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NECHAMBER FOUNDATION

Nebraska's Energy Future

Discussion of Whitepaper

October 16, 2024

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Introduction

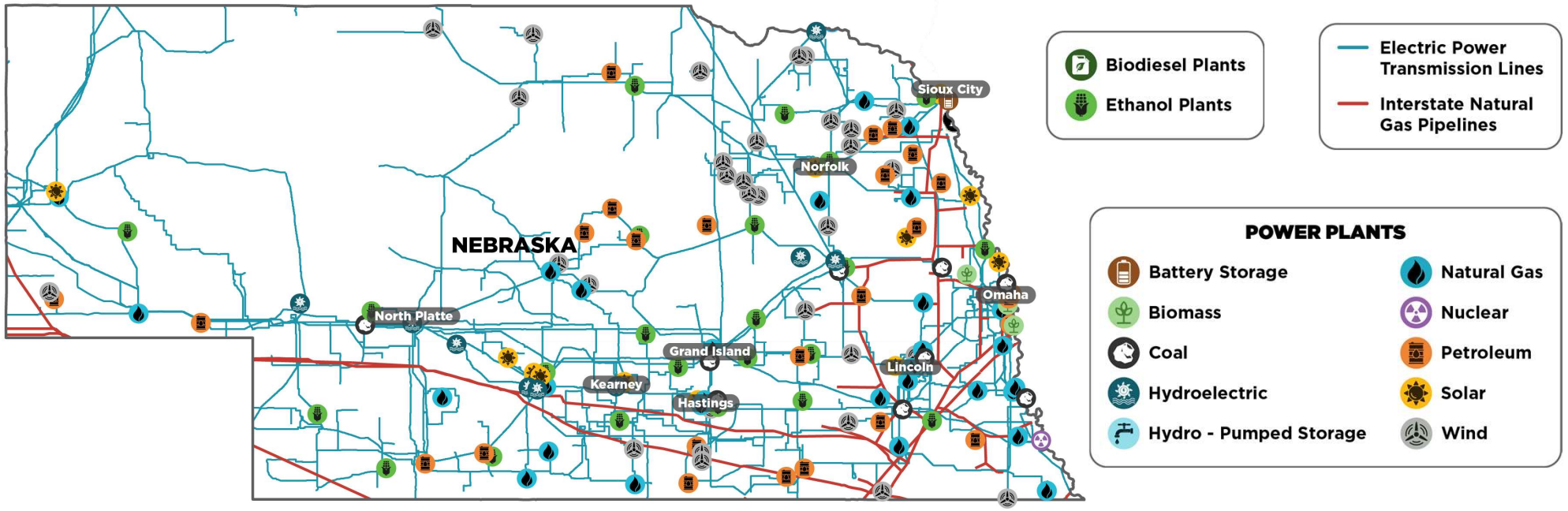
The electric sector is facing several important challenges across the United States, including ***significant load growth*** *and a* ***changing generation mix****. Nebraska faces many of the same issues as the rest of the country, but they may manifest in unique ways. This paper describes the national landscape and how* ***Nebraska is adapting to both local and national needs and trends****. ScottMadden conducted both primary and secondary research for this study, including interviews of key stakeholders, and as such were presented a variety of views on the state's energy industry and changes various parties believe are necessary. This paper also provides some areas of opportunity policymakers may consider in enabling further growth of the energy industry in the state.*

The ***availability of affordable, reliable electricity is critical to economic development****. More and more, our society depends on electricity to power its vital industries, and those industries are expanding. Nowhere is this more true than in Nebraska. The agricultural sector drives the economy of the state, and as clean fuels become more prevalent,* ***the state is poised for additional industrial growth*** *on this agricultural base. Large technology companies looking to site* ***data centers*** *are also seeking to enter the state or expand their presence in Nebraska.* ***Manufacturers, agribusiness, biotechnology, hydrogen production, and sustainable fuel production*** *are just a few of the other industries that seek to grow their businesses in the state. The growth of these sectors* ***depends on the availability of affordable, reliable energy, and Nebraska has both****. The state's electricity ranks among the most affordable and reliable in the country.*

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Energy Infrastructure in the State



