EVOLVING GENERATION PLANNING

PRESENTED BY:

Benny Ethridge

Chief Energy Supply Officer

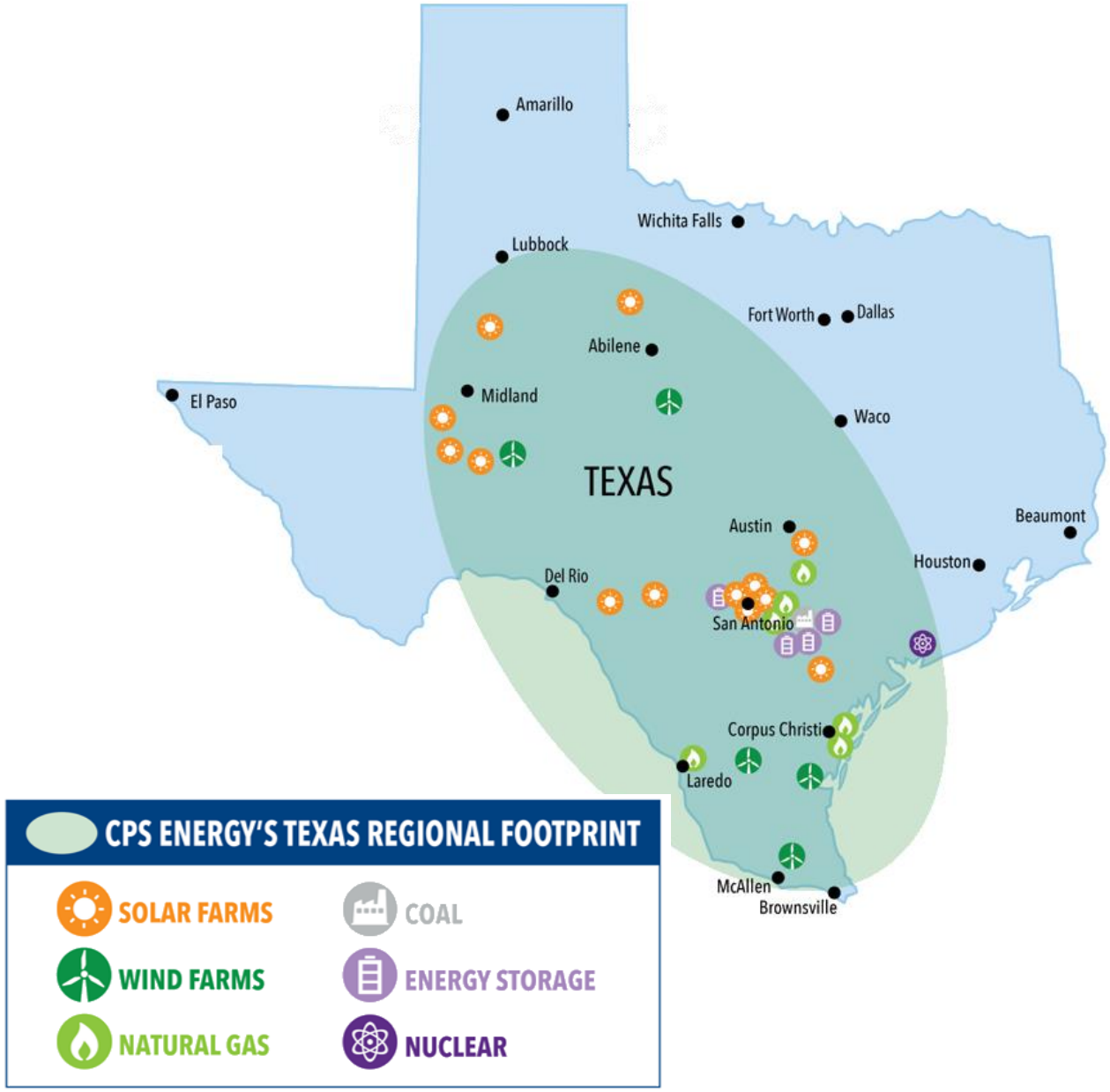
CPS Energy

July 30, 2025

Informational Update

AGENDA

- ERCOT Market Landscape
- CPS Energy Generation Plan
- Future Outlook



ERCOT MARKET LANDSCAPE

- ERCOT anticipates **~48 GW** of new load by 2030
- There are ~2,054 active generation interconnection requests* in the queue, totaling **~420 GW**

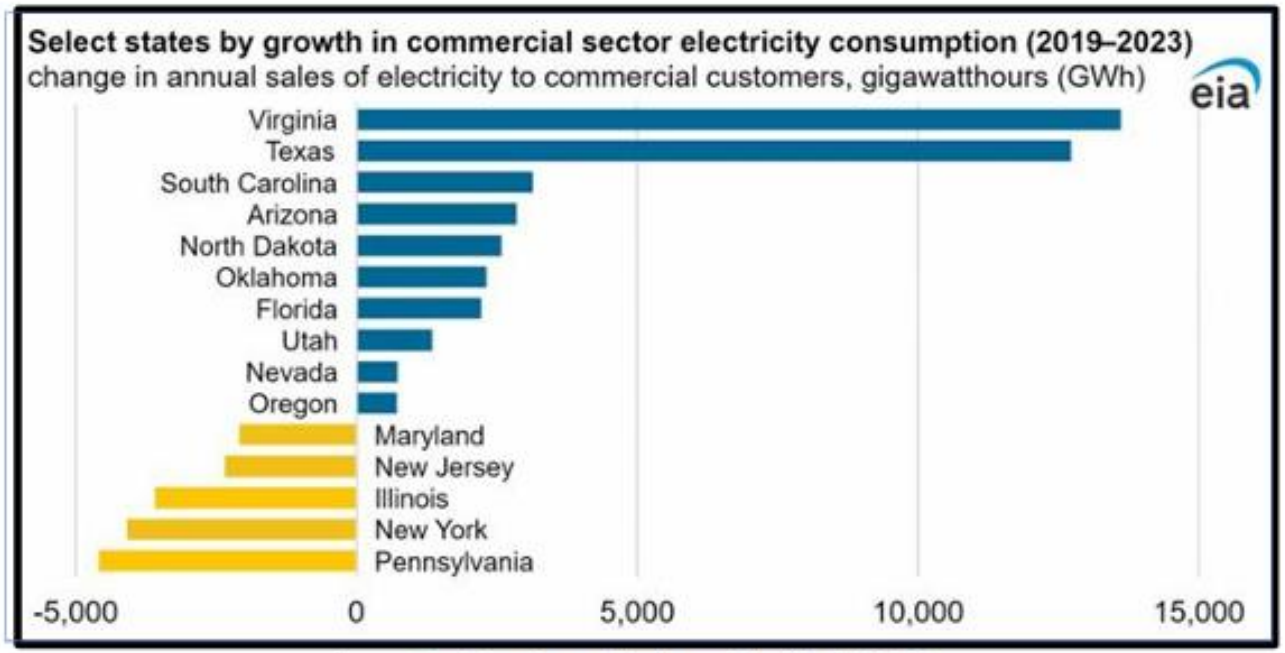
Sources:
- ERCOT Report on the Capacity, Demand and Reserves (CDR) in the ERCOT Region, 2026-2030 – May 16, 2025
- ERCOT Monthly Operational Overview – June 2025

ERCOT forecasts tremendous electric demand growth over the next 5-7 years.
***Not all interconnection requests will advance to the commissioning phase.**

