



MINNESOTA'S ENERGY TRANSITION

Ryan Long | President – Minnesota, North Dakota and South Dakota

April 29, 2024



Fully Regulated and Vertically Integrated Utility

Four
Operating Companies

Eight
States

3.8 Million
Electric Customers

2.2 Million
Natural Gas Customers

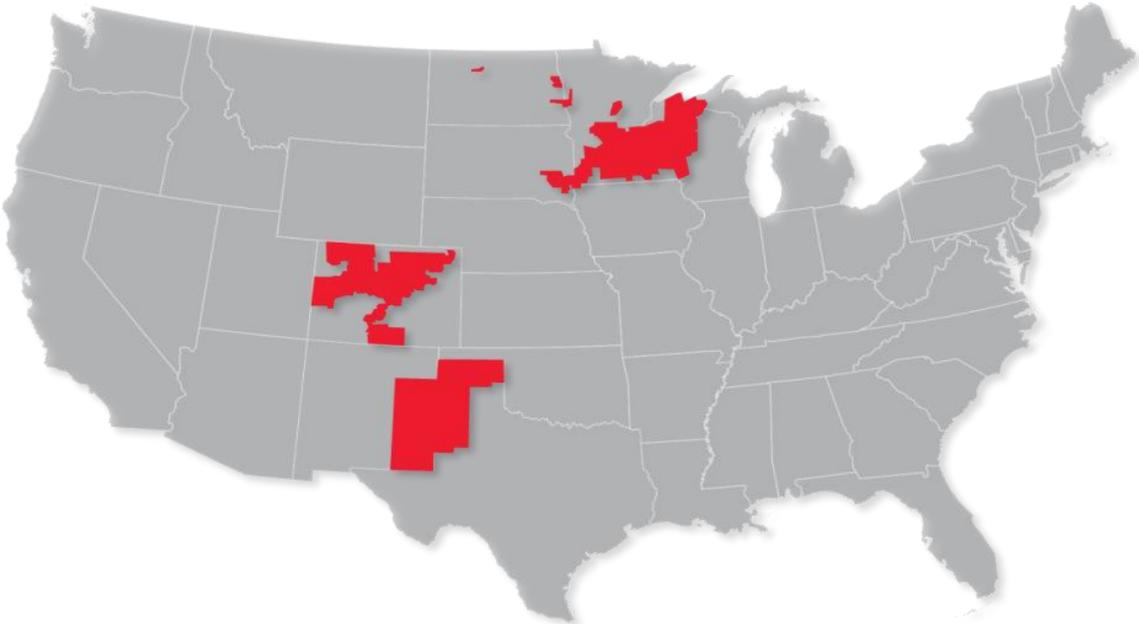
\$42 Billion
2023 Rate Base

21 GW
Owned Gen. Capacity

~11,000
Employees

Northern States Power Minnesota (NSPM)
Minnesota, South Dakota, North Dakota

Northern States Power Wisconsin (NSPW)
Wisconsin, Michigan

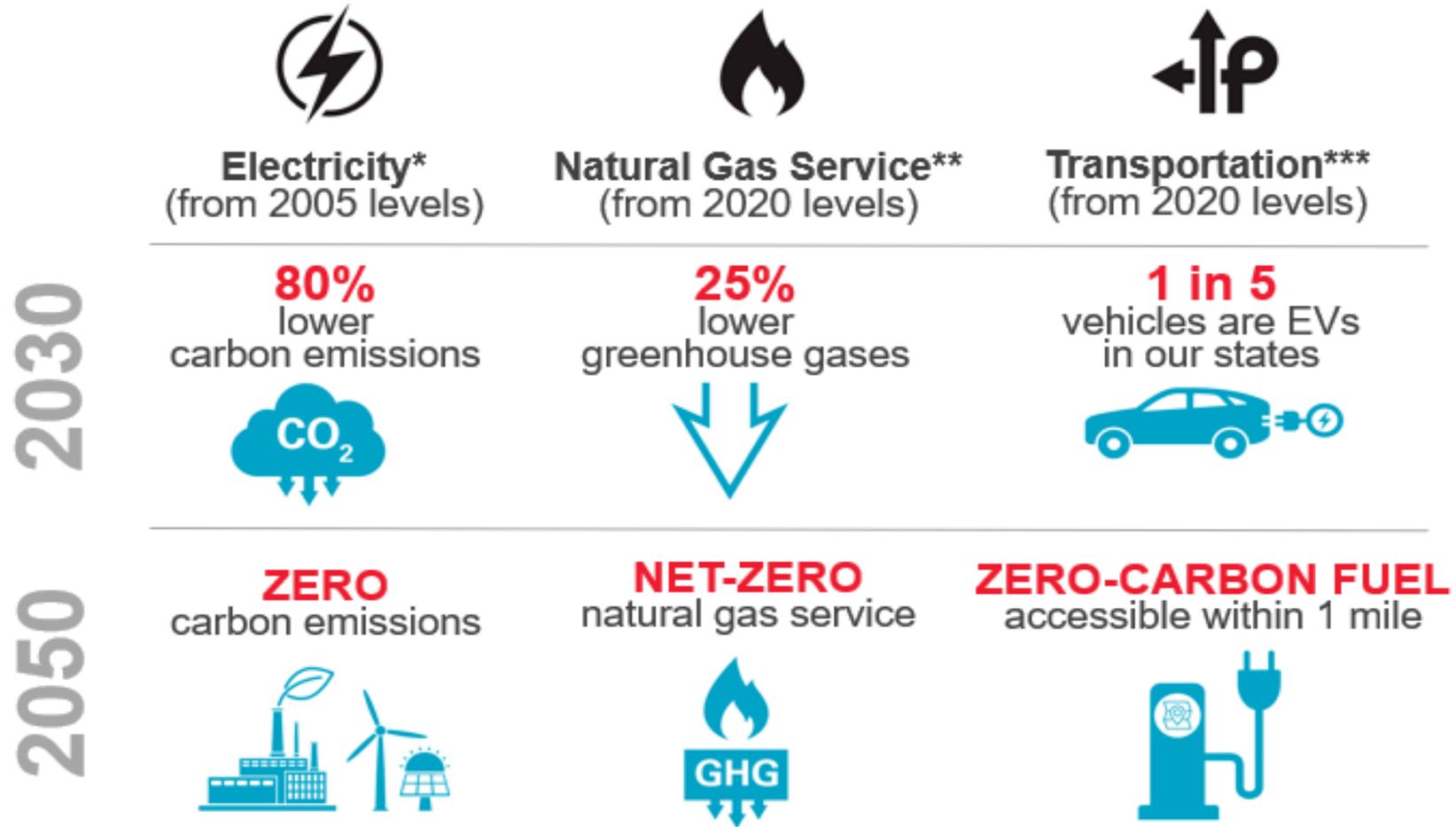


Public Service Company of Colorado (PSCo)
Colorado

Southwestern Public Service (SPS)
Texas, New Mexico

As of 12/31/2023

Xcel Energy Sustainability Goals



Minnesota, North Dakota & South Dakota Overview

