



Nodal Program Update

Mike Cleary

Chief Operating Officer

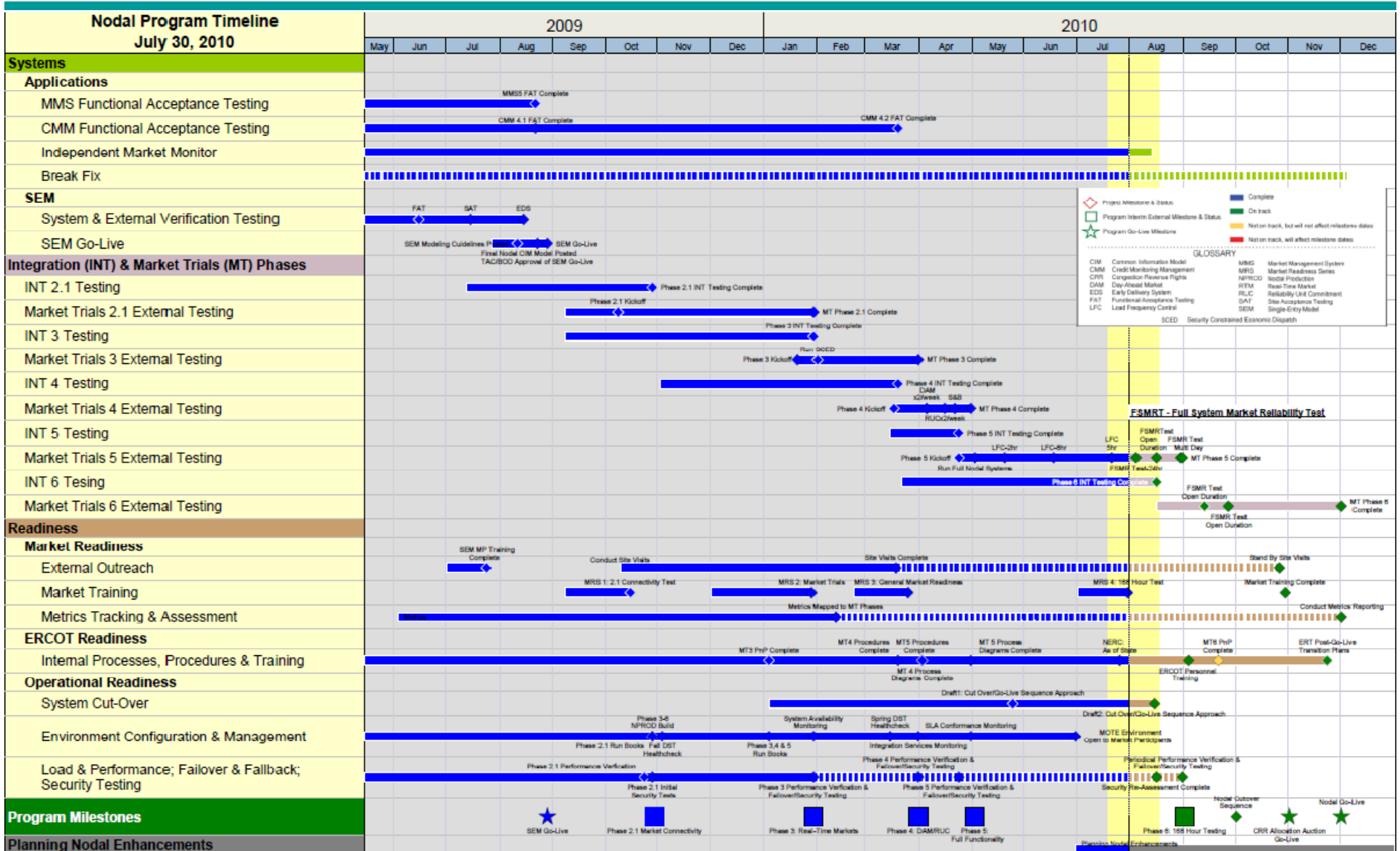
ERCOT Board of Directors

17 August 2010

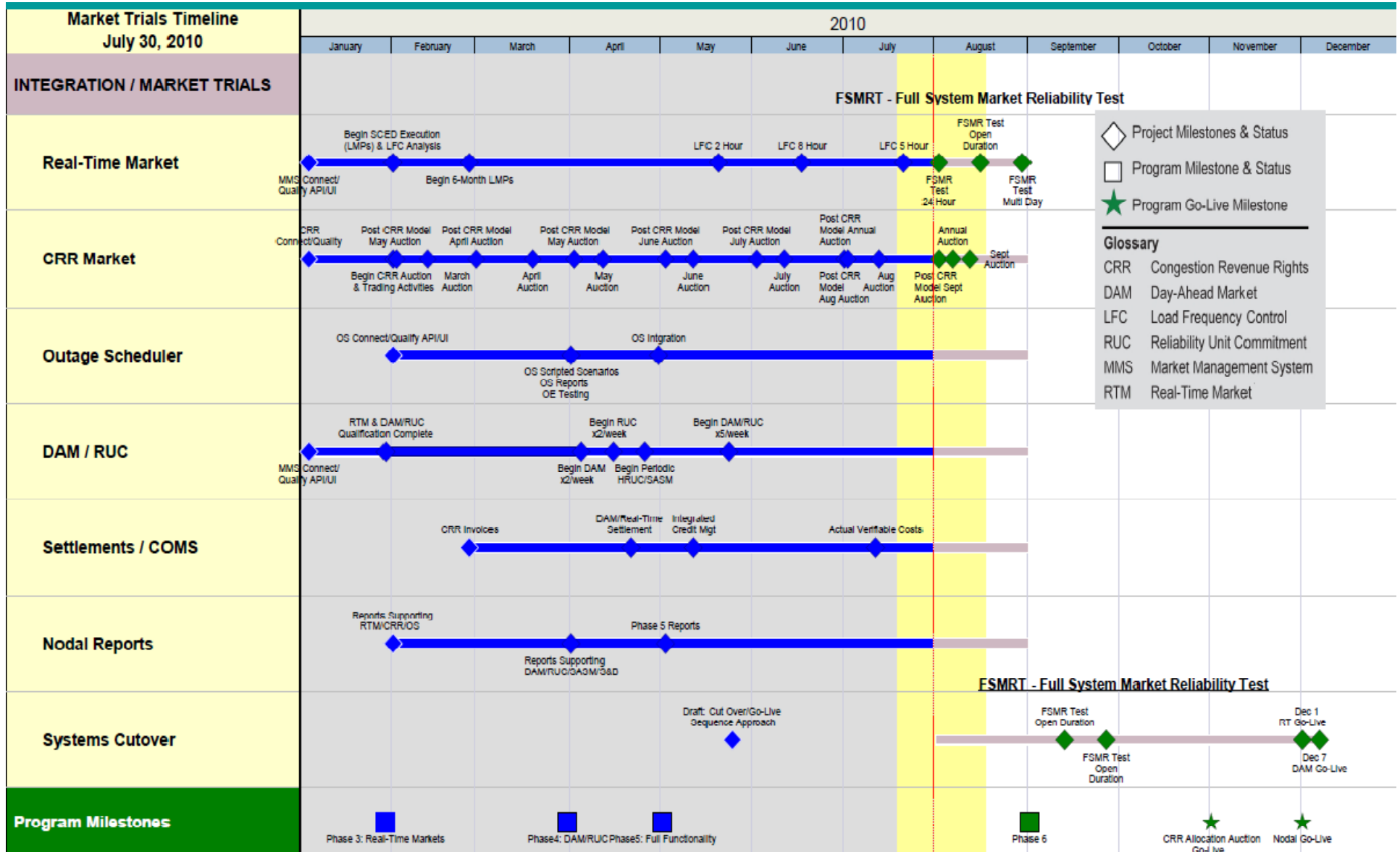
Today's Agenda

- **Program Status**
- **Market Readiness**
- **LFC Test Overview**
- **Nodal Go-Live Update**
 - Network Modeling Management Update
 - Outage Scheduler
 - CRR
- **Financials**
- **Appendix**

