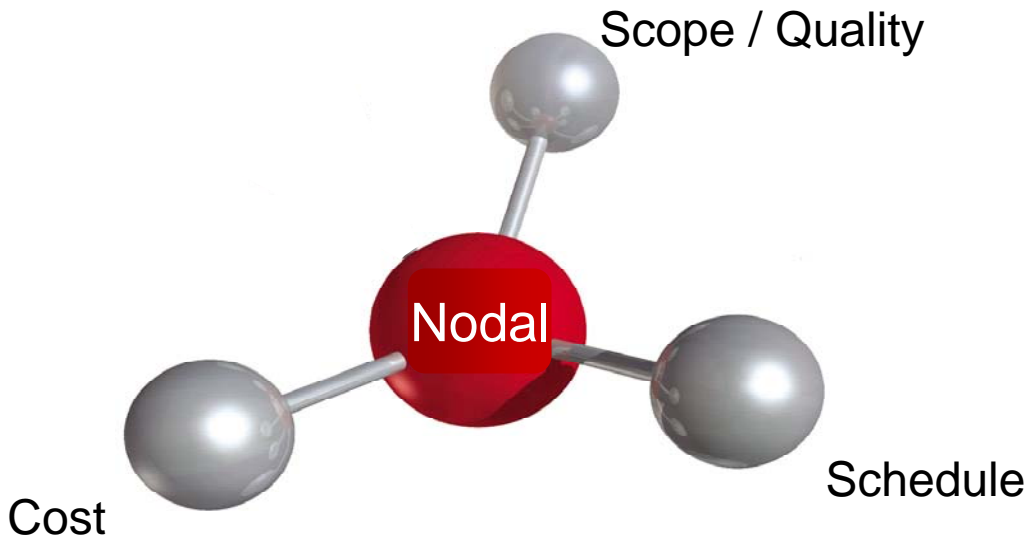




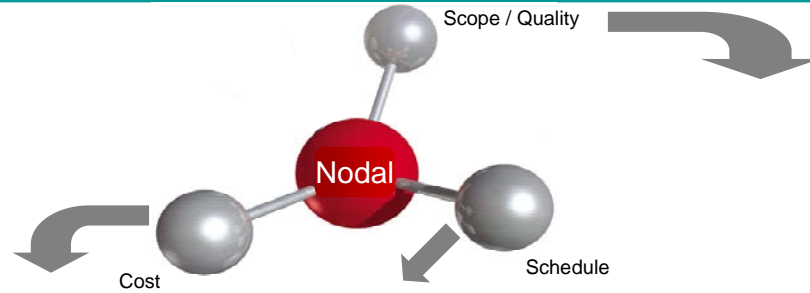
Texas Nodal Market Implementation
ERCOT Board of Directors Meeting
Nodal Status Review
February 20, 2007

Jerry Sullivan, Executive Director, Nodal Program
jsullivan@ERCOT.com

Nodal Delivery Success depends on 3 key dimensions...



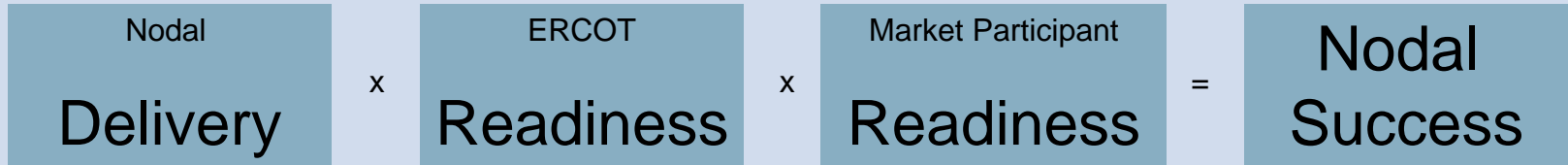
Which are currently showing both success and areas to address...



