Item 4.3: Operations Report
(May & June 2013)

Trip Doggett
President & CEO

Board of Directors Meeting
ERCOT Public
July 16, 2013

Summary – May 2013

- May 2013 Operations
  - The peak demand of 56,182 MW on May 31st was more than the mid-term forecast peak of 55,549 MW and less than the May 2012 actual peak demand of 59,031 MW. The instantaneous load on May 31st was 56,410 MW.
  - Day-ahead load forecast error for May was 3.12%
  - ERCOT issued two Advisories due to Voltage Security Assessment Tool (VSAT) not solving for 30 minutes during each event.
  - No Watches were issued
  - No Energy Emergency Alert (EEA) events

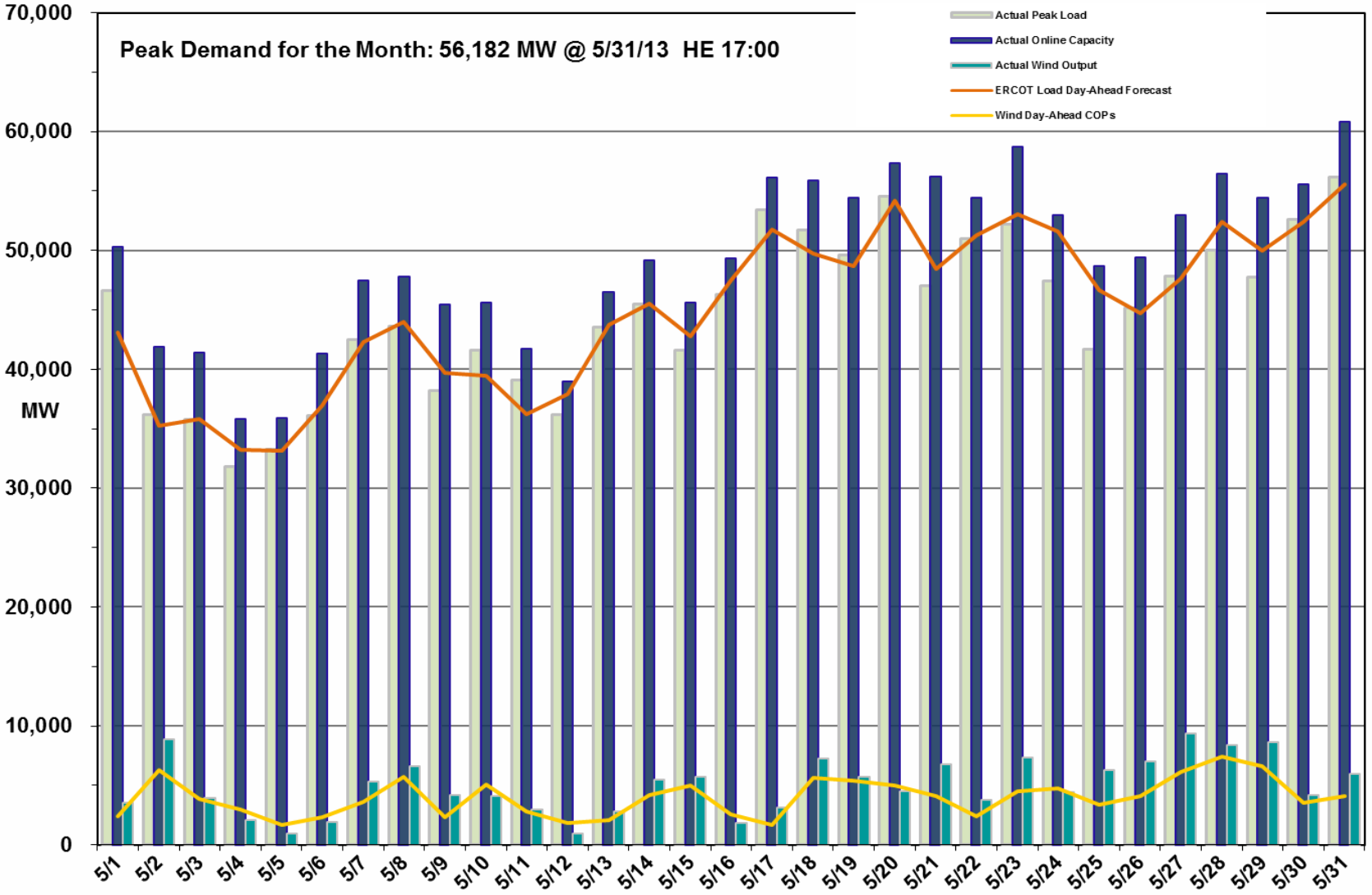
- Planning Activities
  - 158 active generation interconnection requests totaling over 48,000 MW, including 20,000 MW of wind generation as of May 31, 2013. One less request but the same total MW as April 30, 2013
  - 10,570 MW wind capacity in commercial operation May 31, 2013; no change from April 30, 2013

