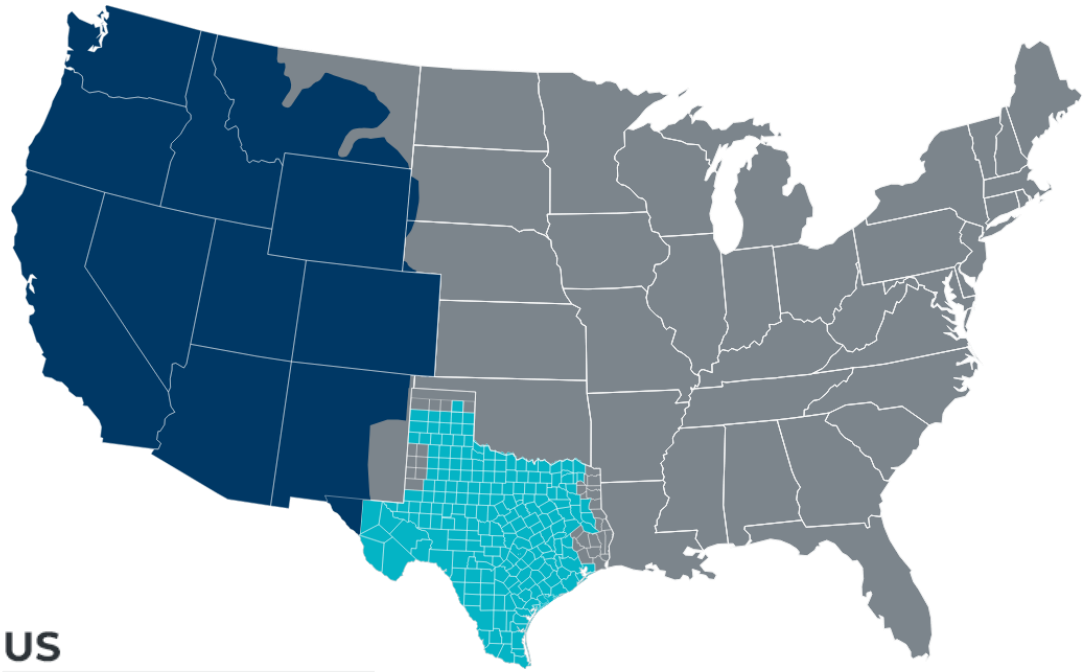
ERCOT Update

Woody Rickerson
Senior Vice President & Chief Operating Officer

Texas House of Representatives
Committee on State Affairs

March 5, 2025

The ERCOT Region



US
Interconnections

- Western Interconnection
  Includes El Paso and Far West Texas
- ERCOT Interconnection
- Eastern Interconnection
  Includes portions of East Texas and Panhandle region

The ERCOT grid is the interconnected electrical system serving most of Texas with limited external connections.

