Texas Nodal Market Implementation: Program Update

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Nodal Program Director

Special Nodal Program Committee
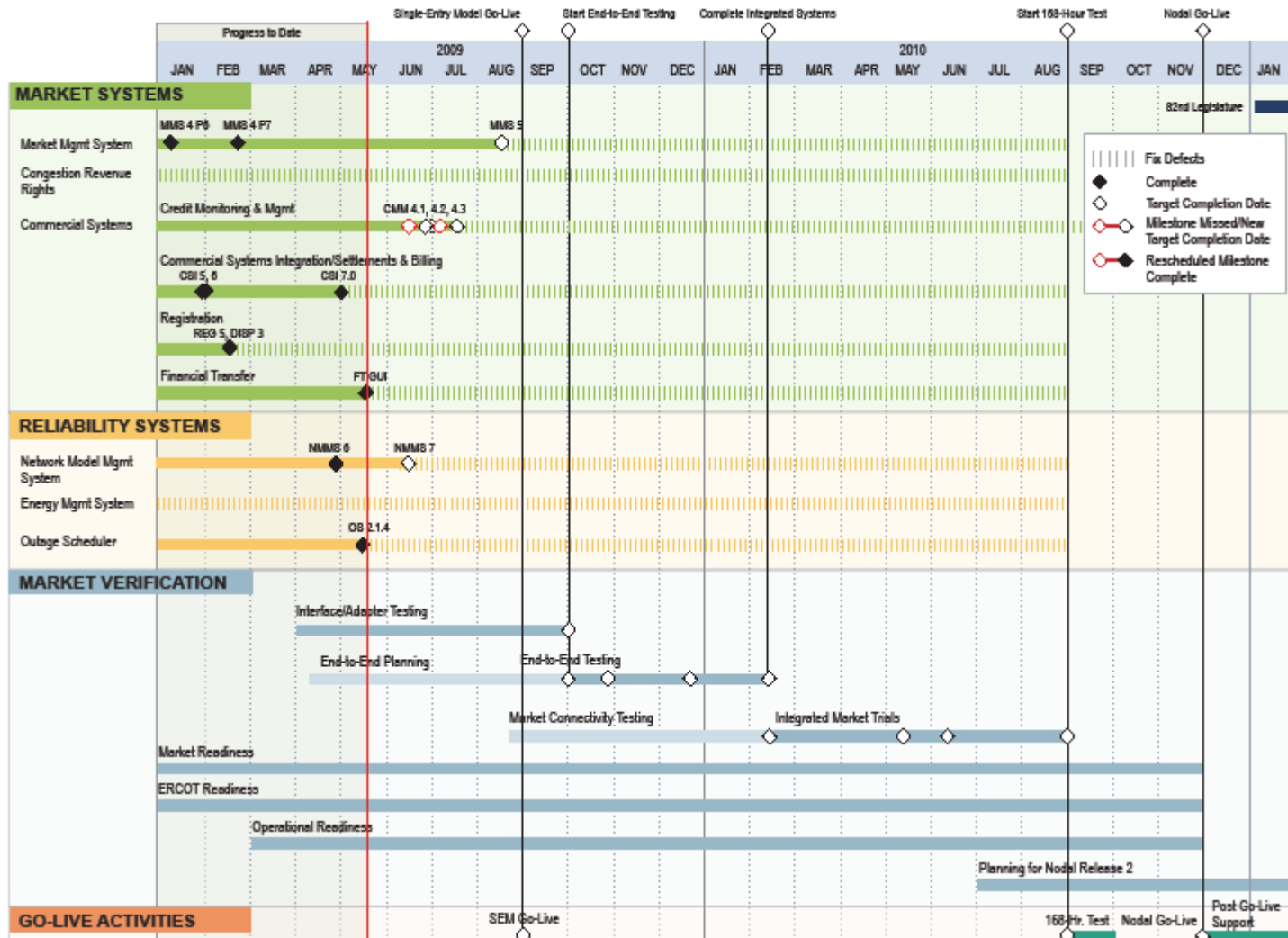
19 May 2009

Agenda

- **Nodal Update**
  - Timeline
  - Milestones
  - Critical Path/Near-Critical Path
  - Risks/Issues
  - Audit Point Update
  - People
  - Program Initiatives

- **Financial Review**

Timeline

Milestones Performance

Tracking Milestones Planned — April 2009

Proj	Name	%	Baseline	Forecast	Actual	Variance
COMS CMM	CMM 4.1 Development Complete	100%	03/31/09	04/03/09	04/03/09	3 days
EIP	EIP.WS1.18C2.Delivery Completed (OS2.1.3 Compatibilit	100%	04/09/09	04/09/09	04/09/09	0 days
MIS	MIS Build 12 Start	100%	04/14/09	04/10/09	04/10/09	-2 days
ENV	Deliver Completed iTest Environment to I-A Testing	100%	04/10/09	04/10/09	04/10/09	0 days
MMS	MMS5: Pre-FAT Release to FAT Testing	100%	04/15/09	04/15/09	04/15/09	0 days
MMS	MMS5 FAT Start	100%	04/15/09	04/15/09	04/15/09	0 days
OS	2.1.4.0 OS FAT Start: Delivered by ABB	100%	04/17/09	04/24/09	04/24/09	5 days
EDW	Deliver State Estimator Statistics Extract EMS Phase 3	0%	04/17/09	05/14/09	Delayed	19 days
COMS CSI	Deliver CSI 7.0 - Migration to iTest	100%	04/23/09	04/23/09	04/23/09	0 days
EMS	EMS Release 6.5.x SPR Patch 2 FAT Complete	0%	04/24/09	05/04/09	Delayed	6 days
NMMS	Deliver NMMS 6 to iTest	100%	04/07/09	04/30/09	04/30/09	17 days
CRR	Final Approval - CRR NPRR 140	100%	04/29/09	04/29/09	04/29/09	0 days
MIS	MIS Build 11 Complete	0%	05/01/09	05/29/09	Delayed	19 days