NSPM Major Infrastructure



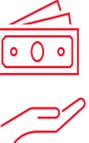
4,800
total employees in jurisdiction



9,100 MW
total owned capacity



67%
carbon-free in 2024



\$6.5B
Revenue



1.5M
residential electric customers



600k
residential gas customers



174k
C&I customers



600
communities served across 3 states



4k MW



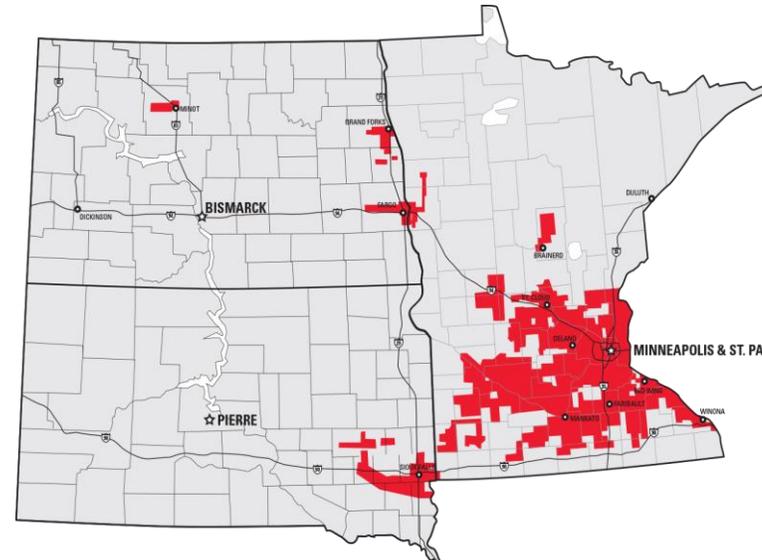
1.2k MW



1.7k MW



35 facilities



Allen S. King Plant
Bayport

Sherco Plant
Becker

Freeborn Wind Farm
Freeborn

Pleasant Valley Wind Farm
Mower County

Grand Meadow Wind Farm
Mower County

Prairie Island Nuclear Plant
Red Wing

Monticello Nuclear Plant
Monticello

Riverside Plant
Minneapolis

High Bridge Plant
St. Paul

Black Dog Plant
Burnsville

Wescott Gas Peaking Plant
Inver Grove Heights

Transmission Lines – 33k Miles

Natural Gas Lines – 11k Miles

The Energy Transition Underway

2023 Headlines

BUSINESS

Minnesota regulators vote to move forward the third large Xcel solar project in Becker

BUSINESS

Xcel Energy receives \$70M federal grant for long-lasting grid battery in Becker

THE WALL STREET JOURNAL.

NEWSPLUS

Xcel Energy Surpasses 50% Carbon-Free Power Companywide

Carbon-free energy made up 53% of Xcel's 2022 energy mix, company says, topping nationwide average

BUSINESS

Xcel closing first unit at Sherco coal plant, a milestone in energy transition

BUSINESS

Hydrogen hub in Minnesota and North Dakota wins nearly \$1 billion in federal money

BUSINESS

Xcel Energy wants to extend life of Prairie Island nuclear facility, add two gas plants