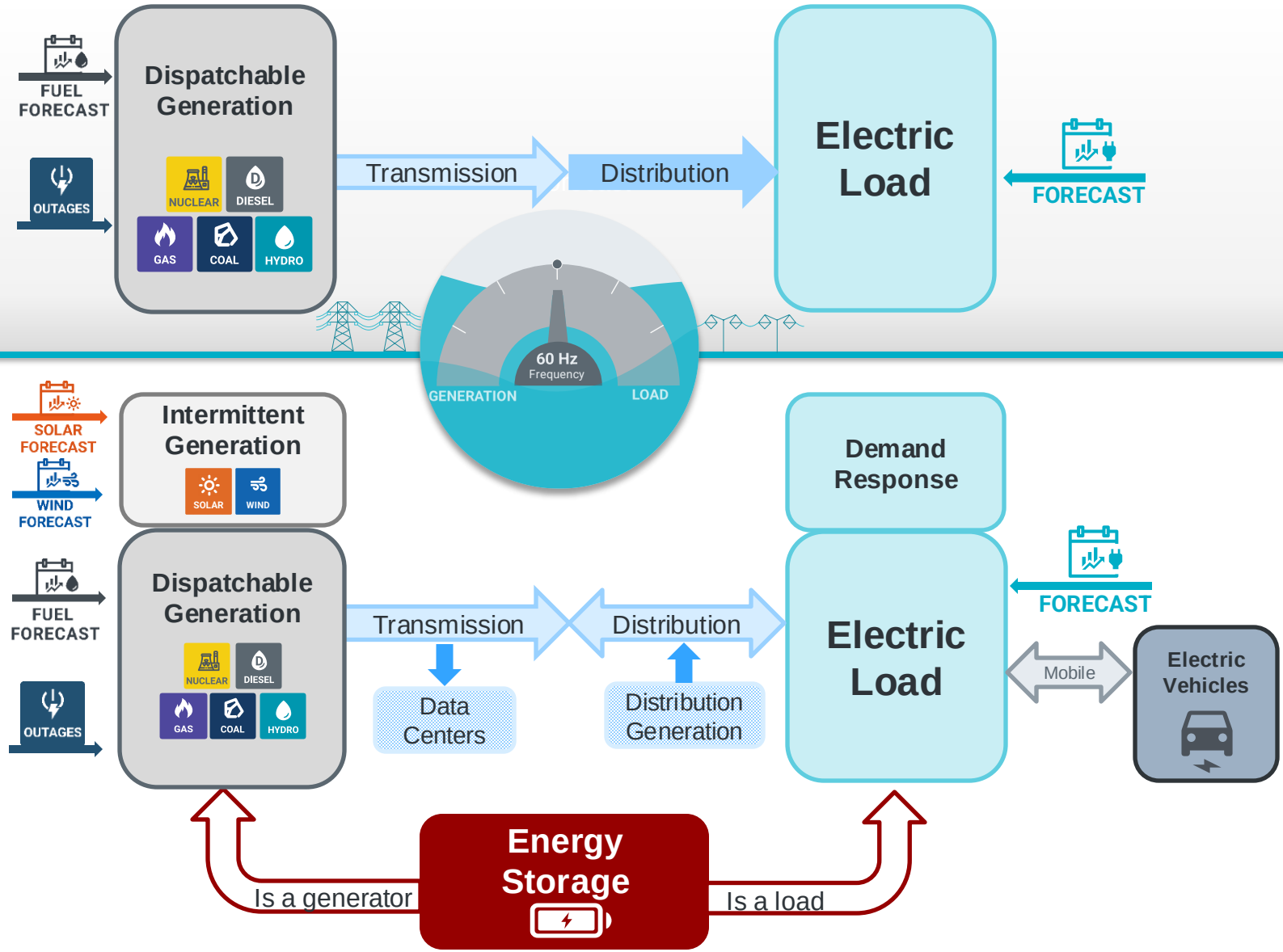
ERCOT highlights include:

- 90% of Texas electric load;
- 75% of Texas land
- More than 54,100 miles of transmission
- 1,250+ generation units (including PUNs)
- ERCOT connections to other grids are limited to ~1,220 MW of direct current (DC) ties, which allow control over the flow of electricity.