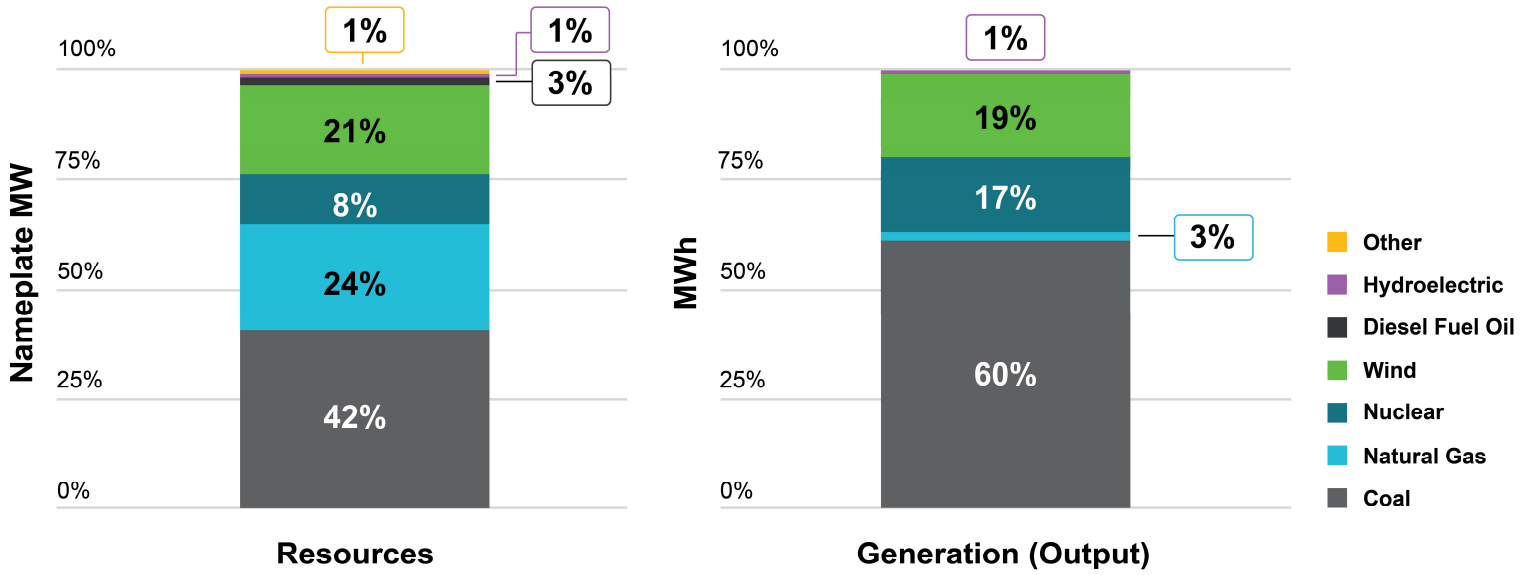
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Capacity and Energy

Nebraska System Resources (Nameplate MW) and Generation (MWh) by Fuel Type as % of Total (2022)

