



## Item 5: CEO Update – **REVISED**

*Pablo Vegas*

ERCOT President and Chief Executive Officer

Board of Directors Meeting

ERCOT Public

August 31, 2023

# Overview

- **Purpose**

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

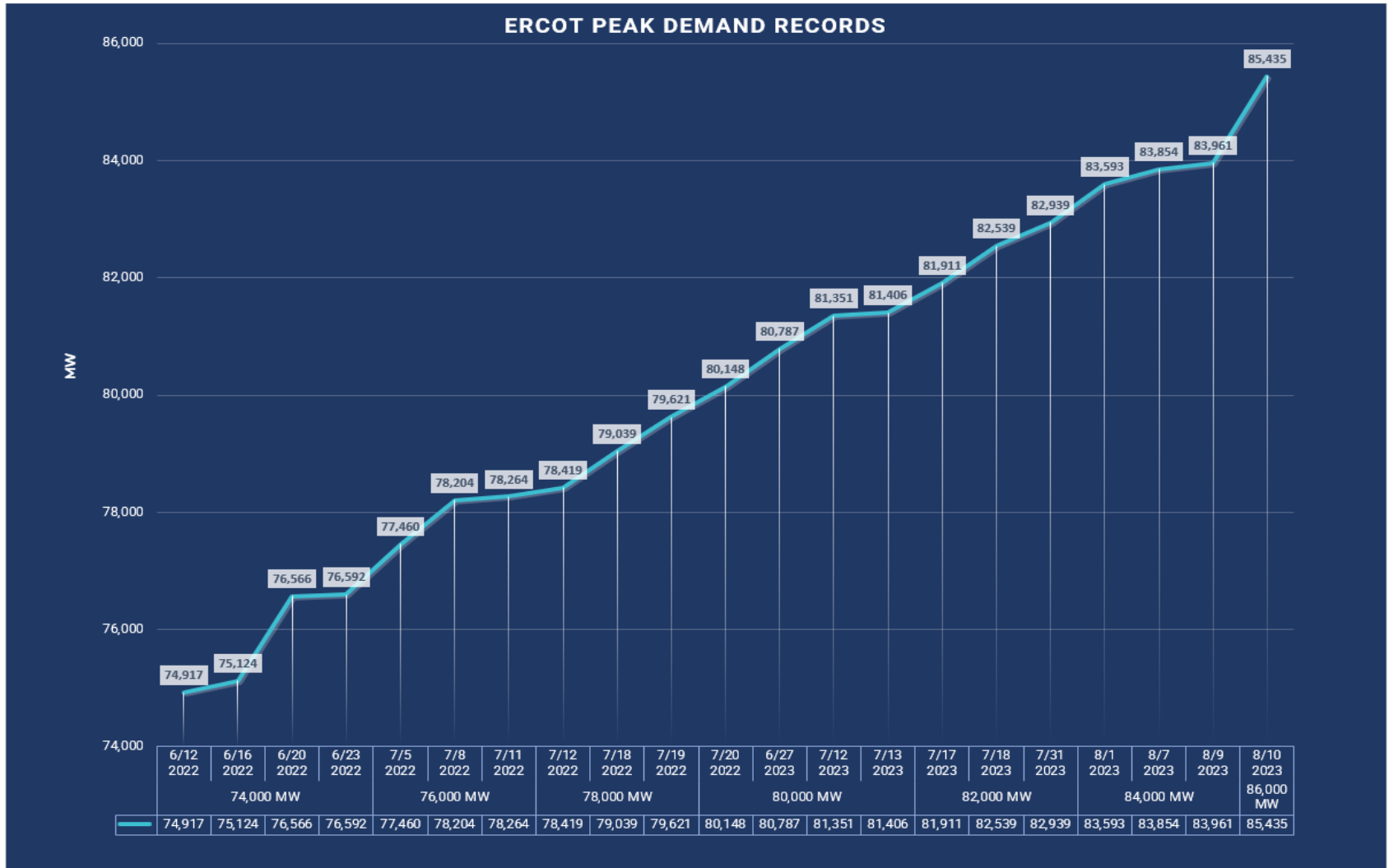
- **Voting Items / Requests**

No action is requested of the Board; for discussion only

- **Key Takeaways**

- ERCOT continues to face record-setting demand driven by both economic growth and weather
- Market design key initiatives and the ERCOT reliability standard are in the planning & development stages
- ERCOT has filed comments on five EPA rules that could negatively impact the grid, especially in peak demand times
- Grid operations continue to become more complex as the resource mix changes