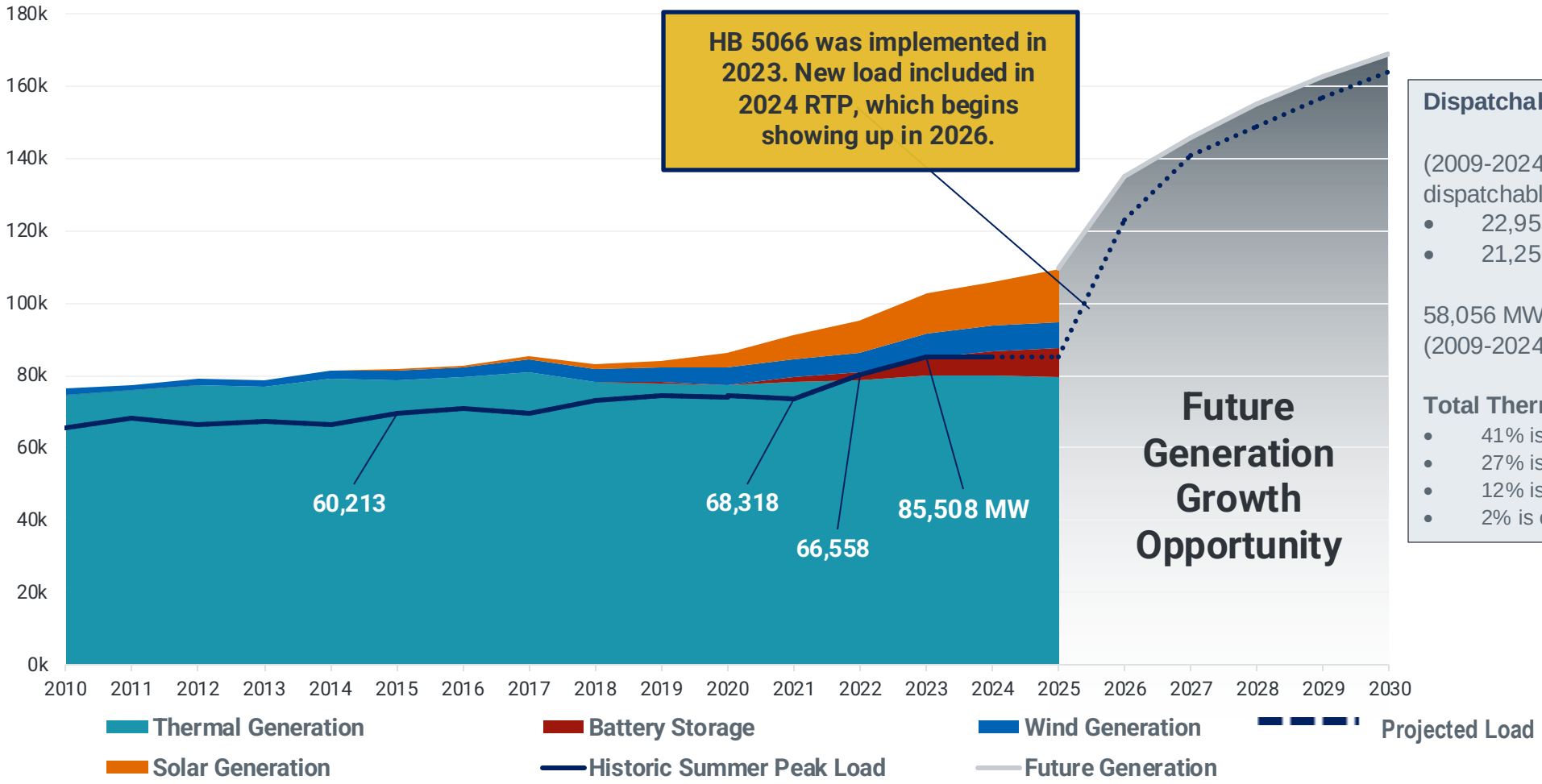
Created by the Texas Legislature in 1999, ERCOT Inc. was assigned four primary responsibilities:

- Maintain system reliability
- Facilitate a competitive wholesale market
- Ensure open access to transmission
- Facilitate a competitive retail market

The ERCOT Electric Grid: Then and Now



Challenges and Opportunities Ahead



Dispatchable Thermal Generation

(2009-2024) only 1,700 MW of net new dispatchable thermal generation added.