Minnesota's 2040 carbon-free energy bill advances to Gov. Walz for signature

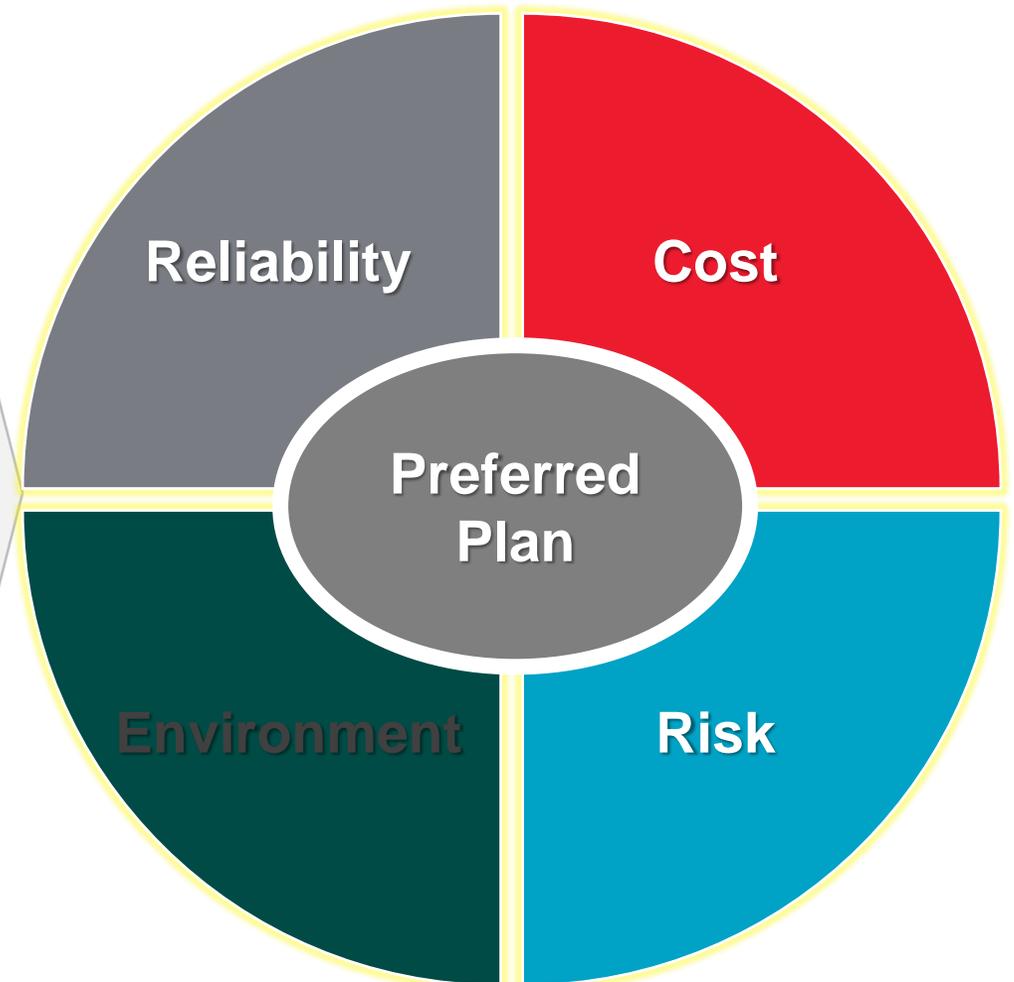
State OKs storing more nuclear waste at Xcel's Monticello plant

The PUC's vote is a key step to extend the life of the nuclear plant.

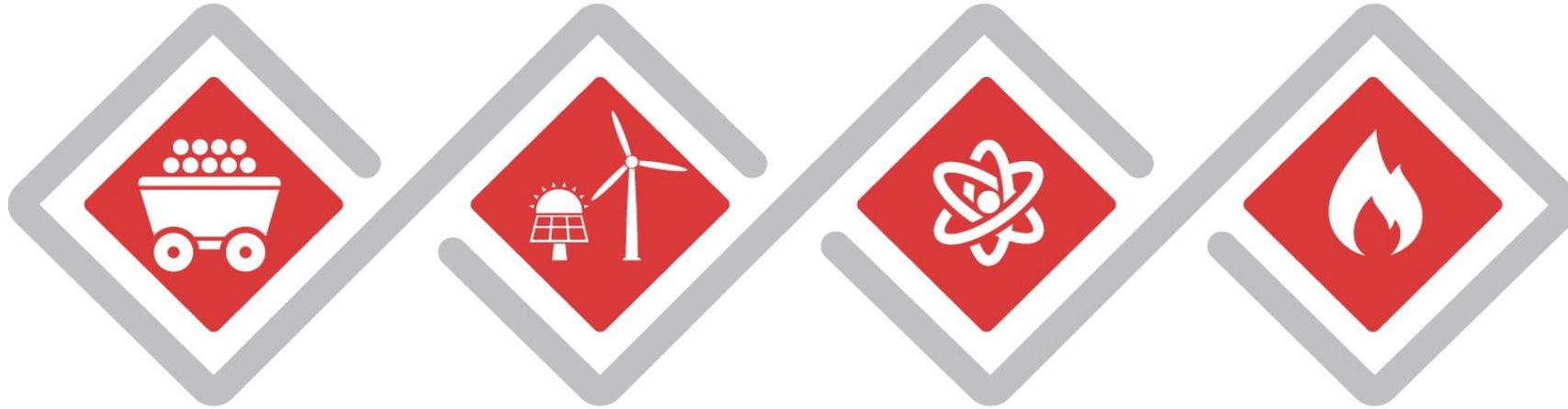
Upper Midwest Integrated Resource Planning (IRP) Process