# New All-Time Peak Demands 2022-2023



# Summer Operations

- Record-setting Demand
  - 10 new all-time peaks as of Aug 23
  - 85,435 MW set on 8/10 (5,287 MW higher than last year's record)
- Sufficient resources to serve these demands
  - Required release of ERCOT Contingency Reserve Service (ECRS) reserves on 11 days (as of Aug 23)
  - Aug 17 also required use of Emergency Reserve Service and Distribution Voltage Reduction
- These tight conditions and transmission limitations exporting from south Texas contributed to high prices on these days.
- The primary driver for the high prices are offers and not adders like ORDC.

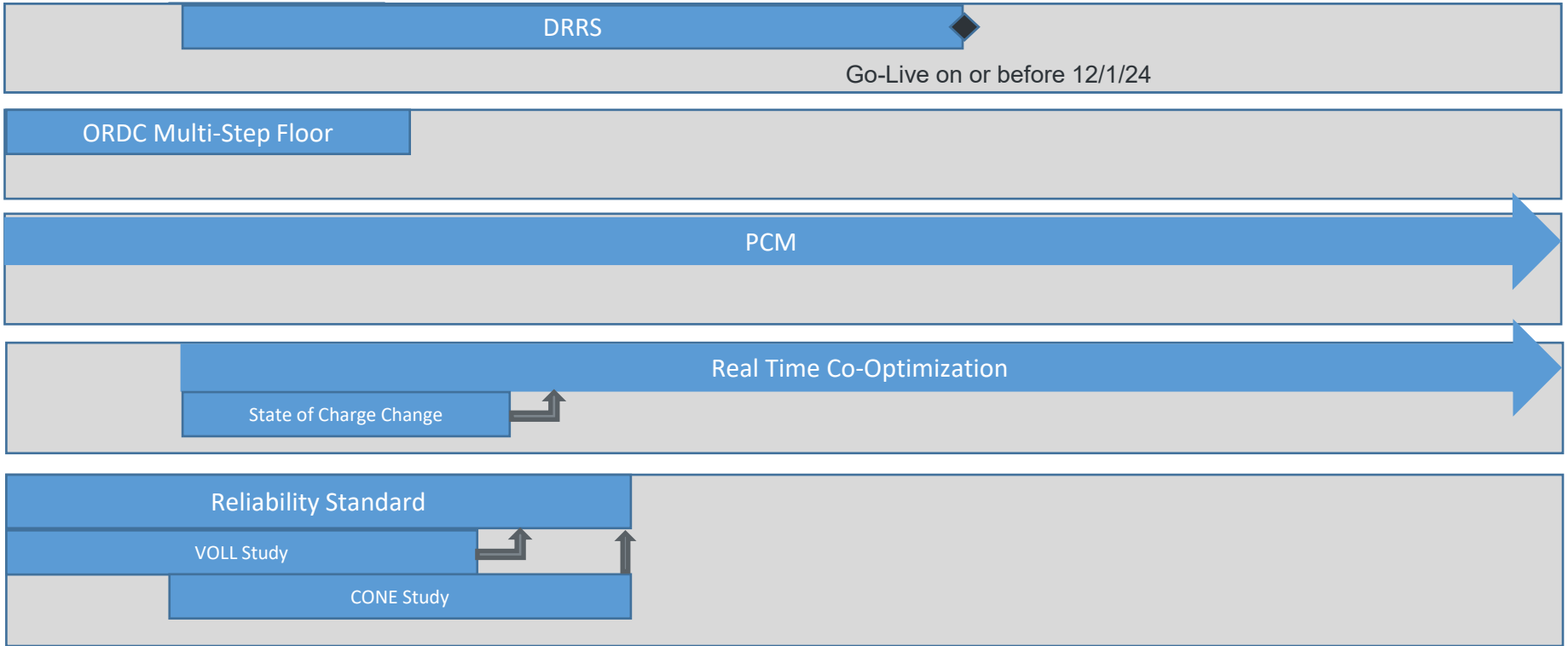
**Key Takeaway:** Peak demand is growing rapidly as population grows and high summer heat persists.