Summary – June 2013

- June 2013 Operations
  - The peak demand of 64,426 MW on June 27th was less than the mid-term forecast peak of 66,430 MW and less than the June 2012 actual peak demand of 66,548 MW. The instantaneous load on June 27th was 64,592 MW.
  - Day-ahead load forecast error for June was 2.51%
  - ERCOT issued two Advisories.
    - Single advisory for Voltage Security Assessment Tool (VSAT) & State Estimator not solving for 30 minutes.
    - Single advisory for geomagnetic disturbance storm of K-7 or higher.
  - No Watches were issued
  - No Energy Emergency Alert (EEA) events

- Planning Activities
  - 164 active generation interconnection requests totaling over 44,000 MW, including 21,000 MW of wind generation as of June 30, 2013. Six more requests and 4,000 less MW from May 31, 2013
  - 10,570 MW wind capacity in commercial operation June 30, 2013; no change from May 31, 2013

Daily Peak Demand: Hourly Average Actual vs. Forecast, Wind Day-Ahead COPs & On-line Capacity at Peak – May 2013



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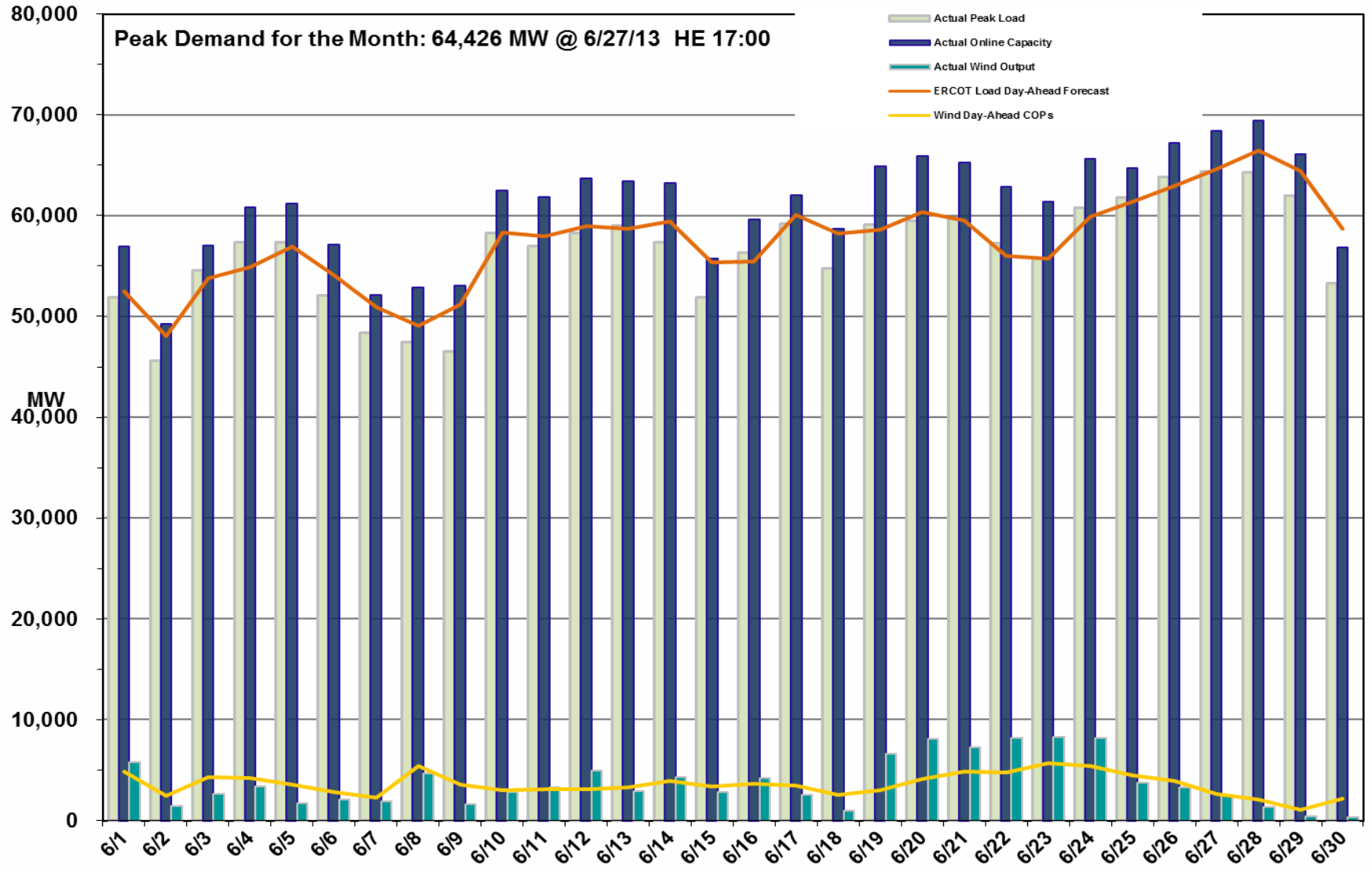
Note: All data are hourly averages during the peak load hour obtained from COPs, and EMMS.