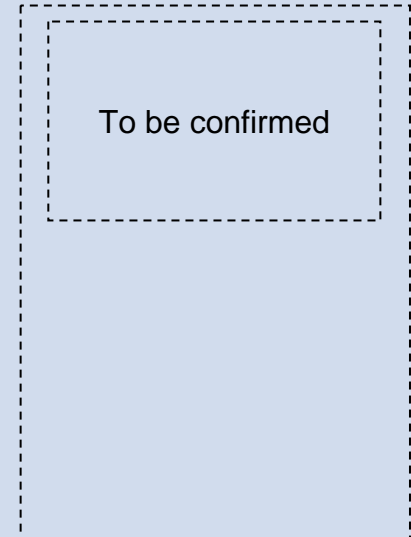
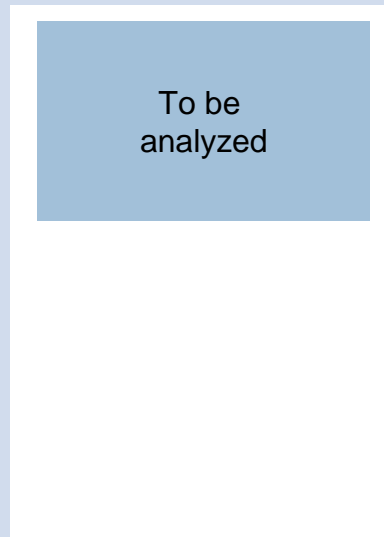
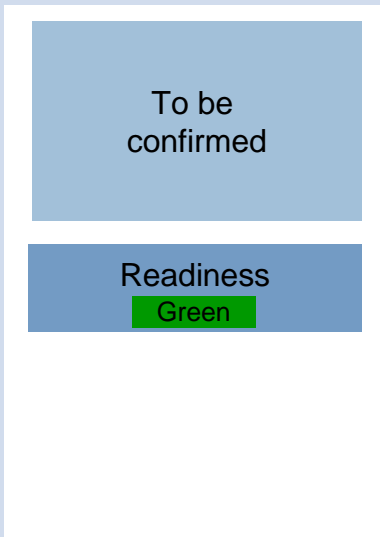
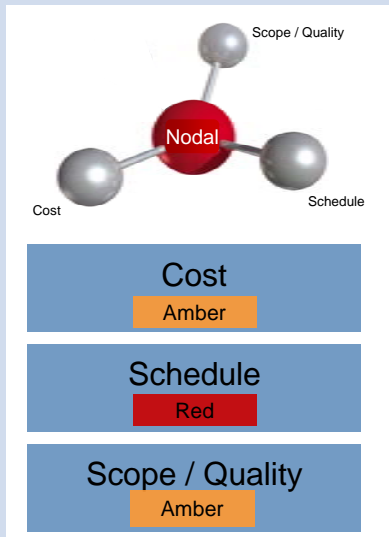
	Cost	Schedule	Scope / Quality
	Amber	Red	Amber
Summary	<p>The program has completed the latest cost review cycle with current overall projected estimate at complete tracking within 1% of budget.</p> <p>A significant proportion of contingency has been earmarked specifically for EMS, MMS, NMMS and COMS.</p>	<p>The program is in the process of defining its critical path and aligning detailed project-level schedules. The preliminary, unscrubbed schedule is later than expected because of EMS.</p>	<p>Two critical systems, (Energy and Market Management Systems) are not yet in sync with the latest approved NPRRs.</p>
Legend			
Red	Estimate at Complete = >\$263m	Go-live = >30 days+	Program is not wholly aligned to protocols
Amber	Estimate at Complete = \$248 - \$263m	Go-live = <30 days+	Program is aligned to previous version of protocols
Green	Estimate at Complete = <\$248m	Go-live = 1/1/09	Program is aligned with current protocols

In order to succeed, delivery must be aligned with broader ERCOT inc. and external readiness...

The "Nodal Success Equation"



Measured by...



Without success of all 3 elements, Nodal success will be compromised...

- **Market Operations Sandbox delivered on January 31st**
 - 2 QSEs successfully connected
- **MMS Requirements approved February 12th**
- **CSDs approved by TPTF**
 - Approvals for MMS, CRR, MIS and most COMS CSDs approved ahead of schedule
- **EDS 1 application (vanilla EMS) currently in ITest**
- **Nodal Deep-Dive Communications Meeting held on January 26th**

Progress this Month (Detail)

▪ Program Management

- Completed Nodal deep-dive presentation to ERCOT BoD
- Completed user interface for balanced scorecard
- Met with all projects to define program critical path in cooperation with IRT.

