

# Memorandum

**To:** ISO Board of Governors  
**From:** Petar Ristanovic, Vice President of Technology  
**Date:** January 27, 2011  
**Re:** **Briefing on Market Initiatives Release Plan**

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*This memorandum does not require Board action.*

## EXECUTIVE SUMMARY

As a final wrap up of 2010, Management confirms that all planned market initiatives deployed and are functioning in the market. Adjustments are being made to *multi-stage generator modeling* (MSG) and operations and market participants are becoming accustomed to the more complex functionality and inter-temporal constraints. A second set of *multi-stage generator modeling* resources are being activated in the market as planned on January 21, 2011. The changes for *initial conditions*, *scarcity pricing* and *phase 2 of the standard capacity product* are operating in the market as designed.

Staff is assessing the effects of actions taken to address price divergence between the hour-ahead scheduling process and real-time dispatches, including several weeks of execution with the hourly intertie ramping feature. The ISO plans further enhancement to allow flexible ramping in the real-time market for implementation early this year which will introduce explicit system ramping up and down capacity constraints in the market optimization module. These changes together with planned improvements in day-ahead and real-time load forecast have potential to significantly mitigate price divergence between the hour-ahead scheduling process and real-time dispatches.

The new year is off to a good start with the *convergence bidding* initiative in final stages of preparation for production. Market simulation completed as expected on January 14, 2011 and as of this writing, no showstoppers will prevent deployment on February 1, 2011. The Spring 2011 and Fall 2011 releases are taking shape as further implementation efforts are underway. Management continues to assess and plan for a new slate of market initiatives, including the renewable integration market and product review.

## **THE RELEASE PLAN**

### ***Early 2011 release***

*Convergence bidding* allows market participants to submit purely financial bids at particular pricing nodes in the day-ahead market. Convergence bids cleared in the day-ahead market at day-ahead prices are liquidated in the hour-ahead or real-time market at the applicable hour-ahead or real-time prices. The market participant thus earns or is charged the difference between the day-ahead price and the applicable hour-ahead or real-time price at the location of the cleared bid. *Convergence bidding* will enable market participants to hedge exposure to real-time price volatility and will provide other market efficiency benefits through increasing liquidity in the markets as well as price convergence between day-ahead and real-time prices. The current status of this initiative is as follows:

- As of mid January, sixty market participants have submitted registration materials and fifty market participants have successfully executed and returned the pro forma agreement;
- Staff held a public walkthrough of monitoring and analysis processes on January 13, 2011;
- Market simulation concluded with all twenty-seven scenarios executed and reviewed;
- Staff reports that high priority technical variance are resolved; and
- Staff is executing a project plan to deploy *convergence bidding* on February 1, 2011.

### ***Spring 2011 release***

Following the early 2011 release, Management intends to respond to stakeholder requests for only two major releases per year with spring and fall deployment timeframes. The spring and fall 2011 releases will be sized appropriately to meet additional concerns that the ISO and market participants will need a stabilization period following the many changes that have occurred since the start of new market. The following smaller efforts will be supported in the Spring 2011 release, targeted for April 1, 2011:

- *Interim capacity procurement mechanism and exceptional dispatch pricing* changes to replace existing structures that will expire in March 31, 2011;
- Initial implementation of *changes in commitment cost* will be applied in this timeframe with the full implementation to follow in the Fall of 2011.
- *72 hour residual unit commitment* extends the time horizon for unit commitment beyond one trade date, which provides efficiency and reliability in scheduling resources across trading day boundaries. Staff evaluated a prototype of this functionality in September 2010 to evaluate impact to market performance and based on the results of this analysis is committing to implementation in the Spring 2011 timeframe, tentatively planned for May 1, 2011.

