



# Nodal Program Update

Mike Cleary

Sr. VP and Chief Technology Officer

ERCOT Board of Directors

23 March 2010

# Agenda

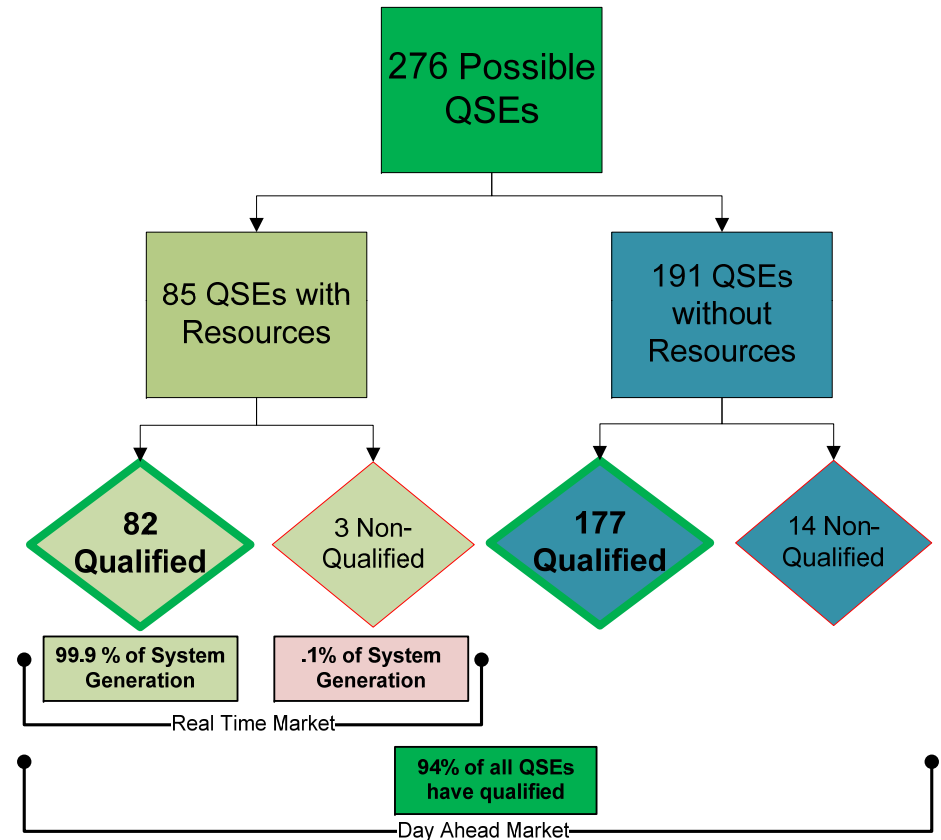
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- **Program Status**
- **Market Readiness**
- **Financials**
- **Appendix**

# 252 Days to Go-Live

## Market Trials 4.0 begins in 9 days 0 Items Impacting Go-Live Date

- **Market Trials 3.0:**
  - 99.9 % of Generation Qualified
  - Six month LMP analysis started on March 1<sup>st</sup>
  - **Congestion Revenue Rights (CRR)**
    - March & April auctions completed and invoiced successfully



# 252 Days to Go-Live

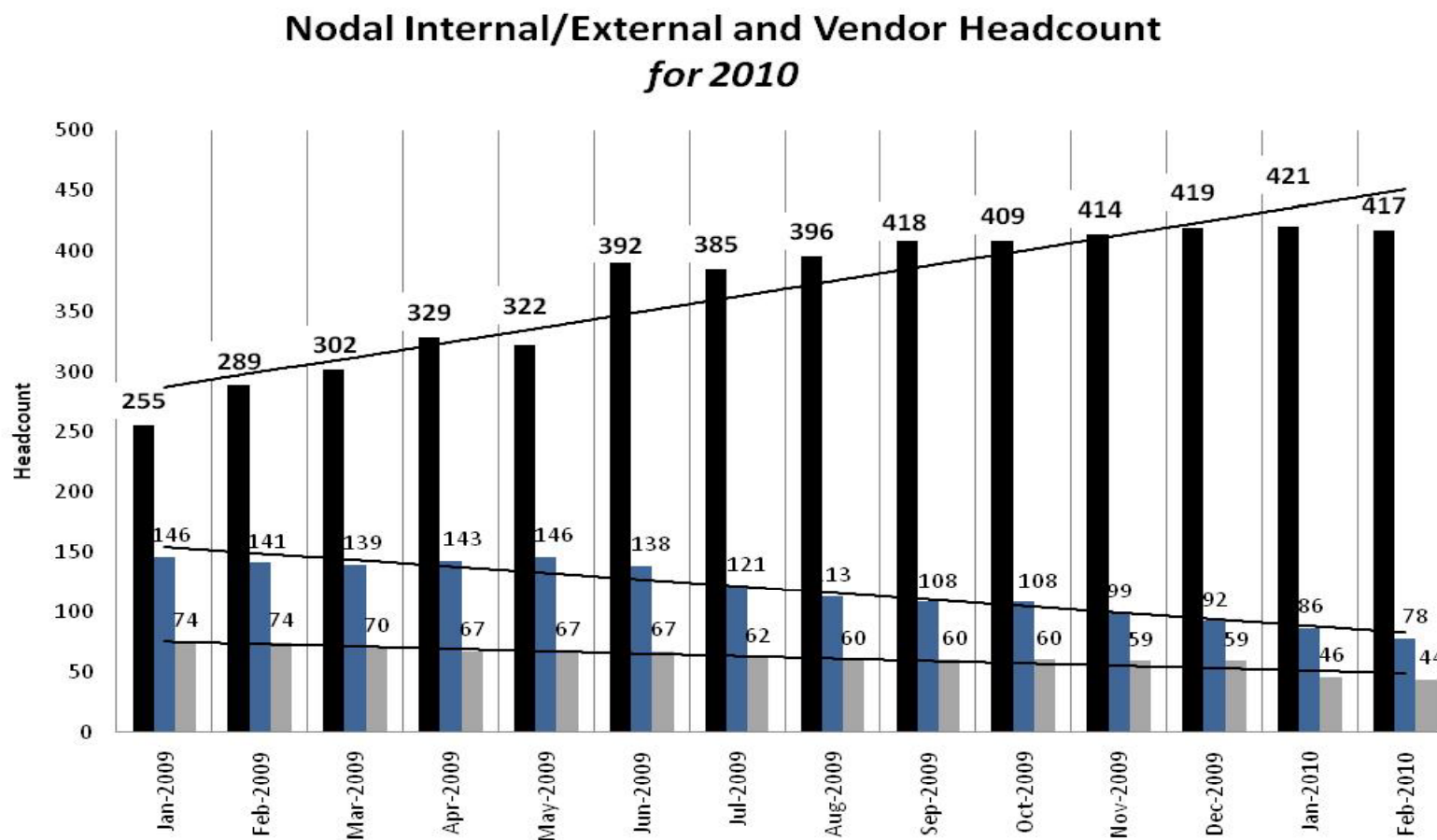
## Market Quality Testing & Operational Readiness 0 Items Impacting Go-Live Date