# ERCOT Market Design Initiatives

- **Operating Reserve Demand Curve (ORDC)** enhancements will add a multi-step floor to the online ORDC price to provide self-commitment incentives and improve resource revenues during scarcity conditions.
- **Reliability Standard** sets up a robust reliability requirement and standard incorporating parameters for frequency, duration and magnitude. Will also include studies to establish the Value of Lost Load (VOLL) and Cost of New Entry (CONE).
- **Dispatchable Reserve Reliability Service** new ancillary service legislatively required by December 2024. Resources must be able to run at their highest sustainable limit for 4 hours, after being given 2 hours' notice. Requires equivalent reduction in Reliability Unit Commitment (RUC).
- **Performance Credit Mechanism (PCM)** resources earn credits when committing and performing during tightest hours in a period. Creates a reliability revenue stream to complement the energy only market.
- **Real-Time Co-optimization (RTC)** is the process of simultaneously procuring energy and Ancillary Services (AS) from available Resources at the lowest production cost to meet the Real-Time system demand for energy and AS.

# Market Initiatives Overview Timeline

2023		2024				2025			
3Q2023	4Q2023	1Q2024	2Q2024	3Q2024	4Q2024	1Q2025	2Q2025	3Q2025	4Q2025



## EPA Rules

- **Coal Combustion Residuals (CCR) Rule** regulates CCR disposal at inactive generating units and establishes groundwater monitoring, corrective action, closure, and post-closure care requirements.
- **Greenhouse Gas Rule** proposes significantly lower CO<sub>2</sub> emissions (coal and gas units).
- **Good Neighbor Rule** lowers state-level NO<sub>x</sub> emissions (coal & gas units) to mitigate pollutants to downwind states.
- **Mercury and Air Toxics Standard Rule** proposes particulate matter emissions standards for coal-fired generators and mercury emissions standards for lignite-fired generators.
- **Texas Regional Haze Federal Implementation Plan** proposes new limits on SO<sub>2</sub> and particulate matter emissions to meet air visibility requirements at national parks and wilderness areas.

**Key Takeaway:** The effective dates of these EPA rules overlap and affect different generating units in different ways; the combination of these rules could have serious unintended consequences for Texans during peak demand times.

# EPA Proposed Rules Timeline

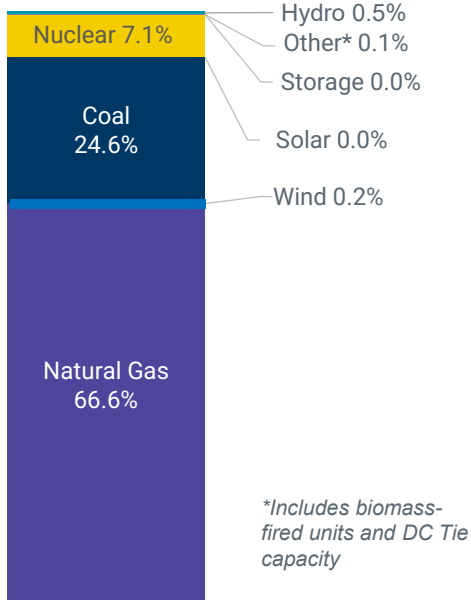
	2023	2024	2025	2026	2027	2028	2029	2032
<b>Coal Combustion Residuals Rule (CCR)</b>	ERCOT comments filed July 17	Final rule expected: April	Compliance Deadline					
<b>Texas Regional Haze Federal Implementation Plan</b>	ERCOT comments filed Aug. 2 Final rule expected: November	»»»	Initial Compliance Deadline	»»»	Additional Compliance Deadline	»»	Additional Compliance Deadline	
<b>Mercury and Air Toxics Standard Rule</b>	ERCOT comments filed June 23	Final rule expected: March	»»»»»		Compliance Deadline			
<b>Greenhouse Gas Rule</b>	ERCOT comments filed Aug. 8	Final rule expected: June	»»»	State Plans for existing fossil fuels due	EPA must approve or reject State Plans	»»»»»		Compliance deadline for coal Jan. 1st; unless committed to cease operations in 2032 Compliance deadline for gas combustion with capacity greater than 300 MW and capacity factor greater than 50% Jan. 1st; unless committed to cease operations, or reduce capacity, or install tech
<b>Good Neighbor Rule</b>	Effective as to other states as of August 4 Not effective as to Texas until there is a final ruling by 5th Circuit on EPA's SIP disapproval (rule is "stayed")	Final ruling by 5th Circuit on EPA's SIP disapproval expected: around June	Compliance Deadline IF Texas were to lose in the 5th Circuit: sometime in 2025 or 2026					