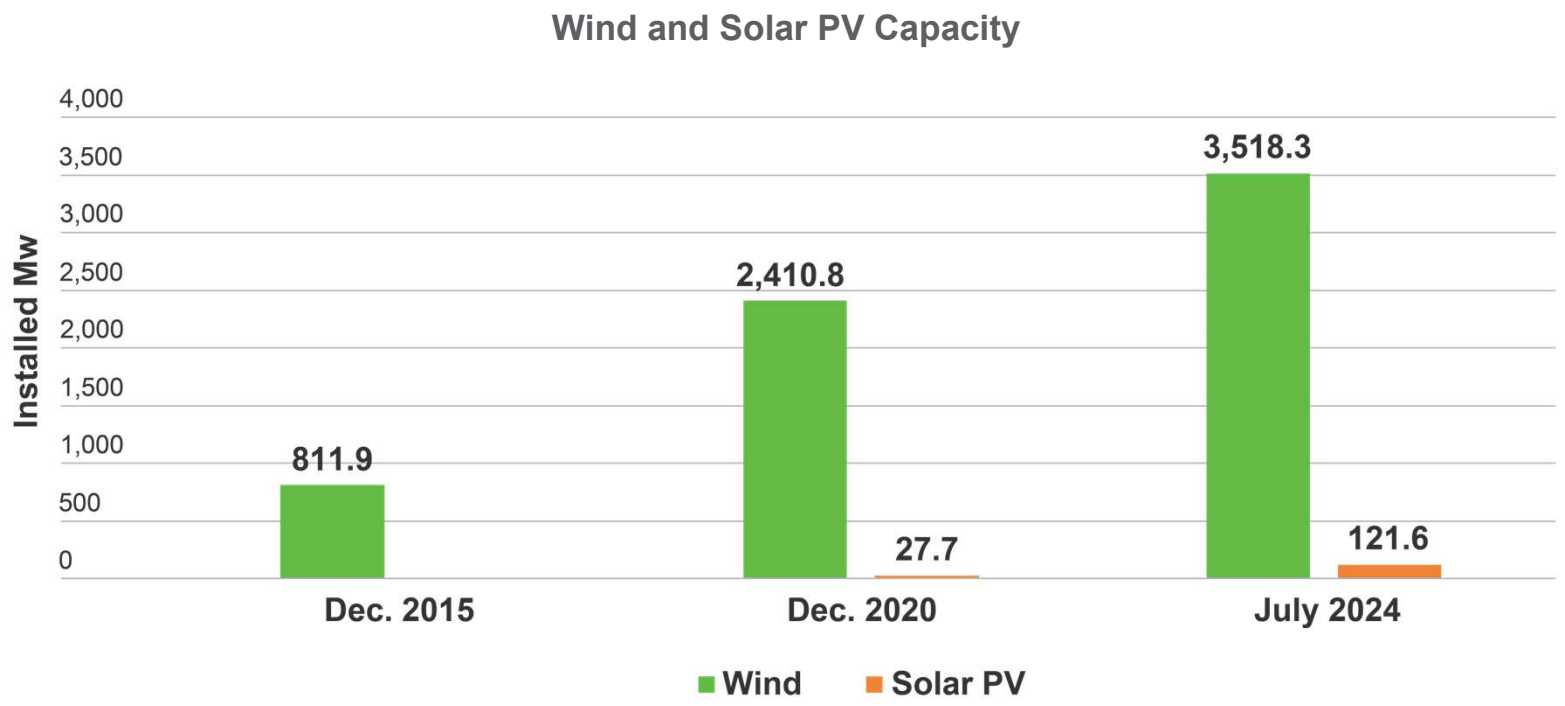


"Capacity" and "Energy" are different; this matters for planning the grid

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Wind and Solar Capacity

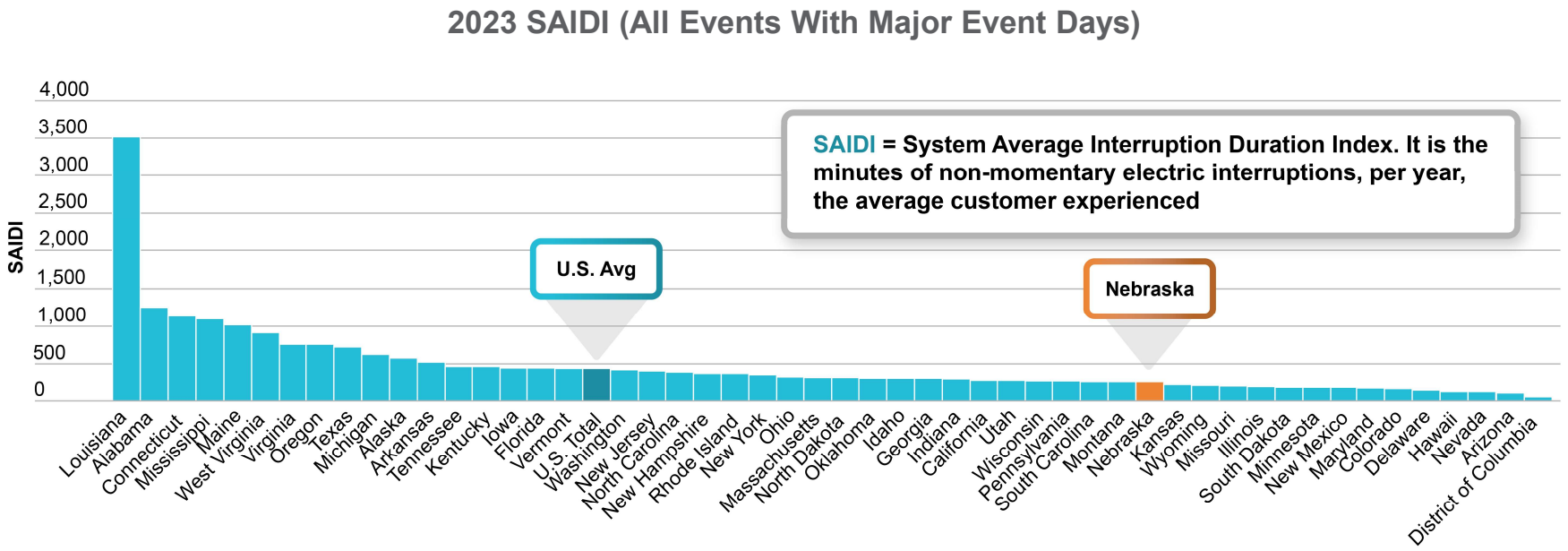


Significant wind has been deployed in the state; solar is growing

