

# The Future of Energy in Iowa: All-of-the Above

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- Kathryn Kunert, [MidAmerican Energy](#)
- Pete Hamell, [Black Hills Energy](#)
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# May Farlinger

President, Alliant Energy's  
Iowa energy company

Vice President of Energy  
Delivery at Alliant Energy



# Alliant Energy at a glance



1 million electric customers  
425,000 gas customers



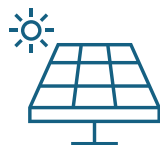
3,000 dedicated employees



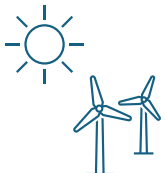
\$9.3 million given by employees, retirees, the company and its Foundation in 2024



3<sup>rd</sup> largest regulated wind owner-operator



Top 5 largest regulated solar owner-operator



~40% of energy from renewable resources in 2023



# Serve customers and build stronger communities.





# Critical Trends are Shaping the Energy Industry



Source: McKinsey & Company ("Utilities & the Energy Transition" presentation at EEI Annual Meeting; June 2024)

# Data Center Trends

- What are Data Center prospects looking for?
  - Speed to market – willing to pay a premium to move fast
  - Access to large amounts of land
  - Electric infrastructure capacity
  - Collaborative community and utility partners
- Data center announcements have tripled over the last year
  - 75% of announcements taking place outside of established data center hubs
- AI data center require ~3x more capital to build than traditional data centers
  - AI Data Centers can be either Hyperscalers or Co-Locators



## IPL SCENARIOS



### Continuing Industry Change (CIC)

Today's economic, market and technology trends continue.



### Market Stagnation (MS)

Low economic growth results in flat load growth environment and relieves environmental regulatory pressure.



### Advanced Customer Technology (ACT)

Increased adoption and performance of distributed generation technologies and electric vehicles that simulates changing load patterns driven by customer behavior.



### New Regulation (NR)

New environmental regulations drive a price on carbon, and restrictions on natural gas production drive prices higher.



### Aggressive Decarbonization (AD)

Regulatory pressure manifests as a cap on CO<sub>2</sub> emissions; increased economy-wide decarbonization drives electrification demand. Includes EPA greenhouse gas rules.



### High Load Growth (HLG)

Today's economic and technology trends, combined with a future of onshoring, hydrogen production, high data center growth, etc.

# Transitioning our energy resources - IPL

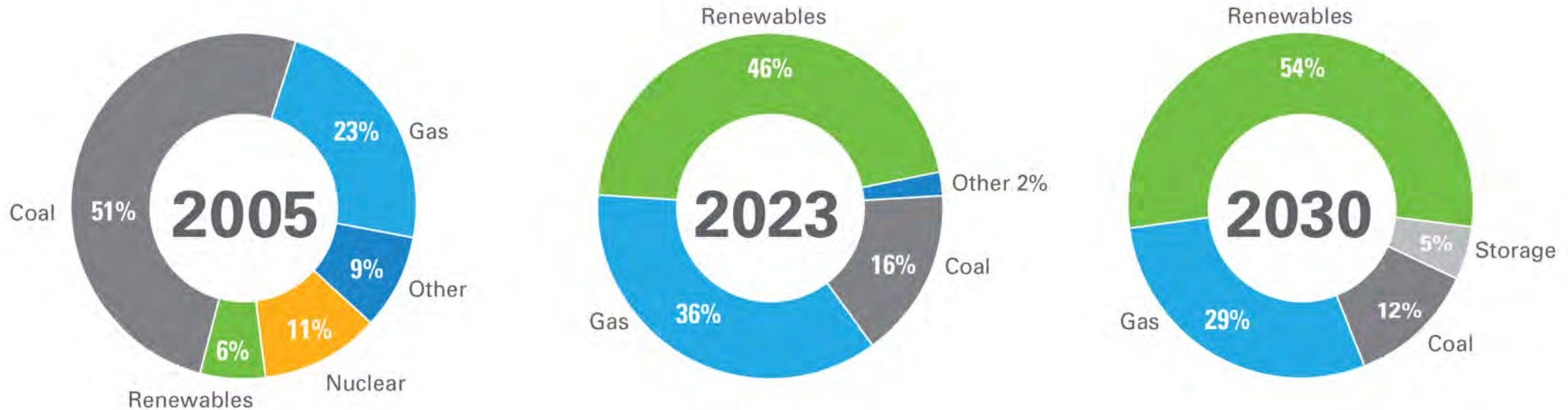


Chart percentages reflect approximate electricity generation capacity in megawatts (MW) determined from owned electric generation resources and various purchase power agreements (PPAs). This includes utility fixed-term contracts, Alliant Energy® renewable programs (Customer-Hosted Renewables, Community Solar, Renewable Energy Partner), Public Utility Regulatory Policies Act (PURPA) resources from non-utility power producers and other distributed energy resources based on these renewable energy agreements. Capacity values for 2023 are as of fiscal year-end and 2030 projections are as of June 2024. Future projections are subject to change and Alliant Energy undertakes no obligation to update publicly such statements to reflect subsequent events or obligations. Actual energy in megawatt-hours (MWh) to serve customer load will differ from the approximate capacity (MW) shown above due to participation in the Midcontinent Independent System Operator (MISO) regional energy markets.



