DTE Energy Trading Shortage Pricing Proposal

Gregory Pakela
EPFSTF
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Current Shortage Pricing Does Not Accurately Reflect Shortages

• Transient shortage pricing is rarely invoked.
• The current two-step ORDC does not accurately price shortages.
• When the system is becomes tight, prices should rise to reflect the risk of falling short of the Primary and Synchronized Reserve targets.
Problems With the PJM Proposal

• PJM proposes to increase the Synchronized and Primary reserve requirement to over 3000 MW.

• Concern: this would cause PJM to carry an excessive amount of reserves in every 5-minute interval when there is very little risk of falling short of reserves.

• The PJM proposal would also price falling short of the objective as a shortage when there is no shortage.

• This would distort the LMP, creating a price adder outside of the ordinary economics of the system.
Alternate Shortage Pricing Proposal – Transient Shortages

• Revive the transient shortage pricing concept, defined by an actual shortage and not an estimate of reserves.

• A spinning reserve event would trigger shortage pricing at the $850/MWh level until the units respond to alleviate the shortage.

• Low ACE events or a low system frequency event like the one that occurred on July 10, 2018 would also trigger shortage pricing.

• Tier 1 and Tier 2 resources would have a very large incentive to respond, or forego energy or LOC revenues.

• Impact would be limited to a few 5-minute intervals, a few times per month.
Alternate Shortage Pricing Proposal: ORDC Pricing – 2 Options

• Option 1: when PJM operators believe that conservative operations are in order due to a Hot or Cold Weather Alert, or some other type of system condition, they could invoke an enhanced 10-minute Synchronized and Primary Reserve Requirement based on the proposed ORDC curves. The PJM ORDC Pricing would apply to falling short of this requirement.

• Option 2: apply the ORDC curves to a PJM secondary reserve objective, defined as those reserves that PJM needs in periods greater than 30-minutes. The Operating Committee has recommended a 30-minute Operating Reserve Requirement of 3784 MW. The reserve requirement and ORDC curves would account for forecasting and enhanced forced outage risk for the balance of the day.

• Secondary reserve requirement could be as much as 5 or 10 percent of the expected peak load. If the quantity of secondary reserves tighten, there would be a gradual increase in the ORDC price.
Integrate the Day Ahead Reserve Requirement With Real-Time Operations

• The Day Ahead Reserve Requirement should extend to those units that are called upon in Real-Time to provide operating reserves, with the appropriate co-optimization of energy and reserves in Real-Time.

• Any unit that fails to respond to a Real-Time shortage event would forego the $850/MWh or LOC payments, and they would also have to forego their Day Ahead Reserve payment.

• 30-Minute Reserves – PJM hasn’t addressed this yet, but any 30-minute reserve requirement could use the Option 2 concept of applying an extended ORDC to cover secondary reserves.