



California Independent
System Operator Corporation

Market Redesign and Technology Upgrade Budget & Schedule Report

Board of Governors Meeting
Executive Sponsor: Charles A. King, PE
Program Manager: Debi Le Vine
May 30-31, 2007

MRTU Executive Summary

MRTU Schedule	
Current Period	Trend
	
<p>Tracking Delay: 0 weeks Critical Path Items: Vendor Delivery, Integration Testing <i>*Based on approved 2/1/08 Go-Live Trade date</i></p>	

MRTU Budget	
Current Period	Trend
	
<p>Approved MRTU budget: \$189.223 M* <i>*Based on approved budget on 12/06</i></p>	

- Work progressing with vendors to incorporate remaining contracted items and several additional FERC scope items into delivery schedule.
- IMS1 began 4/30 with 38 Scheduling Coordinators participating.
- Market Simulation team held a planning session with Market Participants to discuss assumptions and planning for Release 2.
- IMS Release 3 schedule is experiencing a 4-5 week delay due to slower testing progress as a result of data issues, vendor support, and resource constraints.
- Internal Testing progress includes execution of Day-Ahead Market and some Real-Time Market intervals. Testing continues to focus on real-time runs.
- Re-evaluating transition and budget assumptions
- Finalizing Change Requests required to re-baseline MRTU progress to new budget for FERC changes.
- CAISO working with key vendors to re-negotiate remaining work and costs.
- Evaluating the impact of the April 20th FERC Order on budget and schedule.
- PMO confirmed all Projects' Actuals with Corporate Finance and refined MRTU financials accordingly.

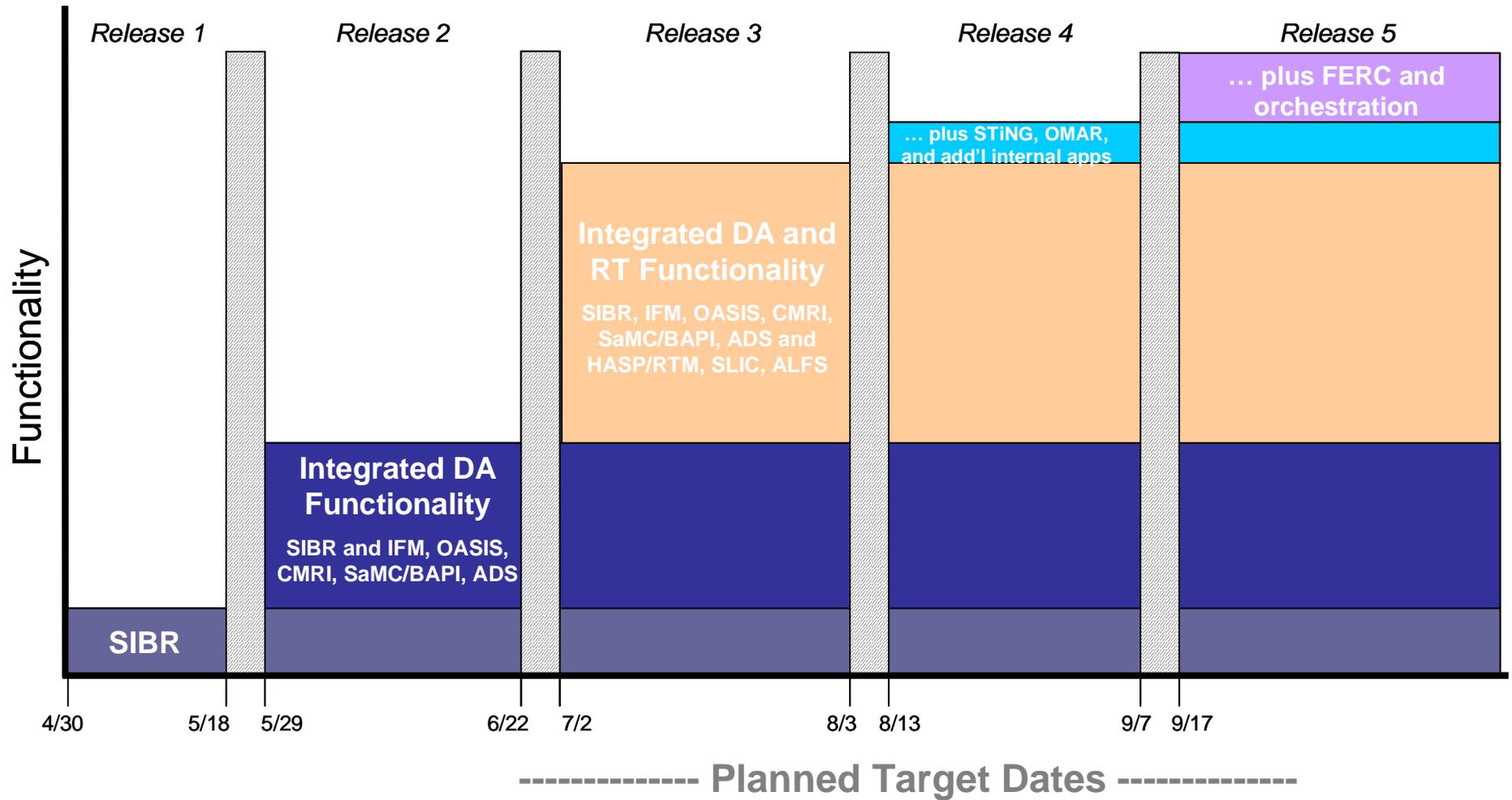
	 Delay, but will not impact 2/1/08 Go-Live Trade date.
	 Delay, will impact 2/1/08 Go-Live Trade date. Use of contingency funds.

