

Nebraska Power Association 2023 Load & Capability Report

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PRELIMINARY: As of 8/21/23, the final version of this presentation has not been submitted to the NPRB.

Organizational and Statutory Background Information

- **Nebraska Power Review Board (NPRB)**
 - State agency formed in 1963 to regulate Nebraska's publicly owned electric utility industry
 - Five member Board approved by the Governor and confirmed by the Legislature
- **Nebraska Power Association (NPA)**
 - Voluntary organization of municipal, public power district, and cooperative electric utilities (166 members)
 - Formed in 1980 to address statewide electricity policies and issues. Administered by LES
- **State Statute 70-1025**
 - Requires an annual statewide report on electric demand and generation for a 20 year period
 - NPA is the designated entity to provide this report to the NPRB

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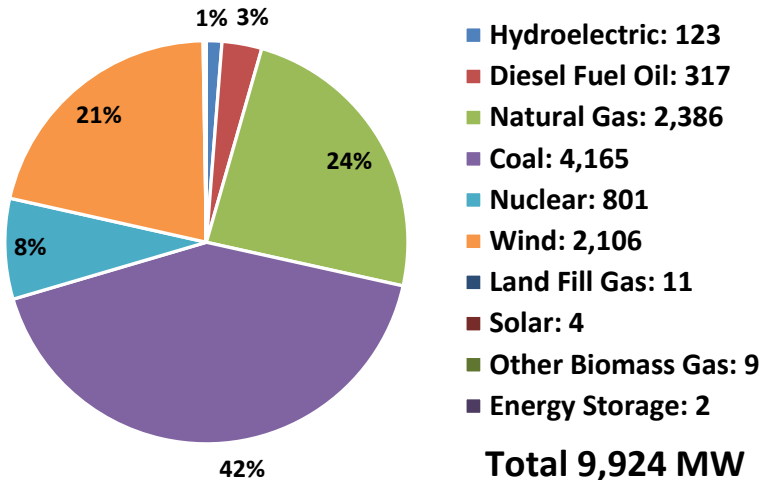
Nebraska's Peak Demand Growth

- **Average annual demand growth rate is 1.5% per year from 2023 through 2042**
 - The utilities are using probability based rankings to determine the loads included
- **This is much higher than the 0.4% growth rate shown in last year's report due to modifications in the methods for including large loads**

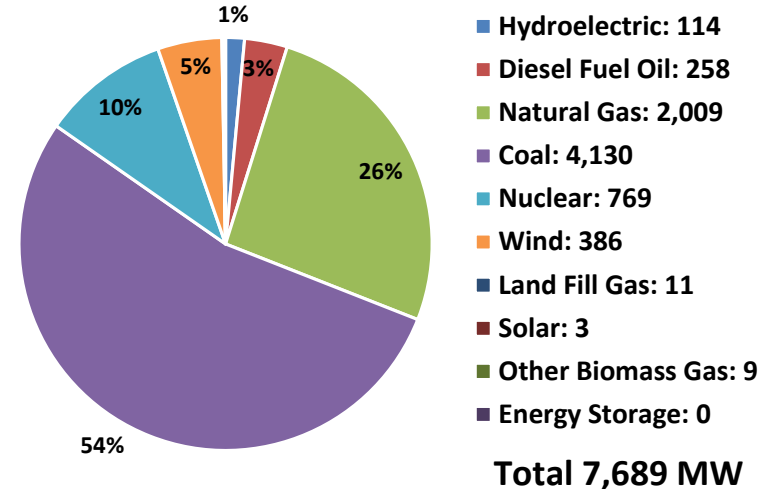
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Existing Generating Resources*

Resource Mix (Nameplate MW)



Resource Mix (Accredited MW)