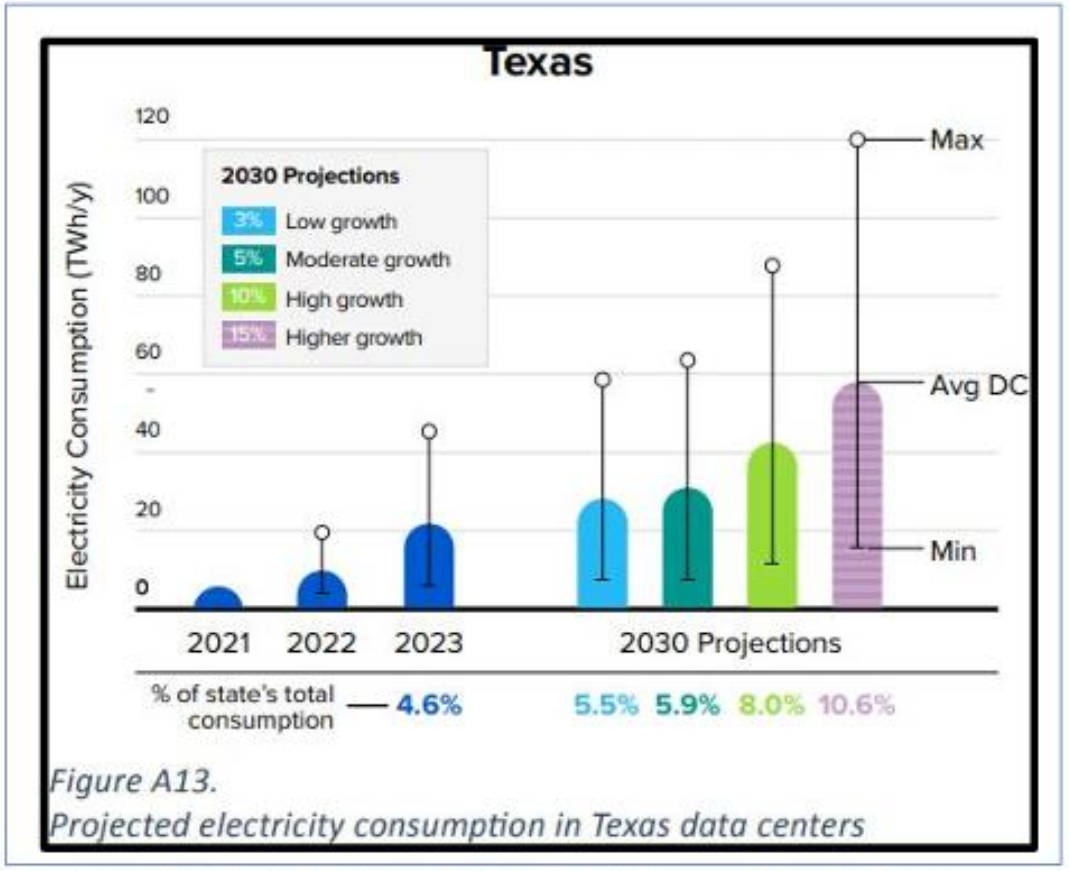
INDUSTRY TRENDS

DATA CENTER – ELECTRIC LOAD GROWTH IN TEXAS

Texas is #2 in the US for commercial demand for electricity led by Data Centers



Source: https://www.eia.gov/todayinenergy/detail.php?id=62409

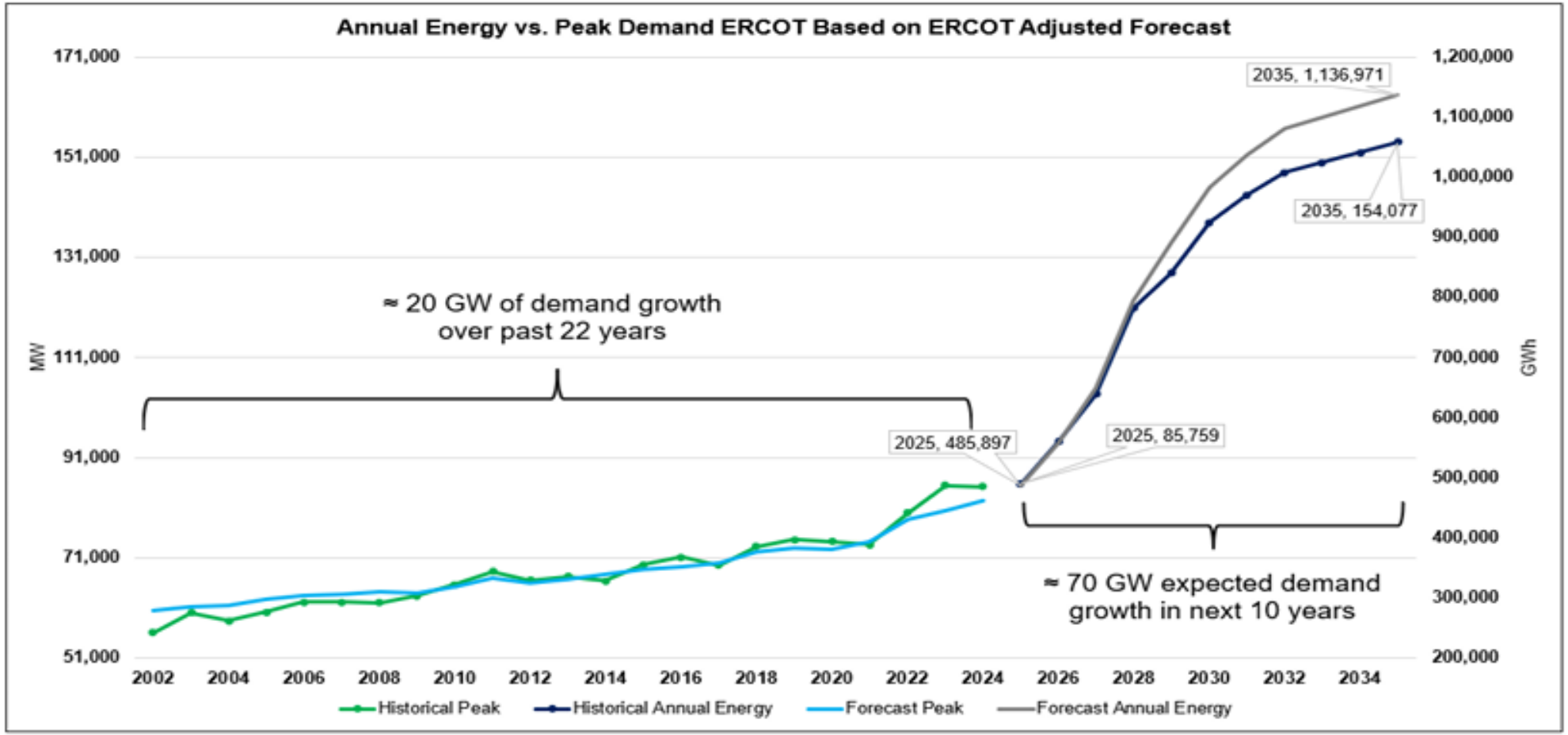


Source: EPRI – Powering Intelligence: Analyzing Artificial Intelligence and Data Center Energy Consumption

Total electric consumption by data centers in the U.S. is expected to double by 2028, driving the need for more baseload generation.

