

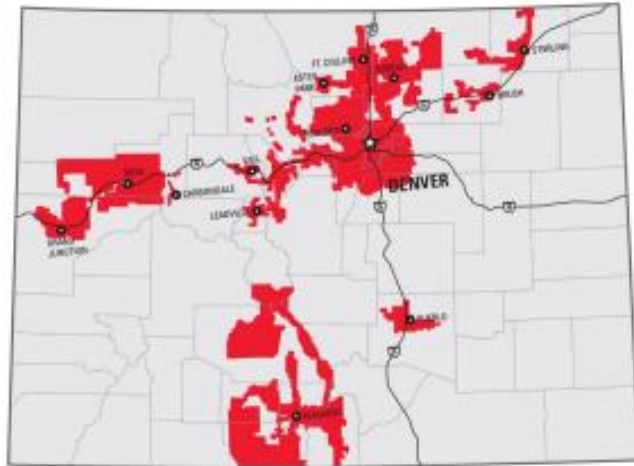


# Xcel Energy-Colorado

Hollie Velasquez Horvath- Regional Vice President

August 6, 2025

# About Xcel Energy-Colorado



**1.6 million  
Electric  
Customers**



**1.5 million  
Natural Gas  
Customers**



**99.98%  
Electric  
Reliability**



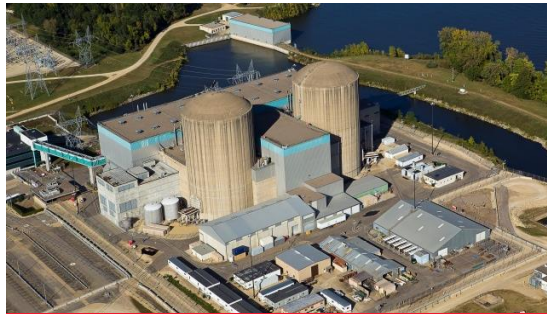
# Our Energy Goals



**Safe**



**Clean**



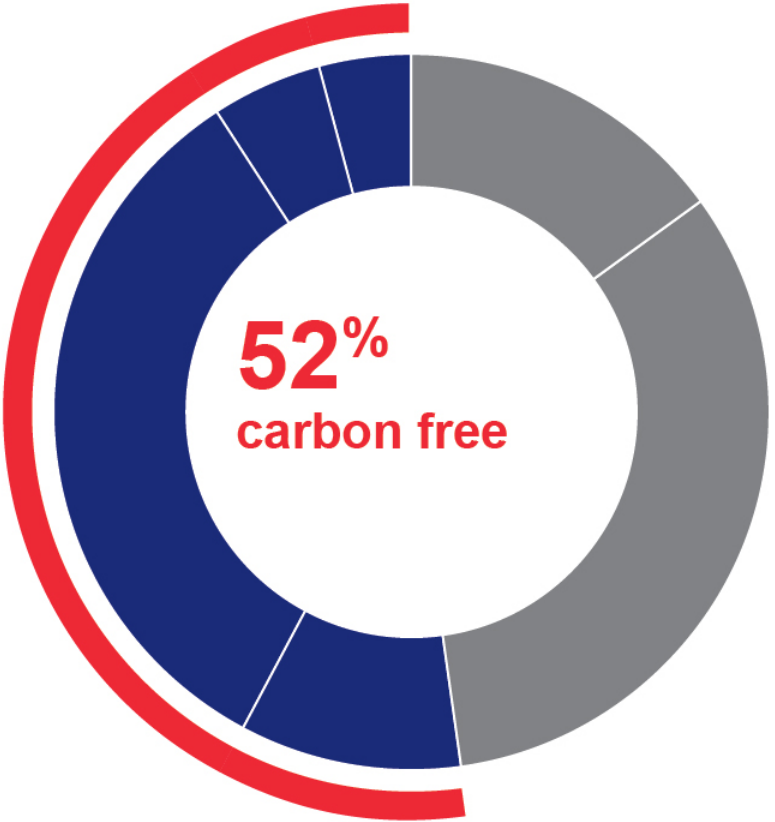
**Reliable**



**Affordable**

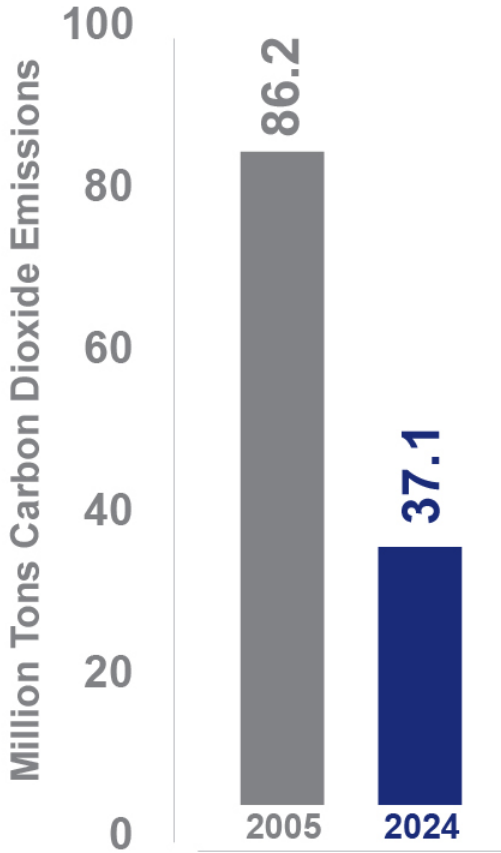


# 2024 Energy Mix – Xcel Energy



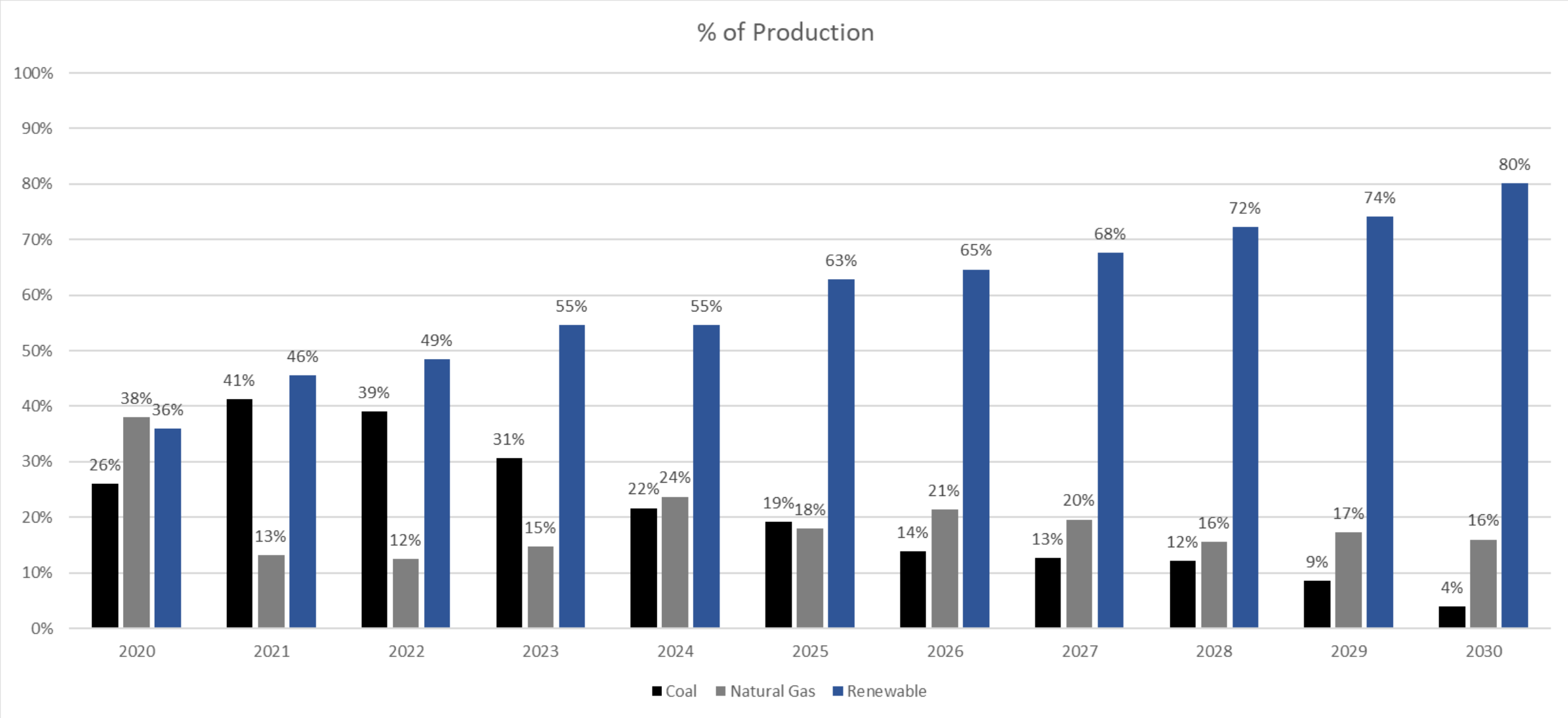
Coal	15%
Natural Gas	33%
Nuclear	10%
Wind	33%
Solar	5%
Other Renewable	4%
Other	<1%

**57%**  
**REDUCTION**



Data based on 2024 Annual Report.