# Impact to Customers





# Putting Iowa on the Map...

- ▶ No. 1 state in U.S. for percentage of energy generated from renewables **(65.3% in 2024)**
- ▶ No. 3 state in the U.S. for operating renewable energy capacity at **13,400 MW**
- ▶ Enough to power the equivalent of approximately **4.2 million** average Iowa homes



# Commitment to Customers



**WIND**



**SOLAR**



**NUCLEAR**



**HYDRO**



**THERMAL**



**BATTERIES**



**ENERGY  
EFFICIENCY**

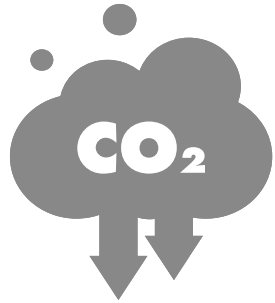
ALL-OF-THE-ABOVE

# Benefits to Customers

- ▶ Renewable energy, in conjunction with other on-demand energy sources has benefitted MidAmerican's customers



100% carbon-free  
energy delivered to  
customers in 2024

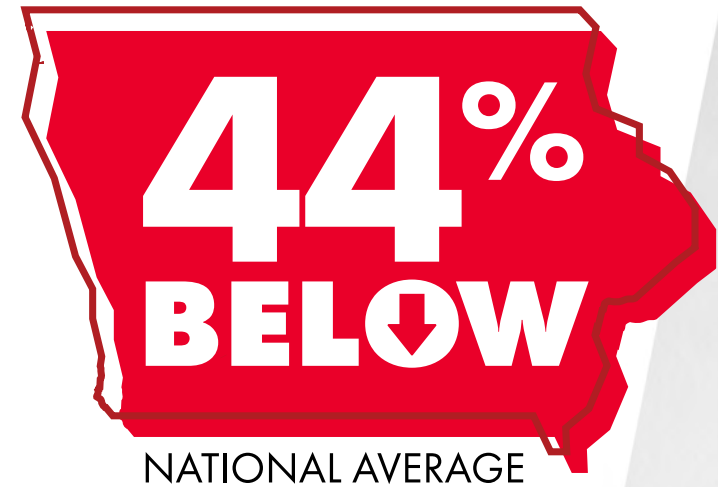


Reduction in  
carbon emissions



Rate stability

MIDAMERICAN'S  
ENERGY RATES ARE







# Demand for New Generation

- ▶ Increasing load across the footprint in many segments including manufacturing, data centers, commercial and residential
- ▶ At the same time, the resource transition from dispatchable resources to weather-dependent resources is driving a need to change how we maintain adequate reserve margins
- ▶ New resources are needed within the next five years to meet the increased need



# All-of-the-Above Generation

- ▶ To meet future demand, MidAmerican has proposed two new generation projects to best serve customers affordably and reliably
  - Solar Reliability Project
    - 800 MW
    - Enough energy to power 144,000 homes
    - Targeted 2027-2028 in-service
    - Multiple sites throughout Iowa
    - \$25m in property tax payments
    - \$270m in landowner lease payments
    - 4,800 acres needed for solar arrays - 0.016% of Iowa farmland
  - Gas Combustion Turbines
    - Orient Energy Center
    - Two gas combustion turbines
    - 465 MW
    - Targeted 2028 in-service
    - Located in Adair County
    - 400 construction jobs and 5 permanent jobs
    - Called on during high-demand periods
    - Plant runs less than 10% of the time





**AVAILABLE**

**EFFECTIVE**

**HELPFUL**

**PROBLEM-SOLVER**

**FAST**

**RESULTS-DRIVEN**

**COMMUNICATE**

Obsessively, Relentlessly **At Your Service**

**PARTNERSHIP**

**ACCESSIBLE**

**SOLUTION**

**TRANSPARENT**

**COLLABORATE**

**CONSISTENT**



We're a regulated, publicly traded electric and natural gas provider, serving:

**Eight**  
states

**1.3 million**  
electric and natural gas  
utility customers

**800+**  
communities



Improving Life with Energy



To be the Energy Partner of Choice

- 2,874 employees
- 9,106 miles of powerline
- 49,172 miles of pipeline
- 1,482 MW owned power generation



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**800+**

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To be the Energy Partner of Choice

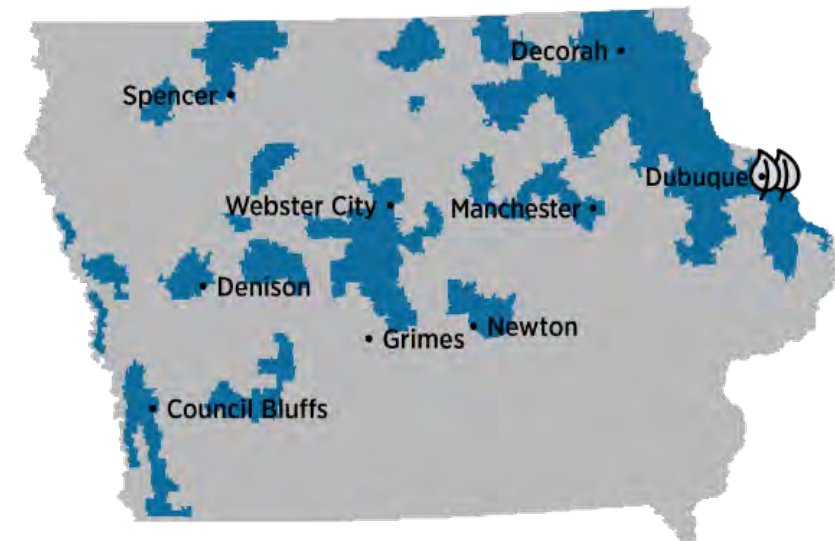


Improving Life with Energy

Iowa

We serve:

- 163,281 customers
- 133 communities
- 265 employees
- 6,839 miles of pipeline



# Iowa community impact

\$60.8 Million in 2023 direct economic impact\*



## \$644,000 CHARITABLE GIVING

Included contributions and sponsorships to nonprofits, chambers and economic development organizations, United Way, energy assistance, in-kind donations, scholarships and investments in trees.



## \$214,000 ECONOMIC DEVELOPMENT

Aided economic development organizations and chambers of commerce working to strengthen communities.



## \$15,000 UNITED WAY PLEDGES

Benefited United Ways Iowa including nearly \$12,000 in employee pledges plus a 25% match from Black Hills Corp. Foundation.



## \$65,000 ENERGY ASSISTANCE

Raised for our energy assistance program, Black Hills Cares, that helped families in need.



## 1,800+ VOLUNTEER HOURS

Company employees lending a hand in service to community organizations.



## 1,300+ FIRST RESPONDERS & EXCAVATORS

Trained on emergency response and safe digging practices so everyone knows safety is our top priority and the rules around 811.