ERCOT DEMAND OUTLOOK

FORWARD ERCOT GROWTH

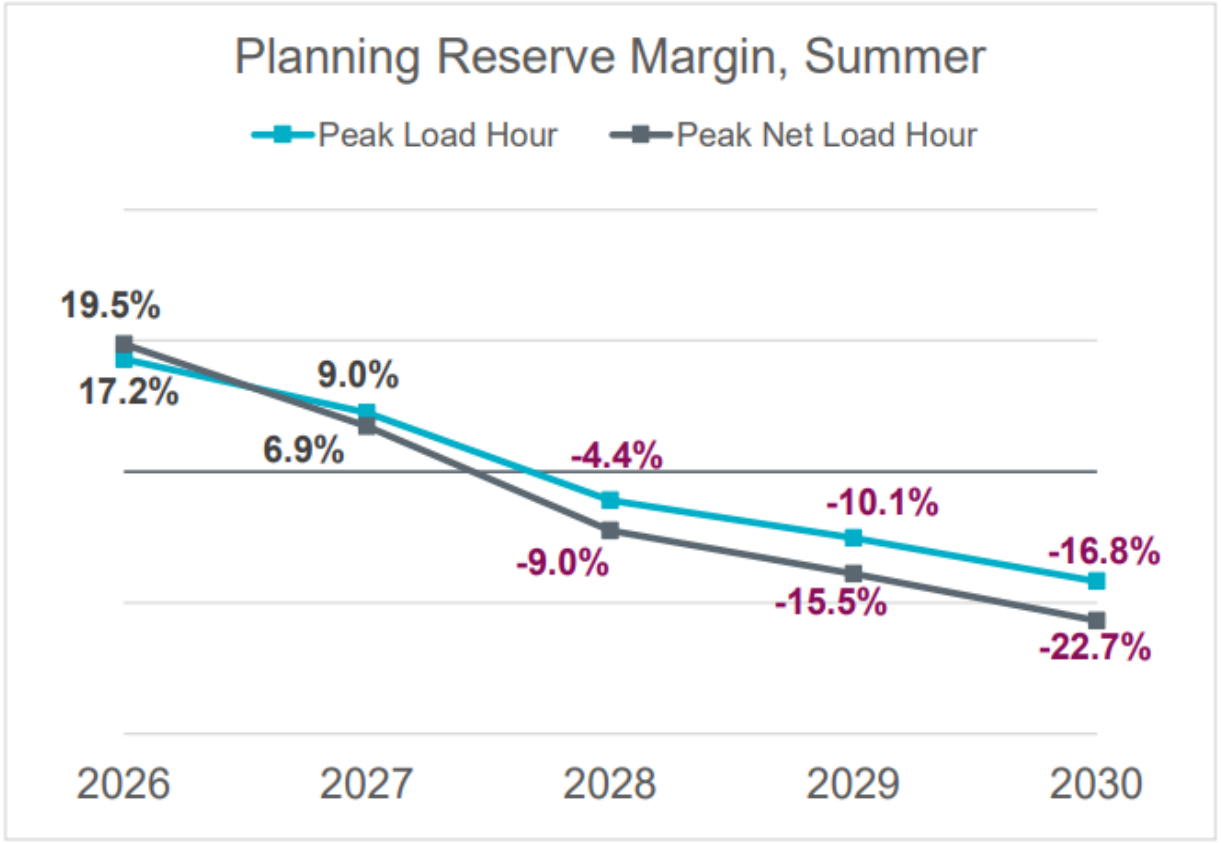


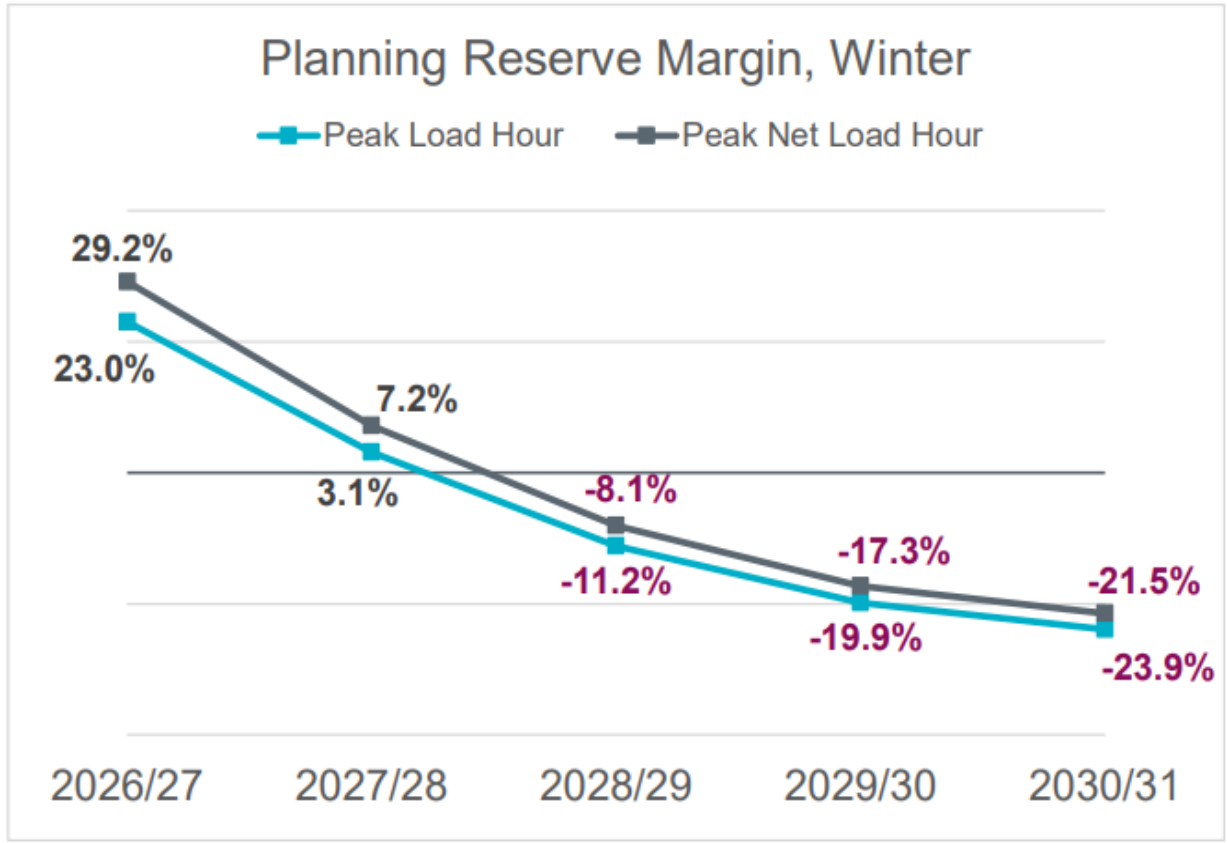
Source from ERCOT Adjusted Load Forecast – 4/15/2025

Sustained demand growth in ERCOT will require a flexible "*all-in*" generation approach.

