



Item 4.3: Operations Report **(September and October)**

Trip Doggett
President & CEO

Board of Directors Meeting
ERCOT Public
November 19, 2013

Summary – September 2013

- **Operations**

- The peak demand of 63,411 MW on September 3rd was more than the mid-term forecast peak of 62,010 MW and less than the September 2012 actual peak demand of 64,862 MW. The instantaneous load on September 3rd was 63,587 MW.
- Day-ahead load forecast error for September was 2.41%
- ERCOT issued one Advisory
 - Single advisory for State Estimator, RTCA and VSAT/TSAT not solved for 30 minutes..
- No Watches were issued
- No Emergency Notices were issued.
- No Energy Emergency Alert (EEA) events

- **Planning Activities**

- 168 active generation interconnection requests totaling over 42,300 MW, including 21,100 MW of wind generation as of September 30, 2013. Six more requests and 900 more total MW from August 31, 2013
- 10,970 MW wind capacity in commercial operation September 30, 2013; 400 more MW than August 31, 2013

Summary – October 2013

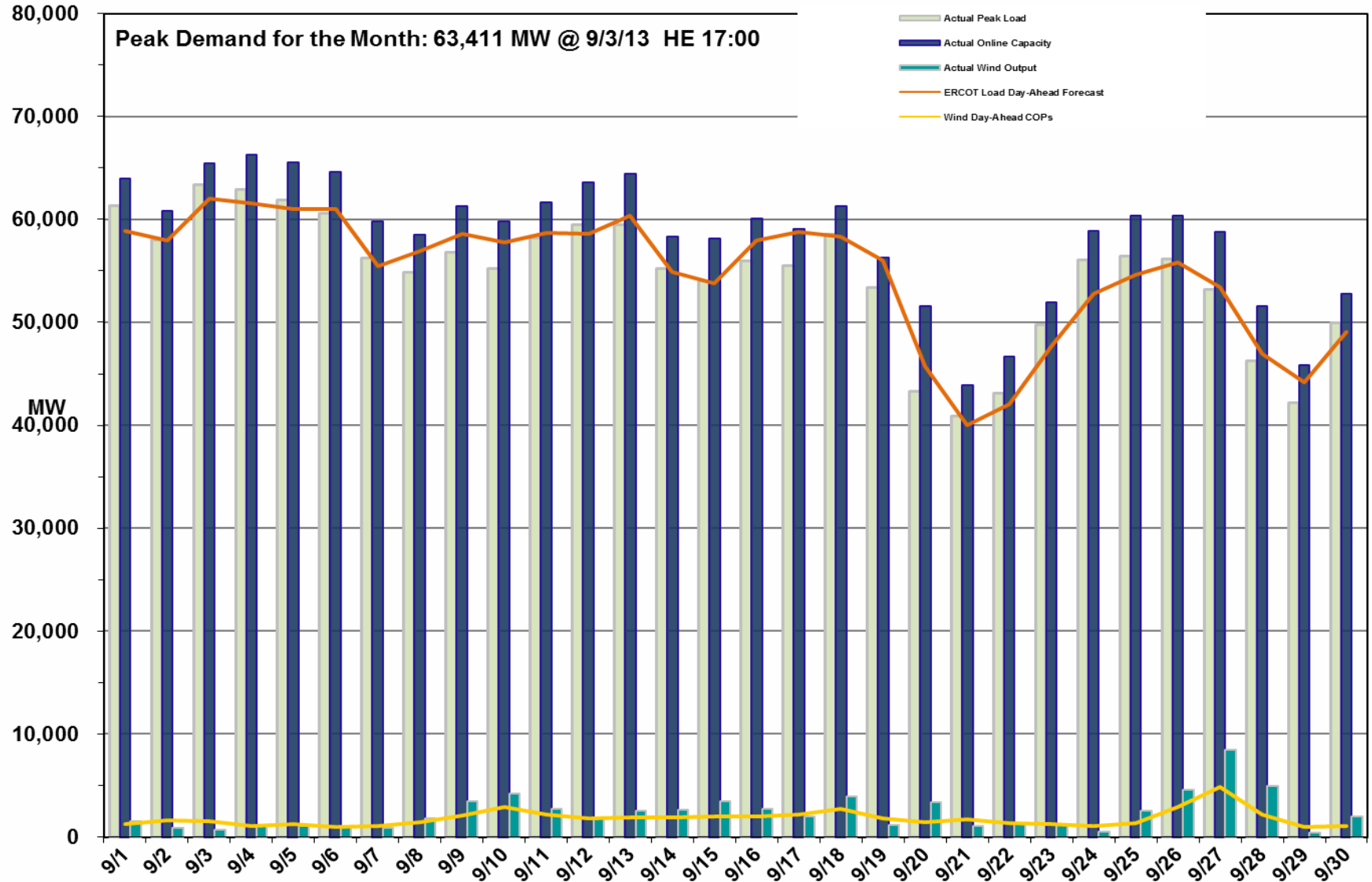