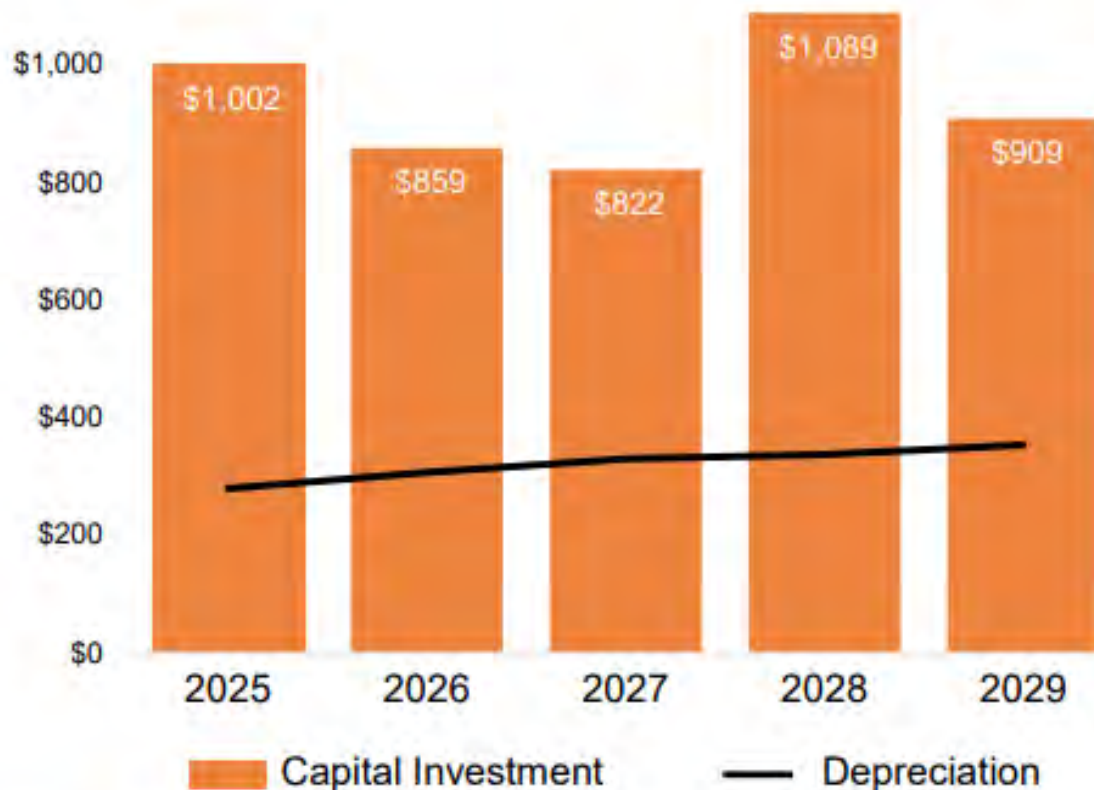


# Investing for Customer Needs Drives Growth

Capital Investment Forecast of \$4.7 billion 2025-2029\*

(millions)

\$1,200



## Key Investment Categories

- Customer growth
- Safety and system integrity projects
- Replacement and modernization programs
- Electric generation and transmission to serve growth and meet emissions reduction goals

## Opportunities Incremental to Plan

- Electric generation and transmission to serve data center demand
- Natural gas pipelines and storage
- Other electric and gas projects in early development phase

\* Forecasted capital is subject to changes in timing and costs of projects and other factors; see Appendix for more detail of capital categories, recovery timing and historical trend of actual versus forecast



# Building on a Decade of Data Center Success

## High-quality Customers

- Proven track record of partnering with hyperscale data centers to support their energy needs
  - Microsoft 10+ years
  - Meta starting in 2026

**More than 1 GW of Demand within the next 10 Years**

## Supportive Business Environment

- Ideal Cheyenne attributes for data center operations and expansion
- Innovative service tariff to serve customer needs

**Ideal Location and Tariffs**

## Scalable Service Model

- Access to renewable resources
- Current transmission capacity
- Future infrastructure investment opportunities

**Well-positioned Infrastructure**



# Ready Wyoming Electric Transmission Initiative

## 260-mile, \$350-million Expansion and Interconnection of Electric System in Wyoming

- Maintain long-term cost stability for customers
- Enhance system resiliency
- Expand access to power markets and provide flexibility as power markets develop in Western states
- Support economic growth in Wyoming and attract data center and blockchain customer growth
- Expand access to renewable resources and facilitate development of renewable development across wind- and sun-rich resource areas



Construction on 115kV lines near Cheyenne, Wyoming as part of Black Hills Energy's Ready Wyoming electric transmission project



# Advancing low carbon fuels

- Established a new business unit, Black Hills Energy Renewable Resource (BHERR)
- 10 RNG interconnections in services as of June 30, 2024
- Recently acquired landfill RNG production facility in Dubuque, Iowa
- Interconnections produce enough pipeline quality RNG to fuel almost 33,000 homes/year





