



## Item 4: Strategic Planning Overview

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ERCOT Public

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# 4.1 Update Regarding Strategic Goals and Initiatives

## Strategically adapt to changing resource mix

Initiative	Completion / Target
Consider redesign of Ancillary Services to ensure ERCOT continues to maintain grid reliability as the ERCOT System and Resource mix continue to evolve.	NPRR667, Ancillary Service Redesign, has been tabled at PRS since December 2014. Cost benefit analysis has been completed and reviewed via workshops. NPRR667 is scheduled for April 2016 PRS consideration.
Tune short term load forecast.	Project initiated Q1-16.
<b>Generation Resources</b>	
Continued integration of intermittent resources: <ul style="list-style-type: none"> <li>– Implement NPRR686, Changing the IRR Forecast from Next 48 Hours to Next 168 Hours into ERCOT systems.</li> <li>– Implement NPRR615, PVGR Forecasting, to incorporate photovoltaic resource type into ERCOT systems.</li> </ul>	<ul style="list-style-type: none"> <li>– Completed Q1-16.</li> <li>– Completed Q1-16.</li> </ul>
Develop white paper on Switchable Generation Resources and align concepts with Reliability Coordinator agreements.	Reliability Coordinator agreements and whitepaper are under legal review. Target Q2-16 release of whitepaper and NPRR.
Improve understanding of changing system stability requirements: <ul style="list-style-type: none"> <li>– Develop and implement system strength analysis processes from Short Circuit Ratio study of Panhandle region.</li> </ul>	Electranix (vendor) study reported to ROS in Q1-16. Scheduled go-live Q3-16 after EMS upgrade.
<b>Demand Resources</b>	
Draft an NPRR to better define technical requirements for limited-participation resources (e.g. Private Use Networks that do not offer into SCED).	Finalizing draft NPRR. Target Q2-16 submission.
Work with market to track growth of retail product offerings for dynamic pricing and other retail demand response incentives: <ul style="list-style-type: none"> <li>– Analyze responses to price events and shifts in behavior by those reported in Time of Use programs.</li> </ul>	– Publish analysis of 2015 retail DR and 4CP response, as well as initial evaluation of Time of Use pricing behavior. Target Q2-16.
<b>Distribution Level Resources</b>	
Improve visibility and participation of distribution level resources: <ul style="list-style-type: none"> <li>– Develop white paper to outline options for distributed energy resource (DER) participation in markets, and supported Distributed Renewable Energy &amp; Ancillaries Markets (DREAM) Task Force.</li> </ul>	– ERCOT and DREAM TF identified various DER proposals. ERCOT options matrix is scheduled for April 2016 TAC consideration.

