



Nodal Program Update

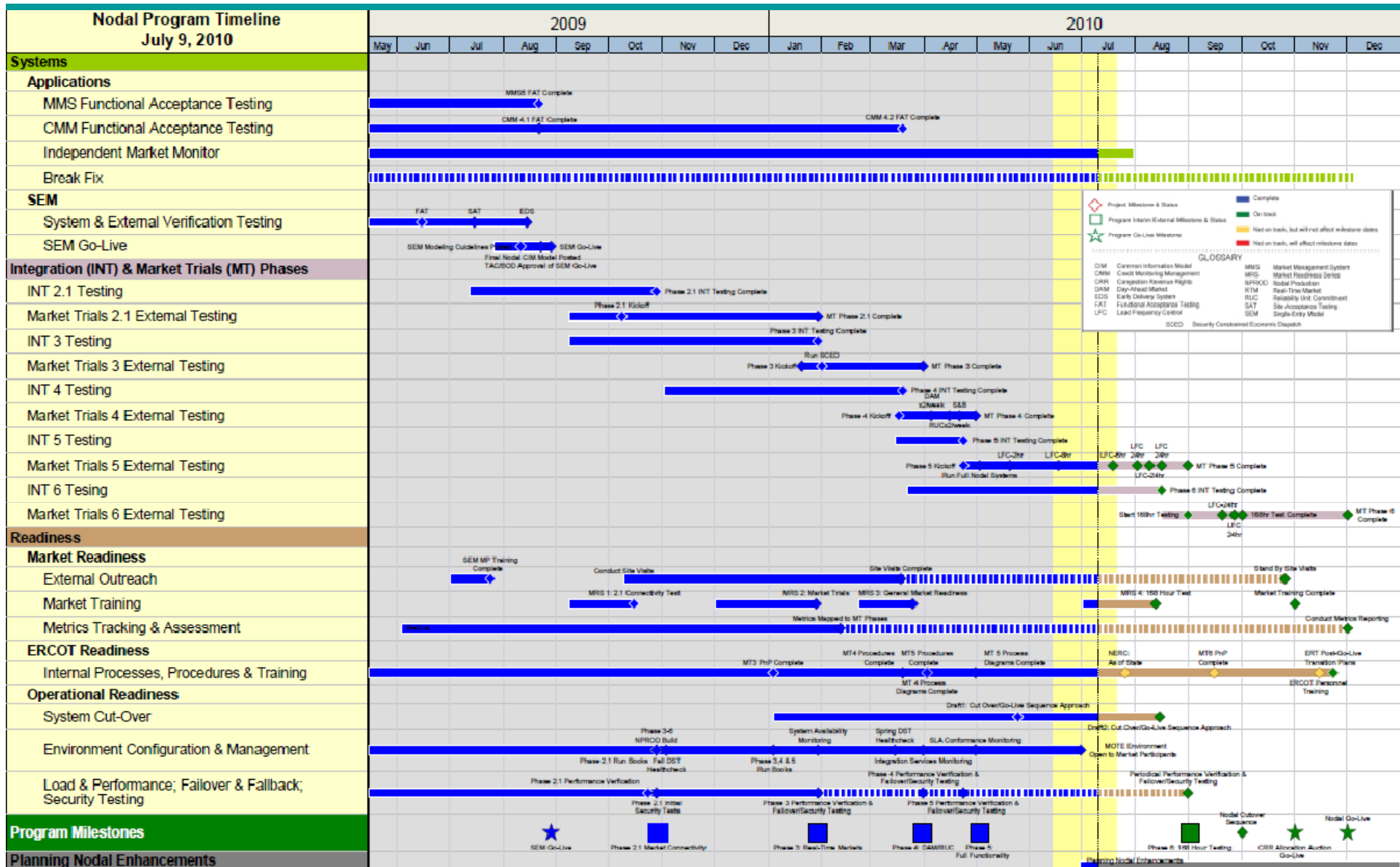
Mike Cleary
Chief Operating Officer

ERCOT Board of Directors
20 July 2010

Agenda

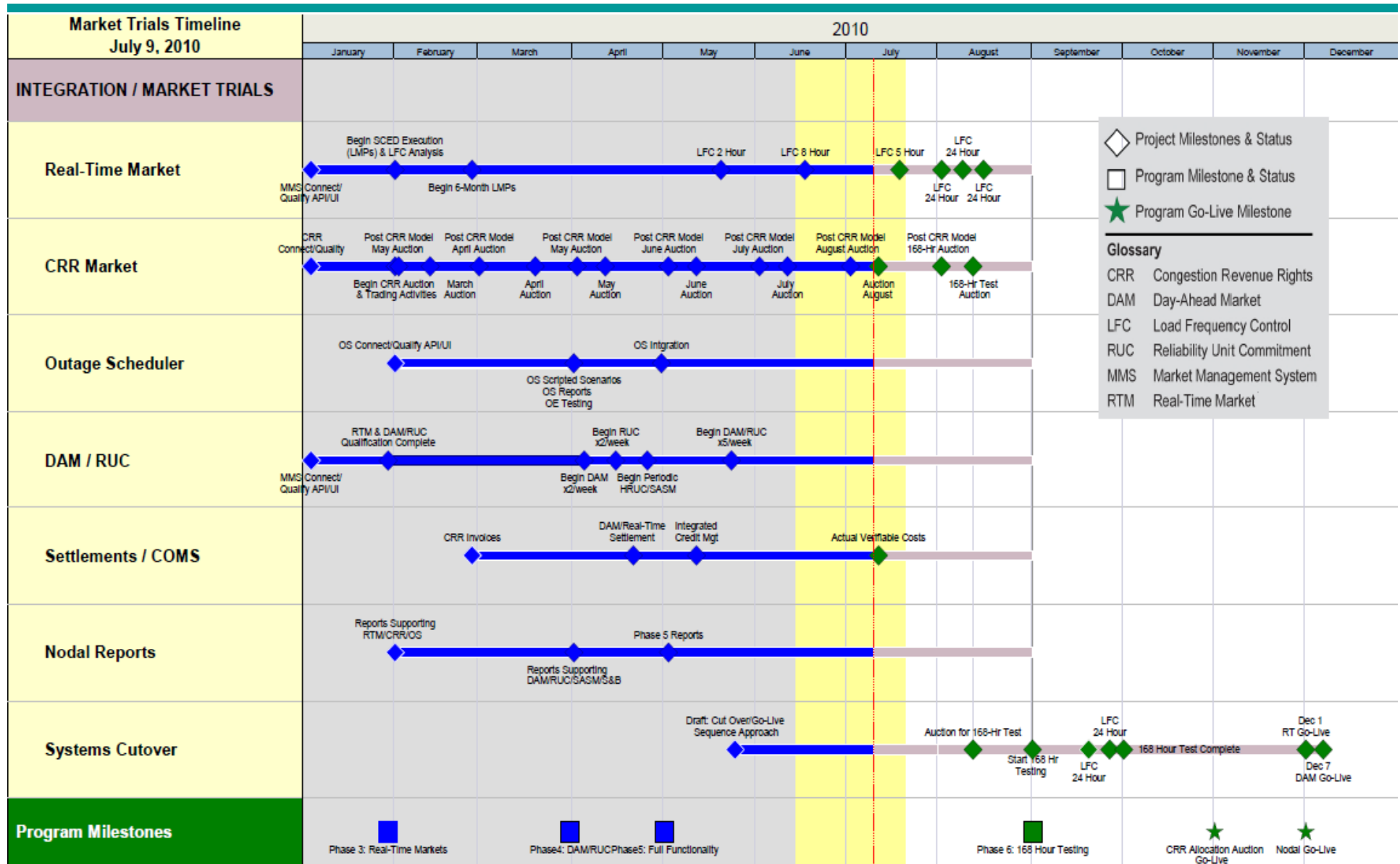
- **Program Status**
- **Nodal Go-Live Update**
- **Market Readiness**
- **Financials**
- **Appendix**

Integrated Nodal Timeline – Go-Live December 1, 2010



20 July 2010

2010 Market Trials Timeline – Go-Live December 1, 2010



ERCOT Nodal Program Cut-Over Timeline

As of May 2010

Sep 2010

Oct 2010

Nov 2010

Dec 2010

Jan 2011

Nodal Project

168-Hour Test (9/1 - 9/30)

Nodal Go-Live
00:00:01 (12/1)

RTM/SCED

ERCOT grid
operations
switch to Nodal
at 14:00 (11/30)

CRR

ERCOT start
accepting PORR
Nominations for
Dec 2010 Auction
(10/13)

ERCOT to
allocate PORRs to
NOIEs for
Dec 2010
Auction
(10/20)