ERCOT MARKET OUTLOOK

SUMMER AND WINTER RESERVE MARGIN UPDATES





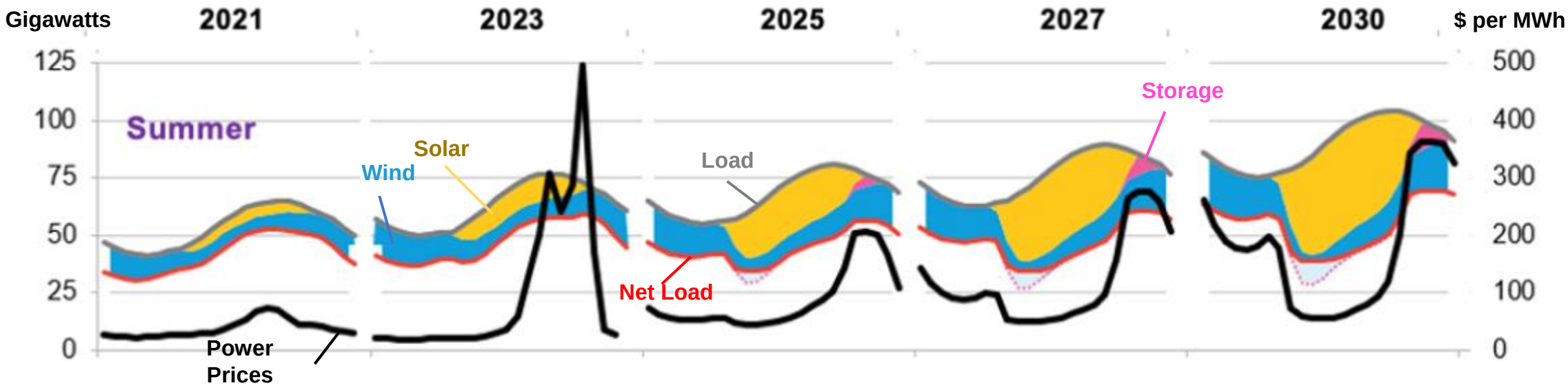
ERCOT Report on the Capacity, Demand and Reserves (CDR) in the ERCOT Region, 2026-2030 – May 16, 2025

ERCOT demand growth in ERCOT may lead to greater market price volatility and potential energy shortfalls within the next 5 years.

CAPACITY AND DEMAND CHALLENGE

SHIFTING "PEAK" DEMAND

Average Hourly Load and Renewables Output in ERCOT

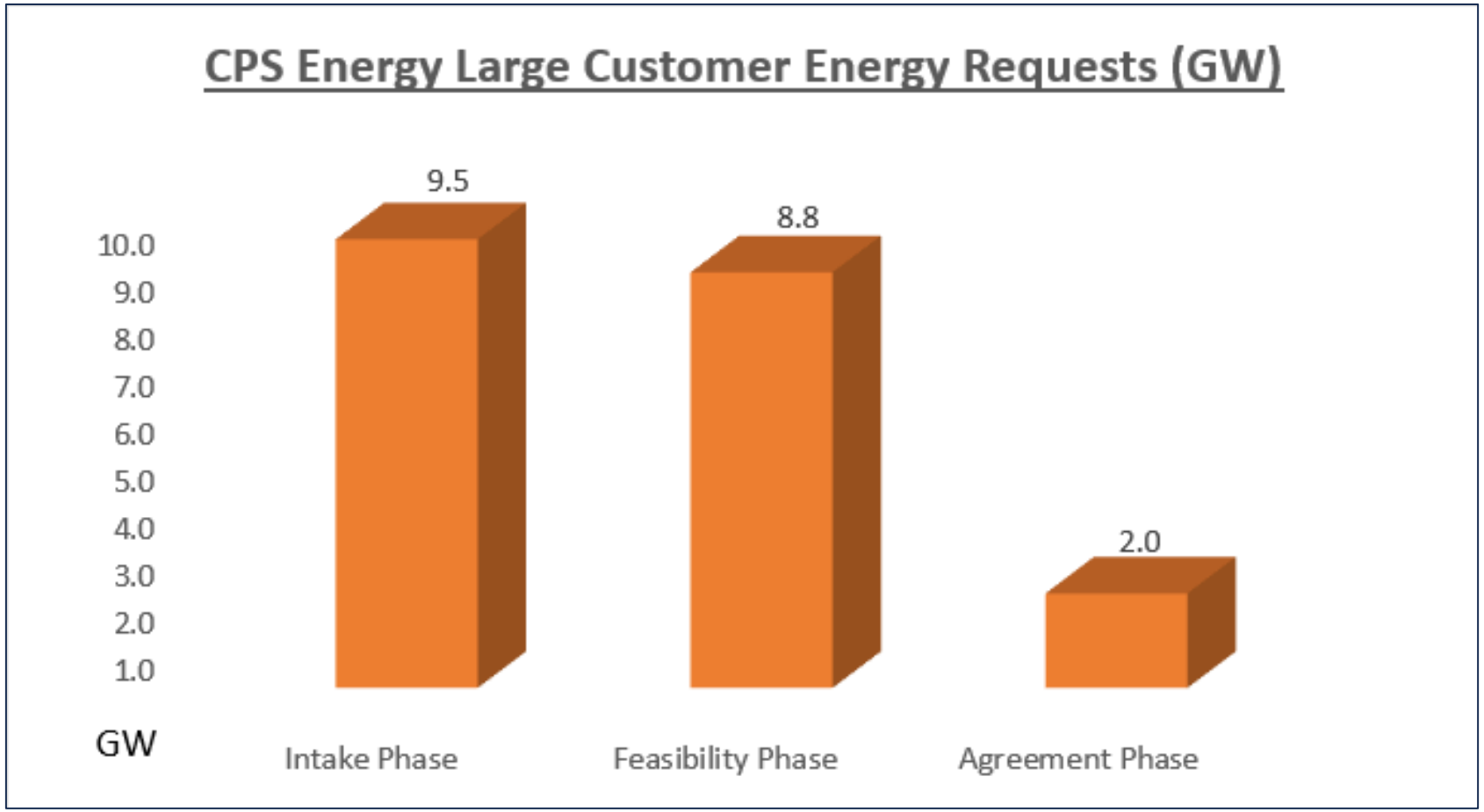


Source: *Texas Tug of War: Grid Juggles Solar Boom and Power-Hungry Data Centers*, BloombergNEF, September 4, 2024

Daily solar generation ramp-out has shifted the peak net load driving the need for more flexible, dispatchable generation resources.

LARGE ENERGY CUSTOMER REQUEST

SIGNIFICANT GROWTH POTENTIAL



2 GW have reached the Agreement Phase, and more coming. This represents ~ 1/3 of current system peak.

COMMUNITY GENERATION PLANNING

OUR PATH SINCE 2022

CPS Energy's community Rate Advisory Committee presenting to Board of Trustees

- Deep analysis of diverse generation scenarios
- Community engaged to provide feedback and understand needs
- Comprehensive evaluation by the Rate Advisory Committee (RAC) supported a blended portfolio

Generation Plan Components

- ❑ Retire or convert coal plants
- ❑ Retire aging gas units
- ❑ Addition of Solar, Wind, Storage, and Gas

The Vision 2027 Generation Plan was developed to address evolving generation needs, while working to achieve the City of San Antonio's Climate Action & Adaptation Plan (CAAP) goals.