Tracking Milestones Planned — May 2009

Proj	Name	%	Baseline	Forecast	Actual	Variance
MMS	ETAG to MMS iTest Test Execution Completed	0%	05/01/09	09/10/09	NA	91 days
NMMS	NMMS Interface Testing Complete	0%	05/04/09	05/29/09	NA	10 days
MMS	MMS UI Project End	0%	05/12/09	07/30/09	NA	55 days
COMS CMM	REG > CMM iTest Test Execution Completed	0%	05/12/09	05/29/09	NA	12 days
EIP	EWS 1.18 Enhancements Completed	0%	05/14/09	05/20/09	NA	4 days
COMS CMM	CMM - 4.2 Development Complete	0%	05/15/09	05/22/09	NA	5 days
COMS REG	CMM-REG: (Creditworthy Status Update) Interface Test Com	0%	05/15/09	06/10/09	NA	17 days
NMMS	Issue Modeling Guidelines Draft to Participants	100%	05/19/09	05/15/09	05/15/09	-2 days
EDS	Publish Draft Modeling Guidelines Document for MP Review	100%	05/19/09	05/15/09	05/15/09	-2 days
NMMS	Deliver NMMS 7 INT	0%	05/21/09	06/19/09	NA	20 days
EMS	EMS Release 6.6.x SPR Patch 3 FAT Complete	0%	05/22/09	06/23/09	NA	21 days
OS	Deliver OS Feature Pack 2 to iTest	0%	05/26/09	05/26/09	NA	0 days
MMS	MMS5 Patch 1 Delivered by ABB	0%	05/29/09	05/29/09	NA	0 days

- 10 of 13 tracking milestones for April completed against the re-baselined schedule.

- 13 tracking milestones scheduled for May.

Milestone Variance Analysis

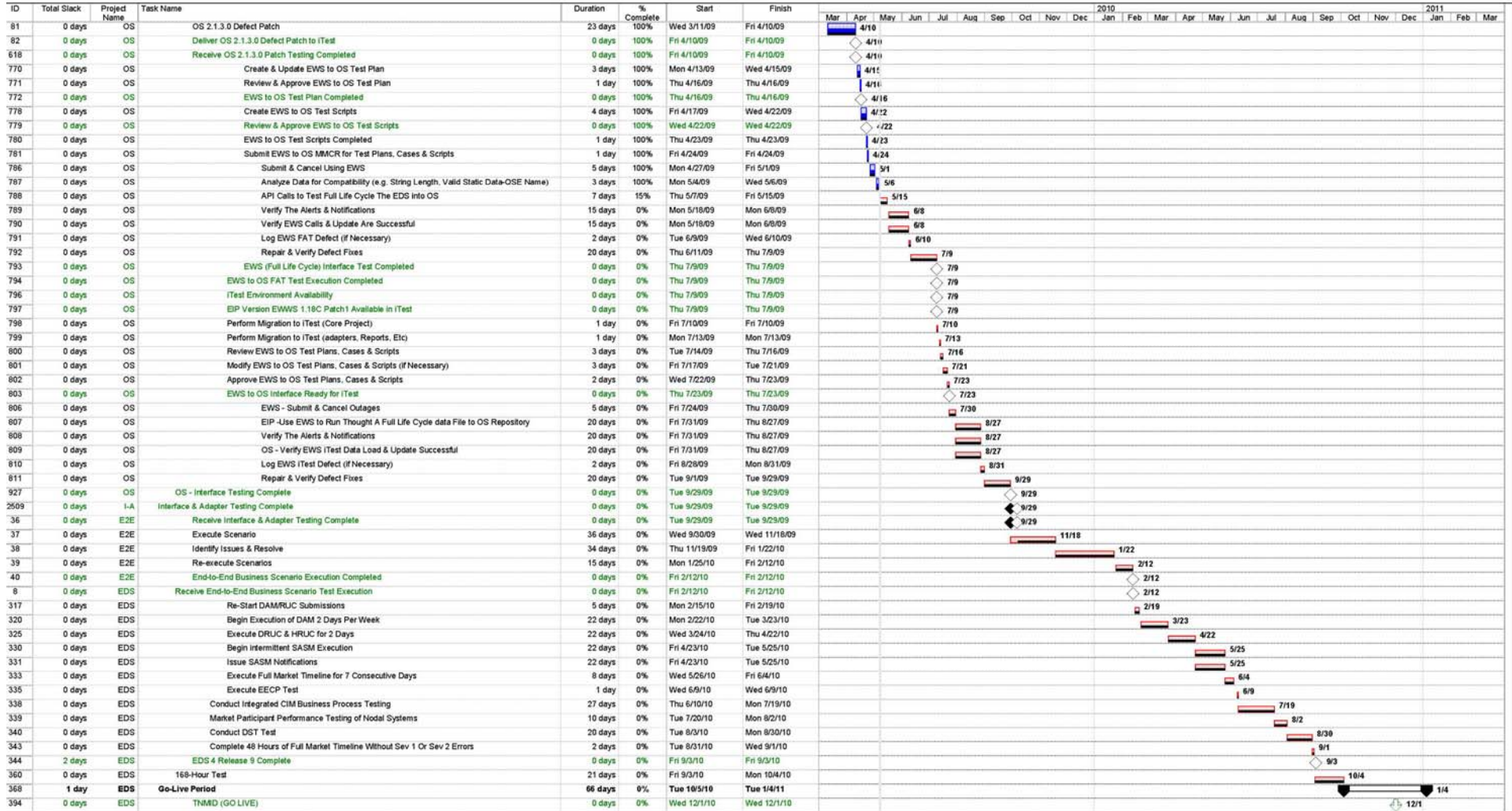- **April Tracking Milestones**
  - EDW State Estimator Statistics extracts: interface specifications changed; will be bundled in June release
  - EMS Release 6.5.x SPR Patch 2 FAT: defects found needed to be repaired by vendor in CIM part of patch release; now separated into different patch release
  - MIS Build 11 complete (into iTest): 2-week testing delayed; MIR database renamed and inaccessible
- **May Tracking Milestones**
  - MMS-ETAG to MMS iTest: originally omitted from schedule because of miscommunication about testing (already in Zonal); inserted to test with MMS5
  - NMMS-Interface testing complete: dependent on NMMS6 delivery to NiTest, which was delayed
  - MMS UI project end: defects were found and patch retracted and redone
  - COMS CMM-REG->CMM iTest: configuration problems in NiTest
  - COMS CMM-4.2 development complete: sequence of delays by ERCOT and vendor (requirements, design, implementation)
  - NMMS-NMMS 7 INT: delayed into FAT by NMMS 6 being in FAT; functionality here is for use by NMMS team, others not dependent
  - EMS Release 6.6.x Patch 3 FAT: resource constraints are caused because same people needed for release 6.5, delaying work on this

