

Transmission Expansion Advisory Committee
(TEAC)
Recommendations to the PJM Board

PJM Staff Whitepaper
October 2016



EXECUTIVE SUMMARY

On August 3, 2016 the PJM Board of Managers approved changes to the Regional Transmission Expansion Plan (RTEP), totaling \$636.45 million, including reliability projects, a market efficiency projects and cost changes to previously approved projects.

Since that time, PJM has identified an additional baseline reliability project to resolve a PSE&G local transmission owner planning criteria violation. The increase in the RTEP to include the upgrade to resolve the new baseline reliability criteria violation is \$43 million. The project, which will provide a third transmission source to the Newark International Airport is intended to be built in coordination with facilities associated with the Bergen – Linden Corridor project (i.e. BLC project) helping to minimize the cost of the overall project.

With these changes, the RTEP will include over \$29,062.42 million of transmission additions and upgrades since the first plan was approved by the Board in 2000.

The additional baseline project was presented for the Board Reliability Committee's consideration and recommendation to the Board for approval. At the October 2016 meeting, the PJM Board approved the updated RTEP as requested.

Under the existing planned configuration the Newark Airport load will be primarily served from two new 345 kV underground cable circuits that are part of the existing Bergen to Linden Corridor project. In addition several existing 26 kV circuits were intended to be used for back up. However, a portion of the property that the substation associated with the 26 kV circuits is located on is owned by the airport and will be needed by the Newark Airport to accommodate the new terminal.

Based on PSEG's FERC filed form 715 planning criteria, load of more than 20MVA cannot be dropped for more than 24 hours following the loss of two underground transmission lines. If one of the 345 kV cables planned to feed the airport is out for maintenance or a fault and a second cable trips, the 26 kV circuits that were intended to provide backup power will not be able to serve the entire load at the airport following the expansion project. Considering all of these factors, a third transmission source to the airport is needed.

Recommended Project

The recommended project to address the violation of PSE&G's FERC filed form 715 planning criteria is to introduce a third 345 kV source to the Newark Airport. A new underground 345 kV line between North Avenue and the Newark Airport is recommended. The new line is intended to be built at the same time portions of the BLC project are being built to take advantage of project design and construction synergies and reduce overall cost of the combined project. The expected cost of the project is \$43 million and is required to be in-service in 2018.

Review by the Transmission Expansion Advisory Committee (TEAC)

The need for the project and the recommended configuration was reviewed with stakeholders at several meetings throughout 2016, most recently at the September 2016 TEAC meeting. Written comments were requested to be submitted to PJM to communicate any concerns with the recommendation and any alternative transmission solutions for consideration.

Cost Allocation

As noted above, based on recent FERC order, cost for transmission upgrades that are required to exclusively address transmission owner FERC filed form 715 planning criteria are allocated to the transmission zone – in this case the PSE&G zone. Consistent with the Operating Agreement the allocations will be filed at the FERC 30 days following approval by the Board.

Board Approval

The PJM Board Reliability Committee endorsed the new baseline reliability project and associated cost allocations. The PJM Board Reliability Committee recommended to the Board approval of the baseline upgrade to the 2016 RTEP, and the PJM Board of Managers have approved the changes to the RTEP.