Vision 2027
GENERATION PLAN

LEGEND

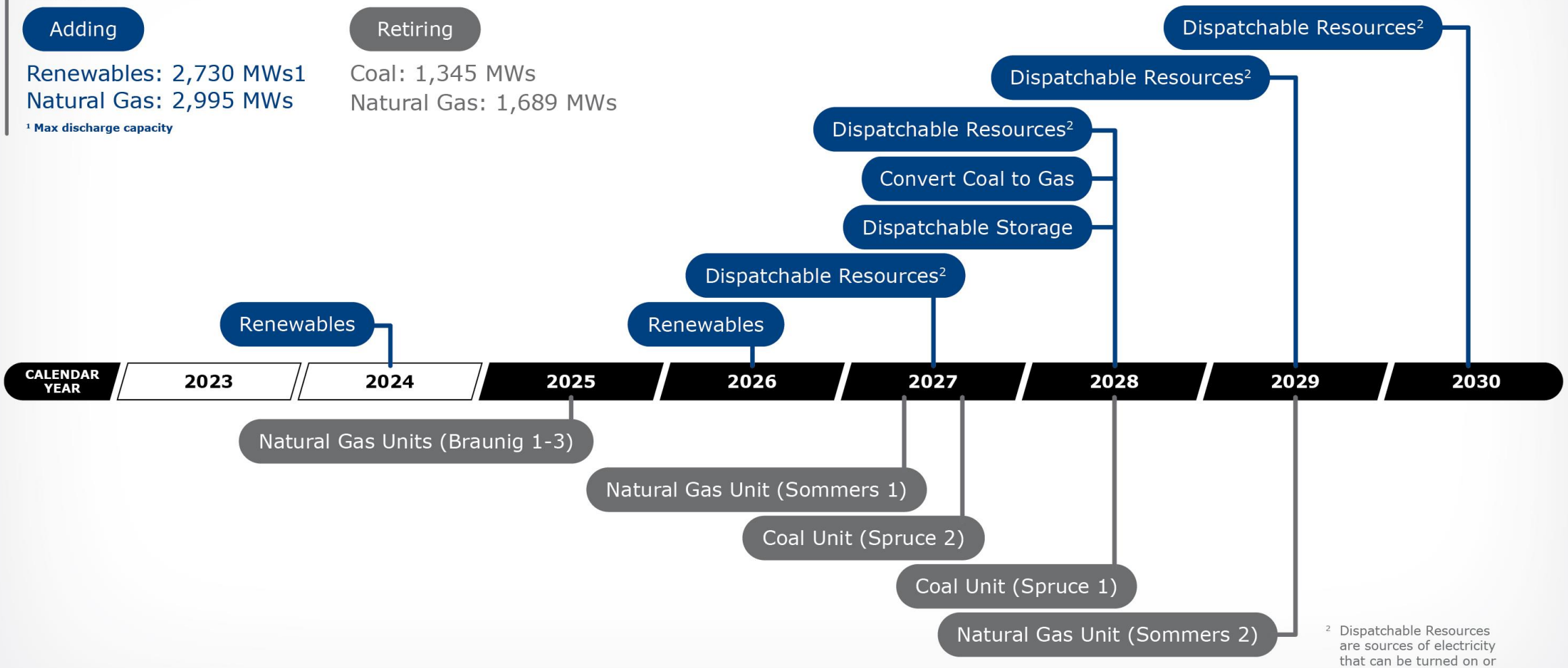
Adding

Renewables: 2,730 MWs1
Natural Gas: 2,995 MWs

[1] Max discharge capacity

Retiring

Coal: 1,345 MWs
Natural Gas: 1,689 MWs

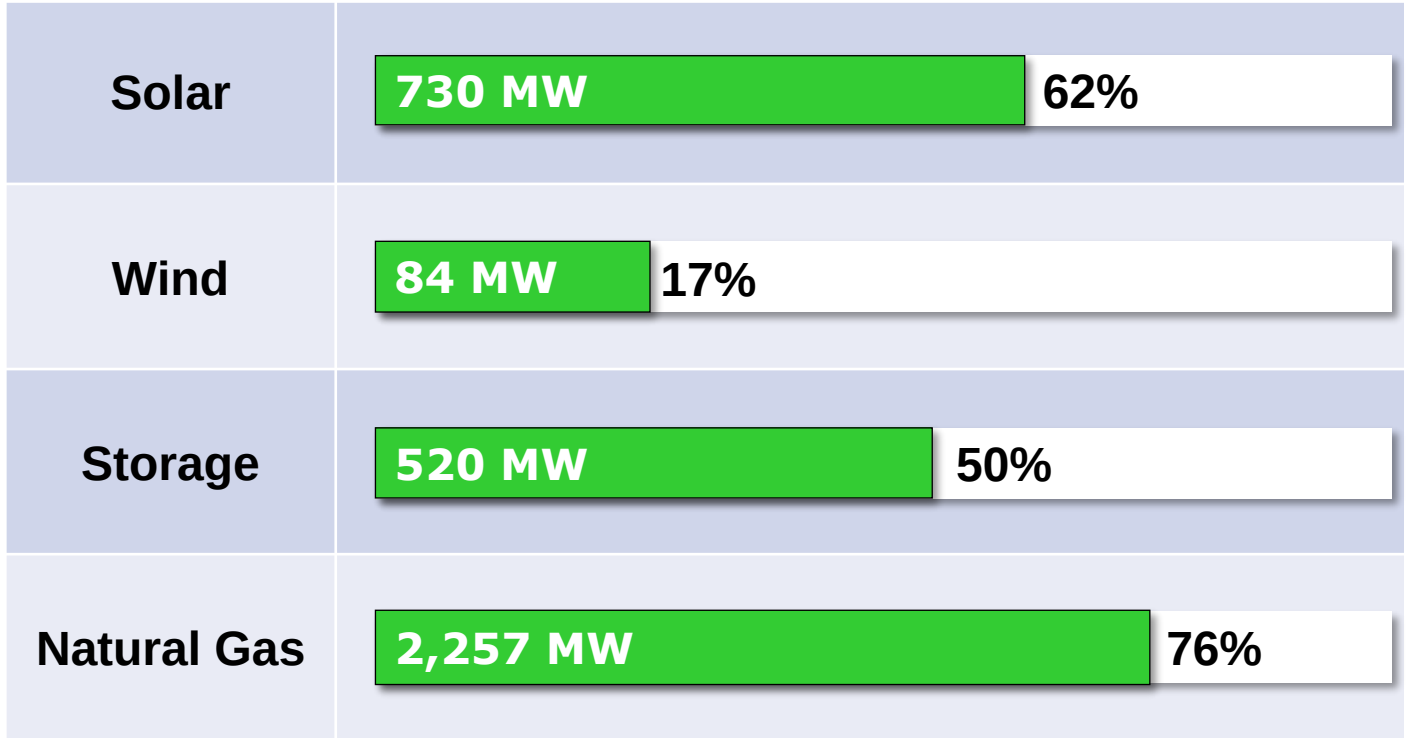


[2] Dispatchable Resources are sources of electricity that can be turned on or off as needed.

March 25, 2024

CAPACITY ADDITIONS ARE AHEAD OF SCHEDULE

% of 2030 Target That is Online or Under Contract



New Capacity Online

830 MW
(Goal through 2024)

VS.

2,521 MW
(Actual)

As our Community's need for electricity accelerates, we are producing more power ahead of schedule.

HORIZON 2050

STRATEGIC FRAMEWORK

VISION

EMPOWERING OUR COMMUNITY FOR GENERATIONS

MISSION

TO SAFELY ***POWER*** OUR COMMUNITY WITH
RELIABLE, AFFORDABLE, AND CLEANER ENERGY

GOALS

EXTERNAL

RELIABILITY	VALUE	CLEANER ENERGY
ELECTRIC AND GAS SERVICES THAT ARE ALWAYS ON	AFFORDABLE PRICES, EXCELLENT OPTIONS AND SERVICE	A BALANCED APPROACH TO REDUCE OUR ENVIRONMENTAL IMPACT

