

AEP Integration Q&A

What does the “integration” of AEP into PJM mean?

It means that PJM Interconnection begins managing AEP’s eastern, or ECAR (East Central Area Reliability Council), control area on Friday, Oct. 1, 2004. PJM now has functional control of the flow of wholesale electricity over AEP’s nearly 22,300 miles of high-voltage transmission lines in AEP’s seven-state eastern region. PJM is responsible for the reliability of that transmission system, as well as for administering competitive wholesale electricity markets for AEP and other market participants.

AEP’s transmission and generation operations, commercial processes and data systems have been integrated into those of PJM. While AEP continues to use its low-cost generation to serve the needs of its native-load customers, and to sell available generation to other parties, it is performing those functions somewhat differently.

How long has PJM been a regional transmission organization (RTO)?

The Federal Energy Regulatory Commission granted PJM full status as an RTO Dec. 18, 2002. In 1997, PJM had become the first fully functioning independent system operators (ISO) responsible for safe, reliable operation of the transmission system as well as for administration of the competitive wholesale electric power market.

Did AEP sell its transmission system to PJM?

No. AEP, through its operating subsidiaries in its eastern region, continues to own the transmission system – the high-voltage lines, substations and other transmission-related facilities. PJM now functionally controls the system, provides electricity transmission services over it and acts as the Reliability Coordinator for the AEP control area.

What companies are joining PJM along with AEP?

Dayton Power and Light, based in Dayton, Ohio, is joining PJM at the same time as AEP. Also, approximately 20 municipal electric companies, cooperatives and generators located within the AEP footprint are joining PJM at that time.

What other companies belong to PJM?

Three hundred transmission owners, load-serving entities, market buyers, sellers and traders of electricity are members of PJM. On May 1, 2004, 21 organizations joined PJM, including Commonwealth Edison, the Chicago-based unit of Exelon. Allegheny Energy of Hagerstown, Md., joined PJM April 2, 2002. The region that includes Allegheny Energy, Commonwealth Edison and – now – AEP often is called “PJM West.”

Dominion, based in Richmond, Va., and Duquesne Light Co., based in Pittsburgh, have announced plans to join PJM.

How can PJM control a transmission system distant from its base of operations?

PJM is able to functionally control and monitor systems from its control centers in Valley Forge and Greensburg, Pa. A model of AEP's eastern transmission system has been incorporated into the sophisticated systems PJM uses to monitor the grid. In fact, PJM will not only be able monitor AEP's eastern system, but also systems around it that could affect the AEP system.

Why did AEP decide to join PJM?

FERC encourages utilities to join regional transmission organizations (RTOs) to support and foster robust wholesale power markets. A condition of AEP's merger in 2000 with Central & South West Corp. was AEP's entry into a FERC-approved RTO.

AEP chose PJM over other RTOs because it is the most established and mature of the FERC-approved RTOs adjacent to AEP's eastern service territory and has a proven performance record.

How will AEP's membership in PJM benefit consumers and the competitive electricity marketplace?

Retail customers will benefit from enhanced transmission service reliability. PJM also operates the largest competitive wholesale electricity market in the world. Membership in PJM will provide:

- Greater access to low-cost generation for transmission owners and other load-serving entities within the PJM footprint. The PJM region has nearly 135,000 megawatts of generation.
- Efficient energy, capacity and ancillary services markets where all market participants can buy and sell.
- Attractive customer options, such as real-time spot market trading and day-ahead pricing, among others.
- Market monitoring to ensure the rules are followed.
- The certainty of supply that comes from a liquid spot market for electricity.
- Many market participants attracted by fair, visible pricing.

What costs will AEP incur because of its membership in PJM?

AEP's administrative costs related to PJM membership are expected to be approximately \$50 million annually.

Will AEP customers experience cost increases as a result of AEP joining PJM?

Cost/benefit studies filed with the applicable state commissions show that AEP customers will not experience increased costs and may realize net benefits. Rate freezes in some AEP jurisdictions would prevent an immediate impact on customers.

How long has the AEP integration process taken?

AEP and PJM reached agreement in May 2002 that AEP would seek to join PJM. In late 2002, AEP requested approval from the applicable state commissions to transfer functional control of transmission. That regulatory process continued into August 2004. Virginia state law prohibited transfer of functional control of transmission assets in that state prior to July 2004. FERC approved AEP's application to join PJM in April 2003, affirmed its approval this year and established the integration date of Oct. 1.

The training, and the technical and logistical changes, required for AEP's integration into PJM started in 2002 and continued until the integration date.

What is the impact of AEP's membership in PJM on AEP's work force?

Minimal impact is expected in terms of number of jobs and changes to existing jobs. The primary impact is the training required. Several hundred transmission, commercial operations and generation employees have received training to adapt to changes associated with the PJM integration – mainly, use of new systems and processes. The integration will not change the day-to-day responsibilities of most AEP employees.

Was PJM affected by the August 2003 blackout?

Impact of the blackout on PJM was minimal.

How does PJM communicate emergency information?

When PJM operators believe emergency operation procedures may be implemented, or after the procedures already are initiated, PJM will relay that information to public utility commissions and state emergency management agencies as needed. PJM's communication system will supplement, not replace, existing emergency communications procedures of individual member companies.

PJM has a separate system for communicating with member transmission owners.

Will PJM and the Midwest ISO (MISO) have a formal relationship?

Coordination and cooperation will exist between PJM and the Midwest ISO. In August 2004, FERC accepted the terms of a Joint Operating Agreement

between the entities. The JOA establishes or formalizes a series of measures to enhance data exchange and other communications, flowgate coordination, coordination of long-term transmission planning, and emergency procedures between the two RTOs. It represents a major step toward development of a common market, which FERC advocates.

KEY STATISTICS*	PJM in 1993 when PJM was the PJM Inter-connection Association	PJM before adding ComEd and other NICA companies	PJM with ComEd and other NICA companies added on May 1, 2004	American Electric Power (AEP) Oct. 1 integration	Dayton Power & Light (DP&L) Oct. 1 integration	PJM with AEP and DP&L added (current as of Oct. 1, 2004)	Dominion Virginia Power Nov. 1 integration	Duquesne Light Jan. 1 integration
<i>member companies</i>	10	270	280	na	na	300		
<i>millions of people served</i>	22	25	35	7.75	1.25	44	5.5	1.5
<i>peak load in megawatts</i>	46,429	63,762	85,000	19,690	3,130	107,820	15,580	2,720
<i>megawatts of generating capacity</i>	55,575	76,000	106,000	23,800	4,450	134,250	22,800	3,400
<i>miles of transmission lines</i>	6,821	20,000	26,000	22,300	1,000	49,300	6,100	620
<i>gigawatt-hours of annual energy</i>	235,700	348,700	446,000	145,400	19,250	610,650	89,700	14,550
<i>generation sources</i>	540	660	800	136	48	984	81	18
<i>square miles of territory</i>	48,700	79,000	91,000	40,700	6,000	137,700	25,750	800
<i>area served</i>	5 states + DC	7 states + DC	8 states + DC	7 states in the East	1 state	2 states + DC	2 states	1 state
<i>* all numbers approximate</i>								