

Nodal Program Update

Mike Cleary

Sr. VP and Chief Technology Officer

ERCOT Board of Directors

16 February 2010

Agenda

- Program Status
- Market Readiness
- Financials
- Appendix



288 Days to Go-Live

0 Items Impacting Go-Live Date

Market Trials 3.0:

- 247 of 275 QSEs Qualified for MMS transaction submittal
 - 79 / 86 QSEs w/ Resources
- 97 % of Generation Qualified

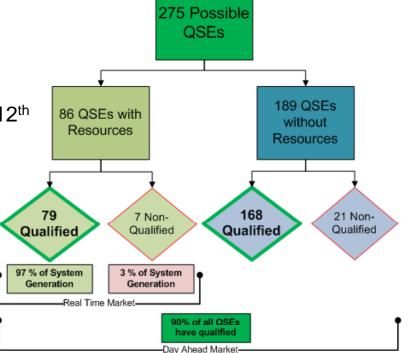
Congestion Revenue Rights (CRR)

- 54 of 80 CRRAH Qualified to date
- 1st Monthly Auction for March ran on February 12th
 - 38 MP's participated 12,208 total submittals
 - » 3,103 cleared transactions

Real Time Markets / Outage Scheduler

- Started Feb 1st
 - Window Closes for Qualification on Aug 13th
 - Real-Time LMPs posting every 5 minutes
 - Reports available on Nodal MIS to all MPs
 - Running on CIM model NMMS/EMS/MMS
 - QSE dashboards posting on Fridays to reflect submission performance metrics (Feb 11th)
- Outage Scheduler available to QSEs and TSPs

March 1st starts Six month LMP analysis



288 Days to Go-Live

0 Items Impacting Go-Live Date

• Market Trials 4.0: DAM/RUC

- Starting Thursday Apr 1st, for Operating Day Friday April 2nd
 - On Schedule
 - Submission Qualifications underway in Market Trials 2.1

• Market Trials 5.0: Full Functionality

- Starting May 3rd
 - 2 Week Slippage
 - Mitigation plan in place to pull back on track
 - » Overtime and budget monitoring

Market Readiness

- 27 of 35 outreach sessions completed
- Market Trials Kickoff
- Executive Briefing

Key Takeaways:

- Continue ramp-up of participation in Real-Time Market
 - Offers- Periodic exhausting of offers, LMP goes to cap (\$2,250)
 - Telemetry- Continued QSE/TSP focus on telemetered data
- Continue to increase CRR Auction participation
- Metrics/progress beginning to light up for market trials
- Need TSP commitment to submit outstanding model updates and perform validation by 2/29/2010