INTERNAL

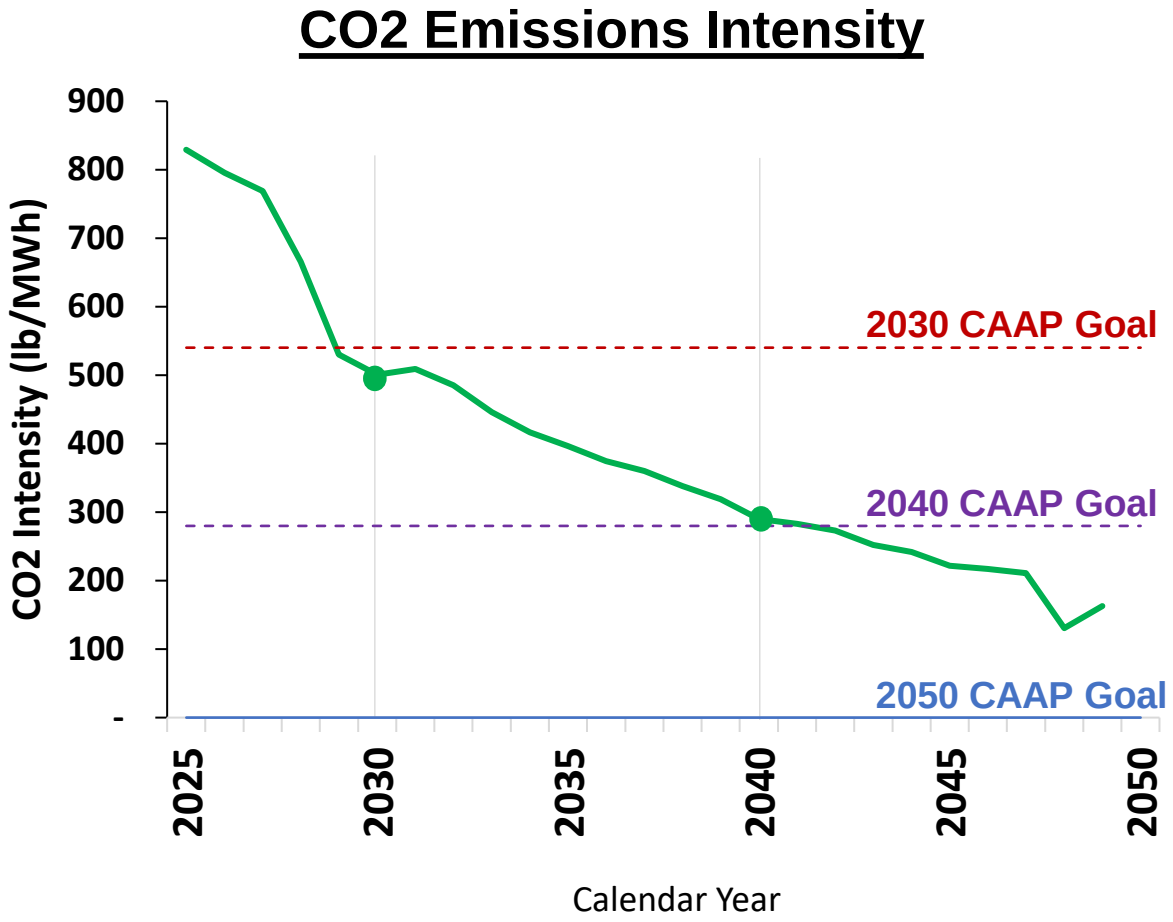
FINANCIAL STRENGTH	TEAM EXCELLENCE
FINANCIALLY RESILIENT AND COMPETITIVELY PRICED TO FUEL GROWTH AND SAFEGUARD INVESTMENTS FOR OUR COMMUNITY	DEVELOP OUR TEAM TO DRIVE INNOVATION AND DELIVER EXCELLENCE AS ONE TEAM

VALUES

ACCOUNTABILITY, INTEGRITY, EXCELLENCE, SAFETY & WELLBEING, TRANSPARENCY, ONE TEAM

WHY NEW GENERATION TECHNOLOGIES ARE NEEDED?

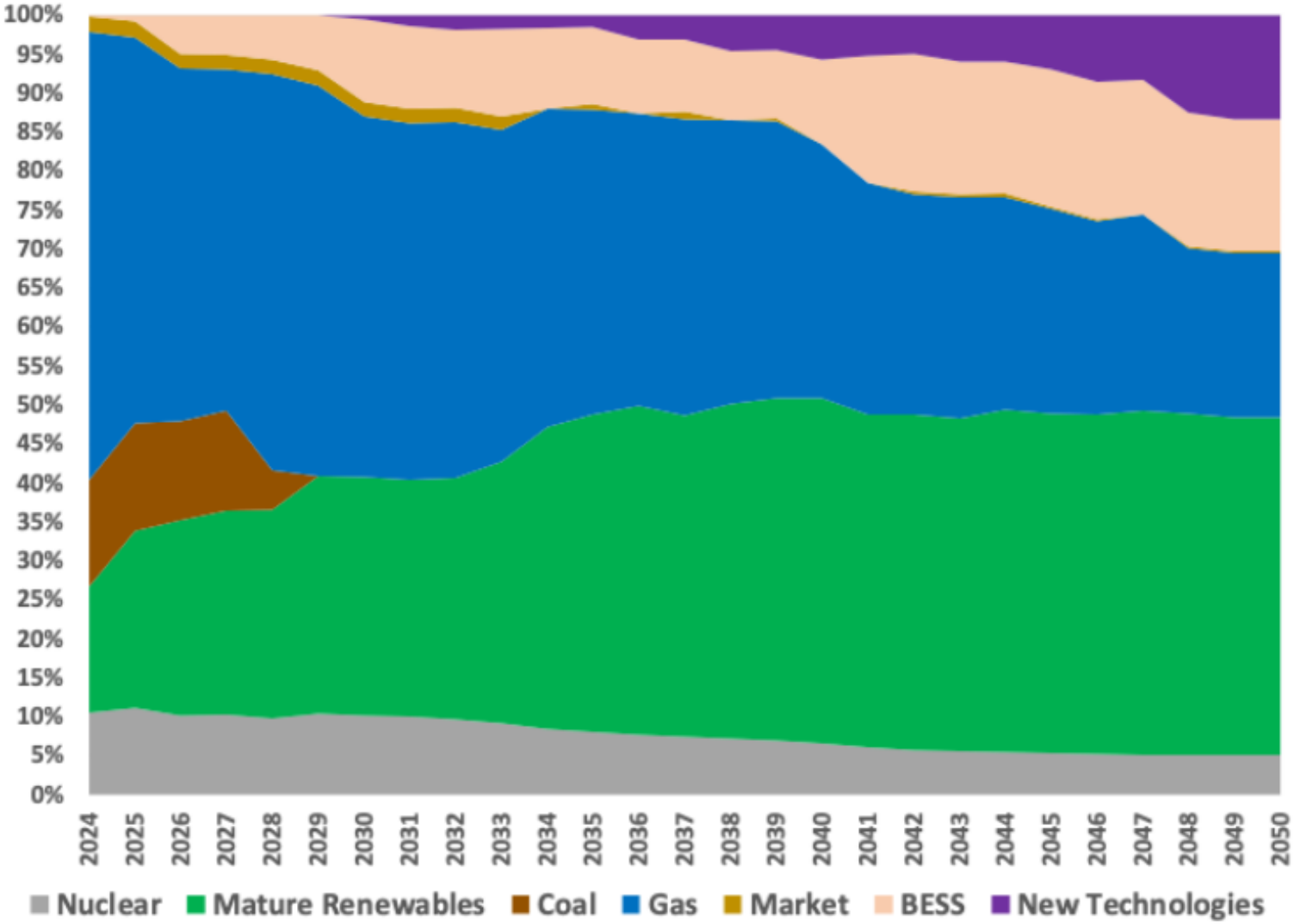
- Support long-range decarbonization goals
- Replace retiring conventional coal and gas generation
- Enable effective integration of variable generation resources



Advancements in new technology are essential to maintaining our ability to provide reliable, affordable and environmentally responsible energy.

