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TO: EPFSTF
FROM: IMM
SUBJECT: Intertemporal ORDC Slope Determinants

The slope of the intertemporal ORDC extension beyond the minimum reserve requirement is based on the probability that the PJM operator will take an action to commit an additional resource in order to maintain the target level of reserves.

Time Frame

The relevant time frame for the operator's decision begins in the current market interval and extends to the time of resource commitment for the next peak load period. The peak load period extends for four to six hours leading up to and including the highest load period of day.

The relevant time frame does not include the immediate ten minutes between solving the RT SCED solution and the actual operating interval. The minimum reserve requirement and the regulation product are designed to support that time frame.

Transitory shortages, violations of the minimum reserve requirement for one or two market intervals, are appropriately addressed through status quo scarcity pricing at the penalty factor. The ORDC design does not need to prevent transitory shortages.

An ORDC incorporating multiple hours in its time frame will exhibit gradually increasing scarcity prices as the market approaches a shortage that is not transitory.

Determinants

Any event affecting the level of reserves that may occur between the present market interval and the next peak will affect the slope of the Intertemporal ORDC. This includes the effects of load forecast, wind forecast error, solar forecast error, generator forced outages, interchange transactions, changes in resource offers, dispatch following, additional resource commitments, and operator actions.

By calculating the slope of the Intertemporal ORDC based on historic observed reserve levels, the analysis includes the full range and variety of events and operator responses to those events that have occurred in PJM during the defined historic period.