Daily Peak Demand: Hourly Average Actual vs. Forecast, Wind Day-Ahead COPs & On-line Capacity at Peak – June 2013



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Note: All data are hourly averages during the peak load hour obtained from COPs, and EMMS.

Market Statistics – May 2013

Market Statistics	May 2012	May 2013	2012 Average	2013 YTD Average
Percentage of Real-Time load hedged in Day-Ahead Market	117.26%	119.39%	122.66%	118.94%
Average 'ERCOT Hub Average 345 kV Hub' Settlement Point Price in Day-Ahead Market ($/MWh)	25.11	34.70	30.18	30.38
Average 'ERCOT Hub Average 345 kV Hub' Settlement Point Price in Real-Time ($/MWh)	21.80	29.94	26.49	28.84

Market Statistics – June 2013

Market Statistics	June 2012	June 2013	2012 Average	2013 YTD Average
Percentage of Real-Time load hedged in Day-Ahead Market	113.54%	115.52%	122.66%	118.37%
Average 'ERCOT Hub Average 345 kV Hub' Settlement Point Price in Day-Ahead Market ($/MWh)	37.80	38.78	30.18	32.14
Average 'ERCOT Hub Average 345 kV Hub' Settlement Point Price in Real-Time ($/MWh)	32.25	32.39	26.49	29.59

Operational Performance Measures – May 2013

Performance Measure	Target Met	Further Information
Retail Transaction Performance *(Target 98%)*	*Yes*	• Retail transaction processing performance was at 100%
Settlements Performance *(Target 99%)*	*Yes*	• 100% timely statement and invoice posting

Operational Performance Measures – June 2013

Performance Measure	Target Met	Further Information
Retail Transaction Performance *(Target 98%)*	*Yes*	• Retail transaction processing performance was at 98%
Settlements Performance *(Target 99%)*	*Yes*	• 100% timely statement and invoice posting