	Variance less than +2 %		Situation has improved since last reporting period.
	Variance between +2 % and +6 %		No change since last reporting period.
	Variance over +6 %		Situation has deteriorated since last reporting period.



- Majority of System Development activities are complete; focus on stabilizing the systems in integration test environment and completing the remaining components. Design and build updates from the September 2006 FERC changes are underway and will be included in Integrated Market Simulation (IMS) Release 5 (scheduled to start 9/17/07).
- Integrated Market Simulation began on 4/30. It consists of 5 releases over 6 months and will include structured, semi-structured, and unstructured testing. Release 2 and 3 planning is underway.
- The Testing team completed Factory Integration Testing for multiple applications and continues to process bids to confirm IMS readiness; Real-Time and Day-Ahead testing in progress. Completing Integration and End-to-End testing for IMS Release 2 and Release 3 are current priorities.
- The Readiness team facilitated process walkthroughs with various business units. Training held a pilot class for select CAISO employees and Market Participants for the Bid-to-Bill courses.

IMS Scope and Schedule





MRTU Program Progress as of May 8, 2007

California Independent System Operator Corporation

Program Area	Design	Build	Test	Integration Test	End-End Test	Market Simulation	Deployment
Phase 1A							
Phase 1B							
Market Systems							
Real-Time Market							
Integrated Forward Mkt							
Hour-Ahead Processor							
Residual Unit Com.							
Scheduling							
Policy Must-Haves							
FERC Changes – Market Systems							
Settlements							
Base Product							
Charge Types							
Congestion Revenue Rights							
FERC Changes – Settlements/CRRs							
Legacy							
Automated Dispatch System (ADS)							
Reference Level Calculator (RLC)							
Scheduling and Logging System (SLIC)							
Compliance Automation Production System (CAPS)							
Existing Transmission Contract Coordination (ETCC)							
Operational Meter Analysis and Reporting (OMAR)							
Open Access Same-Time Information System (OASIS)							
Reliability-Must-Run Application Validation Engine (RAVE)							
Other Applications							
Market Quality System							
PTR							
Portal							
MFRD							
FERC Changes – Legacy/Other Applications							

