Texas Nodal Market Implementation: Program Update

Trip Doggett

Sr. Vice President and Chief Operating Officer

ERCOT Board of Directors

17 February 2009

Agenda

- Program Highlights
- Utilicast Report 8 – Audit Points to Address
- Detailed Risk Status
  - Nodal Program Risks
  - ERCOT Enterprise Risks that Affect the Nodal Program
- Budget – Forecast/Actual Trend
- Stand-alone Benefits

Program Highlights

- Since the schedule was replanned June 1, 2008, all tasks on the program critical path are currently on schedule
  - Of 16 scheduled tasks on the critical path (to date), the program has hit 16
  - Of 2,575 total scheduled tasks (to date), the program has hit 2,262
- Core projects and associated releases

NMMS	• Delivered a validated model (v1.21 schema and data set) on Jan. 9. The delivery of the validated model ensures that data can be utilized from the new Nodal network model in downstream systems (MMS and EMS). • Started functional acceptance test (FAT) for NMMS 6 release on Jan. 19; scheduled to complete by Mar. 17
EMS	• Started FAT on Release 6.1.1.1 (release to address several SIG issues and NPRRs 97 & 102) on Jan. 7; scheduled to complete by Feb. 6
MMS	• Completed FAT testing for MMS4 Patch6 (CIM importer additions, partial NPRR113, and partial SIG Rounding Paper) on Jan. 9 • Received MMS4 Patch7 from ABB on Jan. 23; release is currently undergoing smoke testing to prepare for start of structured testing in FAT
COMS	• Completed FAT of COMS integration with MMS4 Patch6, remaining billing determinants and smoke testing integration between Settlements and Billing and Credit Monitoring System on Jan. 30

Utilicast Report 8
Audit Points to Address – 1

ID	Description	Action Plan	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. 3rd parties are being interviewed at this time 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	a) 2/17/09 for 3rd party negotiator decision; 6/30/09 for contracts to be renegotiated for top 5 vendors b) Integrated schedule is being re-planned incrementally, with full re-plan to be complete in March, 2009
UTI08-02	Given the high risks of the integration phase of the Nodal Program, this area should be reviewed in detail and be the subject of Nodal Oversight Report 9.	This item is closed. The integration phase of the Nodal Program was made the subject of Nodal Oversight Report Number 9.	Closed, 2/2/09
UTI08-03	Scope for the December 2010 release of the Nodal Program should be locked down with any proposed changes subject to a strict change control process.	This item is closed. There is now a clear policy supported by the Board of Directors that any change that affects Nodal schedule and budget must by approved by the ERCOT CEO and Board of Directors.	Expect board approval of PRR799 on 2/17/09

Utilicast Report 8
Audit Points to Address – 2

ID	Description	Action Plan	Target Date
UTI08-04	No enhancements should be considered for zonal market applications or processes unless assessed as business critical.	This item is closed. The ERCOT PMO is carefully monitoring Zonal project work, with guidelines in place to avoid use of Nodal resources. As of 1/30/09, there are no known requirements for use of Nodal resources in the work for 2009.	Closed; 1/30/09
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). The planned occupancy date is September 2009. The plan to add or move hardware is under development. Additional data center space is 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.	Early 2011
UTI08-06	Given the risks of market readiness and Market Participants potentially delaying "Go-live" due to ambiguous EDS exit criteria, this area should be subject to a detail review.	as of 2/4, this recommendation on hold at the request of Utilicast. They want to discuss the subject of Report #10 with the Special Nodal Committee.	2/10/09 – next meeting of the Committee

Nodal Program Risk:
Integration Testing Strategy Needs Updating

<table>
<tr>
<td colspan="2">Risk: Integration Testing Strategy Needs Updating</td>
<td colspan="3">The existing integration testing strategy (e.g. planning approach, team structure, methodology) may not be adequate to successfully perform integration.</td>
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<tr>
<td colspan="4">Risk Life Cycle State</td>
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<tr>
<td>Define</td>
<td>Plan</td>
<td>Manage</td>
<td>Watch</td>
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<tr>
<td colspan="2">Mitigation Plans</td>
<td>Who</td>
<td>Target Date</td>
<td>Current Status</td>
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<tr>
<td colspan="2">1. Identify leader for the entire Enterprise Verification effort (interface and end-to-end testing, market trials and system cutover)</td>
<td>J. Ply</td>
<td>1/13/09</td>
<td>Complete; Linda Clarke named as the Nodal Enterprise Verification Lead</td>
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<td colspan="2">2. Develop high level approach for Enterprise Verification.</td>
<td>L. Clarke</td>
<td>2/16/09</td>
<td>2/6/09 - Work is in progress; high level approach was discussed with project managers this week</td>
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<td colspan="2">3. Review and refine the leadership and staffing levels for Nodal Enterprise Verification.</td>
<td>L. Clarke</td>
<td>2/27/09</td>
<td>2/4/09 – Work is in progress, with organization structure established

Key positions to be filled by end of February.</td>
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Nodal Program Risk:
Nodal Integration Test (iTest) and EDS Environments