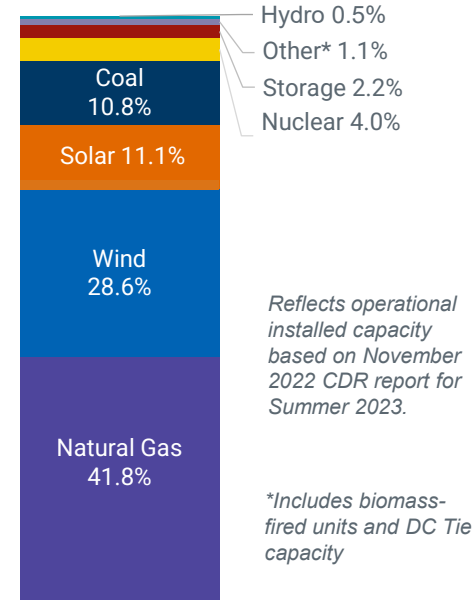


# The ERCOT Electric Grid: Capacity and Demand

## 2000 Generating Capacity



## 2023 Generating Capacity



**2000**  
All-Time Peak Demand Record

**57,606 MW**

**2023**  
All-Time Peak Demand Record

**85,435 MW\***

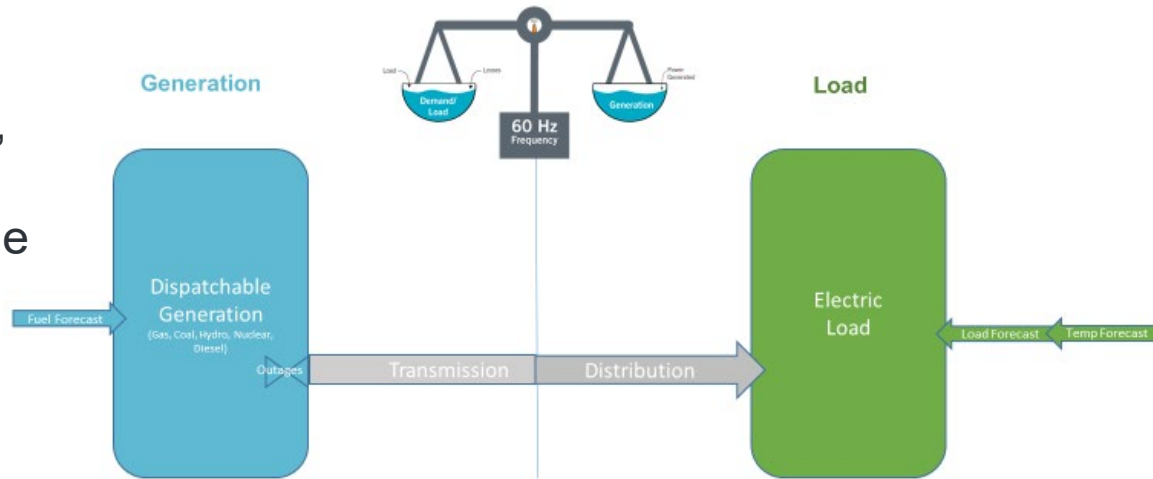
**45% increase**

*\*Unofficial until settlements occur (Aug 10, 2023)*

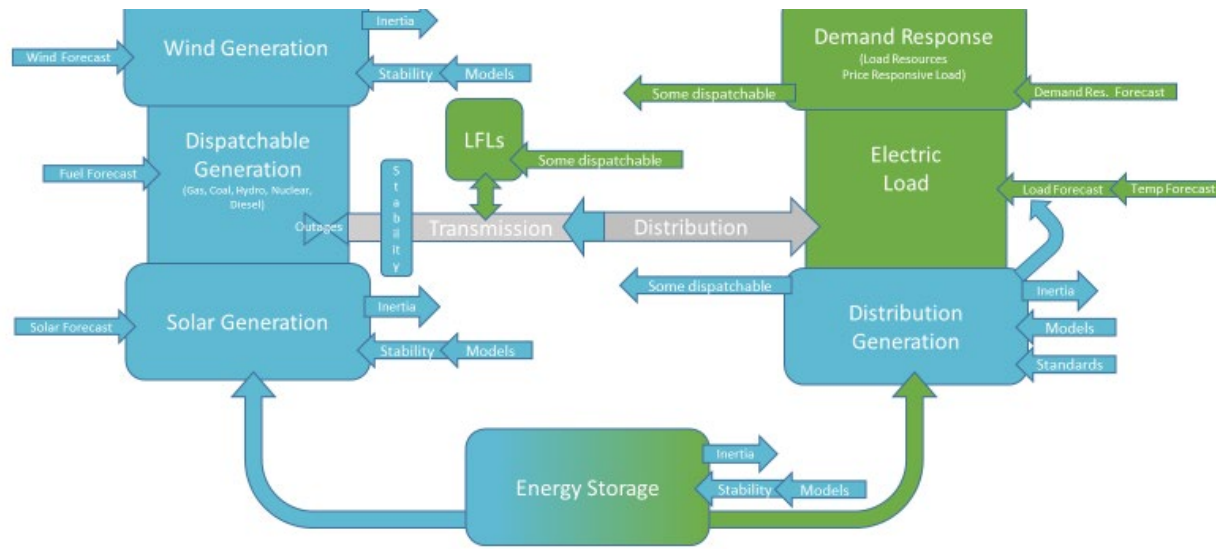


# The ERCOT Electric Grid: Then & Now

August 21, 1996, ERCOT became the first ISO in the United States.