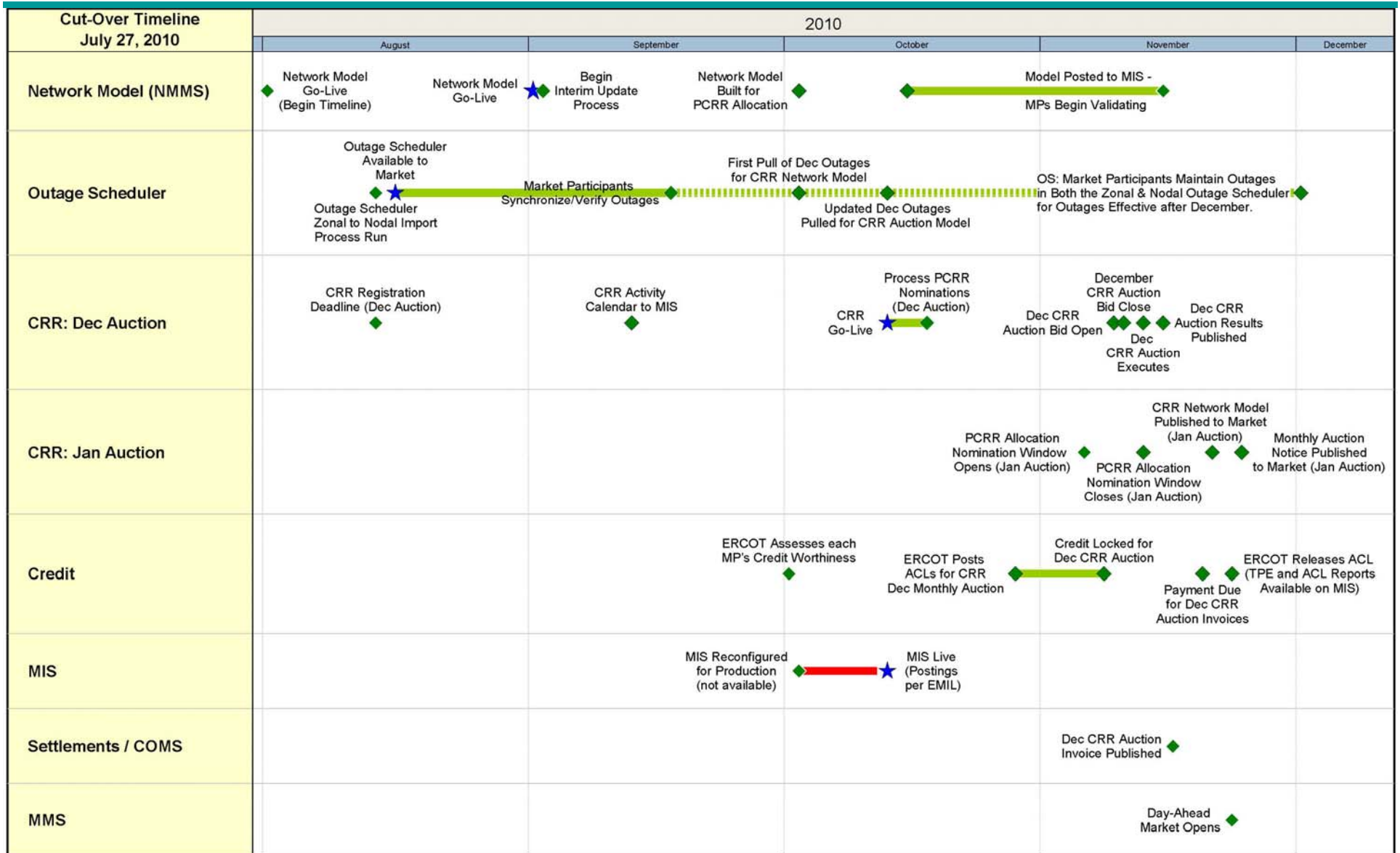
Integrated Nodal Timeline – Go-Live December 1, 2010



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



2010 Cut Over Timeline – 4 month outlook



105 Days to Go-Live

Market Trials has been running for 28 weeks

Achievements within Market Trials:

- CRR
 - Six monthly CRR auctions, one Balance of the Year auction, and one Annual Auction have been completed and invoiced
- Real Time Markets
 - Real Time settlements
 - Occurring daily for 15 weeks
 - Posting Real-Time Prices after every SCED run
- DAM / RUC / WRUC
 - DRUC has been running in conjunction with DAM for 14 weeks
 - Settlement and extract data has been available since Mid-May
 - 12 Operational scenarios were successfully run in June
 - DAM / RUC / WRUC have been running during business hours on non-Full System test days and every hour during the Full System test
- Ancillary Services
 - Supplemental AS Market tested as needed
- Full System Market and Reliability Test
 - 5 hour test occurred on July 21st
 - 24 Hour test to Full System Market and Reliability Test occurred between August 4th – 5th
- Credit
 - NPRR 206, “e” Factors were loaded into production on August 6th
- Cut-Over
 - Market Readiness Seminar #5 was held on July 28th

105 Days to Go-Live

Market Trials has been running for 28 weeks

Upcoming Milestones for Market Trials:

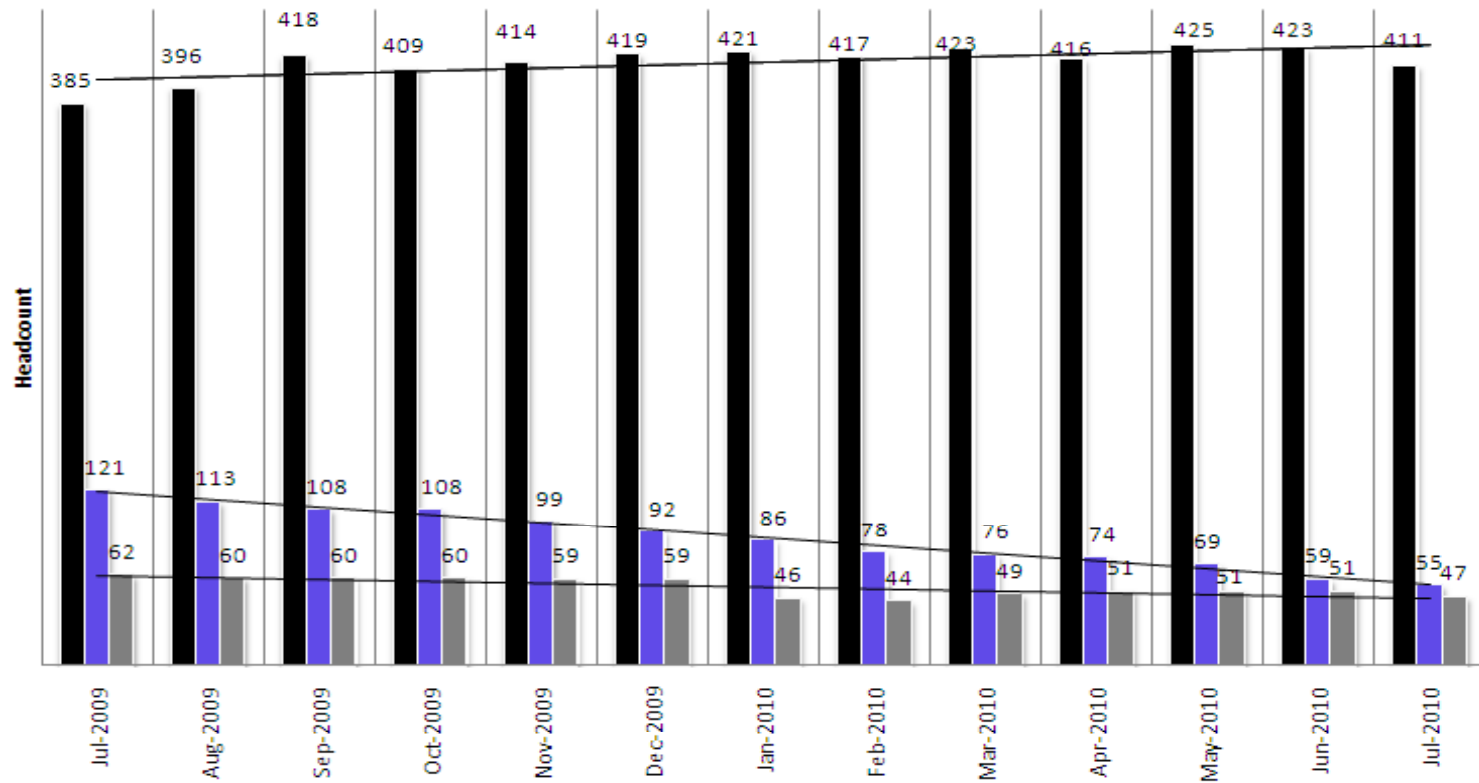
- Full System Market Reliability Tests
 - Additional Full System Market and Reliability Test dates are being considered
 - ERCOT will design next Full System test to cover the evening Ramp-down of units based on the 24 hour test
 - Duration to be discussed at NATF
 - Additional Market Readiness Assessment / Market Simulation will take place, including a multiday test in early Sept
 - 168 hour Full System Market and Reliability Test
- DAM/RUC/SASM Scenarios
 - Planning more operational scenarios for August
 - DAM will run continuously for 7 consecutive days starting on 8/9/2010 through 8/16/2010
 - DRUC, WRUC, and HRUC will run 24x7 all 7 days
 - ERCOT's focus for DAM going forward will be on the quality of solution
- Market Changes in trials for August / September
 - NPRR206- Change in Credit Management Collateral calculations for Day-Ahead Market
 - QSEs and TSPs begin maintaining outages for September and post Go-Live

