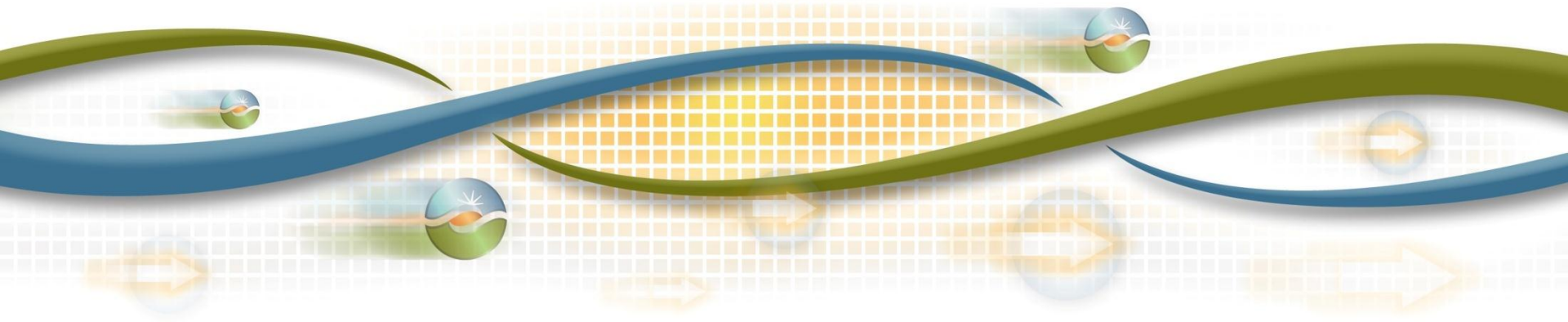


Release User Group Agenda

May 15, 2012

10:00 a.m. – 10:55 a.m. (Pacific Time)

Web Conference Information	Conference Call Information
<p>URL: https://www.connectmeeting.att.com</p> <p>Meeting Number: 8665282256</p> <p>Access Code: 5251941</p>	<p>Domestic Call In: (866) 528-2256</p> <p>International Call In: (216) 706-7052</p> <p>Access Code: 5251941</p>



Release User Group Agenda

May 15, 2012

10:00 a.m. – 10:55 a.m. (Pacific Time)

Time	Topic	Facilitator
10:00 – 10:05	Agenda & ISO Roll call	Janet Morris
10:05 – 10:30	Release Plan	Janet Morris Adrian Chiosea Richard Kalisch Jeremy Malekos Scott Engquist Jeff Dawson Navdeep Saini Kelley Latimer Cici Wang

Release Plan – 2012

- **Pre Summer 2012**
 - Settlements quarterly release
- **Fall 2012**
 - Non-Generator Resources / Regulation Energy Management - Phase 2
 - LMPM Enhancements Phase 2
 - Data Release Phase 3
 - 72 Hour RUC
 - Transmission Reliability Margin
 - Commitment Costs Refinements - Greenhouse Gas Regulation only – tentative
 - FERC 745 Net Benefits Test
 - Contingency Dispatch Upgrade
 - Replacement Requirement for Scheduled Generation Outages
 - Regulatory Must Take Generation
 - MSG Enhancements Phase 3
 - IRR enhancement

Release Plan – 2013

- **Spring 2013**

- Dynamic Transfers
- Flexible Ramping Product - tentative
- FERC Order 755 – Pay for Performance
- Mandatory MSG
- Post Emergency Filing BCR changes