Preliminary application-specific testing conducted

Legend	
Phase not started	
Phase in progress	
Phase complete	

Supporting Activities

Program Area	Planning	Development	Execution
Internal Readiness			
External Readiness			
Training			
Business Processes (Phase 1)			
BPMs			

Accomplishments & Milestones

Integration (Interfaces)

- FERC changes Design and Build complete
- Baselined all affected IS Documents for modified XSDs
- Build and Testing in progress for SaMC services

SaMC

- Completed IMS R5 Charge Code Requirements
- Market Clearing Factory Acceptance Testing 2 (FAT) 35% complete
- 8 of 8 Market Clearing test plans reviewed and approved for sign-off
- Mitigated all R3 performance related issue

Integrated Forward Markets/Real-Time Nodal

- CR3b SAT currently passing 59% of test cases
- Successfully received RealTime bids from SIBR
- Completed CR3c Build and CR4 Design documents

Scheduling Infrastructure and Business Rules (SIBR)

- Successfully ran Day Ahead bid set with MasterFile
- Completed CR4 Design, began CR4 FAT

Market Quality Systems

- Completed MQS V2.0 Design, Design Reviews and sign-off

Legacy

- Completed Site Acceptance Test (SAT) for multiple applications
- Completed Development efforts for PIRP and RAVE

Congestion Revenue Rights

- Began CRR production environment Build-out
- Completed Nexant support and warranty contract

Testing

- Completed Factory Integration Testing for IFM/SIBR/MasterFile
- Completed Load and Performance (L&P) Testing for CRR
- Continued CR3b Functional Integration Testing (FIT) efforts
- Executed all Regression test cases in preparation for R1

Market Simulation

- Began IMS Release 1

Planned Activities

Integration (Interfaces)

- CR3b test support and defect resolution (5/31)
- Update FERC I/O requirements and IS Documents for IRR interface
- Provide CR3b FIT support

SaMC

- Finalize IMS R5 Charge Code Design and Build
- Complete Market Clearing FAT2

Integrated Forward Markets/Real-Time Nodal

- Complete CR3b SAT (5/10)
- Run tests with updated MasterFile to produce RealTime bid results
- MasterFile integration with IFM/RTN and SIBR

Scheduling Infrastructure and Business Rules (SIBR)

- Deliver CR4 FAT (5/25)

Market Quality Systems

- Knowledge transfer with FAT tester
- Detailed Test Case Development for V2.0

Legacy

- Support FIT for IMS Release 2
- Deliver Functional Changes and Integration Logic for: OASIS, CAPS, PIRP and RAVE

Congestion Revenue Rights

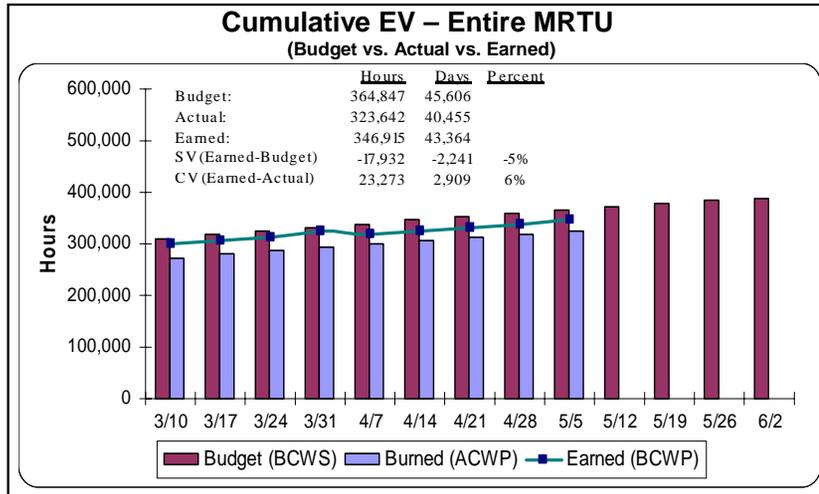
- Receive Build from Nexant (5/9)
- Complete Market Policy Development to resolve issues