ERCOT to
post the Dec 2010
Monthly
Auction
Notice
(10/24)

Start Bid/Order
Submission Window
for Dec 2010 CRR
Auction
(11/4-11/10)

Run Dec
2010
CRR
Auction
(11/11)

Publication of
Dec. 2010
Monthly CRR
Auction
Results
(11/16)

MPs should have Dec outages and
beyond in synch. ERCOT Begin
Approving/Rejecting Outages in
Production using both Zonal and
Nodal Systems (9/15 - 12/7)

MPs and ERCOT should
attempt to maintain both Zonal
and Nodal in support of 168-
Hour Test (9/1 - 9/30)

ERCOT Ends
Approval of Zonal
Outages (12/8)

Outage Scheduler

MPs Enter
Production Outages
in Nodal Go-Live OS
for Dec. and Beyond
(9/1)

DAM / RUC / SASM

Market
Submission
Opens (11/23)

ERCOT Executes
a Binding DA
Market (11/30)

Settlements / COMS

Publication of
Dec. 2010
Monthly CRR
Auction Invoice
(11/17)

Payment
Due for Dec
2010 CRR
Auction
(11/22)

ERCOT pay CR
Account Holders
owed from Dec 2010
Auction (11/23)

CMM

ERCOT Provides Initial
Assessment of each MP
Creditworthiness
(10/12-10/20)

Post ACLs
to MPs
(10/21)

Post ACL to
MP via MIS

MPs can post additional
collateral for Dec 2010
Auction (11/9)

Network Model
(NMMS)

Deadline for Submitting
Changes to the Dec
Network Model (9/1)

Post CIM
Model to
MIS (10/15)
Dec. Network
Model Posted
to Market for
Validation (10/15)

Dec Model
in Prod

Glossary
CRR Congestion Revenue Rights
DAM Day-Ahead Market
LFC Load Frequency Control
RUC Reliability Unit Commitment
RTM Real-Time Market
SASM Supply Ancillary Svc Mkt
COMS Commercial Systems
CMM Credit Monitoring & Mgmt

Post Go-Live/Stabilization Cost Allocation

QUESTION TO ANSWER

- **When do Nodal Program direct costs end?**
 - Hardware/Software Maintenance
 - Deferred defect remediation
 - Parking Lot Items
 - Supplemental Operational Support (customer service inquiries, disputes, monitoring)

CURRENT STATE

- \$2.9 million currently forecasted in Nodal EAC for 12/1 – 12/31
- 2011 budgeting process underway

ACTION REQUIRED

- **BOD/PUC decision in order to progress with Nodal Program closeout and 2011 budgeting process**

Amounts in Millions

133 Days to Go-Live

Market Trials has been running for 24 weeks Market Quality Testing and Operational Readiness

Achievements within Market Trials:

- CRR
 - Six monthly CRR auctions and one Balance of the Year auction have been completed and invoiced
- Real Time Markets
 - SCED
 - Real Time settlements
- DAM / RUC
 - DRUC has been running in conjunction with DAM for 13 weeks
 - DAM Settlements are being executed
 - Settlement and extract data has been available since Mid-May
 - Continual strong participation from the Market Participants (Averaged 197 QSEs / DAM run)
 - 12 Operational scenarios were successfully run in June
 - DAM / RUC 5 times per wk except for weeks that contain an LFC test
- Ancillary Services
 - Procured in every DAM for production quantities
 - Supplemental AS Market tested as needed
- Closed Loop LFC
 - 2 hour test occurred in May
 - 8 hour test occurred on June 17th
- Credit
 - Credit Module went into effect on May 14th

133 Days to Go-Live

Market Trials has been running for 24 weeks

Upcoming Milestones for Market Trials:

- Closed Loop Load Frequency Control (LFC) / Market Readiness Assessment / Market Simulation
 - 5 hour test scheduled for this week
 - 24 hour test scheduled for the week of August 2nd
 - Week of August 30th, 48 hour LFC Test
- DAM/RUC/SASM Scenarios
 - Planning more operational scenarios for August
 - DAM will run continuously for 7 consecutive days starting on 8/16/2010 through 8/23/2010
 - HRUC will run 24x7 for all 7 days
 - Reduce the number of DAMs to create more resource availability to support additional LFC tests
- Market Changes in trials in July/August
 - NPRR206- Change in Credit Management Collateral calculations for Day-Ahead Market
 - NPRR202- Posting of ERCOT network model (redacted version for all MPs)
 - NPRR169- Posting Real-Time Prices after every SCED run
 - Market Readiness Seminar scheduled for July 28th

System Cut-Over / Go-Live

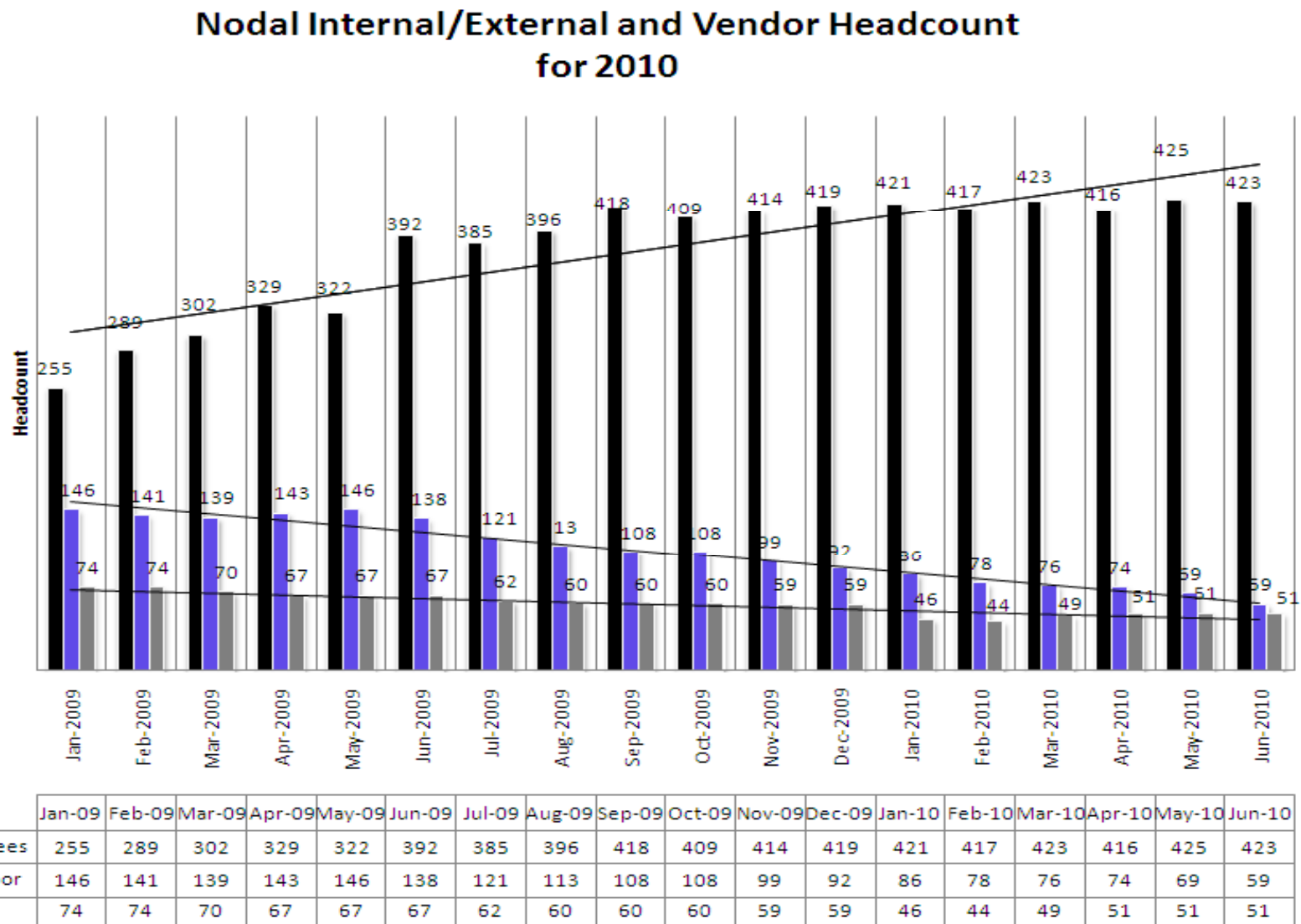
- Sept/Oct 2010– Network Modeling, Outage Scheduling
- November 2010- Go-Live CRR Auction
- November 30th DAM
- December 1st – First Operating Day

