

DTE Energy Trading Shortage Pricing Proposal

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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 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.