# Colorado Transition to Clean Energy: 2020 to 2030

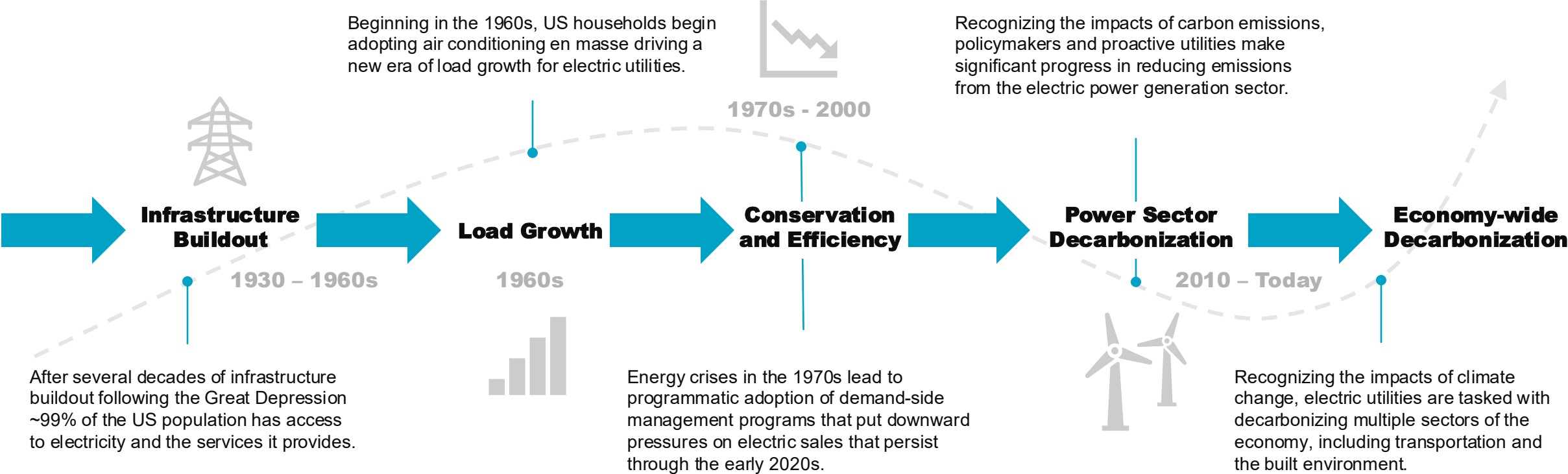


# Energy Demand & Infrastructure Past and Future



# A Brief History of the Distribution Grid in the United States

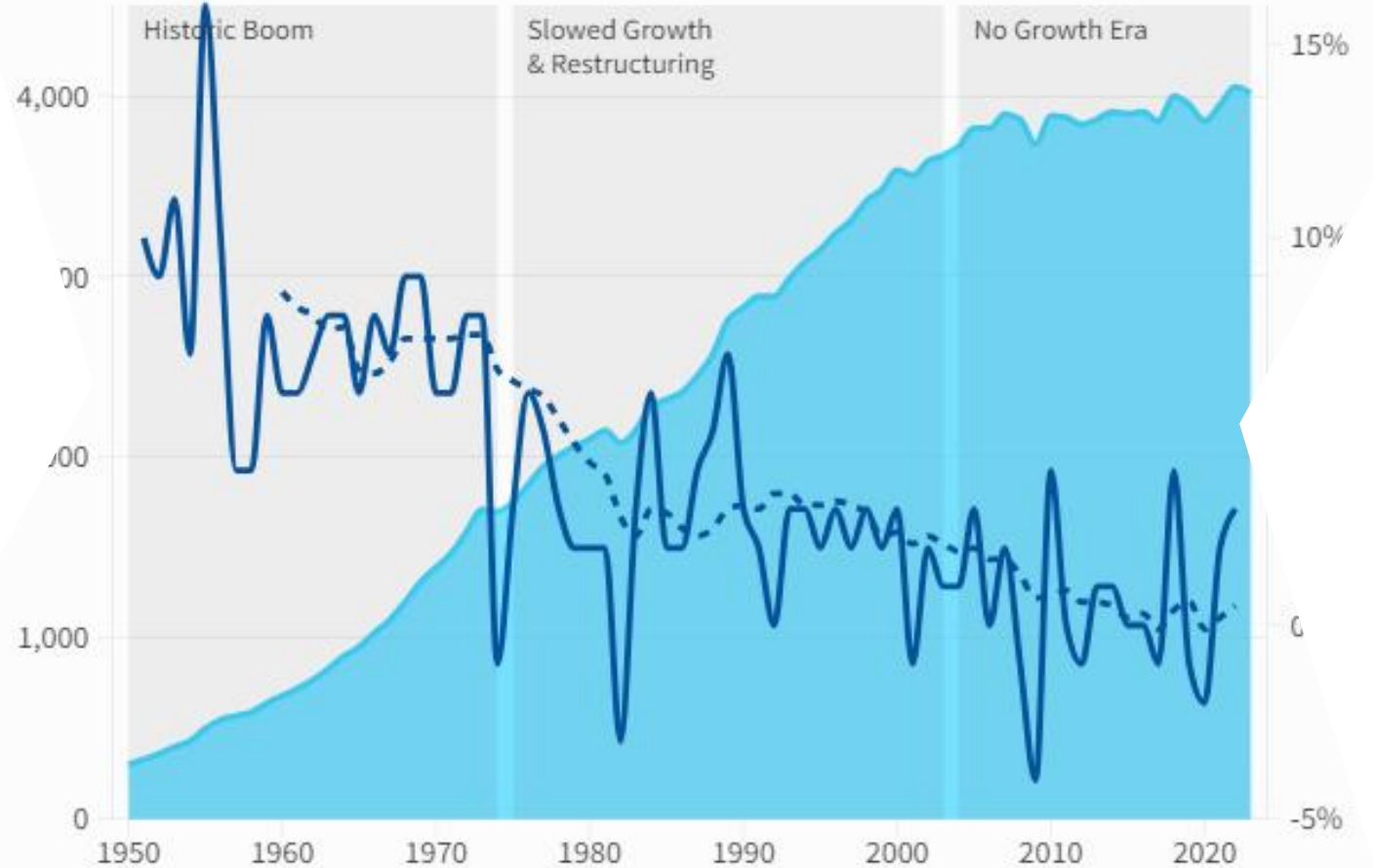
The electric grid has been built out over the last century in tranches in response to various drivers of load growth and public policy objectives – a strategy that has worked well historically.





## Historic Trends in U.S. Electricity Consumption

- Year-Over-Year Growth Rate (%)
- 10 Year Moving CAGR (%)
- Annual U.S. Electric Consumption (TWh)

