utility performance—now, and into the future.

Capturing data. Liberating knowledge.™
It begins at www.AclaraTech.com.

 **ACLARA™**
Aclara Technologies of ESCO