# Provide thought leadership in support of continued improvements to operational reliability and markets

Initiative	Completion / Target
<p>Enhance Operational Reliability</p> <ul style="list-style-type: none"> <li>Facilitate transmission planning improvements; formalize load-scaling methodology.</li> <li>Implementing support for Remote Black Start training.</li> </ul>	<ul style="list-style-type: none"> <li>Filed PGRR042, Regional Transmission Plan Model Reserve Requirement and Load-Generation Imbalance Methodology. Discussed at February 2016 PLWG. ERCOT will file comments for April 2016 PLWG.</li> <li>Evaluating Operator training options including Black Start. Target evaluation completion Q2-16.</li> </ul>
<p>Enhance Outage Scheduling</p> <ul style="list-style-type: none"> <li>Work with stakeholders in the Outage Coordination Task Force to identify high impact outages to more efficiently coordinate their submittal and approval.</li> <li>Implement Outage Scheduler improvements via NPRR219, TSPs Must Submit Outages for Resource Owned Equipment and Clarification of Changes in Status of Transmission Element Postings, and SCR783, Outage Scheduler Enhancements</li> </ul>	<ul style="list-style-type: none"> <li>NPRR758, Improved Transparency for Outages Potentially Having a High Economic Impact, filed February 2016. Scheduled for April PRS consideration.</li> <li>Scheduled go-live Q3-16.</li> </ul>
<p>Assess Environmental Regulatory Impacts</p> <ul style="list-style-type: none"> <li>Conduct studies as appropriate and communicate activities with Stakeholders.</li> </ul>	<p>Conducting further analyses of potential transmission impacts of environmental regulations through the 2016 Regional Transmission Plan study. Target completion Q4-16.</p>
<p>Develop rules to address risk of sub-synchronous oscillation (SSO) in the ERCOT region.</p>	<p>Conducting detailed study with TSPs and selected Resource Entities to better define SSO criteria. Target study results Q4-16 followed by stakeholder discussion on appropriate Protocol requirements for planning and operations.</p>
<p>Evaluate Multi-Interval Real-Time Market (MIRTM)</p> <ul style="list-style-type: none"> <li>Develop requirements and simulator for MIRTM to evaluate potential net benefits</li> <li>MIRTM and Real-Time Co-optimization issues being raised to the PUCT for discussion</li> </ul>	<ul style="list-style-type: none"> <li>Simulator implementation and testing is expected to complete Q2-16. Market Operations will evaluate scenarios to determine potential benefits and modifications needed. Scenarios will be evaluated throughout 2016.</li> <li>At a November 2015 Open Meeting, PUCT Commissioners directed ERCOT to continue evaluating potential net benefits of MIRTM, and to put Real-Time Co-optimization of Energy &amp; Ancillary Services on hold pending decision(s) on FAS.</li> </ul>
<p>Explore improvements to scarcity pricing during Energy Emergency Alert, Emergency Response Service, Load Resource deployment</p> <ul style="list-style-type: none"> <li>Evaluate changes to Operating Reserve Demand Curve</li> <li>Support stakeholder discussions to further develop concept of enabling additional Resources to contribute to Real-Time price formation and to expand access to the Real-Time Energy Market</li> </ul>	<ul style="list-style-type: none"> <li>Workshops held in Q4-15 to discuss items identified by Commissioner Anderson. ERCOT performed back cast analysis. Stakeholders submitted position papers. Discussion is ongoing.</li> <li>Ongoing discussion at SAWG on MIRTM and ORDC changes. Further discussion on Real-Time Co-optimization is on hold until the status of FAS is resolved.</li> </ul>



## Deliver channels and tools to stakeholders for enhanced communication and increased transparency and access

Initiative	Completion / Target
Implement Enterprise Content Alignment Program (ECAP) strategy and roadmap. ECAP projects include: <ul style="list-style-type: none"> <li>- ERCOT Identity – Complete stakeholder research and create messaging framework.</li> <li>- Identify Alignment – Update external channels to reflect ERCOT Identify standards.</li> <li>- Governance and Taxonomy - Define enterprise Information Governance policies and Taxonomy/Metadata framework.</li> <li>- Enterprise Content Management (ECM) Proof of Concept - Define, validate and recommend enterprise content management solution.</li> </ul>	<ul style="list-style-type: none"> <li>- Rollout complete February 2016.</li> <li>- ERCOT.com, Mobile App, Public Dashboards and Social Media completed April 2016. MIS targeted for Q2-16.</li> <li>- Project initiated Q1-16. RFI with Taxonomy vendors complete. Taxonomy RFP to be released Q2-16.</li> <li>- Project initiated Q1-16. RFP with ECM vendors to be released Q2-16.</li> </ul>
Improve communication consistency of Grid conditions by improving the reliability and performance of grid communication information technology	Improved documentation and support of systems complete. Grid Communication Hardening Project will further improve reliability and security of systems. Target initiation Q2-16.
Assist with evaluation of Smart Meter Texas transition options	Provided high level cost estimates to Commission for consideration.
Develop data services to support Market Participant needs: <ul style="list-style-type: none"> <li>- Engage in market forums to discuss potential changes for external web services strategy</li> <li>- Implement MP Online functionality: Automate some manual Generation Interconnection or Change Request (GINR) processes to reduce errors and increase efficiency</li> </ul>	<ul style="list-style-type: none"> <li>- Coordinating interface enhancements via MDWG. Target completion Q4-16.</li> <li>- Project initiated Q1-16.</li> </ul>