- **Operations**

- The peak demand of 54,684 MW on October 3rd was more than the mid-term forecast peak of 53,537 MW as well as the October 2012 actual peak demand of 48,274 MW. The instantaneous load on October 3rd was 54,830 MW.
- Day-ahead load forecast error for October was 2.87%
- ERCOT issued four Advisories.
 - Single advisory for State Estimator, RTCA and VSAT/TSAT not solved for 30minutes.
 - Three advisories for Physical Responsive Capability (PRC) below 3000 MW.
- No Watches were issued
- No Emergency Notices were issued
- No Energy Emergency Alert (EEA) events

- **Planning Activities**

- 182 active generation interconnection requests totaling over 47,100 MW, including 22,800 MW of wind generation as of October 31, 2013. Fourteen more requests and 4,800 more MW from September 30, 2013
- 10,970 MW wind capacity in commercial operation October 31, 2013; no change from September 30, 2013

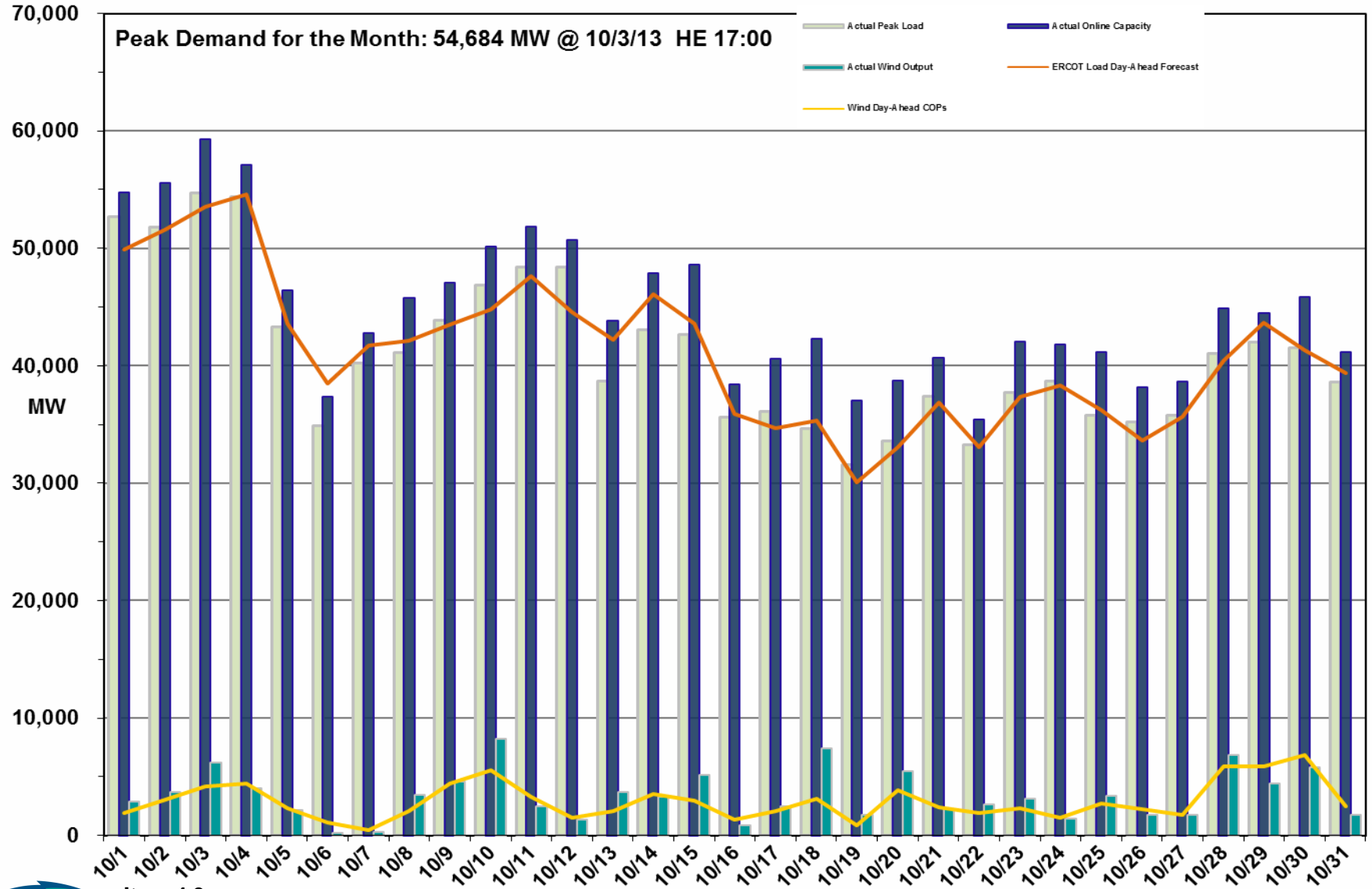
Daily Peak Demand: Hourly Average Actual vs. Forecast, Wind Day-Ahead COPs & On-line Capacity at Peak – Sept. 2013