Upcoming Dates for Go-Live Sign Off

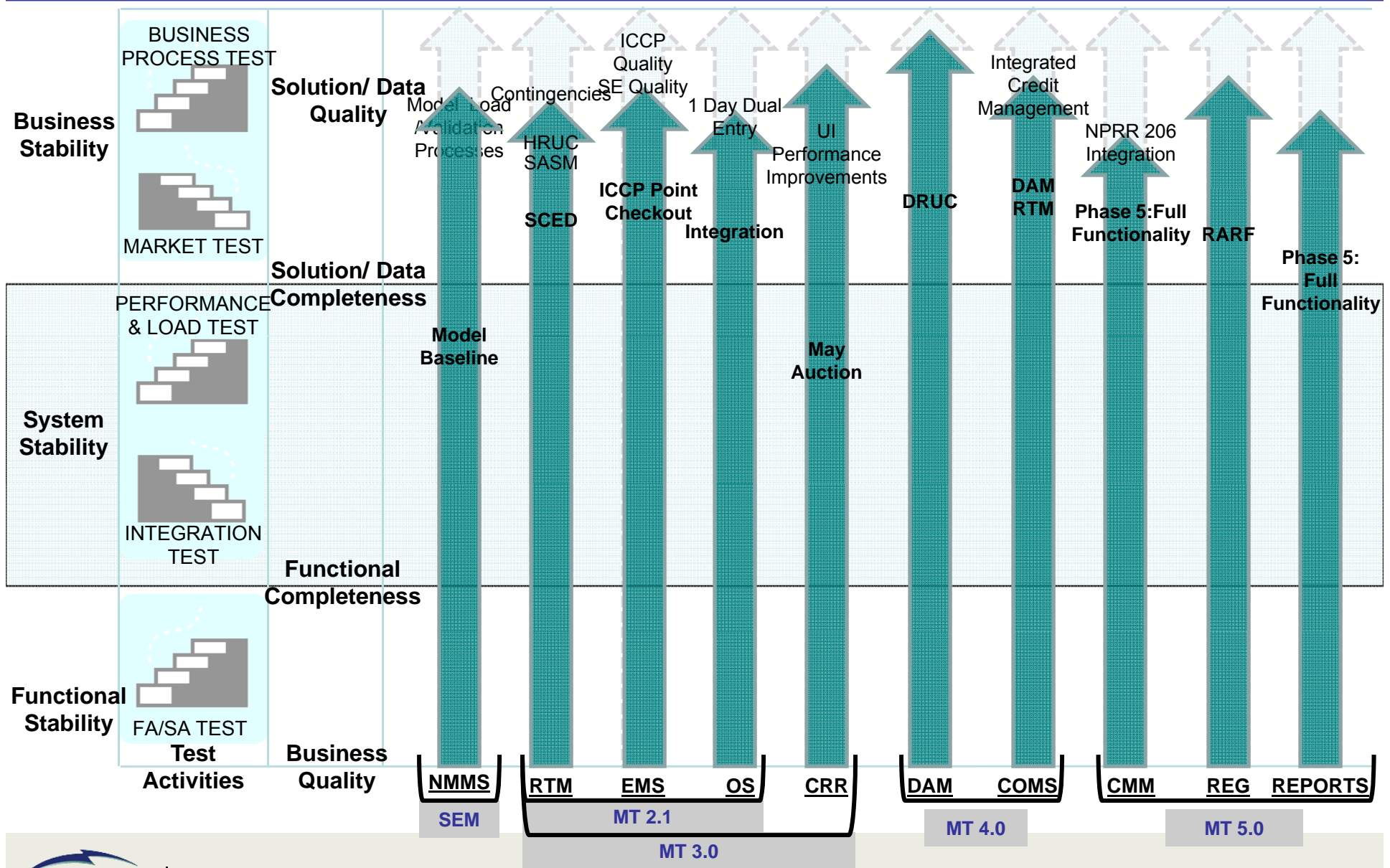
The table below outlines key approval dates for TAC and Board Signoff

System (Protocol)	TAC Approval	Board of Directors Approval
Network Operations Modeling (NMMS)	July 20 th	July 20 th
Congestion Revenue Rights (CRR)	August 5 th	August 17 th
Outage Scheduling (OS)	August 5 th	September 21 st

Nodal Internal/External and Vendor Headcount 2010



Go-Live



Nodal Program Risks & Issues

Risk/Issue	Impacted Milestone	Target	Category	Probability	Severity	Status
Network Model Management <i>Performance and availability issues around the NMMS.</i>	Program	July 2010	Schedule / Budget	Med	High	<ul style="list-style-type: none"> Update given at NATF on 06/23 Working closely with vendor to correct all issues Scheduled update at NAFT on 7/08
Market Design Assessment <i>Risk around the protocol traceability project and the market results as each phase of market trials becomes active.</i>	Program	August 2010	Scope / Budget	Low	High	<ul style="list-style-type: none"> Performing risk assessment associated with four identified issues for August board meeting
Operational Readiness <i>Operational readiness of the Nodal systems and business processes are an increasing risk at this point in the program</i>	Program	September 2010	Scope / Schedule/ Budget	Med	High	<ul style="list-style-type: none"> Organizational capability assessments and improvement recommendations are under review by executive management The PMO has and will continue to identify critical deficiencies and implement mitigation strategies to ensure delivery

Network Model Management System Update

- **Improvement in stability since July 2**
 - Configuration change applied to eliminate memory defect
- **Still have intermittent system re-starts**
 - 8 restarts have occurred since July 2
 - ERCOT/Siemens stability patch was installed July 18
- **System performance needs improvement**
 - Navigation time is slow when accessing network model
 - Target for navigation performance improvement is July 31
- **Validation process being reviewed for performance improvement**
 - Looking to improve validation time
 - In analysis

21.12.3 Notice to Market Participants of Effective Date for Nodal Protocol Provisions and Retirement of Zonal Protocol Provision

No part of the nodal market design may start operation until all the Market Readiness Criteria for that part of the nodal market design have been met. Certification that all Market Readiness Criteria have been met must be made at least by each of the following: the Technical Advisory Committee (TAC), ERCOT and the ERCOT Board. Upon such certification, ERCOT shall issue two Notices alerting Market Participants to the effective date of Nodal Protocol sections and the retirement of Zonal Protocol sections, as applicable. ERCOT shall issue the first Notice no less than thirty (30) days prior to the effective date or retirement date, as applicable, and the second Notice no less than ten (10) days prior to the effective date or retirement date, as applicable. The Notice shall include:

- (1) The Nodal Protocol Sections to become effective; and
- (2) The Zonal Protocol Sections to be retired, if any

ERCOT will measure readiness by the following categories:

- ***System Readiness*** – an evaluation of a particular system needed to support identified market activities
 - ***Process Readiness*** – an evaluation of the Processes and Procedures necessary to support identified market activities
 - ***People Readiness*** – an evaluation of ERCOT and Market Participant capabilities to support identified market activities
-
- ERCOT reviewed the readiness criteria at the 6/23/10 NATF, 7/1/10 TAC and 7/8/10 NATF.
 - The 7/8/10 NATF voted to recommend to TAC that the Network Operations Model readiness criteria has been met.
 - ERCOT is requesting a vote from the 7/20/10 TAC and the 7/20/10 Board on the Market Readiness Criteria per Section 21.12.3, Notice to Market Participants of Effective Date for Nodal Protocol Provisions and Retirement of Zonal Protocol Provision.

Network Operations Modeling – Go Live

System Readiness	Planned Completion	Status
SEM Go-Live	8/31/09	Complete
TSP Model Validation (Metric MP14C)	4/30/10	Complete
Model Change Request Tools Support Market Updates	Ongoing	Green
Regular Model Loads into Market Trials Systems	Ongoing	Green
8 Hour LFC Test Executed w/ Network Model from NMMS	6/17/10	Complete
Process Readiness		
Network Operations Change Request Timeline Transition Plan established	6/03/10	Complete
Network Modeling Procedures Ready	8/01/10	Ongoing
Market Rules – Protocol Transition Plan for September	7/23/10	In Progress

Network Operations Modeling – Go Live

People Readiness	Planned Completion	Status
ERCOT Staff Support of Market Trials	Ongoing	Green
ERCOT Staff Trained on System and Processes	6/22/10	Green
Market Participant Training Delivered	7/29/09	Green
Readiness Review and Approval		
NATF Review	6/23/10 7/08/10	Complete
ERCOT Management Approval	6/30/10	Complete
TAC Approval	7/20/10	
BOD Approval	7/20/10	
30 Day Market Notice	7/30/10	
10 Day Market Notice	8/20/10	

For Board of Directors Consideration - NMMS

Motion for Board of Directors consideration:

- *The ERCOT Board of Directors certifies that the Network Operations Modeling Market Readiness Criteria have been met*

Nodal Program Cutover

The table below outlines key dates and activities requiring Market Participant support

Cutover Timeline Key Dates (Aug – Oct)		
Network Operations Modeling	08/01	Begin transition plan for Network Modeling timelines
	09/01	Deadline to submit Model changes for Month of December
	10/02	Network Model built for PCRR Allocation
	10/13	Network Model built for CRR Auction
	10/15	Model complete and available for Market Participant testing
Outage Scheduling	08/13	Begin transition plan for 168 hour test and outages for December and beyond
	10/02	December Outages pulled for initial CRR Network Model
	10/13	December Outages pulled for CRR Network Model
Congestion Revenue Rights	08/13	Last day to Register for CRR Monthly Auction
	10/18	PCRR Nominations close for December Allocation
	10/20	Allocation results published / Network Model Posted
	10/21	Initial Credit Limit for CRR Auction will be available for posting

Reminder – Nodal Registration Cutoff – QSEs and CRRAHs

- **Scope**

- What is the cutoff date for QSEs and CRRAHs to begin registration for Nodal Go-Live (based on ERCOT resource availability)?