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Reliability

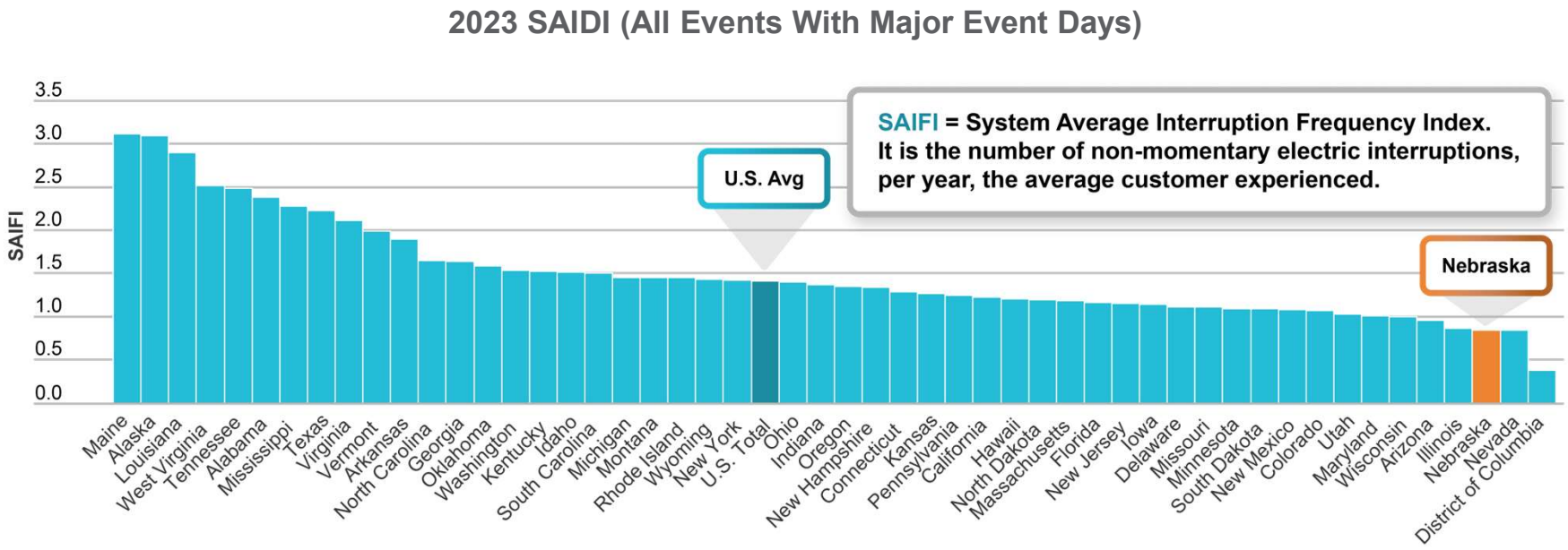


Electric reliability in the state is good

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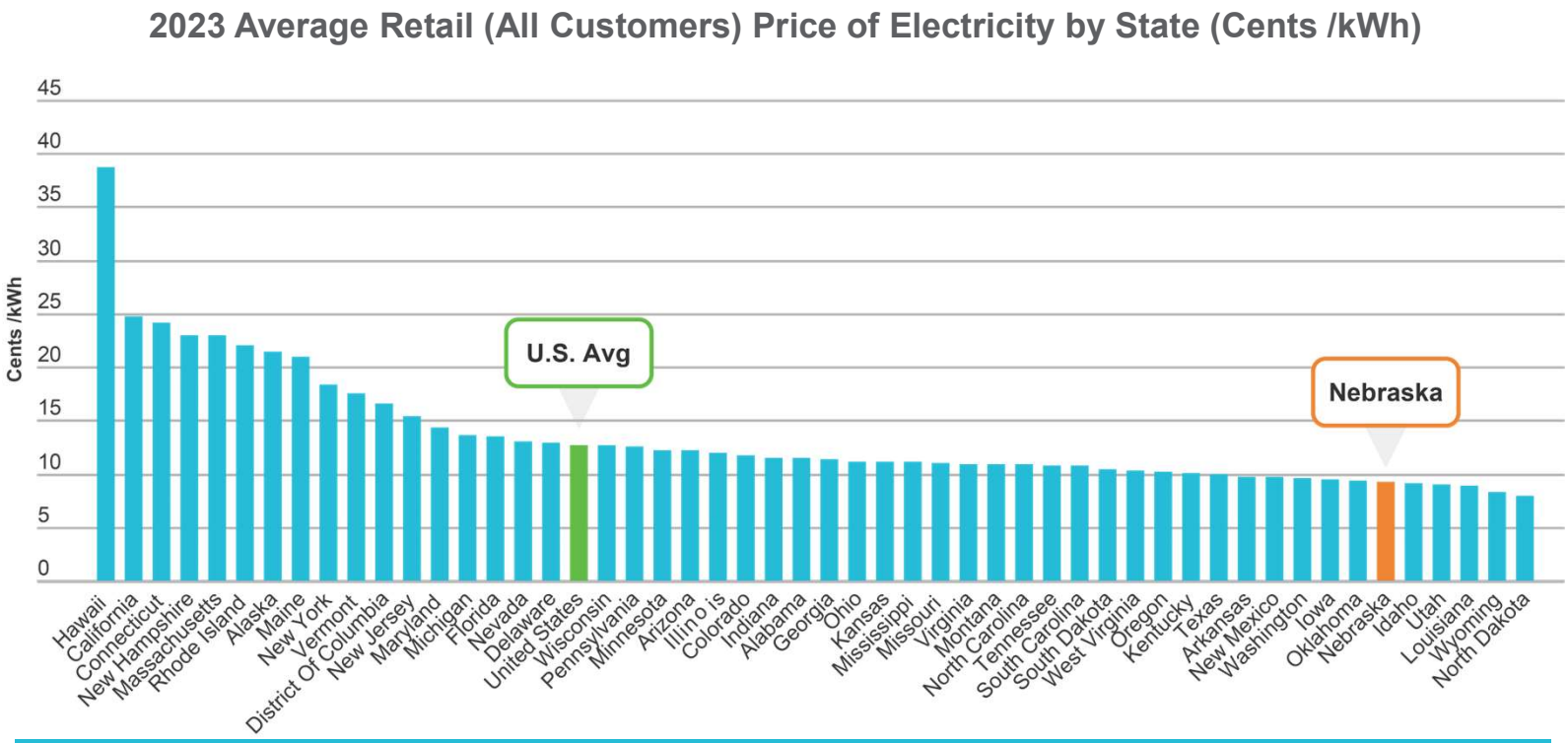