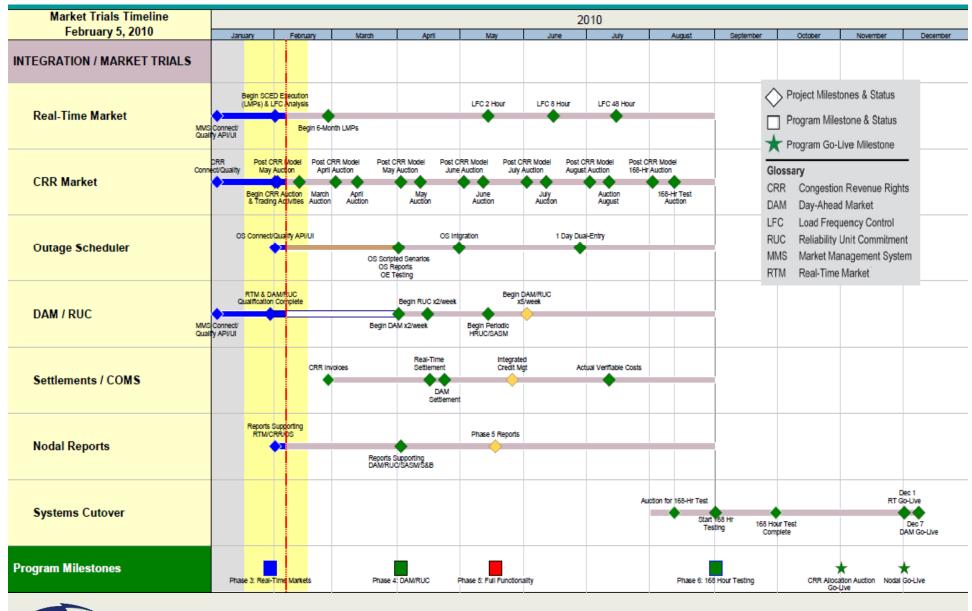
16 February 2010

Integrated Nodal Timeline

| Nodal Program Timeline | | | | | 2009 | | | | | | | | | 20 | 010 | | | | | |
|--|-----|---------|---------------|--|----------------|--------------------|-----------------------|----------------------------|--------------------|-------------|-----------------|---------------------------|-----------------------------------|-------------------------|---------------------|--|---------------------|------------|---|----------|
| February 5, 2010 | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Jan | Feb | Mar | Apr | Мау | Jun | Jul | Aug | Sep | Oct | Nov | De |
| Applications | | | | | | | | | | | | | | | | | | | | |
| MMS Functional Acceptance Testing | | | | MMSS FAT C | mplete | | | | | | | | | | | | | | | |
| CMM Functional Acceptance Testing | | | | CMM 4.1 FAT O | Complete | | | | CMM | EZ FAT CO | riplete | | | | | | | | | |
| Independent Market Monitor | | | | | | | | | | | | | | | | | | | _ | |
| Break Fix | | | | | | | | | | | | | | | | | | | | |
| SEM | | | | | | | | | | Ĩ | | | | | | 1 | | Complete | | - |
| System & External Verification Testing | | FAT | SAT | EDS | | | | | | | | _ | | | | Mestone & Status I Interim External Mile | istono & Status | On back | | |
| SEM Go-Live | | CEN No. | | | CEN Collins | | | | | | | | | | A Program | Go-Live Milestone | | | but will not affect mi will offect mitestone | |
| ntegration (INT) & Market Trials (MT) Phases | | SEM MOD | eing cuideine | s Postaci Final Nodal CIM Mos TAC/800 Approval o | F SEM Go-Live | | | | | | | | | | | men information Mod | | MVS Marke | et Management Syste | |
| INT 2.1 Testing | | | _ | | | - , | Phase 2.1 INT | Testing Complete | | | | | | | CRR Care DAM Day | it Monitoring Manage gestion Revenue Rigt Ahead Market | ment Ri | RTM Real- | Time Market | |
| Market Trials 2.1 External Testing | | | | | Ph | sse 2.1 Kickoff | | | | NT Phone | 2.1 Complete | | | | FAT FUN | Delivery System dianal Acceptance Te 1 Frequency Control | sting | RUC Reia | bility Unit Commitme Acceptance Testing | e. |
| INT 3 Testing | _ | | | | | -Y | | | Phase 3 INT Test | | | | | | | 8080 | Security Constraint | | | |
| | | | | | _ | | | | Run D 3 Kickoff | | | MT Phase 3 Compl | | | | | | | | |
| Market Trials 3 External Testing | _ | | | | | | | Phase | | 2 | | | | | | | | | | |
| INT 4 Testing | | | | | | | _ | | | | Phase 4 Kicks | RUC RUC | C-21r | | | | | | | |
| Market Trials 4 External Testing | | | | | | | | | | 1 | + DA | Malaweek DAMI | UC/RTM/S&B | | | | | | | |
| INT 5 Testing | | | | | | | | | | | - | | Phase 5 I | NT Testing Comp Br L | inte C-48ty | | | | | |
| Market Trials 5 External Testing | | | | | | | | | | | | R | n Full Nodel Sy | | ٠ | | MT Phase 5 | Complete | | |
| INT 6 Tesing | | | | | | | | | | | | | | | • | Phase 6 INT T | esting Complete | | | |
| Market Trials 6 External Testing | | | | | | | | | | | | | | | | Begin 24x7 | 1020-1 | e Complete | | Com |
| eadiness | | | | | | | | | | | | | | | | Support | | | | |
| Market Readiness | | | | P Training rolets | ~ | nduct Site Vielte | | | | | Site Visite Com | piele | | | | | | Stand By | Site Visits | |
| External Outreach | | | _ | • | | 1: 2.1 Connectiv | the Tant | | MRS 2: Mark | at Trials | | Market Readiness | | <u> </u> | | t5 4: 168 Hour Ter | | | ning Complete | |
| Market Training | | | | | | + | | | | and to M | | • | | | - | + | | | • | |
| Metrics Tracking & Assessment | | Metrice | | | | | | | Metrica M | | | | | | | | | | Conduct Me | |
| ERCOT Readiness | | | | | | | | MT3 De | P Complete | | MT4 PnP Compl | MTS De | P Complete | | NERC: | ERT Go-Live | | | ERT Post-G | |
| Internal Processes, Procedures & Training | | | | | | | | | | | • | | • | l Į | MTS PhP Com | O | OT Personnel | 1 | • | <u> </u> |
| System Cutover | | | | | | | | _ | | | | - Cree | Qo-Live | | Ge- | • | Training | | | |
| Operational Readiness | | | | | | | • 3-6 | | System Ave | | Spring | System | Cutover Plans | | System | Cutover Plans | | | | |
| Environment Configuration & Management | | | | | | NPRO | D Build | | Monitori | 1 | Health | check | SLA Conform | ance Monitoring | | | | | | |
| | | | | | | | all DST althcheck | Phase 3,4 & 5 Run Books | | | Phase 4 Perform | mance Verification a | 5 | | | Periodical Perform | ance Verification | 4 | | |
| Load & Performance; Failover & Fallback; Security Testing | | | | Phase | 21 Performance | | | | - | | Fallover/Se | cuity Testing | • | | | Fallover/Securi | ty Testing | | | |
| occurry resulty | | | | | | Phase 2 Securit | 1 Initial ty Testa | P | Failover/Security | Vertication | an & | Phase 5 Perio Failover | mance Vertical Security Testin | son & g | | | | Cutover | Node | Go-Live |
| Program Milestones | | | | | * | | | | | | | | | | | | | • | * 1 | * |
| Planning Nodal Enhancements | | | | SEM | xo-cive | Phase 2.1 Mar | tet Connectivity | | Phase 3: Real-TI | ine Markeb | Phase | 4 DAM/RUC | Phase 5: Full Functional | ty . | Planning Nod | Phase 6: 16 al Enhancemente | Hour Testing | CRR Alb | cation Auction | |



2010 Market Trials Timeline





Program Milestone Schedule Mitigation

Phase 5: *Full Functionality*

Integration Testing Schedule is still two weeks behind: No Impact on Go-Live

- Scope
 - End to end integration testing
 - Begin HRUC/SASM
 - Daylight Savings time change verification
 - Phase 5 performance verification

Mitigation Strategy

- Continue to leverage weekend overtime for Phase 5 test
- Prioritize and phase in the delivery of reports during Market Trials
- Prioritize Testing to ensure the critical functionality and reports are completed first
- Prioritize must have End-to-End scenarios
- Continue to efficiently schedule testing and release management windows



Nodal Program Risks & Issues

| Risk/Issue | Impacted Milestone | Target | Category | Probability | Severity | Status |
|---|-----------------------|--------------------|---------------------------------|-------------|----------|---|
| Integration Testing - Risk Continued risk around technology delivery of business systems integration due to complexity and continuing maturing of application and data dependencies. | Program | May 2010 | Scope / Schedule / Budget | Low | Med | Phase 3 complete Phase 4 On track; planning complete, execution in progress |
| Market Interaction Operating Level Agreements (OLAs)Need to determine operating level agreements associated with market interactions to assist ERCOT in establishing operational thresholds:-Network Model Load Frequency-DAM Sizing; -CRR sizing -Reporting | Program | April/ May 2010 | Scope / Budget | High | Low | On track Phase 3 complete Phase 4 and 5 OLA definitions in process NATF and NDSWG heavily involved in issue. Joint working session scheduled for 02/16/10 On track; presented to NATF on 02/02/10 On track; ERCOT is researching comparable CRR market sizes in PJM, CAISO, and MISO On track |
| Inadequate Backup for ICCP Failure: Current Protocol Language does not allow ERCOT to use State Estimator results as a backup input to SCED, LFC, & NSA processes in the event of an ICCP failure from both sources of Resource Status. | Program | April/ May 2010 | Scope / Schedule / Budget | High | High | ERCOT working on an impact analysis and NPRR language for consideration |