System Cut-Over / Go-Live

- Market Readiness Seminar #6 is scheduled for August 31, 2010
- Sept/Oct 2010– Network Modeling, Outage Scheduling
- November 2010- Go-Live CRR Auction
- November 30th DAM
- December 1st – First Operating Day

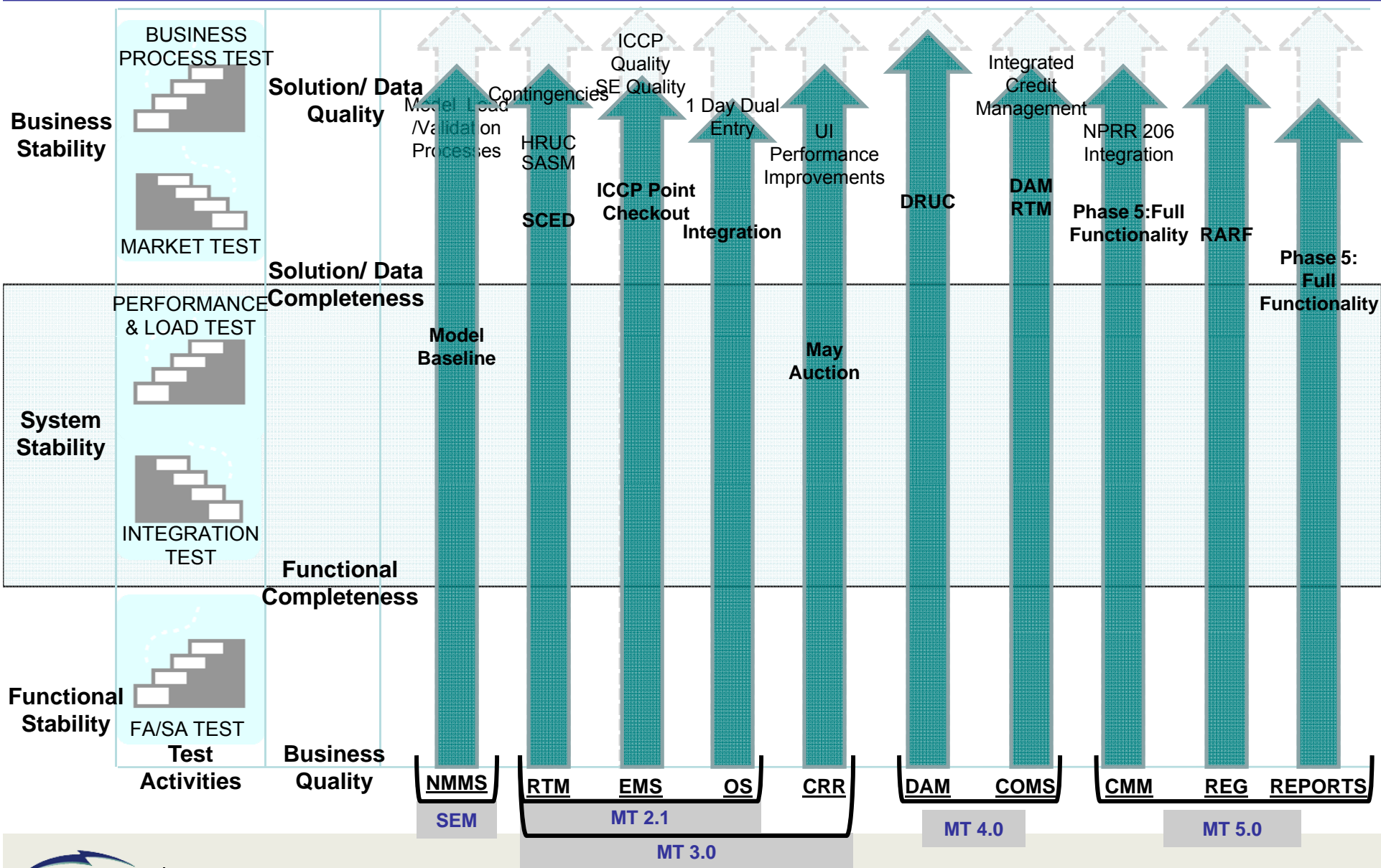
Nodal Internal/External and Vendor Headcount 2010

Nodal Internal/External and Vendor Headcount for 2010



	Jul-09	Aug-09	Sep-09	Oct-09	Nov-09	Dec-09	Jan-10	Feb-10	Mar-10	Apr-10	May-10	Jun-10	Jul-10
■ ERCOT Employees	385	396	418	409	414	419	421	417	423	416	425	423	411
■ Contingent Labor	121	113	108	108	99	92	86	78	76	74	69	59	55
■ Vendor Labor	62	60	60	60	59	59	46	44	49	51	51	51	47

