



Nodal Program Update

Jason Iacobucci
Nodal Program Manager

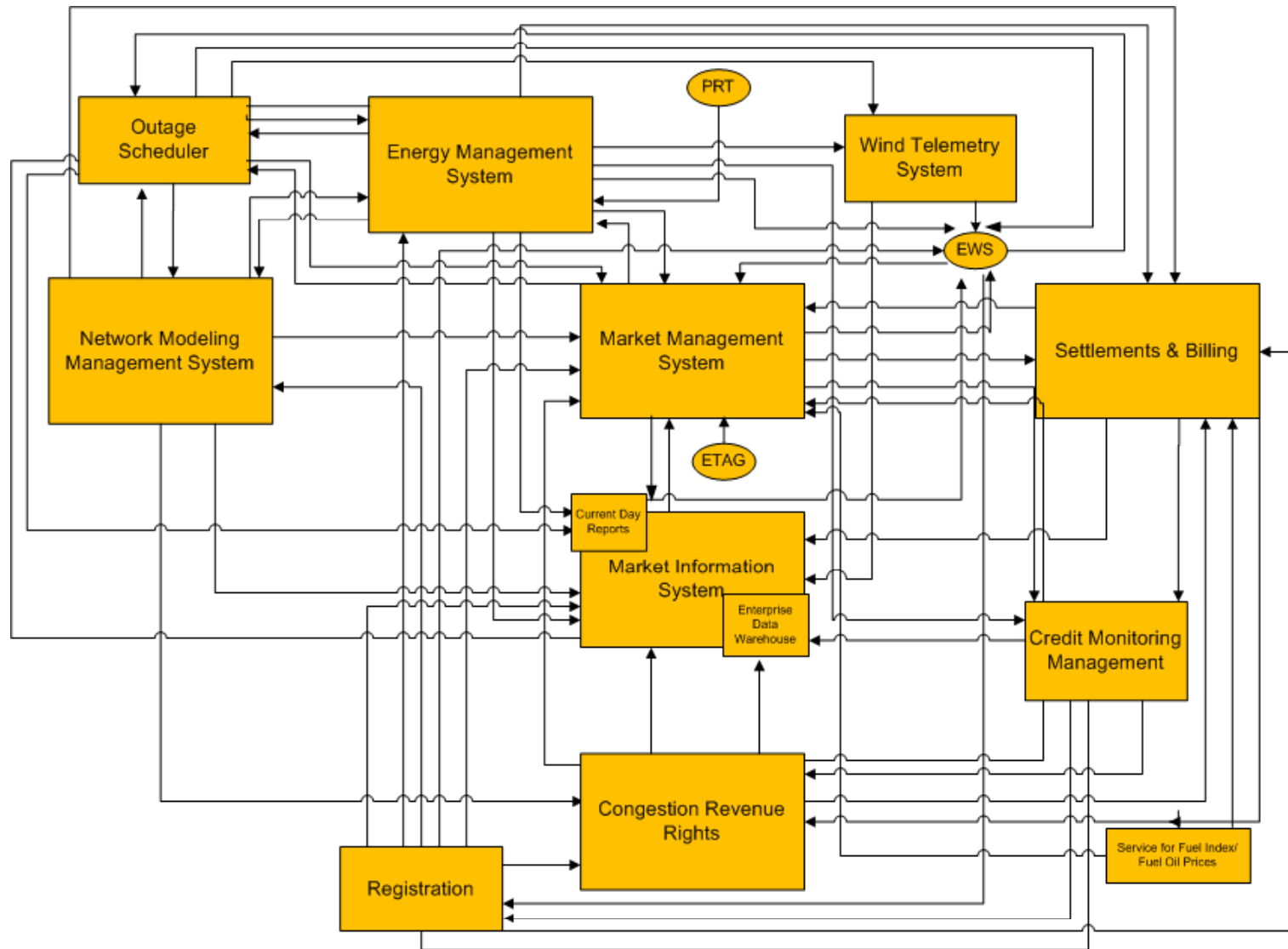
Special Nodal Program Committee

14 September 2009

Today's Agenda

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

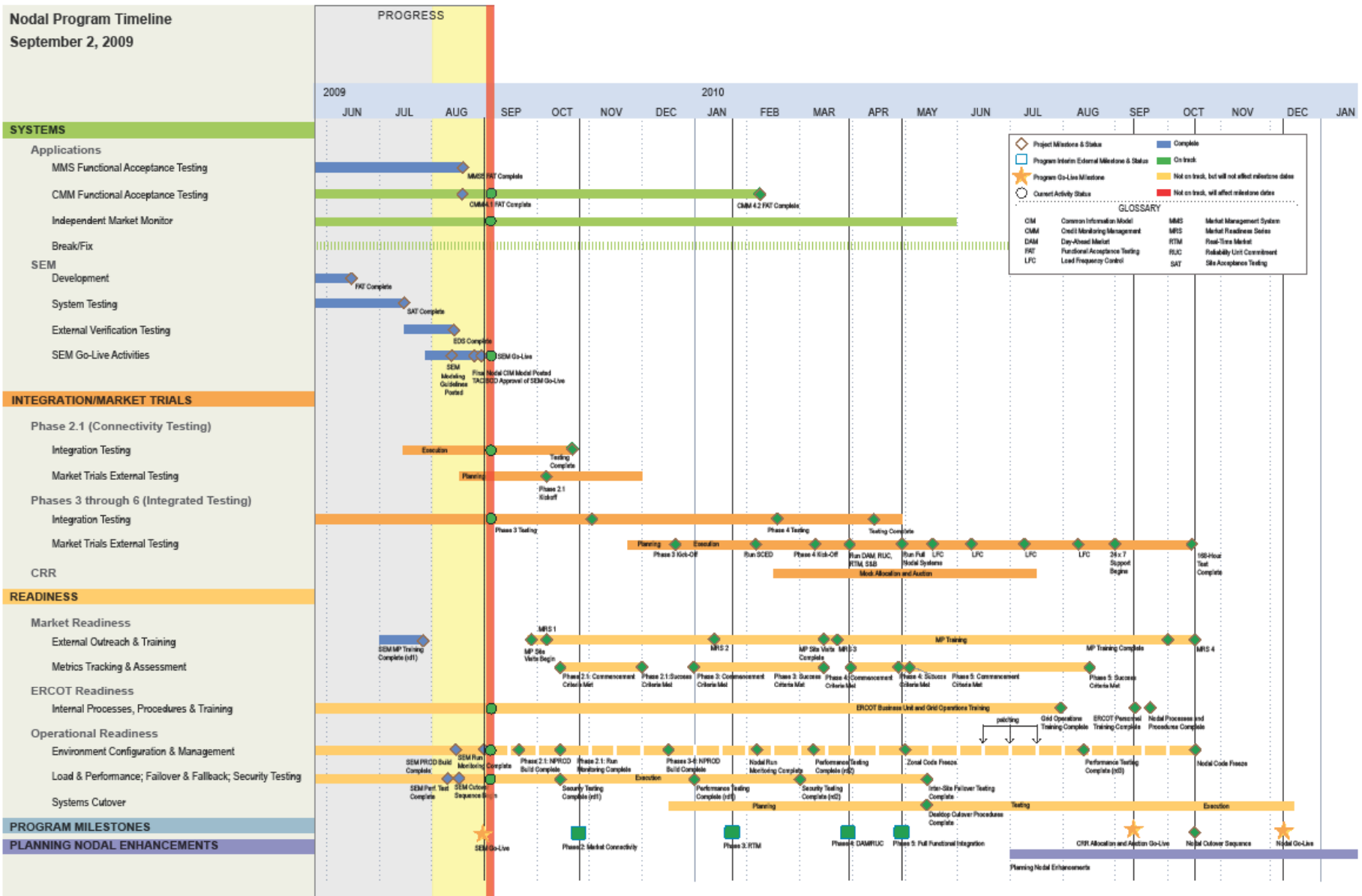
Nodal Systems Blueprint



Nodal Timeline

Nodal Program Timeline

September 2, 2009



Completed Milestones

■ Program Milestone: SEM Go-Live

◆ Included the following project milestones

- Systems/SEM/External Verification Testing
 - EDS complete
- Systems/SEM/Go-Live Activities
 - SEM modeling guidelines posted, final nodal CIM model posted; TAC/BoD approval of SEM Go-Live
- Readiness/Operational Readiness/Environment Configuration & Management
 - SEM PROD build complete, SEM monitoring complete
- Readiness/Operational Readiness/Load & Performance
 - SEM performance test complete, SEM cutover sequence begins

◆ Project Milestones

- Systems/Applications/MMS Functional Acceptance Testing
 - MMS5 FAT complete – Aug. 21
- Systems/Applications/CMM Functional Acceptance Testing
 - CMM4.1 FAT complete – Aug. 21
- Integration Testing
 - >95% of all core integration components installed in iTest; >80% technically verified (e.g., connector to connector); testing complete for all Phase 2 Market Connectivity integration components

Single-Entry Model Go-Live Update

- **SEM went live on time Aug. 31**
 - ERCOT applying NOMCRs to zonal production, nodal test systems
 - Model posting to TSPs
- **Early results (as of Sept. 10)**
 - No significant functional issues
 - 9 of 20 TSPs have successfully submitted 203 NOMCRs
 - >Majority of Help Desk tickets have been access-related
 - Week 2 tickets related to submitting data (validation rules)
 - Maximum of 20 concurrent users
 - ERCOT tested more than 50 concurrent users
 - Additional configuration and performance tuning continues to improve performance
- **Monthly touch points will be established with MPs to verify integrity of network model data**

Integration Project Testing Status

- **Currently realigning interface and adapter testing delivery to future program milestones**
 - Phase 2 (Market Connectivity)
 - Phase 3 (Real-Time Market)
 - Phase 4 (Day-Ahead Market, Reliability Unit Commitment, initial Settlements & Billing)
