

American Electric Power, Columbus, Ohio, US

Barco helps AEP drive the safety & reliability of its energy services

“We see it as a true evolution: from static displays with tapes, over plasma TV and the existing video walls in our dispatch offices through to Barco, the leader in the field of visualization.”

Tim Cole, Transmission
Dispatching Director, AEP



Headquartered in Columbus, Ohio, American Electric Power (AEP) is one of the largest utilities in the United States, delivering electricity to over five million customers in 11 states. The nation's biggest generator of electricity, AEP manages more than 38,000 megawatts of generating capacity and the nation's largest electricity transmission system, a nearly 39,000-mile network. To further raise the reliability of this transmission system, AEP invested in a new 83,500-square-foot transmission operations center. The energy provider turned to Barco for the supply of high-quality video walls to monitor its transmission 24/7.

“The new center was a must for a couple of reasons,” Tim Cole, Transmission Dispatching Director at AEP, explained. “We were outgrowing our existing space and wanted a campus-like center that would allow AEP to continue its growth path. In addition, the equipment and capabilities of our operations center also needed updating to conform with tougher transmission reliability standards mandated by the Energy Policy Act of 2005. Last but not least, the Northeast Blackout convinced us that we needed a fully functional back-up center in case of a major incident.” AEP decided to set up a new facility, while its existing operations center in downtown Columbus would serve as a back-up and training center.

BARCO

Visibly yours

Barco stood out

When designing the new center, AEP was already pretty familiar with the concept of video walls. "For years, system operators had been working with static mimic boards and tabular data," Clinton Moses, Transmission Dispatch Manager, recalled. "As we wanted to provide them with an overview of the electrical grid to improve decision-making and situational awareness, we equipped our local dispatch centers with video walls." At the time, AEP purchased a non-Barco solution used by PJM, which manages the electric grid and wholesale electricity market in 13 states and the District of Columbia. That changed when the new transmission control center came in sight.

Barco invited AEP to Kansas City Power and Light, a Barco customer, where everyone was very enthusiastic about the video wall. In addition, Barco's solutions had already caught the attention of the AEP Vice-President during a show in Paris, in 2006. Based on its experience with video walls and lessons learned during visits to other utilities, AEP drew up a detailed request for proposals. Barco came out the winner on account of its unique features, e.g. the seamless stitched screen, the active color/brightness system and the powerful Apollo management software.

Monitor T&D operations

Experienced engineers from Barco and The Lerro Corporation equipped the AEP transmission control center with five Barco DLP walls: two walls consisting of 4x3 80" cubes and three 3x3 walls, with a dedicated Transform controller connected to each. "Five walls was a must to overview our complex operations," Tim Cole explained. "Two walls are used



for the security center side of our business. They act like a second pair of eyes that oversee the AEP transmission activities and interface with PJM and SPP, the regional transmission operators of the states where we deliver electricity. On two other walls we monitor transmission operations in the eastern and southern parts of Ohio, respectively. In addition, there is also one spare desk/video wall to serve as a back-up in the event of breakdowns, storm emergencies or disaster recovery for our other dispatch centers."

Moving to the next level

Operators at AEP were fairly skeptical about the new video walls, but soon discovered that Barco is a step-up in quality and efficiency compared to their trusted solution. "You can see that Barco has been in this business for many years," Clinton Moses said. He illustrated his statement with a few features that AEP greatly appreciates: "Besides the clarity, contrast and high resolution of the walls, we are particularly happy about the Sense6 active color/brightness balance system, which constantly evaluates/adjusts color value on each cube over IP. The seamless display, too, is a step-change to our former plasma solution, which had a 4-inch gap

between the cubes. That made it quasi-impossible to clearly view connectivity, which is key to our business. And our operators praise the user-friendliness, flexibility and rich functionality of the Apollo wall management software. It allows them to easily change info on the wall, to quickly switch between different info, to pre-configure the content with templates, etc. All in all, the wall enables AEP to make critical decisions faster during both normal situations and emergencies."

Leaders teaming up

Upon the inauguration of AEP's new transmission control center, Michel G. Morris, AEP chairman, president and CEO stated that "AEP's new transmission exemplifies our leadership in developing, demonstrating and deploying innovative technologies that will secure and protect infrastructures that are critical to our nation's electricity delivery system." AEP's choice of Barco clearly illustrates that commitment. "We see it as a true evolution: from static displays with tapes, over plasma TV and the video walls in our dispatch offices through to Barco, the leader in the field of visualization. We are confident Barco's video walls will support us for many years, along our growth path," Cole concluded.

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