- 22,955 MW added
- 21,256 MW retired

58,056 MW of net new solar and wind added (2009-2024)

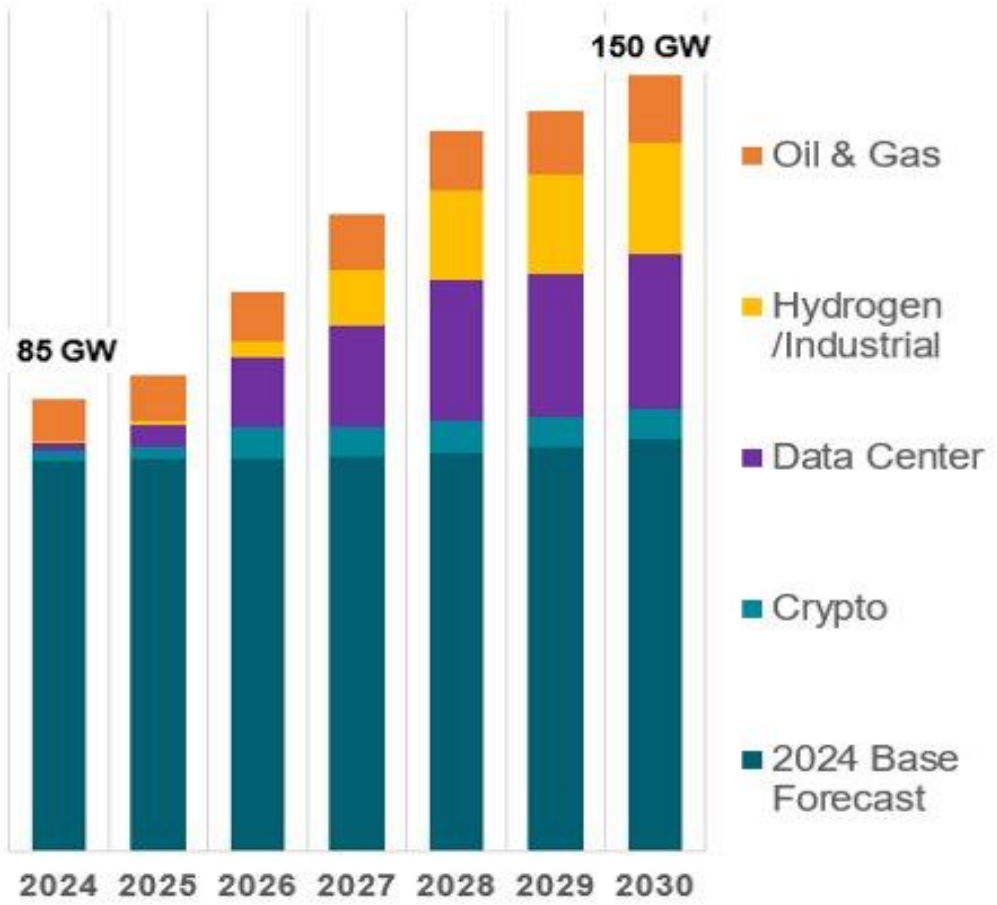
Total Thermal Fleet is 78,477 MW

- 41% is older than 30 years (32,082 MW) (1994)
- 27% is older than 40 years (21,214 MW) (1984)
- 12% is older than 50 years (9,646 MW) (1974)
- 2% is older than 60 years (1,751 MW) (1964)

Key Takeaway: The new load forecast in ERCOT creates significant investment opportunities for balanced generation growth to serve Texans.

New View of Load Growth in the ERCOT System

- Previous Regional Transmission Plan (RTP) rules did not allow ERCOT to factor in unsigned load.
- House Bill 5066 (88th Legislative Session) required ERCOT to include prospective load identified by Transmission Service Providers (TSPs).
- This rule coupled with incredible interest in Texas led to significant increases in large loads considered in planning studies (i.e., crypto mining, hydrogen and hydrogen-related manufacturing, data centers, and electrification).

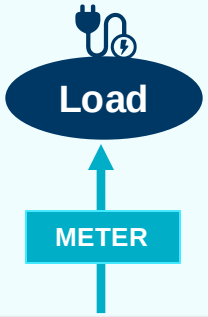


Key Takeaway: Forecasted load growth coupled with the evolution of generation types and locations have led to a new era of system planning to reliably and efficiently facilitate large power transfer across the system.