 - Phase 5 (Full functional integration)
- **Completed technical verification testing of Phase 2 interfaces**
 - Some technical connector testing rescheduled to align with Phase 3 and Phase 4
- **No impact to Nodal Program milestones**

Phase 2 Market Connectivity Defect Update

Project	Sub-Project	Status	Open Critical Defects (As of Sept. 8)			
MMS	Core Application	<ul style="list-style-type: none"> MMS Release 5 with several patches currently being used for Phase 2 testing. A portion of the outstanding defects have been fixed in a patch that is currently in the MMS FAT environment with testing underway. Once that testing is complete, the patch will be migrated to iTest; remaining defects have been logged with the vendor and are being worked into an upcoming patch. 	MMS5			
			Sev 1s	0		
			Sev 2s	2		
			Sev 3s	33		
			P1/P2			
	MMS UI	<ul style="list-style-type: none"> MMS Market Manager UI (MMS MM UI) release 1.16 currently being used for Phase 2 testing. All outstanding defects have been logged with the in-house development team; development/testing/deployment cycles to address critical defects are in progress. 	MMS MM UI 1.16			
			Sev 1s	0		
			Sev 2s	7		
			Sev 3s	9		
			P1/P2			
EIP	EWS-MMS Interface	<ul style="list-style-type: none"> EIP external Web Services spec release 1.19 with several patches currently being used for Phase 2 testing. All outstanding defects have been logged with the in-house development team; development/testing/deployment cycles to address critical defects are in progress. 	EIP1.19			
			Sev 1s	0		
			Sev 2s	1		
			Sev 3s	2		
			P1/P2			

Upcoming Program Milestone Definition

■ Phase 2: Market Connectivity

– Scope

- Market Participant interface testing (API, Market Manager UI)
- Market System Rules Validation - Phase 1*

– Objectives

- Make available Market Trials environment with latest version of MMS, Market Manager UI and External Web Services
- Provide MPs access to Market Trials environment to complete development and qualification preparation

– Schedule

- Sept.-Oct.: Bi-weekly Market Calls
- Week of Oct. 5: Kickoff meeting (MP workshop)
- Oct. 28: Market Connectivity testing begins

*As defined in MMS – Explanation of Market Participant Submission Items v0.26 document.