# The Future of Iowa's Electric Grid



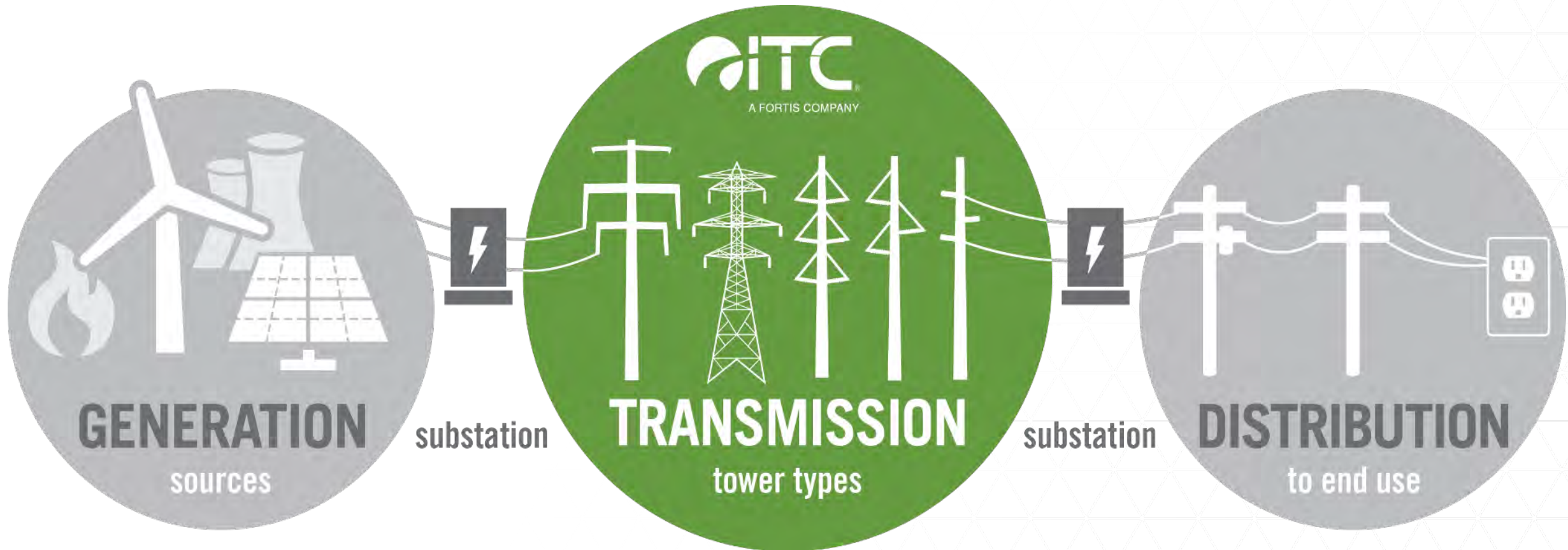
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ITC Midwest  
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**FOR THE GREATER GRID**