- **Registration must begin by these dates to be qualified for Nodal Go-Live**

- **August 13th, 2010**

- QSEs with Resources with a new WAN connection *
- CRRAHs (to be qualified for the 10/13 PCRR nomination and for the 11/11 December 2010 CRR Auction) * ~

- **October 1st, 2010**

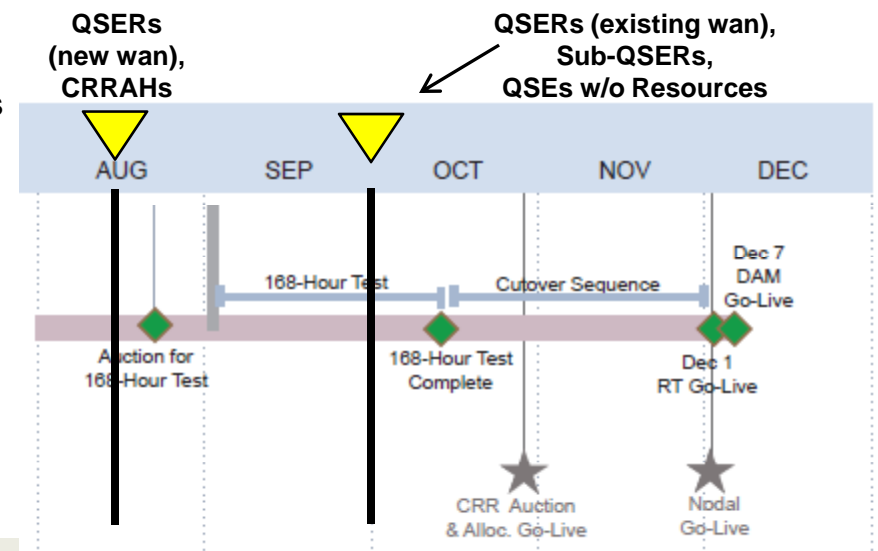
- QSE with Resources using a Nodal qualified service provider *
- QSEs without Resources *
- Sub-QSEs using a Nodal qualified parent QSE *

- **Mechanics**

- Qualification will follow the Nodal production qualification process and all testing will be done in the MOTE environment
- MPs that want to begin registration past these deadlines will be examined on a case-by-case basis
- Nodal Metric MP22 will measure progress of new entrants

* QSE Application or CRRAH Application must be submitted, which includes Credit Application

~ Doesn't include NOIE Allocation Eligibility Form, which must be submitted by 6/30 for CRRAHs eligible for PCRRs



Next 60-days of Classes/Workshops

Course	Start Date	Location
Load Serving Entity 201	July 20	Optim Energy (Dallas)
Congestion Revenue Rights	July 21	Optim Energy (Dallas)
ERCOT Nodal 101	July 26	First Choice (Dallas)
Generation 101	July 27	Calpine (Houston)
Transmission 101	August 3	ERCOT Met Center (Austin)
Basic Training Program	August 10	Calpine (Houston)
NPRR206 E-Factors Workshop	August 10	Hilton Austin Airport (Austin)
ERCOT Nodal 101	August 10	ERCOT Met Center (Austin)
Basic Training Program	August 10	Calpine (Houston)
Load Serving Entity 201	August 16	Reliant Energy (Houston)
Market Settlements 301	August 17	City of Garland Fire Administration Building (Dallas)

Enrollment at: <http://nodal.ercot.com/training/courses/index.html>

Next 60-days of Classes/Workshops - continued

ERCOT Nodal 101	August 10	
NOIE QSE Operations	August 20	City of Garland Fire Administration Building (Dallas)
Congestion Revenue Rights	August 24	University of Delaware (Newark, DE)
Generation 201	August 25	University of Delaware (Newark, DE)
Congestion Revenue Rights	August 31	ERCOT Met Center (Austin)
Generation 201	September 1	Hilton Austin Airport (Austin)
Economics of LMP	September 13	ERCOT Met Center (Austin)
ERCOT 101 for Wind Generation	September 13	Optim Energy (Dallas)
ERCOT Nodal 101	September 14	StarTex Power (Houston)
Generation 101	September 15	Hilton Austin Airport (Austin)

Enrollment at: <http://nodal.ercot.com/training/courses/index.html>

RED/AMBER Metrics Summary – Market Participant Metrics

Market Participant Metrics

Metric Name	Current Score	Applies to	Weight	Green %	Yellow %	Red %	Not Scored %	Primary Criteria	Notes
Market Participant Metrics									
MP15(B) CRR Connectivity Qualification	Red	CRRAHs	Even weighting	86.0%	0.0%	9.3%	4.7%	Successful submission CRR transactions	73/85 CRRAHs qualified. Greater than 5% RED.
MP16 DAM Participation	Amber	QSEs	Even Weighting	78.8%	5.4%	11.4%	4.4%	Participation in 50% of the Day-Ahead Market runs	145/184 QSEs w/o Resources
MP21 WGRs ICCP Meteorological Telemetry	Amber	REs (only WGRs)	WGR Registered MW Capacity Ratio Share	72%	27%	1%	N/A	95% of registered WGRs megawatt capacity must meet reasonability tests for MET ICCP	Less than 95% of registered WGR megawatt capacity meeting reasonability tests

MP15(B)

- 12 not qualified - 4 within 30 day grace period, 2 expressed no intention to qualify, and 6 still working to submit qualification transactions
- Minimal risk to running the December 2010 Auction

MP16

- QSEs w/o Resources DAM participation ~ 80% since measurement started in April.
- These QSEs represent 1% of Load.
- Minimal risk to Go-Live

MP21

- 83 WGRs – 54 passed reasonability test, 26 working with ERCOT to resolve, 3 with no response
- WGRs notified 6/23 and metric began 7/14
- Any WGRs not meeting reasonability tests by end of July are subject to escalation to the TRE

RED/AMBER Metric Summary – ERCOT Metrics

ERCOT Metrics

Metric Name	Current Score	Applies to	Weight	Green %	Yellow %	Red %	Not Scored %	Primary Criteria	Notes
ERCOT Metrics									
EMO9(B) RTCA Modeling Differences	Amber	ERCOT	N/A	N/A	92.53%	N/A	N/A	95% of load tap setting values matched between Zonal/Nodal	92.53% Match for transformer tap settings. 1430 transformers in Nodal.

