

IDENTIFICATION OF OFFLINE GENERATION RESOURCES FOR THE CALCULATION OF REAL-TIME SECONDARY RESERVE OPPORTUNITY COSTS IN SETTLEMENTS

Detailed instructions and process steps are available in M34, Section 6

PROBLEM / OPPORTUNITY STATEMENT

Tariff, Attachment K-Appendix, Section 3.2.3A.01(f)(v) and the parallel provisions in Schedule 1 of the Operating Agreement state that Secondary Reserve market opportunity costs for generation resources not synchronized to the grid, such as offline resources, should be zero.

Scenarios have been identified where generation resources were cleared and committed as offline resources with zero opportunity costs in the real-time market clearing, however non-zero real-time Secondary Reserve opportunity costs were calculated in settlements.

This difference is attributable to timing and source data differences. PJM's real-time security constrained economic dispatch ("RT SCED") software calculates the most efficient dispatch of resources on a ten-minute ahead basis, based on system conditions and resource parameters using real-time system data provided by the State Estimator application at the time the RT SCED case executes. Using this information, RT SCED calculates which resources to assign Secondary Reserves. In running this calculation, RT SCED treats offline resources as having zero opportunity costs in connection with Secondary Reserve assignments, pursuant to Tariff, Attachment K-Appendix, section 3.2.3A.01(f)(v). However, because of the ten-minute look-ahead period between the time RT SCED executes and the time for which the dispatch instruction and Secondary Reserve assignment becomes effective, resources that appeared offline to RT SCED may appear online in the revenue quality meter data if the resource came online in the intervening ten minutes and submitted a positive MW output for that interval. As standard practice, market settlements calculations use revenue quality meter data when determining resource output, and consequently online/offline status. This creates a disconnect between market clearing and settlement outcomes because such resources are consequently designated as online resources for real-time Secondary Reserve opportunity cost eligibility in settlements.

The Tariff and manual provisions governing Secondary Reserve lost opportunity cost do not specify what data should be used when determining a resource's online/offline status for settlements purposes. PJM and stakeholders have the opportunity to consider how a resource's online / offline status should be determined, for purposes of being compensated for real-time Secondary Reserve opportunity costs.