Reliability (Cont'd)



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Cost of Electricity



The relative cost of electricity is low

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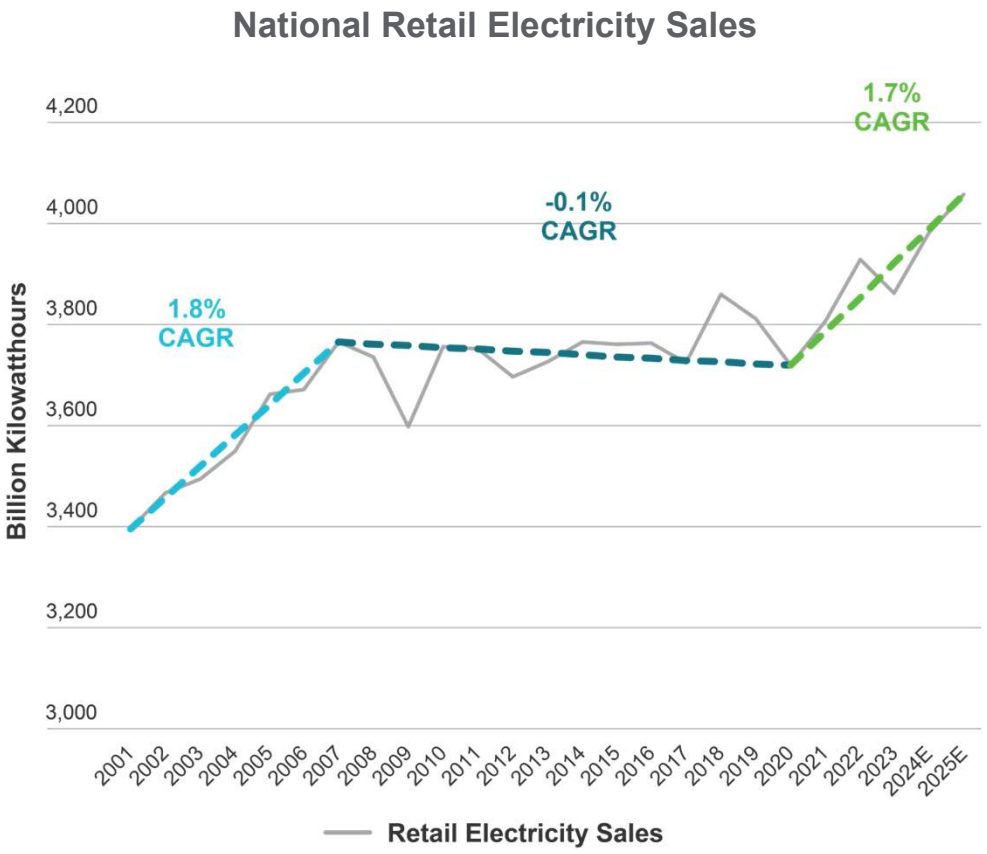
Electricity Sales and Forecasts

