

Extended Locational Marginal Pricing reflects the true value of energy, smoothing incremental price spikes and minimizing uplift charges.

Capturing the True Value of Energy

In any energy market, the goal in determining price is to capture all factors that contribute to the cost for energy at any, and then price that energy accordingly. Since market start in 2005, MISO's Independent Market Monitor recommended the following:

- Develop real-time software and market rules that allow gas turbines offering energy at their minimum or maximum levels to set energy prices.
- Develop rules that allow non-dispatchable demand response (or interruptible load) resources to set energy prices in the real-time market when called upon during a shortage.

Additionally, the Federal Energy Regulatory Commission requires MISO to allow emergency demand response resources to set energy prices when called upon. MISO and its stakeholders began analyzing potential improvements to the locational marginal pricing (LMP) used today to satisfy these requirements, with a goal of producing market prices closer to the true value of energy.

Locational Marginal Pricing

LMP is based on the marginal cost of serving a small increment (or decrement) of load at a particular location. For a resource to contribute to setting prices, it must already be committed and able to respond to this small change in demand. Some units, such as resources already operating at their limits, cannot set price. In those cases, some costs incurred by those units committed in real-time that are not included in the LMP are uplifted to the market. Costs not included in the LMP methodology include unit start-up costs, no-load costs or incremental energy costs incurred when the unit operates at a limit. Traditionally, these commitment-related costs were socialized as part of the revenue sufficiency guarantee process.

Advantages of Extended Locational Marginal Pricing

MISO's Extended Locational Marginal Pricing methodology, or ELMP, gets MISO's market closer to calculating the true cost of energy because it incorporates commitment costs for fast-start resources and emergency demand response resources. Because a fast-start resource can be on-line and producing power within 10 minutes, it's a valuable resource when energy is needed most. ELMP allows fractional commitment of these much-needed fast-start resources to be included in setting prices and includes start-up and no-load costs as well as incremental energy cost, even if the resource is operating at a limit, necessary to commit and dispatch the fast-start resources. By factoring in these costs associated with commitment and dispatch, ELMP reflects a truer cost of energy for these resources. Emergency demand response resources will be treated the same way.

Benefits

ELMP enhances energy and ancillary services pricing to reflect the physical reality of how costs are incurred in generating electricity. ELMP will minimize price spikes during shortages and, over time, should provide incentives for better resources offers. Consumers, regulators and market participants will also benefit from more accurate price signals, reduced uplift charges and reduced price volatility.

Staged Implementation

FERC conditionally approved MISO's proposal to improve market pricing using ELMP and software revisions are underway. MISO will compare LMP and ELMP results in parallel operations, planned for mid-2014 with implementation in late 2014. For more information, see the [ELMP section](#) on MISO's website.

Did you know?

- ELMP incorporates commitment costs for fast start and emergency demand response resources.
- ELMP ensures that prices reflect start-up, no-load and incremental energy costs of fast start resources in determining the price of energy.
- ELMP fulfills FERC's directive to MISO to allow emergency demand response resources to set prices.
- MISO will compare LMP and ELMP results during the parallel operations phase of staged implementation.