Risk: Nodal Integration Test (iTest) and EDS Environments	Because the current iTest environment is set up in the EDS (passive) environment, and because it lacks all of the required platform software and permissions, the Nodal program cannot effectively conduct integration testing. Delays in integration testing threaten program delivery.		
Risk Life Cycle State			
Define — **Plan** — Manage — Watch			
Mitigation Plans	Who	Target Date	Current Status
1. Review current iTest environment and strategy.	• K. Meinen	2/6/09	Complete
2. Establish a detailed plan and project schedule for key activities and milestones to establish and maintain the iTest environment. Include elements such as: – Ensure all technical architecture documents are current – Deploy all needed HW – Install all Nodal systems, with required components – Establish release procedures with appropriate controls – Ensure iTest environments match needs of integrated testing strategy	• K. Meinen	TBD	2/6/09 Identified elements for initial iTest environment, to be complete 3/20/09 Detailed plan is under development

ERCOT-Wide Risk:
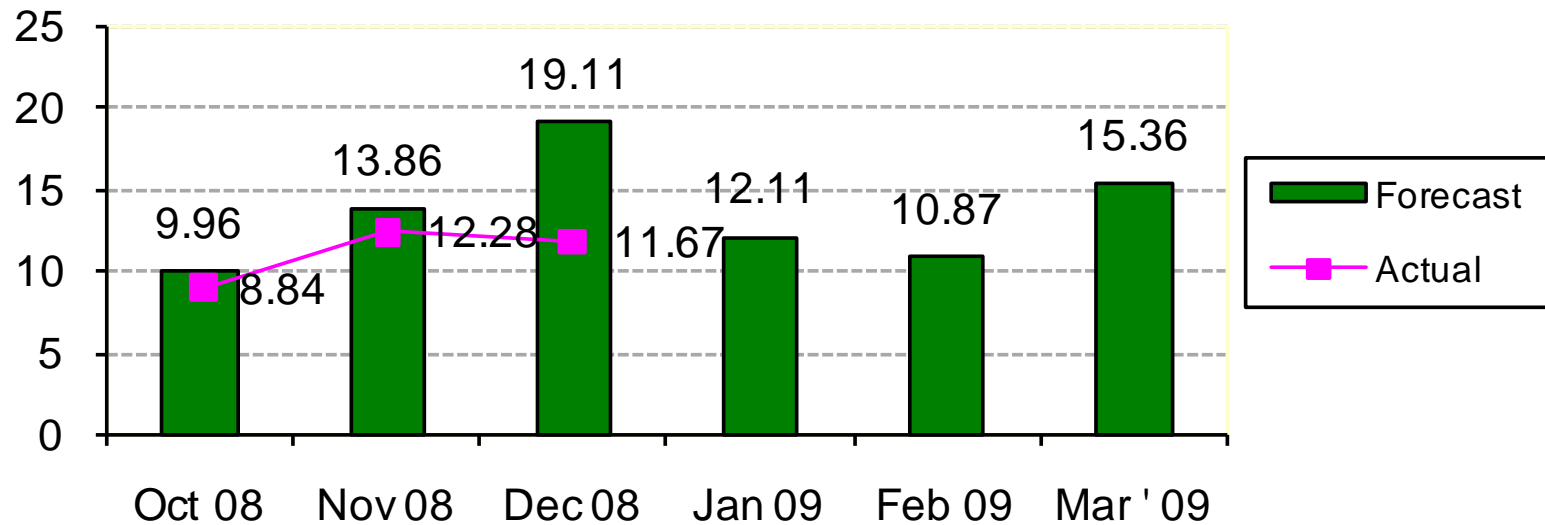## Zonal Resource Constraints for Nodal Program

Risk: 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 that may result in resource constraints for the Nodal Program.		
Risk Life Cycle State						
Define	Plan	**Manage**	Watch			
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. Troxtell T. Anderson	ongoing	1/30/09 – Completed review with PRS and WMS on the current list of reconsidered and new PRRs and SCRs. No expected impact to Nodal. Updates will be provided to Nodal PMO as the list evolves. March/09 – To review the list with TAC
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. Troxtell	Ongoing	1/28/09 – Current PPL shows no threat to Nodal personnel resource; updates to be provided to Nodal PMO as the PPL evolves; sent the list to Nodal PMO.

ERCOT-Wide Risk:
Data Center Space Concerns

Risk: Data Center 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.		R. Hinsley	Underway		ERCOT project PR 90006_01 Commercial Systems Information Lifecycle Management: Project Manager has been named, SAIC is engaged to complete a roadmap for a strategy.
2. Expand current data center space, and build out new data center, to increase ERCOT data center capacity.		R. Hinsley	Underway		ERCOT project PR_80001 Planning is underway for identifying and managing data center capacity to meet the overall needs of ERCOT.
3. Validate and monitor Nodal data capacity assumptions		J. Floyd	Ongoing		Work in progress, with a plan to be completed by 2/3/09

Program Forecast/Actual Trends of February 5, 2009, $M

Please note: forecast numbers are preliminary until approved by the BOD and the PUCT

Stand-Alone Benefits
Resulting from Nodal Activity To Date

Item	Description
Hardware/ Infrastructure	• Usable for either Zonal or Nodal efforts.
NMMS	• Reusable with some retool efforts to address interfaces to EMS and MOS.
COMS – Credit Monitoring	• Reusable with some retool efforts to address Zonal market.
COMS – Data Aggregation	• Performance enhancements to application are reusable.
Outage Scheduler	• Reusable with some retool efforts to address interfaces to EMS and MMS.
Wind Forecasting Tool	• The AWS Wind Forecast Service and related applications are usable in Zonal.
Mid-Term Load Forecast (MTLF) Tool	• The enhanced MTLF is usable in Zonal.
Training	• Some general education modules developed by Nodal can continue in a Zonal market.

Questions ?