Item 5: CEO Update

Pablo Vegas
President and Chief Executive Officer

Board of Directors meeting

ERCOT Public
December 3, 2024

Overview

- **Purpose**

  This presentation highlights ERCOT's recent Operations and Planning activity and highlights strategic areas of focus.

- **Voting Items / Requests**

  No action is requested of the Board; for discussion only

- **Key Takeaways**

  - ERCOT is working with Market Participants in advance of winter with weatherization inspections and preparedness workshops.
  - The Winter season remains the highest risk period due to limited renewable resources during peak and severe winter storms.
  - New requirements under NOGRR245 will better protect grid reliability as Inverter-Based Resources continue to increase in the generation mix.

Monthly Outlook on Resource Adequacy (MORA)

December and January have an increased risk of emergency conditions in the evening and morning hours; for December, the peak risk hour is hour-ending 8 p.m.; for January, the highest risk hour is hour-ending 8 a.m.

Dec	Chance of Normal System Conditions	EMERGENCY LEVEL	
		Chance of an Energy Emergency Alert	Chance of Ordering Controlled Outages
Hour Ending (CST)	Probability of CAFOR being above 3,000 MW	Probability of CAFOR being less than 2,500 MW	Probability of CAFOR being less than 1,500 MW
1 a.m.	98.90%	0.79%	0.66%
2 a.m.	98.84%	0.89%	0.79%
3 a.m.	98.72%	0.95%	0.79%
4 a.m.	98.63%	1.06%	0.89%
5 a.m.	98.63%	1.09%	0.97%
6 a.m.	98.24%	1.38%	1.24%
7 a.m.	97.90%	1.75%	1.54%
8 a.m.	96.95%	2.51%	2.35%
9 a.m.	97.68%	1.79%	1.63%
10 a.m.	98.55%	1.08%	0.92%
11 a.m.	99.23%	0.56%	0.50%
12 p.m.	99.55%	0.22%	0.18%
1 p.m.	99.78%	0.14%	0.09%
2 p.m.	99.92%	0.05%	0.04%
3 p.m.	99.93%	0.02%	0.02%
4 p.m.	99.89%	0.02%	0.02%
5 p.m.	99.80%	0.06%	0.04%
6 p.m.	96.89%	1.24%	0.84%
7 p.m.	94.94%	2.30%	1.61%
8 p.m.	91.36%	4.90%	3.94%
9 p.m.	92.13%	4.80%	3.91%
10 p.m.	93.35%	3.88%	3.08%
11 p.m.	96.98%	1.36%	0.87%
12 a.m.	99.46%	0.17%	0.09%