Upcoming Program Milestone Definition

■ Phase 3: Real Time Market

– Scope

- MMS-SCED execution
- SCED results and report publishing
- CRR auction execution (CRR UI)
- Outage Scheduler submissions (API, OS RUI)

– Objectives

- Execute real-time functionality on latest versions of EMS and MMS, using common NMMS Network Model
- Publish SCED results through ICCP and MIS
- Provide MPs access to Market Trials environment for continued defect resolution of critical Real-Time Outputs from ERCOT systems

Upcoming Program Milestone Definition

■ Phase 4: Day-Ahead Market, Reliability Unit Commitment

– Scope

- MMS-DAM, DRUC, HRUC, SCED execution
- Market results and report publishing
- Initial Settlements & Billing execution
- Outage and CRR integration

– Objectives

- Execute Nodal Markets on latest versions of EMS and MMS running on an integrated NMMS Network Model
- Publish SCED results through ICCP and MIS
- Provide MPs access to Market Trials environment for continued defect resolution of critical Market and Settlement outputs from ERCOT systems
- Publish initial Settlement statements and extracts

Program Measures

- **Current baseline execution index (BEI) and earned value (EV) measures give equally weighted credit for completed tasks**
- **New performance factor will reflect task's completion percentage, with weighting factor for each task (based on the associated effort)**
- **Weighted percentage-completion data rolled up to summary**
 - Performance factor derived solely from summaries
- **Four projects part of initial performance factor index (PFI) computation**
 - Integration Testing (INT)
 - Market Trials (MT)
 - ERCOT Readiness & Transformation (ERT)
 - Operational Readiness Testing (ORT)

* Reference Appendix slides for additional details regarding PFI calculation process

Performance Factor Index (PFI) Current Status

- **Initial baselines and weighting (weighting will be based on initial estimates of effort/work required)**

Project	Weight	Forecast %	Est %	PFI*	Forecast Wgt.*	Est. Wgt.*
ERT	127,359	11.65%	14%	1.20	14,838	17,830
INF	236,728	17.08%	14%	0.82	40,440	33,142
MT	174,399	0%	0%	0.00	0	0
INT	95,145	0%	0%	0.00	0	0
Program	633,631			0.92	55,278	50,972
				* As of July		

- PFI 1.00: optimum; shows program effort on track according to estimated work
- PFI <1.00: program's performance behind budgeted effort; work is slipping based on estimated work
- PFI >1.00: program's performance ahead of the budgeted effort; work is ahead of budgeted work
- PFI should be as near to 1.00 as possible (strong estimation, efficient delivery)

NOTE: PFI data preliminary from PMO ground-up planning efforts; currently being validated by FMO as part of October budget updates.

Nodal Program Risks/Issues Approach

- **Program risks/issues to be prioritized as they pertain to next major market deliverable**
 - October Market Connectivity
 - Subsequent functional deliveries for MP testing
- **General programmatic risks/issues, proposed mitigations and impact assessments**
 - Included in daily PMO discussions
 - Escalated to marketplace when needed
- **For example ...**
 - CMM's delivery status has low impact to current program deliverables
 - Issues related to Market Connectivity have relatively high impact

Nodal Program Risks & Issues

- **Immediate**
 - Risk: Reconciling protocols, systems and market expectations
 - Risk: Integration Testing
- **Long-Term**
 - Risk: Data Center capacity concerns

External Audit Status Summary

Audit	Audit Points Identified	Audit Points in Execution	Date to Complete Last Point
IBM Report 7	4	1	12/31/09
Utilicast Report 8	6	1 in progress	2011
Utilicast Report 10 (Morgan)	9	9 complete	
Utilicast Report 10 (Cleary)	12	5 in progress; 7 complete	12/15/09
Utilicast Report 10 (Capezzuti)	1	1 in progress	9/17/09



Market Readiness

Vikki Gates
Readiness & Transformation

Special Nodal Program Committee

14 September 2009

Participant Readiness Touch Points

2009

	September	October	November	December
Meetings	<ul style="list-style-type: none"> • NATF 9/1 • NATF 9/29 	<ul style="list-style-type: none"> • NATF 10/27 		<ul style="list-style-type: none"> • NATF 12/8
Training	<ul style="list-style-type: none"> • Nodal 101 • LSE 201 	<ul style="list-style-type: none"> • Nodal 101 • LSE 201 • Generation 101 • Basic Training 	<ul style="list-style-type: none"> • Nodal 101 • LSE 201 • Generation 101, 201 • Economics of LMP • Transmission 101 ◆ Settlement Workshops 	<ul style="list-style-type: none"> • Nodal 101 • LSE 201 • Generation 101, 201 • Basic Training • Economics of LMP • Transmission 101
Outreach	<ul style="list-style-type: none"> • Material preparation • Full schedule confirmation ◆ 3 site visits: w/o 9/28 	<ul style="list-style-type: none"> ◆ Readiness Center • Limited ERCOT metrics • 6 site visits 	<ul style="list-style-type: none"> • Additional ERCOT & MP metrics • 6 site visits 	<ul style="list-style-type: none"> • 3 site visits
Market trials	<ul style="list-style-type: none"> • Last Resource registration data collection window open • Bi-weekly market calls 	<ul style="list-style-type: none"> • Bi-weekly calls ◆ 2010 Market Trials Roadmap: w/o 10/5 ◆ Technical Workshop ■ Market Connectivity open to MPs 	<ul style="list-style-type: none"> • Bi-weekly calls • Voluntary MP connectivity testing ◆ MP Handbooks <ul style="list-style-type: none"> • SCED/LFC • CRR • DAM/RUC 	<ul style="list-style-type: none"> • Bi-weekly calls • Outage Scheduler • Settlement

Upcoming Milestones

Program Milestones

- Phase 2: Market Connectivity

Market Readiness Project Milestones (30 day look-ahead)

- Readiness/Market Readiness/External Outreach & Training
 - MP site visits begin (week of Sept. 28)

Outreach Candidates

ERCOT is proactively contacting the following entities to request a site visit. Additional participants will be accommodated where the schedule permits.*

- **AEP**
- **ANP**
- **APX**
- **Austin Energy**
- **BP**
- **Brazos**
- **BTU**
- **Calpine**
- **CPS Energy**
- **Constellation**
- **Direct Energy**
- **Eagle Energy**
- **Exelon**
- **Garland**
- **LCRA**
- **Luminant**
- **Nextera/FPL Energy**
- **NRG Texas**
- **Occidental**
- **Shell**
- **STEC**
- **Suez**
- **Tenaska**
- **Topaz Energy**