Nodal Program Risks & Issues

| Risk/Issue | Impacted Milestone | Target | Category | Probability | Severity | Status |
|---|-----------------------|-----------|---------------------------------|-------------|----------|--|
| Reconciling Protocols, Systems and Market Expectations Experience by other ISOs in deploying nodal markets 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. | Phase 3 | Complete | | | | • Complete |
| Credit Management – Business & Technical Exposure Credit Management rules and exposure calculations will change significantly with the implementation of the Nodal Program. During the requirements and design phase of the program stakeholder concerns have been expressed that may result in requested system changes as the program moves into Market Testing of Credit Management. | Phase 5 | July 2010 | Scope / Schedule / Budget | High | Med | ERCOT business and Nodal Program reviewing Credit concerns and next steps. |



Earned Value for the Nodal Program

\$90.0 Chart only uses values associated with Internal Labor Costs, External Resource Costs, Administrative & Employee Expenses, Vendor and Backfill \$80.0 \$70.0 The metrics were set to 0 starting in September 2009 to coincide with Q4 EAC Reforecast. \$60.0 The Planned Value for January-December 2010 coincides with \$ Millions Q1 EAC Reforecast. CPI = 1.07 \$50.0 PFI = .98 \$40.0 \$30.0 Planned Value \$24,171,474 Earned Value \$23,446,330 Actual Cost \$22,087,033 \$20.0 \$10.0 \$-Sep-09 Jun-10 Oct-09 Nov-09 Dec-09 Jan-10 Feb-10 Mar-10 Apr-10 May-10 Jul-10 Aug-10 Sep-10 Oct-10 Nov-10 Dec-10 Planned Value \$-\$6.5 \$12.7 \$18.4 \$24.2 \$30.0 \$36.4 \$42.4 \$48.1 \$53.9 \$58.2 \$62.2 \$66.1 \$69.7 \$73.0 \$76.0 🛨 Earned Value \$-\$5.8 \$12.0 \$17.4 \$23.4 Actual Cost \$-\$5.8 \$11.2 \$16.4 \$22.1

Nodal Program



10

Participant Readiness Touch Points

| | | 20 | 10 | |
|------------------|--|--|--|---|
| | February | March | April | Мау |
| Meetings | • NATF 2/2, 2/16,2/19) | • NATF 3/2 | • NATF 4/6 | • NATF 5/4 |
| Training | Nodal 101 LSE 201 Basic Training Generation 101, 201 CRR – instructor-led Settlement Workshop Operations Seminar | Nodal 101 LSE 201 Basic Training Generation 101, 201 CRR – instructor-led Settlement Workshop Operations Seminar | Nodal 101 Trans 101 Generation 101, 201 CRR – instructor-led NMMS Economics of LMP Combined Cycle Workshop | Nodal 101 Trans 101 Generation 101, 201 CRR – instructor-led NMMS Economics of LMP |
| Outreach | 5 site visits Additional Phase 3 metrics Standby site visits mitigation approach | 4 site visits Scheduled Site Visits conclude MRS #3 March 25th | Standby site visits Phase 4 metrics launch | Standby site visits Metrics monitoring |
| Market trials | Weekly calls Phase 3 Market Trials initiates QSE OS qualification Phase 4 Handbooks DAM/RUC MIS | Weekly calls Phase 3 Execution Phase 4 Handbooks Updates to prior handbooks LFC individual QSE tests | Weekly calls Phase 4 Market Trials initiates Phase 5 Handbooks Updates to prior handbooks Credit | Weekly calls 2 hr system-wide LFC test Phase 5 Market Trials initiates |



| | Course | Start Date | Location |
|---------------|--------------------------------|-------------|--|
| | Generation 201 | February 9 | Suez Energy (Houston) |
| | Generation 101 | February 16 | Austin Airport Marriott South (Austin) |
| | Network Model Management | February 18 | ERCOT Met Center (Austin) |
| \Rightarrow | Settlements Workshop – RUC/RTM | February 23 | ERCOT Met Center (Austin) |
| | ERCOT Nodal 101 | February 25 | ERCOT Met Center (Austin) |
| | Load Serving Entity 201 | March 3 | ERCOT Met Center (Austin) |
| | Economics of LMP | March 8 | Norris Conference Center (Houston) |
| | Basic Training Program | March 8 | Austin Airport Marriott South (Austin) |
| | Congestion Revenue Rights | March 9 | Norris Conference Center (Houston) |
| \Rightarrow | Settlements Workshop – RUC/RTM | March 9 | City of Garland Fire Building (Dallas) |
| 4 | Settlements Workshop – RUC/RTM | March 23 | Calpine (Houston) |

Enrollment at: http://nodal.ercot.com/training/courses/index.html



Wind Panel Hosted by Horizon Wind February 16, 2010 Houston, TX 9-3pm

Retail Panel Hosted by StarTex February 17, 2010 Houston, TX 9-3pm

Agenda:

- Outreach: Program Update
- Outreach: Real-Time Market
- Outreach: Merged DAM&RUC
- Credit Management
- Wind Resource discussion

Agenda:

- Outreach: Program Update
- Outreach: Merged DAM&RTM
- Outreach: CRR Auction
- Credit Management
- Retail operations discussion