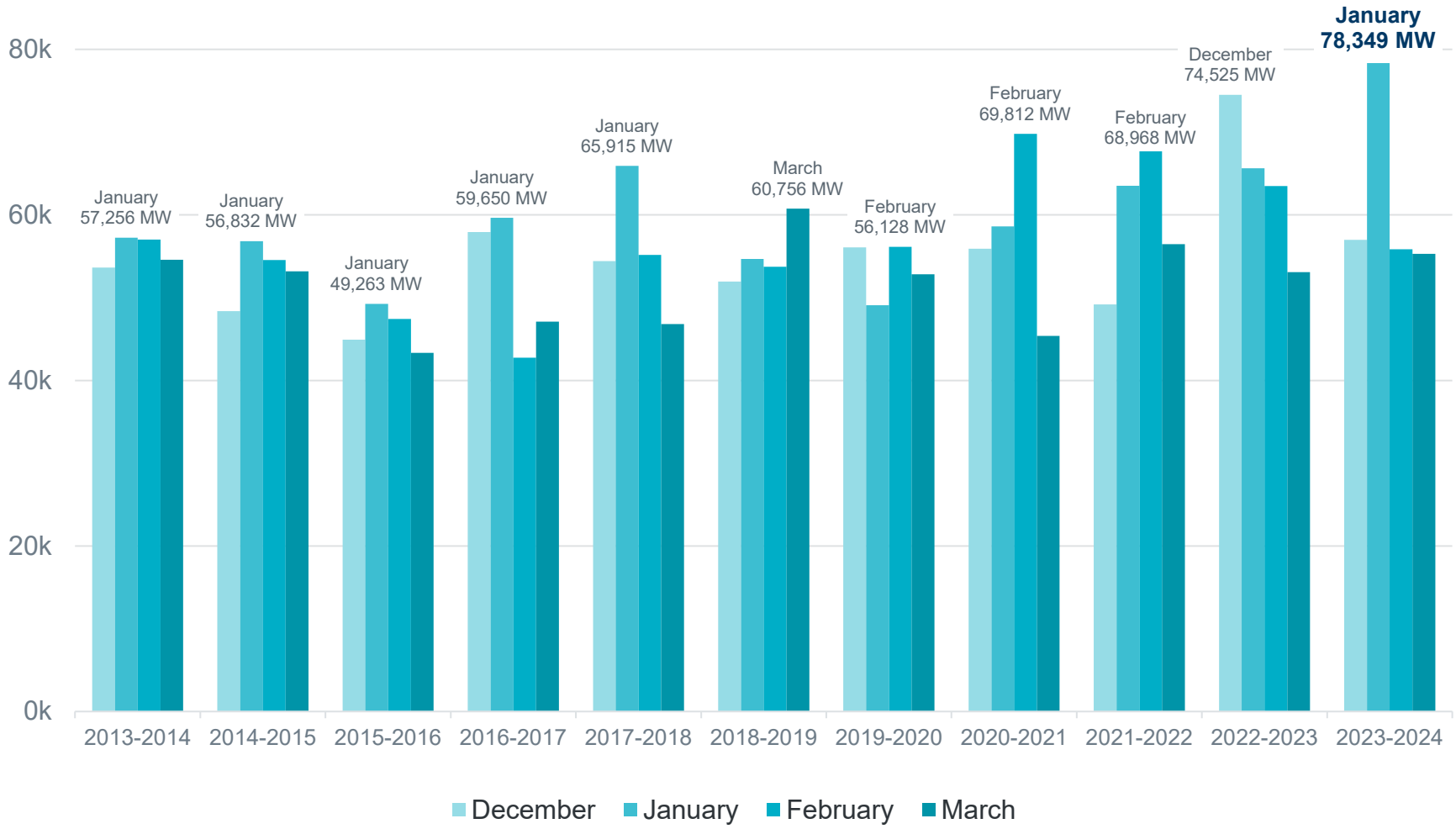
Note: Probabilities are not additive.

Jan	Chance of Normal System Conditions	EMERGENCY LEVEL	
		Chance of an Energy Emergency Alert	Chance of Ordering Controlled Outages
Hour Ending (CST)	Probability of CAFOR being above 3,000 MW	Probability of CAFOR being less than 2,500 MW	Probability of CAFOR being less than 1,500 MW
1 a.m.	98.21%	1.45%	1.31%
2 a.m.	98.70%	0.87%	0.76%
3 a.m.	98.65%	0.93%	0.80%
4 a.m.	98.69%	0.89%	0.75%
5 a.m.	98.41%	1.11%	0.99%
6 a.m.	98.10%	1.49%	1.38%
7 a.m.	95.93%	2.81%	2.46%
8 a.m.	87.56%	8.51%	7.12%
9 a.m.	94.36%	3.69%	3.13%
10 a.m.	97.93%	1.35%	1.16%
11 a.m.	99.48%	0.27%	0.22%
12 p.m.	99.62%	0.20%	0.16%
1 p.m.	99.82%	0.11%	0.09%
2 p.m.	99.94%	0.02%	0.01%
3 p.m.	99.95%	0.01%	0.00%
4 p.m.	99.90%	0.02%	0.02%
5 p.m.	99.83%	0.06%	0.05%
6 p.m.	97.97%	0.98%	0.63%
7 p.m.	93.93%	2.82%	2.08%
8 p.m.	93.02%	3.65%	2.78%
9 p.m.	96.29%	1.95%	1.65%
10 p.m.	96.12%	2.14%	1.67%
11 p.m.	98.79%	0.54%	0.41%
12 a.m.	99.64%	0.19%	0.14%

Note: Probabilities are not additive.

CAFOR is Capacity Available for Operating Reserves

Winter Demand Over Last 10 Years



This includes the impact of residential, commercial, and industrial demand response.