IRP is a roadmap for the generation resources we will use to serve customers in the future

- Assesses **size, type, timing** of least-cost resource sets that appropriately **balance four core planning objectives**
- Looks **15 years** into the future and charts a path to our 2030 goals and compliance with Minnesota's 2040 Legislation
- **Complex economic modeling** supports plan development



Elements of Our Plan



Close coal plants

Retire the last of our coal plants in the Upper Midwest by 2030

Add renewables

Build about 3,600 megawatts of new wind and solar facilities, along with 600 megawatts of battery energy storage by 2030

Continue carbon-free nuclear

Extend the use of our carbon-free nuclear plants until the early 2050s

Enable a carbon-free future

Continue to use natural gas facilities to ensure the reliability and stability of the electric system while exploring new “always available” energy sources to advance the clean energy transition

2024 Integrated Resource Plan

- Leverages \$5.7B in tax credit savings from the Inflation Reduction Act.
- Maintains affordability, with an estimated average annual increase in customers' electric rates of less than 1% —less than half of the expected national average increase in electricity prices.
- Meets the energy needs of our customers as electric use in the region is expected to grow in the coming years.



Major Transition Projects



Sherco Solar 1, 2 & 3
\$1.1B CapEx
• 710 MW
• 1,000 jobs
• \$160M landowner payments



King Gen-Tie
\$110M CapEx
• 20 Miles
• 30 jobs



Sherco Gen-Tie
\$1B CapEx
• 180 Miles
• 200 jobs



LRTP Lines
\$1.2B CapEx
• 285 Miles
• 300 jobs



Form Long-Duration Battery
\$70M CapEx
• 100 hours
• 15 jobs



Renewables
\$5.8B CapEx
• 4,200k MW
• 6,000 jobs



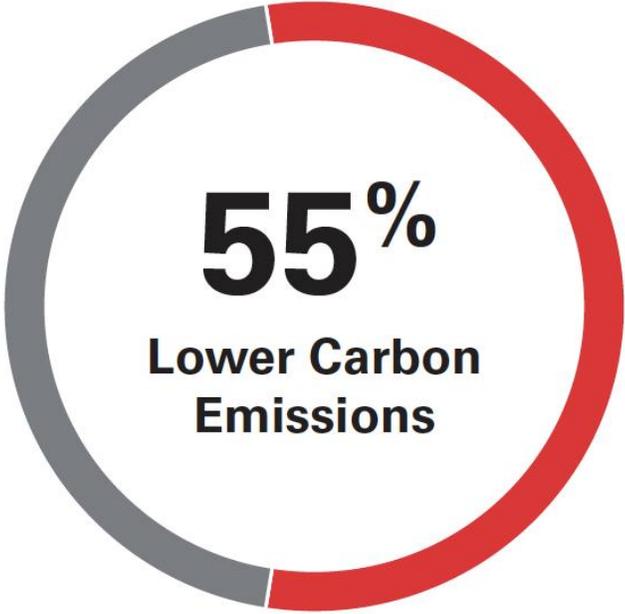
Hydrogen Hub
\$2B - \$4B CapEx
• 440 metric tons/day of clean hydrogen produced
• 1,500 jobs