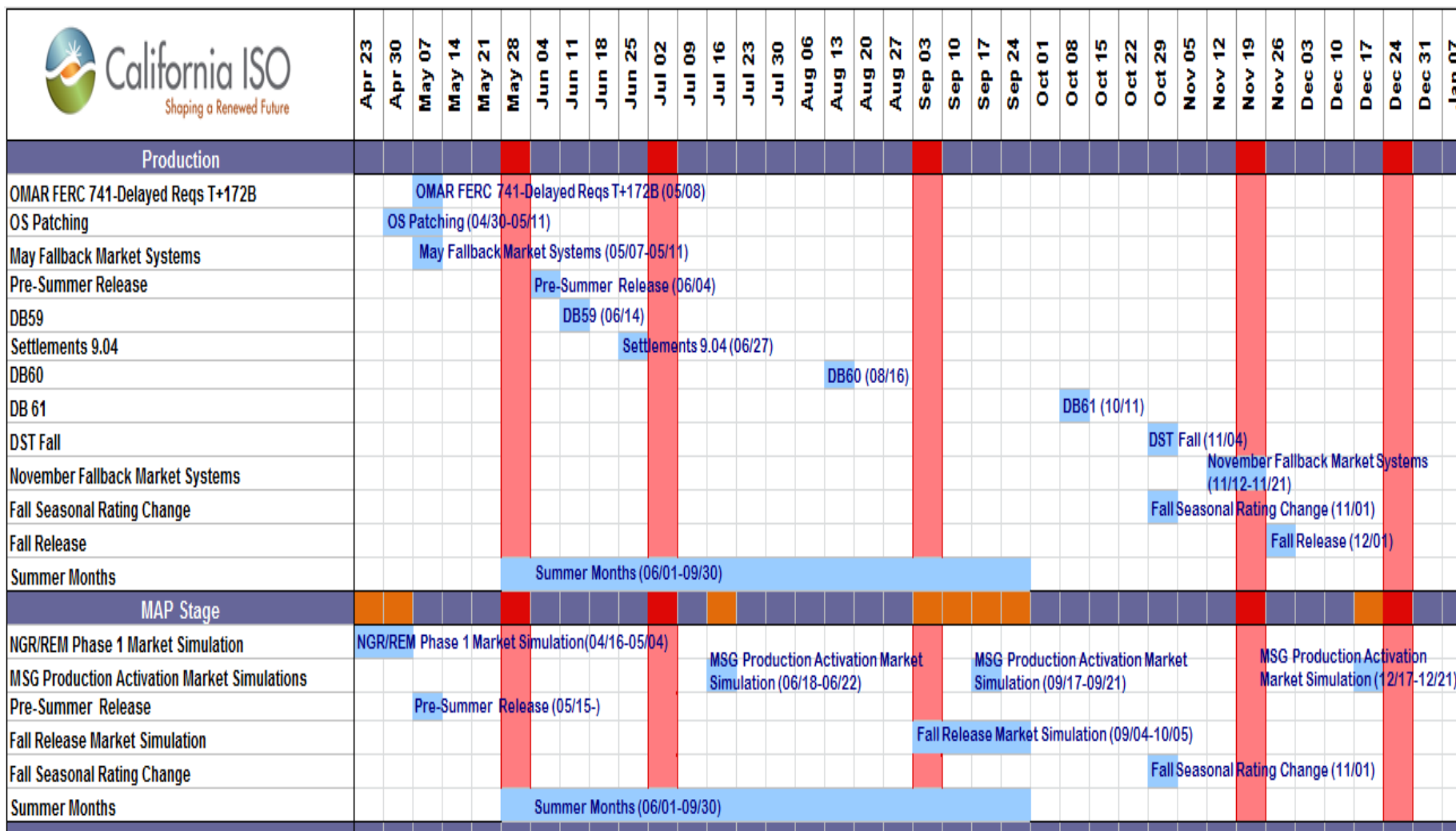
- **Fall 2013**

- RIMPR-Phase 1
- Circular Scheduling
- Commitment Cost Refinements (remaining scope)






- **Subject to further release planning:**

- Enhanced Operating Reserve Management
- Enterprise Model Management System
- Outage Management System
 - BRS to be posted for review in mid-May 2012
- Reliability Demand Response Product
 - Need a Policy Stakeholder process and then present the recommendation to the Board
- Subset of Hours

2012 Release Plan



Spring 2012 Release – NGR Phase I: REM Only

Milestone	Date	
Application Software Changes	SIBR: NGR as a generation resource DAM/RTM: Model NGR with an negative to positive power injection Settlements - Settle the NGR energy and AS similar as generator; Master File: Define NGR resource characteristics and REM flag SLIC: Support NGR register outage or de-rate ramp rates OASIS: Include NGR for publishing T+90 bids, EMS: Model NGR with supply range of negative to positive	
BPM Changes	Manage Full Network Model Market Instruments Settlements & Billing	Market Operations Outage Management Compliance Monitoring
Tariff Approved	November 30, 2011	
Revised Implementation Plan	February 27, 2011	
Market Sim. NGR RDT 6.0 due	March 15, 2012	
2012 Spring Market Sim. Training	March 26, 2012	
Spring Market Simulation	April 16 – May 4, 2012	
Production Activation	2012 Fall Release	

