



# Texas Nodal Market Implementation: Program Update

Trip Doggett

Sr. Vice President and Chief Operating Officer

**ERCOT Board of Directors**

**17 March 2009**

# Agenda

- **Program Highlights**
- **Utilicast – Audit Points to Address**
- **Detailed Risk Status**
- **Budget – Cost Management**

# 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 2,913 total scheduled tasks (to date), the program has hit 2,598
- Core projects and associated releases

NMMS	<ul style="list-style-type: none"><li>• Conducting functional acceptance test (FAT) for NMMS 6; scheduled to complete by Apr. 7</li></ul>
EMS	<ul style="list-style-type: none"><li>• Completed FAT on release 6.2.x (release to address several SIG issues and NPRRs) on Feb. 9 and completed FAT on release 6.4.x (CIM Importer additions based on synchronized model (v1.21 schema) and additional SIGs) on Feb. 20</li><li>• Scheduled to start FAT on release 6.5.x (regression test and SPR Patch 2 Release) on Mar. 9</li></ul>
MMS	<ul style="list-style-type: none"><li>• Completed FAT testing for MMS4 Patch7 (CIM importer additions based on synchronized model (v1.21 schema) and bug fixes) on Feb. 20</li><li>• Scheduled to start FAT on MMS5 (last scheduled release of functionality) on Apr. 16. PreFAT is scheduled to start on Mar. 16</li></ul>
COMS	<ul style="list-style-type: none"><li>• Scheduled to start FAT on CSI7.0 (COMS integration refactoring with MMS 5) on Mar. 31</li></ul>

# Audit Points to Address from Utilicast Report 8 – 1

ID	Description	Action Plan	Responsible Manager	Target Date
UT108-01	<p>The individual project budgets should be challenged in the following areas:</p> <ul style="list-style-type: none"> <li>a. Vendor contracts</li> <li>b. Contract staff</li> <li>c. Internal staff</li> </ul>	<ul style="list-style-type: none"> <li>a. Long –term vendor contracts will be negotiated with the assistance of a 3<sup>rd</sup> party negotiator, to address budget matters as well as others. 3<sup>rd</sup> parties are being interviewed at this time</li> <li>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</li> </ul>	J. Ply	<ul style="list-style-type: none"> <li>a) 3/5/09 Met with a 3<sup>rd</sup> party negotiator firm; expect to begin renegotiation of first vendor in March. Plan to complete renegotiations for top 5 vendors by 6/30/09</li> <li>3/3/09 Have completed one review of our key contracts by an outside firm who has provided several recommendations that we will consider in our future negotiations</li> <li>2/27/09 Contract in process for 3<sup>rd</sup> party negotiator; 6/30/09 for contracts to be renegotiated for top 5 vendors</li> <li>b) Integrated schedule is being re-planned incrementally, with full re-plan to be complete in March, 2009</li> </ul>

# Audit Points to Address from Utilicast Report 8 – 2

ID	Description	Action Plan	Responsible Manager	Target Date
UT108-02	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.	J. Ply	Complete and verified; 2/2/09
UT108-03	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 be approved by the ERCOT CEO and Board of Directors.	T. Doggett	Complete and verified; 2/17/09

# Audit Points to Address from Utilicast Report 8 – 3

ID	Description	Action Plan	Responsible Manager	Target Date
UT108-04	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.	T. Doggett	Complete and verified; 1/30/09
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). 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.	J. Floyd	Early 2011
UT108-06	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.	This item is closed. This will be covered in Utilicast Report #10	J. Ply	Complete and verified; 2/26/09

# Audit Points to Address from Utilicast Report 9 – 1

ID	Recommendation	Action Plan Status	Responsible Manager	Target Date
UTIL09-01	The application project teams should own and be accountable for developing and testing their application interfaces.	The ownership has been reassigned and was communicated to the teams on 2/18/09	L. Clarke	Complete; to be verified
UTIL09-02	The scope of system integration testing (end-to-end testing) should be limited to confirming that the individual applications can operate as a single enterprise solution.	Communication to leaders was done on 2/18/09, and they carried the information to their teams that week. 2/26/09 End to End scenario criteria are under development...	L. Clarke	3/31/09
UTIL09-03	Clearly define and communicate the scope, objectives and expected deliverables of the core system integration components	2/23/09 The approach has been communicated. Project Managers are in the re-planning process.	L. Clarke	3/31/09
UTIL09-04	Assign a qualified integration project lead.	This item is closed. Linda Clarke has been assigned.	J. Ply	Complete and verified; 2/13/09