Go-Live



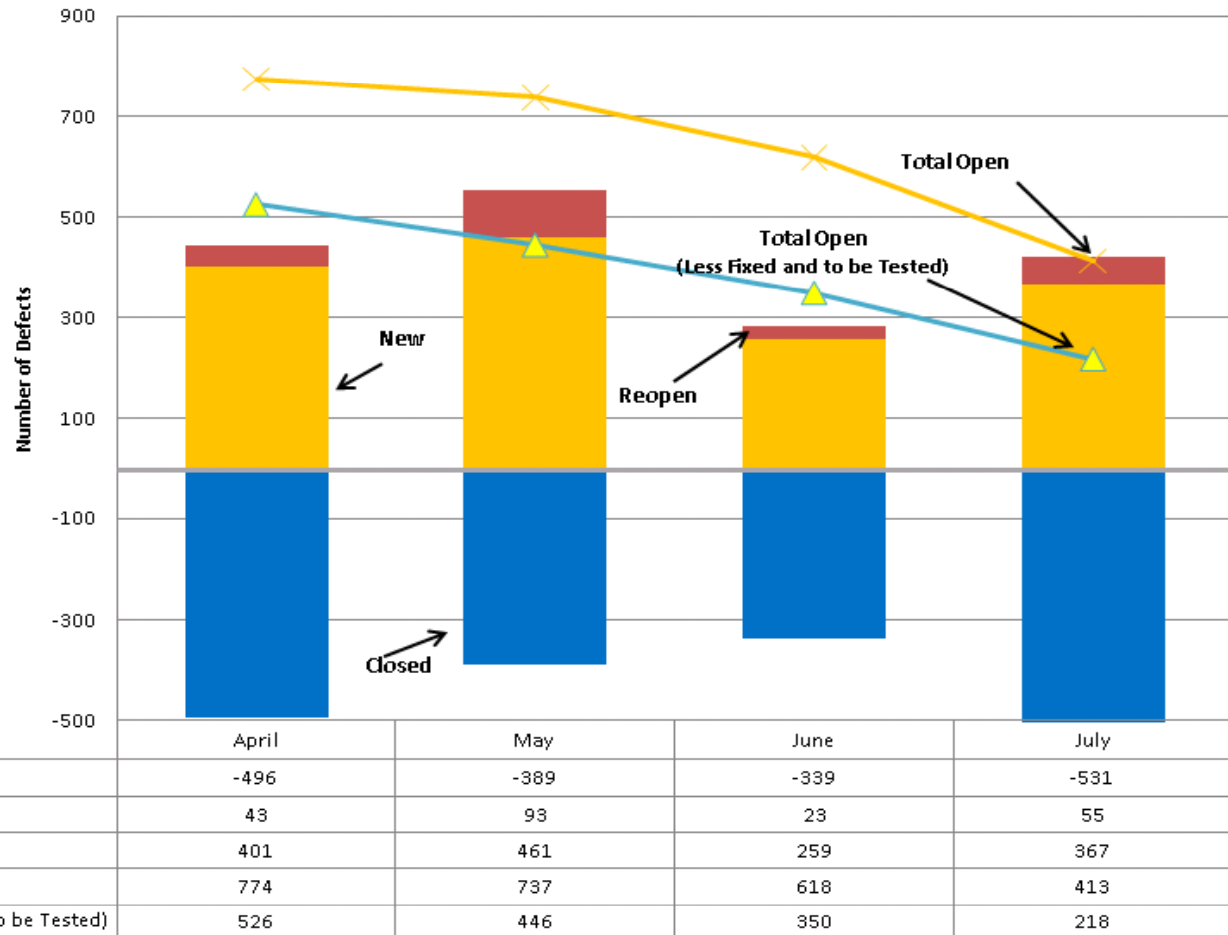
Nodal Program Risks & Issues

Risk/Issue	Impacted Milestone	Target	Category	Probability	Severity	Status
Network Model Management <i>Performance and availability issues around the NMMS.</i>	Program	August 2010	Schedule / Budget	Med	Med	<ul style="list-style-type: none"> Working closely with vendor to correct all issues Working through issues list with NDSWG and NATF
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	High	Low	<ul style="list-style-type: none"> Performing risk assessment associated with four identified issues for August board meeting <ul style="list-style-type: none"> PTP Options in the DAM Ancillary Services CRR Derating Scarcity Pricing
Operational Readiness <ul style="list-style-type: none"> Operational readiness of the Nodal systems and business processes are an increasing risk at this point in the program DAM CRR 	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 Analyzing quality of solution with Market Participants Zonal workaround will be modified to incorporate outages into ongoing CRR models

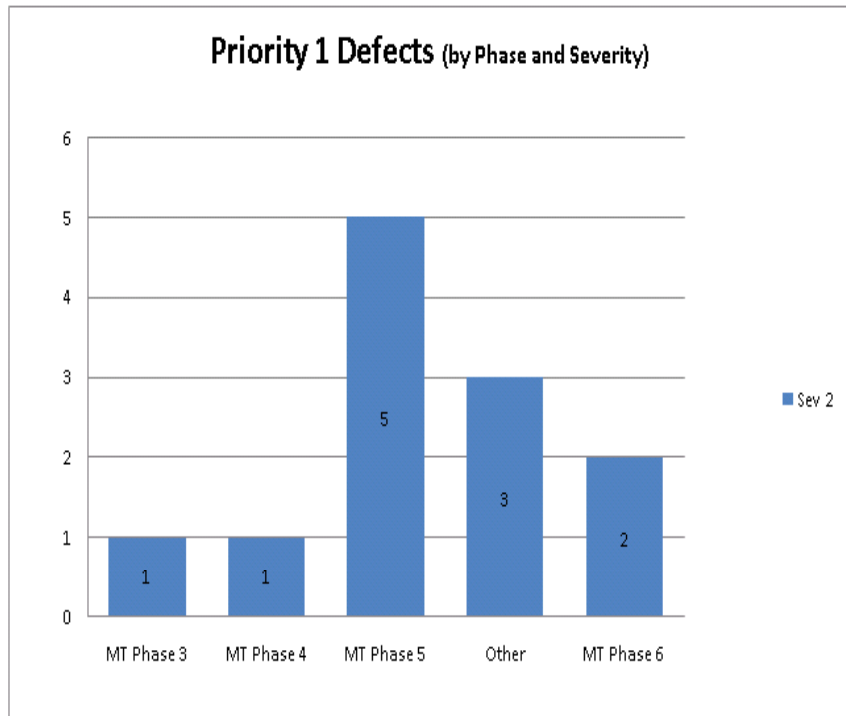
Nodal Defects Trends - High Priority (Must Fix Before Go-Live)

- Defect counts decreased due to planned defect migrations into Nodal ITest.
- Primary source for New defect counts are EDW/60, EIP/42, EMS/41, MIS/53, and MMS/72.

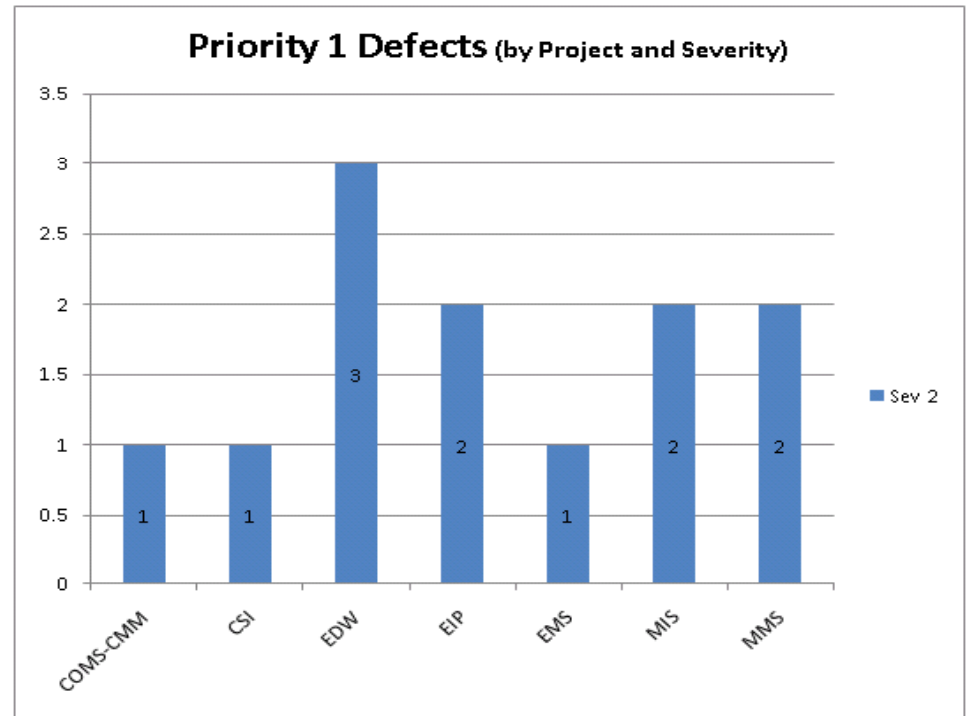
**Nodal Defects
Total Open vs. Monthly Variation**



Nodal Defect Reporting



Systems & Testing teams are focused on the most important defects.



Market Trials delivery risk is being managed through a focus on key systems.