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ERCOT Public 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 – Oct. 2013



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

Market Statistics – September 2013

Market Statistics	September 2012	September 2013	2012 Average	2013 YTD Average
Percentage of Real-Time load hedged in Day-Ahead Market	122.47%	119.04%	122.66%	118.37%
Average 'ERCOT Hub Average 345 kV Hub' Settlement Point Price in Day-Ahead Market (\$/MWh)	30.33	36.54	30.18	34.21
Average 'ERCOT Hub Average 345 kV Hub' Settlement Point Price in Real-Time (\$/MWh)	25.97	40.55	26.49	32.01

Market Statistics – October 2013

Market Statistics	October 2012	October 2013	2012 Average	2013 YTD Average
Percentage of Real-Time load hedged in Day-Ahead Market	126.83%	129.74%	122.66%	119.51%
Average 'ERCOT Hub Average 345 kV Hub' Settlement Point Price in Day-Ahead Market (\$/MWh)	28.90	33.26	30.18	34.12
Average 'ERCOT Hub Average 345 kV Hub' Settlement Point Price in Real-Time (\$/MWh)	28.06	36.77	26.49	32.45

Operational Performance Measures – September 2013

Performance Measure	Target Met	Further Information
Retail Transaction Performance (Target 98%)	Yes	<ul style="list-style-type: none">• Retail transaction processing performance was at 100%
Settlements Performance (Target 99%)	Yes	<ul style="list-style-type: none">• 100% timely statement and invoice posting

Operational Performance Measures – October 2013

Performance Measure	Target Met	Further Information
Retail Transaction Performance (Target 98%)	No	<ul style="list-style-type: none">Retail transaction processing performance was at 95% due to delays in processing of 867 transactions.
Settlements Performance (Target 99%)	Yes	<ul style="list-style-type: none">100% timely statement and invoice posting

Operational Dashboard – September & October 2013

Metric	Trending as Expected	Further Information
Day-Ahead Schedule	Yes	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • Hourly average prices correctly reflect the opportunity cost of energy
Day-Ahead vs Real-Time Load Zone Settlement Point Price (Hourly Average)	Yes	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • 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 – September & October 2013