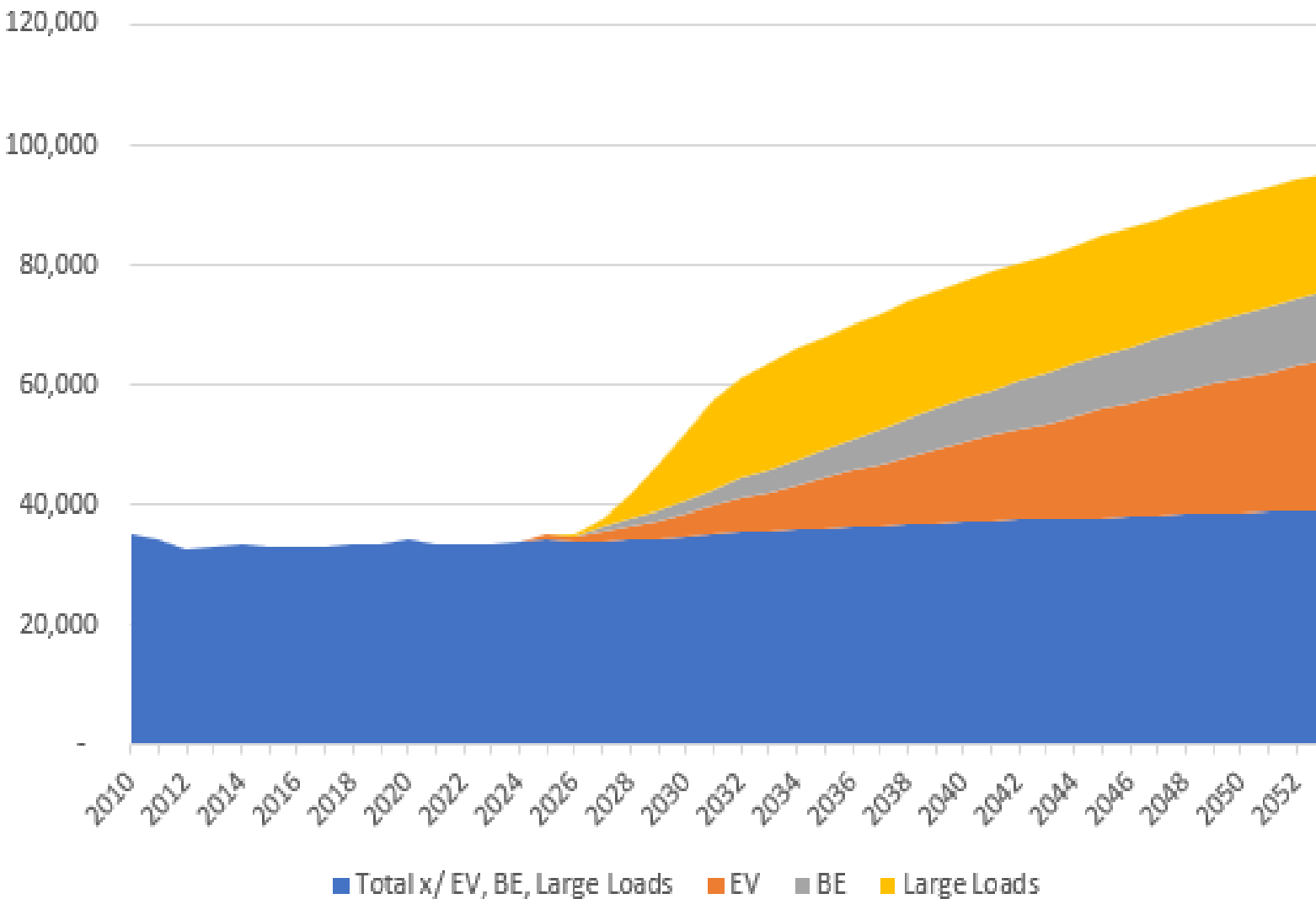


Source: [U.S. Energy Information Administration](#).