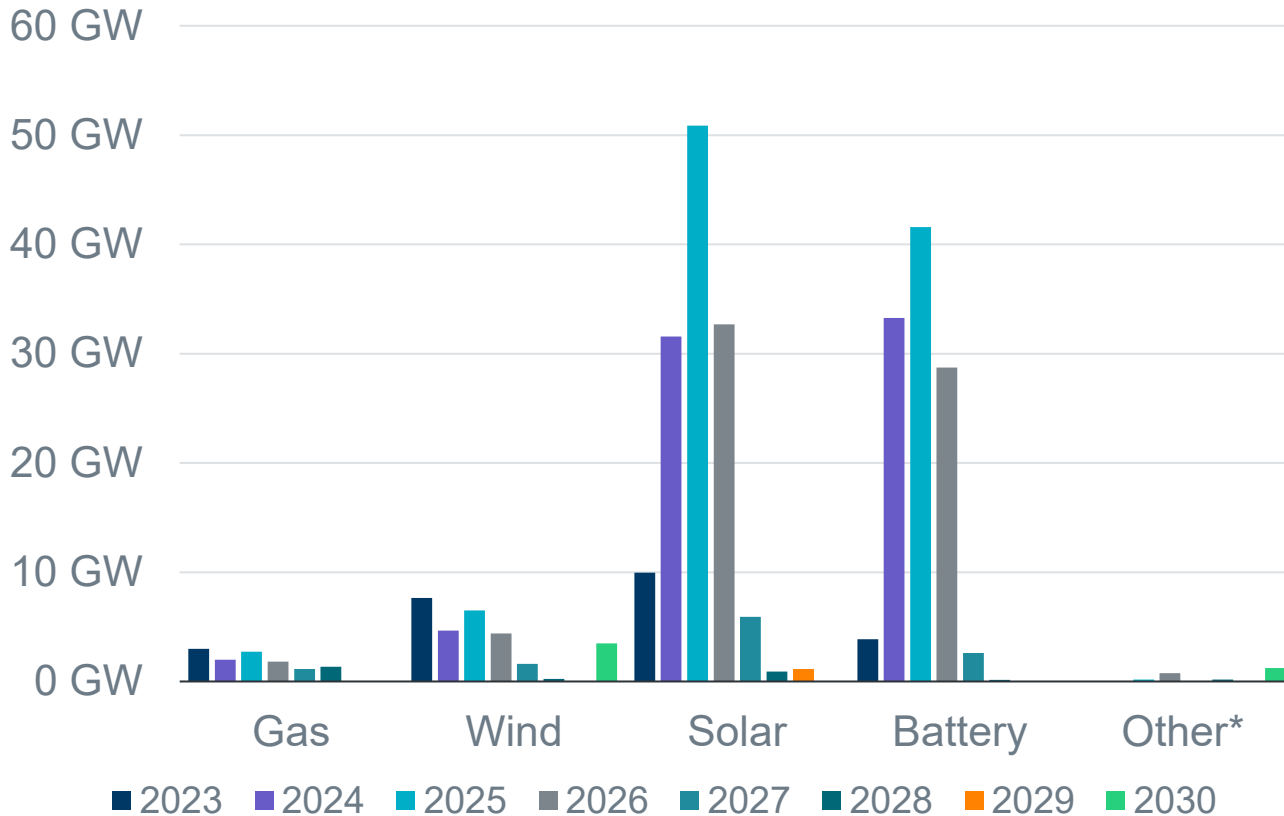


Today



# Generation Interconnection Requests

1,500 active generation interconnection requests totaling 287,809 MW as of July 31.