Generation Type Comparison - Winter

It is important to note that winter has greater variability.

100 MW
Modular Nuclear Plant

24,455 Homes

98% capacity availability during winter peak demand hours

100 MW
Gas Turbine (Peaking)

22,000 Homes

88% capacity availability during winter peak demand hours

100 MW
Wind Turbine (West Texas)

7,000 Homes

28% capacity availability during winter peak demand hours

100 MW
Solar Plant (West Texas)

4,250 Homes

17% capacity availability during winter peak demand hours

100 MW (one hour)
(need to recharge once used)

7,750 Homes

31% capacity availability during winter peak demand hours

1 MW serves about 250 homes during winter peak demand.

Generation Type Comparison - Summer

100 MW
Modular Nuclear Plant

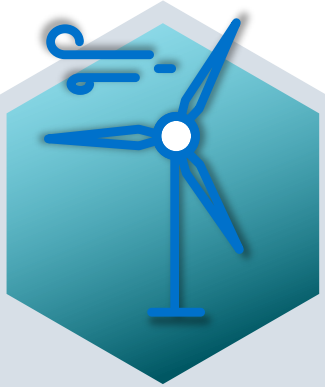
23,601 Homes

94% capacity availability during summer peak demand hours

100 MW
Gas Turbine (Peaking)

20,750 Homes

83% capacity availability during summer peak demand hours



100 MW
Wind Turbine (West Texas)

5,500 Homes

22% capacity availability during summer peak demand hours

100 MW
Solar Plant (West Texas)

19,000 Homes

76% capacity availability during summer peak demand hours

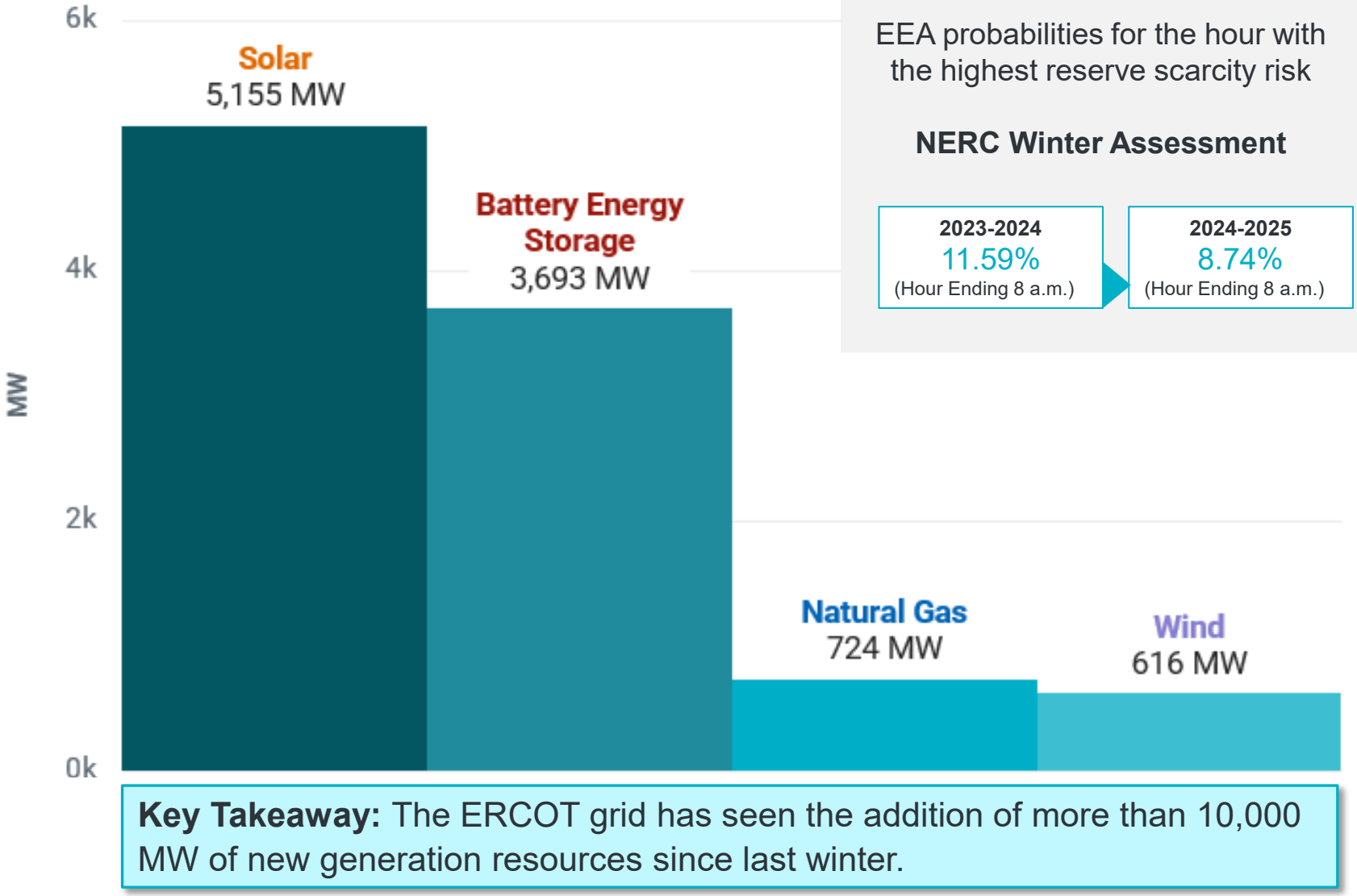
100 MW (one hour)
Battery Energy Storage