Near Critical Task Analysis						
Total Slack (Wk/dys)	Finish Variance (Wk/d)	R/Y/G	Project	Work-flow Description	Analysis	Corrective Action Plan
7	0	R	COMS - CMM	CMM 4.2 Release	On schedule to Re-Baseline. Could impact downstream activities if it continues to slip	See attached explanation
0	0	Y	OS	EWS to OS Interface Testing	New planning. On schedule and on Critical Path	Monitor Closely, Critical Path
5	0	Y	MMS	MMS5	Has been primary critical path, now near critical, 5 days off (as of 5/08/09) . Has remained on schedule historically	Monitor Closely
10	57	Y	MMS	Market Manager UI FAT Delivery to iTest	Added 2 FAT Correction Cycles	Monitor Closely
16	16	Y	EMS	EMS Build 6	SPRs required re-work and re-testing	Monitor Closely
Completed	17	G	NMMS	Release 6 for SEM go live	Completed FAT on 4/30 and is scheduled to be deployed into iTest on 5/12.	Completed
3	0	G	OS	OS to MIS Interface Testing	New planning. On schedule	Monitor Closely, Low total slack
4	0	G	E2E	End to End Planning	Currently working on the phased testing approach for E2E	Monitor Closely, Low total slack
5	0	G	EMS	OS to EMS Interface Testing	Tasks have remained on baseline schedule	Monitor Closely, Low total slack
5	0	G	COMS - S&B	MMS --> S&B interface Testing	New planning. On schedule	None required
8	0	G	CRR	CMM to CRR Interface Testing (ACL)	Re-baselined - On schedule	Monitor Closely, Low total slack: Added Resources to CMM team
8	0	G	OS	NMMS to MIS Interface Testing	New planning. On schedule	None required.
8	0	G	MMS	MMS to MIS Interface Testing	New planning. On schedule	None required.

Near Critical Task Analysis						
Total Slack (Wk/dys)	Finish Variance (Wk/d)	R/Y/G	Project	Work-flow Description	Analysis	Corrective Action Plan
9	0	G	MMS	EWS to MMS Interface Testing	Reduced repair and defect duration. Slack increased from 9 to 20 days	None required.
Completed	0	G	COMS-CSI	CSI release 7.0	Completed	Completed
11	0	G	MMS	Reg to MMS Interface Testing	New planning. On schedule	None required.
11	0	G	COMS - CMM	Release 4.1.5 Component Exposure Adjustment	Re-Baselined - On schedule	None required.
12	0	G	COMS - S&B	EMS --> S&B Interface Testing	New planning. On schedule	None required
12	0	G	COMS - CMM	MMS --> CMM Interface Testing	Driven by MMS5 release. New planning. On schedule	None required
13	0	G	OS	EMS to OS Integration Testing	New planning. On schedule	None required.
13	-12	G	EDW	OS Related Reports	Currently forecasted ahead of schedule.	None required
16	0	G	OS	MMS to OS Interface Testing	New planning. On schedule	None required.
16	11	G	CRR	NMMS to CRR Interface Testing	Slip due to NMMS 6 Delivery & Availability in iTest	Monitor Closely
20	1	G	MIS	Release 12	Re-Baselined - On schedule.	None required
20	0	G	COMS - S&B	CRR --> S&B Interface Testing	New planning. On schedule	None required
20	45	G	MMS	ETAG to MMS Interface Testing	Moved out testing to coincide with MMS5	None required.

Getting CMM Back on Track

- **The Issue: Turnover in ERCOT/vendor staff and limited business resources delaying detailed requirements and designs**
  - All CMM test resources have started and are under way
  - Triple Point has added staff to meet the timelines (went from 3 to 12 developers and QA staff)
  - ERCOT has added 2 additional credit FTEs to participate in nodal testing and readiness activities 3 days per week
  - Adding 3 credit zonal backfills to allow credit FTE focus on E2E and market trials. Start dates: 04/30/2009, 06/01/2009 and TBD.
  - ERCOT on site with Triple Point (May 7), providing project management oversight and QA testing
    - 2 testers to run pre-FAT tests prior to deliveries to ERCOT
- **Mitigation**
  - TPT SOW under amendment to fixed price with milestone payments
  - Business will continue to monitor sufficient resources to cover all test efforts, current production and post go-live needs

Risks & Issues to Achieving Nodal's Major Milestones

◆ **Single-Entry Model Go-Live (8-31-09)**

   – Issue: NMMS defect-resolution threatens SEM Go-Live (CLOSED)

◆ **Complete Integrated Systems (11-18-09)**

   – Risk: Resource conflict for Advanced Metering and Nodal Program

   – Issue: Handling CMM delays for Nodal Program

   – Issue: Zonal resource constraints for Nodal Program

   – Risk: Resource conflict could delay development of NMMS processes and procedures

◆ **Integrated Market Trials (2-10)**

   – Risk: Reconciling Protocols, Systems and Market Expectations

◆ **Nodal Go-Live (12-1-10)**

   – Risk: Data Center capacity concerns

Nodal Program Risk:
Resource Conflict for Advanced Metering and Nodal Program

◇   **Potential Milestone Impact: Complete Integrated Systems**

Risk: Advanced Metering Resources	Advanced Metering is a high priority project for 2009. There are potential conflicts in 2009 over resources and testing environments needed at the same time by the nodal program and Advanced Metering project.