RSVP required due to room limitations, but WebEx available

Wind- http://www.ercot.com/calendar/2010/02/20100216-MT

Retail- http://www.ercot.com/calendar/2010/02/20100217-MT



16 February 2010

Market Participant Site Visits

Confirmed 🗌 Completed 🖌 27 Outreach Site Visits have been completed Entity Entity Date Date NRG TEXAS POWER ✓ LOWER COLORADO RIVER AUTHORITY 9-Oct 15-Dec DIRECT ENERGY LP 5-Jan 14-Oct ✓ CALPINE CORP 6-Jan CPS ENERGY ✓ AUSTIN ENERGY 20-Oct 13-Jan ☑ BTU (Bryan Texas Utilities) SERVICES 21-Oct ✓ CITY OF GARLAND **OCCIDENTAL** 20-Jan 29-Oct GDF SUEZ ENERGY MARKETING \checkmark 26-Jan TENASKA POWER SERVICES ✓ ANP FUNDING 3-Nov OPTIM ENERGY 27-Jan ✓ LUMINANT ENERGY 5-Nov 3-Feb ✓ INVENERGY WIND DEVELOPMENT 10-Nov I E. ON 9-Feb 11-Nov Z EXELON WIND PANEL (Houston) 16-Feb ☑ AMERICAN ELECTRIC POWER SERVICE 12-Nov RETAIL PANEL (Houston) 17-Feb CONSTELLATION ENERGY 17-Nov \checkmark TRI-EAGLE ENERGY 18-Feb ✓ PSEG ENERGY RESOURCES 18-Nov NEXTERA ENERGY 26-Feb J ARON 19-Nov □ XTEND ENERGY LP 2-Mar FULCRUM POWER 2-Dec 9-Mar ✓ EAGLE ENERGY PARTNERS I LP 3-Dec BRAZOS ELECTRIC 10-Mar ✓ STEC 9-Dec □ SHELL ENERGY 11-Mar **BP ENERGY COMPANY** 10-Dec **FORMOSA UTILITY** 16-Mar 18-Mar **WESTAR**



Active MP Metrics (as of 2/12/2010)

| Metric Name | Current Score (as of 2/12/2010) | Applies to | Weight | Green % | Yellow % | Red % | Not Scored % | Primary Criteria | Notes |
|---|---------------------------------------|------------|--|------------|-------------|-------|--------------|---|--|
| | Green | QSERs | Generation Ratio Share | 97.2% | 2.8% | 0.0% | 0.0% | Successful submission of RT and | 79/86 QSERS Qualified (including sub-QSEs). |
| MP3 Market Submissions Connectivity Qualification | Amber | QSEs | Even weighting | 88.9% | 5.8% | 1.1% | 4.2% | DAM transactions (275 total entities included sub-QSEs). | 168/189 QSEs qualified (including sub-QSEs). Below 95% threshold for overall GREEN. |
| | Green | QSERs | Generation Ratio Share | 87.7% | 0.6% | 0.0% | 11.7% | 100% expected State Estimator telemetry submitted. | 42/45 QSERs completed (parent QSEs only). 3492/3500 SE points provided (99.1%). |
| MP6 Telemetry Compliance with Nodal Protocols 3.10.7.5 | Green | QSERs | Generation Ratio Share | 87.7% | 0.0% | 0.6% | 11.7% | 100% expected SCED telemetry submitted. | 42/45 QSERs completed (parent QSEs only. 7621/7633 SCED points provided (99%). |
| | Green/White only | TSPs | Ownership Ratio Share | 83.4% | 0.0% | 0.0% | 16.6% | 100% expected TSP telemetry per ICCP Handbook submitted | 15/20 TSPs completed. 12600/12956 TSP CB and LD points provided (94.9%). |
| MP11 Resource Registration | Green | REs | Registered MW Capacity Ratio Share | 97.9% | 1.3% | 0.8% | | RARF validated, Decision Making Authority form submitted, and GENMAP validated | 151/159 Resources completed (95%). |
| MP15-A Real-time Market Participation | Green/White only | QSERs | Generation Ratio Share | 9.8% | 0.0% | 0.0% | | Weekly average of daily SCED submissions (energy offer curves and/or | 13/86 QSERs above 95% weekly average for SCED submissions. AMBER/RED scores light up 2/24/2010 . |
| MP15-B CRR Connectivity Qualification | Red | CRRAHs | Even weighting | 71.6% | 6.2% | 11.1% | 11.1% | Successful submission CRR transactions | 57/83 CRRAHs qualified. 13 CRRAHs non-responsive to outreach calls. Greater than 5% overall RED. |
| MP20 Outage Scheduler Connectivity Qualification | Green/White only | QSERs | Generation Ratio Share | 34% | 0.0% | 0.0% | 66% | Successful submission of OS transactions | 13/86 QSERS qualified. AMBER/RED scores light up 4/7/2010 after OS window closes. |
| zuanneation | Green/White only | TSPs | Ownership Ratio Share | 6% | 0% | 0% | 94% | | 1/20 TSPs qualified. |
| | | | | | | | GREEN | Submissions complete | |
| | m / 0010 | | | | | 45 | AMBER | Submissions not complete, but | actively working with ERCOT |



RED

ERCOT Board of Directors Submissions not complete, participation not adequate

Red Market Participants (in order of importance)

M3 Market Submissions Connectivity Qualification

Total: 189 QSEs without Resources (including sub-QSEs) * Green: 168 complete Amber: 11 (working with ERCOT) Red: 2 (unresponsive). New: 8 (allowed 30 day grace period) UBS AG LONDON BRANCH VANTAGE WIND SERVICES LLC

EDISON MISSION MARKETING AND TRADING INC

MP6 Telemetry Compliance with Nodal Protocols 3.10.7.5

Total: 45 QSEs with Resources (parent QSEs only) **Green:** 42

Amber: 1 for State Estimator points (< 100% and >= 80% telemetry provided)

Red: 1 for SCED points (< 80% telemetry provided).

MP15-B CRR Connectivity Qualification

Total: 81 CRRAHs Green: 58 complete Amber: 5 Amber (working with ERCOT) Red: 9 (unresponsive) New: 9 (allowed 30 day grace period)

The applicable primary contact for each Market Participant has been contacted via phone and e-mail by ERCOT's Wholesale Client Services Department notifying them of the change to RED status. AMBRIDGE ENERGY LLC (CRRAH) COMMERCE ENERGY INC (CRRAH) CREDIT SUISSE ENERGY LLC (CRRAH) FRANKLIN POWER LLC (CRRAH) MERRILL LYNCH COMMODITIES INC (CRRAH) PEPCO ENERGY SERVICES INC (CRRAH) PRIVATEMARKETS INC (CRRAH) STAR ELECTRICITY LLC DBA STARTEX POWER (CRRAH) VELOCITY AMERICAN ENERGY MASTER I LP (CRRAH)

* MP3 applies to QSEs with and without Resources. Currently, the only Market Participants with a RED status for MP3 are QSEs without Resources.