▪ Integration Design Authority (IDA) Package

- Assignment of IDA's issues continued
- Preliminary review of EMS RPP CSD
- Review and response to TPTF comments for EMS requirements

▪ Commercial Systems Package

- Defined short term milestones and owners for outstanding architectural discussion points
- Continue integration planning - continued meetings with CRR, participated in CMM - registration POC with UISOL team
- Registration Requirements approved on 1/9/07 as scheduled.
- Financial Transfer requirements approved.

▪ Network Model Management System/Network Model Package

- Developed training documentation
- Prepared training classes
- Clarified and document modeling issues.
- Obtained CSD approval from TPTF
- Continue to work on Detailed design issues
- Network operations modeling issues: Now 77% complete with 4,153 Closed out of the 5,360 identified data issues. Now 25% complete with 243 completed out of the 973 identified Critical Measurements.
- SIR 11147 and 11181 have been approved to be promoted into the iTEST / Production 2/22/2007 release.

▪ Energy Management System Package

- Completed 1st Week of Change Impact Analysis for TPTF. (Presentation Available)
- Confirmed & Committed Phased Delivery Dates for EMS Phase 2

▪ Market Management System/SCED Package

- Completed Execution of MMS (ABB) Phase 2 SOW

▪ Congestion Revenue Rights Package

- BOD budget approval
- Zonal replacement for Stacy Barry on-boarded; training begun
- Updated PCRR – generator list
- Completed Detailed Design Documents

▪ Electronic Data Warehouse Package

- Achieved definitions of 80% of project areas and have begun process of high-level requirements gathering for those identified.
- First deliverable "State Estimator Statistics" requirements being worked with EMS team.

▪ Integration Package

- Sandbox go live
- Prioritized list of Interfaces
- High Level Design of CIM

▪ Market Participant Engagement & Readiness Package

- Executed new SOW for 2007 engagement for the Mosaic Company for 2007.
- Interviewed candidates for contract training delivery personnel.
- Completed major review of the structure of 5 day QSE Basic Training Sessions (Course content, how to break 5 days into modules, scheduling, NERC CE hours issues etc...)
- Proof of Concept with LDAP
- SAD Deployment architecture completed.
- Presentation of 3 Design Styles for the portal.

▪ ERCOT Readiness & Transition Package

- Training: Completed 30% of Curriculum Reviews, Started 70%
- Market Trials: Refine EDS Detailed Plan (ongoing through March 07)
- Market Trials: Conducted reviews with business owners
- Sandbox: Met 1/31/2007 release date. Great team effort
- Sandbox: 2 QSEs have successfully connected
- Readiness Advisor: Metrics Map - Version 6 for Metric Subgroup review
- Readiness Advisor: Verification Plan - Version 3

▪ Infrastructure Package

- EDS1/2 Environment: All systems delivered for testing
- EA Lab: VMWare license issue resolved

▪ Integrated Testing Package

- COMS: Conducted Test Case training for business
- Received ROME-hosted access to the credit risk software for familiarizing ourselves with the application; Created draft CMM test plan.
- EMS/MMS/CRR: Reviewed CRR Component Use Cases
- Submitted rough draft of assumptions and durations for FAT testing of CRR.
- Data/E2E/Info: Data Transformation Presentation Preparation for other Teams in progress; Delivered First Phase of Mini Market
- NMMS: Team created 77 proposed lower level business flows; System test case candidate analysis; Started initial NMMS FAT Test Plan creation
- Tools: Create Daily Metric Reporting Data; Update Severity and Priority for Defect Tracking