Risk Life Cycle State			
Define	**Plan**	Manage	Watch

Mitigation Plans	Who	Target Date	Current Status
1. Establish a testing approach to use different environments for the Lodestar testing. Limit shared testing to just the single shared ISM environment during testing in Q4 2009.	H. Parrish S. Jirasek	7/24/09	5/1/09 Test strategy is complete for Advanced Metering. It is being incorporated into the nodal test plan for end-to-end testing as part of the end-to-end planning.
2. Arrange resource assignments for Lodestar and EDW to ensure coverage by development teams and business team resources to allow for parallel nodal program work and Advanced Metering work, to support the Advanced Metering mandate of January 2010 and nodal go-live date of December 2010.	H. Parrish S. Jirasek	7/24/09	5/1/09 Resource planning is underway, with current expectations that coverage will be sufficient. Plans are being incorporated into overall resource management plans for nodal and zonal needs.
3. Monitor resource assignments and availability.	H. Parrish S. Jirasek	November, 2009	

Nodal Program Issue:
Handling CMM Delays for Nodal Program

◇ **Potential Milestone Impact: Complete Integrated Systems**

Issue: Handling CMM Delays	Delays in completing the detailed requirements and designs for CMM have occurred because of turnover in both ERCOT and vendor staff. There are limited business resources allocated to complete creation of requirements and to perform reviews.			
Issue Life Cycle State				
Plan | **Manage**				
Mitigation Plans	Who	Target Date	Current Status	
1. Break the definition and development of remaining CMM capability into incremental releases. Modify contract with vendor to fit the approach.	H. Parrish	Plan complete; contract to be finished 5/15	5/8/09 SOW drafted, to complete 5/15/09 5/1/09 Vendor contract extension in work, while next contract is under development by EquaTerra. Ongoing discussions with Triple Point on timing and quality of deliverables.	
2. Identify ERCOT business resources to ensure the plan can be executed.	H. Parrish	target date under discussion	5/1/09 Position posted internally; 1 backfill starting 6/1/09; 1 pending 4/17/09 2 additional Credit FTE resources are participating in testing. Business has1 backfill resource under evaluation. Goal - to have at least 2 backfill by 04/30/2009 .	
3. Identify vendor resources to ensure the plan can be executed.	H. Parrish	As needed	5/7/09 ERCOT on site at Triple Point, providing PM oversight and 2 testers for pre-FAT .	
4. Receive software and perform FAT in increments, to keep overall program on schedule.	H. Parrish	7/08/09	4/2/09 Deliveries of software scheduled from 2/6/09 through 5/15/09, with testing incrementally to 7/8/09	

ERCOT-Wide Issue: Zonal Resource Constraints for Nodal Program

◇ **Potential Milestone Impact: Complete Integrated Systems**

Issue: Zonal Resource Constraints for Nodal Program	Because the Nodal go-live date has been delayed, there are a number of Zonal projects, PRRs, and IMM suggestions for Zonal improvements are resulting in resource constraints for the Nodal Program.		
Issue Life Cycle State			
Plan	**Manage**		

Mitigation Plans	Who	Target Date	Current Status
1. Manage list of PRRs and SCRs to a resource plan that uses a strategy to avoid impacting Nodal personnel resources when delivering additional Zonal enhancements.	D. Forfia D. Troxtell	Ongoing	5/1/09 – Meetings underway this week and next, to review EACs with Mike Cleary and Janet Ply 4/24/09 – Meetings of PM with Program Office and with Resource Managers set for week of 4/27/09, to address personnel allocations
2. Manage Project Priority List (PPL) with clear view of resources needed for any projects in flight or about to be launched, with a strategy to avoid impact on Nodal personnel resources.	D. Forfia D. Troxtell	4/17/09 – complete an "on request" analysis of resource conflicts, updated to 5/1/09	5/1/09 – Prototype completed and shared for two departments , consolidating resource hours for O&M, Nodal, and Zonal needs, to enable discussion of resource conflicts with resource managers 4/24/09 – ERCOT PMO is working on a prototype to track all Nodal and Zonal resources, to enable better forecasting and analysis of capacity; expect to have solution available by 5/29/09

Nodal Program Risk:
Developing NMMS Business Processes and Procedures

◇ **Potential Milestone Impact: Complete Integrated Systems**

Risk: Inadequate staffing to develop NMMS-related business processes			Availability of facilitators, writers, and key SME's for the development of NMMS processes and procedures is limited. This resource conflict will result in delays of NMMS processes and procedures unless a workaround is found.		
Issue Life Cycle State					
Define	**Plan**	Manage	Watch		
Mitigation Plans		Who	Target Date	Current Status	
1. Work with individuals in other departments who can facilitate collecting the information for documenting the processes and procedures.		D. Moldenhour	8/1/09	5/8/09 2 procedures finalized, 3 drafted and are in review, with other key departments identified for SME input 4/17/09 Other organizations have provided technical writers and training personnel to facilitate the process definition.	
2. Review process and procedure work for consistency with others.		M. Nixon, C. Hansen	ongoing	4/17/09 Chuck Hansen reviews materials developed for level of detail and specific content.	
3. Identify personnel in other groups who can help with technical aspects of procedures being developed.		D. Moldenhour, P. Miller	ongoing	4/17/09 In process	

Nodal 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.	Nodal Project Managers	7/1/09	4/13/09 Program is planning the assessment activities.
2. Add team members to the nodal program with Texas market experience to ensure readiness for Market Trials. Have them assess completeness of requirements addressed by the software new/tailored for the Texas nodal market and participate in end-to-end testing.	J. Ply	8/1/09	5/8/09 – One candidate will start on 5/18/09; another still in discussions 4/13/09 Two candidates have been approached regarding their involvement; additional candidates from other areas of the market are yet to be identified.
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.

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 Program 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 ongoing	3/31/09 ILM Roadmap has been completed by SAIC, and next planning activities underway ERCOT project PR 90006_01 Commercial Systems Information Lifecycle Management: Project	
2. Expand current data center space, and build out new data center, to increase ERCOT data center capacity.	D. Forfia	TCC1 build out complete 9/09 South DC in production Feb 2011 TCC3 in production May 2011	3/30/09 Work underway to expand current TCC1 data center ERCOT project PR_80047 TCC1 equipment to be purchased May 2009. ERCOT project PR_80001 South DC will run parallel Oct 2010 – Feb 2011 to test and avoid disruption to Nodal	
3. Validate and monitor Nodal data capacity assumptions for Go Live	D. Forfia	Plan: May 2009 Analysis: to complete 7/15/09	5/11/09 Plan under review by D. Forfia	

External Audit Status Summary

Audit	Audit Points Identified	Audit Points in Execution	Date to Complete Last Point
IBM Report 6	4	1	8/31/09
IBM Report 7	4	1	12/31/09
Utilicast Report 8	6	2	2011
Utilicast Report 9	9	1	4/30/09
Utilicast Report 10 (Morgan)	10	9 in planning; 1 complete, to be verified	7/3/09
Utilicast Report 10 (Cleary)	13	12 in planning; 1 complete, to be verified	9/4/09
Utilicast Report 10 (Capezzuti)	1	1 in planning	TBD