Testing

- Continue IMS R2 FIT; complete CR3b FIT
- Continue L&P profiling for SIBR, IFM, Integration, and SaMC
- Begin End-to-End Testing

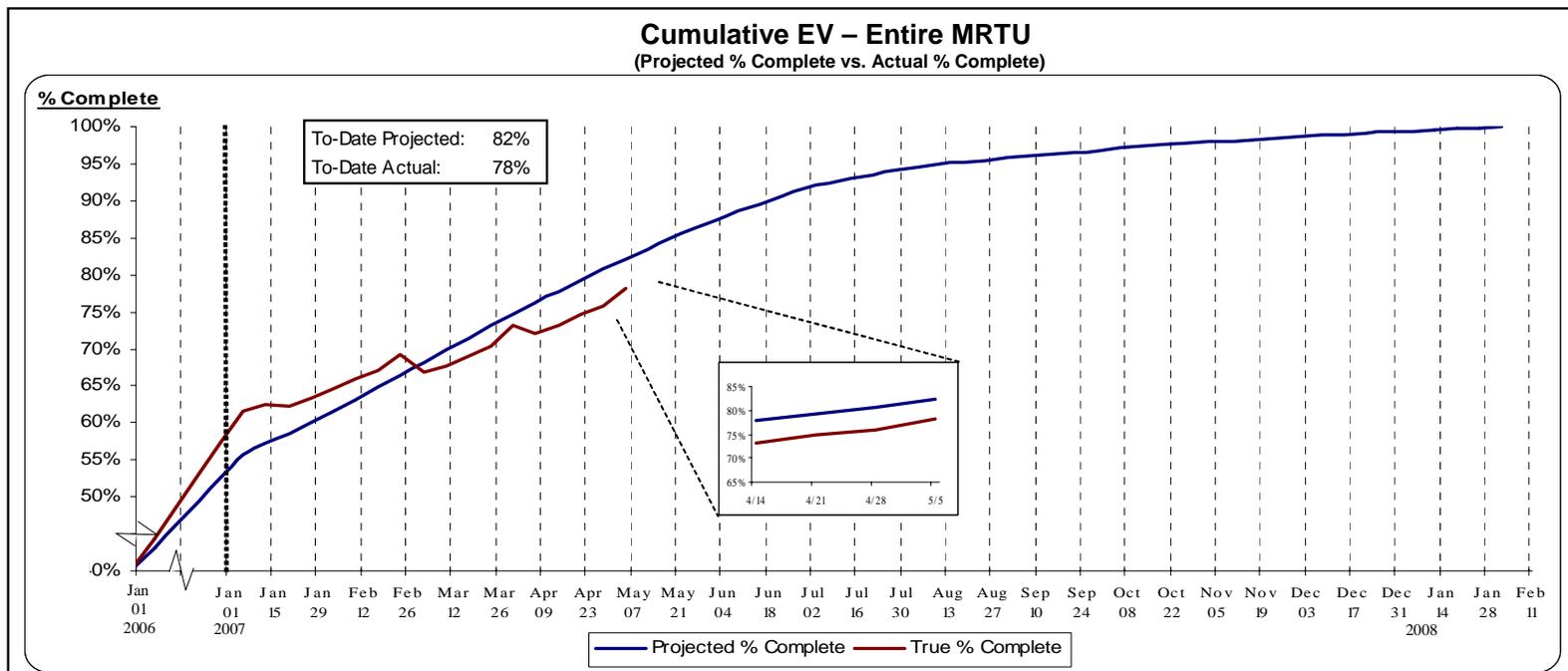
Market Simulation

- Continue planning & preparation for IMS R2 and R3



Notes/Comments:

Graph represents the new baseline as of June 2006.
Legacy figures are still being validated.