- **Market Trials 4.0: DAM/RUC**
  - Starting Thursday April 1<sup>st</sup>, for Operating Day Friday April 2<sup>nd</sup>
    - Core migration installed on March 19<sup>th</sup>
    - Internal O.D. on March 23<sup>rd</sup> & 24<sup>th</sup>
    - All procedures & business processes are finalized
    - Operational training completed
- **Market Trials 5.0: Full Functionality**
  - Starting May 3<sup>rd</sup>
    - Mitigation has brought the milestone back to schedule
      - Full scope of deliverables under review
- **Market Readiness**
  - Outreach sessions completed
  - Next market readiness seminar is March 25<sup>th</sup>

### Key Takeaways:

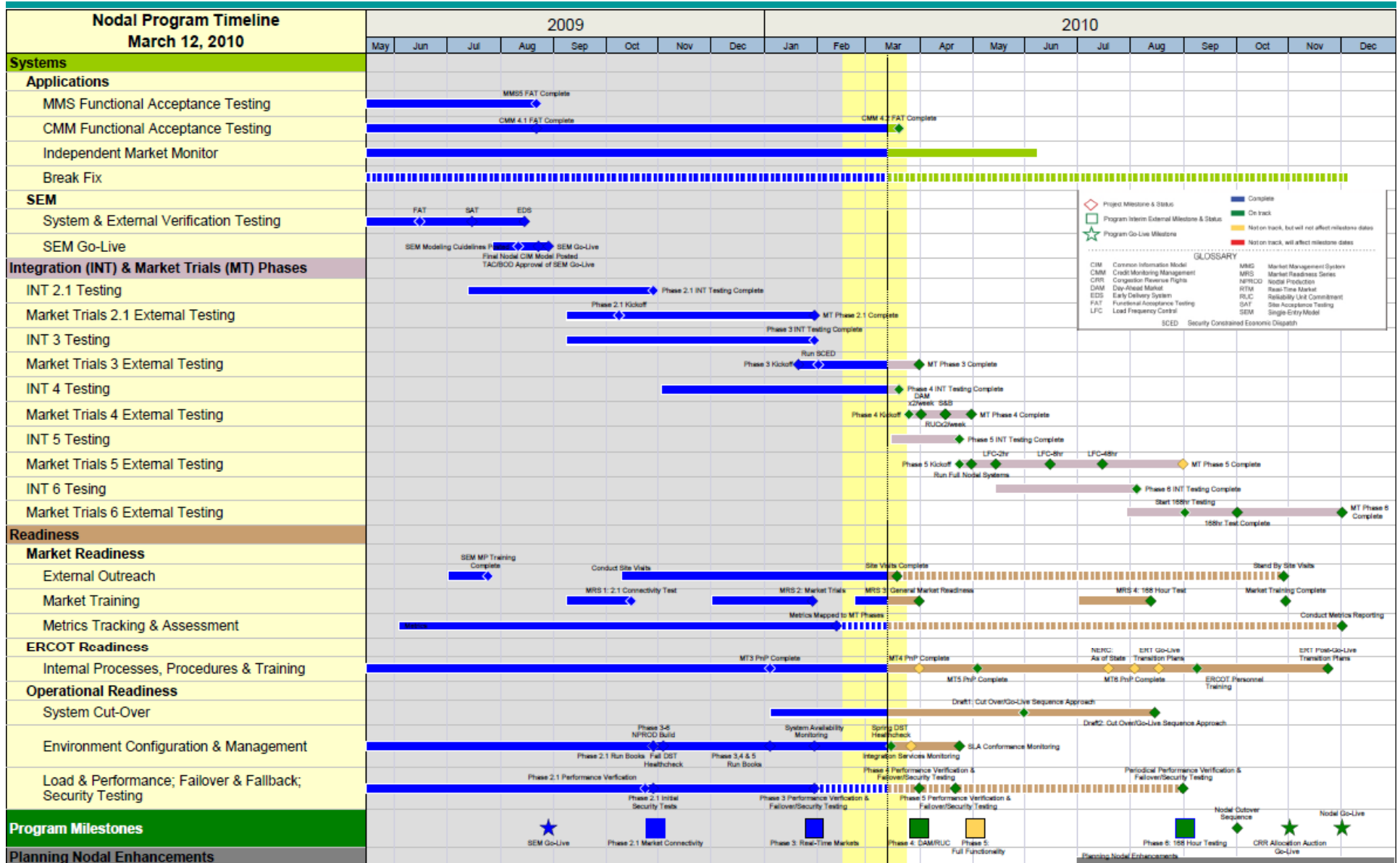
- Market Trials 4.0 begins in 9 days
- Market readiness seminar on March 25<sup>th</sup>
- Continued participation in the Real Time and CRR market trials needed
- DRUC and settlements of RT/DAM market trials starts on April 19<sup>th</sup>
- Individual testing of LFC ends in April
- Market Participants should continue to take advantage of the market trials to test their systems and procedures for Nodal operations

# Nodal Internal/External and Vendor Headcount 2010



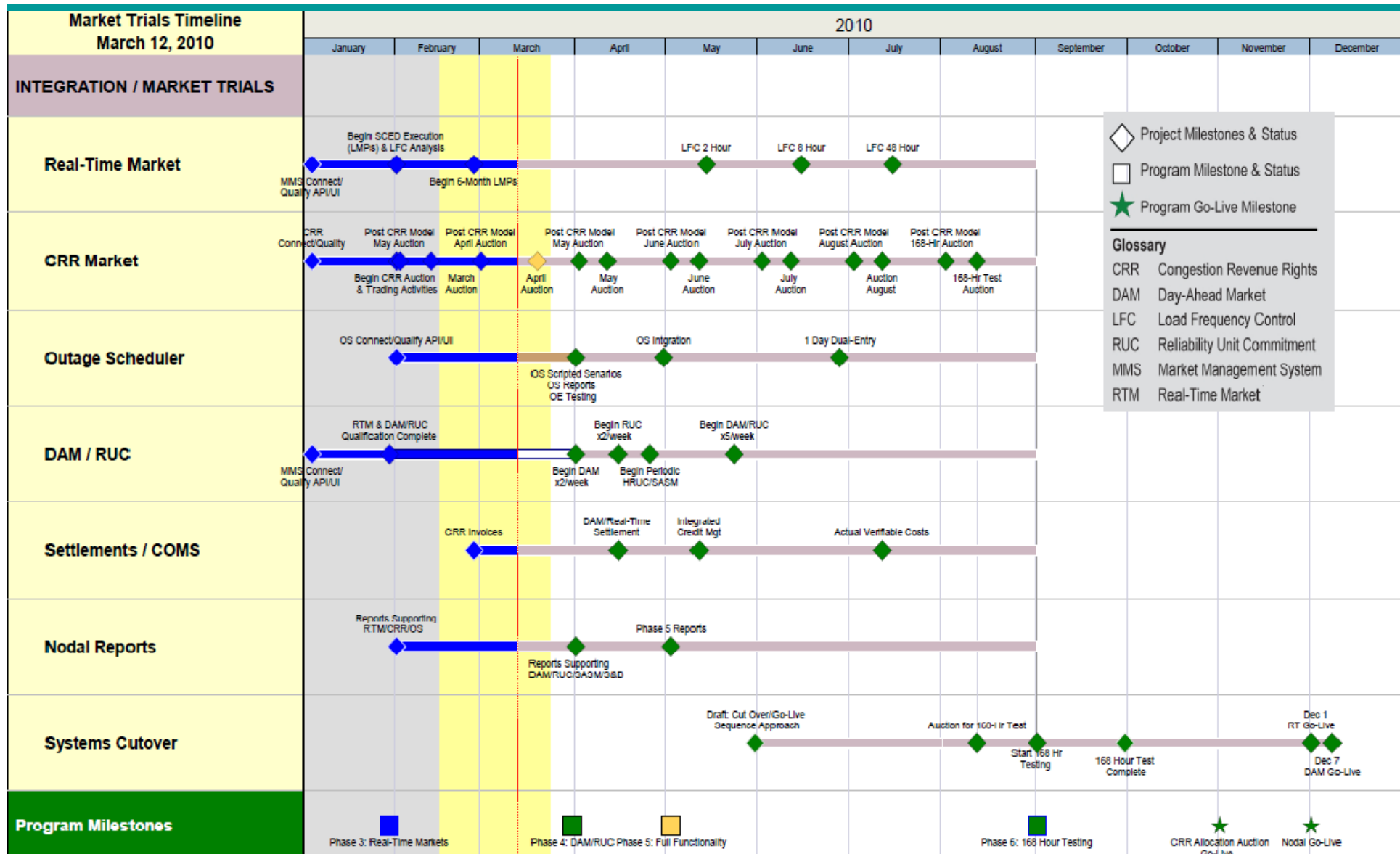
	Jan-09	Feb-09	Mar-09	Apr-09	May-09	Jun-09	Jul-09	Aug-09	Sep-09	Oct-09	Nov-09	Dec-09	Jan-10	Feb-10
■ ERCOT Employees	255	289	302	329	322	392	385	396	418	409	414	419	421	417
■ Contingent Labor	146	141	139	143	146	138	121	113	108	108	99	92	86	78
■ Vendor Labor	74	74	70	67	67	67	62	60	60	60	59	59	46	44