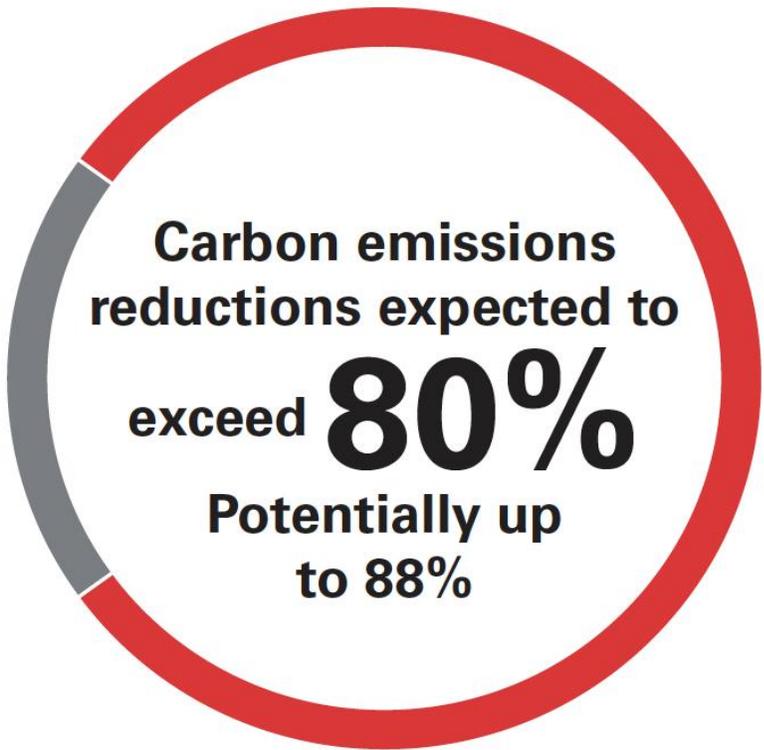
Firm Dispatchable Units
\$1B CapEx
• 800 MW
• 200 jobs