Large Load (75 MW ≥) Scenarios at Transmission Level

Scenario 1

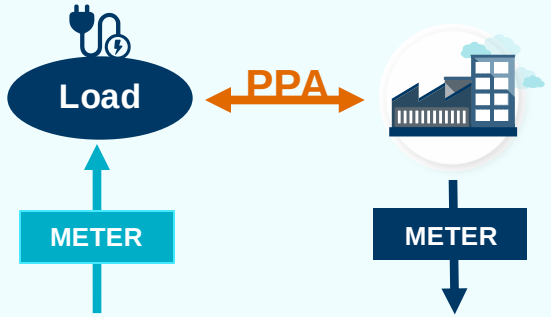
Load is directly connected to the grid as a retail customer.



- Load has no backup generation located onsite.

Scenario 2

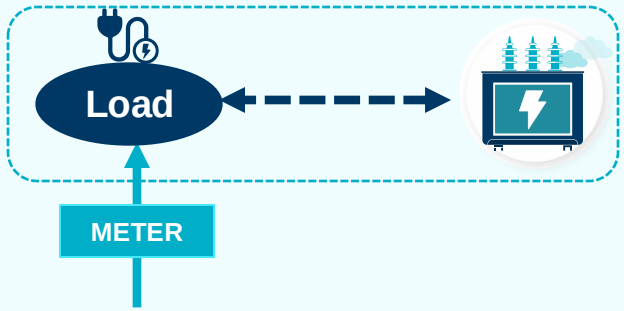
Load is directly connected to the grid and has an agreement with a separate generator via a Power Purchase Agreement (PPA).



- Generator is connected to the grid at a separate meter; generation offered into the market and settled by ERCOT.
- Generator is studied through the Resource Interconnection process.
- Load is hedged against price volatility via PPA (settled outside ERCOT processes).

Scenario 3 Backup Generation

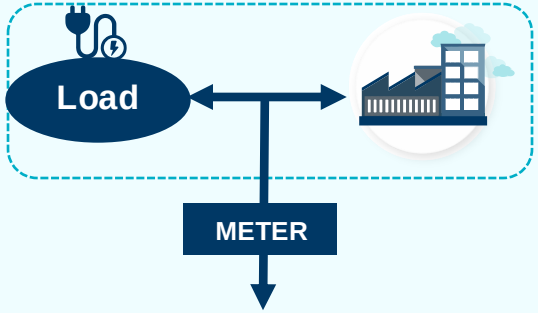
Load is directly connected to the grid, and there is non-synchronous backup generation at the site.



- Generation is not synchronized to the grid and only provides backup power to the load (and the generation is never settled by ERCOT).
- Load can take power from either the grid or the backup generation but must disconnect from the grid to use backup generation.

Scenario 4 Co-location

Load is behind the meter at a site with a grid-connected generator, making the site a Private Use Network (PUN).



- Load and generator are connected to the grid through the same meter.
- Generator may serve some or all of the load; only excess generation is offered into the market and settled by ERCOT.
- Load is served by the grid when generation is not available or insufficient; load is settled by ERCOT. Load may not have been planned for operationally.
- Studies examine load individually, generation individually, and load and generation in combination.

ERCOT GRID

- Load is connected to the ERCOT grid as standalone load, is served by the ERCOT grid at all times, and settled by ERCOT.
- Load is studied for impact on grid reliability prior to construction.