Operational Dashboard – May 2013

Metric	Trending as Expected	Further Information
Day-Ahead Schedule	*Yes*	• Normal level of market activity and liquidity • Loads appear to have hedged against exposure to Real-Time prices
Day-Ahead Electricity And Ancillary Service Hourly Average Prices	*Yes*	• Hourly average prices correctly reflect the opportunity cost of energy
Day-Ahead vs Real-Time Load Zone Settlement Point Price (Hourly Average)	*Yes*	• Day-Ahead & Real-Time prices for different Load Zones reflect relative transmission congestion
Day-Ahead vs Real-Time Trading Hub Settlement Point Price (Hourly Average)	*Yes*	• The average energy price across the system reflects marginal offers and scarcity pricing impacts • Higher average Day-Ahead energy prices reflect the risk premium between Day-Ahead & Real-Time
Day-Ahead Reliability Unit (DRUC) Commitment Monthly Summary	*Yes*	• Capacity committed by the DRUC process indicates the level of out of market activity needed Day-Ahead to maintain reliability • No resources were committed in DRUC in this period

Operational Dashboard – June 2013

Metric	Trending as Expected	Further Information
Day-Ahead Schedule	*Yes*	• Normal level of market activity and liquidity • Loads appear to have hedged against exposure to Real-Time prices
Day-Ahead Electricity And Ancillary Service Hourly Average Prices	*Yes*	• Hourly average prices correctly reflect the opportunity cost of energy
Day-Ahead vs Real-Time Load Zone Settlement Point Price (Hourly Average)	*Yes*	• Day-Ahead & Real-Time prices for different Load Zones reflect relative transmission congestion
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Day-Ahead Reliability Unit (DRUC) Commitment Monthly Summary	*Yes*	• Capacity committed by the DRUC process indicates the level of out of market activity needed Day-Ahead to maintain reliability • No resources were committed in DRUC in this period

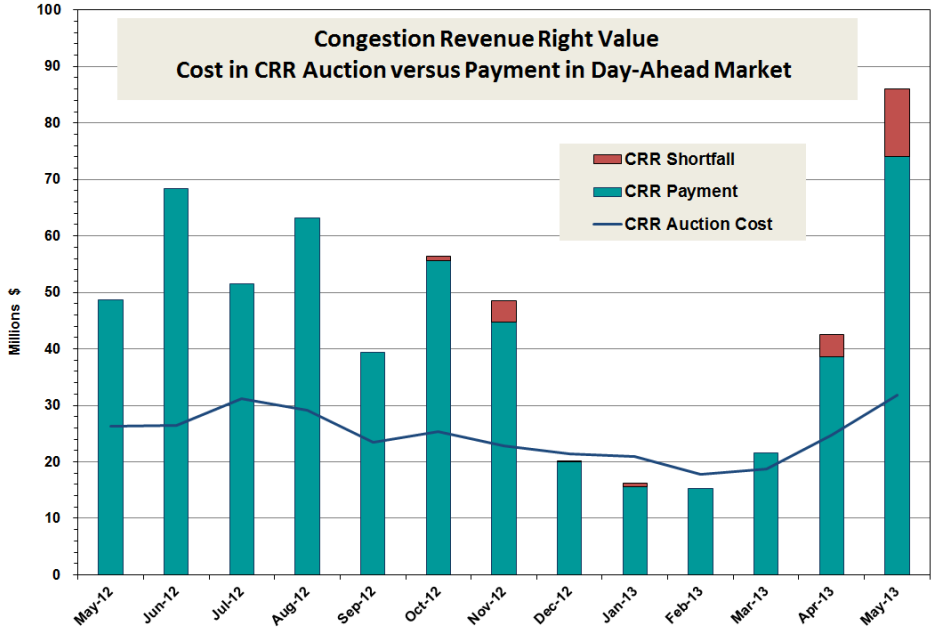
Operational Dashboard – May 2013

Metric	Trending as Expected	Further Information
Hourly Reliability Unit Commitment (HRUC) Monthly Summary	*Yes*	• Capacity committed by the HRUC process indicates the level of out of market activity needed during the Operating Day to maintain reliability • Eight Resources were committed in May to help resolve congestion
Supplemental Ancillary Service Market Monthly Summary	*Yes*	• Normal trend indicates that deliverability was not a major concern
Non-Spinning Reserve Service Deployment	*Yes*	• Offline Non-Spin was deployed on four days in May to help resolve congestion
Congestion Revenue Rights Price Convergence	***No***	• The total CRR value was about 2.3 times of the total CRR cost • CRRs were valued much higher in Day Ahead due to combination of outages, low wind and high load • Shortfall was high in May due to significant outages that came in after CRR auction and a defect in Day-Ahead Market that was fixed starting Operating Day June 14th