# Integrated Nodal Timeline



23 March 2010

# 2010 Market Trials Timeline



# Program Milestone Schedule Mitigation

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## **Phase 5: Full Functionality**

***Integration Testing has been mitigated back on schedule: No Impact on Go-Live***

### **– Scope**

- End to end integration testing
- Begin HRUC/SASM
- Daylight Savings time change verification
- Phase 5 performance verification

### **– Yellow Status**

- Mitigation has brought the milestone back to schedule
- Full scope of milestone still under review
- Some functionality may come online after milestone



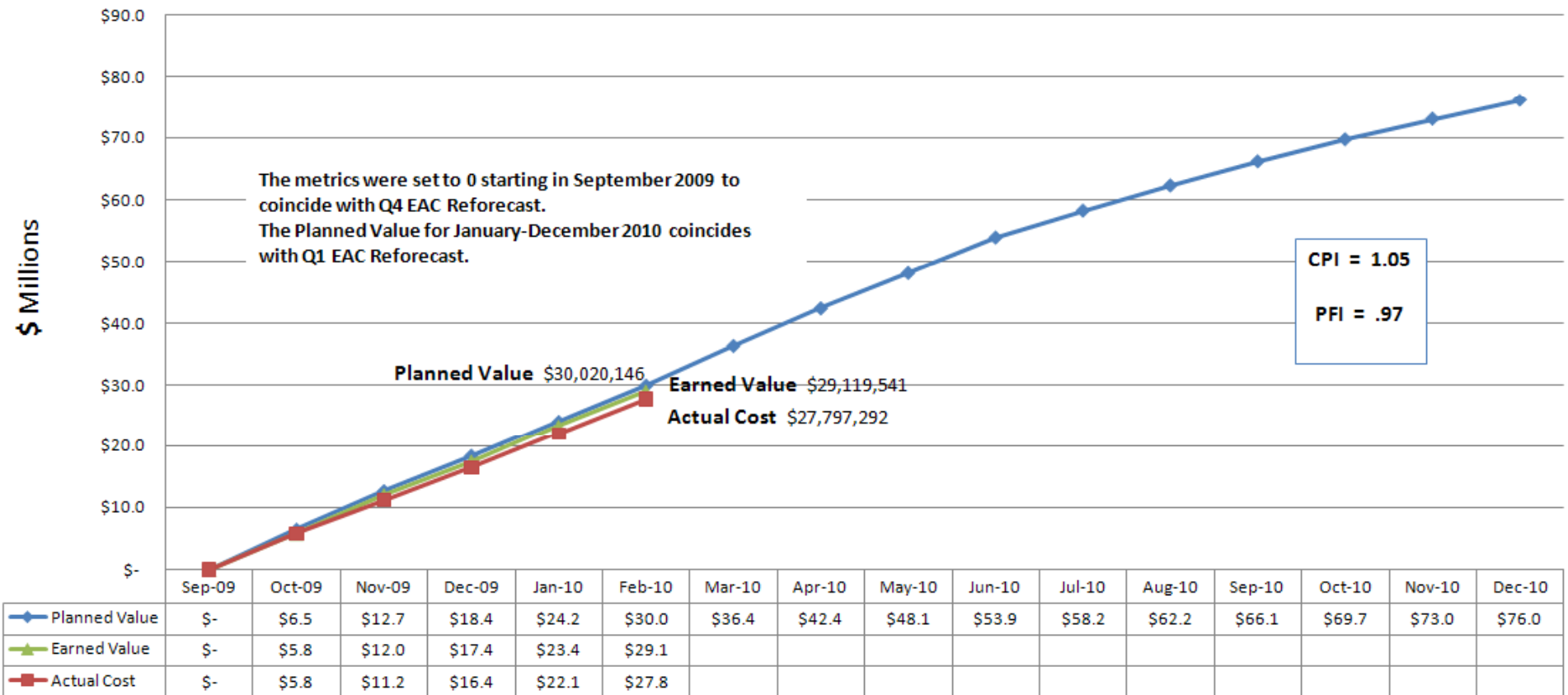
# Nodal Program Risks & Issues

Risk/Issue	Impacted Milestone	Target	Category	Probability	Severity	Status
<b>Inadequate Backup for ICCP Failure:</b> <i>Current Protocol Language does not allow ERCOT to use State Estimator results as a backup input to SCED, LFC, &amp; NSA processes in the event of an ICCP failure from both sources of Resource Status.</i>	Program	April/ May 2010	Scope / Schedule / Budget	High	Low	<ul style="list-style-type: none"> <li>ERCOT submitting NPPRR language for consideration</li> <li>No impact to systems anticipated based on Impact Analysis</li> </ul>
<b>Market Interaction Operating Level Agreements (OLAs)</b> <i>Need to determine operating level agreements associated with market interactions to assist ERCOT in establishing operational thresholds:</i>  <i>-Network Model Load Frequency</i>  <i>-DAM Sizing</i>  <i>-CRR sizing</i>  <i>-Reporting</i>	Program	April/ May 2010	Scope / Budget	High	Low	<ul style="list-style-type: none"> <li>Phase 4 OLA definitions complete</li> <li>Phase 5 OLA definitions in progress</li> <li>NATF and NDSWG heavily involved in issue</li> <li>10,000 / 10,000 submissions achieved</li> <li>200,000 submissions total; ERCOT presented comparable sizing to NATF on 03/02/10</li> <li>On track</li> </ul>
<b>Integration Testing - Risk</b> <i>Continued risk around technology delivery of business systems integration due to complexity and continuing maturing of application and data dependencies.</i>	Program	May 2010	Scope / Schedule / Budget	Low	Med	<ul style="list-style-type: none"> <li>Phase 4 On track; planning complete, execution in progress</li> <li>Phase 5 final planning in progress</li> </ul>