Audit Points to Address from Utilicast Report 8

ID	Description	Action Plan	Resp. Manager	Target Date
UTI08-01	The individual project budgets should be challenged in the following areas: a. Vendor contracts b. Contract staff c. Internal staff	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	Janet Ply	a) Target: 6/30/09 for contracts to be renegotiated for 5 top vendors 3/31/09 Third party has been engaged to conduct one vendor negotiation as an initial effort, to be complete 3/31 3/3/09 Have completed one review of our key contracts by an outside firm b) 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.
UTI08-05	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 early 2011. Plans are under development to provide capacity prior to those new data centers becoming available.	Jeff Floyd	Early 2011

Audit Points to Address from Utilicast Report 9 - 2

ID	Recommendation	Action Plan Status	Resp. Manager	Target Date
UTIL09-06	Update project plans and budgets based on revised integration scope, objectives, roles and responsibilities.	3/30/09 – The integrated project schedule is being updated with detailed plans for connector testing as well as the general approach for end to end testing; resources are being reviewed against the plans	Nodal Project Managers and J. Ply	5/11/09 Complete, to be verified 3/31/09; revised to 4/30/09

Audit Points to Address from Utilicast Report 10 – 1

ID	Short Description	Recommendation	Action Plan Status	Resp. Dir.	Resp. Mgr	Target Date
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.	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 Mgt team is updating its documentation and will provide a concierge to train and assist with the process. Training on Access Mgt will be done the week of 5/4/09.	R. Morgan	D. Forfia	5/8/09 **Complete; to be verified**
UTI-10 - 01B	Release Mgmt, Change Mgmt, Access Mgmt, Problem Mgmt	A plan will be developed to consolidate into one respository after the final releases of software are available for nodal go-live. Execution of the plan is not expected to occur until mid-2010.	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.	R. Morgan	D. Forfia	7/3/09
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 RM process.	Release Mgt (RM) Team is working with the teams to define methods for all Nodal Project teams to do auto-deployment using the standard RM process and coordinator roles by August 2009. This will be enforced by the nodal program.	M. Cleary	J. Ply	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.	Weekly release planning sessions began the week of 4/20/09 at both program and project level. Measurement will be done to monitor progress toward improved forecasting accuracy.	M. Cleary	J. Statz; D. Gwinn	9/4/09

Audit Points to Address from Utilicast Report 10 – 2

ID	Short Description	Recommendation	Action Plan Status	Resp. Dir.	Resp. Mgr.	Target Date
UTI-10 – 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	After the first phase is complete, a plan will be built for the succeeding project. It is likely to be part of the 2010 PPL.	R. Morgan	D. Forfia	Q1 2010
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.	A forecast is being built based on the nodal schedule, to establish a plan for adding contract staff to handle workload waves.	R. Morgan	D. Forfia	6/5/09
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.	A roadmap is under development. There are multiple projects in flight that will be synched with the roadmap, and some will need to be funded in the project list for 2010.	R. Morgan	D. Forfia	7/3/09
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.	This will be included as an element of the roadmap being developed for implementing ITIL V3.	R. Morgan	D. Forfia	7/3/09

Audit Points to Address from Utilicast Report 10 – 3

ID	Short Description	Recommendation	Action Plan Status	Resp. Dir.	Resp. Mgr.	Target Date
UTI-10 – 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.	This is underway, as part of mapping out resource needs for all ERCOT resources - nodal and otherwise - for 2009.	R. Morgan	D. Forfia	5/29/09
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	This is underway, as part of resource management for all ERCOT resources - nodal and otherwise. A process will be established for monthly review.	R. Morgan	D. Forfia	5/29/09
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.	R. Morgan	J. Floyd	9/14/09
UTI-10 – 04B	Taylor Data Center Expansion Project Mgt	Continue to track and trend data center usage and available capacity to ensure that the actual usage remains within expected ranges.	Capacity planner in place, collecting data on capacity needs. Defining process for monthly review of needs.	R. Morgan	J. Floyd	7/31/09
UTI-10 – 04C	Taylor Data Center Expansion Project Mgt	Continue to develop mitigation strategies to address performance testing induced contingencies and perform a cost/risk analysis to determine if additional capacity to cover potential contingencies should be procured.	Process in place to monitor risks weekly and take action when needed.	R. Morgan	J. Floyd	4/24/09 **Complete; to be verified**

Audit Points to Address from Utilicast Report 10 – 4

ID	Short Description	Recommendation	Action Plan Status	Resp. Dir.	Resp. Mgr.	Target Date
UTI-10 – 05A	Vendor Performance Management	Manage the vendor very closely over the next four months while software is being delivered for End-to-End testing. Defects should be addressed in parallel with any remaining functional releases.	This is being done as a standard part of the FAT and Interface/Adapter testing.	J. Ply	PMs	4/24/09 **Complete; to be verified**
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	Examine current release and migration process to see if any steps can be eliminated.	J. Ply	J. Statz, E. Hall	6/5/09
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.	Review states covered by current measures; ensure they are using only recent data and that only vendor time is included in the measures.	J. Ply	J. Statz, E. Hall	6/5/09

Audit Points to Address from Utilicast Report 10 – 5

| ID	Short Description	Recommendation	Action Plan Status	Resp. Dir.	Resp. Mgr.	Target Date
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.	Common Data Set Approach communicated week of 4/20. Scheduling to release first data set version (DSV) on June 1. Goal is to establish a DSV with good data for E2E prior to the start of E2E testing as well.	J. Ply	AShepherd	6/1/09 (initial DSV)
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	The End-to-End (E2E strategy will define this. Manual triggers or workarounds (documented in test scripts) will be used where necessary to execute an end-to-end or bid-to-bill test. Not all of ERCOT's unique market rules will be executed in E2E testing. Due to time constraints, E2E will first execute a Base Case scenario, then a select set of scenarios expected to occur frequently after go-live.	J. Ply	AShepherd	6/1/09 (strategy)
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.	J. Ply	M. Nixon	9/17/2009
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.	Consolidate the results of the review of protocols to system capabilities and identify any gaps.	J. Ply	B. Luedke	9/4/2009