* Represents:

- Level IV QSE
- NATF participation
- Vendor diversity



Traceability

Betty Day
Program Control & Review

Special Nodal Program Committee
14 September 2009

Protocol Traceability Effort Update

Tier 1 Sections				
	Definition	SME Analysis/Validation	Begin Reviews w/Business	Target for Reports to NATF
Section 7	Congestion Revenue Rights	85-90%	In progress	Sept
Section 8	Performance Monitoring	75%	9/03	Nov*
Section 3	Management Activities for the ERCOT system	40%	9/15	Nov
Section 4	Day Ahead Operations	5%	9/22	Oct
Section 5	Transmission Security Analysis and RUC	5%	9/29	Nov
Section 9	Settlement & Billing	5%	10/01	Nov
Section 6	Adjustment Period and Real-Time Operations	15%	10/20	Dec
Section 17	Market Monitoring and Data Collection	0%	10/22	Dec
Section 16.11	Financial Security for Counter-Parties	0%	10/27	Dec

Tier 2 (Moderate Impact): 10, 11, 12, 13, 20, 22 (Dec. '09 completion target)
Tier 3 (Low Impact): 1, 2, 14, 15, 18, 19, 21, 23, 24 (Nov. '09 completion target)

* Delays in approving performance criteria may affect date.





Financial Review

Special Nodal Program Committee

14 September 2009

Monthly Financial Review: August 2009 Performance

Nodal Program

Approved Forecast to Actual Comparison

Month of August 2009

Line	Cost Summary	Forecast	Actual	Forecast Variance	Forecast Cumulative
					Variance (Pending Contingency Mgmt Disposition)
1	Internal Labor Costs	\$2.1	\$2.2	-\$0.1	\$3.5
2	Backfill Labor Costs	0.1	0.1	0.0	-0.2
3	External Resource Costs	5.3	3.6	1.7	11.9
4	Software & Software Maintenance	0.7	1.1	-0.4	0.5
5	Hardware & Hardware Maintenance	0.3	0.4	-0.1	1.9
6	Other	0.0	0.0	0.0	0.4
7	Sub-total Direct Project Costs	\$8.5	\$7.4	\$1.1	\$18.0
8	Contingency Costs	\$0.0	\$0.0	\$0.0	\$0.0
9	Allocations	\$0.4	\$0.3	\$0.1	\$1.7
10	Finance Charges	0.9	1.0	-0.1	0.8
11	Sub-total Indirect Project Costs	\$1.3	\$1.3	\$0.0	\$2.5
12					
13	Total	\$9.8	\$8.7	\$1.1	\$20.5

Amounts in millions

Monthly Financial Review

LTD Performance through August 2009

Nodal Program

Approved Forecast to Actual Comparison

Life-to-Date through August 2009

Line	Cost Summary	Forecast	Actual (June, July & Aug)	Forecast Cumulative Variance	Forecast Remaining
1	Internal Labor Costs	\$47.6	\$47.3	\$0.3	\$37.0
2	Backfill Labor Costs	4.9	4.9	0.0	2.8
3	External Resource Costs	240.6	237.1	3.5	48.4
4	Software & Software Maintenance	28.1	27.1	1.0	10.0
5	Hardware & Hardware Maintenance	48.0	48.1	-0.1	8.0
6	Other	2.0	1.9	0.1	0.6
7	Sub-total Direct Project Costs	\$371.2	\$366.4	\$4.8	\$106.9
8	Contingency Costs	\$0.0	\$0.0	\$0.0	\$58.6
9	Allocations	\$18.5	\$18.6	-\$0.1	
10	Finance Charges	20.6	20.7	-0.1	
11	Sub-total Indirect Project Costs	\$39.1	\$39.3	-\$0.2	
12					
13	Total	\$410.3	\$405.7	\$4.6	

Amounts in millions

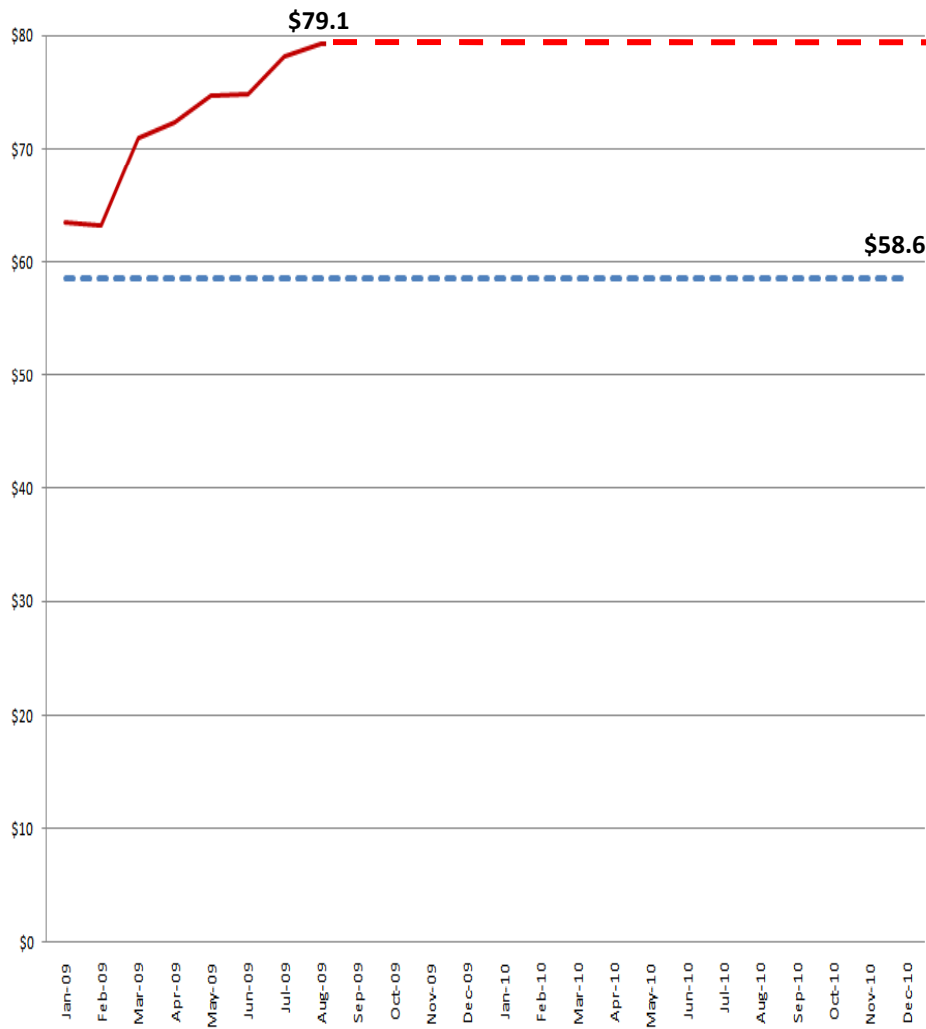
Note 1: "Forecast Remaining" allocations and finance charges will be determined upon final program EAC.