CSIS | ENERGY SECURITY AND CLIMATE CHANGE PROGRAM

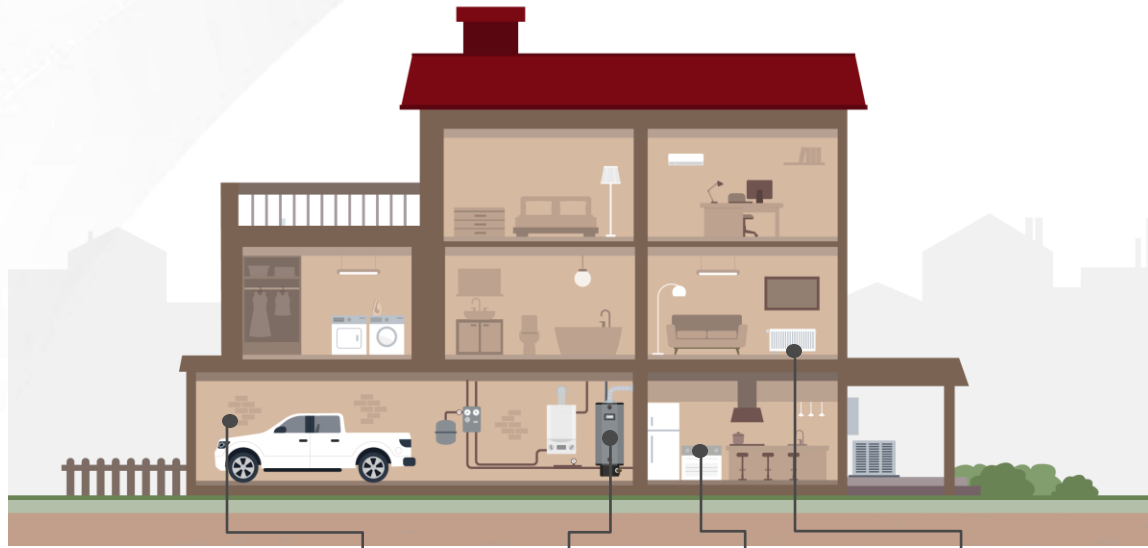


# Native Load Energy Components (GWh)

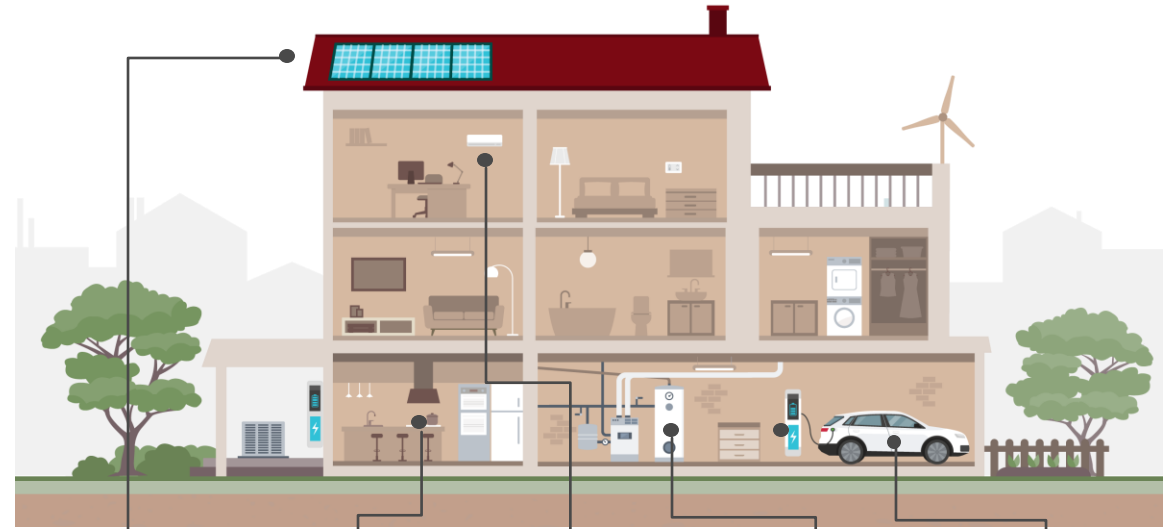


# Electricity usage for 'home of the future' could jump by ~84% by 2040

## Residential Customer Today



## Residential Customer of the Future



### Typical Characteristics



ICE Vehicle



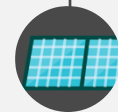
Gas Water Heater



Gas Stovetop



Gas Furnace



Rooftop Solar

~7kW



Electric Stovetop

~1.5kW



Elec. Space Heating

~8kW



Elec. Water Heating

~5kW



2 x EVs  
(with 2 x L2 chargers)  
~12kW

### Avg. annual consumption (MWh)<sup>1</sup>



Base load<sup>4</sup>



Solar<sup>2</sup>

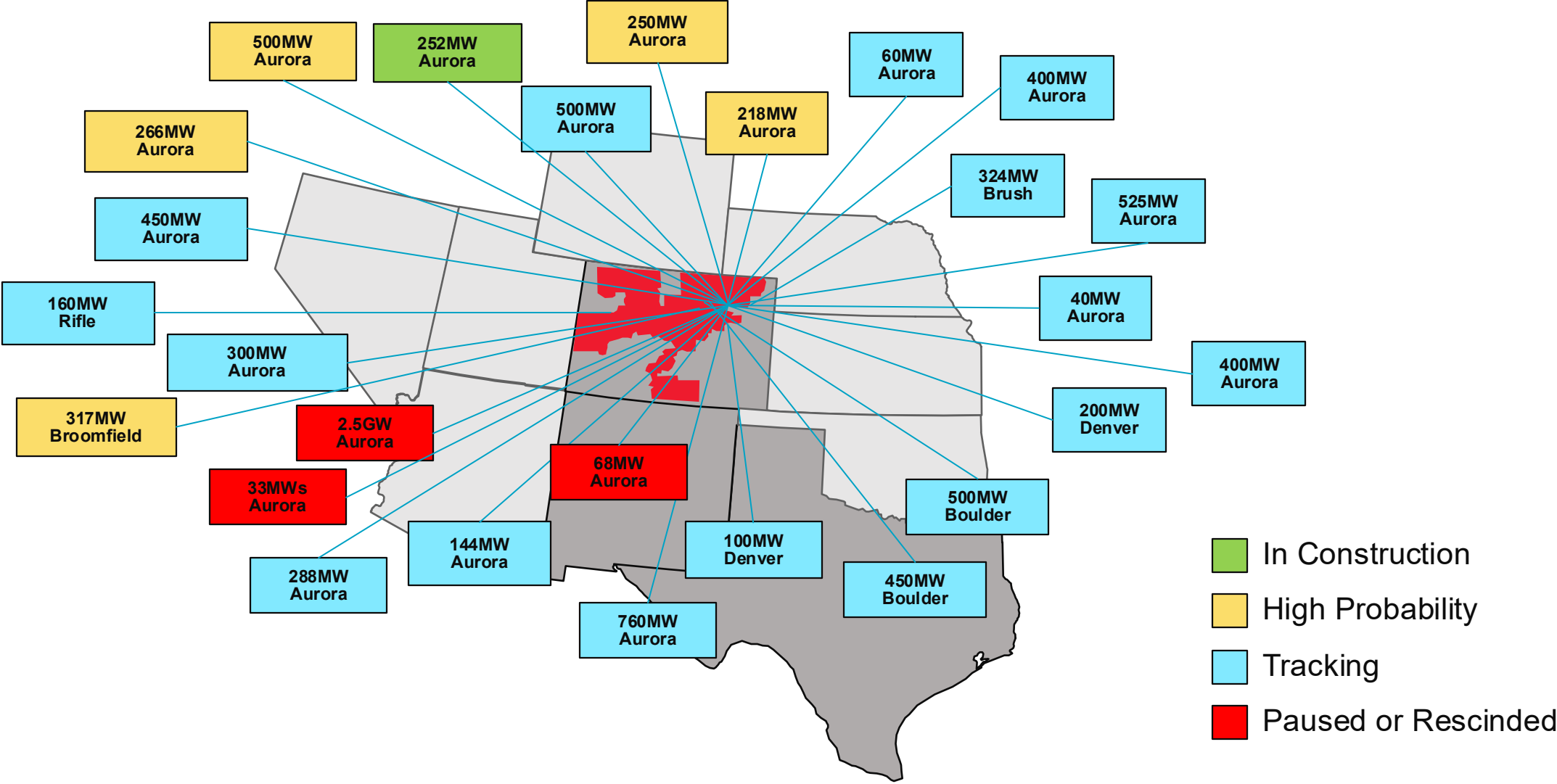
Base load

EV

BE

