

Question

Why is my thermal (non-fast start) unit off-line when real-time prices indicate it should be running?

Answer

Your unit is not on-line because it did not clear in the DAM, and the ISO has not committed your unit to meet capacity needs during the RAA process. As described in a separate FAQ, the ISO commitment in the Resource Adequacy Assessment is not based on economic merit order but on minimizing the capacity costs of getting a unit on line. Therefore, for any re-evaluation of the RAA commitment is not done based on real-time prices. The RAA process simply ensures that there is sufficient capacity made available to meet the real-time load and reserve requirements. Real-time prices are the result of the dispatch of the resources made available through the DAM and RAA commitment processes.

When your non-fast start resource is not committed as a result of the DAM or RAA, your unit will not be committed by the ISO for the operating day. If real-time prices are such that you would like to have your unit on-line, you can submit a self-commitment/self-schedule request to the ISO. A self-commitment request, or self-schedule, must be submitted thirty minutes prior to the clock hour in which you are looking to come on-line. You should submit your requests to the Forecaster at (413) 535-4338 or 4340. They will review your request and respond back with an approval or denial within approximately 20 minutes. Self-commitment/self-schedule requests are denied only if acceptance would result in a reliability issue.

Question

What is the basis for the commitment decisions in the RAA process?

Answer

The goal of the RAA commitment process is to ensure sufficient resources are committed to meet real-time capacity needs (load plus reserves). The commitment from the DAM is the starting point for the RAA. The RAA commitment software then commits sufficient capacity while minimizing the cost of operation at EcoMin. It calculates a cost for capacity for each unit as follows:

$$\frac{[(\text{Start-up cost}/\text{min run time}) + \text{No Load Cost} + \text{cost of all blocks to EcoMin}]}{\text{EcoMax}}$$

This calculation produces the cost for capacity for each unit, and is the cost the software considers when making its determination to meet the difference between Day Ahead cleared energy and the forecasted real-time load and

reserve requirements.

Question

How does ISO commitment and dispatch under SMD differ from commitment and dispatches under the interim markets?

Answer

In the interim markets, the ISO performed a Day Ahead commitment that minimized the total cost to supply load plus reserves for the next day. During each day the ISO updated unit commitment as conditions changed. Updates to the commitment also minimized total costs to supply load plus reserves. Under this approach the ISO was committing units in economic merit order when additional units were needed for reliability. In this approach, the ISO commitment criteria minimized production cost and committed units in merit order.

ISO commitment and dispatch under SMD differ significantly from this practice. Generation offers and load bids into the Day Ahead market. The Day Ahead Market clears to minimize total cost to serve load plus reserves, much like the day ahead commitment under the interim markets. However, since the Day Ahead Market is voluntary and financial, not all load may bid into it, consequently, there may not be enough capacity on-line to assure reliable operation.

To assure reliability, the ISO performs a Resource Adequacy Assessment. The objective of the Resource Adequacy Assessment is to assure sufficient capacity is on-line (or off-line and available) to meet load plus reserves. If additional capacity is needed to meet reliability the ISO does not commit based on energy economic merit order. Instead, the ISO commitment is based on minimizing the costs of bringing a unit on-line. The minimization is based on the equation below:

$$\frac{[(\text{Start-up cost}/\text{min run time}) + \text{No Load Cost} + \text{cost of all blocks to EcoMin}]}{\text{EcoMax}}$$

This is a fundamental change in commitment philosophy. Generators are responsible for either bidding into the Day Ahead market to be committed economically or for self-committing during real time if the generator is economic. The ISO will not bring units on based on energy merit order. As described above, the ISO will commit in the Resource Adequacy Assessment based on minimizing capacity costs.