The short-term milestones, except Requirements, are on track

<i>Control Milestone</i>	<i>Baseline</i>	<i>Actual/F'cast</i>	<i>Comment</i>
Requirements approval	10/31/2006	2/28/2007	Slippage to key reqts (EMS, MMS & EDW). EMS requirements are dependent on NPRRs and white papers being incorporated.
Key CSD submission	12/31/2006	12/31/2006	Planned CSDs issued on schedule
Key CSD approval	2/28/2007	2/28/2007	CRR, MIS and most COMS CSDs approved ahead of schedule
Vendor SOW BOD approval	12/10/2006	1/16/2006	CRR vendor approval deferred
Interface specs – draft	12/31/2006	12/31/2006	Deliverable issued to TPTF on schedule
Market Operations Sandbox	1/31/2007	1/31/2007	Initial sandbox delivered on schedule
Interface specs – final	3/31/2007	3/31/2007	Cross-program working group focused on achieving key MP milestone

The overall schedule and critical path are the major concerns

	IDA	NMMS	INF	MMS	EMS	CRR	COMS	EDW	MIS	MER	INT	EIP	IRT	Commentary
Scope & baseline	=	↓	=	=	=	↑	↓	↑	=	=	=	=	=	<ul style="list-style-type: none"> Working to close NPRR backlog on all projects to November Protocol version . Plan presented to TPTF. Technical Change control Board started
Resourcing	=	↑	=	↓	=	↓	↑	=	=	=	=	=	=	<ul style="list-style-type: none"> Looking to ramp up committed resources from Zonal for nodal projects and transition preparation Currently working on recruiting a number of EMS developers
Costs	=	=	=	↑	↑	=	=	↓	↓	=	=	=	=	<ul style="list-style-type: none"> Tracking to budget with some variances. Working with finance to close variances
Timescales	↓	=	=	↑	↑	↓	=	=	↓	=	=	=	=	<ul style="list-style-type: none"> Working on requirement and CSD approvals with TPTF. EMS requirements currently under review with TPTF, with CSDs scheduled for submission 2/23
Critical dependencies	=	=	=	=	=	↑	↓	=	=	=	↑	=	=	<ul style="list-style-type: none"> Working to finalize integrated project schedules to confirm feasibility of build sequence and timescales for downstream projects (Integration, Integration Testing, and market trials)
Vendors	=	=	=	=	↑	↑	↓	=	=	=	=	=	=	<ul style="list-style-type: none"> Project team assessing capabilities of key vendors to deliver on time and under Nodal protocols.
Stakeholders	=	=	=	=	=	=	=	↑	↓	=	=	=	↑	<ul style="list-style-type: none"> MP Sandbox delivered 31 January “Deep dive” review held with ERCOT Executives, business/IT owners and Nodal leadership as a step to improve engagement

Acronym	Project Name	Acronym	Project Name
IDA	Integration & Design Authority	EDW	Enterprise Data Warehouse
NMMS	Network Model Management System	MIS	Market Engagement & Readiness – Market Information System
INF	Infrastructure	MER	Market & Engagement & Readiness – Training
MMS	Market Management System	INT	Integration Testing
EMS	Energy Management System	EIP	Enterprise Integration
CRR	Congestion Revenue Rights	IRT	Integrated ERCOT Readiness & Transition
COMS	Commercial Systems		

	No major threats
	Known and contained threat – continue to progress and maintain a watching brief
	Major threat (or unknown) – “hair of fire” is the only acceptable response

Nodal spending to date

EXPENDITURE CATEGORY	JAN	Program
<input type="checkbox"/> O&M Expenses (,000):		Total
▪ Internal Labor	9	1,712
▪ Equipment, Tools, Materials & Supplies	0	50
▪ Outside Services/Consulting	(68)	4,922
▪ Software license	54	123
▪ Hardware	50	149
▪ Facilities & Utilities	0	1
▪ Employee Expenses	0	34
▪ Interest and Fees	46	430
▪ Depreciation and Amortization	478	3,344
▪ <u>Other</u>	<u>10</u>	<u>291</u>
▪ Sub-Total	579	11,056
<input type="checkbox"/> Capital Expenditures (,000):		
▪ <u>Sub-Total</u>	<u>12,837</u>	<u>49,584</u>
<input type="checkbox"/> Total Expenditures (,000)	11,571	60,640
<input type="checkbox"/> Commitments		\$36,178

Notes:

Total spending through December \$49,820K