# Earned Value for the Nodal Program

## Nodal Program

Chart only uses values associated with Internal Labor Costs, External Resource Costs, Administrative & Employee Expenses, Vendor and Backfill



# Participant Readiness Touch Points

2010				
	March	April	May	June
<b>Meetings</b>	• NATF 3/2	• NATF 4/6	• NATF 5/4	• NATF 6/1
<b>Training</b>	<ul style="list-style-type: none"> <li>• Nodal 101</li> <li>• LSE 201</li> <li>• Basic Training</li> <li>• Generation 101, 201</li> <li>• CRR – instructor-led</li> <li>◆ Settlement Workshop</li> <li>• Operations Seminar</li> </ul>	<ul style="list-style-type: none"> <li>• Nodal 101</li> <li>• Trans 101</li> <li>• Generation 101, 201</li> <li>• CRR – instructor-led</li> <li>• NMMS</li> <li>• Economics of LMP</li> <li>★ Combined Cycle Workshop</li> </ul>	<ul style="list-style-type: none"> <li>• Nodal 101</li> <li>• Trans 101</li> <li>• Generation 101, 201</li> <li>• CRR – instructor-led</li> <li>• NMMS</li> <li>• Economics of LMP</li> </ul>	<ul style="list-style-type: none"> <li>• Nodal 101</li> <li>• LSE 201</li> <li>• Generation 101, 201</li> <li>• Economics of LMP</li> <li>★ Ancillary Service Workshop</li> </ul>
<b>Outreach</b>	<ul style="list-style-type: none"> <li>• 4 site visits</li> <li>• Scheduled Site Visits conclude</li> <li>◆ MRS #3 March 25<sup>th</sup></li> </ul>	<ul style="list-style-type: none"> <li>• Standby site visits</li> <li>• Phase 4 metrics launch</li> </ul>	<ul style="list-style-type: none"> <li>• Standby site visits</li> <li>• Metrics monitoring</li> </ul>	<ul style="list-style-type: none"> <li>• Repeat Retail Workshop (Dallas) – <i>tentative</i></li> <li>• Phase 5 Metrics launch</li> </ul>
<b>Market trials</b>	<ul style="list-style-type: none"> <li>• Weekly calls</li> <li>• Phase 3 Execution</li> <li>• Phase 4 Handbooks                             <ul style="list-style-type: none"> <li>• <i>Updates to prior handbooks</i></li> </ul> </li> <li>• LFC individual QSE tests</li> </ul>	<ul style="list-style-type: none"> <li>• Weekly calls</li> <li>• Phase 4 Market Trials initiates</li> <li>• Phase 5 Handbooks                             <ul style="list-style-type: none"> <li>• <i>Updates to prior handbooks</i></li> <li>• <i>Credit</i></li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Weekly calls</li> <li>• 2 hr system-wide LFC test</li> <li>• Phase 5 Market Trials initiates</li> </ul>	<ul style="list-style-type: none"> <li>• Weekly calls</li> <li>• 8 hr system-wide LFC test</li> <li>• Full market trials functionality</li> </ul>

## Next 60-days of Classes and Settlement Workshops

Course	Start Date	Location
Settlements Workshop –RUC/RTM	March 23	Calpine (Houston)
ERCOT Nodal 101	March 29	PSEG (New Jersey)
Generation 201	March 30	ERCOT Met Center (Austin)
LSE 201	April 7	Suez Energy (Houston)
Generation 201	April 20	Calpine (Houston)
ERCOT Nodal 101	April 26	Tenaska Power Services (Dallas)
Congestion Revenue Rights	April 27	Hilton Garden Inn (Dallas)
ERCOT Nodal 101	May 10	ERCOT Met Center (Austin)
Congestion Revenue Rights	May 11	ERCOT Met Center (Austin)

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

# Outreach Program Overview

## Outreach Site Visits completed as of March 18, 2010

Confirmed ☐ Completed ☒

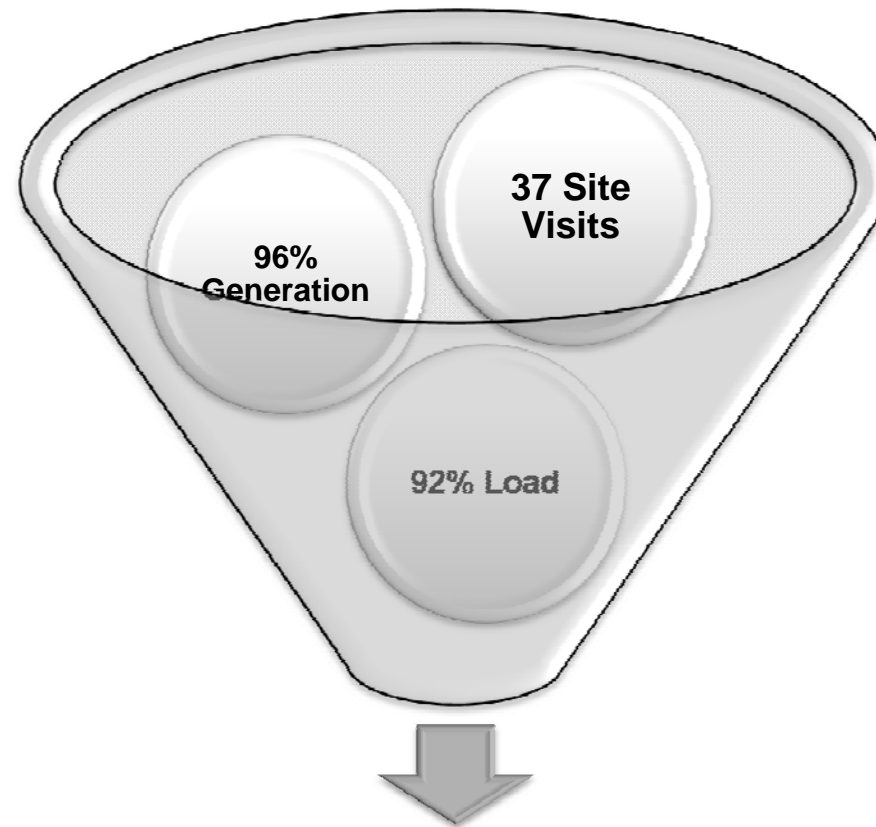
Entity	Date
✓ LOWER COLORADO RIVER AUTHORITY	9-Oct
✓ CALPINE CORP	14-Oct
✓ AUSTIN ENERGY	20-Oct
✓ CITY OF GARLAND	21-Oct
✓ GDF SUEZ ENERGY MARKETING	29-Oct
✓ ANP FUNDING	3-Nov
✓ LUMINANT ENERGY	5-Nov
✓ INVENERGY WIND DEVELOPMENT	10-Nov
✓ EXELON	11-Nov
✓ AMERICAN ELECTRIC POWER SERVICE	12-Nov
✓ CONSTELLATION ENERGY	17-Nov
✓ PSEG ENERGY RESOURCES	18-Nov
✓ J ARON	19-Nov
✓ FULCRUM POWER	2-Dec
✓ EAGLE ENERGY PARTNERS I LP	3-Dec
✓ STEC	9-Dec
✓ BP ENERGY COMPANY	10-Dec