**Average power consumption can increase by ~84% if a premise has solar but can go up to ~150% without solar**

# Current Colorado Data Center Pipeline



# Scale of Demand

## 1GW Data Center



1,000,000 million Homes



Image: RentOwn

Every home in Austin, TX could power a single data center.

## 3GW Renewable and Firm Dispatchable



Image: TotalEnergies, 1GW Solar Panel farm in Iraq

Solar Panels: It takes about **3 million solar panels to generate 1 GW**. So, for 3GW, you'd need around 9 million solar panels.



Image: Britannica

Wind Turbines: With an average utility-scale wind turbine producing about 3.4MW, **you'd need approximately 300 wind turbines to generate 1GW**. Alternatively, you would need around 900 turbines to generate 3 GW.



Nuclear Plants: XE Prairie Island

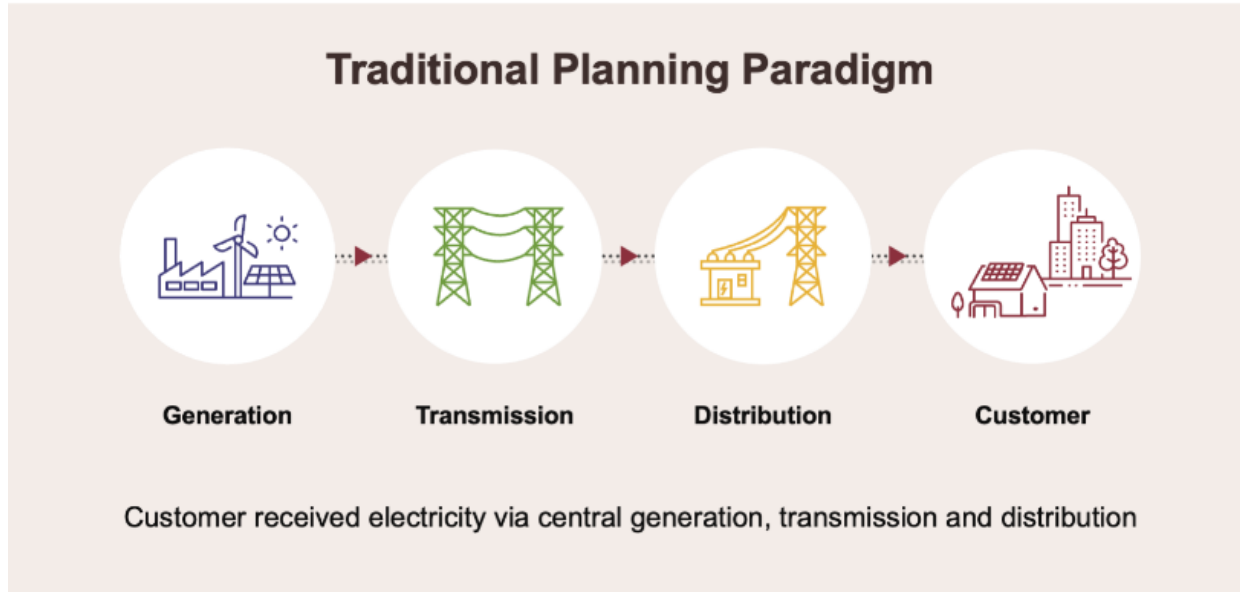
- The **2 reactors generate about a total plant output of 1.1GW**.