# ITC Midwest – Our Role in the Electric Industry





# ITC MIDWEST POWERS OUR STATE



**322**

**JOBS IN OUR STATE**



**5**

**FACILITIES IN OUR STATE  
HEADQUARTERED IN  
CEDAR RAPIDS**



**\$6.8**

**MILLION PAID IN IOWA  
PROPERTY TAXES IN 2024**



**5,553**

**CIRCUIT MILES OF  
TRANSMISSION IN IOWA**



**155**

**SUBSTATIONS  
IN IOWA**

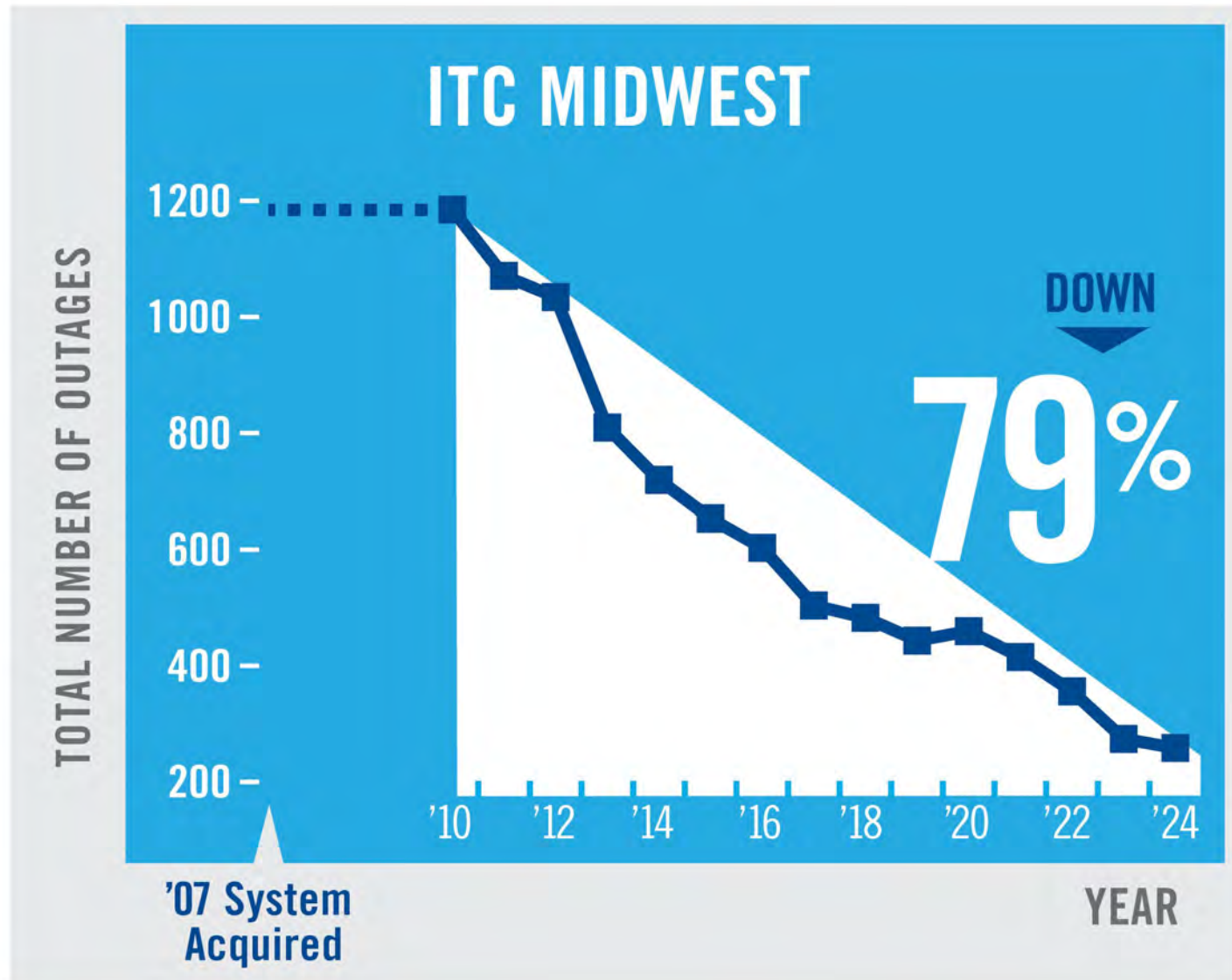