Nodal Parking Deck - Approved

Source	Title	Priority	Current Status
NPRR208	Registration and Settlement of Distributed Generation (DG) Less Than One MW	Critical	BoD Approved 7/20/2010
SCR756	Enhancements to the MarkeTrak Application	Critical	BoD Approved 7/20/2010
NPRR131	Ancillary Service Trades with ERCOT	High	BoD Approved 1/19/2010
NPRR146	ICCP Telemetry Information Submittals	High	BoD Approved 6/15/2010
NPRR181	FIP Definition Revision	High	BoD Approved 1/19/2010
NPRR207	Unit Deselection	High	BoD Approved 7/20/2010
NPRR210	Wind Forecasting Change to P50, Synch PRR841	High	BoD Approved 6/15/2010
NPRR222	Half-Hour Start Unit RUC Clawback	High	BoD Approved 7/20/2010
NPRR153	Generation Resource Fixed Quantity Block Offer	Medium	BoD Approved 1/19/2010
NPRR164	Resubmitting Ancillary Service offers in SASM	Medium	BoD Approved 1/19/2010
SCR755	ERCOT.com Website Enhancements	Medium	BoD Approved 2/16/2010

Nodal Parking Deck – Pending

Source	Title	Suggested Priority	Current Status
NPRR240	Proxy Energy Offer Curve	TBD	Pending PRS Impact Analysis Approval
NPRR241	Aggregate Incremental Liability (AIL) Calculation and Credit Reports Publish Corrections	TBD	Pending PRS Impact Analysis Approval
NPRR251	Sync of PRR845, Definition for IDR Meters and Optional Removal of IDR Meters at a Premise Where an Advanced Meter Can be Provisioned	High	Pending at PRS RMS approved 7/14/2010
NOGRR034	Rescind Telemetry Performance Calculation Exclusions	Medium	Pending at Board TAC approved 8/5/2010
SCR759	acLineSegment Name Length Increase in Information Model Manager	High	Pending further review at ROS ROS approved 7/15/2010

The following items were removed from the Parking Deck in the past month:
None

Nodal Parking Deck –Additional Items for Consideration

Title	Current Status / Description
Wind Cost Allocation	High level impact assessment of two options is near completion
Deferred NOGRR025 Reports	Draft NPRR in progress to gray-box reports planned for delivery after Nodal go-live
NMMS API	Functionality to be considered for post-go-live development
CRR API	Functionality to be considered for post-go-live development
MMS Multiple Network Models	Functionality to be considered for post-go-live development
Add PSS Status to RARF	Automation of manual process as a result of NPRR156
Automated Default Uplift Invoice	Automation of manual process as a result of NPRR221
EILS Enhancements	Automation of manual process
Load Participation in SCED	Functionality to be considered for post-go-live development
EMS Upgrade	Upgrade EMS system from v2.3 to v2.5/v2.6
Deferred Defects	Defects not addressed during Nodal stabilization period Approximately 700 deferred defects as of July 2010 Review underway to confirm issues and confirm acceptable workarounds

Nodal Parking Deck –Additional Items for Consideration

Title	Current Status / Description
Large Wind Power Production Ramp Forecasting Phase 2	Phase 2 of the project that built a display for ERCOT operators to indicate periods of time within the next 6 hours during which there is a high risk for a large wind power production ramp to occur
TML Transition to MIS	Upon go live, most applications that are currently available through TML will migrate to MIS and will only be accessible to MPs through the MIS portal. RMS has requested that Zonal Reports, Find ESI ID, Find Transactions, and Transaction submission be accessed through TML until MIS has had sufficient time to stabilize.
Decommission of Zonal Wholesale	After go-live of the redesigned ERCOT wholesale market, certain ERCOT systems and components that were only applicable to zonal wholesale operations will become disposable and need to be decommissioned.
Nodal Cutover Cleanup	Remove pre-go-live data from Nodal systems
Move Price Validation Tool (PVT) to a Server Application	Functionality to be considered for post-go-live development
PVT Enhancements	Enhancements to be identified during market testing and Nodal implementation
PVT Reporting Tools	Functionality to be considered for post-go-live development

Nodal Parking Deck – Prioritization Guidelines

Priority	Definition
Critical	Required by Statute, PUCT Order, NERC compliance or <u>critical</u> reliability of: <ul style="list-style-type: none">• Grid Operations• IT Infrastructure• Commercial Settlement
High	<u>High</u> value for a majority of market segments or ERCOT
High / Medium	<u>High</u> value to one or two segments, or <u>Medium</u> value for a majority of market segments or ERCOT
Medium	<u>Medium</u> value for only one segment



24 Hr Full System Market and Reliability Test Overview

Kenneth Ragsdale
Principle Market Operations

ERCOT Board of Directors

17 August 2010

24-Hour Full System Reliability and Market Test Results

Date	Time (<i>CDT</i>)	Event
Aug 4	08:30	<ul style="list-style-type: none"> • Pre-test meeting for Nodal Support Staff
	09:00	<ul style="list-style-type: none"> • Hotline call by ERCOT Operators to announce the 12:00 test start time • Kick-off of the Market WebEx • Market Notice to be sent out with the test start time • Start troubleshooting period with QSEs
	10:00	<ul style="list-style-type: none"> • Operators to start using OC3s to manage congestion
	12:00 (<i>actual start 12:04</i>)	<ul style="list-style-type: none"> • Hotline call to QSEs/TOs to announce the start of the test
		<ul style="list-style-type: none"> • ERCOT Operators begin switching QSEs to Nodal control
	12:45 (<i>actual end 12:47</i>)	<ul style="list-style-type: none"> • All participating QSEs switched to Nodal control
		<ul style="list-style-type: none"> • Hotline call to announce that all participating QSEs are on Nodal control
	16:00-18:00	<ul style="list-style-type: none"> • Planned period for ERCOT LFC tuning with AREVA and ERCOT Engineers (1 of 2)
19:00-19:30	<ul style="list-style-type: none"> • ERCOT nodal staff transition to night shift 	

24-Hour Full System Reliability and Market Test Results

Date	Time (<i>CDT</i>)	Event
Aug 5	05:00-05:30	<ul style="list-style-type: none"> ERCOT nodal staff transition back to day shift
	06:00-08:00	<ul style="list-style-type: none"> Planned period for ERCOT LFC tuning with AREVA and ERCOT Engineers (2 of 2)
	11:15 (<i>actual start 11:24</i>)	<ul style="list-style-type: none"> Hotline call to announce that ERCOT will begin switching QSEs back to Zonal control
		<ul style="list-style-type: none"> ERCOT Operators begin switching QSEs back to Zonal control
	12:00 (<i>actual end 11:53</i>)	<ul style="list-style-type: none"> All QSEs on Zonal control
		<ul style="list-style-type: none"> Hotline call to QSEs/TOs to announce that the test has concluded
	After cutover is complete	<ul style="list-style-type: none"> Once QSEs have complete switchover back to Zonal, ERCOT will provide a debrief of the test and an initial review of the completion criteria

24-Hour Full System Reliability and Market Test Results

Issues and Observations from the test

- Total of 19 constraints activated, 7 at one time during the test
 - One contingency was defined incorrectly, but resolved and activated during the test.
- QSEs released from AS obligations
 - 2 instances where QSEs were released from their Regulation Obligation to make resources available to SCED to resolve congestion.
 - This was the correct Operator action. Not previously observed during a closed loop test.
- CPS1 score of -34
 - Primarily due to resources being off of their expected generation (HE 17)
 - Resources were also having equipment problems and did not reflect those changes in telemetry.
 - Time Error Correction was also being performed during this time.
 - For some intervals, ERCOT Operations responded with a manual offset in SCED.

24-Hour Full System Reliability and Market Test Results

Issues and Observations from the test

- Quick Starts coming on or offline
 - For testing purposes QSEs will need to call the ERCOT Operators before coming on or going offline.
- Energy constraints superseding transmission constraints
 - Occurred during the peak load intervals.
- Telemetry Inconsistencies
 - Cases where HSLs were being set lower than MWs.
 - QSEs were not using the “ONTEST” resource status as expected. Some resources were testing and not using this status. There were also resources which were using this status who were not testing.

24-Hour Full System Reliability and Market Test Results

Issues and Observations from the test

- **Ramping down of resources to take them offline**
 - A number of resources were off their expected generation which negatively affected ERCOT's ability to manage frequency.
 - More guidance for ramp-offs and start-ups will be provided on the 8/13 RTM Market Call.
- **Shift Factors being sent to SCED**
 - Issue #1 - 3 intervals with shift factors not sent to SCED (1815, 1835 and 1850). This is a known issue and the fix is planned to be implemented before the next full system test.
 - Issue #2 – For specific constraints with unresolved contingencies, shift factors were not passed. Vendor is working on an emergency patch.