Retail (end use) electricity sales are growing across the US

Forecasts are being revised upward annually

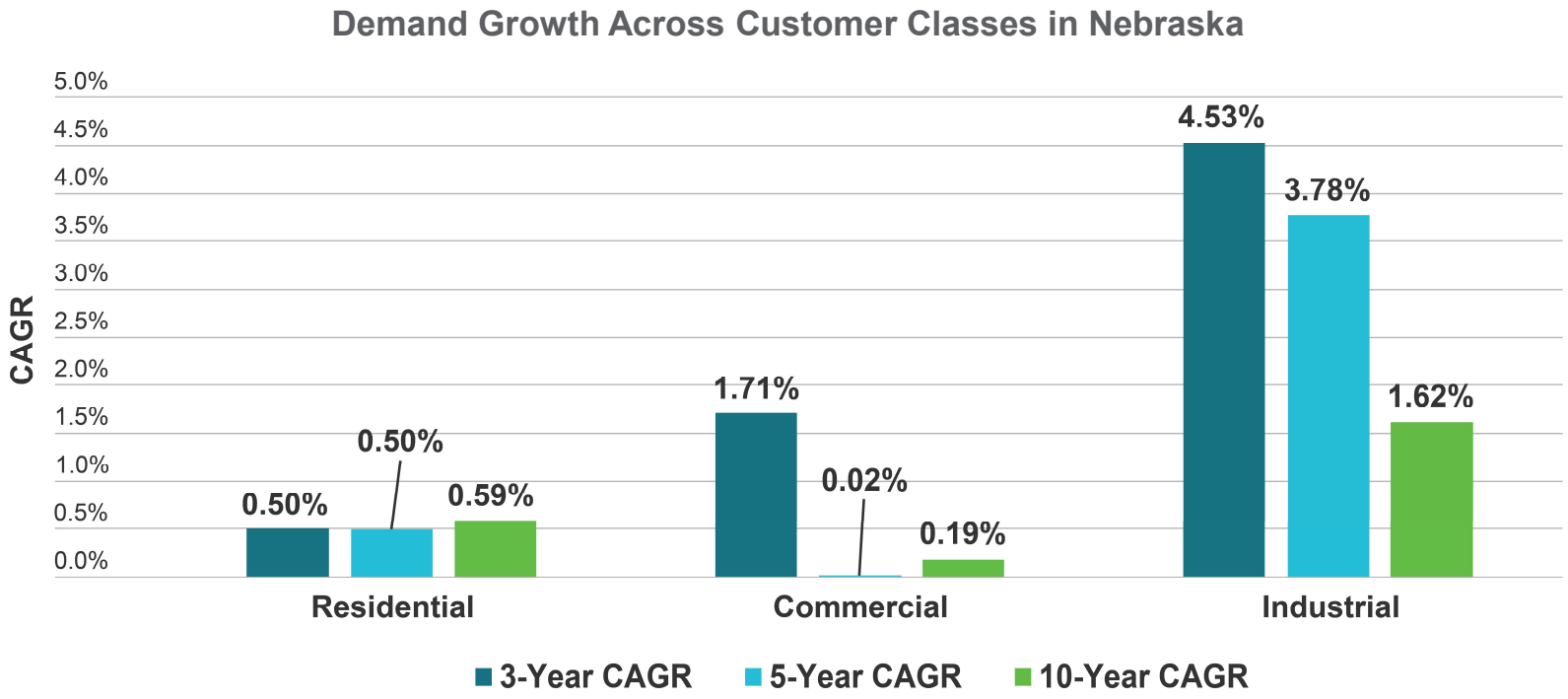
These changes are being driven by

- Manufacturing onshoring
- Data center load growth
- Electrification



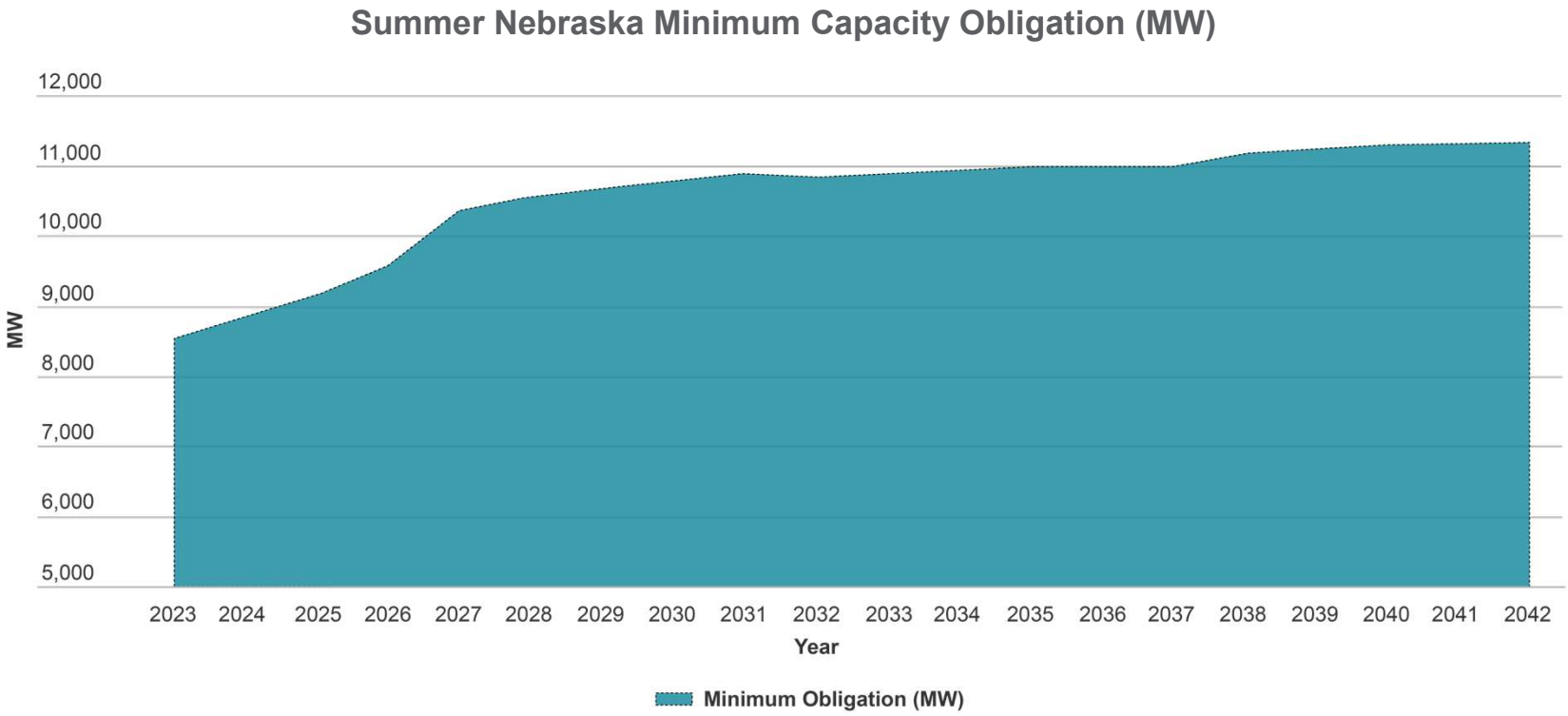
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Demand Growth



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Minimum Capacity Obligation



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Responding to Increasing Loads



Generation and Supply

- *New generation (natural gas, nuclear, renewables, energy storage)*
- *Delaying retirements*
- *Demand side management*
- *New technologies*



Updated Processes

- *Load interconnection*
- *Generation interconnection*
- *Streamlined private renewables approval*