Audit Points to Address from Utilicast Report 10 – 6

ID	Short Description	Recommendation	Action Plan Status	Resp. Dir.	Resp. Mgr.	Target Date
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.	Such an analysis has begun, in collaboration with the ERCOT HR function. A full assessment plan will be developed.	J. Ply	ARinaldi	6/30/09
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. Ply	AShepherd	5/29/09

Audit Points to Address from Utilicast Report 10 – 7

ID	Short Description	Recommendation	Action Plan Status	Resp. Dir.	Resp. Mgr	Target Date
UTI-10 – 08	Contingency Plans for Failed Data Transfers	Utilicast recommends that the Nodal Program should create and execute contingency plans for failed data transfers which would include the following components: 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.	1. Manual workarounds will be created where needed, documented either as a part of the test script or as a defect. 2. Our common data set approach details how data will be collected, made common, released, and managed in terms of defects and modifications. 3. Other actions TBD upon clarification of this item.	J. Ply	AShepherd	TBD
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. Ply	J. Statz	9/4/2009

People
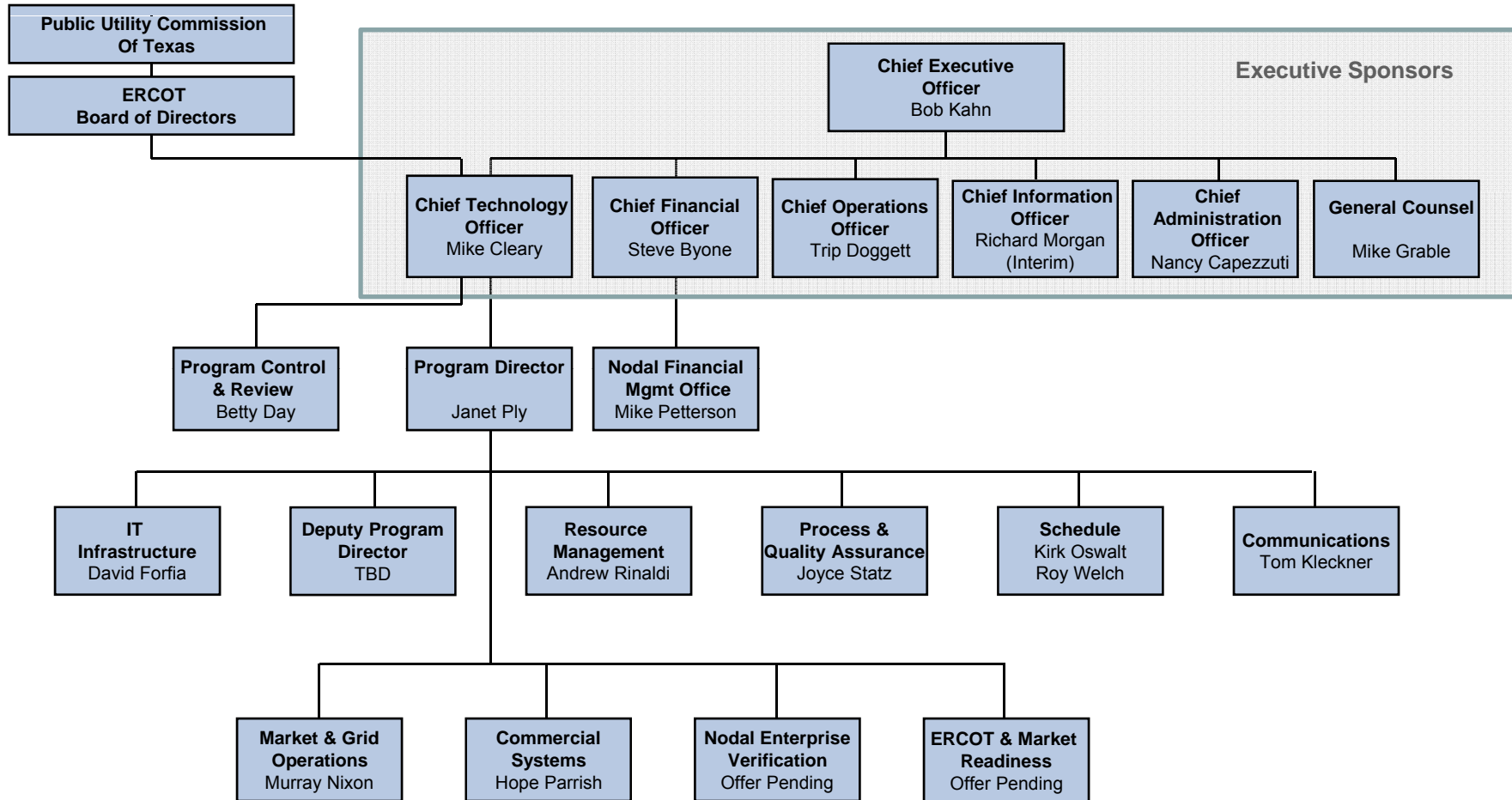
People: Staffing and Recruitment

- **Project Manager, ERCOT & Market Participant Readiness**
  - Interviews complete; offer accepted

- **Project Manager, ERT Organization Development & Design**
  - Interviews complete; offer on hold

- **Project Manager, Vendor Relations**
  - Interviews complete; offer accepted

- **Project Manager, EMS**
  - Interviews complete; offer accepted

- **Deputy Program Director**
  - Interviews currently in progress

- **Lead Integration Coordinator**
  - Interviews complete; offer accepted

- **Budget Analyst/Jr. Project Manager (4)**
  - Candidates reviewed; interviews in process

Program Initiatives

- **Budget Management**
  - Re-forecasts with each project team began May 4; expect to complete May 15
  - Nodal leadership, FMO, PMs and project controllers all involved
  - Back in July with June actuals and updated EACs

- **Nodal Contract Renegotiations**
  - 5 major vendor contracts:
    - Renegotiations underway with 2 vendors; ERCOT working on contract update
    - Developing detailed document on how we move forward
    - Top priority is conducting stronger negotiations
    - Continuing to work down list of vendors
    - Escalated second vendor
    - Still on track to complete renegotiations by end of June

- **Resource Management**
  - Initiated monthly resource manager meetings to ensure nodal, zonal managers have proper resources for their work
  - Nodal staffing reviewed on weekly basis
  - Transition & Assessment Initiative:
    - Joint process between nodal, zonal resource managers to identify, deploy and transition resources
    - Ensures long-term resource succession plans, knowledge transferred to ERCOT resources