EMO9(B)

- Measures data quality between Zonal and Nodal Network Models
- Expected completion after verification of Model changes in DSV 21 (mid-August)

EMO9(B) Metric Historical Trend Analysis	
Period Ending	EMO9b (Tap Settings)
17-May	56.25%
31-May	55.95%
14-Jun	84.33%
28-Jun	85.87%
12-Jul	92.53%



Monthly Financial Review

Mike Petterson
Controller
20 July 2010

Current Monthly Financials

Financial Review – June 2010 Performance

Forecast vs. Actual

Line	Cost Summary	Variance			
		Forecast ¹	Actual	Fav./ (Unfav.)	
1	Internal Labor Costs	\$ 2.7	\$ 2.7	\$	-
2	Backfill Labor Costs	0.1	0.1		-
3	External Resource Costs	2.8	2.7		0.1
4	Software & Software Maintenance	0.2	0.2		-
5	Hardware & Hardware Maintenance	0.2	0.2		-
6	Other	-	-		-
7	Sub-total Direct Project Costs	\$ 6.0	\$ 5.9	\$	0.1
8	Allocations	0.3	0.3		-
9	Finance Charges	1.1	1.0		0.1
10	Sub-total Indirect Project Costs	\$ 1.4	\$ 1.3	\$	0.1
11	Total	\$ 7.4	\$ 7.2	\$	0.2

Amounts in Millions

Note 1: Forecast consists of re-forecast from April 1, 2010 plus NCRs



Financial Review – LTD Performance through June 2010

Forecast vs. Actual

Line	Cost Summary	Forecast ¹	Actual	Variance Fav./((Unfav.)	Estimate to Complete ²
1	Internal Labor Costs	\$ 71.8	\$ 71.6	\$ 0.2	\$ 11.9
2	Backfill Labor Costs	5.9	5.9	-	0.4
3	External Resource Costs	271.5	270.8	0.7	9.0
4	Software & Software Maintenance	28.8	28.8	-	2.0
5	Hardware & Hardware Maintenance	48.5	48.4	0.1	1.4
6	Other	2.1	2.1	-	0.2
7	Sub-total Direct Project Costs	\$ 428.6	\$ 427.6	\$ 1.0	\$ 24.9
8	Allocations	21.8	21.8	-	1.3
9	Finance Charges	32.2	32.0	0.2	18.8
10	Sub-total Indirect Project Costs	\$ 54.0	\$ 53.8	\$ 0.2	\$ 20.1
11	CTO Contingency Fund Unutilized	-	-	-	3.4
12	Board Discretionary Fund	-	-	-	112.8
13	Total	\$ 482.6	\$ 481.4	\$ 1.2	\$ 161.2

Amounts in Millions

Note 1: Forecast consists of re-forecast from April 1, 2010 plus Q2 NCRs

Note 2: Estimate to Complete (ETC) consists of re-forecast from April 1, 2010 plus Q2 NCRs



Financial Review – CTO Contingency Fund

Q2 Risk Items Update

Line	Major Activities/Adjustments	Likely to Spend ¹	Risk	Approved NCRs	Unutilized Risk Funds
1.	Credit Management	H	\$ 1.2	\$1.3	(\$0.1)
2.	Infrastructure Hardware & Application Upgrades	H	1.0	0.6	0.4
3.	Expected Nodal Change Requests	H	1.0	(0.5)	1.5
4.	Market Analysis	L	0.8	0.1	0.7
5.	Business Process Monitoring & Cutover Coordination	H	0.7	0.1	0.6
6.	Current Open Change Requests	H	0.3	-	0.3
7.	Network Model Management	H	0.2	0.3	(0.1)
8.	Independent Market Monitor	L	0.1	-	0.1
	Total		<u>\$ 5.3</u>	<u>\$1.9</u>	<u>\$ 3.4</u>

Amounts in Millions

Note 1: H – high probability risk has or will materialize, L – low probability risk has or will materialize



Quarterly Reforecast Process Update

Financial Review – Board Discretionary Fund Summary

- **The Board Approved Budget is \$643.8M**
- **Board Discretionary Fund increasing by \$0.8M to \$113.6M**
 - Direct Program Costs:
 - Estimate at Completion reforecast favorable net variance \$0.6M
 - Unutilized Q1 2010 EAC risk items \$3.4M
 - Q2 favorable variance \$1.0M
 - CTO risk items for Q3 (\$3.8M)
 - Indirect Program Costs:
 - Q2 favorable finance variance \$0.2M

Summary	
Board Discretionary Fund	Millions
Beginning balance, 4/01/10	\$112.8
Direct Program Costs (see slide 8)	0.6
Indirect Program Costs	<u>0.2</u>
Ending balance, 7/1/10	<u>\$113.6</u>

Financial Review – CTO Contingency Fund

Q3 Risk Items Update

Program Risk & Changes	Major Activities/Adjustments	CTO Fund	Board Fund
	Existing CTO Contingency at April 1, 2010	\$ 5.3	
Approved Change Management Items Charged to CTO Contingency	<ul style="list-style-type: none"> •NCR121 TriplePoint source code purchase (\$1.2M) •NCR125 Software true-ups (\$0.3M) •NCR135 Informatica License (\$0.2M) •NCR147 Delivery Assurance for NMMS (\$0.2M) •Various NCRs less than \$0.2M (\$1.3M) •Giveback NCRs (-\$1.3M) 	(1.9)	
	Close out unutilized Q2 2010 EAC Risk Items	(3.4)	3.4
Budget to Actual Variance	•Q2 Favorable Variance		1.0
Estimate to Complete	<ul style="list-style-type: none"> •Reduction of External Labor Budget (\$0.1M) •Reduction of Internal Labor Budget (\$0.2M) •Reprogramming of Vendor dollars, no net increase (-\$0.3M) 		
Risk items for Inclusion in CTO Contingency	<ul style="list-style-type: none"> •Operational Readiness Support •Current Open Nodal Change Request •Infrastructure Hardware Upgrades and Application Patching •Expected Nodal Change Requests •Network Modeling Mangement •Cutover Coordination 	2.0 0.6 0.5 0.3 0.2 0.2	(2.0) (0.6) (0.5) (0.3) (0.2) (0.2)
	Total Board Discretionary Fund Giveback		\$ 0.6
	CTO Contingency Fund at July 1, 2010	\$ 3.8	

Amounts in Millions



20 July 2010

Financial Review – CTO Contingency Fund

Q3 Risk Request Detail

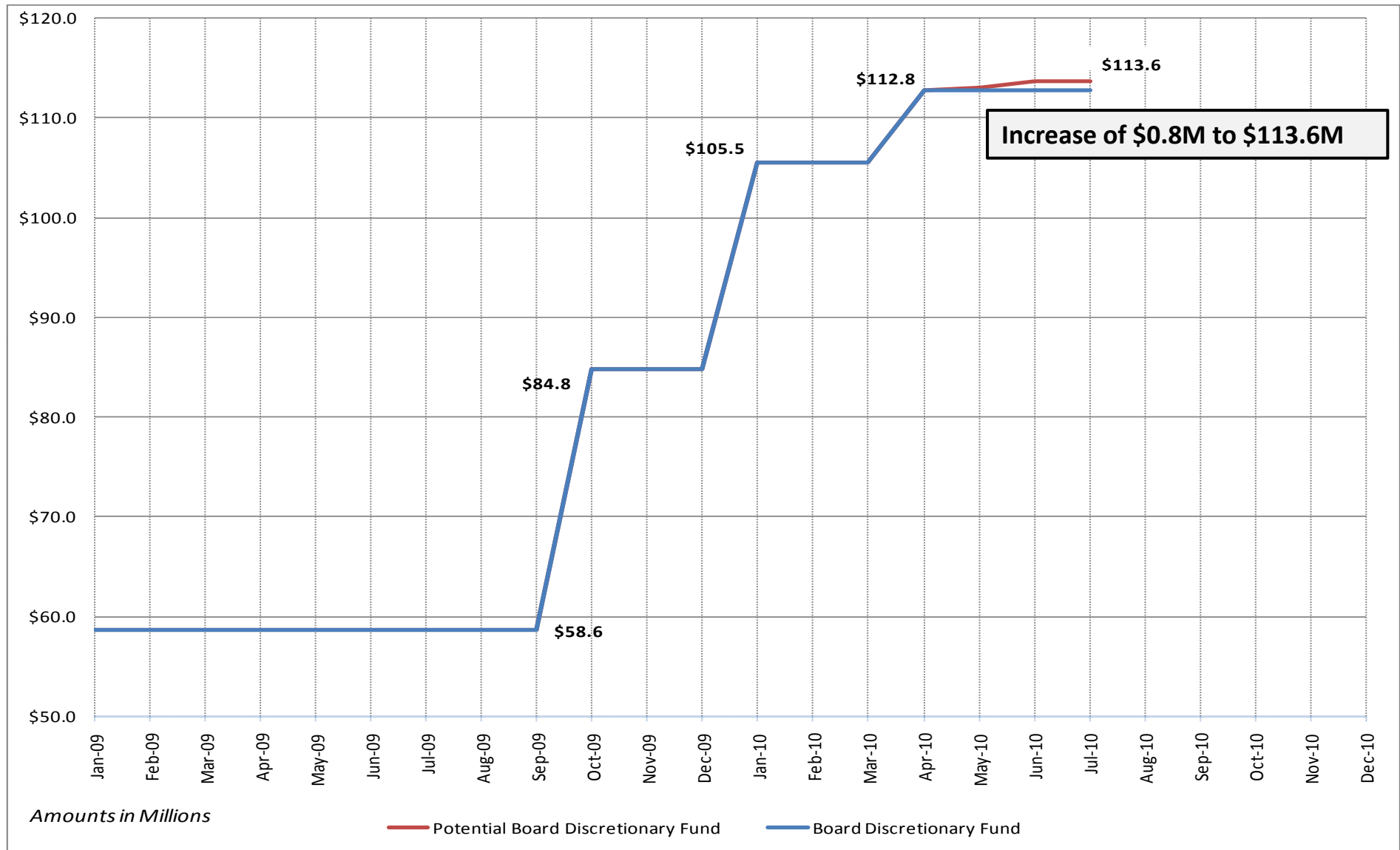
Program Risk & Changes	Risk	Risk Details
Operational Readiness Support	\$2.0	<ul style="list-style-type: none"> • Potential staff augmentation due to attrition prior to go-live • Assumes 8 additional contractors brought in @\$250/hr monthly
Infrastructure Hardware & Application Upgrades	0.5	<ul style="list-style-type: none"> • Technical architecture for performance optimization • Unplanned hardware (servers and storage) • HW/SW Maintenance true-ups
Current Open Change Request	0.6	<ul style="list-style-type: none"> • Open Nodal change request estimate as of July 1, 2010 • Extension of internal and external labor
Expected Nodal Change Requests	0.3	<ul style="list-style-type: none"> • Estimate based on historical change requests and future complexities. Includes risk for defect remediation and work efficiencies
Network Model Management	0.2	<ul style="list-style-type: none"> • Contingency for mitigation strategy for NMMS system stability • External Resource support for modeling and contingency processing
Cutover Coordination	0.2	<ul style="list-style-type: none"> • External Resource support for cutover planning and coordination
Total	<u>\$3.8</u>	

