



Markets and Performance (MAP)

The California Independent System Operator Corporation (California ISO) intends to implement a significant new market design in the fall of 2008. Known as Market Redesign and Technology Upgrade (MRTU), it is a major step forward for California's energy markets.

While MRTU is a major overhaul of the original zonal California ISO market design, it does not represent the end state for energy markets in California. Rather, MRTU provides a flexible platform for subsequent enhancements as needed, for example to support environmental policy initiatives enhance infrastructure development and demand response participation. The *California ISO Market Initiatives Roadmap* identifies and prioritizes enhancements to the MRTU platform, which are then elaborated through scope definition and the market design process. Once the market design of an enhancement or set of enhancements reaches the point that an implementation plan can be determined it is defined in a release. The California ISO has identified the next release of market enhancements and will collectively refer to these items as "Markets and Performance," or "MAP", formerly known as Market Release 1A.

The California ISO and most of its market participants and stakeholders have been correctly focused on MRTU. However, it is also important for market participants to know how they can continue to have input in the process and what they must do now to allocate sufficient resources to implement MAP in the fall of 2009. This document is designed to provide basic information about MAP—as well as links to more in-depth material for each MAP element.

Background

In September, 2006, the Federal Energy Regulatory Commission (FERC) ordered the California ISO to implement several market elements that are not part of the MRTU program. Working with its stakeholders, the California ISO ranked an initial set of the most beneficial enhancements. These enhancements are scheduled to be in place within 12 months after the MRTU Go-Live date. The MAP elements include:

- Dispatchable Demand Resources
- Convergence Bidding
- Scarcity Pricing of Reserves
- Revised DEC Bidding Rule
- Seasonal Competitive Path Assessment

Implementing the MAP elements within 12 months after MRTU allows the California ISO to launch and stabilize the new MRTU platform, and then add the new market elements within a reasonable time frame. While each element is well along the development phase, each still needs to be approved by the California ISO Board of Governors.

Elements of MAP

Dispatchable Demand Resources

The original conceptual design of the new California ISO markets included a comprehensive Participating Load model which is partially implemented with MRTU. MAP will enhance the Participating Load model by allowing certified end-users to provide energy and reserves comparably to generating plants. This MAP element will provide a critical new functionality that can be further enhanced over time as technological and product innovation enable more extensive demand participation in the wholesale markets.

<http://www.caiso.com/1cbb/1cbbc26edb20.html>

Convergence Bidding

A system for market participants to submit “convergence bids,” also known as “virtual bids,” only in the Day-Ahead Market. If cleared in the Integrated Forward Market, these virtual supply and virtual demand bids would settle first at day-ahead prices and then be automatically liquidated with the opposite sell/buy position at real-time prices. This process tends to reduce the difference between the day-ahead and real-time prices, consequently increasing the alignment between day-ahead schedules and the real-time operating needs of the CAISO grid. It also provides additional tools for market participants to manage their financial risks in the energy market. <http://www.caiso.com/1807/1807996f7020.html>

Scarcity Pricing of Reserves

A mechanism that lets the market prices for reserve capacity rise automatically, potentially beyond any applicable bid cap, when there is a shortage of supply in the market. Properly designed scarcity pricing stimulates demand response, draws supply from outside of the California ISO balancing authority area, creates incentives for generators to make more resources available during peak load periods, creates incentives for increased demand response, promotes long-term contracting, and attracts investment in new generation resources.

<http://www.caiso.com/1bef/1bef12b9b420b0.html>

Revised DEC Bidding Rule

A current market rule—designed to prevent a form of market manipulation known as “the DEC Game”—prohibits a scheduling coordinator from submitting energy bids in the Hour-Ahead Scheduling Process or Real-Time Markets that are lower than any cleared bid price submitted by that scheduling coordinator in the Day-Ahead Market. Based on internal and independent economic analysis, the California ISO has determined that this rule would be ineffective and perhaps even counterproductive by reducing liquidity in the Real-Time Market. Based on that determination, the California ISO seeks to eliminate this rule for MRTU, and as part of MAP to implement a more effective approach for increasing the liquidity and competitiveness of DEC bids in real time. <http://www.caiso.com/1fb1/1fb184c166370.html>