Metric	Trending as Expected	Further Information
Hourly Reliability Unit Commitment (HRUC) Monthly Summary	Yes	<ul style="list-style-type: none"> 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 September and in October to help resolve congestion or capacity
Supplemental Ancillary Service Market Monthly Summary	Yes	<ul style="list-style-type: none"> Normal trend indicates that deliverability was not a major concern
Non-Spinning Reserve Service Deployment	Yes	<ul style="list-style-type: none"> Offline Non-Spin was not deployed during this period
Congestion Revenue Rights Price Convergence	Yes	<ul style="list-style-type: none"> Normal trend indicates good ability of market participants to estimate value of hedges

Operational Dashboard – September 2013

Metric	Trending as Expected	Further Information
Retail Transactions	Yes	<ul style="list-style-type: none"> Seasonal variations in transaction volumes trending as expected
Advanced Metering	Yes	<ul style="list-style-type: none"> 97.3% of ERCOT load settled with 15-minute interval data. 6.4M Advanced Metering System (AMS) Electric Service Identifier (ESIIDs) included in settlement as of September 2013.
Settlement Dollars	Yes	<ul style="list-style-type: none"> As of settlement of Operating Day 9/30/2013, the daily average settlement dollars are \$14.1M, which is up from \$13.5M in August 2013 and higher than September 2012 which had an average of \$11.45M.
Revenue Neutrality	Yes	<ul style="list-style-type: none"> As of settlement of Operating Day 9/30/2013, Revenue Neutrality uplift is a charge of \$4.63M, which is up from August 2013 which was a charge of \$3.82M and down from September 2012 which was a charge of \$10.27M.
Market-Based Uplift to Load	Yes	<ul style="list-style-type: none"> As of settlement of Operating Day 9/30/2013, the market-based uplift to load is a credit of \$0.28M, as opposed to a \$13.21M credit in August 2013 and a credit of \$2.36M in September 2012.

Operational Dashboard – October 2013

Metric	Trending as Expected	Further Information
Retail Transactions	Yes	<p>Retail transaction activity in October was increased due to:</p> <ul style="list-style-type: none"> • A Mass Acquisition • Creation of ESI IDs in the new Sharyland TDU area in preparation for moving to competition
Advanced Metering	Yes	<ul style="list-style-type: none"> • 97.5% of ERCOT load settled with 15-minute interval data. • 6.4M Advanced Metering System (AMS) Electric Service Identifier (ESIID)s included in settlement as of 10/30/2013*
Settlement Dollars	Yes	<ul style="list-style-type: none"> • As of settlement of Operating Day 10/29/2013*, the daily average settlement dollars are \$13.1M, which is down from \$14.1M in September 2013 and higher than October 2012 which had an average of \$10.5M.
Revenue Neutrality	Yes	<ul style="list-style-type: none"> • As of settlement of Operating Day 10/29/2013*, Revenue Neutrality uplift is a charge of \$4.00M, which is down from September 2013 which was a charge of \$4.63M and up from October 2012 which was a charge of \$1.84M.
Market-Based Uplift to Load	Yes	<ul style="list-style-type: none"> • As of settlement of Operating Day 10/29/2013*, the market-based uplift to load is trending as a charge of \$1.89M, as opposed to a \$0.28M credit in September 2013 and a charge of \$0.38M in October 2012.

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



Market Enhancements Under Consideration

Enhancement	Further Information
Evaluating market design improvement proposals	<ul style="list-style-type: none">• ERCOT provided NPRR 568 and corresponding Other Binding Document (OBD) on 9/19/2013 that would implement ORDC as described in the white paper• Multiple stakeholder meetings have occurred discussing the NPRR:<ul style="list-style-type: none">• RATF (9/26, 10/4, 10/9, and 10/11)• PRS (10/17 and 10/18)• WMS (10/9)• TAC (11/7)• Targeting Nov. 2013 Board for consideration
Evaluating Pilot Project Feasibility	<ul style="list-style-type: none">• Fast Responding Regulation Service pilot started on Operating Day 2/25/13 and will continue until 2/28/14• 30-minute ERS pilot will continue through end of January 2014. An NPRR is being introduced into stakeholder process which is targeting Nov. 2013 Board for consideration• Weather-sensitive ERS pilot project concluded at the end of September. The final report is scheduled to be completed before the end of 2013