Modeled Carbon Reduction

2022

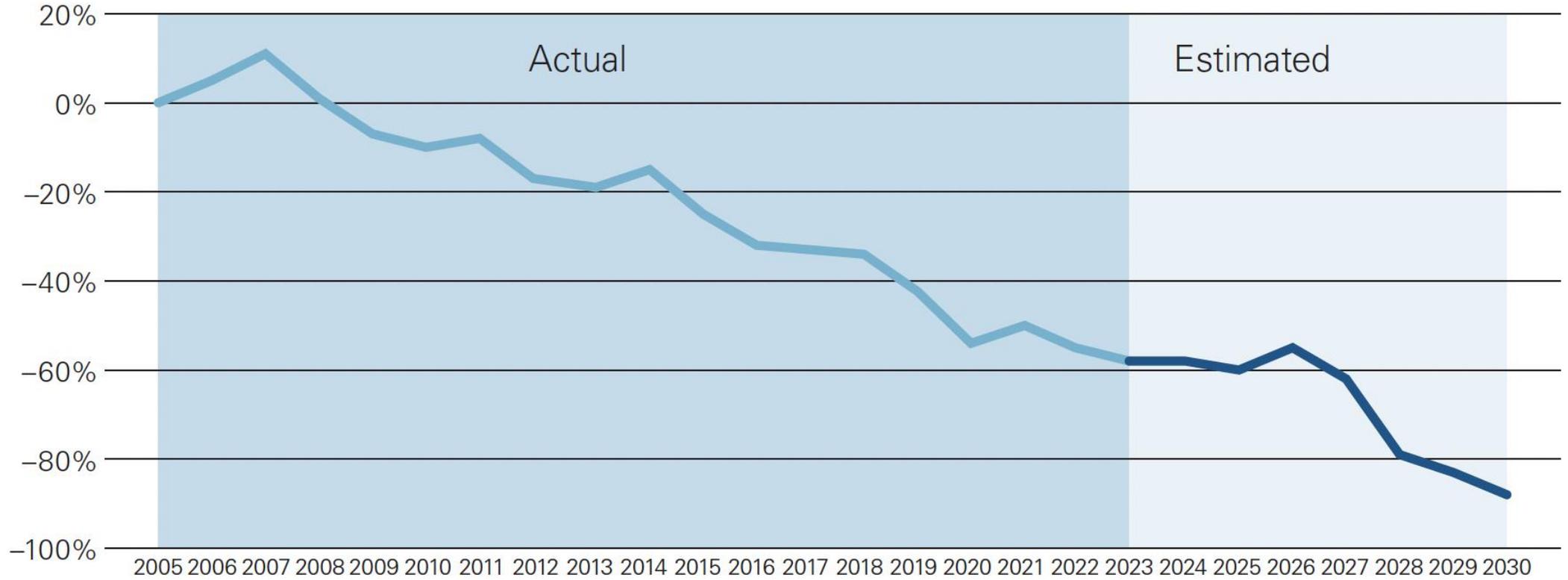


2030



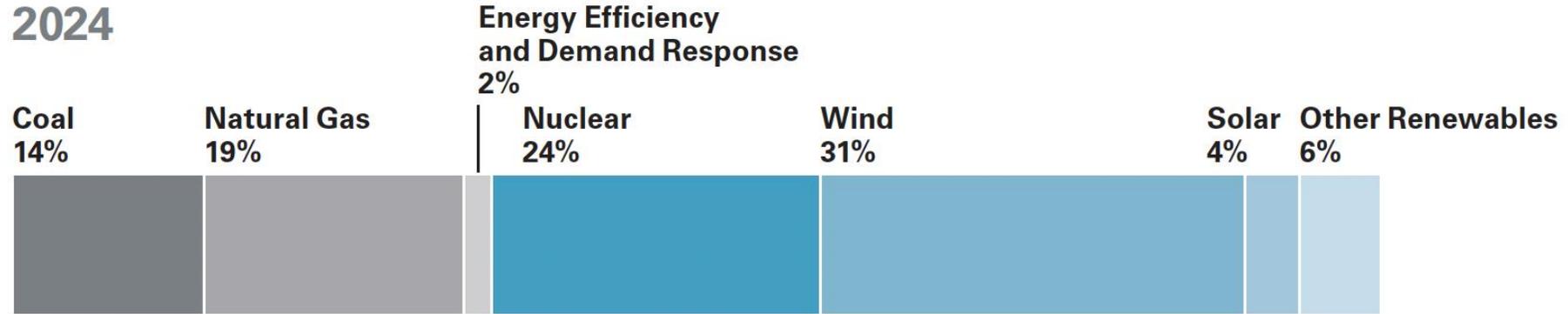
*Carbon emissions reductions from electricity serving Upper Midwest customers since 2005-2022 and modeled 2030 reductions under the Upper Midwest Energy Plan.

Projected Carbon Emissions



Our Customers' Energy Mix

2024



2030



Xcel Energy Nuclear Generating Fleet

Over five decades of carbon free power

Prairie Island Nuclear Plant



- 2 Pressurized water reactors
- Unit 1 (1973); Unit 2(1974)
- Licensed through 2033/2034
- 1,100 MW
- 800 Employees; 1,000 more during refueling

Monticello Nuclear Plant



- 1 Boiling water reactor (1971)
- Licensed through 2030
- 671 MW
- 650 employees; 800 more during refueling

Benefits of Nuclear Power



Carbon Free

Nuclear provides more than 1,700 MW of carbon free energy



Economic

Nuclear provides \$1B to the local economy



Reliable

Nuclear is on 24/7 - regardless of the weather. Can flexibly operate – better integration with renewables