Fall 2012 Release – NGR Phase II: Non-Rem

Milestone	Date
Application Software Changes	SIBR: NGR as a generation resource DAM/RTM: Model NGR with an negative to positive power injection Settlements - Settle the NGR energy and AS similar as generator; Master File: Define NGR resource characteristics and REM flag SLIC: Support NGR register outage or de-rate ramp rates OASIS: Include NGR for publishing T+90 bids, EMS: Model NGR with supply range of negative to positive
BPM Changes	Manage Full Network Model Market Operations Market Instruments Outage Management Settlements & Billing Compliance Monitoring
Business Process Changes	May 31, 2012 - Expected Energy Calculations
External Business Requirements Update	June 18, 2012
Configuration Guides	July 31, 2012
Technical specifications	June 23, 2012
Market Simulation registration	July 27, 2012
Updated BPM	Sep 2012
Market Simulation	Sep 4 – 21, 2012
Production Activation	Dec 1, 2012

Fall 2012 – LMPM Enhancements (Phase 2)

Milestone	Date
Application Software Changes	Day Ahead and Real-Time Market: MPM for 15 min. RT, DCPA for HASP and 15 min. RT OASIS: Display LMPM-related components for nomogram & intertie shadow prices, and competitive paths for real-time CMRI : Display real-time mitigated bid curve
BPM Changes	Market Operations Market Instruments
Business Process Changes	Manage Market Setup & Execution Manage Day Ahead Market Real Time Market & Grid Manage Real Time Market- After Close of Market Manage Real Time Operations- Generation Dispatch
Board Approval	July 14, 2011 
External Business Requirements	May 15, 2012 (update for phase 2 requirements)
OASIS/ CMRI Technical Specifications	July 27, 2012
Updated BPMs	August 17, 2012
Market Simulation	September 10 - 21, 2012
Tariff Filing / Approved	Filing in June, FERC Approval TBD
Production Activation	Trade Date December 11, 2012



Fall 2012 – Data Release (Phase 3)

Milestone	Date
Application Software Changes	CMRI: Release of Day – Ahead Load Distribution Factors Release of Shift Factors, Transmission Limits, & Nomogram Constraint Limits and Enforcements for Day-Ahead and Real-Time OASIS: Release of Aggregated Generation Outages, Wind and Solar Forecasts, & CRR Public Bids
BPM Changes	Market Operations; Market Instruments
Business Process Changes	None
Board Approval	May 17, 2011 
External Business Requirements	March 19, 2012 
NDA's	6/1/2012 – posted, 8/1/2012 - due for Market Simulation
OASIS/ CMRI Technical Specifications	July 20, 2012
Updated BPMs	August 13, 2012
Market Simulation	September 3 – 14, 2012
Tariff Filing / Approved	Filing TBD
Production Activation	Trade Date December 11, 2012

Fall 2012 – 72 Hour RUC

Milestone	Date
Application Software Changes	CMRI : Existing reports will publish extra long start unit binding startup instructions / initial condition
BPM Changes	Market Operations Market Instruments
Business Process Changes	Not Applicable
External Business Requirements	September 23, 2010 and September 1, 2011 (BPM synch revision) 
Technical Specifications	Not Applicable
Updated BPMs	October 28, 2011 
Market Simulation Plan to include Implementation Plan	July 30, 2012
Market Simulation	September 10-14
Production Activation	Trade Date December 1, 2012

Fall 2012 – Transmission Reliability Margin


Milestone	Date
Application Software Changes	OASIS – CBM line item replaced, three TRM component line items added.
BPM Changes	Market Instruments, Market Operations, Full Network Model (TBD), Reliability Requirements (TBD), Congestion Revenue Rights (TBD)
Business Process Changes	Manage Real-Time Interchange Scheduling
Board Approval	March 22, 2012 
External Business Requirements	April 9, 2012 
Technical Specifications	July 31, 2012
Updated BPMs	July 31, 2012
Market Simulation	September 11, 2012- September 17, 2012
Tariff Filing / Approved	June 2012 / September 2012
Production Activation	Trade Date December 1, 2012

Fall 2012 (tentative) – Commitment Cost Refinements (Green House Gas Emissions Costs)


Milestone	Date
Application Software Changes	SIBR: Changes to Generated Bids and Minimum Load Costs. Master File: Registration of units that did not emit more than 25,000 mtCO2 in the previous year (to be exempt from greenhouse gas allowance costs in its calculation of variable costs).
BPM Changes	Market Operations
Business Process Changes	No business process impacts
Board Approval	July 12, 2012
External Business Requirements	May 2012
Market Simulation	Fall 2012
Technical Specifications	TBD
Tariff Filing	TBD
Production Activation	Trade Date January 1, 2013