7,750 Homes

31% capacity availability during summer peak demand hours

1 MW serves about 250 homes during summer peak demand.

New Generation Since Last Winter (March 1 – November 1)



EEA probabilities for the hour with the highest reserve scarcity risk

NERC Winter Assessment

2023-2024	2024-2025
11.59% (Hour Ending 8 a.m.)	8.74% (Hour Ending 8 a.m.)

Key Takeaway: The ERCOT grid has seen the addition of more than 10,000 MW of new generation resources since last winter.

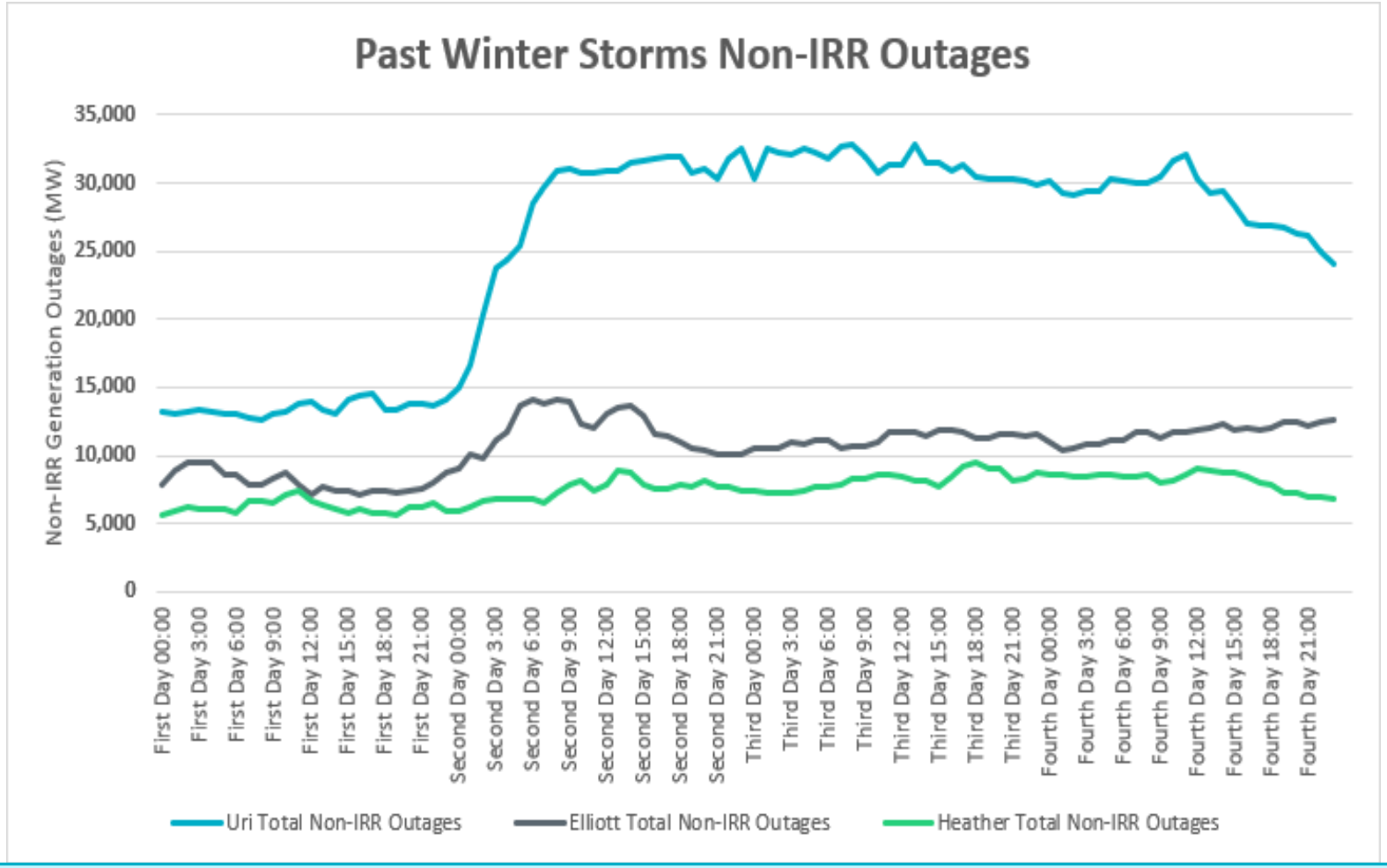
Looking Back on the Weatherization Program