16 February 2010



Monthly Financial Review

Don Jefferis Interim Director – Nodal Financial Management Office 16 February 2010

Approved Forecast to Actual Comparison Month of January 2010

Forecast Cumulative

Variance

| Line | Cost Summary | Forecast | Actual | Forecast Variance | (Pending Contingency Mgmt Disposition) |
|--------|----------------------------------|----------|--------|----------------------|---|
| 1 | Internal Labor Costs | \$2.1 | \$2.3 | (0.2) | (\$0.2) |
| 2 | Backfill Labor Costs | 0.2 | 0.1 | 0.1 | 0.1 |
| 3 | External Resource Costs | 3.4 | 3.2 | 0.2 | 0.2 |
| 4 | Software & Software Maintenance | 0.3 | 0.2 | 0.1 | 0.1 |
| 5 | Hardware & Hardware Maintenance | 1.0 | 0.8 | 0.2 | 0.2 |
| 6 | Other | 0.1 | 0.0 | 0.1 | 0.1 |
| 7 | Sub-total Direct Project Costs | \$7.1 | \$6.6 | \$0.5 | \$0.5 |
| 8 | Board Discretionary Fund | \$0.0 | \$0.0 | \$0.0 | \$0.0 |
| 9 | Allocations | \$0.4 | \$0.3 | \$0.1 | \$0.1 |
| 10 | Finance Charges | 1.1 | 1.1 | 0.0 | 0.0 |
| 11 | Sub-total Indirect Project Costs | \$1.5 | \$1.4 | \$0.1 | \$0.1 |
| 12 | | | | | |
| 13 | Total | \$8.6 | \$8.0 | \$0.6 | \$0.6 |
| nounte | in millions | | | | |

Amounts in millions

Favorable / (Unfavorable)



Financial Review - LTD Performance through January 2010

Nodal Program

Approved Forecast to Actual Comparison

Life-to-Date through January 2010

| | | | | | Forecast |
|------|----------------------------------|----------|---------|----------|-----------|
| Line | Cost Summary | Forecast | Actual | Variance | Remaining |
| 1 | Internal Labor Costs | \$58.5 | \$58.7 | (\$0.2) | \$25.1 |
| 2 | Backfill Labor Costs | 5.5 | 5.4 | 0.1 | \$1.8 |
| 3 | External Resource Costs | 258.0 | 257.8 | 0.2 | 24.5 |
| 4 | Software & Software Maintenance | 25.9 | 25.8 | 0.1 | 3.2 |
| 5 | Hardware & Hardware Maintenance | 52.1 | 51.9 | 0.2 | 3.2 |
| 6 | Other | 2.1 | 2.0 | 0.1 | 11.3 |
| 6a | Sales Tax Refund | (\$7.3) | (\$7.3) | 0.0 | 0.0 |
| 7 | Sub-total Direct Project Costs | \$394.8 | \$394.3 | \$0.5 | \$69.1 |
| 8 | Board Discretionary Fund | \$0.0 | \$0.0 | \$0.0 | \$105.5 |
| 9 | Allocations | \$20.4 | \$20.3 | \$0.1 | \$2.6 |
| 10 | Finance Charges | 27.0 | 27.0 | 0.0 | 24.4 |
| 11 | Sub-total Indirect Project Costs | \$47.4 | \$47.3 | \$0.1 | \$27.0 |
| 12 | | | | | |
| 13 | Total | \$442.2 | \$441.6 | \$0.6 | \$201.6 |
| | | | | | |

Amounts in millions

Favorable / (Unfavorable)

Note 1: Forecast consists of actuals through January 2010 and re-forecast February 2010 forward

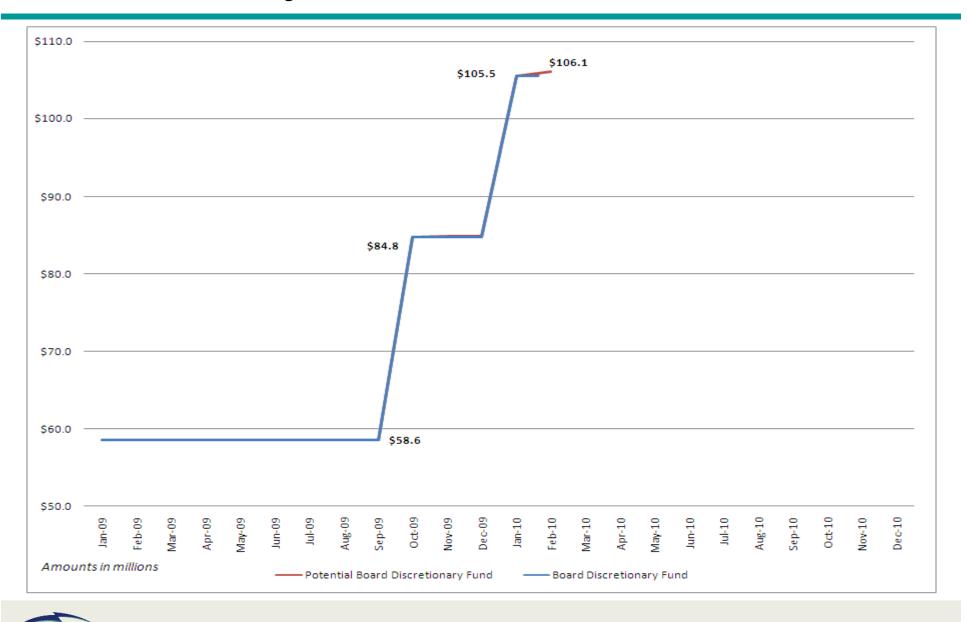
Note 2: Actual amounts in 2009 are preliminary and unaudited

| | | S | Sources (A | dditions |) | | | | | |
|----------|----------------------|----------------------------|--|-------------------|------------------------|----------------------------|---------------------------------|--|-------------------|-------------------|
| Date | Beginning Balance | Direct Program Costs | Facilities & Support Allocations | Finance Charge | Sales Tax Refund | Direct Program Costs | CTO Risk Contingency Fund | Facilities & Support Allocations | Finance Charge | Ending Balance |
| 09/30/09 | \$58.6 | 21.7 | 1.8 | 15.1 | | (10.1) | (2.3) | | | \$84.8 |
| 12/31/09 | \$84.8 | 12.1 | 0.7 | 11.7 | 7.3 | | (10.8) | (0.3) | | \$105.5 |