Note 2: June-Aug Forecast Cumulative variance column represents comparison of actual costs incurred to the reforecast budget developed in June 2009.

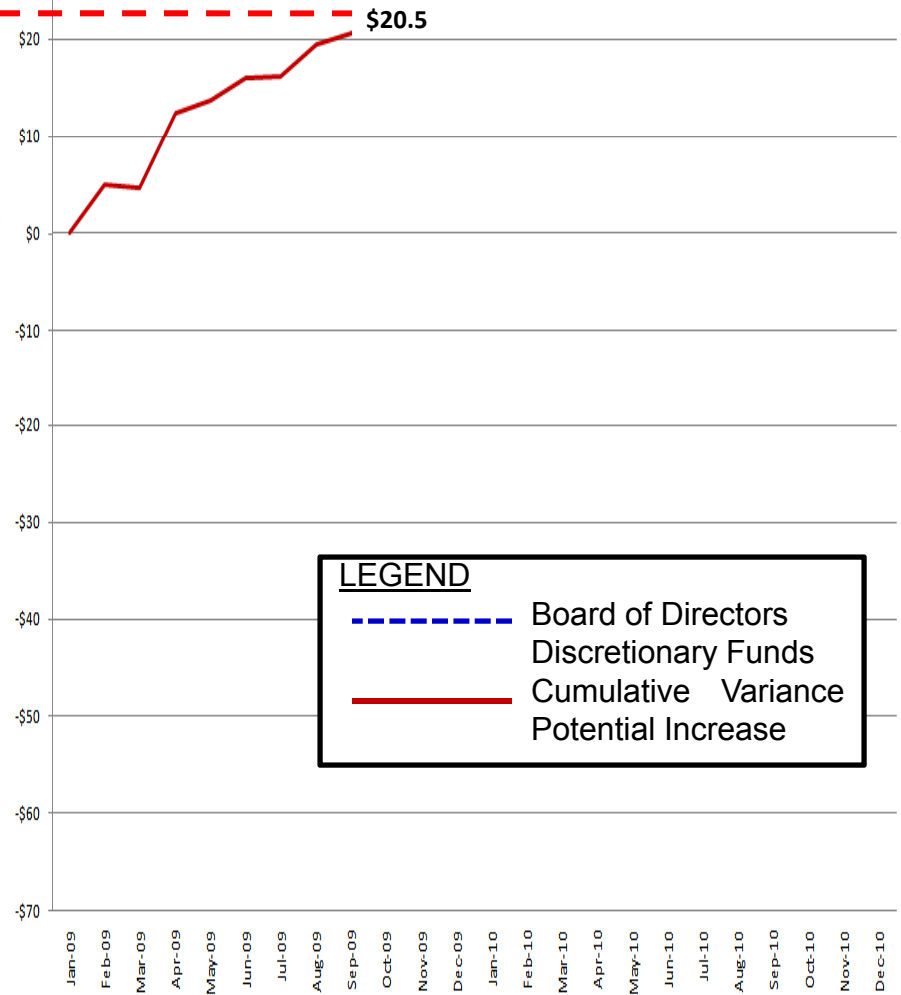


Board Discretionary Fund

Current View



Detail of Cumulative Variance (Pending Contingency Mgmt Disposition)