Amounts in Millions



20 July 2010

Financial Review – Board Discretionary Fund



Financial Review – Estimate At Completion

Q3 Reforecast

Line	Cost Summary	LTD Actual	Estimate To Complete	Estimated Program Total
1	Internal Labor Costs	\$ 71.6	\$ 11.7	\$ 83.3
2	Backfill Labor Costs	5.9	0.4	6.3
3	External Resource Costs	270.8	9.1	279.9
4	Software & Software Maintenance	28.8	2.0	30.8
5	Hardware & Hardware Maintenance	48.4	1.4	49.8
6	Other	2.1	0.2	2.3
7	CTO Contingency Fund Request	-	3.8	3.8
9	Sub-total Direct Project Costs	\$ 427.6	\$ 28.6	\$ 456.2
10	Allocations	21.8	1.3	23.0
11	Finance Charges	32.0	18.8	51.0
12	Sub-total Indirect Project Costs	\$ 53.8	\$ 20.1	\$ 74.0
13	Total	\$ 481.4	\$ 48.7	\$ 530.2
Supplemental Information		Q2 Balance	Giveback	Q3 Balance
14	Board Discretionary Fund	\$ 112.8	\$0.8	\$ 113.6
15	February 2009 Approved Budget			<u>\$ 643.8</u>

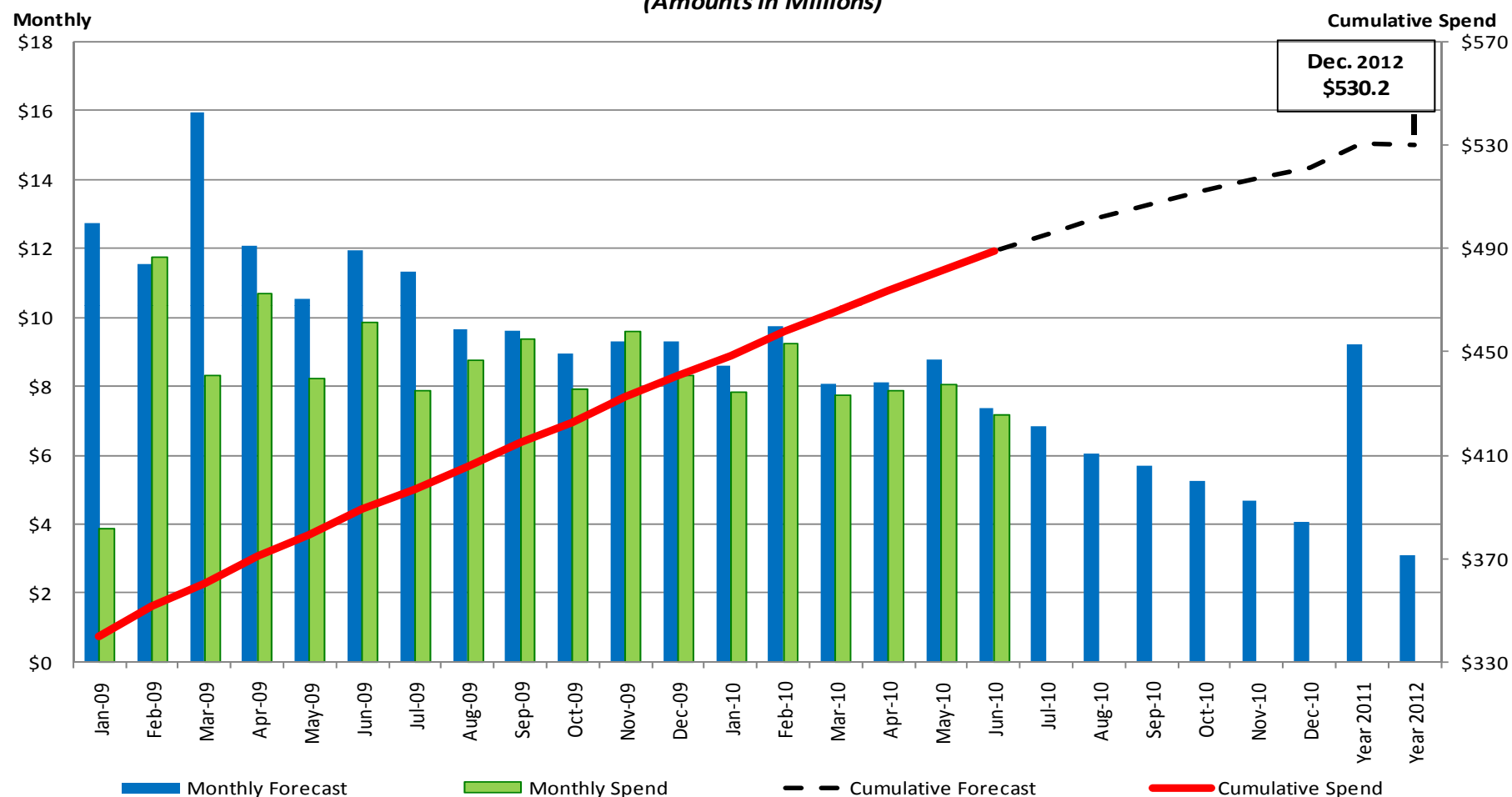
Amounts in Millions



Financial Performance

Financial Review – Program Cost Management

Monthly Budget, Forecast and Actual Analysis (Amounts in Millions)