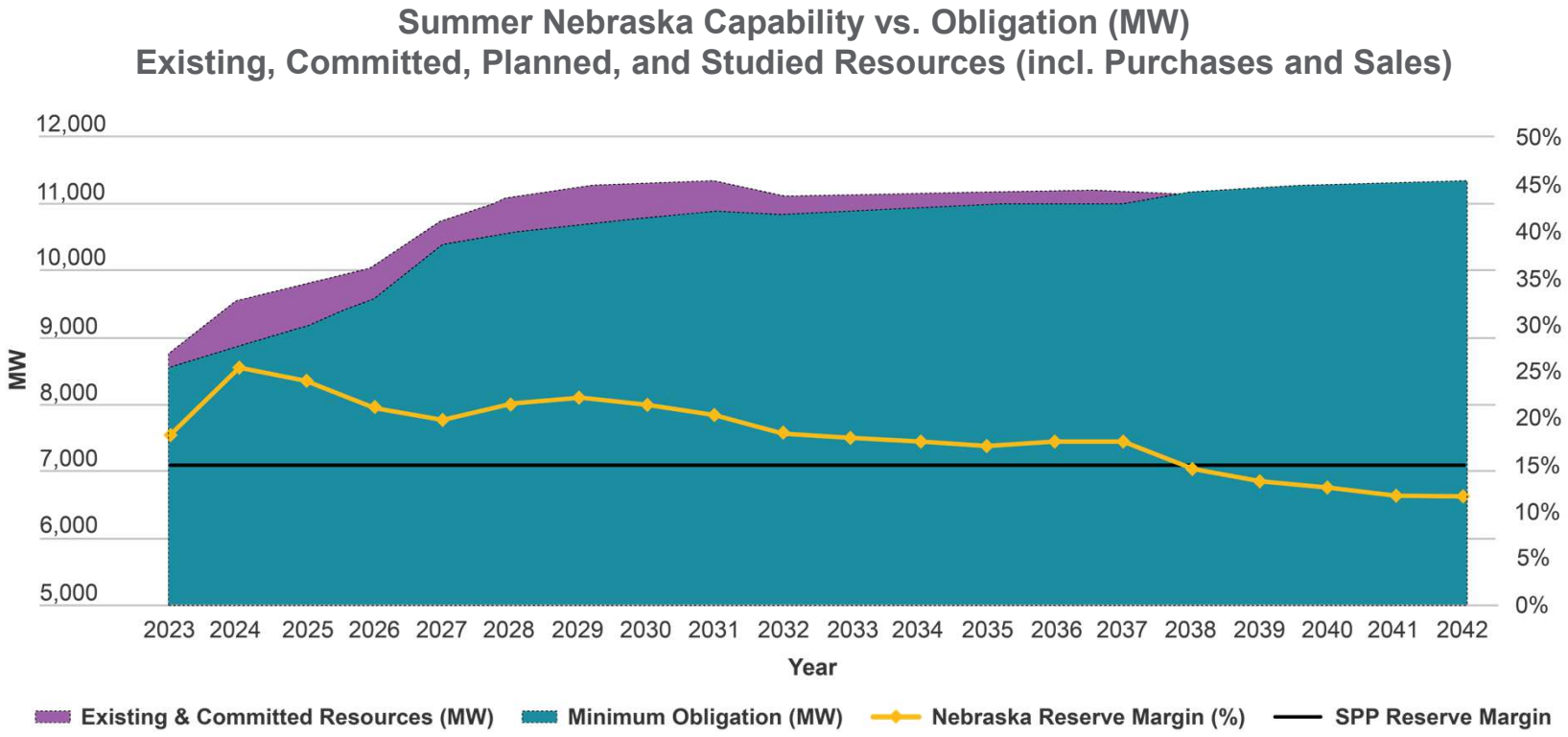
Creative Rates and Funding

- *New rate and contract structures*
- *Federal funds*

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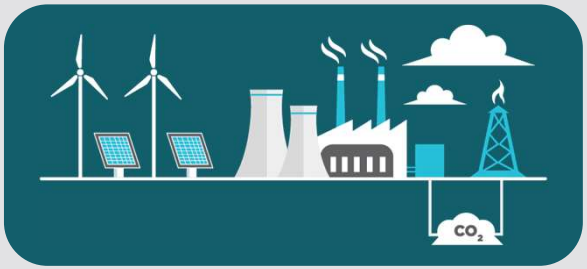
Meeting Forecasted Load



Source: Nebraska Power Association, 2023 Load and Capability Report

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Areas for Consideration



Public education and transparency about ***energy infrastructure*** in the state is critical.

Citizens, customers, stakeholders, and legislators need to understand the industry and be informed about the **need for** and **trade-offs** across ***different types of critical energy resources***.



There is an opportunity to consider ***streamlining zoning*** and ***permitting processes for private renewables*** to be **more consistent across counties**.

These facilities can play an important role as part of a ***diverse portfolio of generation resources***.



The ***various stakeholders*** who are working to bring large load customers into the state can look to create more flexible rate schedules and contracting as well as **unique, creative partnerships** across ***customers, utilities, and renewables developers***.

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Areas for Consideration

Design Option #2

Erica, if you have thoughts on some 'cooler' looking graphics for each of these points, I'd welcome your ideas



Public education and transparency about ***energy infrastructure*** in the state is critical.

Citizens, customers, stakeholders, and legislators need to understand the industry and be informed about the **need for** and **trade-offs** across ***different types of critical energy resources***.



There is an opportunity to consider ***streamlining zoning*** and ***permitting processes for renewables*** to be **more consistent across counties**.

These ***facilities*** are a part of the energy landscape and can play an important role as part of a ***diverse portfolio of generation resources***.



The ***various stakeholders*** who are working to bring large load customers into the state can look to ***create more flexible rate schedules*** and ***contracting*** as well as unique, ***creative partnerships*** across customers, utilities, and renewables developers.

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