- **Market Participant Readiness**
  - Planning integration initiative as identified by Utilicast
  - Re-planning interface and adapter testing
  - Staffing up and planning integration effort

Nodal Budget: Unexpected Costs

$5M+ in Additional Work Absorbed by Nodal Program

- Mike Cleary
    - Nodal Program leadership
- Utilicast
    - Third-party audit
- Opportune
    - Financial management/FMO
- EquaTerra
    - Third-party negotiations
- CRA International
    - Cost-benefit analysis
- Integration Re-Planning
    - Two-month effort involving PMs, teams
- Protocol Traceability Initiative

Financial Review

Special Nodal Program Committee

19 May 2009

Nodal Program
Approved Budget to Actual Comparison
Month of April 2009

Line	Cost Summary	Budget	Actual	Variance	Cumulative Variance (Pending Contingency Mgmt Disposition)
1	Internal Labor Costs	$2.3	$1.9	$0.4	$3.0
2	Backfill Labor Costs	0.1	-0.1	0.2	-0.1
3	External Resource Costs	7.3	6.2	1.1	7.1
4	Software & Software Maintenance	0.3	0.8	-0.5	-0.5
5	Hardware & Hardware Maintenance	0.2	0.6	-0.4	1.6
6	**Sub-total Direct Project Costs**	**$10.2**	**$9.4**	**$0.8**	**$11.1**
7	**Contingency Costs**	**$0.0**	**$0.0**	**$0.0**	**$0.0**
8	Allocations & Other	$0.7	$0.5	$0.2	$1.8
9	Finance Charges	1.2	0.8	0.4	0.7
10	**Sub-total Indirect Project Costs**	**$1.9**	**$1.3**	**$0.6**	**$2.5**
11					
12	**Total**	**$12.1**	**$10.7**	**$1.4**	**$13.6**

Amounts in millions

Nodal Program
Approved Budget to Actual Comparison
Life-to-Date through April 2009

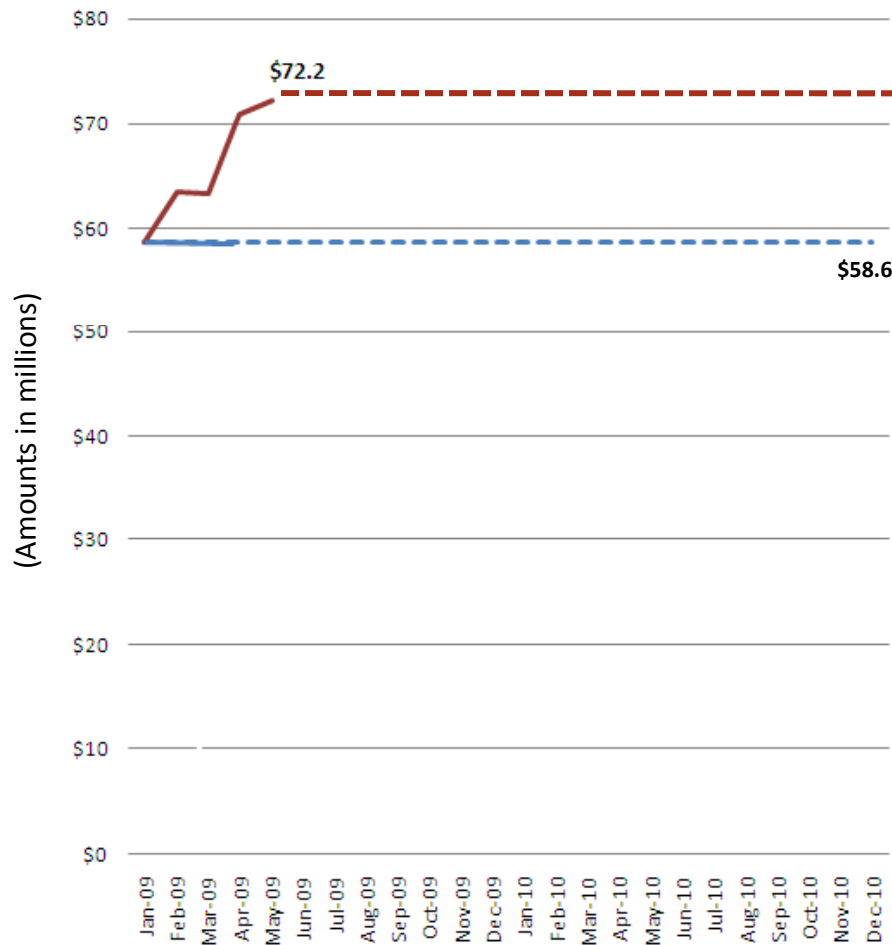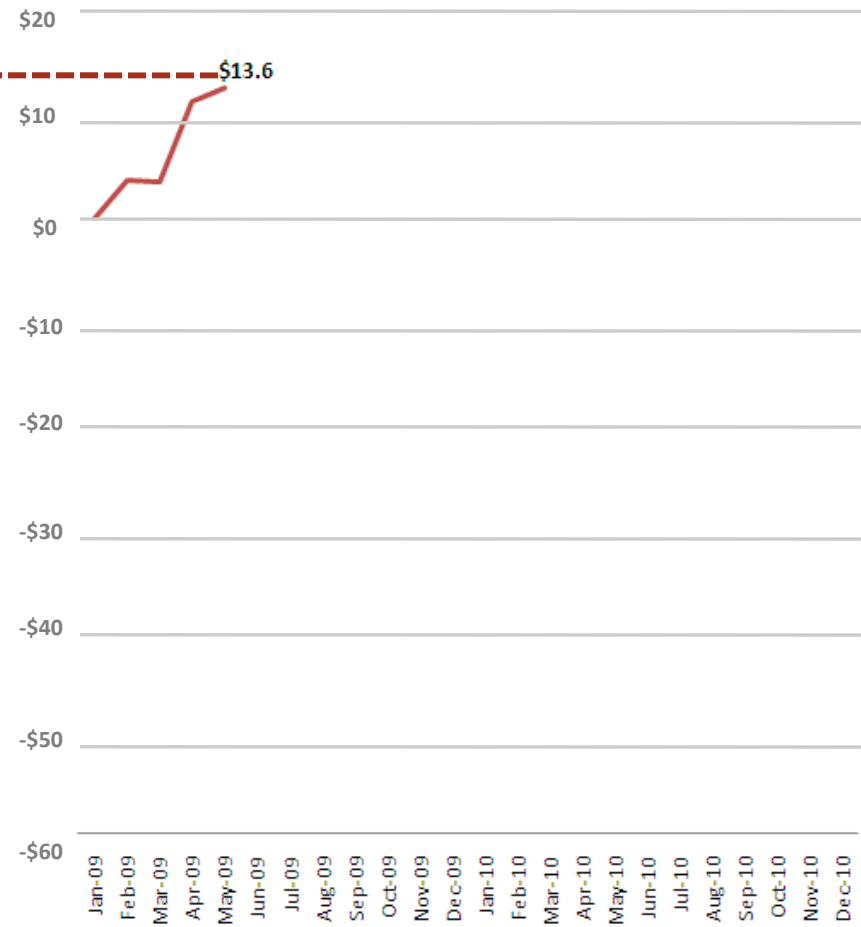| Line	Cost Summary	Budget	Actual	Cumulative Variance * (Pending Contingency Mgmt Disposition)	Budget Remaining
1	Internal Labor Costs	$42.5	$39.5	$3.0	$43.7
2	Backfill Labor Costs	4.2	4.3	-0.1	4.3
3	External Resource Costs	227.0	219.9	7.1	65.5
4	Software & Software Maintenance	24.0	24.5	-0.5	13.1
5	Hardware & Hardware Maintenance	48.6	47.0	1.6	5.7
6	**Sub-total Direct Project Costs**	**$346.3**	**$335.2**	**$11.1**	**$132.3**
7	**Contingency Costs**	**$0.0**	**$0.0**	**$0.0**	**$58.6**
8	Allocations & Other	$20.8	$19.0	$1.8	$8.1
9	Finance Charges	17.5	16.8	0.7	60.2
10	**Sub-total Indirect Project Costs**	**$38.3**	**$35.8**	**$2.5**	**$68.3**
11					
12	**Total**	**$384.6**	**$371.0**	**$13.6**	**$259.2**