Safe

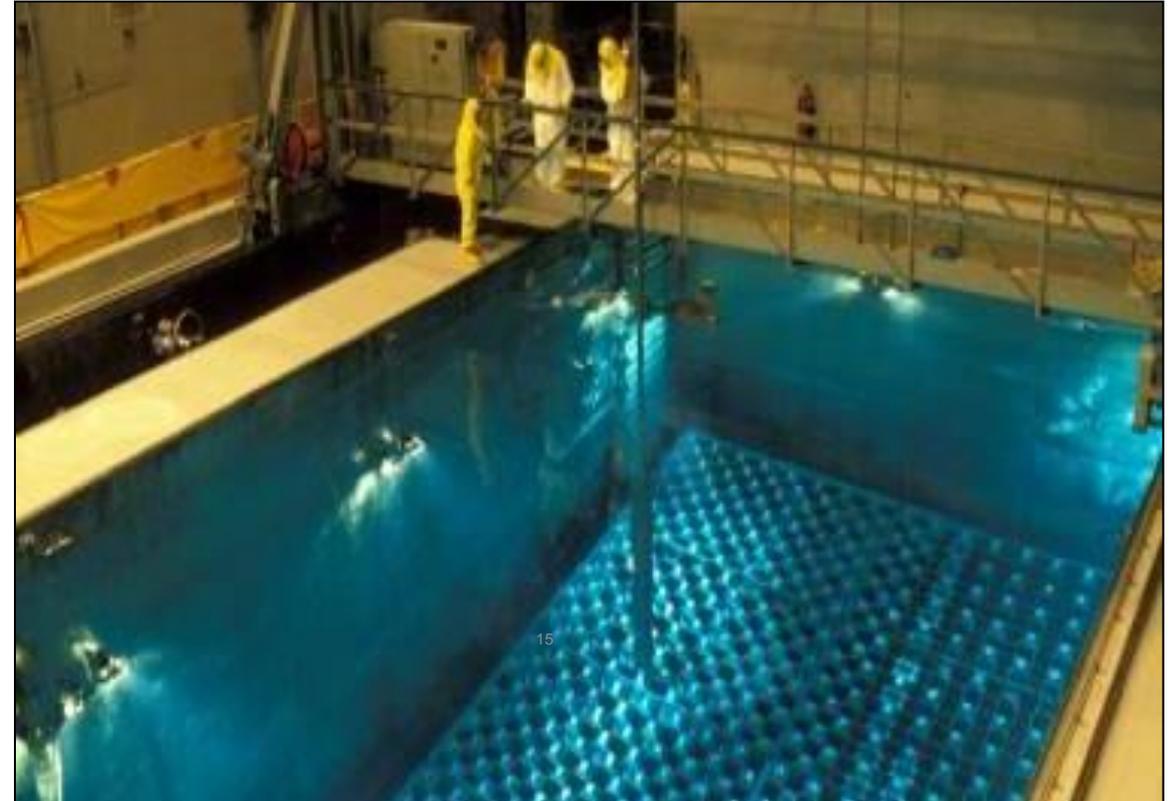
Nuclear is highly regulated and secured

Spent Fuel Pools

After producing electricity for 5– 6 years, spent fuel assemblies stored in pools inside the plants. Once cooled sufficiently it is moved to dry storage systems.

Pools have 3-6 feet of concrete with stainless-steel liners.

Pools contain a leakage detection and collection system.



Status of On-Site Storage



30 loaded canisters stored on site

- Supports operations to 2030
- Mid-1980's shipped 33 casks containing ~1,000 assemblies to General Electric facility in Morris, IL



50 loaded casks stored on site

- 64 approved to support 2033/2034

Advanced Technology Required for 2050 Goal

- All Options on the Table
- Advanced Technologies
 - Long-Duration Storage
 - New Nuclear (Small Modular Reactors)
 - Hydrogen
 - Carbon Capture & Sequestration
- Depending on technological advances, each resource presents the potential to contribute to meeting carbon emission goals.



Opportunities & Issues to Manage

- Thousands of Construction Jobs
 - Community Investment
 - Inflation Reduction Act
 - Electrification of Other Sectors
 - Promise of Advanced Technology
 - Reuse of Infrastructure
- Workforce Transition
 - Community Support
 - Transmission
 - Reliability & Load Growth
 - Stranded Asset Risk
 - Divergent State Policies
 - Wildfire Risk

