

Item 8.1: CEO Update

Bill Magness President & Chief Executive Officer ERCOT

Board of Directors Meeting

ERCOT Public February 12, 2019

2018 Variance to Budget (\$ in Millions) Net Revenues After Department Expenditures

Preliminary 2018 Net Revenues at Year End: \$29.1 M Favorable

Highlighted Revenue Variances

- \$11.9 M over budget: interest income due to higher investment balance and rates
- \$8.1 M over budget: System Administration Fees due to weather and stronger economy
- \$1.2 M over budget: interconnection revenue

Highlighted Expenditure Variances

- \$2.8 M under budget: external studies/consulting/legal services
- \$1.3 M under budget: employee health costs
- \$1.2 M under budget: employee training and business travel
- \$0.5 M under budget: resource management (\$-2.0 M staffing management; \$2.5 M project work)
- \$1.2 M over budget: computer hardware and equipment purchases

2019 Revenues (as of January 29, 2019)

Highlighted Revenue Variances

- \$13.0 M over budget: interest income due to higher investment balance and rates
- \$6.2 M over budget: System Administration Fees based on current actuals and load forecast for remainder of year

2020-2021 Budget Request

- We will present the first draft of the 2020-2021 Budget Request at the April Finance & Audit Committee Meeting.
- We do not anticipate a change in the System Administration Fee rate.



2018 Project Timing Differences

(\$ in)	Millions)		2018 Preli	minary Year						
		2017	2018 Variance			nce				
					varia	uce				
Line		Actual	Budget	Actual	\$	%				
	System Administration Revenue	\$ 199.3	\$ 201.8	\$ 209.9	\$ 8.1	4.0				
	Department Net Expenditures						Project	Timi	ng Diffe	rences
	Information Technology	64.9	68.3	67.4	0.9	1.3				2018 Fi
	Operations	57.7	64.4	60.0	4.3	6.7	Project	Va	ariance	Publish
	-						DC4	\$	(3.1)	Apr-18
	Finance & Treasury	10.6	14.5	0.8	13.6	93.8	Training Facil	it∨	(4.4)	Apr-18
5	External Affairs & Corporate Communications	5.9	6.6	6.0	0.6	9.1	Other Project	-	(4.3)	Oct-1
										Oct-1
	Human Resources	4.6	5.3	4.6	0.8	15.1	Total	\$	(11.8)	
6	General Counsel	4.3	4.8	4.0	0.7	14.6				
)	Corporate Administration	1.9	2.1	2.0	0.1	4.8				
0	Total Department Net Expenditures	149.9	165.8	144.8	21.0	12.7				
1	Net Revenues After Department Expenditures	49.4	36.0	65.1	29.1	80.8				
2										
13	Less: Project Expenditures	38.1	28.5	40.3	(11.8)	(41.4)				
-	and the second				(,	()				
4										
15	Net Available for Debt & Working Capital	\$ 11.3	\$ 7.5	\$ 24.8	\$ 17.3	(230.7)				
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	Note: Schedule may not foot due to rounding									

PUCT Directs ERCOT to Implement Real-Time Co-optimization of Energy and Ancillary Services

PUCT Project Nos. 48551, 48539 and 48540, Chairman Walker's Memorandum (Jan. 17, 2019)

Real Time Co-optimization

I believe real time co-optimization brings not only economic benefits that exceed its costs, but operational benefits for ERCOT as well. These benefits and costs were discussed in detail by ERCOT and the IMM in filings made on June 29, 2018. After consideration of the information provided by ERCOT, the IMM, and the many parties that commented on the issue, information. If the Commission determines that real time co-optimization should be time co-optimization. If the Commission determines that must be addressed either by the Commission insplemented, then there are additional issues that must be addressed either by the Commission or in the stakeholder process before ERCOT can move forward with implementation.

If the Commission decides to implement real time co-optimization, then I propose having the Commission Staff bring back to the Commission on February 7th a list of policy issues that can be published for stakeholder comment. I also propose requesting that ERCOT submit a high-level implementation plan and timeline, so that the Commission can determine the expectations for timing and milestones during the implementation of the project. Lastly, I propose that the project be funded through the favorable variance in the revenues that occurred in 2018 and will likely occur in 2019 by ERCOT. Such funds should be set aside for future use for this project.



2018-2019 Favorable Variance Summary (\$ in Millions)

		2018				
	Preliminary		2019			
	Actual		Forecast		Total	
Net Revenues After Department Expenditures	\$	29.1	\$	18.3	\$	47.4
Project Timing Differences:						
Data Center 4.0 Optimization (DC4)	\$	(3.1)	\$	0.6	\$	(2.5)
Training Facility		(4.4)		4.1		(0.3)
Other Projects		(4.3)		3.4		(0.9)
Total Project Timing Differences	\$	(11.8)	\$	8.1	\$	(3.7)
Net Available for Debt & Working Capital	\$	17.3	\$	26.4	\$	43.7



Real Time Co-optimization Funding

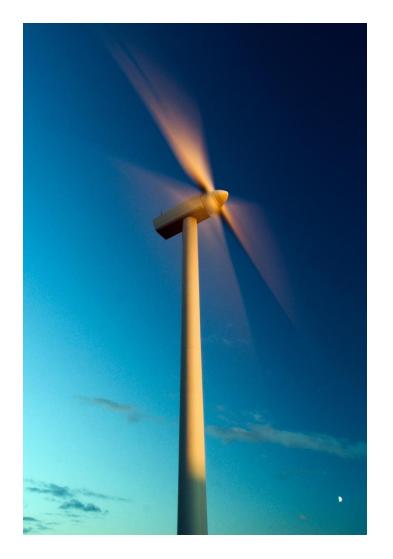
The PUCT's direction to ERCOT involved using 2018 and 2019 budget favorable variances to fund the Real Time Co-optimization Project.