Solar: 133,979 MW  
 Wind: 28,615 MW  
 Gas: 12,368 MW  
 Battery: 110,408 MW

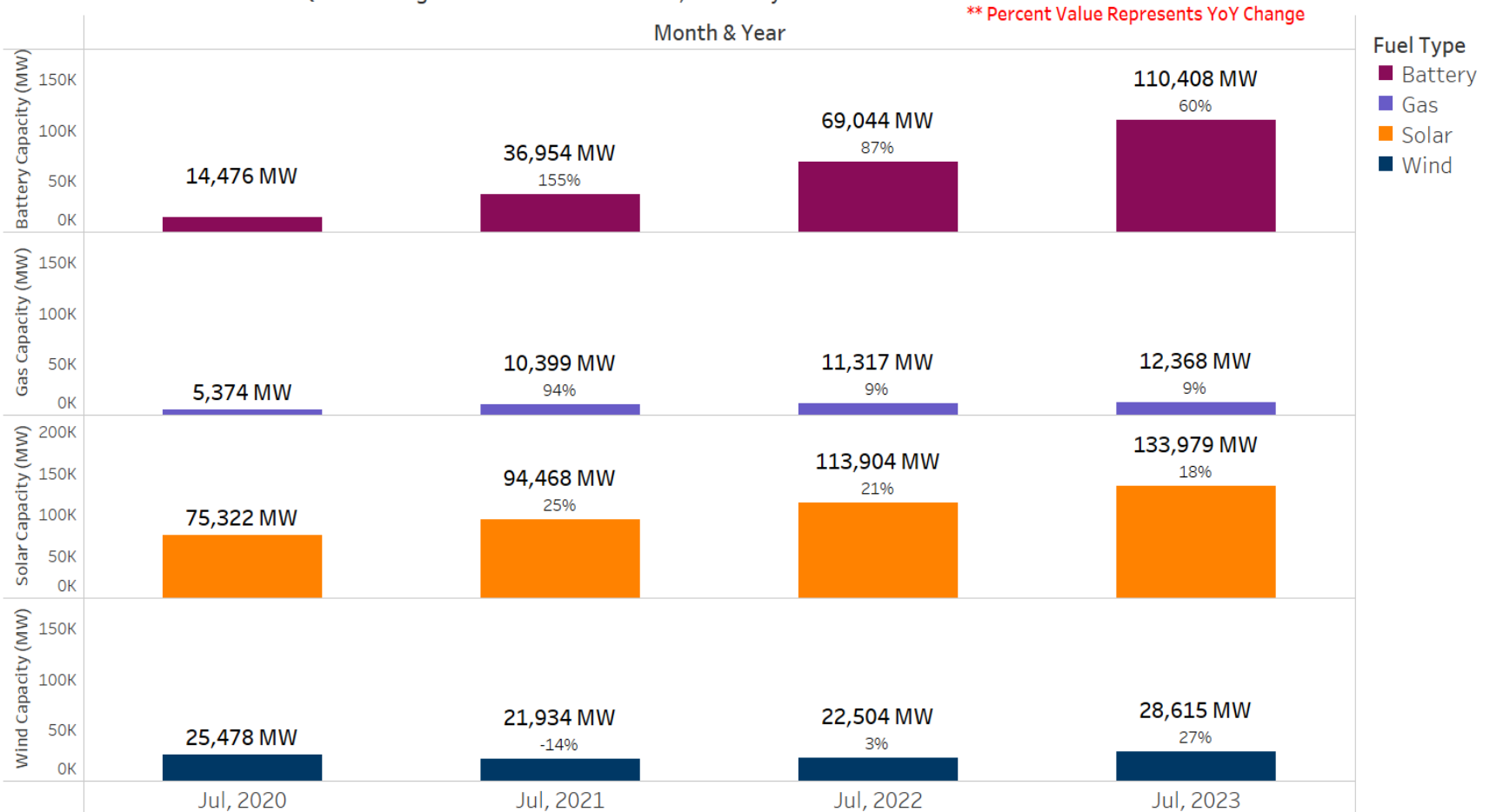
**Key Takeaway:**  
 The generation is changing rapidly, how we manage the grid is evolving too.

A break-out by zone can be found in the monthly Generator Interconnection Status (GIS) reports available on the ERCOT Resource Adequacy Page: <http://www.ercot.com/gridinfo/resource>. Other includes petroleum coke (pet coke), hydroelectric, fuel oil, geothermal energy, other miscellaneous fuels reported by developers, and fuel cells that use fuels other than natural gas.



# Interconnection Queue Changes Past 4 Years (as of July)

Year-on-Year Interconnection Queue Changes for the Past Four Years, as of July



\* Data Source: July 2023 GIS Report GIM Trends tab.  
 Chart from ERCOT Resource Adequacy Department



# Communications Update

## New Peak Demand Webpage

- Peak demand records for 2022 and 2023
- Yearly demand dating back to 2000
- Found under *Helpful Resources* on ERCOT.com

## TXANS notifications (as of Aug 23)

- 5 Weather Watches, 3 Voluntary Conservation Notices
- More than 10,000 signed up to receive TXANS notifications
- Emergency Alert subscribers increased significantly (4,600)

**Key Takeaway:** We continue to create transparent communications for stakeholders.

# Employee Recognition

Thank you to all the ERCOT employees who participated in the Strategic Plan 2024 – 2028!

## Strategic Planning Team Members

- Lauren Fleming
- Adam Martinez
- Chad Thompson
- Leslie Wiley
- Jeff Billo
- Alfredo Moreno
- Joel Koepke
- Davida Dwyer
- Ajay Mannepalli
- Dawn Herms

## Communications Team:

- Mark Miner
- Penney Christian
- Julie House
- Amy Lofton
- Olga Lyakhovets
- Sam Mogerman
- Christy Penders

Thank you to every single  
ERCOT employee and contractor  
for helping us navigate this  
record-setting summer!