Seasonal Competitive Path Assessment

At the start of MRTU, the California ISO will assess annually which transmission paths are competitive. FERC has directed the ISO to fine-tune this approach by assessing path competitiveness seasonally—four times per year. This process is sufficiently streamlined that the California ISO is on track to be able to produce results quarterly beginning one year after the start of MRTU without additional policy discussions, software changes or hardware upgrades. <http://www.caiso.com/docs/2005/07/01/200507011120583480.html>

Expected Benefits of MAP

- New market functionality (convergence bidding and scarcity pricing) will provide tools to California ISO market participants comparable to those used successfully by other ISOs to improve market efficiency.
- Expanded Demand Response functionality will enable consumers to play a more significant role in responding to peak-hour prices to reduce supply costs and extend limited supplies.
- MAP will increase the liquidity and competitiveness of the California ISO markets to reduce ultimate costs to end-use customers.
- More precise bid mitigation will protect consumers from the exercise of local market power without stifling accurate price signals needed for short-term operation and new investment.

The MAP elements will increase the efficiency and liquidity of the new market by adding bidding tools, creating incentives for increased supply/reduced demand and removing impediments to bidding. These enhancements should increase participation in the California ISO markets, provide more robust competition for supply and demand and, ultimately, may reduce costs paid by end users.

Payment Acceleration also Pending Implementation

In addition to the MAP elements, the California ISO recognizes that the current payment calendar takes too long between trade date and market clearing and presenting undue credit risk to market participation. This increased risk may hinder resource availability from out-of-state resources, challenges credit management, and exposes market participants to additional risk in the event of defaults or bankruptcies. While not specifically part of the MAP process, the Payment Acceleration Program which was initially started in 2005 with a stakeholder process in 2006, is an important enhancement to the California ISO overall structure and market participants should be aware of it.

The Payment Acceleration Program will reduce the initial daily settlement statement timeframe from 38 business days to nine days. The initial invoicing process is proposed to be monthly, 20 days after the end of the previous month.

Following six months of MRTU operations, the California ISO plans to implement the necessary process changes, including real-time, post-process, settlement, invoicing and peripheral processes, to facilitate accurate information delivery to market participants, and subsequent financial market clearing in more than half the time of current processes. The California ISO is in the process of re-validating the plans for payment acceleration and will provide more information to stakeholders as soon as it is available.

Implementation Timeline

The timeline below is provided to allow market participants to plan for various activities. However, it is subject to change.

2008

Second Quarter 2008

- Continue stakeholder review of conceptual market design for MAP functional areas
- Identify CAISO business impacts to business processes, systems and Business Practice Manuals (BPMs)
- Complete CAISO business and system requirement specifications
- Complete CAISO project planning, schedule and budget
- Start external communication/awareness of implementation plans
- Approval of implementation phase by CAISO executive management

Third Quarter 2008

- Approval of policy by CAISO Board of Governors (July 9,10)
(Note that Convergence Bidding will be presented for approval after MRTU Go-Live)
- Contract with CAISO vendors as needed
- Start design and build of CAISO system changes
- Publish preliminary business interface changes externally
- Start drafting MAP tariff and BPM changes (internally)

Fourth Quarter 2008

- Continue CAISO system build and test
- Internal review of tariff and BPM changes
- Publish preliminary technical interface changes externally



2009

First Quarter 2009

- Integration testing
- Approval of Convergence Bidding, including granularity, by CASIO Board of Governors
- Post draft MAP tariff and BPM changes externally
- Finalize business and technical interface changes and post externally
- Begin external training

Second Quarter 2009

- File MAP tariff with FERC
- Begin market simulation

Third Quarter 2009

- Complete internal and external readiness checks
- Pre-production

Fourth Quarter 2009

12 months following MRTU Go-Live

- Deploy

Additional information about MAP, the *Market Initiatives Roadmap* and MRTU can be found on the California ISO website at caiso.com.