24-Hour Full System Reliability and Market Test Results

Overview – Completion Criteria

- **ERCOT will communicate an initial assessment of the following completion criteria upon conclusion of the test on August 5th:**
 - The rolling CPS1 one minute average score must equal or exceed 100% during the test period
 - Note that the CPS1 average will not take into account the periods where ERCOT is transitioning to Nodal and then back to Zonal
 - Note that the CPS1 average will not take into account the periods where ERCOT is performing system tuning
 - **Hourly CPS1 Scores:**
 - » **Max: 167, Min: -34,**
 - » **Average: 130 (137 when HE17 -34 is removed)**
 - Zonal Commercially Significant Constraints (CSCs) and Closely Related Elements (CREs) managed below thermal limits. **None active**
 - Local Congestion managed below thermal limits **Yes**
 - Stability limits managed below transfer limits **None active**
 - No NERC Disturbance Control Standard (DCS) failure if applicable. **No DCS failures during the test**
 - No LFC-SCED system issues that result in termination of the test. **No LFC / SCED failures**
 - Procedural and software fixes have been verified to address lessons learned from previous rounds of testing. **All software fixes put in prior to the test worked as expected.**

Network Model Management System Update

- **Improvement in stability from three patches installed on July 2nd , July 22nd , and August 1st**
 - Two unscheduled restart since the July 22nd patch install,
 - One on Friday, July 30th
 - Another on Monday, August 2nd
- **Navigation Performance:**
 - Performance patch was installed on Sunday, August 1st
 - Feedback from internal and external users is that performance has improved
 - Developing automated performance testing tools to enable performance monitoring
- **Validation Performance:**
 - Programmers are assessing validation and testing potential improvements



Nodal Go-Live Update

Review of Outage Scheduler and CRR Go-Live Items

Kenneth Ragsdale
Market Trials

ERCOT Board of Directors

17 August 2010

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
Congestion Revenue Rights (CRR)	Completed on August 5 th	August 17 th
Outage Scheduling (OS)	Completed on August 5 th	August 17 th
Full Nodal Operations	October 7 th	October 19 th

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 Market Readiness Criteria for Outage Scheduling and Congestion Revenue Rights at NATF and subsequently received unanimous votes from TAC to meet the requirements of Section 21.12.3, Notice to Market Participants of Effective Date for Nodal Protocol Provisions and Retirement of Zonal Protocol Provision

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

Outage Scheduling – Go Live

System Readiness	Planned Completion	Status
Outage Scheduler released to Market Trials	2/01/10	Complete
Outages Scheduler Integrated with DAM, RUC	4/15/10	Complete
Outage Scheduler Qualification Connectivity Qualification (MP20)	4/01/10	Green
Process Readiness		
Verify Outage Evaluation System Functionality (EMO3 #1)	6/23/10	Green
Outage Coordination Procedures	7/16/10	Complete
Nodal Protocol Transition Plan Updated for Outage Scheduling	7/29/10	Complete
Outage Scheduling Transition Plan Established	7/08/10	Complete

Outage Scheduling – Go Live

People Readiness	Planned Completion	Status
ERCOT Staff Support of Market Trials	Ongoing	In Progress
ERCOT Staff Trained on System and Processes	09/03/10	In Progress
Market Participant Training Delivered	7/15/10	NMMS/OS work-shop added
Overall Readiness		
NATF Review	7/08/10, 07/29/10 08/03/10	Complete
ERCOT Management Signoff	8/04/10	Complete
TAC Approval	8/05/10	Complete
BOD Approval	8/17/10	
30 Day Market Notice	10/01/10	
10 Day Market Notice	10/21/10	

TAC's Outage Scheduler Certification – Unanimous Approval 8/5/10

WHEREAS, Protocols Section 21.12.3 (Notice to Market Participants of Effective Date for Nodal Protocol Provisions and Retirement of Zonal Protocol Provisions) provides that before a “part of the nodal market design may start operation,” a vote of the Technical Advisory Committee (TAC) is required affirming that the “Market Readiness Criteria for that part of the nodal market design have been met”

WHEREAS, the Section 21.12.3 certification by TAC, Electric Reliability Council of Texas, Inc. (ERCOT) staff, and the ERCOT Board of Directors regarding the satisfaction of “Market Readiness Criteria” for a particular part of the nodal market design will result in ERCOT issuing “two Notices alerting Market Participants to the effective date of Nodal Protocol sections and the retirement of Zonal Protocol sections, as applicable”;

WHEREAS, the Protocols do not define the term “Market Readiness Criteria,” and ERCOT, in conjunction with Market Participants, has developed specific metrics and a Nodal Readiness Scorecard that are used to determine the progress of specific parts of the nodal market design in meeting the criteria necessary for implementing the Nodal Protocols and starting operations;

WHEREAS, the members of TAC recognize that there are issues that remain to be addressed regarding the implementation and operation of the Outage Scheduler before the Texas Nodal Market Implementation Date (TNMID), but that none of those issues should prevent the Outage Scheduler Go-Live on November 1, 2010, which is an integral occurrence in the progress toward meeting the TNMID on schedule;

WHEREAS, TAC has reviewed the market readiness metrics documentation underlying ERCOT staff’s recommendation regarding the Outage Scheduler part of the nodal market design, and has conducted due diligence on ERCOT staff’s conclusion that the Outage Scheduler has satisfied all of the steps necessary to make the declaration of market readiness required by Section 21.12.3, in order to authorize Outage Scheduler Go-Live on November 1, 2010;

THEREFORE be it RESOLVED, that this Resolution shall serve as the TAC certification that all Market Readiness Criteria have been met, for purposes of ERCOT Protocols Section 21.12.3, regarding Outage Scheduler Go-Live on November 1, 2010.

Recommended Board Resolution for Outage Scheduler Certification

WHEREAS, ERCOT Protocol Section 21.12.3, Notice to Market Participants of Effective Date for Nodal Protocol Provisions and Retirement of Zonal Protocol Provisions, provides that before a “part of the nodal market design may start operation,” a vote of the Electric Reliability Council of Texas, Inc. (ERCOT) Board of Directors is required affirming that the “Market Readiness Criteria for that part of the nodal market design have been met”;

WHEREAS, the Section 21.12.3 certification by the Technical Advisory Committee (TAC), ERCOT staff, and the ERCOT Board of Directors regarding the satisfaction of “Market Readiness Criteria” for a particular part of the nodal market design will result in ERCOT issuing “two Notices alerting Market Participants to the effective date of Nodal Protocol sections and the retirement of Zonal Protocol sections, as applicable”;

WHEREAS, the Protocols do not define the term “Market Readiness Criteria,” and ERCOT, in conjunction with Market Participants, has developed specific metrics and a Nodal Readiness Scorecard that are used to determine the progress of specific parts of the nodal market design in meeting the criteria necessary for implementing the Nodal Protocols and starting operations;

WHEREAS, the members of the ERCOT Board of Directors recognize that there are issues that remain to be addressed regarding the implementation and operation of the Outage Scheduler before the Texas Nodal Market Implementation Date (TNMID), but that none of those issues should prevent the Outage Scheduler Go-Live on November 1, 2010, which is an integral occurrence in the progress toward meeting the TNMID on schedule;

WHEREAS, the ERCOT Board of Directors has reviewed the market readiness metrics documentation that ERCOT staff has executed regarding the Outage Scheduler part of the nodal market design, and has reviewed ERCOT staff’s conclusion that the Outage Scheduler has satisfied all of the steps necessary to make the declaration of market readiness required by Section 21.12.3, in order to authorize Outage Scheduler Go-Live on November 1, 2010;

WHEREAS, ERCOT staff provided its Section 21.12.3 certification document, attached hereto as Exhibit A, to TAC prior to TAC’s consideration of this issue and on August 5, 2010 TAC voted unanimously on a similar resolution, attached hereto as Exhibit B, to certify that all Market Readiness Criteria have been met for purposes of Section 21.12.3 regarding Outage Scheduler on November 1, 2010

THEREFORE be it RESOLVED, that this Resolution shall serve as the ERCOT Board of Directors certification that all Market Readiness Criteria have been met, for purposes of ERCOT Protocol Section 21.12.3, regarding Outage Scheduler Go-Live on November 1, 2010.

FURTHERMORE, the ERCOT Board of Directors directs that status updates regarding outstanding issues be provided at future ERCOT Board of Directors meetings.