NEW TECHNOLOGIES IN RESOURCE MIX

2024 PLAN



- New Technologies in 2024 Plan:
  - Compressed Air Storage (CAES)
  - Hydrogen
  - Advanced Geothermal
- Technologies serve as placeholders in the Plan.
- New Technologies 1st enter our 2024 Plan in 2031 and grow to about 13% of our Portfolio by 2050.
- A Multitude of Technology Options are being evaluated and considered for the 2025 Resource Plan Update.

Note: Percentage calculations are based off nameplate capacities

NEW TECHNOLOGIES UNDER REVIEW

WHAT ELSE?

- Long Duration Energy Storage (LDES)
  - Thermal, Mechanical, and Chemical Options
- Clean Hydrogen
  - Electrolysis, Pyrolysis, Hydrogen Turbines
- Advanced Nuclear
- Small Modular Reactors (SMR)
- Advanced Geothermal
- Carbon Capture Utilization and Storage (CCUS)

THANK YOU

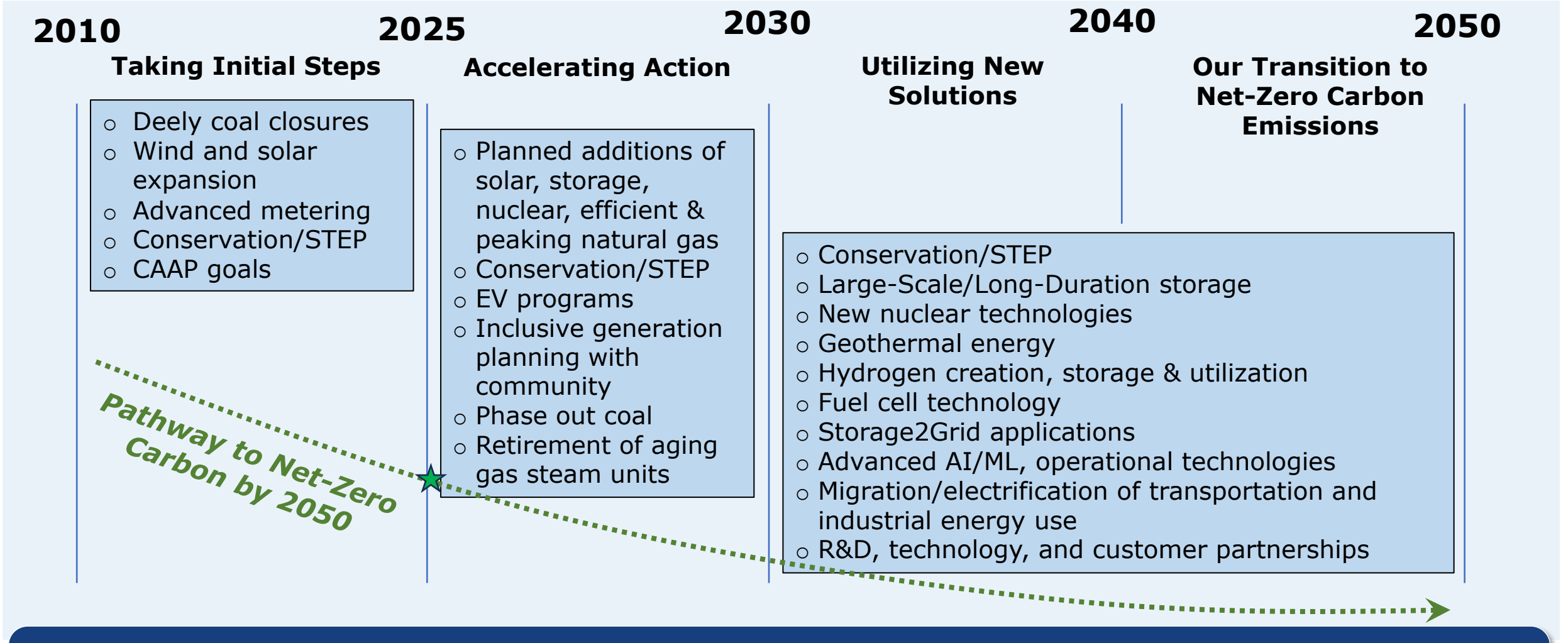
APPENDIX

GLOSSARY / DEFINITIONS

ACRONYM OR WORD	DEFINITION	ACRONYM OR WORD	DEFINITION
AI/ML	Artificial Intelligence/Machine Learning	EV	Electric Vehicles
CAAP	Climate Action and Adaptation Plan	GT	Gas Turbine
CC	Combined Cycle	GW	Gigawatt
CO2	Carbon Dioxide	MW	Megawatt
CT	Combustion Turbine	MWh	Megawatt-hour
CY	Calendar Year	R&D	Research and Development
Dispatchable Resources	Sources of electricity that can be turned on and off as needed.	STEP	Sustainable Tomorrow Energy Plan
ERCOT	Electric Reliability Council of Texas	STP	South Texas Nuclear Project

PATHWAY TO 2050

OUR TRANSITION TO NET-ZERO CARBON EMISSIONS



A blend of proven technologies, energy efficiency, and timely commercialization of new generation and storage technologies is our path to net-zero carbon by 2050.

CPS ENERGY GENERATION PORTFOLIO

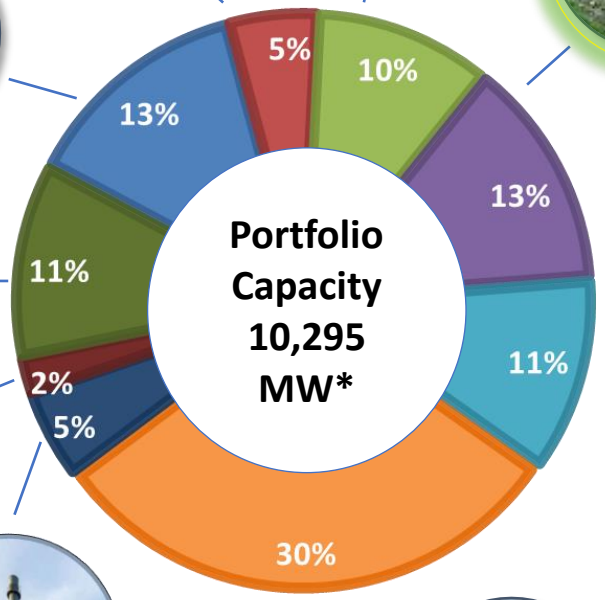
Battery Storage
530 MW* / 1990 MWH*
(10+520) / (10+1980)
Storage