- This winter marks the fourth with a PUCT Weatherization Rule in place.
- Phase I of 16 TAC § 25.55 was adopted on October 19, 2021.
- Phase II was adopted on September 29, 2022, adding summer standards.
- Beginning in 2023:
  - Weather zone-specific cold and hot conditions at which MPs must implement measures reasonably expected to ensure sustained operation
  - List of all cold- and hot-weather-critical components

Inspections	Resources	TSP Facilities	Total
Winter '21-'22	302	22	324
Winter '22-'23	634	140	774
Summer '23	208	342	550
Winter '23-'24	340	129	469
Summer '24	417	358	775
Total to Date	**1,901**	**991**	**2,892**

Key Takeaway: The ERCOT grid has been more reliable since the implementation of weatherization standards and inspections.

Weatherization Program Seeing Positive Results



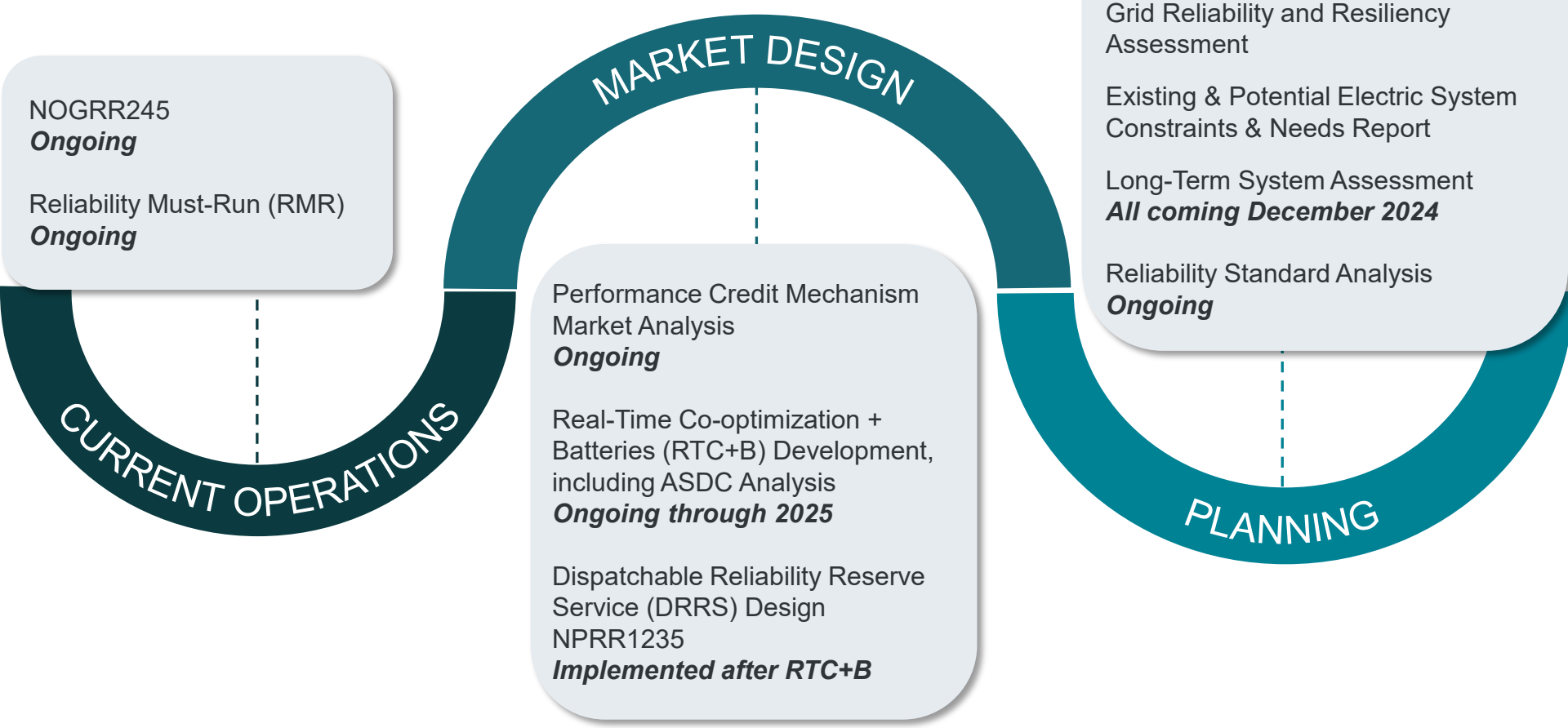
Key Takeaway: Non-Intermittent Renewables Resource (IRR) outages during W.S. Heather (Jan 2024) remained lower than W.S. Elliott (Dec 2022) and W.S. Uri (Feb 2021).

Texas SET 5.0 Implementation

- On November 10, ERCOT completed the planned migration to Texas Standard Electronic Transaction (SET) V5 for retail transaction processing.
- The upgrade was developed to provide better information for Market Participants to:
  - Communicate with one another
  - Compress time associated with closing customer issues transactionally
  - Improve customer experience with regards to continuous service
  - Incorporate lessons learned from weather events, hurricanes, and winter storms
  - Support new technology advancements in reporting