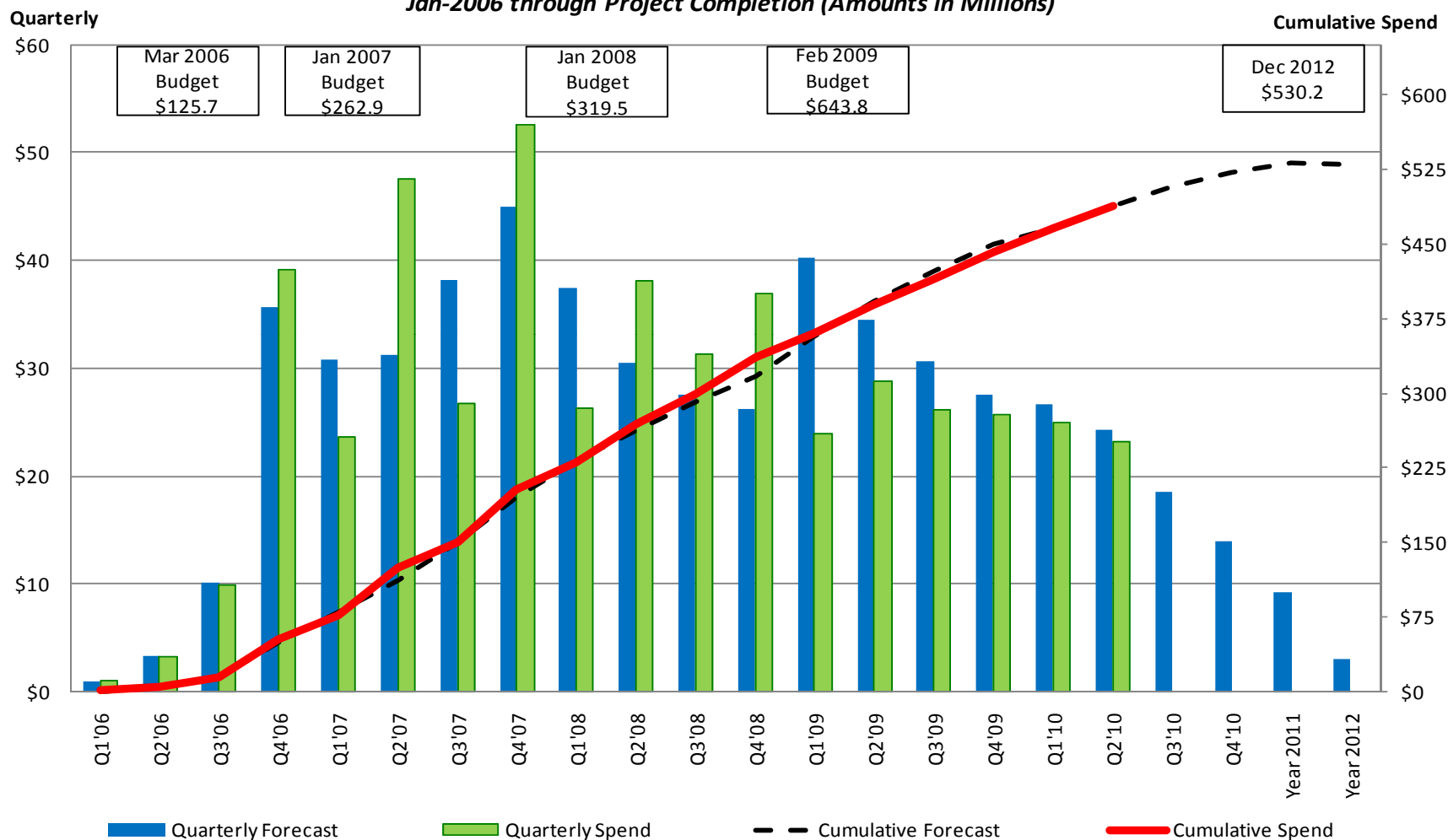


Note: Years 2011 and 2012 reflect finance charges

Financial Review – Program Cost Management

Quarterly Budget, Forecast and Actual Analysis

Jan-2006 through Project Completion (Amounts in Millions)



Note: Years 2011 and 2012 reflect finance charges

Questions?

Appendix

Nodal Program Risks & Issues: Definitions

Definitions for Category, Probability and Severity of Risks & Issues:

- **Category**
 - Scope : Will require a scope change
 - Schedule: Will require a schedule change
 - Budget: Will require a budget change
- **Probability**
 - High : Probability to occur is $\geq 90\%$; perceived impact would require a Change Request over the next 1-3 months
 - Medium: Probability to occur is between 31 – 89%; perceived impact would require a Change Request over the next 4 -10 months
 - Low: Probability to occur is $\leq 30 \%$; not expected to require a Change Request
- **Severity**
 - High: Milestone impact, or budget impact $> \$250,000$
 - Medium: Milestone impact - but expected to be mitigated, or budget impact between \$0 - \$250,000
 - Low: No milestone impact, or no budget impact

DAM/RUC/SASM Operational Scenarios

Scenario	Date of execution	ERCOT activity	MP activity required
ERCOT submits RMR Units into DAM	June 1, 2010	Create and activate RMR Three-Part Offers	Submit COP for RMR units.
RUC fails; commitment/decommitment through VDI	June 3, 2010	Simulate RUC failure. Commit/decommit using VDIs. As a technical test, we will send all QSEs with Resources one VDI xml message. Settlements of this scenario is not yet available so it will be redone in August	Acknowledge electronic VDI message
DAM fails to complete	June 8, 2010	Abort DAM. Issue DAM failure notification/Emergency Condition. Shift AS procurement to the SASM.	Resubmit self-arrangement of AS once ERCOT has opened the SASM.
More than one SASM for the same Operating Hour; increase load forecast throughout the day prior to executing market processes	June 10, 2010	Execute two SASMs for the same Operating Hour. Manually increase load forecast prior to DRUC and HRUC	None (optional self-arrangement of additional AS Obligation, if any)
AS Offers insufficient to meet AS Plan; RUC deployment for Ancillary Services	June 15, 2010	Declare AS Insufficiency, delay DAM execution by 30 minutes, request additional AS Offers be submitted during that time. When the AS is still insufficient after this process, reduce AS Plan and clear DAM; commit Resources in DRUC for purpose of providing AS.	None
[None]	June 17, 2010		None

DAM/RUC/SASM Operational Scenarios

Scenario	Date of execution	ERCOT activity	MP activity required
Manual DRUC commitment/ decommitment; Cancel previous RUC commitment	June 22, 2010	Operator will manually select Resources in addition to those recommended by the RUC software. Operator will decommit some Resources Cancel previous RUC commitment in HRUC.	Inform markettrials@ercot.com at least 2 days in advance that you need to repeat the technical test done in April and would like to be selected to receive a RUC instruction.
Resolving undeliverable AS and failure to provide AS	June 29, 2010	Communicate and resolve failure to provide AS and undeliverable AS. Two different SASMs will be opened for these two reasons.	None
Delay DAM publishing of results	July 1, 2010	Delay publishing of results past DAM timeline of 1330; issue related notice.	None

Defect Definitions

Severity	Definition
Severity 1: Data loss/critical error	Defects that render unavailable the critical functions of the system under test. These include errors such as system errors, application failures, loss of data, incorrect calculations, inability to transfer data, failure to access database, and inability to display information to the user.
Severity 2: Loss of functionality w/o workaround	Defects that render unavailable partial functionality of the system under test with no workaround available. These include errors such as incorrect information displayed to the user, information not updating correctly, extracts failing, and missing export files.
Severity 3: Loss of functionality with workaround	Defects that render unavailable partial functionality of the system under test with a workaround available. These include errors such as incorrect message displayed, optional information missing or not displayed correctly, not receiving e-mail notifications, and incorrect defaults.
Severity 4: Partial loss of a feature set	Defects that affect a feature that is not executed on a frequent basis and there is not a significant impact on the system. These include errors such as help information, filtering, and consistent naming.
Severity 5: Cosmetic/documentation error	Defects that are cosmetic and need to be resolved, but are not a factor in the functionality or stability of the system. These include errors such as field alignment, report formatting, drop down list order, fonts, column order and documentation that is inconsistent with the system(s) as tested.

	Prescription in Quality Center
Priority 1	Must fix ASAP
Priority 2	Must fix prior to Go-Live
Priority 3	Not critical to fix before Go-Live
Priority 4	Minor system/user impact
Priority 5	No system/user impact

CRR Metrics

Metric Name	Current Score	Applies to	Weight	Green %	Yellow %	Red %	Not Scored %	Primary Criteria	Notes
Market Participant Metrics									
MP15(B) CRR Connectivity Qualification	Red	CRRAHs	Even weighting	86.0%	0.0%	9.3%	4.7%	Successful submission CRR transactions	73/85 CRRAHs qualified. Greater than 5% RED.
CRR3 Operation of CRR Auctions and Allocations	Green	CRRAHs	Even weighting	85.3%	0%	14.7%	0.0%	Participation in at least 1 of the last 2 auctions or allocations. > 80% total participating	58/68 CRRAHs with adequate participation in June or July auction or allocation
ERCOT Metrics									
CRR3 Operation of CRR Auctions and Allocations	Green	ERCOT	N/A	N/A	N/A	N/A	N/A	Auction results distributed to participants per schedule in CRR Handbook	6/21 2010 June Monthly Auction results posted to market.
	TBD	ERCOT	N/A	100%	0%	0%	0%	Allocated Revenue Rights in statistical sample = 100% accurate	Source – Sink prices = CRR Clearing prices for obligations for BOY auction. ERCOT working on similar validation process for options.
CO8 Verify CRR Auction Invoices	Green	ERCOT	N/A	100%	0%	0%	0%	CRR Auction Result for MP(n) – CRR Auction Invoices for MP(n) = 0\$	S&B validated invoices reflected awards for each CRRAH in the March, April, May, June, and July auctions, .
	Green	ERCOT	N/A	100%	0%	0%	0%	System Generated CRR Auction Invoices not posted = 0	6/22 July CRR auction invoices submitted to all 48 CRRAHs who participated