Wind Farms
1067 MW
Wind

Spruce Plants
1,345 MW
Coal

Solar Plants
1,295 MW*
(1041+254)
Solar

South Texas Project
1,081 MW*
(1,029 + 52)
Nuclear



Gas ST Plants 1,122 MW
- **Sommers 830 MW**
- **Barney Davis 292 MW**

Purchased Power
200 MW
Market

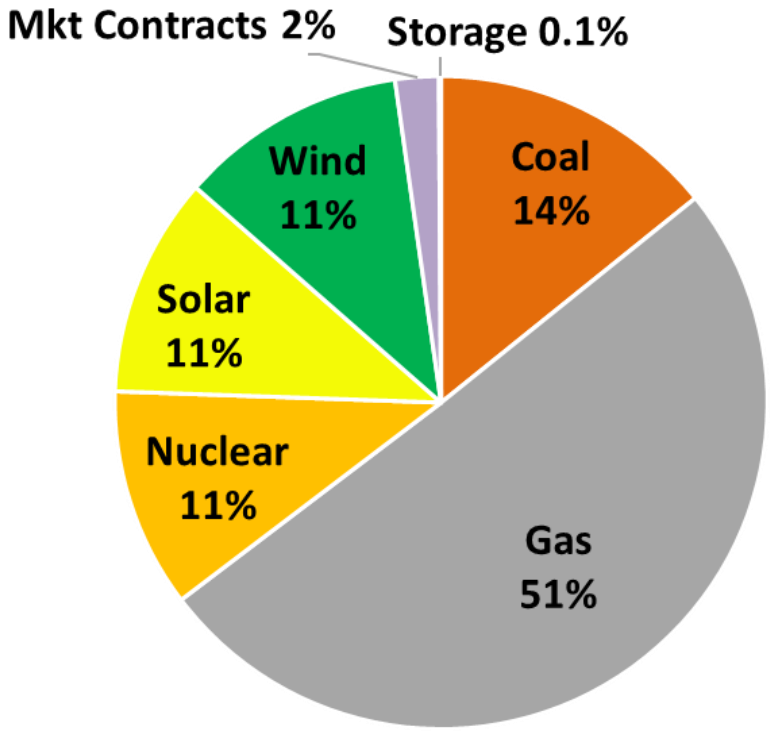
Gas Peaking Plants 552 MW
- **Milton B Lee 375 MW**
- **Laredo 177 MW**

Gas CC Plants 3,104 MW
- **AvR 518 MW**
- **Rio Nogales 798 MW**
- **Barney Davis 633 MW**
- **Nueces Bay 633 MW**
- **Gas Toll (Guadalupe) 522 MW**

*includes executed contracts not yet operational as of 6/1/2025

GENERATION PLAN
CAPACITY MIX BY CY2030

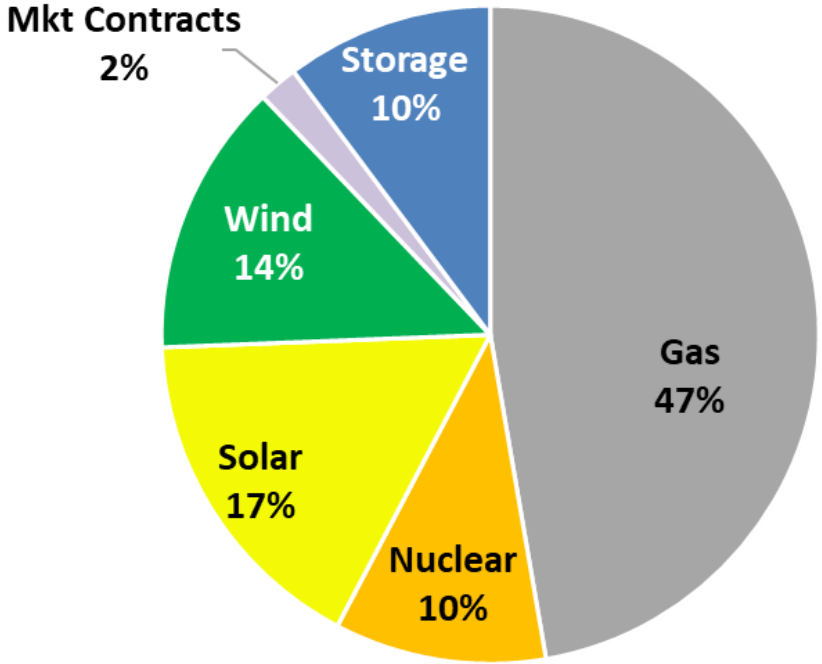
CY2025 Capacity Mix*



9,470 MW

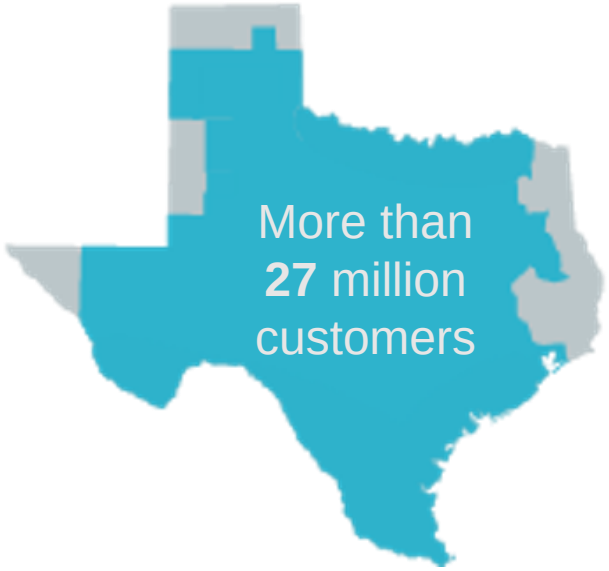
*includes only operational assets as of 6/1/2025

CY2030 Capacity Mix



10,376 MW

ERCOT FACTS



85,508 MW

Record peak demand (August 10, 2023)

103,105+ MW

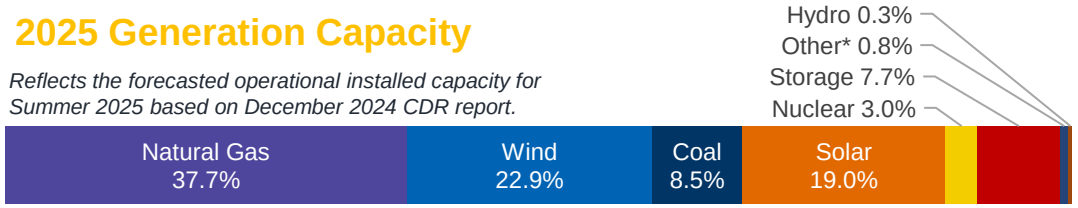
Expected capacity for Summer 2025 peak demand (December 2024 CDR)

$3.8 billion

Transmission projects endorsed in 2024

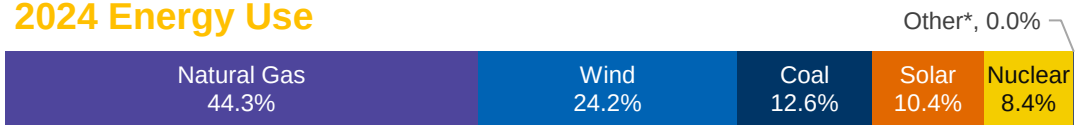
2025 Generation Capacity

Reflects the forecasted operational installed capacity for Summer 2025 based on December 2024 CDR report.



The sum of the percentages may not equal 100% dues to rounding.
**Other includes biomass-fired units and DC tie capacity.*

2024 Energy Use



** Other includes hydro, petroleum coke (pet coke), biomass, landfill gas, distillate fuel oil, net DC-tie and Block Load Transfer important/exports and an adjustment for wholesale storage load.*

1 MW of electricity is enough to serve about 250 residential customers during ERCOT peak hours.

39,781 MW

Wind

of installed wind capacity as of March 2025, the most of any state in the nation

28,550 MW
Generation Record (March 3, 2025)

69.15 %
Penetration Record (April 10, 2022)

30,586 MW

Solar

of utility-scale installed solar capacity as of March 2025

26,741 MW
Generation Record (April 11, 2025)

56.60 %
Penetration Record (March 20, 2025)

76 % (36,966 MW)

Preliminary **Wind + Solar** Penetration Record (March 1, 2025)

11,196 MW

Battery Storage

of installed energy storage capacity as of April 2025

5,998 MW

Energy storage generation Record (April 10, 2025)

Source: ERCOT