Amounts in Millions

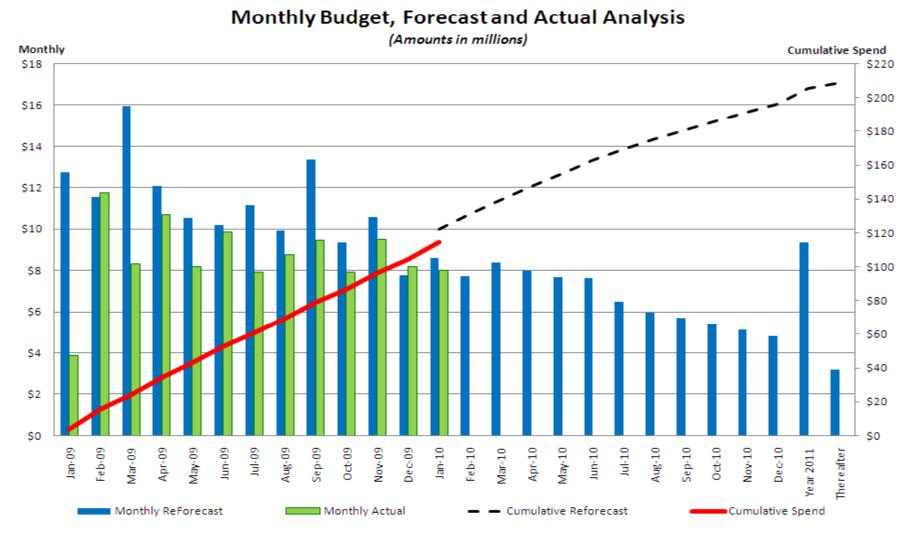


Board Discretionary Fund



ERCO

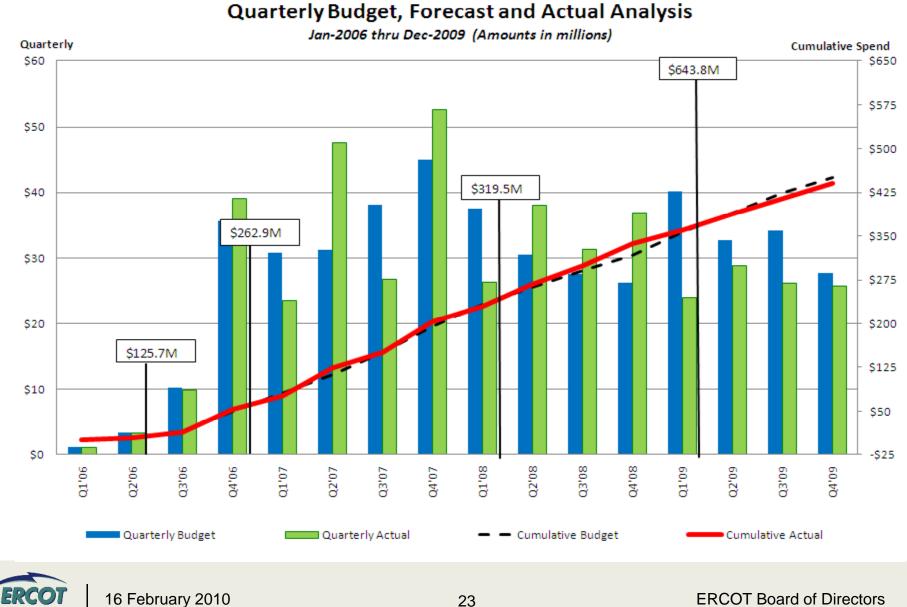
Program Cost Management – 2009 and 2010 Forecast



Note: Year 2011 and thereafter are finance charges



Program Cost Management - 2006 to 2009 Quarterly



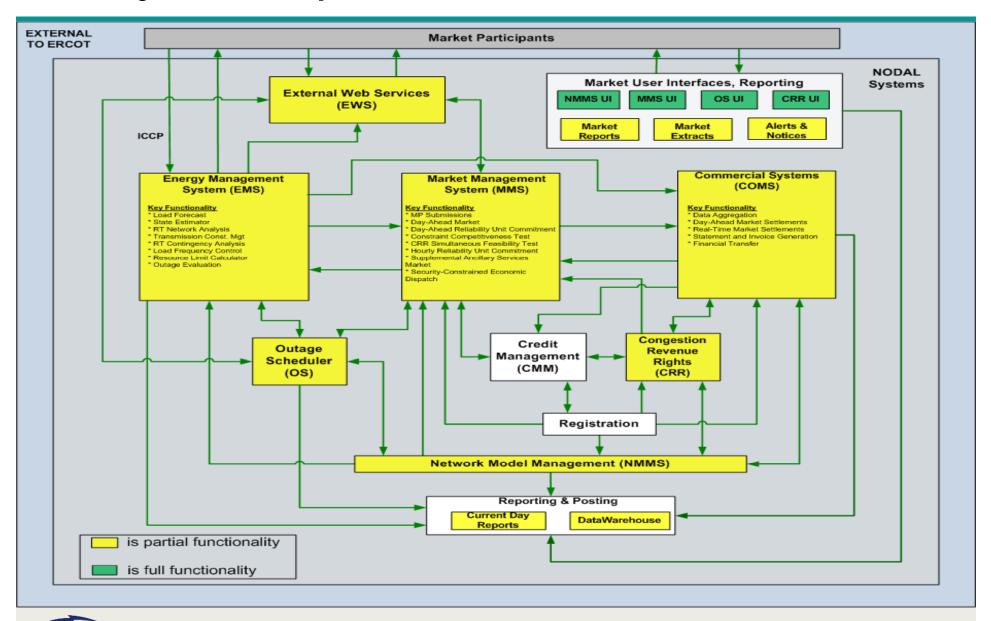
Questions?