# Key Considerations and Complexity

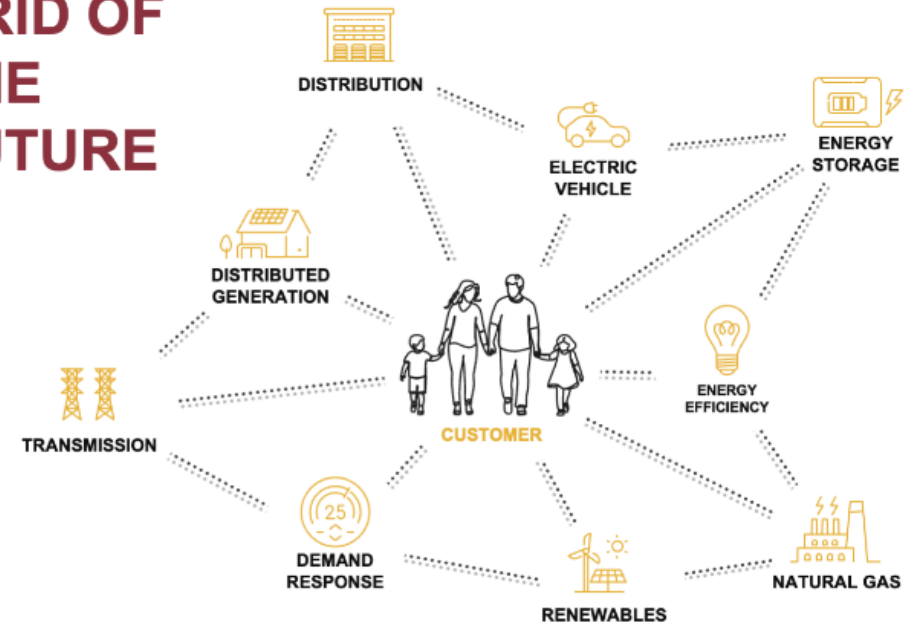
Near and long-term impacts must be weighed and balanced



# A New Approach to Planning



## GRID OF THE FUTURE

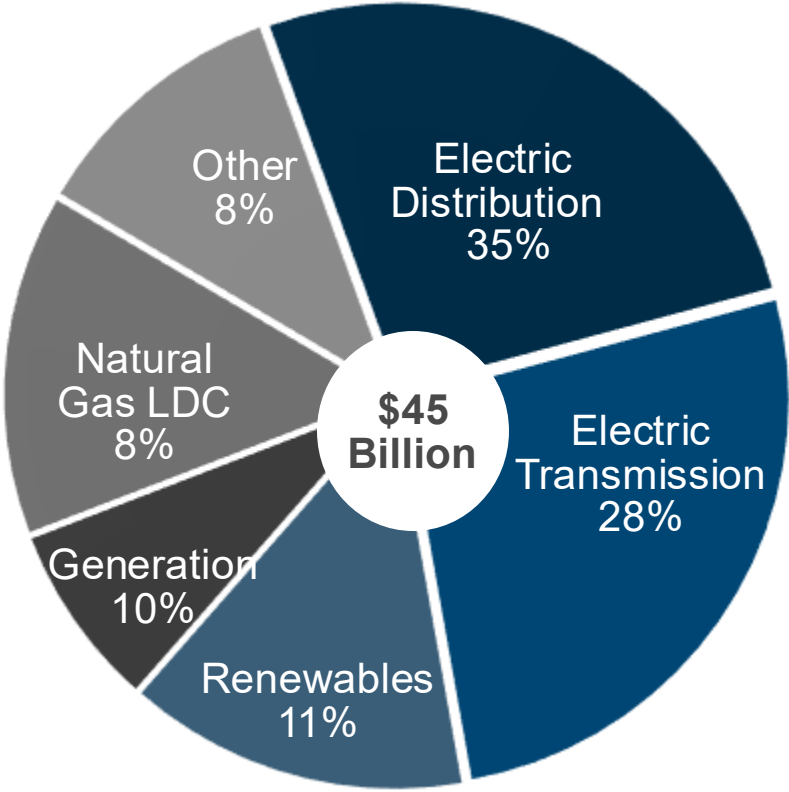


- ▶ More load and DERs at the grid edge, requiring a modernized approach to distribution system planning and operations