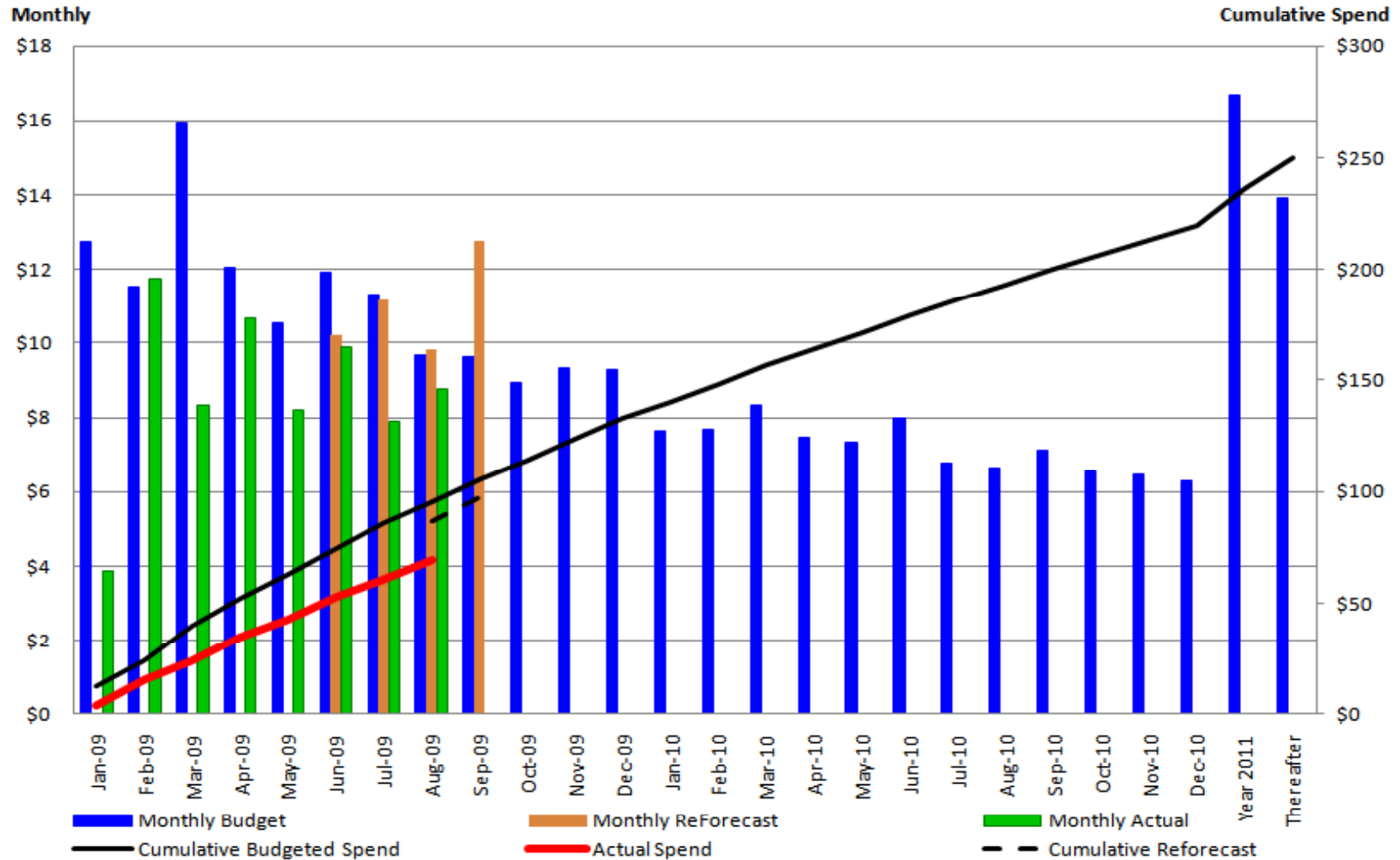


LEGEND

- - - - Board of Directors Discretionary Funds
- Cumulative Variance Potential Increase

Program Cost Management

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



Questions ?

Appendix

Program Risk: Reconciling Protocols, Systems and Market Expectations

◇ Potential Milestone Impact: Market Trials

Risk: Reconciling Protocols, Systems and Market Expectations				Experience with deploying nodal markets by other ISOs has shown that expectations of the market participants are often missed, despite best efforts at defining tariffs or protocol requirements. ERCOT needs to assume such a risk exists for this nodal implementation as well.		
Risk Life Cycle State						
Define	Plan	Manage	Watch			
Mitigation Plans				Who	Target Date	Current Status
1. Assess maturity and readiness of software in the initial nodal release, focusing on new/tailored capability for Texas Nodal.				B. Day K. Farley	Tier 1: 10/5/09 Tier 2: 12/15/09 Tier 3: 11/30/09	8/7/09 – Work is underway to trace protocols, requirements and business processes alignment analyses are in progress.
2. Add team members to the nodal program with Texas market experience to ensure readiness for Market Trials. SMEs will report requirements to testing traceability gaps to ERCOT business owners for resolution.				B. Day K. Farley	Ongoing	8/7/09 – SMEs were added to the team in May. Work is underway to trace protocols, requirements and business processes alignment analyses are in progress.
3. Keep the oversight groups apprised of progress.				M. Cleary	Ongoing	4/13/09 Risk incorporated into the set being reported externally; will be maintained actively.

Program Risk: Integration Testing

◇ Potential Milestone Impact: Market Trials

Risk: Integration Testing				Continued risk around technology delivery of business systems integration due to complexity and continuing maturing of application and data dependencies.		
Risk Life Cycle State						
Define	Plan	Manage	Watch			
Mitigation Plans				Who	Target Date	Current Status
<ul style="list-style-type: none"> Planned Integration Test phases and associated functional and technology components. Created effort-based testing delivery work plan to prioritize and align deliverables to key external milestones. Instituted daily PMO meetings to manage and mitigate day-to-day risks to scope and schedule deliverables. 				PMO	Ongoing	<p>9/2/09 – Planning of Test phases and associated work plan has been completed</p> <p>Execution of work plan, with specific focus on October Market Trials functionality has begun</p>

ERCOT-Wide Risk: Data Center Capacity Concerns

◇ Potential Milestone Impact: Nodal Go-Live

Risk: Data Center Capacity Space Concerns		Data center capacity, space, and power may be inadequate for Nodal go-live, unless plans for expansion are adequate.		
Risk Life Cycle State				
Define	Plan	Manage	Watch	
Mitigation Plans		Who	Target Date	Current Status
1. Establish an Information Lifecycle Management approach to manage the life cycle of data being managed.		D. Forfia	Implementation expected Q1 2010 for Retail Applications	ERCOT project PR 90006_01 Commercial Systems Information Lifecycle Management Project will be presenting as an update during the October Board of Directors Meeting, and will request Execution and Funding approval at the November Board of Directors Meeting.
2. Expand current data center space, and build out new data center, to increase ERCOT data center capacity.		D. Forfia	TCC1 build out is complete Bastrop DC in production mid - 2011 TCC3 in production mid-2011	TCC Expansion commissioned as of 9/2/09. TCC1 expansion and risk-mitigation steps for Met Data Center provide sufficient space for Nodal Go-Live in December 2010. Relocation to the new data centers occurs in mid-2011 after Nodal Go-Live.
3. Validate and monitor Nodal data capacity assumptions for Go Live		D. Forfia	Ongoing	7/17/09 Status reports are provided to the Board of Directors in executive sessions.

External Audit Status Summary

Audit	Audit Points Identified	Audit Points in Execution	Date to Complete Last Point
IBM Report 7	4	1	12/31/09
Utilicast Report 8	6	1 in progress	2011
Utilicast Report 10 (Morgan)	9	9 complete	
Utilicast Report 10 (Cleary)	12	5 in progress; 7 complete	12/15/09
Utilicast Report 10 (Capezzuti)	1	1 in progress	9/17/09

Audit Points Complete, To Be Verified: 1

ID	Description	Action Plan	Resp. Mgr.	Target Date
UT108-01	<p>The individual project budgets should be challenged in the following areas:</p> <ul style="list-style-type: none"> a. Vendor contracts b. Contract staff c. Internal staff 	<ul style="list-style-type: none"> a. Long-term vendor contracts will be negotiated with the assistance of a 3rd party negotiator, to address budget matters as well as others. b, c. Plans for use of contract staff, as well as the orderly transition to ERCOT teams are being examined, as we refine the schedule and plan for the remainder of the schedule. 	J. Iacobucci	<p>CLOSED The last renegotiated contract was signed on 6/27/09.</p> <ul style="list-style-type: none"> a) Target: 6/30/09 for contracts to be renegotiated for 5 top vendors b) 3/31/09 Third party has been engaged to conduct one vendor negotiation as an initial effort, to be complete 3/31. c) 3/3/09 Have completed one review of our key contracts by an outside firm. d) 3/30/09 resourcing of remaining effort shows growth in size of ERCOT teams and reduction of contract staff as testing effort is re-planned incrementally; program has engaged a resource manager to review all staffing.