## Continually enhance our cyber and physical security posture

Initiative	Completion / Target
Participate in NERC Grid Ex III 2015 planning and exercise.	Completed Q4-15.
Continue progress on Critical Infrastructure Security Roadmap implementation .	Average 60% complete.



## Develop ERCOT resources – people and technology

Initiative	Completion / Target
Implement Technology Refresh.	DC4 Program is on schedule/budget; migration planning and architecture work is in flight; RFP posted January 2016; proposals are being evaluated; procurements of initial hardware are expected Q2 & Q3-16.
Implement CIPv5 Readiness.	CIPv5 will be effective July 1, 2016 (NERC revised date). Processes, procedures and systems readiness are on track to meet effective date.
Implement major upgrades: <ul style="list-style-type: none"> <li>- Network Model Management System (NMMS)</li> <li>- Energy Management System (EMS)</li> <li>- Congestion Revenue Rights (CRR) Framework</li> <li>- Credit Monitoring and Management System (CMM)</li> <li>- Enterprise Resource Management System (HR and Finance)</li> </ul>	<ul style="list-style-type: none"> <li>- NMMS scheduled go-live revised from Q2-16 to Q3-16.</li> <li>- EMS scheduled go-live Q2-16.</li> <li>- Project initiated Q4-2015. Currently in Planning phase.</li> <li>- Project initiated Q4-2015. Currently in Planning phase.</li> <li>- Project in Planning phase. Targeting completion in 2016.</li> </ul>
Continue ERCOT management development: <ul style="list-style-type: none"> <li>- Evaluate needs and define strategy.</li> <li>- Implement Manager Development program.</li> </ul>	<ul style="list-style-type: none"> <li>- Completed Q4-15.</li> <li>- Managing at ERCOT class developed; begins in April 2016.</li> <li>- Managing at ERCOT website developed.</li> </ul>
Optimize ERCOT release management and change management procedures and processes.	Completed December 2015: Rollout of IT Change Management System & Configuration Management System.
Improve internal access management.	Process improvements completed Q1-16.
Implement Governance Risk and Compliance system <ul style="list-style-type: none"> <li>- Review ERCOT must/shall/will Protocol and Market Guide requirements and controls</li> </ul>	Target completion delayed one month, now Q2-16. No budget impacts. <ul style="list-style-type: none"> <li>- Protocol review 90% complete.</li> </ul>

## 4.2 Strategic Planning Update

# ERCOT Strategic Planning Process Review

The ERCOT Board, Stakeholders and ERCOT Staff have worked together on the following strategic planning activities:

- 2013 – Crafted a five-year strategic plan detailing the framework for ERCOT to maintain operational reliability, a flexible market design, data transparency and access, and committee strategic alignment.
- 2014 & 2015 – Considered strategic plan for any needed revisions within current environment.
  - Held sessions with each Segment to review ERCOT strategic goals and supporting initiatives.
  - Revised corporate Key Performance Indicators (KPIs).



# Upcoming Segment Sessions and Request for Feedback

## 2016 Proposed Activities:

- April
  - Review approach with HR&G
- June
  - Provide questions to Board Members to obtain Segment input in preparation for summer sessions
  - Schedule Segment facilitated sessions for August
- August
  - Facilitate sessions with Board Members and Segments to review Segment feedback, key ERCOT strategic goals, and any needed updates to Strategic Plan, KPIs or goals (weeks of August 15<sup>th</sup> & 22<sup>nd</sup>)
- October
  - Review 2017 ERCOT strategic goals with Board and obtain feedback on proposed edits to Strategic Plan, KPIs or goals