# Audit Points to Address from Utilicast Report 9 – 2

ID	Recommendation	Action Plan Status	Responsible Manager	Target Date
UTIL09-05	Appoint qualified leaders with clear ownership of clearly defined deliverables to the key system integration roles.	2/26/09 – ERCOT has provided offers to potential candidates for 4 of 5 positions. We have commitments for the following positions: Technical Solution Lead, Market Trials Lead, End-to-End Business Scenario Testing Lead. On target to complete offers by mid-March.	L. Clarke	3/31/09
UTIL09-06	Update project plans and budgets based on revised integration scope, objectives, roles and responsibilities.	2/27/09 Work is in progress	Nodal Project Managers and J. Ply	3/31/09
UTIL09-07	Define and implement (in conjunction with the Market Participants) the specification for the volume and content of information transmitted over external web services.	2/20/09 Action items were assigned to the EIP Project Manager to establish a plan and a specification for content by 3/12/09, in preparation for the next Board of Directors meeting.	B. Brandaw	3/17/09
UTIL09-08	Build and configure a dedicated integration test environment.	2/27/09 Data has been gathered and a plan is under development for the tasks required to complete.	K. Meinen	3/31/09
UTIL09-09	Review access policies and IT controls for non-production environments.	2/20/09 Among the plans in the integration test environment preparation is a description of the procedures for handling access and IT controls.	K. Meinen	3/31/09



# Nodal Program Risk: Integration Testing Strategy Needs Updating

Risk: Integration Testing Strategy Needs Updating				The existing integration testing strategy (e.g. planning approach, team structure, methodology) may not be adequate to successfully perform integration.		
Risk Life Cycle State						
Define	Plan	Manage	Watch			
Mitigation Plans				Who	Target Date	Current Status
1. Identify leader for the entire Enterprise Verification effort (interface and end-to-end testing, market trials and system cutover)				J. Ply	1/13/09	<u>Complete</u> ; Linda Clarke named as the Nodal Enterprise Verification Lead
2. Develop high level approach for Enterprise Verification.				L. Clarke	2/18/09	<u>Complete</u> Approach for interface testing rolled-out to PMs, who are updating schedules and moving forward with implementation
3. Review and refine the leadership and staffing levels for Nodal Enterprise Verification.				L. Clarke	Previous date 2/27/09; updated to 4/16/09	3/6/09 Data management position still to be filled; internal offer was turned down; position has been posted externally  2/26/09 ERCOT has provided offers to potential candidates for 4 of 5 positions, and they will come on board in March

# Nodal Program Risk:

## Nodal Integration Test (iTest) and EDS Environments

<b>Risk: Nodal Integration Test (iTest) and EDS Environments</b>				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: <ul style="list-style-type: none"><li>– Ensure all technical architecture documents are current</li><li>– Deploy all needed HW</li><li>– Install all Nodal systems, with required components</li><li>– Establish release procedures with appropriate controls</li><li>– Ensure iTest environments match needs of integrated testing strategy</li></ul>				K. Meinen	2/27/09 Updated to 3/13/09	3/6/09 Plan is detailed through iTest deployment; work underway on details for procedures to maintain the environment and for transition of iTest to EDS  2/20/09 Established initial milestones for completion of analysis and iTest build. Working on plan for iTest readiness for testing.  2/6/09 Identified elements for initial iTest environment, to be complete 3/20/09

# Nodal Program Risk:

## Information Transmitted Over External Web Services

<b>Risk: Information Transmitted Over External Web Services</b>				If the volume and content of the information transmitted over Nodal external web services is not defined in detail, then market participant applications may attempt to transmit information in forms and of sizes that the Nodal applications are unable to process.		
Risk Life Cycle State						
Define	Plan	Manage	Watch			
Mitigation Plans				Who	Target Date	Current Status
1. Identify an approach to handle appropriate sizes of files.				B. Brandaw	3/12/09	2/20/09 An initial meeting was held to explain the actions required, so that a strategy can be explained at the next Board of Directors meeting on 3/17/09.
2. Establish a specification of the format of the information content to be transmitted by market participants.				B. Brandaw	3/12/09	3/6/09 Shared draft specifications with Market Participants via the weekly EDS call  2/27/09 Team has contacted technical rep from large MP – no need to chunk files; contacted Structure, PSI, and PJM for recommendations  2/20/09 An initial meeting was held to explain the actions required, so that a strategy can be explained at the next Board of Directors meeting on 3/17/09.

