Item 5:
2018 Strategic Goal Update

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Anticipate and adapt to changing resource mix

Initiative	Status
Forecasting: Load (short-term and mid-term), Solar and Wind	Obtained extreme weather impact on wind generation information throughout winter 2018. Full integration targeted Q2-18.
Inertia and Ancillary Service (AS) needs for changing Resources	AS Methodology changes approved at December 2017 Board.
Develop white paper on Switchable Generation Resources and align concepts with Reliability Coordinator agreements	• Finalizing policy statement on coordinated operation of Switchable Generation Resources with neighboring ISOs. • Working coordination issues with Mexico grid operator (CENACE) and applicable regulatory entities. Policy goals will be reflected in new/modified coordination agreements with SPP, MISO and CENACE. • Revision requests (e.g., Current Operating Plan status changes) may be necessary to achieve operational alignment in ERCOT Protocols. • Target completion Q4-18.
Continued integration of intermittent resources through Intra-hour Wind Forecasting	Full integration targeted Q2-18.

Anticipate and adapt to changing resource mix (continued)

Initiative	Status
Draft Binding Document changes to better define technical requirements for limited-participation resources (e.g. Private Use Networks that do not offer into SCED), clarify existing Resource definitions, and provide a framework in Binding Documents that allows incorporation of new types generation.	Resource Definition Taskforce, co-chaired by ERCOT, is drafting white paper with changes to framework for Resource Definitions. Update provided to QMWG. Revision Requests targeted for introduction Q3-18.
Improve visibility and participation of distribution level resources: • Develop white paper to outline options for distributed energy resource (DER) participation in markets, and supported Distributed Renewable Energy & Ancillaries Markets (DREAM) Task Force.	• Develop NPRR to extend nodal price signals to registered (>1MW) DERs. • Target completion Q3-18.

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

Initiative	Status
Facilitate transmission planning improvements; formalize load-scaling methodology	• PGRR042, Regional Transmission Plan Model Reserve Requirement and Load-Generation Imbalance Methodology, implemented Q1-18. • NPRR837, Regional Planning Group (RPG) Process Reform, and PGRR059, Regional Planning Group (RPG) Process Reform, were unanimously recommended for approval by PRS and ROS at their respective March 2018 meetings. Target April 2018 TAC and June 2018 Board consideration.
Consider redesign of Ancillary Services to ensure ERCOT continues to maintain grid reliability as the ERCOT System and Resource mix continue to evolve	• NPRR815, Revise the Limitation of Load Resources Providing Responsive Reserve (RRS) Service was approved at December 2017 Board. • NPRR828, Include Fast Frequency Response as a Subset of Responsive Reserve was rejected by November 2017 PRS. • NPRR835, Removing the Capacity Limits from Resources Providing Fast Responding Regulation Service (FRRS) was withdrawn in November 2017. • NPRR863, Creation of Primary Frequency Response Service Product and Revisions to Responsive Reserve; tabled at PRS for Stakeholder review. • ERCOT is conducting workshops on the state of system inertia and providing education about possible options to mitigate critical inertia.
Conduct studies, as appropriate, to assess environmental regulatory impacts and communicate activities with Stakeholders	ERCOT continues to assess regulatory proposals and rule changes issued by the EPA, as well as the progress of legal challenges in the federal courts.
Development of rules to address risk of subsynchronous resonance (SSR) in the ERCOT region	NPRR562, Subsynchronous Resonance approved by June 2017 Board; partially implemented Q3-17; target complete implementation with new MIS Link and SSR report posting Q2-18.

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

Initiative	Status
Real-Time Co-optimization issues being raised to the PUCT for discussion	Continue to support ongoing discussions at PUCT Open meetings.
Explore improvements to scarcity pricing during Energy Emergency Alert, Emergency Response Service (ERS), Load Resource deployment: • Evaluate changes to Operating Reserve Demand Curve • 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	• OBDRR002, ORDC OBD Revisions for PUCT Project 47199, is currently under Stakeholder review. Target April 2018 Board. • Support stakeholder discussions as needed based on ERCOT roadmap.
Phasor Measurement Units (PMU)	Project is in Execution. Target go-live for PMU tool Q2-18 and for Dynamic DTS (Dispatch Training Simulator) Q3-18.
Establish market continuity principles	NPRR850, Market Suspension and Restart, tabled at PRS for Stakeholder review.