**\$67**

**MILLION ANNUALLY IN PURCHASES  
IN MATERIALS AND SERVICES**

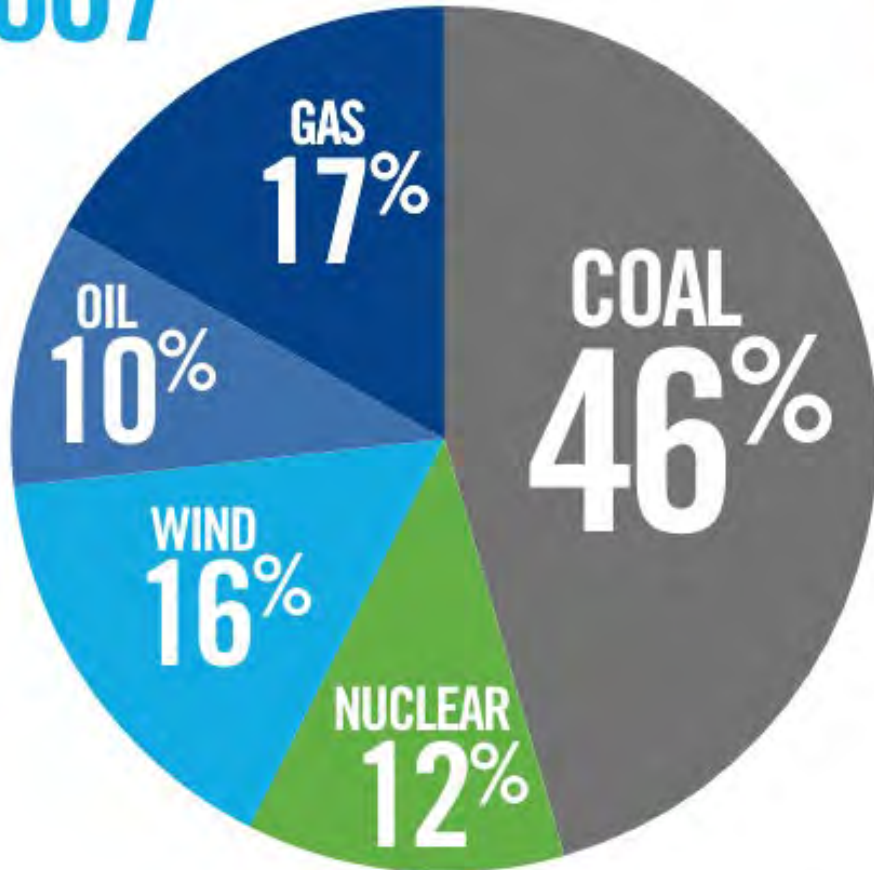


# ITC Midwest – System Reliability Improvement

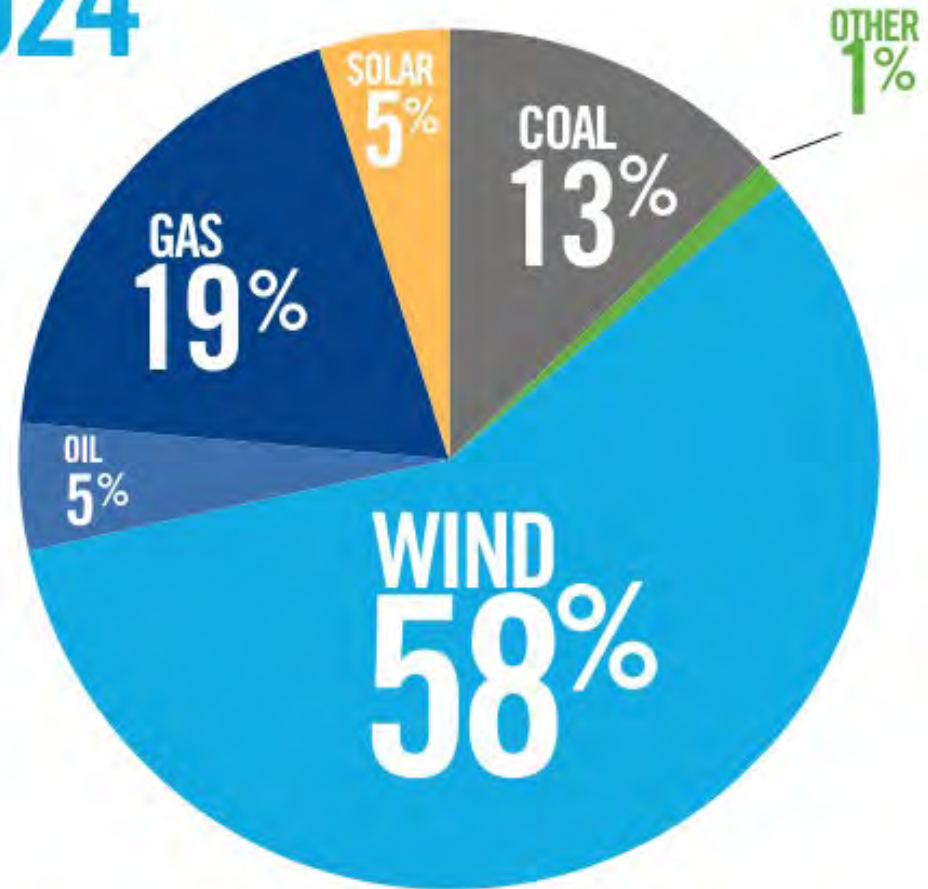


# ITC Midwest – Changes in Connected Generation

2007



2024



# ITC Midwest – Major Projects Under Development

## MISO Multi-Value Projects

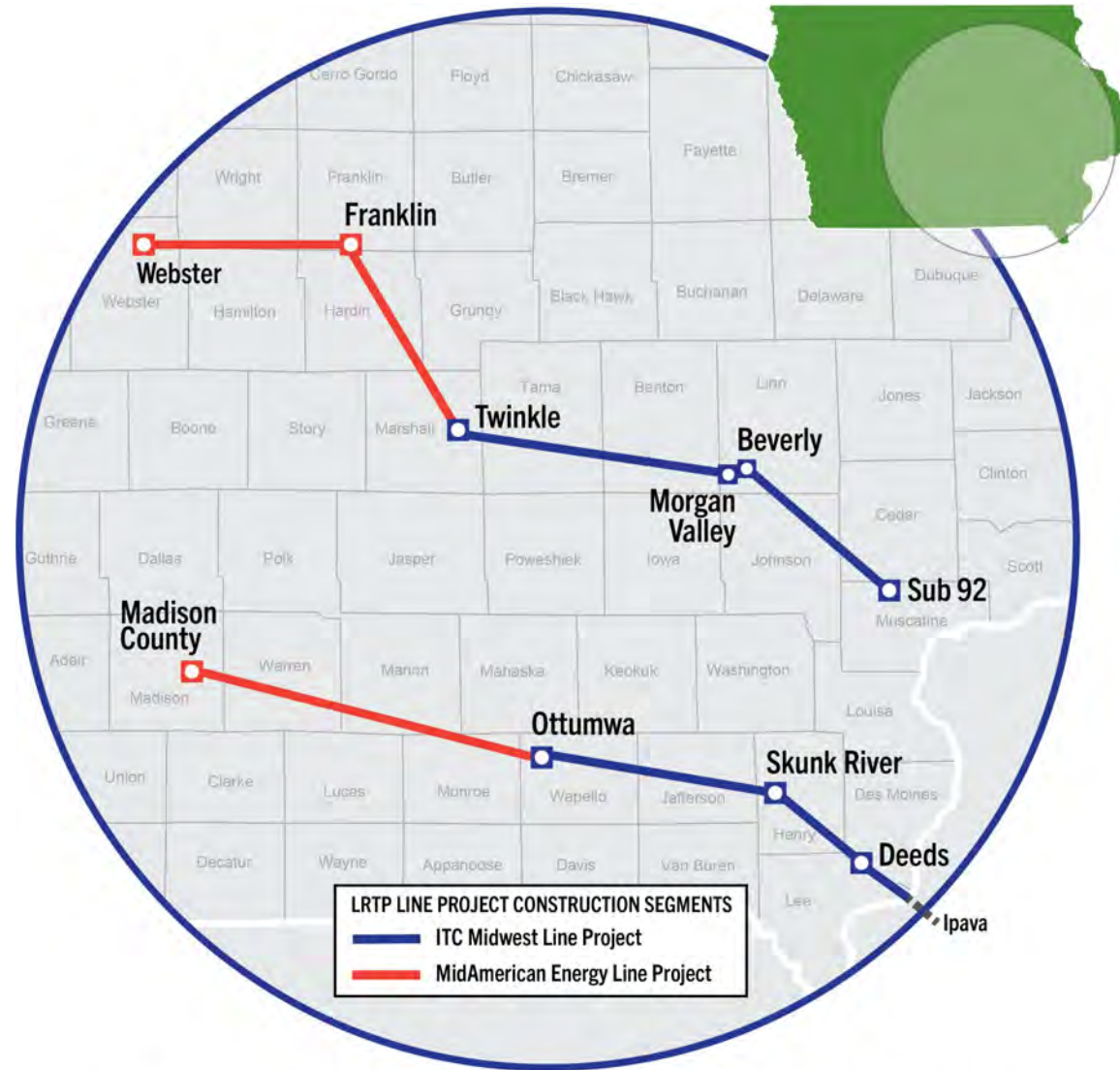