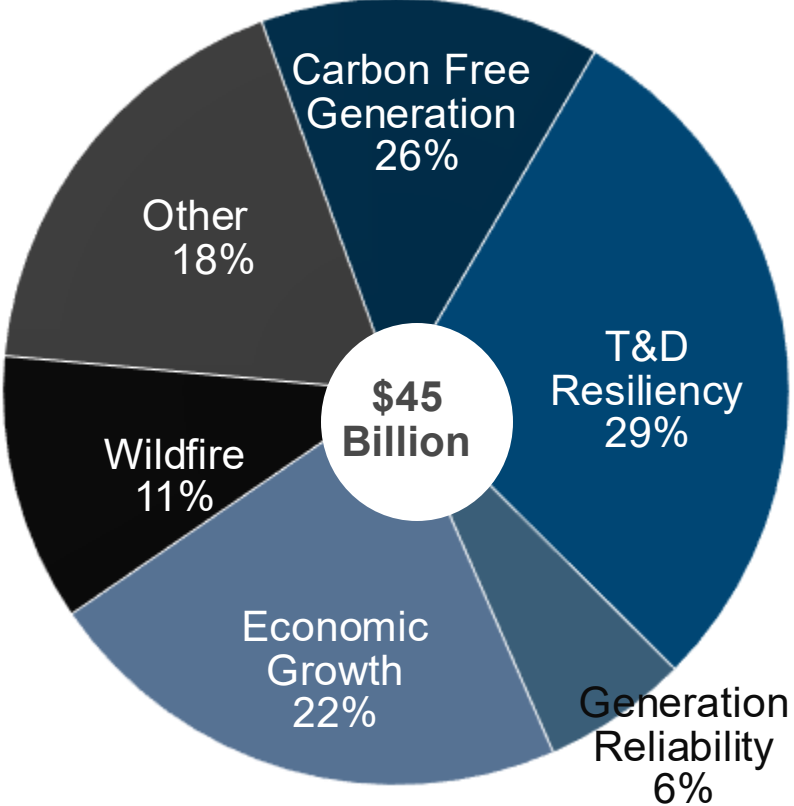
# Xcel Energy's Plan to Meet the Future



# 5 Year Capital Investment Forecast 50% in Colorado

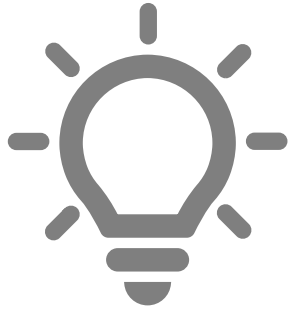


Investment by Function

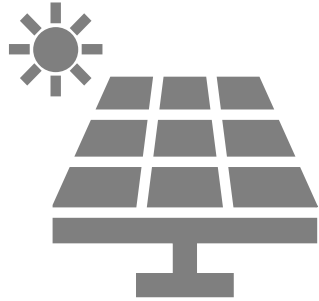


Investment by Driver

# Investment Areas



**Asset Health  
& Reliability**



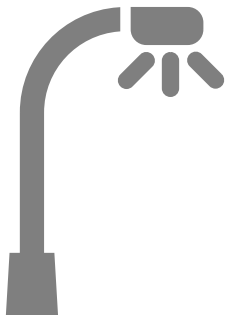
**Capacity**



**Electric  
Vehicle**



**Mandated**



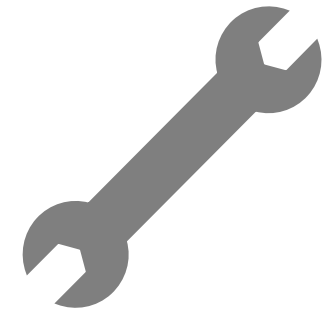
**New Business**



**Advanced Grid  
Intelligence & Security**



**Wildfire**



**Fleet, Tools &  
Equipment**

An aerial photograph of a solar farm. The foreground is filled with rows of solar panels, with a central aisle. In the background, a line of wind turbines stands against a sunset sky with orange and red hues. The overall scene represents renewable energy generation.

# Energy Generation

# Just Transition Plan

## What are we requesting?

### PHASE 1

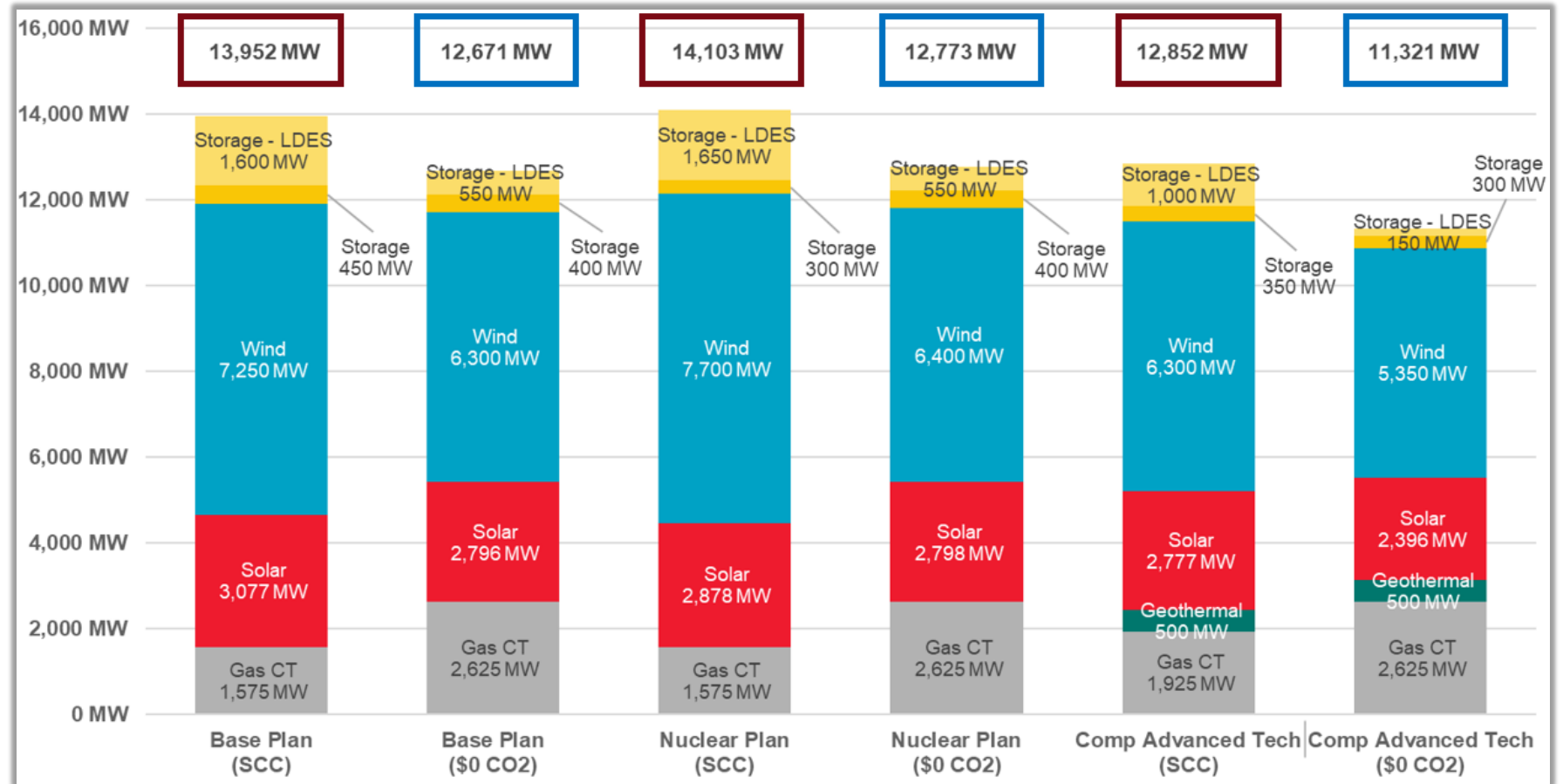
- The Commission will examine our:
  - Forecasting methodology and modeling
  - Project bid criteria and evaluation standards
  - Community and workforce transition policies
- Specific power projects will not be included