# 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

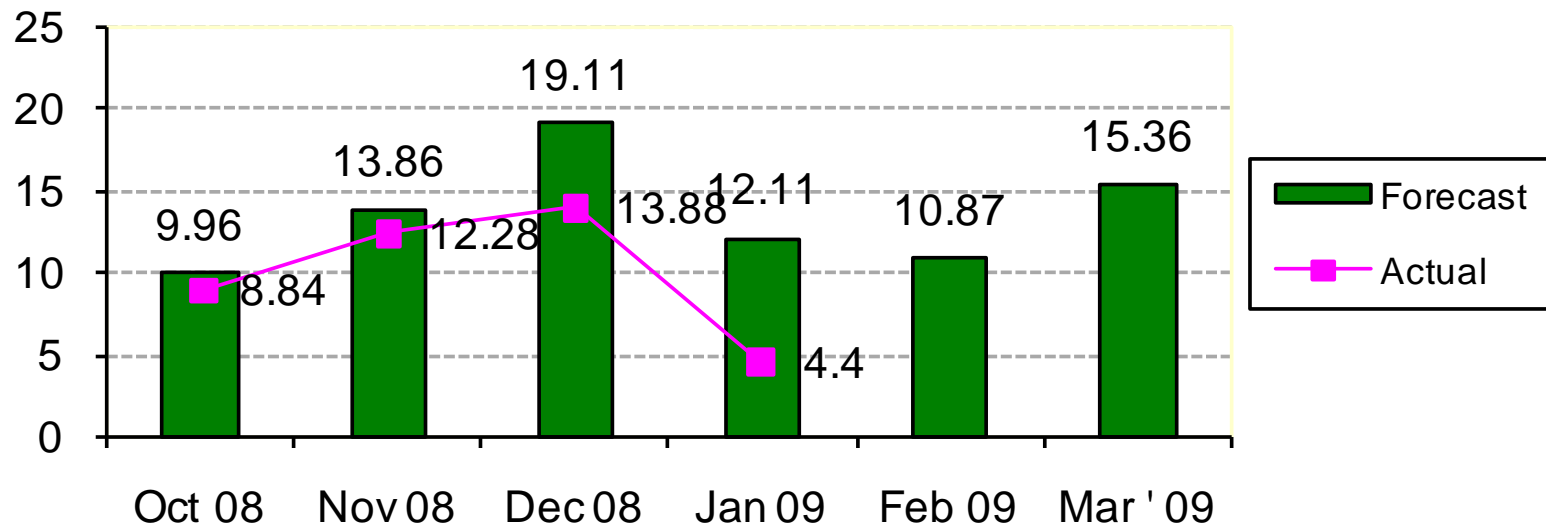
Risk: Data Center Space Concerns				Data center capacity, space, and power may be inadequate for Nodal Program go-live, unless plans for expansion are adequate.		
Risk Life Cycle State						
Define	Plan	Manage	Watch			
Mitigation Plans				Who	Target Date	Current Status
1. Establish an Information Lifecycle Management approach, to manage the life cycle of data being managed.				D. Forfia	Roadmap by March 6  Implementation ongoing	ERCOT project PR 90006_01 Commercial Systems Information Lifecycle Management: Project  SAIC to be Project Manager SAIC is engaged to complete a roadmap for a strategy by March 6.
2. Expand current data center space, and build out new data center, to increase ERCOT data center capacity.				D. Forfia	TCC1 build out complete by 9/09  South DC in production Feb 2011  TCC3 in production May 2011	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				D. Forfia	May 2009	Study underway to validate current assumptions

# Budget – Cost Management

- The program's monthly expenses have been under the forecast over the last several months
  - Currently re-forecasting each Nodal sub-project's forecast to ensure appropriate staffing levels, mix of internal and external labor, and estimates based on current information
- Introducing new financial management processes
  - Generating a “Current Month-End Spend Projection” that is a combination of expenses and liabilities incurred during the first half of a month combined with a projection of expenses and liabilities during the second half of a month
  - The program, at a sub-project level beginning in February, will update forecasted spend for a minimum of the subsequent three months and further out if known
  - Monthly financial reviews will be scheduled the last week of each month with each sub-project for the purpose of reviewing the prior month budget to actual performance in order to explain variances and impacts to schedule or forecasted expense and to approve or deny any forecast changes
  - Monthly sub-project reviews will be revised to include both budget and schedule together, as well as other key controls of the program

PRELIMINARY

**Program Forecast/Actual Trends  
of March 6, 2009, \$M**



Questions ?