Appendix



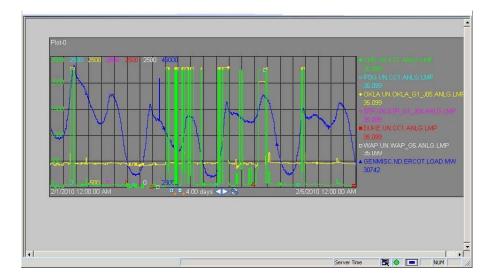
Nodal Systems Blueprint - Market Trials - Phase 3 - Feb. 1st



Real Time Market / LFC Update

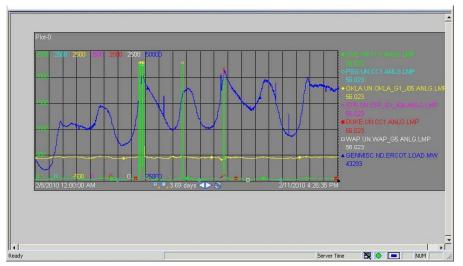
SCED Week 1

The lack of offer curves was apparent with the amount of time the LMP's were at \$2250 during Week 1.



SCED Week 2

During Week 2 offer curve submissions clearly demonstrate better LMP's and hitting \$2250 mainly during morning peaks.



Nodal Program Risks & Issues: Definitions

Definitions for Category, Probability and Severity of Risks & Issues:

• Category

- <u>Scope</u>: Will require a scope change
- <u>Schedule</u>: Will require a schedule change
- <u>Budget</u>: Will require a budget change

• Probability

- <u>High</u> : Expected to require Change Request over the next 1-3 months
- <u>Medium</u>: Expected to require Change Request over the next 4-10 months
- <u>Low</u>: Not expected to require a Change Request

• Severity

- <u>High</u>: Milestone impact, or budget impact >\$500,000
- <u>Medium</u>: Milestone impact but expected to be mitigated, or budget impact between \$0 - \$500,000
- Low: No milestone impact, or no budget impact



Defect Definitions

| Severity | | Definition | | | | | | | |
|---|------------------|---|---------------------------------|--|--|--|--|--|--|
| Severity 1: Data loss/critical error | such as syste | ender unavailable the critical functions of the system un m errors, application failures, loss of data, incorrect calc o access database, and inability to display information to | ulations, inability to transfer | | | | | | |
| Severity 2: Loss of functionality w/o workaround | available. The | Defects that render unavailable partial functionality of the system under test with no workaround available. These include errors such as incorrect information displayed to the user, information not updating correctly, extracts failing, and missing export files. | | | | | | | |
| Severity 3: Loss of functionality with workaround | available. The | efects that render unavailable partial functionality of the system under test with a workaround vailable. These include errors such as incorrect message displayed, optional information missing r not displayed correctly, not receiving e-mail notifications, and incorrect defaults. | | | | | | | |
| Severity 4: Partial loss of a feature set | | Defects that affect a feature that is not executed on a frequent basis and there is not a significant mpact on the system. These include errors such as help information, filtering, and consistent naming. | | | | | | | |
| Severity 5: Cosmetic/documentation error | stability of the | re cosmetic and need to be resolved, but are not a factor system. These include errors such as field alignment, re s, column order and documentation that is inconsistent | eport formatting, drop down | | | | | | |
| | | Prescription in Quality Center | | | | | | | |
| | Priority 1 | Must fix ASAP | | | | | | | |
| | Priority 2 | Must fix prior to Go-Live | | | | | | | |
| | Priority 3 | Not critical to fix before Go-Live | | | | | | | |
| | Priority 4 | Minor system/user impact | | | | | | | |
| | Priority 5 | No system/user impact | | | | | | | |



Protocol Traceability Effort Update

| Tier 1 Sections | | | | | | | | | | |
|--|------------------------|-------------------|--|--------------------------------------|------------------------|--|--|--|--|--|
| | PTE Traced Items | Research Items | In Progress: Business Procedures | In Progress: Reports/ Extracts | PTE Alignment Items | | | | | |
| Section 3 – Management Activities for the ERCOT system (Dec NATF) | 928 | 171 | 550 | 193 | 67 | | | | | |
| Section 4 – Day Ahead Operations (Nov NATF) | 635 | 66 | 63 | 76 | 3 | | | | | |
| Section 5 – Transmission Security Analysis and RUC (Nov NATF) | 166 | 30 | 53 | 15 | 10 | | | | | |
| Section 6 – Adjustment Period and Real- Time Operations (Jan NATF) | 926 | 71 | 441 | 55 | 39 | | | | | |
| Section 7 – Congestion Revenue Rights (Oct NATF) | 445 | 54 | 58 | 27 | 1 | | | | | |
| Section 8 – Performance Monitoring (Jan NATF) | 226 | 32 | 130 | 82 | 9 | | | | | |
| Section 9 – Settlement & Billing (Nov NATF) | 408 | 0 | 128 | 55 | 2 | | | | | |
| Section 16.11 – Financial Security for Counter Parties (Dec NATF) | 198 | 2 | 33 | 25 | 3 | | | | | |
| Section 17 – Market Monitoring & Data Collection (Dec NATF) | 25 | 7 | 21 | 1 | 6 | | | | | |
| Total | 3956 | 433 | 1477 | 529 | 140 | | | | | |



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Alignment Item Categories

| | Total | | Cate | egory of Align | ment Items | |
|---|--------------------|------|---------------------------|-----------------------------------|------------------------------------|------------|
| | Alignment Items | NPRR | TBD / need category | Business Requirement Update | Business Procedures Revision | Other |
| Section 3 – Management Activities for the ERCOT system | 67 | 6 | 31 | 19 | 7 | 4 - Report |
| Section 4 – Day Ahead Operations | 3 | 2 | 0 | 1 | 0 | 0 |
| Section 5 – Transmission Security Analysis and RUC | 10 | 5 | 0 | 2 | 3 | 0 |
| Section 6 – Adjustment Period and Real-Time Operations | 39 | 11 | 6 | 12 | 6 | 4- Report |
| Section 7 – Congestion Revenue Rights | 1 | 0 | 0 | 0 | 0 | Handbook |
| Section 8 – Performance Monitoring | 9 | 2 | 1 | 3 | 2 | 1- Report |
| Section 9 – Settlement & Billing | 2 | 2 | 0 | 0 | 0 | 0 |
| Section 16.11 – Financial Security for Counter Parties | 3 | 1 | 0 | 1 | 1 | 0 |
| Section 17 – Market Monitoring & Data Collection | 6 | 1 | 2 | 1 | 1 | 1- Report |
| Total | 140 | 30 | 40 | 39 | 20 | 11 |



The SMEs are transitioning to ERT team.