May 2013 CRR Shortfall

- **May 2013 had higher than normal CRR shortfalls in DAM congestion rent**
  - CRRAH paid approximately $32M for May CRRs
  - DAM payments owed to CRRAH were $86M
  - Due to shortfall, CRRAH were paid $74M (14% less of target value)
- **Shortfalls occur in congestion markets. In May it was larger due to:**
  - Significant congestion revenues combined with
  - Overselling CRRs due to outages that were not in the CRR Auction
- **80% of the shortfall was due to constraints near four stations (listed below):**

West-
Chinagrove CGRSW
MossSwitch MOSSW
MorganCreek MGSES
North-
North Dallas TEASLEY



Operational Dashboard – June 2013

Metric	Trending as Expected	Further Information
Hourly Reliability Unit Commitment (HRUC) Monthly Summary	*Yes*	• Capacity committed by the HRUC process indicates the level of out of market activity needed during the Operating Day to maintain reliability • Five Resources were committed in June to help resolve congestion or voltage stability
Supplemental Ancillary Service Market Monthly Summary	*Yes*	• Normal trend indicates that deliverability was not a major concern
Non-Spinning Reserve Service Deployment	*Yes*	• No offline Non-Spin was deployed in June.
Congestion Revenue Rights Price Convergence	*Yes*	• Normal trend indicates good ability of market participants to estimate value of hedges

Operational Dashboard – May 2013

Metric	Trending as Expected	Further Information
Retail Transactions	*Yes*	• Seasonal variations in transaction volumes trending as expected
Advanced Metering	*Yes*	• 96.5% of ERCOT load settled with 15-minute interval data. • 6.2M Advanced Metering System (AMS) Electric Service Identifier (ESIID)s included in settlement as of 5/31/13
Settlement Dollars	*Yes*	• For the month of May 2013, the final daily average settlement dollars were $12.9M, which is down slightly from $12.94M in April 2013 and up from $8.7M in May 2012.
Revenue Neutrality	*Yes*	• For the month of May 2013, Revenue Neutrality uplift was a charge of $7.28M, which is up from a charge of $5.55M in April 2013 and up from a charge of $.44M in May 2012.
Market-Based Uplift to Load	*Yes*	• For the month of May 2013, the market-based uplift to load was a charge of $4.12M, as opposed to a $9.39M charge in April 2013 and a credit of $12.58M in May 2012.

Operational Dashboard – June 2013

Metric	Trending as Expected	Further Information
Retail Transactions	*Yes*	• Seasonal variations in transaction volumes trending as expected
Advanced Metering	*Yes*	• 96.6% of ERCOT load settled with 15-minute interval data. • 6.3M Advanced Metering System (AMS) Electric Service Identifier (ESIID)s included in settlement as of 6/24/13*
Settlement Dollars	*Yes*	• As of settlement of Operating Day 06/24/13*, the daily average settlement dollars are trending to be near $12.4M, which is down from $12.9M in May 2013 and expected to be close to June 2012 which had an average of $12.63M.
Revenue Neutrality	*Yes*	• As of settlement of Operating Day 06/24/13*, Revenue Neutrality uplift is trending as a charge of nearly $3.71M, which is down from May 2013 which was a charge of $7.28M and from June 2012 which was a charge of $7.03M.
Market-Based Uplift to Load	*Yes*	• As of settlement of Operating Day 06/24/13*, the market-based uplift to load is trending as a credit of $20.31M, as opposed to a $4.12M charge in May 2013 and a credit of $1.10M in June 2012. High credit for June 2013 is due to CARD revenues and an expected Balancing Account Credit.

** For full month detail refer to the Monthly Operational Overview.*

Market Enhancements Under Consideration

Enhancement	Further Information

Evaluating market design improvement proposals	• Ongoing discussions with stakeholders on:
	  • Price reversal during ERS and Load Resource deployment
	  • Reduction to the settlement timeline
	  • Improved scarcity pricing
	  • Constraint Competitiveness Test design improvements

Evaluating Pilot Project Feasibility	• 6 month Fast Responding Regulation Service pilot started on Operating Day 2/25/13 • 30-minute ERS pilot continuing through end of September 2013 • Weather-sensitive ERS pilot started on June 1st for the June to Sep contract period.