Entity	Date
✓ NRG TEXAS POWER	15-Dec
✓ DIRECT ENERGY LP	5-Jan
✓ CPS ENERGY	6-Jan
✓ BTU (Bryan Texas Utilities) SERVICES	13-Jan
✓ DIRECT ENERGY	14-Jan
✓ APX	19-Jan
✓ OCCIDENTAL	20-Jan
✓ TENASKA POWER SERVICES	26-Jan
✓ OPTIM ENERGY	27-Jan
✓ E.ON	9-Feb
✓ WIND PANEL (Houston)	16-Feb
✓ RETAIL PANEL (Houston)	17-Feb
✓ TRI-EAGLE ENERGY	18-Feb
✓ NEXTEra	26-Feb
✓ XTEND ENERGY LP	10-Mar
✓ BRAZOS ELECTRIC	10-Mar
✓ SHELL ENERGY	11-Mar
✓ FORMOSA UTILITY VENTURE	16-Mar
✓ Westar	18-Mar



# Outreach Results

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## **5 Additional training workshops identified**

- Wind
- Credit
- Retail
- Combined Cycle
- Ancillary Services

## **Most popular topics**

- Day Ahead Market
- Real-Time Operations
- Congestion Revenue Rights

# Active MP Metrics

Metric Name	Current Score	Applies to	Weight	Green %	Yellow %	Red %	Not Scored %	Primary Criteria	Notes
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	83/85 QSERS Qualified (includes QSEs with Load Resources).
	Amber	QSEs	Even weighting	92.6%	2.7%	1.1%	3.7%		175/189 QSEs qualified. Below 95% threshold for overall GREEN.
MP6 Telemetry Compliance with Nodal Protocols 3.10.7.5	Green	QSERS	Generation Ratio Share	99.9%	0.1%	0.0%	0.0%	Expected State Estimator telemetry submitted.	79/80 QSERS completed. 3501/3502 SE points provided (99.6%).
	Green	QSERS	Generation Ratio Share	99.9%	0.0%	0.1%	0.0%	Expected SCED telemetry submitted.	79/80 QSERS completed. 7621/7629 SCED points provided (99.1%).
	Green/White only	TSPs	Ownership Ratio Share	0.3%	0.0%	0.0%	99.7%	Expected TSP telemetry per ICCP Handbook submitted	1/17 TSPs completed, all other TSPs are in review by ERCOT. 12603/12941 TSP CB and LD points provided (93.8%).

## Active MP Metrics Continued

Metric Name	Current Score	Applies to	Weight	Green %	Yellow %	Red %	Not Scored %	Primary Criteria	Notes
MP11 Resource Registration	Amber	REs	Registered MW Capacity Ratio Share	82.3%	16.1%	1.6%	0.0%	Decision Making Authority form submitted, and GENMAP validated	147/157 Resources completed.
MP14-C TSP Model Validation	Amber	TSPs	Ownership Ratio Share	66.0%	34.0%	0.0%	0.0%	Network Model data validated by TSP	8/22 TSPs have submitted model validation e-mail to ERCOT.
MP15-A Real-time Market Daily Participation	Green	QSERS	Generation Ratio Share	99.0%	1.0%	0.0%	0.0%	Weekly average of daily SCED submissions	77/80 QSERS above 95% weekly average for SCED submissions.
MP15-B CRR Connectivity Qualification	Red	CRRAHs	Even weighting	79.4%	3.8%	11.5%	5.3%	Successful submission CRR transactions	63/78 CRRAHs qualified. Greater than 5% overall RED.
MP20 MP ability to submit Outages - Connectivity Test	Green/White only	QSERS	Generation Ratio Share	87%	0.0%	0.0%	13%	Successful submission of OS transactions. AMBER/RED scores light up 4/7/2010 after OS window closes.	52/80 QSERS qualified.
	Green/White only	TSPs	Ownership Ratio Share	50%	0%	0%	50%		9/25 TSPs qualified.



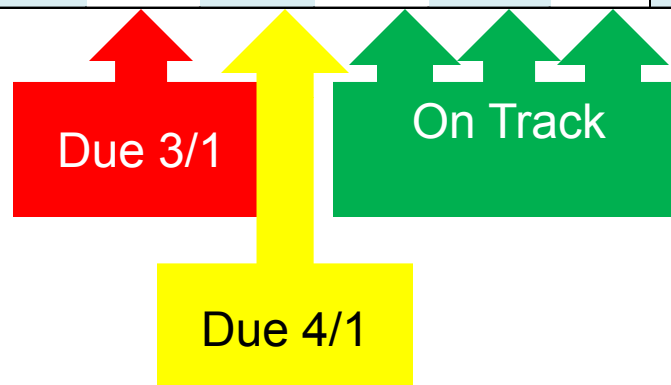
# Active ERCOT Metrics

Metric Name	Current Score	Applies to	Percentage (if applicable)	Primary Criteria	Notes
E1 ERCOT Staff Completes Training	Green	ERCOT	100%	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	Red	ERCOT	N/A	Procedures developed 1 month prior and exercised in the appropriate Market Trials Phase	153/158 procedures developed for Market Trials Phase 4. Deadline for completion was 3/1/2010. RED = More than 1 procedure not developed 1 month prior to applicable Market Trials Phase.
MO4 Verify SCED Execution Quality	Red* *as of 3/24/10	ERCOT	N/A	All of the successful SCED executions passed the post-execution price validations for the given reporting period.	03/10/10 validation run by the Price Validation Tool produced error flags for the Dispatch Consistency vs. LDL. 58 units were dispatched to non-zero Base Points which caused 58 dispatch inconsistency error messages.
MO5 Generate 6 Months of LMPs	Red	ERCOT	47%	Greater than 95% of the SCED executions produced and posted LMPs for the given reporting period.	From 3/1 to 3/8, 1,245 SCED executions completed with no LMPs posted to the MIS. Posting errors were caused as a result of EIP configuration error to global application parameter.

## Detail of Procedure Metric

As of 3/17/10	Market Trials Phase	MT3	MT4	MT5	TBD	168 Hour	go- live	Grand Total
	Total	32	158	111	7	14	149	471
	<b>Total Remaining to Complete by Phase</b>	<b>0</b>	<b>2</b>	<b>16</b>	<b>1</b>	<b>6</b>	<b>20</b>	<b>45</b>

- RED = More than 1 procedure not developed 1 month prior to applicable Market Trials Phase.
- Once complete, procedures are scheduled to be exercised in the applicable phase
- Quality review ongoing





# Monthly Financial Review

Don Jefferis

Interim Director – Nodal Financial Management Office

23 March 2010

# Financial Review – February 2010 Performance

## Approved Forecast vs. Actual

Line	Cost Summary	Forecast	Actual (Unaudited)	Variance Fav./Unfav.)	Forecast Cumulative Variance <sup>1</sup>
1	Internal Labor Costs	\$2.4	\$2.4	\$0.0	(\$0.2)
2	Backfill Labor Costs	0.2	0.1	0.1	0.1
3	External Resource Costs	3.3	3.0	0.3	0.4
4	Software & Software Maintenance	0.3	0.4	(0.1)	0.0
5	Hardware & Hardware Maintenance	0.3	0.1	0.2	0.5
6	Other	0.0	0.0	0.0	0.1
7	CTO Contingency Fund	2.0	2.0	0.0	0.0
8	<b>Sub-total Direct Project Costs</b>	<b>\$8.5</b>	<b>\$8.0</b>	<b>\$0.5</b>	<b>\$0.9</b>
9	<b>Board Discretionary Fund</b>	<b>\$0.0</b>	<b>\$0.0</b>	<b>\$0.0</b>	<b>\$0.0</b>
10	Allocations	\$0.3	\$0.3	\$0.0	\$0.1
11	Finance Charges	1.0	1.0	0.0	0.1
12	<b>Sub-total Indirect Project Costs</b>	<b>\$1.3</b>	<b>\$1.3</b>	<b>\$0.0</b>	<b>\$0.2</b>
13					
14	<b>Total</b>	<b>\$9.8</b>	<b>\$9.3</b>	<b>\$0.5</b>	<b>\$1.1</b>