Major Project Highlights

Project	Trending as Expected	Further Information
<p>EMS Upgrade – Upgrade EMS and OTS from ALSTOM EMP 2.3 to EMP 3.0</p>	<p>Yes</p>	<p>ALSTOM's EMP 3.0 was installed on basic development and demo platforms following the official release in October. The installation included knowledge transfer from ALSTOM to ERCOT staff to enable independent installation on additional development instances. Orientation by ALSTOM staff on standard application was completed as well, to facilitate independent evaluation of the base product with the aim of reducing customization.</p> <p>The ALSTOM contract for the vendor's review of key functional design documents, as well as providing planning support to the ERCOT team, was completed and is now active. Business, development and production teams are on track with functional requirements, functional design and test scripts work and the first wave of review meetings of functional requirements and the corresponding design specifications have started.</p> <p>Lastly, a program-level change management plan is in place and the first major change to undergo review is in progress. This change seeks to minimize program risk with early development of key application areas and the CIM Importer subsystem.</p>
<p>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</p>	<p>Yes</p>	<p>The project entered the Planning phase in late May 2013 and continues work in support of this phase. ERCOT originally targeted November for completion of Planning, however, a delay in finalizing a hardware vendor contract has pushed other planning activities out on the calendar. The team has proactively re-planned remaining work to minimize the impact. As a result, the revised date for Planning phase end is now February 2014, but this revision is not expected to extend the overall project schedule and target completion.</p> <p>Planning activities are currently 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.</p>
<p>NPRR484 – Revisions to Congestion Revenue Rights Credit Calculations and Payments</p>	<p>Yes</p>	<p>Phase 1A (core functionality to support the NPRR requirements) went live, as scheduled, on October 21st.</p> <p>The team is supporting stabilization of Phase 1A while also working to plan Phase 1B by fully defining all remaining requirements. These requirements are needed so that remaining Phase 1 work design, development and testing activities can be estimated and planned.</p>

Major Project Highlights (cont.)

Project	Trending as Expected	Further Information
Settlement System Upgrade – Replace proprietary code, data structures and tools with an ERCOT supported solution	Yes	<p>The project continues in Execution, tracking to the approved schedule that delivers the upgrade to production in Q4 2014. The budget forecast has also continued its monthly trend down, resulting in a current forecast closely aligned with the Board-approved budget of \$6.8M.</p> <p>Development and Functional Acceptance Test (FAT) activities continue with the team achieving a development completion rate of 37% (slightly lower than goal of 44%) and FAT keeping pace with development deliveries. The slight delay in output is being addressed by management to ensure no impacts to critical path and overall go-live.</p> <p>Two major risks could impact schedule and budget:</p> <ol style="list-style-type: none"> 1. Contract IT developers may have to be extended beyond planned roll-off dates to ensure coverage. Efforts by IT to hire or re-assign FTEs who would work and cross-train with these contractors in order to assume primary support responsibility have been unsuccessful. 2. In addition, potential risks from competing NPPRR projects may result in a schedule and/or cost increase, but the team will confirm the impacts as more information is available and specific planning activities for the other efforts finalize design and resource needs.
Oracle 11g Upgrade – Upgrade Oracle databases and related tools that support ERCOT's application portfolio from Oracle 10g to Oracle 11g	No	<p>Oracle cluster software defects have impacted the stability of the Information Services Master (ISM) database in production resulting in several sets of vendor patches having to be migrated and tested through the ISM environments. In addition, significant performance issues were identified during testing of Oracle upgrade for the Commercial System Integration (CSI) application and the team is working to resolve this issue, as well.</p> <p>As a result of these issues and the work to resolve them, the project's overall schedule and budget will require a change. Remaining upgrades that have been delayed will be rescheduled and the cost to deliver remaining scope will be estimated. The team is preparing a change control for management approval this month that will align the project with the revised schedule and budget.</p>

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