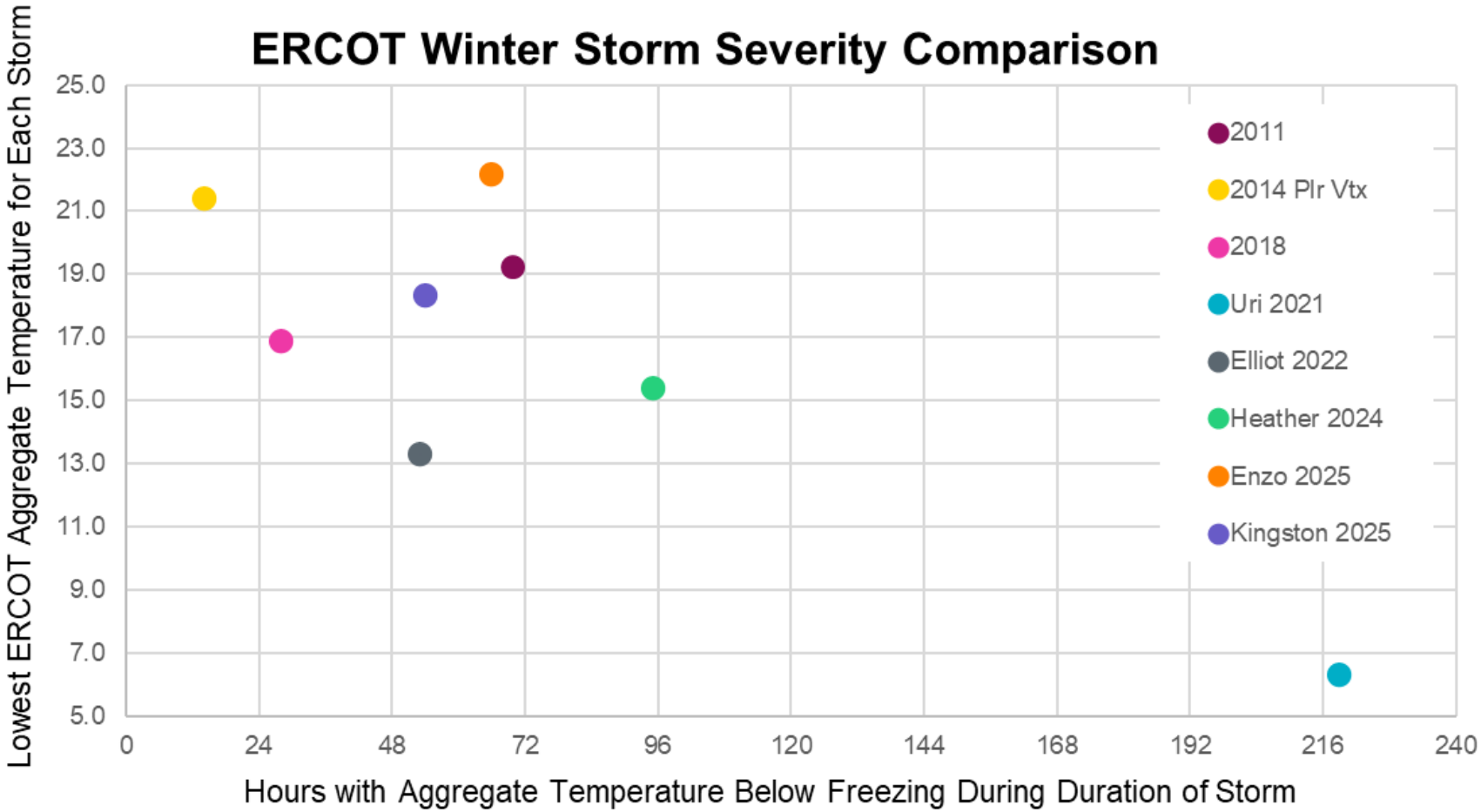
Subject To Grid Costs

May Avoid Grid Costs

Grid costs include system admin fee, transmission, and Ancillary Service costs and are typically based on net consumption.

Large Loads include crypto mining, hydrogen and hydrogen-related manufacturing, data centers, and electrification.

Comparison of Past Winter Storms



Key Takeaway: Winter Storm Kingston was less severe than several historical storms that have impacted the ERCOT region; however, it was the most severe storm this winter season.