ERT and PMO will prioritize the remaining work within the ERCOT Readiness activities.

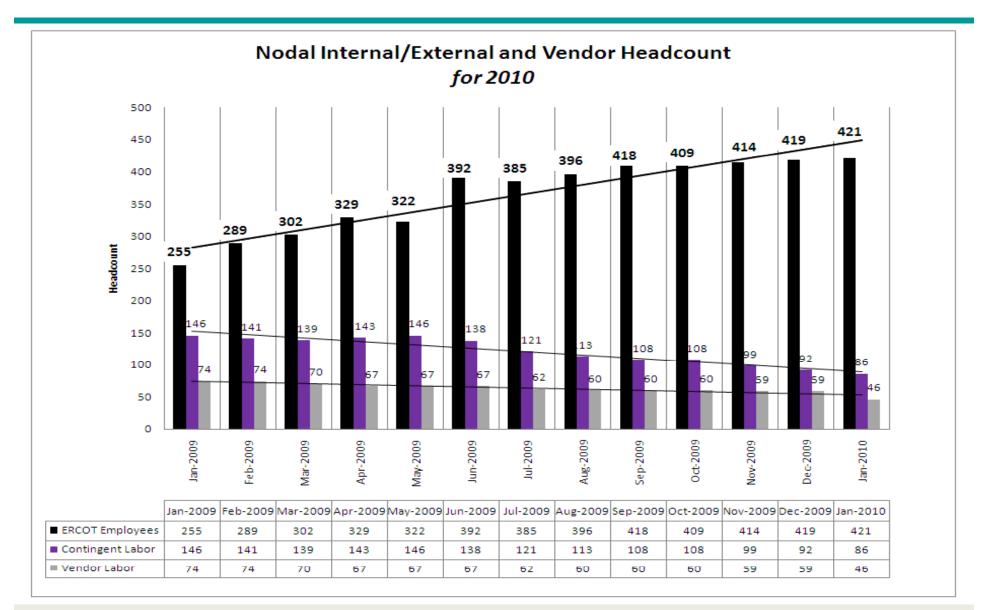
- NPRRs SMEs work with Business Owners to draft NPRRs to put through CEO review process and governance process
- Alignment Items
 - TBD Category
 - Business Requirement Updates
 - Business Procedures Revisions
 - Other
- Research Items
- In Progress Business Procedures
- In Progress Reports / Extracts

ERT and PMO will report to market closure of items



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Nodal Internal/External and Vendor Headcount 2010





Program Issue: Market Interaction Operating Level Agreements

Potential Milestone Impact: Phase 3 RTM, Phase 4 DAM/RUC, Phase 5 Full, Go-Live Need to determine service level agreements associated with market interactions to **ISSUE:** assist ERCOT in establishing operational thresholds. ERCOT is responsible for Market Interaction OLA ensuring any market thresholds required before Go-Live are defined, managed through the appropriate stakeholder processes and communicated in a timely fashion. Life Cycle State Plan Manage **Mitigation Plans** Who **Current Status Target Date** March 1. ORT to define OLA with business and **ORT**, Market Continuing to define Market OLAs for all the market for each phase. subsequent Market Trial Phases as part of Trials the ORT project plan: Phase 2.1: Complete Phase 3: Complete Phase 4: OLA Definitions in Progress PMO. ORT. 2. PMO working with ORT to ensure January, April, Continuous communication will be consistent communications and work May, August delivered to the internal and external Market Trials planning is in place to deliver the stakeholders in support of each market appropriate OLA and market throttling delivery. recommendations for each market release.

Program Risk: Integration Testing

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| 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 C | ycle State | | | | | | |
| Define | Plan | Manage | Watch | | | | | |
| Mitigation Plans | | | | Who | Target Date | Current Status | | |
| 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 | Nodal Program Release Scope and Schedule defined to ensure delivery. Program Status Report and Dashboard in place to track progress. | | |

Program Issue: Network Model Load Frequency

◇ Potential Milestone Impact: Overall Program

| ISSUE: Network Model Load Frequency | | Model updates for Nodal will require more attention and coordination by both MPs and ERCOT to ensure alignment. ERCOT has determined that a bi-monthly Nodal database load represents the most manageable solution for updating the | | | | | | |
|---|--------|---|-------------|--|---|--|--|--|
| Life Cycle State | | real-time environment when Nodal begins in December 2010. | | | | | | |
| Plan | Manage | | | | | | | |
| Mitigation Plans | | Who | Target Date | Current Status | | | | |
| Define and document Initial Model Load Process. | | ERT | Complete | Initial Process Documented, to be updated based on feedback from Testing and Operations teams. | | | | |
| 2. Validate and improve the Model Load Process over the next several months based on a Zonal Bi-Weekly load timeframe. | | | INT, INF | January - March | Initial loads completed, targeting mid January Model load to align with Zonal schedule. | | | |

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Program Risk: Reconciling Protocols, Systems, and Market Expectations

| \diamond Pote | ential Mil | lestone I | mpact: | Market Trials | | | | |
|--|------------|-----------|---------------------|--|-------------|----------------|--|--|
| Risk: Reconciling Protocols, Systems and Market Expectations Risk Life Cycle State | | | | 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 | | | | |
| Define | Plan | Manage | Watch | nodal implementation as well. | | | | |
| Mitigation Plans | | | | Who | Target Date | Current Status | | |
| Assess maturity and readiness of software in the initial nodal release, focusing on new/tailored capability for Texas Nodal. | | | B. Day K. Farley | Complete | Complete | | | |
| 2. Add team members to the nodal program with Texas market experience to ensure readiness for Market Trials. SMEs to discussion alignment issues with ERCOT business owners. SMEs to report the results of the assessment to the ERCOT business owners for resolution. | | | | V. Gates | Complete | Complete | | |
| 3. Keep the oversight groups apprised of progress. | | | | M. Cleary | Complete | Complete | | |