Fall 2012 Release - FERC Order 745

DR Compensation in Wholesale Electricity Markets

Milestone	Date
Application Software Changes	Demand Response System (DRS): Changes needed to support the settlement of DRs in compliance with the FERC order 745 Settlements <ul style="list-style-type: none"> Automation of the calculation of the Monthly Demand Response DR Net Benefits test (NBT) Threshold Prices. Change Settlement Charge Codes (RT Energy Pre-Calc, CC6806, CC6475, CC6477) to comply with guidance issued in FERC order 745
BPM Changes	Market Operations, Settlement Configuration Guides, Definitions and Acronyms
External Business Requirement Specification	May 2, 2012 
Technical Specifications	Not Applicable
Configuration Guides	Aug 27, 2012 – CC6806, CC6475, CC6477, RT Energy Pre-Calculation
Market Simulation	Sep 25-26, 2012
Production Deployment	Nov 11, 2012
Production Activation	Trade Date December 1, 2012 Retroactive settlement dating back to effective trade date Dec 15, 2011

Fall 2012 – Contingency Dispatch Upgrade

Milestone	Date
Application Software Changes	<p>RTM: Prioritize Operating reserves dispatch over energy-only during Disturbance Control Standard (DCS) event</p> <p>ADS:</p> <ul style="list-style-type: none"> Always broadcast the Dispatch when it is coming from Real-Time Contingency Dispatch (RTCD). Three new Yes/No flags to Indicate <ul style="list-style-type: none"> RTCD was a Disturbance Dispatch (Prioritized Operating Reserves over energy-only bids) Incrementing the Northern Ties was skipped Incrementing Southern Ties was skipped
BPM Changes	Market Operations
Business Process Changes	Manage Real-Time Contingency Dispatch
Board Approval	May 16, 2012
External Business Requirements	May 8, 2012 
Updated BPMs	RTCD-6/15/12, RTDD-8/17/12
Tariff Filing / Approved	Filing July 2012 requesting FERC approval by Oct 2012
ADS Technical Specifications	July 23, 2012
Market Simulation	September 17 – September 21, 2012
Production Activation	December 11, 2012

Fall 2012 – Replacement Requirements for Scheduled Generation Outages


Milestone	Date
Application Software Changes	RAAM: Unit substitution has to be expanded for Planned Outages.
BPM Changes	Outage Management; Reliability Requirements
Business Process Changes	Manage Generation Outages: Annual Monthly RA Process (new) RA Outage Management Process (new)
Board Approval	July 12, 2012
External Business Requirements	June 2012
Technical Specifications	TBD
Market Simulation	Fall 2012
Tariff Filing	TBD
Production Activation	Trade Date January 1, 2013

Fall 2012 – Regulatory Must Take Generation

Milestone	Description/Date
Application Software Changes	<p>DAM/RTM: During optimization, acknowledge regulatory must take (RMT) scheduling priority for any resource that has on-peak and off-peak RMTmax values registered in MF.</p> <p>Master File: Allow SCs of Combined Heat and Power (CHP) resources to submit on-peak and off-peak RMTmax values via Resource Data Template (RDT). RMTMax values must be within Pmin and Pmax.</p> <p>SIBR: Add validation rules to enforce on-peak and off-peak RMTmax capacities</p> <p>OMAR: Allow meter data CHP resources; allow for up to 180-day exemption for newly transitioning CHP resources</p>
BPM Changes	Market Operations and Market Instruments
Business Process Changes	<p>Potential new business process to</p> <ul style="list-style-type: none"> • Manage 180-day exemption between contract expiration and ISO tariff compliance (metering) • Manage contracts and approval of a CHP resource for RMT
External Business Requirements	April 30, 2012
Technical Specifications	July 23, 2012
Board Approval	May 16, 2012
Market Simulation	September 11, 2012- September 17, 2012
Production Activation	Trade date December 11, 2012




Fall 2012 – MSG Enhancements (Phase 3)