### ***Fall 2011 release***

The Fall 2011 release, targeted for October 1, 2011, will be a major release with significant new functionality being added to address policy changes that have already completed or will soon complete the stakeholder process, including:

- *Aggregated pumps and pump storage* further enhance the ability of pumping and pump storage resources for bidding into the market;
- *Ancillary services for non-generation resources* further enhances the ability of non-generation resources to be bid and optimized in the market;
- Additional implementation of resource adequacy features, including: *bids for resource adequacy imports and subset of hours resource adequacy* and the *replacement requirement for resource adequacy resources for planned outages*, as well as the third phase of the *standard capacity product*;
- *Dynamic transfers* will respond to requests to the ISO for dynamic scheduling of import services which have increased dramatically in the past year;
- *Changes to commitment costs* including bidding and mitigation for start up and minimum load costs;
- *Reliability demand response product* will meet the needs for newly configured demand response resources that have a reliability trigger and desire to be dispatched only under particular system conditions;
- *Data release phase 3* will further address market transparency concerns;
- *Grid management charge rate structure change* redesign fees based on the following guiding principles: cost causation; focus on the use of services, transparency, predictability, forecastability, flexibility, and simplicity.
- *Enhancements to the participating intermittent resource program* to minimize reliance on administrative measures for these resources to successfully participate in the ISO market and to provide economic bids, especially decremental bids.
- *Bid floor cap* to incent all types of resources to participate in providing a liquid supply of decremental bids for over-generation situations and to manage congestion; and
- *Outage management system* will provide an improved platform for managing generation outages.

### ***Spring 2012 release***

As we look ahead to the Spring of 2012, many additional market initiatives are planned for the three-year milestone following the start of the new market. Most significantly, the ISO will start to implement the results of the renewable integration market and product review. Management will also address the new functionality mandated by FERC to be completed in this timeframe, including enhancements to local market mitigation, export of ancillary services, bid cost recovery for units over multiple days, two tier real-time uplift, and long term congestion revenue right auction.

### **LOOKING FORWARD**

Management is committed to maintaining high quality and timely releases to satisfy these objectives, working with market participants to achieve the greatest value for investments made in evolving our systems, processes, and people to meet this challenge.

1/11/2011		Market Initiatives Release Plan																									
Release	Phase	Initiative	Sep-10	Oct-10	Nov-10	Dec-10	Jan-11	Feb-11	Mar-11	Apr-11	May-11	Jun-11	Jul-11	Aug-11	Sep-11	Oct-11	Nov-11	Dec-11	Jan-12	Feb-12	Mar-12	Apr-12	May-12				
Early 2011	Implementation	Convergence Bidding / Credit Tracking System	→																		★					→	Market Sim - MAP Stage
	Recurring	Transmission Planning Process 2011																			▲					→	Market Sim - Stage
Spring 2011	Implementation	Updating ICPM and Exceptional Dispatch and Bid Mitigation	→																		▲					▲	Start Stakeholder Process
	Implementation	72 Hour Residual Unit Commitment (pending prototype analysis)																			★					▲	Present to Board
	Implementation	Changes in Commitment Costs - SUC/MLC Phase 1																			★					★	Deployment Date
	Recurring	2012 Local Capacity Requirements (LCR Study)																			⊞					★	Effective Date, if different
Fall 2011	Planning	Aggregated Pumps and Pump Storage																			⊞					⊞	Study Complete
	Planning	AS for Non-Generation Resource																									
	Policy	Bids for RA Imports and Subset of Hours RA																								★	
	Policy	Standard Capacity Product Phase 3																			▲					★	
	Policy	Dynamic Transfers - Full Functionality (Interim release to be determined)	→																		⊞					▲	
	Planning	Changes in Commitment Costs - SUC/MLC Phase 2																								▲	
	Policy	Reliability Demand Response Product	→																		▲						
	Policy	Data Release Phase 3	→																		▲					▲	
	Policy	GMC Rate Structure Change																			▲					★	
	Policy	Renewable Integration Market & Product Review - Phase 1	→																		▲						
	Planning	PIRP Enhancements																									
	Planning	Bid Floor Cap																									
	Implementation	Outage Management System																									
	Spring 2012	Policy	Renewable Integration Market & Product Review Phase 2	→																		▲					
Policy		Regulation Energy Management	→																		▲						
Policy		Year Three Mandated Items (listed below)																									
Policy		Load Granularity Refinements	→																		▲						
Policy		Refinements in LMPM Process	→																		▲						
Policy		Export of AS																									
Policy		Bid Cost Recovery for Unit over Multiple Days																									
Policy		Two Tier Real-Time Uplift																									
Policy		Long Term CRR Auction																									
Policy		Non Mandated Items (listed below)																									
Policy		Replacement Requirements for Scheduled Generation Outages																									
Policy		Simultaneous RUC and IFM																									
Policy		Multi Day Unit Commitment																									
Policy		AS Substitution																									
Policy		Multi Hour Block Bidding in RUC																									