- This release makes a meaningful refresh to the Texas SET 4.0 platform implemented in 2012.

Key Takeaway: ERCOT continues to look for areas to innovate and improve communication efforts and transparency for stakeholders, including Market Participants.

A Look Ahead


MARKET DESIGN
CURRENT OPERATIONS
PLANNING
NOGRR245
Ongoing
Reliability Must-Run (RMR)
Ongoing
Performance Credit Mechanism Market Analysis
Ongoing
Real-Time Co-optimization + Batteries (RTC+B) Development, including ASDC Analysis
Ongoing through 2025
Dispatchable Reliability Reserve Service (DRRS) Design NPRR1235
Implemented after RTC+B
2024 Regional Transmission Plan
Extra High Voltage (EHV) Regional Transmission Plan
Grid Reliability and Resiliency Assessment
Existing & Potential Electric System Constraints & Needs Report
Long-Term System Assessment
All coming December 2024
Reliability Standard Analysis
Ongoing

Employee Recognition

Ancillary Services Study

Jeff Billo
Keith Collins
Gordon Drake
Davida Dwyer
Luis Hinojosa
Fred Huang
Julie Jin
Weifeng Li
Dave Maggio
Nitika Mago
Dan Woodfin
Rebecca Zerwas

Reliability Standard

Matthew Arth
Julie Jin
Ryan King
Pete Warnken

Texas Set 5.0

Jeanette Agron
Leo Castillo
Uday Chennapragada
Mano Chevva
Seth Connel
Justin Couture
Mike Dameron
Satish Edhara
Elizabeth Gutierrez
Sarah Heselmeyer
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Jason Lam
Tisha Mannella
Catherine Meiners
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Kathryn Thurman
Daniel Vazquez
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