Amounts in millions

Note 1: Pending contingency management disposition



# Financial Review – LTD Performance through February 2010

## Approved Forecast vs. Actual

Line	Cost Summary	Forecast <sup>1</sup>	Actual (Unaudited)	Variance Fav./((Unfav.)	Forecast Remaining
1	Internal Labor Costs	\$60.9	\$61.1	(\$0.2)	\$22.8
2	Backfill Labor Costs	5.6	5.5	0.1	1.6
3	External Resource Costs	261.3	260.9	0.4	21.2
4	Software & Software Maintenance	26.2	26.2	0.0	3.0
5	Hardware & Hardware Maintenance	52.4	51.9	0.5	2.9
6	Other	2.1	2.0	0.1	0.4
7	CTO Contingency Fund	2.0	2.0	0.0	8.8
8	Sales Tax Refund	(\$7.3)	(\$7.3)	0.0	0.0
9	<b>Sub-total Direct Project Costs</b>	<b>\$403.2</b>	<b>\$402.3</b>	<b>\$0.9</b>	<b>\$60.7</b>
10	<b>Board Discretionary Fund</b>	<b>\$0.0</b>	<b>\$0.0</b>	<b>\$0.0</b>	<b>\$105.5</b>
11	Allocations	\$20.7	\$20.6	\$0.1	\$2.3
12	Finance Charges	28.0	27.9	0.1	23.4
13	<b>Sub-total Indirect Project Costs</b>	<b>\$48.7</b>	<b>\$48.5</b>	<b>\$0.2</b>	<b>\$25.7</b>
14					
15	<b>Total</b>	<b>\$451.9</b>	<b>\$450.8</b>	<b>\$1.1</b>	<b>\$191.9</b>

*Amounts in millions*

*Note 1: Forecast consists of actuals through December 2009 and re-forecast January and February*

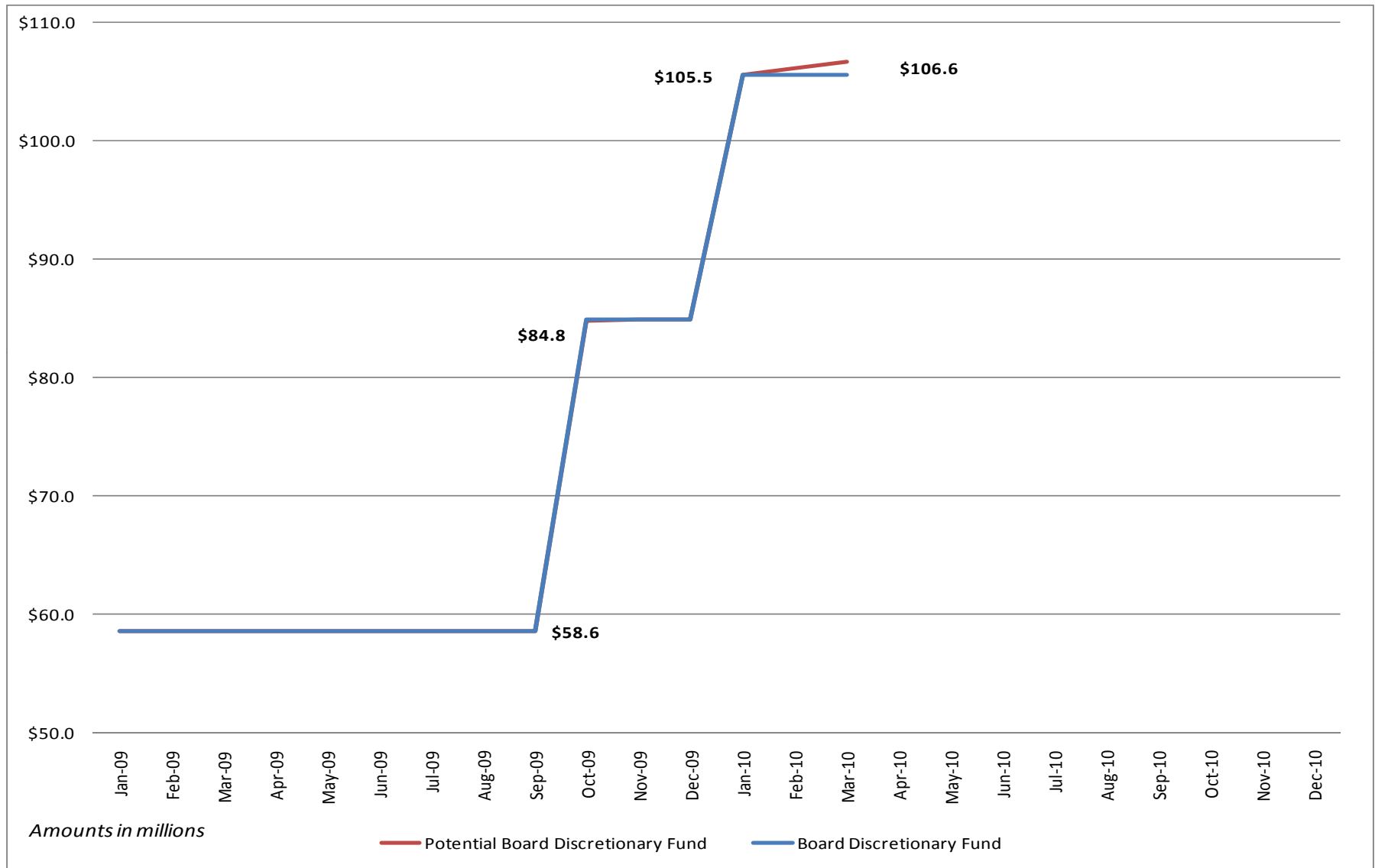


# Financial Review – CTO Contingency Fund

	Risk items for Inclusion in CTO Contingency Fund		(Amounts in millions)				
Line	Major Activities/Adjustments	Likely to Spend <sup>1</sup> (H/L)	Allocated	Feb. Spend	Spend to Date	Remaining Balance	Initiated NCRs to date
1.	•External Labor Support for Delivery Assurance and Market Experts for Operational Support & Guidelines (\$2.4M) & Board directive for Organization Study (\$0.5M)	H	\$ 2.9	(\$ 0.2)	(\$ 0.2)	\$ 2.7	\$ 0.5
2.	•Infrastructure hardware upgrades and application patching	L	2.0	-	-	2.0	0.2
3.	•Software Licenses and Maintenance Fees	H	1.9	(1.8)	(1.8)	0.1	1.8
4.	•Current in-flight change requests within the NCR pipeline	H	1.6	-	-	1.6	0.7
5.	•Market Collateralization for Credit system changes and NPRRs	L	1.0	-	-	1.0	-
6.	•Business Process Monitoring scoping and requirements gathering based on other ISO implementations, Internal and External Labor support for problem analysis, monitoring configurations, tools and utilities	H	1.0	-	-	1.0	0.2
7.	•Network Modeling changes for loading and publishing to support NPRR	L	0.2	-	-	0.2	-
8.	•IMM Development Resources from ABB	L	0.2	-	-	0.2	-
	<b>Total</b>		<b><u>\$ 10.8</u></b>	<b><u>(\$2.0)</u></b>	<b><u>(\$2.0)</u></b>	<b><u>\$ 8.8</u></b>	<b><u>\$ 3.4</u></b>