CRR Allocation and Auction (3 open defects) [as of 8-06-10]

1. Topology Processor (TP) cannot properly consume outage information. With TP version 8 delivered in early July it was identified that the outages were not properly consumed. Working with Siemens and also working on manual work-around.
 - ERCOT has postponed the posting of the September CRR model. Plan to execute manual work-around or automated process to properly incorporate outages before the model is posted and the auction is executed.
 - Exercised a proven Zonal manual work-around with the August CRR model that incorporating outages.
 - Still working with Siemens to create a patch for Topology Processor.

2. Incorrect Load Zone Designation from TP. (Possible data issue. Continue to investigate with Siemens.)
 - Test in progress to confirm it is a data issue. Target to close by the end of this week. Manual work-around being investigated.

CRR Allocation and Auction (3 open defects) [as of 8-06-10]

3. Resource Nodes missing from output file produced by TP. (Possible data issue. Continue to investigate with Siemens.)
 - Test in progress to confirm it is a data issue. Target to close by the end of this week. Manual work-around being investigated.

CLOSED:

1. HUB PNODES mismatch between TP and DSV model database. Defect resolved and currently being retested
 - Testing is complete and defect is closed
2. Islanding in PSSE network model (Possible data issue. Continue to investigate with Siemens.)
 - Issue closed with 08-02-10 model load

CRR Allocation and Auction – Go Live

System Readiness	Planned Completion	Status
CRR System released to Market Trials	2/01/10	Complete
CRR Integrated in Market Trials	5/01/10	Complete
CRR Account Holder Connectivity Qualification MP 15 (B)	9/17/10	Red**
Operation of CRR Auctions and Allocations (CRR3)	Ongoing	Green
Verify CRR Auction Invoices (CO8)	Ongoing	Green
Process Readiness		
CRR Procedures	6/25/10	Complete
Nodal Protocol Transition Plan Updated for CRR	7/29/10	Complete
TCR to CRR Transition Plan (CRR4)	9/29/09	Complete

** Red due to MPs registering but not working to get qualified. (inflated denominator)

CRR Allocation and Auction – Go Live

People Readiness	Planned Completion	Status
ERCOT Staff Support of Market Trials	Ongoing	In Progress
ERCOT Staff Trained on System and Processes	06/25/10	Complete
Market Participant Training Delivered	07/15/09	Complete
Overall Readiness		
ERCOT Management Signoff	08/04/10	Complete
NATF Review	07/08/10, 07/29/10 08/03/10	Complete
TAC Approval	08/05/10	Complete
BOD Approval	08/17/10	
30 Day Market Notice	09/13/10	
10 Day Market Notice	10/03/10	

TAC's CRR Certification – Unanimous Approval 8/5/10

WHEREAS, Protocols Section 21.12.3 (Notice to Market Participants of Effective Date for Nodal Protocol Provisions and Retirement of Zonal Protocol Provisions) provides that before a “part of the nodal market design may start operation,” a vote of the Technical Advisory Committee (TAC) is required affirming that the “Market Readiness Criteria for that part of the nodal market design have been met”

WHEREAS, the Section 21.12.3 certification by TAC, Electric Reliability Council of Texas, Inc. (ERCOT) staff, and the ERCOT Board of Directors regarding the satisfaction of “Market Readiness Criteria” for a particular part of the nodal market design will result in ERCOT issuing “two Notices alerting Market Participants to the effective date of Nodal Protocol sections and the retirement of Zonal Protocol sections, as applicable”;

WHEREAS, the Protocols do not define the term “Market Readiness Criteria,” and ERCOT, in conjunction with Market Participants, has developed specific metrics and a Nodal Readiness Scorecard that are used to determine the progress of specific parts of the nodal market design in meeting the criteria necessary for implementing the Nodal Protocols and starting operations;

WHEREAS, the members of TAC recognize that there are issues that remain to be addressed regarding the implementation and operation of the Congestion Revenue Rights before the Texas Nodal Market Implementation Date (TNMID), but that none of those issues should prevent the Congestion Revenue Rights Go-Live in October 2010, which is an integral occurrence in the progress toward meeting the TNMID on schedule;

WHEREAS, TAC has reviewed the market readiness metrics documentation underlying ERCOT staff’s recommendation regarding the Congestion Revenue Rights part of the nodal market design, and has conducted due diligence on ERCOT staff’s conclusion that the Congestion Revenue Rights has satisfied all of the steps necessary to make the declaration of market readiness required by Section 21.12.3, in order to authorize Congestion Revenue Rights Go-Live in October 2010;

THEREFORE be it RESOLVED, that this Resolution shall serve as the TAC certification that all Market Readiness Criteria have been met, for purposes of ERCOT Protocols Section 21.12.3, regarding Congestion Revenue Rights Go-Live in October 2010;

FURTHERMORE, TAC directs that status updates regarding outstanding issues be provided at future TAC meetings.

Recommended Board Resolution for CRR Certification

WHEREAS, ERCOT Protocol Section 21.12.3, Notice to Market Participants of Effective Date for Nodal Protocol Provisions and Retirement of Zonal Protocol Provisions, provides that before a “part of the nodal market design may start operation,” a vote of the Electric Reliability Council of Texas, Inc. (ERCOT) Board of Directors is required affirming that the “Market Readiness Criteria for that part of the nodal market design have been met”;

WHEREAS, the Section 21.12.3 certification by the Technical Advisory Committee (TAC), ERCOT staff, and the ERCOT Board of Directors regarding the satisfaction of “Market Readiness Criteria” for a particular part of the nodal market design will result in ERCOT issuing “two Notices alerting Market Participants to the effective date of Nodal Protocol sections and the retirement of Zonal Protocol sections, as applicable”;

WHEREAS, the Protocols do not define the term “Market Readiness Criteria,” and ERCOT, in conjunction with Market Participants, has developed specific metrics and a Nodal Readiness Scorecard that are used to determine the progress of specific parts of the nodal market design in meeting the criteria necessary for implementing the Nodal Protocols and starting operations;

WHEREAS, the members of the ERCOT Board of Directors recognize that there are issues that remain to be addressed regarding the implementation and operation of the Congestion Revenue Rights before the Texas Nodal Market Implementation Date (TNMID), but that none of those issues should prevent the Congestion Revenue Rights Go-Live in October 2010, which is an integral occurrence in the progress toward meeting the TNMID on schedule;

WHEREAS, the ERCOT Board of Directors has reviewed the market readiness metrics documentation that ERCOT staff has executed regarding the Congestion Revenue Rights part of the nodal market design, and has reviewed ERCOT staff’s conclusion that the Congestion Revenue Rights has satisfied all of the steps necessary to make the declaration of market readiness required by Section 21.12.3, in order to authorize Congestion Revenue Rights Go-Live in October 2010;

WHEREAS, ERCOT staff provided its Section 21.12.3 certification document, attached hereto as Exhibit A, to TAC prior to TAC’s consideration of this issue and on August 5, 2010 TAC voted unanimously on a similar resolution, attached hereto as Exhibit B, to certify that all Market Readiness Criteria have been met for purposes of Section 21.12.3 regarding Congestion Revenue Rights in October 2010;

THEREFORE be it RESOLVED, that this Resolution shall serve as the ERCOT Board of Directors certification that all Market Readiness Criteria have been met, for purposes of ERCOT Protocol Section 21.12.3, regarding Congestion Revenue Rights Go-Live in October 2010.

FURTHERMORE, the ERCOT Board of Directors directs that status updates regarding outstanding issues be provided at future ERCOT Board of Directors meetings.