Map Registered Distributed Generation to the transmission grid	• Mapped current fleet of Registered DG to the transmission grid, working bilaterally with TDSPs.
	• Introduced revisions to implement long-term mapping process:
	  • NPRR866, Mapping Registered Distributed Generation and Load Resources to Transmission Loads in the Network Operations Model,
	  • PGRR061, Related to NPRR866, Mapping Registered Distributed Generation and Load Resources to Transmission Loads in the Network Operations Model, and
	  • RRGRR017, Related to NPRR866, Mapping Registered Distributed Generation and Load Resources to Transmission Loads in the Network Operations Model ROS.

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

Initiative	Status
Implement Enterprise Content Alignment Program (ECAP) strategy and roadmap. ECAP projects include: • Implement Taxonomy into existing systems • Enterprise Content Management (ECM) Proof of Concept - Define, validate and recommend enterprise content management solution	• Taxonomy management software training in process. Initial validation and rollout of taxonomy for Market Notices is underway. Target Q3-18 completion. • Phase 1 implementation planning completed Q1-18. Target go-live Q4-18.
Improve communication consistency of Grid conditions by improving the reliability and performance of grid communication information technology	• Running end-to-end testing periodically as part of normal operations. • Improving technical health of ERCOT Mobile Application. Target completion Q2-18.
Improve efficiency of managing Public Data requests	Project Charter developed. Target for submission Q2-18.
Develop data services to support Market Participant needs: • Implement MP Online (renamed RIOO) functionality: Automate some manual Generation Interconnection or Change Request (GINR) processes to reduce errors and increase efficiency. • Replace existing Resource Asset Registration Form (RARF)	• Project is in Execution phase; target go-live moved from Q1-18 to Q3-18. • Planning phase complete. Project is in Execution Stage 1. Target Q2-18 completion.
Full Interconnection Study process changes	• First Quarterly Stability Assessment (QSA) posted Q4-17. QSA is an ongoing quarterly process. • Completion of exit alternative studies for all existing GTCs targeted for Q4-2018.

Continually enhance our cyber and physical security posture

Initiative	Status
Participate in NERC Grid Ex IV 2017 planning and exercise	NERC Grid Ex IV planning and exercise completed Q4-17.
Continue progress on Critical Infrastructure Security Roadmap	Completed 2017 Roadmap. 2018 Roadmap in progress.
Continue collaborative efforts on security issues	Ongoing work with various Industry/Government groups on security issues.
Coordinate Grid Resilience Working Group	Tracking EPRI study to evaluate impacts of electromagnetic pulse on power system. First phase released Q1-17; final targeted for Q2-19.

Develop ERCOT resources - people and technology

Initiative	Status

Implement Technology Refresh (DC4 Project)	• All original DC4 projects have been initiated.
	  ▪ Eight projects active.
	  ▪ Three projects complete (network refresh, replacement of database servers and server migrations).
	• One new project will be added for MV90 Upgrade. Target start is Q2-18.
	• Committed spend is near 83% of forecasted budget.
	• Program is approximately 76% through estimated timeline.
	• DC4 procurement in progress with approximately 91% of purchases complete; target completion moved from Q1-18 to Q3-18 due to extended length of DC4 Program.
	• Converged infrastructure and database storage hardware completed Q1-18.
	• Migration of existing servers to new converged infrastructure is 85% complete; target completion Q2-18.

Implement major upgrades: • Congestion Revenue Rights (CRR) Framework • Credit Monitoring and Management System (CMM) • Retail Technical Refresh	• CRR: Project in Execution; target go-live delayed from Q1-18 to TBD-18 pending defect resolution by the vendor. • CMM: Phase 1A completed Q1-18. Phase 1B in Execution; target go-live Q4-18. • Roadmap projects identified and being placed on timeline with Stakeholder input. Projects expected to begin in 2018.
Optimize ERCOT release management and change management procedures and processes	Project in Execution; target go-live delayed from Q2-18 to TBD-18 due to data model and integration complexity, and resource constraints.
Improve internal access management	Project in Planning Phase 2. Target Execution phase start Q2-18.

Develop ERCOT resources - people and technology (continued)

Initiative	Status
Continue development of career paths: • Enhance job description repository • Benchmark critical positions	• Job description project is underway. • Position benchmarking for Legal and Cyber completed. Evaluation of critical positions in Operations and IT planned for 2018.
Measure Employee Satisfaction and Engagement	• Best Places to Work Survey postponed to 2019. • Quarterly internal pulse surveys are ongoing.
Continue focus on Management Development: • Coaching classes and clinics • Interview training for all managers	• Coaching activates are on track. • Interview training pilot held Q1-2018. Roll-out is underway.
Continually improve impact assessment process	• Provided PRS a process overview and obtained stakeholder input; completed Q4-17. • Enhanced artifact detail to increase analysis transparency; completed Q1-18. • Provided 2017 annual cost and duration estimate statistics; completed Q1-18.