- How would this be accomplished?
 - Determine 2018 and 2019 favorable financial variances, which are currently forecast to be approximately \$40 million. Final amounts will be based on the financial statement audit results, available in April 2019 and April 2020.
 - Track Real Time Co-optimization Project implementation costs along with the ERCOT project portfolio.
 - Provide regular reporting on both the Real Time Co-optimization
 Project costs and the remaining available funding from 2018 and
 2019 favorable variances.
- Currently, there is no anticipated impact to the System Administration Fee due to use of 2018 and 2019 favorable variances.



Recent Demand and Resource Updates

- Record energy use in 2018
 - 376 million MWh
 - 5% increase compared to 2017
- Instantaneous wind output record
 - 19,672 MW of the load served came from wind power
 - Set Jan. 21, 2019 at 7:19 p.m.
- Wind penetration record
 - 56.16% of load served by wind power (17,406 MW of wind)
 - Set Jan. 19, 2019 at 3:10 a.m.





Summer 2019 Update

- Since the last CDR release in December, the City of Garland announced plans to retire the Gibbons Creek Generating Station (470 MW). This lowers the planning reserve margin for peak in summer 2019 from 8.1% to 7.4%.
- The final spring and preliminary summer Seasonal Assessment of Resource Adequacy (SARA) reports will be released on Tuesday, March 5.
- At this reserve margin level, it is likely we will have to use the additional resources that are available under our emergency operating procedures on a number of occasions next summer.
- While there is no specific indication at this time that we will have to implement rotating outages, power reserves at this level increase the likelihood that rotating outages may be needed due to extreme weather, forced outages, low wind output or spikes in demand.



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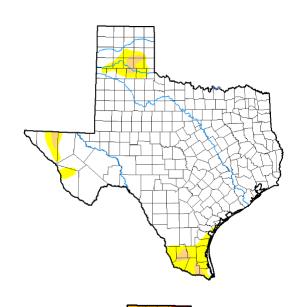
Peak Season Preparations

- Stakeholder/segments/market participant meetings with PUCT Chairman Walker completed in January
- Formation of the ERCOT Gas-Electric Working Group (GEWG)
 - Addresses increased focus on electric/gas coordination at the federal and state level
 - Establishes communications channels in advance of potential issues with electric/gas coordination
 - Increases system reliability
 - ERCOT will host the first GEWG meeting on Feb. 15
- Commission action
 - PUCT directed ERCOT to make changes to the Operating Reserve Demand Curve (ORDC)
 - Implementing language is in Other Binding Document Revision Request (OBDRR) 011 on the Board's February agenda



Positive Outlook for 2019 Water Supplies

- Texas has the greatest amount of water available since 1993.
- Over the past 20 years, 2005 and 2016 are the only two years that began with fewer drought concerns, compared to 2019.
- Texas reservoirs were 89.9% full as of Jan. 1, 2019.



Map released: Thurs. January 17, 2019

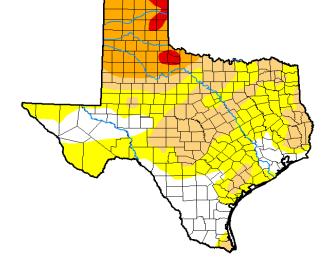
Data valid: January 15, 2019 at 7 a.m. EST



Author(s):

Brad Pugh, NOAA/CPC

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast nents.





New Training Facility in Taylor



• ERCOT's new training center officially opened in January.

 Black Start and Operator Training Seminars will take place in the new building in 2019.



Success Driven By A Team Effort Across the Enterprise

- Congratulations to all of the ERCOT staff who played a role in the construction of the new training facility.
- The 22,500-square-foot training center includes a simulation room that mimics the control room and a central training observation room for joint training.
- The training rooms are named after Texas rivers, and the waiting area includes memorabilia from Texas utilities.



From left to right: Gene Goetz, Grady Roberts, Mark Lucas, Jennifer Hibbard, Jimmy Mizell and Johnathan Gensler

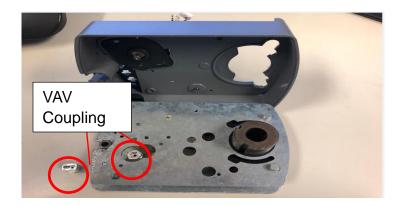
Not pictured: Michael Alexander, Robert Blackard, Scotty Clifton, Yancy Harlow, Sarah Janak, Blane Johnson, Scott Privette, Julie Ringling and Mike Stewart



Item 8.1 ERCOT Public

Employee Appreciation: Creative Thinking by Data Center Team

- The climate control systems in Taylor buildings include over 200 Variable Air Volume (VAV) controllers to regulate air flow.
- The VAVs began to fail and could not be replaced by the system vendor who recommended a replacement system that would cost more than \$800,000.
- ERCOT data center staff worked with a Taylor fabrication and machining company to develop an alternative solution using aluminum components.
- Replacement VAVs have been successfully installed and tested.
- The total replacement cost was \$4,000.





Comparison: new component (left) and old component (right)