Audit Points Complete, To Be Verified: 2

ID	Short Description	Recommendation	Action Plan Status	Resp. Dir.	Resp. Mgr.
UTI-10-01A	Release Mgmt, Change Mgmt, Access Mgmt, Problem Mgmt	The Nodal PMO in conjunction with IT should ensure that proper education is provided to the Nodal PMs and new staff regarding the IT processes including contact information for those who support the IT processes.	CLOSED Nodal team provides reports on incidents, from which IT does its problem management. Training was recently provided on nodal release and change management. The Access Management team is updating its documentation and will provide a concierge to train and assist with the process.	R. Morgan	D. Forfia
UTI-10-01B	Release Mgmt, Change Mgmt, Access Mgmt, Problem Mgmt	A plan will be developed to consolidate into one repository after the final releases of software are available for nodal go-live. Execution of the plan is not expected to occur until mid-2010.	CLOSED All applicable tasks were completed on 7/3/09. Remaining items in the action plan will be completed in 2010.	R. Morgan	D. Forfia
UTI-10-01E	Release Mgmt, Change Mgmt, Access Mgmt, Problem Mgmt	Since the version of the IDM project scheduled to be completed by November 2009 will only support SAS 70 related environments and Active Directory, a follow-on project is recommended. This project should focus on ensuring that the remainder of the ERCOT environments will be supported by IDM at Nodal go-live.	CLOSED A follow-on project has been added to the 2010 project priority list as requested by the audit.	R. Morgan	D. Forfia

Audit Points Complete, To Be Verified: 3

ID	Short Description	Recommendation	Action Plan Status	Resp. Dir.	Resp. Mgr
UTI-10 – 01F	Release Mgmt, Change Mgmt, Access Mgmt, Problem Mgmt	Establish an IT SWAT team dedicated to the Nodal effort and focused on developing plans to mitigate the impact of potential Nodal workload waves on IT process performance.	CLOSED The team is currently in place and the concierge site is up and running. The INF budget includes supplemental staffing if needed.	R. Morgan	D. Forfia
UTI-10 – 02A	Information Technology Infrastructure Library	Develop a program roadmap to guide the implementation ITIL V3 service management module with a target completion by December 2010 and assess the ability of the internal staff to support the ITIL effort while maintaining zonal operations and supporting Nodal testing and go-live.	CLOSED – The roadmap is complete. Phase 3 of the roadmap is in progress with PR 90009_01. A candidate project is on the potential project list for 2010, which may or may not be above the cut line.	R. Morgan	D. Forfia
UTI-10 – 02B	Information Technology Infrastructure Library	Evaluate the costs and benefits of purchasing a complete set of ITIL processes and related consulting services from one of the vendors who have pre-configured their tools to support ITIL.	CLOSED This will be included as an element of the roadmap being developed to implement ITIL V3.	R. Morgan	D. Forfia
UTI-10 – 03A	Nodal Infrastructure Budget	The Nodal Program should continue to perform a “deep dive” on the INF project specifically focusing on challenging the work expected and the resources required to support the Nodal Program.	CLOSED Budget review and reforecast for INF is complete.	R. Morgan	D. Forfia
UTI-10 – 03B	Nodal Infrastructure Budget	A reoccurring planning exercise between the INF project manager and the other Nodal project managers should occur to ensure that IT Operations and Infrastructure support requirements are more thoroughly assessed and forecasted.	CLOSED Deep dive of the INF budget at the program level was conducted in May. Recurring budget reviews are now scheduled and on-going.	R. Morgan	D. Forfia

Audit Points Complete, To Be Verified: 4

ID.	Short Description	Recommendation	Action Plan Status	Resp. Dir.	Resp. Mgr.
UTI-10 – 04B	Taylor Data Center Expansion Project Mgt	Continue to track and trend data center usage and available capacity to ensure the actual usage remains within expected ranges.	CLOSED Board of Directors now receives monthly updates of data center capacity trends and mitigation activities.	R. Morgan	J. Floyd
UTI-10 – 05B	Vendor Performance Management	The Nodal Program should work with the vendor to expedite the release cycle and to decrease the average defect closure time. The overall process needs to be reviewed. The current process includes overhead activities that need to be streamlined to support upcoming test phases. Testing should drive the release schedule; the release schedule should not drive the testing	CLOSED Changes have been made on how the work is planned and tracked to streamline the process. Changes have been incorporated into the re-negotiated contracts with vendors.	J. Iacobucci	T. Baum
UTI-10 – 05C	Vendor Performance Management	The measure of defect closure time should be updated to reflect only the time spent by the vendor to correct assigned defects. The current values include contracting time, migration time and other factors that are not related to vendor performance. As introduced in Report #8, negotiations should continue with the vendors to deliver more value for the overall cost. Vendor costs continue to exceed industry peers.	CLOSED Defect states reflect changes agreed to in contract renegotiations. A new state of Authorization is used as the starting point to measure their closure time.	J. Iacobucci	T. Baum
UTI-10 – 06A	End-to-End Business Readiness Activities	Establish a common test bed with data from common business days to allow data validation logic to be fully exercised.	CLOSED Completed 6/1/09. Ongoing task to develop better data set each month.	J. Iacobucci	K. Ragsdale