Market Readiness

Brandon McElfresh
Readiness & Transformation

ERCOT Board of Directors

17 August 2010

Next 60-days of Nodal Classes/Workshops

Course	Start Date	Location
Load Serving Entity 201	August 16	Reliant Energy (Houston)
Market Settlements 301	August 17	City of Garland Fire Administration Building (Dallas)
Network Model/Outage Scheduler Workshop	August 18	ERCOT (Taylor)
GCPA Retail Workshop	August 19	Centerpoint (Houston)
NOIE QSE Operations	August 20	City of Garland Fire Administration Building (Dallas)
Congestion Revenue Rights	August 24	University of Delaware (Newark, DE)

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

Next 60-days of Nodal Classes/Workshops - continued

Course	Start Date	Location
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)
Basic Training Program	September 20	LCRA (Austin)
Load Serving Entity 201	September 27	ERCOT Met Center (Austin)
Congestion Revenue Rights	September 29	Suez Energy (Houston)

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	89.4%	0.0%	10.6%	0.0%	Successful submission CRR transactions	76/85 CRRAHs qualified. Greater than 5% RED.
MP16 DAM Participation	Amber	QSEs	Even Weighting	68.4%	9.6%	15.0%	7.0%	Participation in 50% of the Day-Ahead Market runs	128/187 QSEs w/o Resources
MP21 WGRs ICCP Meteorological Telemetry	Amber	REs (only WGRs)	Registered MW Capacity Ratio Share	62.8%	32.5	4.7	N/A	WGRs must meet reasonability tests for MET ICCP	< 5% RED, so the metric is currently listed at AMBER

MP15(B)

- 9 not qualified - 2 expressed no intention to qualify and 7 still working to submit qualification transactions
- Minimal risk to running the December 2010 Auction

MP16

- QSEs w/o Resources DAM participation between 70%-80% since measurement started in April.
- These QSEs represent 1% of Load.
- Minimal risk to Go-Live

MP21

- 67 WGRs – 39 passed reasonability test, 24 working with ERCOT to resolve, 4 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



Monthly Financial Review

Mike Petterson
Controller

ERCOT Board of Directors
17 August 2010

Monthly Financial Review

Financials to be provided before SNPC meeting.

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

Critical Defect Definitions

- **Critical defects are required to be fixed before go-live**
- **Critical defects are identified as:**
 - Severity 1
 - Severity 2
 - Severity 3 priority 1 & priority 2
 - Severity 4 priority 1 & priority 2
 - Severity 5 priority 1 & priority 2
- **A continual defect review process will ensure that, after review and approval by the business, non-critical defects are deferred in Quality Center with adequate documentation (e.g., test script results, impacted functions, recreation steps, workarounds)**

NOTE: All documented workarounds for deferred defects will be provided to the ERCOT readiness team for review and inclusion in desk procedures, when applicable

External Audit Status Summary

Audit	Audit Points Identified	Audit Points in Execution	Date to Complete Last Point
Utilicast Report 8	6	6 complete	2011*
Utilicast Report 10 (Cleary)	17	1 in progress; 16 complete	8/2/10**

* Audit point required for go-live complete with the construction of the TCC1 expansion in Taylor.

** Updated end date to reflect date to complete remaining audit points

Audit Points to Address from Utilicast Report 10-1

ID	Short Description	Recommendation	Action Plan Status	Resp. Dir.	Resp. Mgr.	Target Date
UTI-10 – 06C	End-to-End Business Readiness Activities	Ensure Nodal processes and procedures are completed so they can be exercised during End-to-End testing.	<p>Planning is complete for ensuring that all nodal processes and procedures that will need to be exercised during end-to-end testing are scheduled for completion prior to the execution of those processes and procedures per the end-to-end schedule.</p> <p>The schedule below reflects the Nodal test schedule for 4 audit points:</p> <ol style="list-style-type: none"> 1. Phase 6 – Integrated final code: Audit point UTI10-06C was set up for the final test phase (Market Trials 6). This phase is now essentially the 168-hour test. As such, the end has changed to 8/2/10 to coincide with the 168-hour test. 	V. Gates	J. Adams	8/2/10

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	89.4%	0.0%	10.6%	0.0%	Successful submission CRR transactions	76/85 CRRAHs qualified. Greater than 5% RED.
CRR3 Operation of CRR Auctions and Allocations	Green	CRRAHs	Even weighting	88.2%	0%	11.8%	0.0%	Participation in at least 1 of the last 2 auctions or allocations. > 80% total participating	67/76 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	7/19 2010 August Monthly Auction results posted to market.
	Green	ERCOT	N/A	100%	0%	0%	0%	Allocated Revenue Rights in statistical sample = 100% accurate	Source – Sink price/clearing prices quality check performed successfully by CRR team after each auction
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, July, and August auctions, .
	Green	ERCOT	N/A	100%	0%	0%	0%	System Generated CRR Auction Invoices not posted = 0	August CRR auction invoices submitted to all 49 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	97.6%	0.0%	0.0%	0.0%	Weekly average of daily SCED submissions	74/79 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.	7/12 – 7/26 period - 4,045 Price Validation runs with no rule violations
MO5 Generate 6 Months of LMPs	Green	ERCOT	N/A	98.7%	0%	1.3%	0%	95% of SCED executions completed with LMPs posted on MIS.	7/12 – 7/26 period, 4,014 out of 4,066 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	7/19 – 7/30 RTM Statements and Invoices validated \$\$ = system generated (with some rounding differences)
	Green	ERCOT	N/A	100%	0%	0%	0%	System Generated RT Statements/Invoices not posted = 0	7/19 – 7/30 RTM Statements and 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	97.0%	3.0%	0.0%	0.0%	Participation in 50% of the Day-Ahead Market runs	67/79 QSEs with Resources
	Amber	QSEs	Even Weighting	68.4%	9.6%	15.0%	7.0%		128/187 QSEs w/o Resources
ERCOT Metrics									
MO9 Generate DAM LMPs	Green	ERCOT	N/A	N/A	N/A	N/A	N/A	95 percent DAM execution as evidenced by DAM LMP postings	6/1 – 6/14 – 7/7 DAM runs execute (doesn't measure quality)
MO10 DRUC Execution	Green	ERCOT	N/A	N/A	N/A	N/A	N/A	95 percent DRUC execution	6/1 – 6/14 - 7 out of 7 DRUC runs executed (doesn't measure quality)
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	7/19 – 7/30 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	7/19 – 7/30 DAM Statements and Invoices All posted on time

1. MP16 – Metric is based on a 2 week rolling average (7/19 – 7/30 – 10 runs).
2. MP16 – 91% Load participating.

Network Modeling Metrics

Metric Name	Current Score	Applies to	Weight	Green %	Yellow %	Red %	Not Scored %	Primary Criteria	Notes
Market Participant Metrics									
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	9/1/2010	QSERS	Generation Ratio Share	89.5%	0%	0%	10.5%	ICCP Failover test completed successfully prior to the 8-hour LFC test.	64/79 QSERS completed ICCP telemetry failover test.
MP21 WGRs ICCP Meteorological Telemetry	Amber	REs (only WGRs)	Registered MW Capacity Ratio Share	62.8%	32.5	4.7	N/A	WGRs must meet reasonability tests for MET ICCP	< 5% RED, so the metric is currently listed at AMBER

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	N/A	N/A	N/A	N/A	State Estimator converges 97% during monthly test period	97.4% Convergence for State Estimator for the month of May.
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	97.5% 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	98.3% match for ratings for lines. 5288 lines in Nodal.
	Amber	ERCOT	N/A	N/A	87.8%	N/A	N/A	95% of load tap setting values matched between Zonal/Nodal	87.8% Match for transformer tap settings. 1430 xfrms in Nodal.
EMO10 Anomalous / Auto-Disabled Telemetered Points	Green	ERCOT	N/A	1.91%	N/A	N/A	N/A	The % of Anomalous and Auto-Disabled Measurements < 2% of Total Measurements	April Nodal 2.58% May Nodal 1.92% June Nodal 1.91%
EMO9(C) RTCA CSC Comparison	Green	ERCOT	N/A	99.3%	N/A	N/A	N/A	CSC Pre-contingency SE Flows within 5% (Hourly snapshot)	Measurement establishes baseline flows on Commercial lines to indicate the significance of Psuedo modeling and multi-section lines on the SE flows.

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 MT4 and MT5 are developed and the MT4 procedures exercised as scheduled in MT4.
EMO3 Verify Outage Evaluation System Functionality	Green	ERCOT	N/A	N/A	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

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	Green	ERCOT	N/A	98.6%	87.8%	N/A	N/A	95% of load tap setting values matched between Zonal/Nodal	<u>Zonal-model to Nodal-model comparison is 98.6% correct for load tap settings.</u>

EMO9(B)

- In May, 2010, ERCOT choose to stop manual overrides of Nodal tap settings in order to correct transformer telemetry from MPs
- Measures data quality between Zonal and Nodal Network Models
- Expected completion after verification of Model changes in DSV 21 (mid-August)