Milestone	Date
Application Software Changes	<p>Master File: System must be extended to allow the registration of minimum up time (MUT) or minimum down time (MDT) on a group of MSG configurations. Registrations would be submitted to the ISO via a separate registration form.</p> <p>DAM/RTM: System must be able to recognize the MUT and MDT constraints on a group of configurations (as registered in the Master File) during the optimization.</p>
BPM Changes	Market Instruments, Market Operations
Business Process Changes	Not Applicable
Board Approval	Not Applicable
External Business Requirements	May 7, 2012 
Technical Specifications	Not applicable
Market Simulation	Sept 2012
Tariff Filing	Not Applicable
Production Activation	December 11, 2012

Fall 2012 – IRR (ISO Reliability Requirements) Annual

Milestone	Date
Application Software Changes	IRR: Modifications to enable annual automated cross validation and loading of supply and RA plans
BPM Changes	Reliability Requirements
Business Process Changes	No business process impacts
Board Approval	Not Applicable
IRR Users Guide	August 20, 2012
Market Simulation	September 18 - 20
Technical Specifications	TBD
Tariff Filing	Not Applicable
Production Activation	Trade Date Oct,1 2012

Spring 2013 – Dynamic Transfers

Milestone	Description/Date
Application Software Changes	ADS: Pass the 5-min-2-hour rolling forward forecast to Real-Time Market ALFS : Create the ISO forecast for the intermittent DT CAS: e-tag DS/PTG that mapped to multi-ITGs CMRI : Report Transmission Reservation (TRC) DAM/RTM: Include TRC, incorporate forecast value, model multi-tie services , model primary/alternative tie under open tie INTEGRATION: Enable TRC, forecast communicate between systems Master File: Define TRC, multi-tie group OASIS: Show aggregated TRC Settlements: Settle TRC as shadow price of Intertie constraint in market DAM/HASP. Exclude congestion cost in RTD for the resources that have TRC. SIBR: Include bidding capability and relevant validation rules for the TRC
BPM Changes	Market Operations; Market Instruments; Settlements & Billing; Definitions & Acronyms
Business Process Changes	Maintain Master File, Day Ahead Process, Real Time Process, Manage Billing and Settlements, Manage Interchange Scheduling
External Business Requirements	May 31, 2012
Technical Specifications	TBD
Board Approval	May 19, 2011 
Market Simulation	Spring 2013
Production Activation	Spring 2013 Release

Spring 2013 – Flexible Ramping Product

Milestone	Description/Date
Application Software Changes	<p>ADS: Send Flexible Ramping Up/Down Awards to Market Participants.</p> <p>CMRI : Report Flex Ramp Up/Down Awards to Market Participants.</p> <p>DAM/RTM: Co-optimize Energy Ancillary Services and Flexible Ramping up/down. This optimization is subject to Flexible Ramping requirements and existing constraints.</p> <p>OASIS: Show aggregated Flexible Ramping capacity awards, requirements and marginal prices.</p> <p>Settlements: Settle Flexible Ramping payment at marginal price in Day Ahead and Real Time markets Add no pay and cost allocation for Flexible Ramping.</p> <p>SIBR: Include Flexible Ramping bidding capability and relevant validation rules of bid cap, self provision.</p>
BPM Changes	Market Operations; Market Instruments; Settlements & Billing; Definitions & Acronyms.
Business Process Changes	Maintain Day Ahead Process, Real Time Process, Manage Billing and Settlements
External Business Requirements	TBD
Technical Specifications	TBD
Board Approval	July 12-13, 2012
Market Simulation	TBD
Production Activation	Spring 2013 Release (tentatively)

Spring 2013 – FERC Order 755 Impact Assessment

Milestone	Description/Date
Application Software Changes	ADS: provide DA regulation up/down mileage awards CMRI : provide DA and RT regulation up/down mileage price and awards DAM/RTM: include mileage bids and requirements into the optimization and generate mileage price and awards Master File: regulation certification based on 10 min ramping capability OASIS: provide DA regulation up/down mileage price, system mileage multipliers, system mileage requirement, actual system mileage, historical mileage bids, historical resource mileage multipliers Settlements : calculate mileage payment, mileage cost allocation and GMC for mileage bids SIBR: receive and validate regulation up/down mileage bid
BPM Changes	Market Operations Settlements & Billing Market Instruments Definitions & Acronyms
Business Process Changes	Maintain Master File, Day Ahead Process Manage Billing and Settlements, Manage Analysis Dispute and Resolution, Market Performance (MAD),Market Performance (DMM) Manage AS Certification and Testing
Board Approval	March 23, 2012 
External Business Requirements	May 18, 2012
Technical Specifications	TBD
Compliance Filing	April 2012
Product Activation	2013 Spring Release