Amounts in millions

$643.8

* Note: Effective with February 17, 2009 approved budget, LTD budgeted spend set to actual spend through December 31, 2008; accordingly, cumulative variance "reset" as of January 1, 2009.
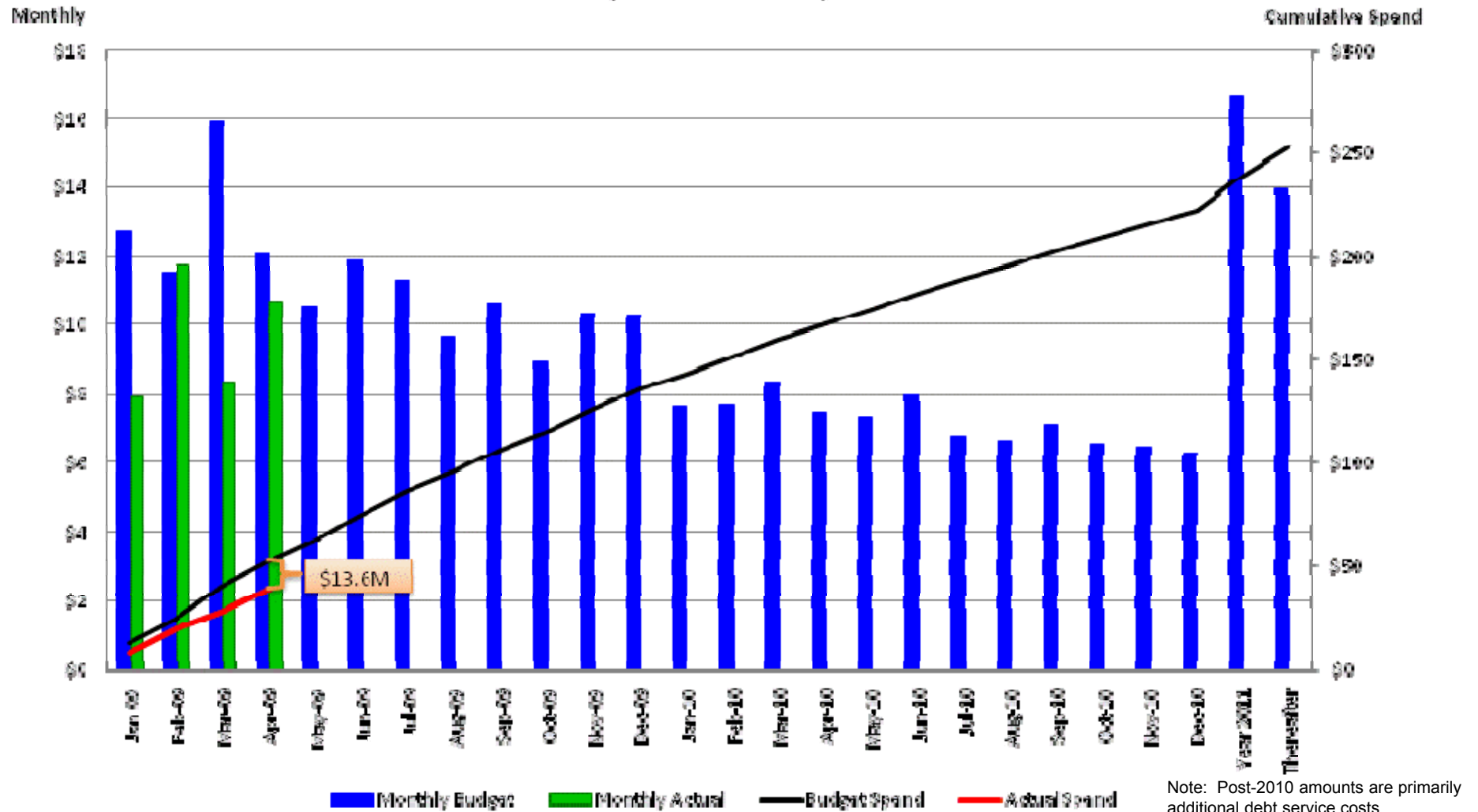
Monthly Financial Review – Contingency Monitoring

Monthly Budget to Actual Variance
(Amounts in millions)

$13.6M

Note: Post-2010 amounts are primarily additional debt service costs

Questions ?