Real-Time Metrics

Metric Name	Current Score	Applies to	Weight	Green %	Yellow %	Red %	Not Scored %	Primary Criteria	Notes
Market Participant Metrics									
MP3 Market Submissions Connectivity Qualification	Green	QSERS	Generation Ratio Share	99.0%	1.0%	0.0%	0.0%	Successful submission of RT and DAM transactions	79/81 QSERS qualified
	Green	QSEs	Even weighting	98.9%	1.1%	0.0%	0.0%		178/182 QSEs qualified.
EMO6 Individual LFC Testing	Green	QSERS	Generation Ratio Share	96.9%	0%	0%	3.1%	80% of system-wide generation has completed individual QSE tests for LFC	70/73 QSERS completed their individual LFC test or provided attestation
MP15-A Real-time Market Participation	Green	QSERS	Generation Ratio Share	100.0%	0.0%	0.0%	0.0%	Weekly average of daily SCED submissions	79/79 QSERS above 95% weekly average for SCED submissions.
ERCOT Metrics									
MO3 Verify SASM	Green	ERCOT	N/A	100%	N/A	N/A	N/A	Multiple SASMs are successfully executed during Market Trials and the 168 hour test.	SASMs successfully run on 4/28, 4/30, 5/4, 5/6, 5/7, 5/12, 5/14, 6/9, and 6/10. No issues reported.
MO4 Verify SCED Execution Quality	Green	ERCOT	N/A	100%	0%	0%	0%	All successful SCED executions passed the post-execution price validations.	6/29 – 7/12 – 4,140 Price Validation runs with no rule violations
MO5 Generate 6 Months of LMPs	Green	ERCOT	N/A	99.3%.	0%	.7%	0%	95% of SCED executions completed with LMPs posted on MIS.	6/29 – 7/12, 4,131 out of 4,160 SCED runs with LMPs posted.
CO5 Verify RTM Settlement Statements/CO6 Verify RTM Settlement Invoices	Green	ERCOT	N/A	100%	0%	0%	0%	System Generated RT Statement Dollars-Independently Generated RT Calculation Dollars =\$0	6660 RTM Statements; 1609 RTM Invoices All validated \$\$ = system generated (with some rounding differences)
	Green	ERCOT	N/A	100%	0%	0%	0%	System Generated RT Statements/Invoices not posted = 0	6660 RTM Statements; 1609 RTM Invoices All posted on time

Day-Ahead Market Metrics

Metric Name	Current Score	Applies to	Weight	Green %	Yellow %	Red %	Not Scored %	Primary Criteria	Notes
Market Participant Metrics									
MP16 DAM Participation	Green	QSERS	Generation Ratio Share	99.9%	.1%	0.0%	0.0%	Participation in 50% of the Day-Ahead Market runs	78/79 QSEs with Resources
	Amber	QSEs	Even Weighting	78.8%	5.4%	11.4%	4.4%		145/184 QSEs w/o Resources
ERCOT Metrics									
MO9 Generate DAM LMPs	Green	ERCOT	N/A	100%	N/A	N/A	N/A	95 percent DAM execution as evidenced by DAM LMP postings	6/29 – 7/12 10 out of 10 DAM runs executed with LMPs posted
MO10 DRUC Execution	Green	ERCOT	N/A	N/A	N/A	N/A	N/A	95 percent DRUC execution	6/29 – 7/12 10 out of 10 DRUC runs executed successfully
CO3 Verify DAM Settlement Statements/CO7 Verify DAM Invoices	Green	ERCOT	N/A	100%	0%	0%	0%	System Generated RT Statement Dollars-Independently Generated RT Calculation Dollars =\$0	4715 DAM Statements and Invoices All validated \$\$ = system generated (with some rounding differences)
	Green	ERCOT	N/A	100%	0%	0%	0%	System Generated RT Statements/Invoices not posted = 0	4715 DAM Statements and Invoices All posted on time

1. MP16 – Metric is based on a 2 week rolling average (6/7 – 6/18 – 9 runs).
2. MP16 – 97% Load participating.



Network Modeling Metrics

Metric Name	Current Score	Applies to	Weight	Green %	Yellow %	Red %	Not Scored %	Primary Criteria	Notes
Market Participant Metrics									
MP14-C TSP Model Validation	Green	TSPs	Ownership Ratio Share	99.9%	.1%	0.0%	0.0%	Network Model data validated by TSP	24/28 TSPs have submitted model validation e-mail to ERCOT.
MP6 Telemetry Compliance with Nodal Protocols 3.10.7.5	Green	QSERS	Generation Ratio Share	100%	0.0%	0.0%	0.0%	Expected State Estimator telemetry submitted.	78/78 complete. 3502 total SE points provided
	Green	QSERS	Generation Ratio Share	100%	0.0%	0.0%	0.0%	Expected SCED telemetry submitted.	78/78 complete. 7629 SCED points provided
	Green	TSPs	Ownership Ratio Share	99.3%	0.0%	0.0%	.7%	Expected TSP telemetry per ICCP Handbook submitted	14/17 TSPs above 98% threshold for GREEN. 143 points outstanding
N2 Telemetry ICCP System Failover	8/25/2010	QSERS	Generation Ratio Share	91%	0%	0%	31.1%	ICCP Failover test completed successfully prior to the 8-hour LFC test.	74/78 QSERS completed ICCP telemetry failover test.
MP21 WGRs ICCP Meteorological Telemetry	Amber	REs (only WGRs)	WGR Registered MW Capacity Ratio Share	72%	27%	1%	N/A	95% of registered WGRs megawatt capacity must meet reasonability tests for MET ICCP	Less than 95% of registered WGR megawatt capacity meeting reasonability tests

1. MP6 does not include 405 QSE CB and DSC points from TSP outreach. ERCOT is determining whether these rollback into the QSER MP6 measurement.

Network Model Metrics

Metric Name	Current Score	Applies to	Weight	Green %	Yellow %	Red %	Not Scored %	Primary Criteria	Notes
ERCOT Metrics									
EMO9(A) State Estimator Standards Performance	Green	ERCOT	N/A	97.4%	N/A	N/A	N/A	State Estimator converges 97% during monthly test period	97.4% Convergence for State Estimator for the month of June.
EMO9(B) RTCA Modeling Differences	Green	ERCOT	N/A	96.8%	N/A	N/A	N/A	95% of impedance values matched between Zonal/Nodal	98.4% match for impedances for lines and transformers. 6718 lines and transformers in Nodal.
	Green	ERCOT	N/A	96.8%	N/A	N/A	N/A	95% of dynamic line ratings matched between Zonal/Nodal	97.8% match for ratings for lines. 5288 lines in Nodal.
	Amber	ERCOT	N/A	92.53%	7.47%	N/A	N/A	95% of load tap setting values matched between Zonal/Nodal	92.53% Match for transformer tap settings. 1430 xfrms in Nodal.
EMO10 Anomalous / Auto-Disabled Telemetered Points	Green	ERCOT	N/A	1.47%	N/A	N/A	N/A	The % of Anomalous and Auto-Disabled Measurements < 2% of Total Measurements	July Nodal 1.47% June Nodal 1.91% May Nodal 1.92% April Nodal 2.58%
EMO9(C) RTCA CSC Comparison	Green	ERCOT	N/A	99.76%	N/A	.24%	N/A	CSC Pre-contingency SE Flows within 5% (Hourly snapshot)	Line flows in Nodal compared to 12 CSCs in Zonal. Daily snapshot based on average of 5 min intervals.

Other Readiness Metrics

Metric Name	Current Score	Applies to	Weight	Green %	Yellow %	Red %	Not Scored %	Primary Criteria	Notes
Market Participant Metrics									
MP20 Outage Scheduler Connectivity Qualification	Green	QSERS	Generation Ratio Share	98.9%	0.0%	0.0%	1.1%	Successful submission of OS transactions	78/79 QSERS qualified.
	Green	TSPs	Ownership Ratio Share	99.7%	0%	0%	.3%		20/23 TSPs qualified.
MP11 Resource Registration	Green	REs	Registered MW Capacity Ratio Share	99.6%	0.0%	.4%	0.0%	Decision Making Authority form submitted, and GENMAP validated	154/157 Resources completed.
ERCOT Metrics									
E1 ERCOT Staff Completes Training	Green	ERCOT	N/A	100%	N/A	N/A	N/A	Training plans must be adhered to for highly impacted departments	15 out of 15 highly impacted departments are up to date with their training plans.
E9 Develop Nodal Procedures	Green	ERCOT	N/A	100%	N/A	N/A	N/A	Procedures developed 1 month prior and exercised in the appropriate Market Trials Phase	All MT5 are developed and exercised as scheduled in MT5.
EMO3 Verify Outage Evaluation System Functionality	Green	ERCOT	N/A	100%	N/A	N/A	N/A	A test of the Outage Management Process is completed	OS to OE integration tested throughout Market Trials and reviewed at 6/23 NATF