**Completed  
Fall 2024**



# ITC Midwest – Major Projects Under Development

## MISO Long-Range Transmission Plan Tranche 1 Projects In Iowa



**To be completed  
by December 2029**

# ITC Midwest – Major Projects Under Development

## MISO Long-Range Transmission Plan Tranche 2 in Iowa/Minnesota

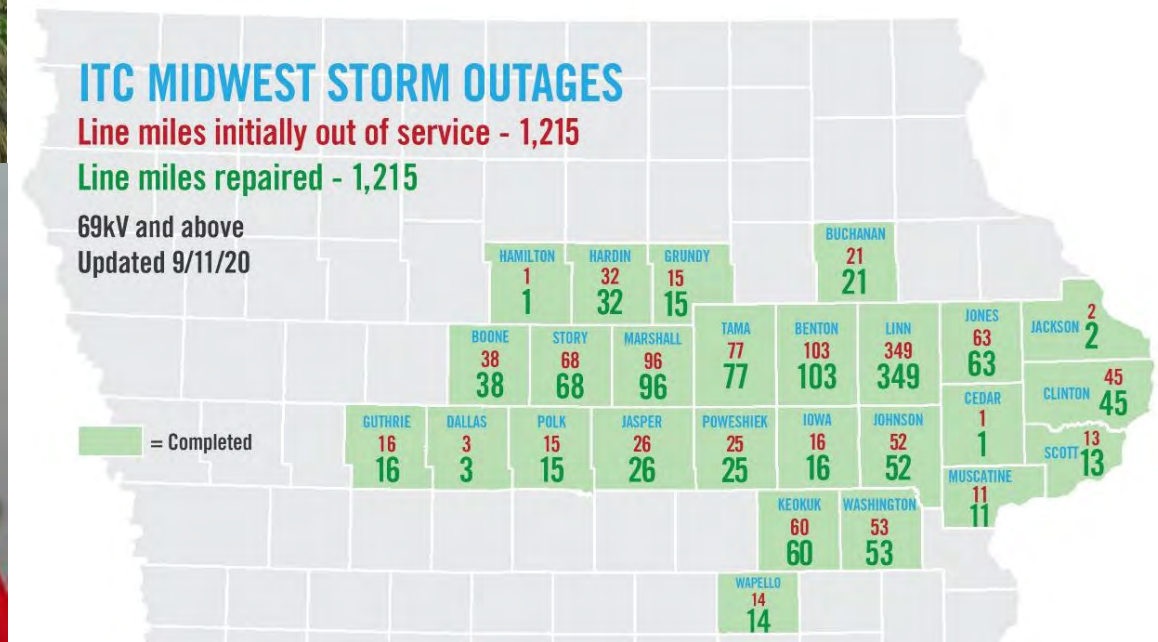


To be completed  
in 2035











**Thank  
You!**