Included in Graphs: BPM, Business Process, SIBR, Training, FNM/SE, IFM, MQS, CRR, MFRD, SaMC, Portal, Testing, Integration, PTR, PMO, Legacy, STING, Readiness, and Technical Architecture.

Not Included in Graphs: n/a



MRTU Financials

California Independent System Operator Corporation

California Independent System Operator
 Summary of Expected Completion Costs vs. December, 2006 Budget
 April 30, 2007
 (In Thousands) *

Project	Re-baselined Project Costs Dec. 2006 (a)**	Actual Costs Through 2006 (b)	Paid Invoices To Date 4/30/07 (c)	Estimated Costs to Complete (d)	Cost of Project at Completion (e)=(c+d)	Increase (Decrease) from Baseline (f)=(e-a)
Market Redesign	\$ 64,807	\$ 49,990	\$ 51,892	\$ 12,914	\$ 64,807	\$ -
1 Automatic Mitigation Procedures/Phase 1A	773	773	773	0	773	0
2 Real Time Markets/Phase 1B	16,297	16,297	16,297	0	16,297	0
3 Integrated Forward Markets/Real -Time Market (IFM/RTM)	33,372	23,673	24,908	8,464	33,372	0
4 Congestion Revenue Rights (CRR)	4,516	3,986	4,172	344	4,516	0
4A Market Quality System (MQS)	6,261	2,315	2,796	3,465	6,261	0
11A Hardware & Software Purchases	3,588	2,947	2,947	642	3,588	0
Technology Upgrade	\$ 74,179	\$ 61,020	\$ 65,034	\$ 9,144	\$ 74,179	\$ -
5 Scheduling Infrastructure Business Rules (SIBR)	13,323	9,727	9,923	3,400	13,323	0
6 Settlements and Market Clearing (SaMC)	18,030	16,170	16,763	1,266	18,030	0
6 Master File (MFRD)	2,300	2,291	2,320	(20)	2,300	0
9 Post Transactional Repository (PTR)	2,461	2,236	2,549	(88)	2,461	0
10 Legacy Systems	7,785	6,379	6,719	1,066	7,785	0
10A State Estimator/Full Network Model	1,345	1,040	1,122	223	1,345	0
11 Technology Infrastructure/ Portal	2,065	2,050	2,051	14	2,065	0
11B Hardware & Software Purchases	6,923	5,197	6,059	864	6,923	0
12A System Integration/Enterprise Architecture	17,989	15,540	16,866	1,123	17,989	0
12B Technology Architecture	1,957	389	661	1,297	1,957	0
Common Projects ***	\$ 41,214	\$ 25,738	\$ 30,450	\$ 10,765	\$ 41,214	\$ -
13 Training/Readiness Projects	9,709	6,975	8,360	1,349	9,709	0
14A Project Management	17,666	11,907	12,781	4,885	17,666	0
14B Testing	13,840	6,856	9,309	4,531	13,840	0
Ongoing Scope Adjustments	\$ 1,523	\$ -	\$ -	\$ 1,523	\$ 1,523	\$ -
Pending MRTU Scope Changes	1,523	0	0	1,523	1,523	0
Contingency	\$ 7,500	\$ -	\$ -	\$ 7,500	\$ 7,500	\$ -
15 Program Contingency	7,500	0	0	7,500	7,500	0
Total MRTU Project	\$ 189,223	\$ 136,748	\$ 147,376	\$ 41,847	\$ 189,223	\$ -

* Columns and rows may not total due to rounding.

** Budgets include: Consultant Labor, Vendor Costs, Travel & Meals Expenses, Training, Hardware, Software, Maintenance, Employee Backfill costs

*** Common Projects Allocation: 47.9% to Market Redesign; 52.1% to Technology Upgrade