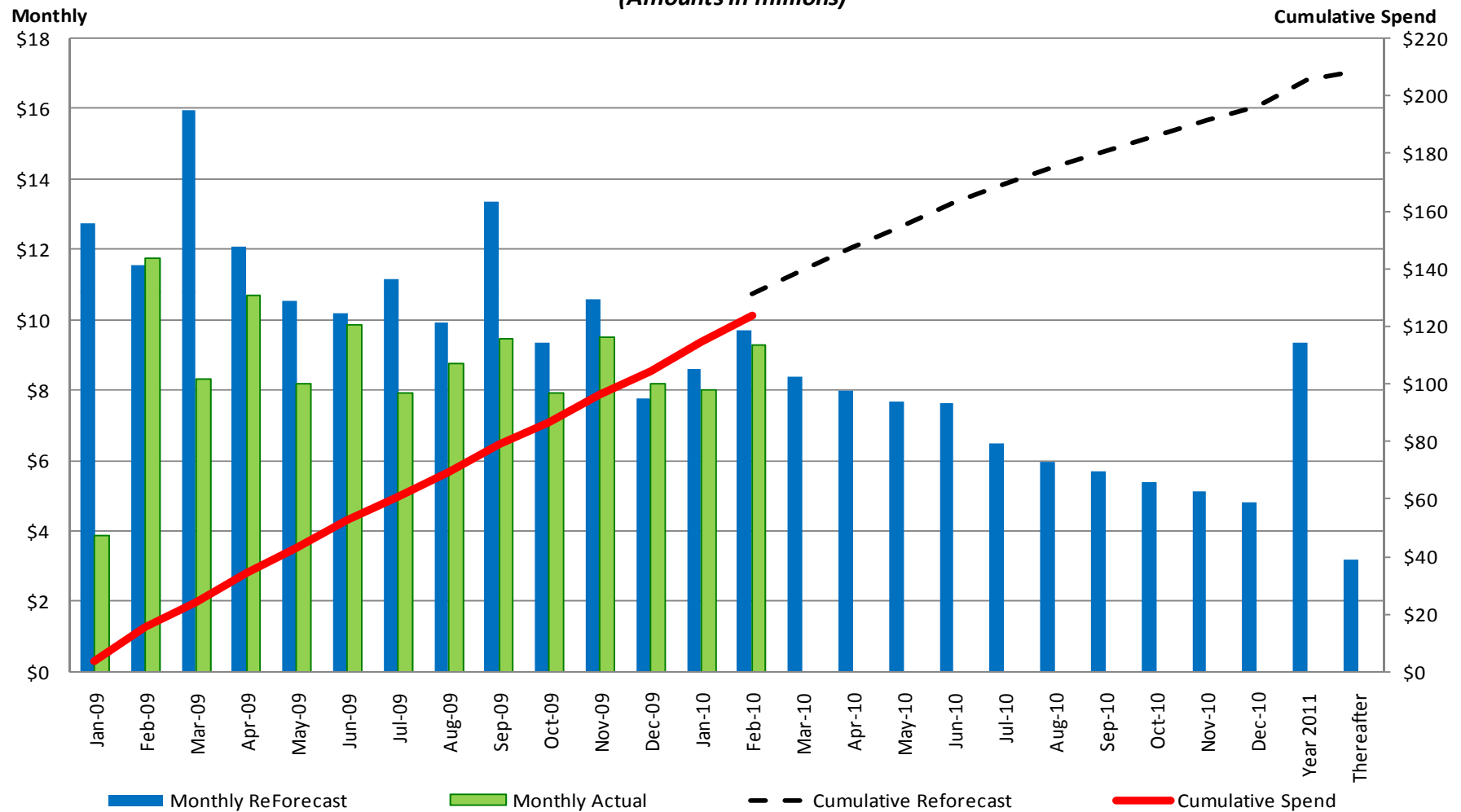
Note 1: H – high probability risk will materialize, L – low probability risk will materialize

# Financial Review – Board Discretionary Fund



# Financial Review – Program Cost Management 2009 and 2010 Forecast

## Monthly Budget, Forecast and Actual Analysis (Amounts in millions)



**Note:** Year 2011 and thereafter are finance charges



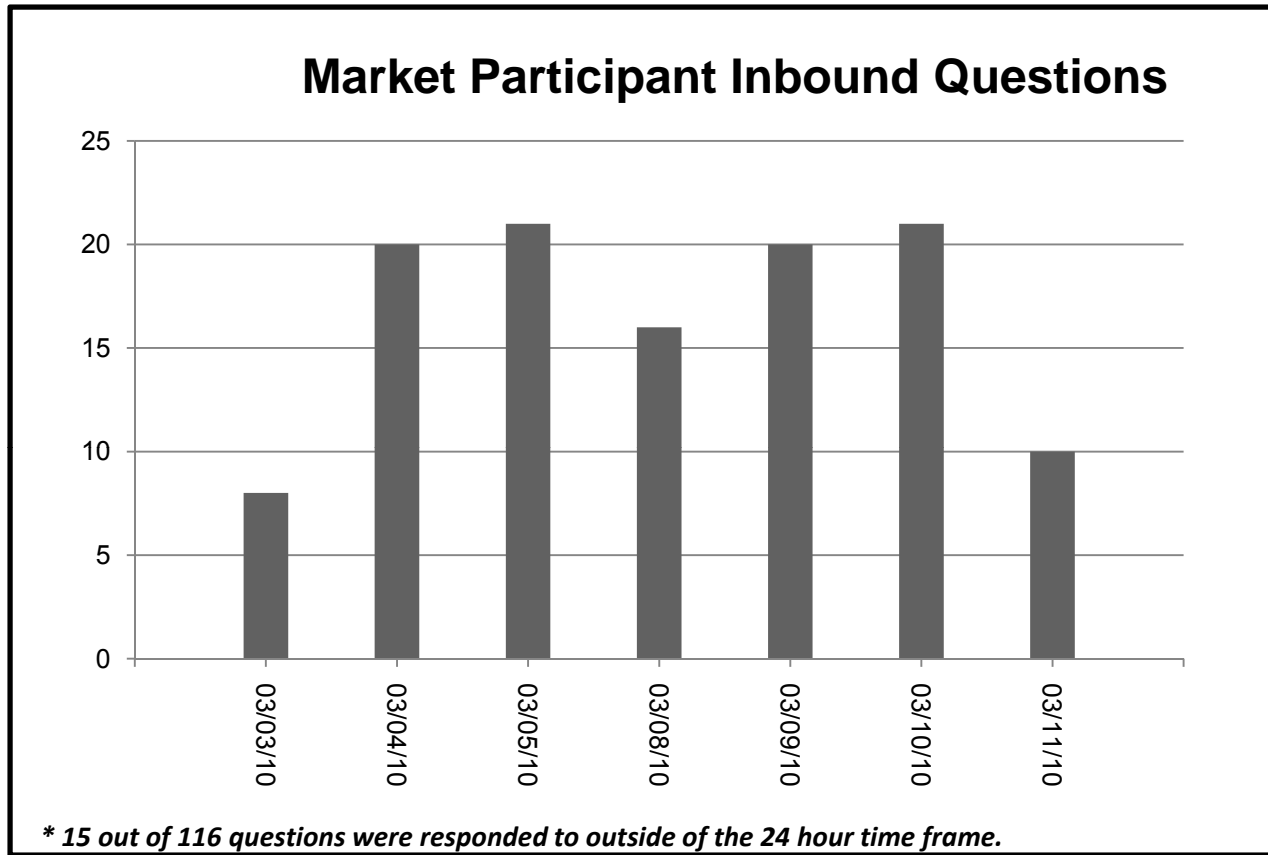
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# Questions?