Audit Points Complete, To Be Verified: 5

ID	Short Description	Recommendation	Action Plan Status	Resp. Dir.	Resp. Mgr.
UTI-10 – 07A	Organization Assessment	A comprehensive organizational assessment should be completed to confirm that skilled staff is in place to support the Nodal Program. The objective of the assessment should be: 1) to verify that dual operations can be run and supported and 2) to confirm that ERCOT has the appropriate staff in place to support long-term Nodal Market operations.	CLOSED The analysis is complete and ERCOT skill sets are present. Implementation is currently underway with ERCOT managers transferring specific functions from contractors to the ERCOT team, with continuous assessment of progress and training.	J. Iacobucci	A. Rinaldi
UTI-10 – 07B	Organization Assessment	ERCOT staff should be deployed in time for End-to-End testing to take advantage of the training opportunity and to assist with the dual operation workload.	Resource plans for End-to-End testing are being identified in the resource planning spreadsheet, with appropriate ERCOT staff handling their operations roles.	J. Iacobucci	D. Luedtke V. Gates

In addition, two audit points were verified as being complete on 5/27 – UTI10-4C and UTI10-5A

Audit Points to Address from Utilicast Report 8

ID	Description	Action Plan	Responsible Director	Responsible Manager	Target Date
UT108-05	There should be immediate investment in new data center capacity to allow for expansion of IT infrastructure to support the Nodal Program.	A project has been initiated to expand the data center in Taylor (PR-80047). Planned occupancy date is September 2009, with plan to add or move hardware under development. Additional data center space planned as part of the Met Center disposition project (PR-80001). Those data centers should be online in mid-2011. Plans are under development to provide capacity prior to those new data centers becoming available.	R. Morgan	Jeff Floyd	TCC1 build out is complete. Bastrop DC in production Feb 2011. TCC3 in production May 2011.

Audit Points to Address from Utilicast Report 10-1

ID	Short Description	Recommendation	Action Plan Status	Resp. Dir.	Resp. Mgr.	Target Date
UTI-10 – 01C	Release Mgmt, Change Mgmt, Access Mgmt, Problem Mgmt	The Nodal Project Team should continue to require the implementation of ClearCase for use as the automatic code deployment tool, and the Nodal PM's should be required to use their assigned Release Coordinators to facilitate their use of the Release Management (RM) process.	CLOSED The RM team is working with the nodal teams to implement the approach. The nodal teams need to follow the approach and use the RM tool.	M. Cleary	J. Iacobucci	9/4/09
UTI-10 – 01D	Release Mgmt, Change Mgmt, Access Mgmt, Problem Mgmt	The Nodal Project Teams should work with their Release Coordinators to refine their release planning processes and work toward a forecasting accuracy of +/- 20% or better.	CLOSED The RM team is tracking metrics at a more granular level and reaching out to project teams where improvement opportunities are identified. RM will continue to monitor these reports and pinpoint problem areas. As the integrated nodal solution continues to mature, the program will continue to expect improved forecasting accuracy.	M. Cleary	K. Kasparian D. Gwinn	9/4/09
UTI-10 – 04A	Taylor Data Center Expansion Project Mgt	Continue to manage the Taylor Control Center Expansion project to ensure that the additional capacity is available, as planned, by October 2009.	Expansion is underway, controlled by ERCOT facilities; no budget or schedule issues known.	N. Capezzuti	S. Grendel	9/14/09

Audit Points to Address from Utilicast Report 10-2

ID	Short Description	Recommendation	Action Plan Status	Resp. Dir.	Resp. Mgr.	Target Date
UTI-10-06B	End-to-End Business Readiness Activities	Use manual triggers, or other workarounds, to string together business functions to simulate End-to-End testing. This will be particularly beneficial in areas where ERCOT has unique market rules.	<p>CLOSED Defined by the End-to-End (E2E) strategy. Manual triggers or workarounds (documented in test scripts) are used where necessary to execute an end-to-end or bid-to-bill test.</p> <p>Not all of ERCOT's unique market rules are being executed in E2E testing. Due to time constraints, E2E first executes a Base Case scenario, then a select set of scenarios expected to occur frequently after go-live.</p>	M. Nixon	K. Ragsdale	9/17/09
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.	There is a plan 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.	V. Gates	J. Adams	9/17/09

Audit Points to Address from Utilicast Report 10-3

ID	Short Description	Recommendation	Action Plan Status	Resp. Dir.	Resp. Mgr.	Target Date
UTI – 10 – 06D	End-to-End Business Readiness Activities	Prior to End-to-End testing, complete a final review of the Protocols to compare against current system capabilities. Such reviews are underway on many of the project teams.	<p>Work is underway to trace protocols, requirements, and business processes alignment analyses are in progress.</p> <p>Tier 1: 10/5/09 Tier 2: 12/15/09 Tier 3: 11/30/09</p>	B. Day	K. Farley	12/15/09
UTI- 10 – 08	Contingency Plans for Failed Data Transfers	<p>Utilicast recommends that the Nodal Program should create and execute contingency plans for failed data transfers which would include the following components:</p> <p>1) Create manual workarounds for situations where interfaces fail to enable continued End-to-End operations. 2) Create procedures to correct flawed or missing data from upstream systems. The workarounds and procedures could evolve into a long-term data controls and data quality management process. 3) Utilize these tools now to support functional Integration Test while technical components are still evolving.</p>	<p>9/2/09 The internal integration contingency development is complete. FAT testing is due to be complete by 9/15/09 with automated test scripts.</p> <p>Contingencies will begin to be tested in iTest the week of 9/21.</p>	M. Nixon	S. Mijar	9/17/09

Audit Points to Address from Utilicast Report 10-4

ID	Short Description	Recommendation	Action Plan Status	Resp. Dir.	Resp. Mgr.	Target Date
UTI – 10 – 09	End to End Testing Readiness Updates	The Nodal Program should provide monthly End-to-End Testing Readiness updates. Utilicast recommends that the Nodal Program provide an End-to-End Testing Readiness update each month to the Special Nodal Program Committee Meeting. To reduce the subjectivity in status reporting, the Nodal Program should report the status of End-to-End requisite components (not simply % complete of tasks). Milestones should be developed that clearly cover the entry criteria for End-to-End testing.	Progress tracking charts have been developed to show progress through the Interface and Adapter testing, per connector (interface or adapter), to complement the milestone tracking that is already underway. In addition, there are entry criteria established for End-to-End Testing which must be met before it can start. All of these comprise our readiness measures for End-to-End testing.	J. Iacobucci	D. Luedtke	9/4/2009