Major Project Highlights

Project	Trending as Expected	Further Information
SCR760 – Recommended Changes Needed for Information Model Manager and Topology Processor for Planning Models	*Yes*	The final components of this project are undergoing testing targeting a July release; costs remain within approved budget. Recent work to address some defects pushed the release date from June to July, however this move still meets the business need – to have the enhancements available for the start of the mid-year planning cases – and also aligns the release with ERCOT's window for R4 release.
NPRR461 - Energy Storage Settlements Consistent with PUCT Project 39917	*Yes*	The project, in final stages of testing activities, remains on schedule and within approved budget. The team is completing integration test cycles and the production go-live is aligned with the R4 release to occur in late July.
Oracle 11g Upgrade – Upgrade Oracle databases and related tools that support ERCOT's application portfolio from Oracle 10g to Oracle 11g	***No***	The project continues to complete individual upgrades, but has experienced technical issues requiring vendor support that are resulting in a schedule extension. Upgrades for the Net Dependable Capability and Reactive Capability (NDCRC) and the Current Day Reporting (CDR) systems were delivered to production in June; however, upgrades for the Information Services Master (ISM) and Commercial Systems Integration (CSI) systems have experienced performance issues that are delaying their completions. ERCOT has engaged the services of a specialized Oracle performance tuning firm to help resolve the issues, but the result is a delay to overall project completion. In addition to the performance tuning work, the activities in support of NPRR484 delivery has also delayed planned upgrades for Credit Monitoring and Management (CMM) and Congestion Revenue Rights (CRR) systems until that project delivers to production. The team is currently re-planning the remaining upgrades and will present a revised schedule and any budget impact to ERCOT management for approval in July.
NPRR484 - Revisions to Congestion Revenue Rights Credit Calculations and Payments	*Yes*	Project is completing Planning activities and expects to begin the Execution phase by mid-July. The go-live target for a production release of Phase 1A (scope includes core functionality to support the NPRR) is currently planned for Q4 2013 with subsequent release(s) to follow in 2014.

Major Project Highlights (cont.)

Project	Trending as Expected	Further Information
EMS Upgrade – Upgrade EMS and OTS from ALSTOM EMP 2.3 to EMP 3.0	*Yes*	The project is preparing for the start of Planning Phase 2, targeted for August 2013, by finalizing the tasks, schedule, cost and resource needs to support the phase activities and deliverables. Work is on target with the approved current phase schedule and budget. Planning Phase 2, in partnership with the ERCOT's business and IT staff and the EMS vendor, will deliver the functional, technical and testing documentation required to support execution of the upgrade. These deliverables will be used to confirm the final scope of the project, including any cross-system impacts, as well as environment and resource needs. Planning Phase 2 will deliver the final detailed Execution schedule and total project estimate for approval by the Board.
ABB MMS/OS Technology Refresh - improve ERCOT's ability to support and maintain the Market Management System (MMS) and Outage Scheduler (OS) system by upgrading the underlying infrastructure and its required components to versions on mainstream vendor support	*Yes*	The project began Planning activities in late May 2013 and will continue through November. Work remains in line with approved schedule and budget. Planning activities are focused on vendor site installation of required hardware and software to support testing phases to follow, as well as documentation of the test strategy required for functional, regression and middleware component testing. The team is also evaluating current environment impacts to ensure progress towards delivery while minimizing impacts to other projects or testing initiatives.
Settlement System Upgrade – Replace proprietary code, data structures and tools with an ERCOT supported solution	*Yes*	The project continues tracking to the schedule that delivers the upgrade to production by end of 2014 and costs are trending to stay within the Board –approved budget. Development and Functional Acceptance Testing (FAT) activities are underway and will carry on through the remainder of this year and into next year, leading up to the first integration test of Data Aggregation functionality by mid-2014.

Appendix

The *ERCOT Monthly Operational Overview* is posted on or about the 15th of the following month to (http://www.ercot.com/committees/board/)