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# Appendix

# Support Metrics



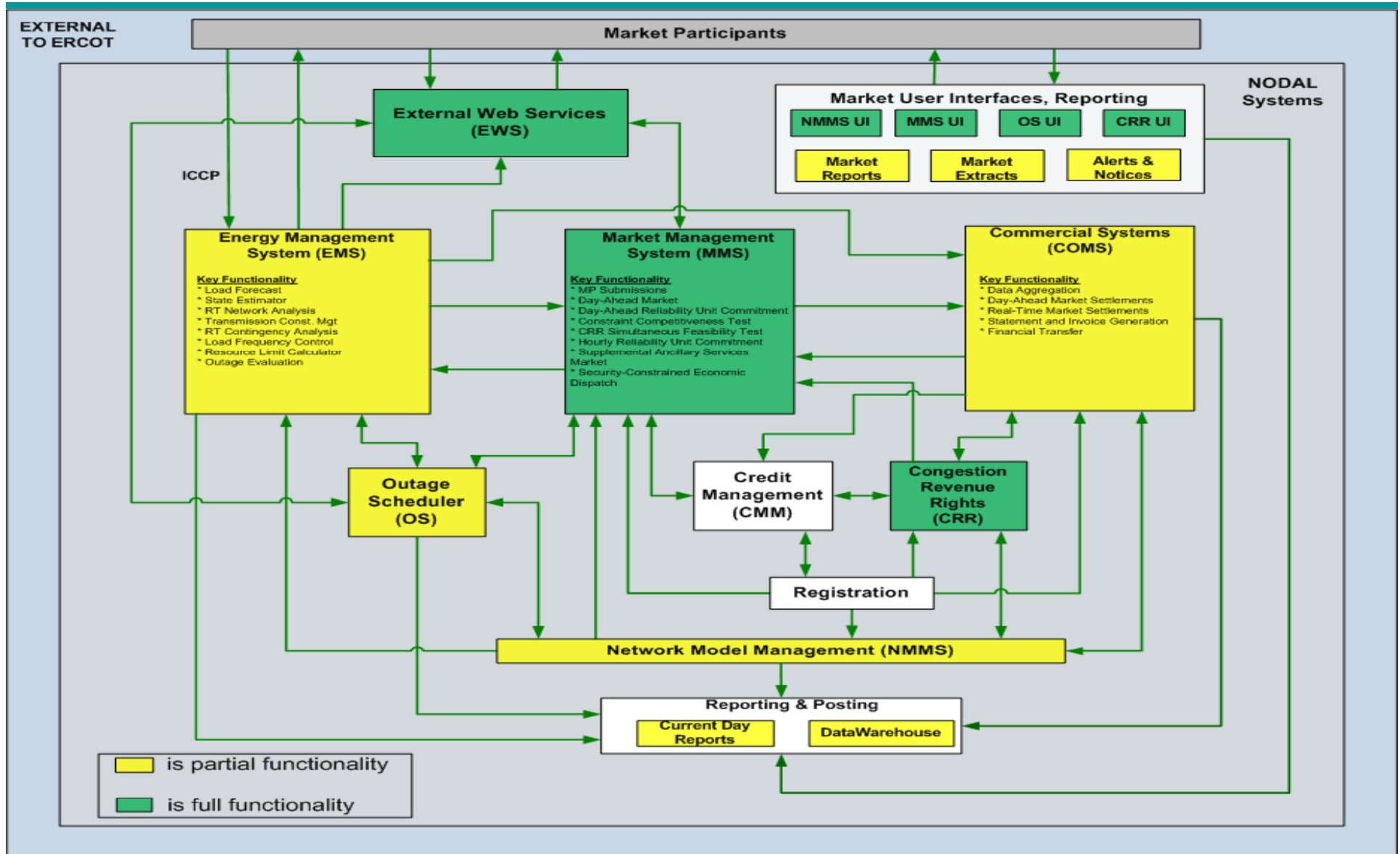
## Example Questions:

- Question: Which day's FIP/FOP is used for day-ahead market TPO validation? For example, for tomorrow the Platt's daily index will not be posted until later on today after the DAM is closed. Is ERCOT using today's FIP/FOP for tomorrow's offer validation?
- Question: When will Load Serving Entities (LSEs) be given access to enter MIS to see Market Trial Postings that we will be able to see when the Market goes live. We are especially interested in tracking the Market Trial LMP's and Settlement Point LMP's?

## Market Trials Phase 4 – DAM: Schedule/Key Dates

	<b>Week 1</b>	<b>Week 2</b>	<b>Week 3</b>	<b>Week 4</b>	<b>Week 5</b>
	<b>4/1/2010</b>	<b>4/6/2010 &amp; 4/8/2010</b>	<b>4/13/2010 &amp; 4/15/2010</b>	<b>4/20/2010 &amp; 4/22/2010</b>	<b>4/27/2010 &amp; 4/29/2010</b>
<b>DAM / RUC / SASM</b>					
<b>Objective</b>	Connectivity / Execution	AS co-optimization	Network constrained solution	DAM + DRUC	DAM + DRUC + HRUC + SASM
<b>Network Constraints</b>	None	None	Included	Included	Included
<b>Self-Arranged AS Requested</b>	100%	50%	50%	Actual	Actual
<b>Load Bid MW Requested</b>	80/120% forecasted load	80/120% forecasted load	80/120% forecasted load	80/120% forecasted load	80/120% forecasted load
<b>Virtual Bids / Offers</b>	Up to 5 transactions totaling 50 MW/QSE/hr	Up to 5 transactions totaling 50 MW/QSE/hr	Up to 10 transactions totaling 100 MW/QSE/hr	Up to 10 transactions/QSE/hr	Up to 10 transactions/QSE/hr
<b>PTP Obligations</b>	Up to 5 bids totaling 50 MW/QSE/hr	Up to 5 bids totaling 50 MW/QSE/hr	None	Up to 5 bids totaling 50 MW/QSE/hr	Up to 5 bids totaling 50 MW/QSE/hr (unless the bid represents QSE's load)
<b>NOIE CRR Offers</b>	Allocated CRRs only	Allocated CRRs only	None	Allocated CRRs only	Allocated CRRs only
<b>DRUC</b>	None	None	DRUC after each DAM	DRUC after each DAM	DRUC after each DAM
<b>HRUC</b>	None	None	None	None	Limited
<b>SASM</b>	None	None	None	None	Yes

# Nodal Systems Blueprint - Market Trials - Phase 4 - April 1st



# Nodal Program Risks & Issues: Definitions

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## 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

# 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