### PHASE 2

- Request for Proposals to solicit new power generation
- Commission approval of future projects

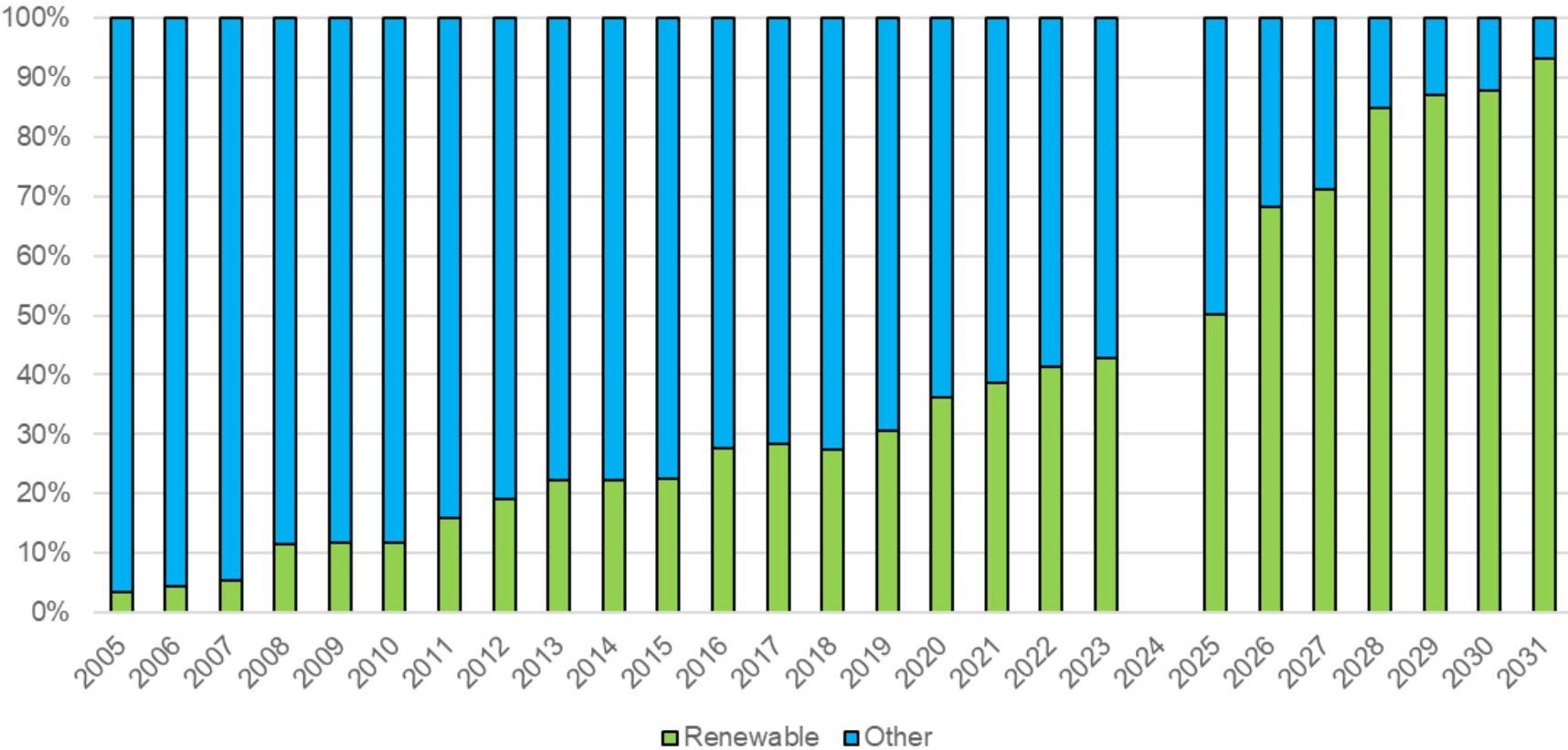


# Base Resource Case





Carbon Free Energy Percent



# Transmission

# Colorado's Power Pathway

**2016**

Last major addition or upgrade to backbone transmission in eastern Colorado



**5,000 megawatts**  
of new wind, solar and other resources



The energy provided by the Pathway is the equivalent of powering **2.5 million** Colorado homes annually



# DISTRIBUTION



# SB24-218 Powering Up Colorado

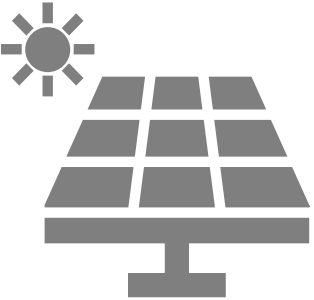
- Policy changes to modernize the electric grid, ensure proactive investments and support clean energy technology adoption
- Current investment levels aren't sufficient to upgrade and maintain distribution system
- Flexibility to plan significant improvements, especially in communities where electrification is needed most
- Framework for streamlined, forward-looking distribution system planning



# Filing Investment Areas at a Glance



**Asset Health  
& Reliability**



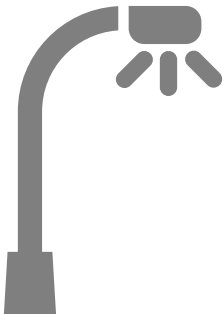
**Capacity**



**Electric  
Vehicle**



**Mandated**



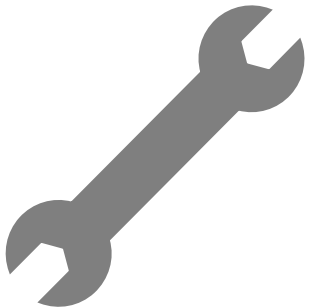
**New Business**



**Advanced Grid  
Intelligence & Security**



**Wildfire**



**Fleet, Tools &  
Equipment**

# Proposed Distribution Capacity Additions



**35** new substations

**108** new substation transformer banks

**300+** new feeders

**154** capacity projects

**3.1** gigawatts of new capacity