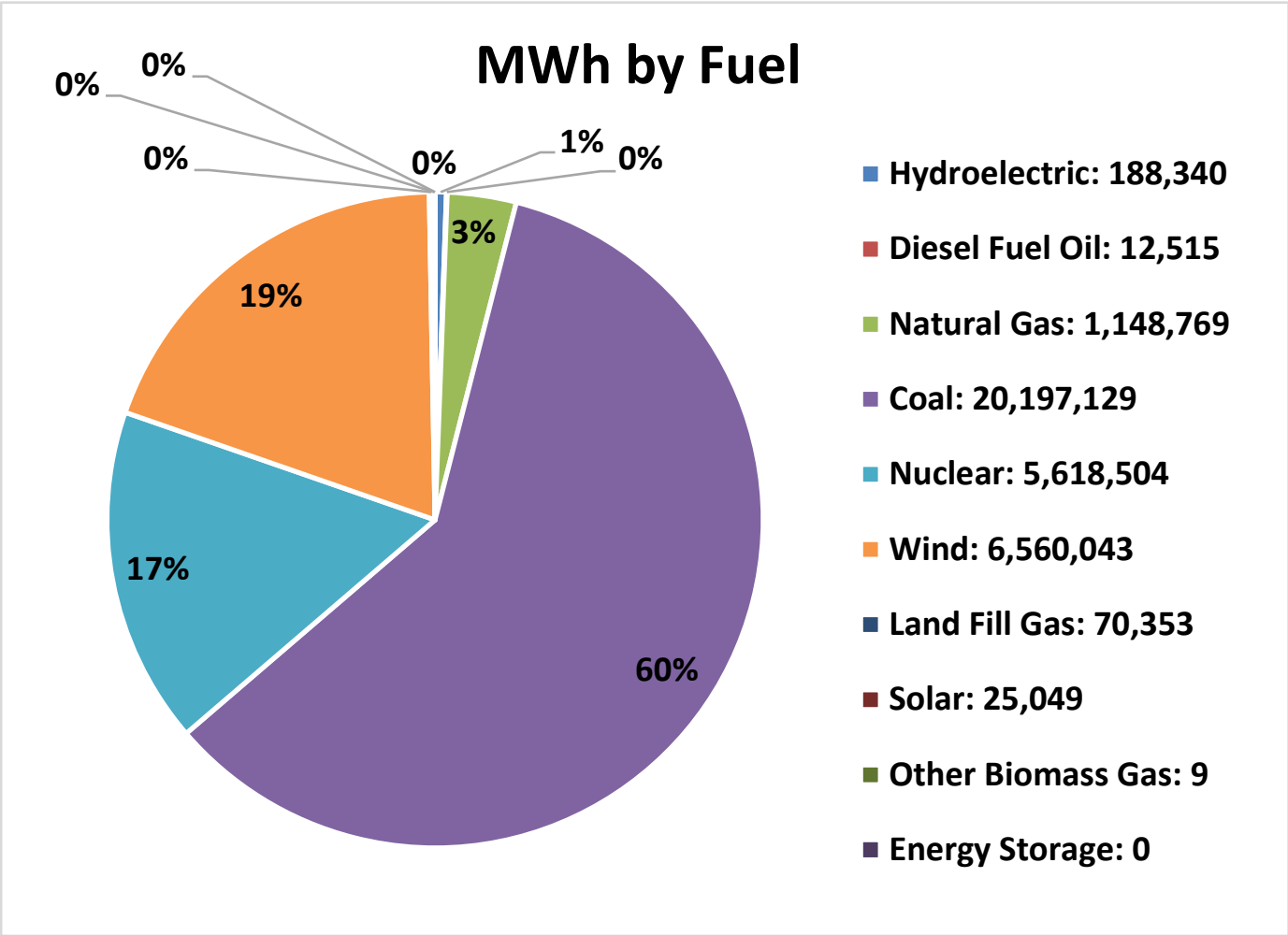
- **1,180 MW of Firm Power Purchases**¹
 - 832 MW Western Area Power Administration Hydro Contracts
 - 348 MW Other Firm Power Contracts
- **124 MW of utility behind the meter nameplate generation (includes solar)**

* Nameplate and Accredited data added per NPRB request. Resources expected to be in service by summer of 2023.

¹ Capacity reserves are provided by the Firm Power provider

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2022 Generation Energy Production By Fuel (MWh)

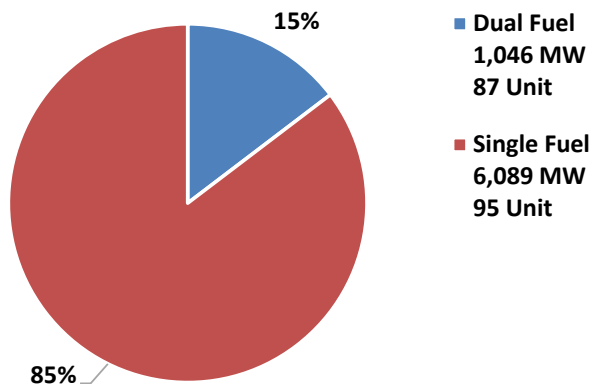


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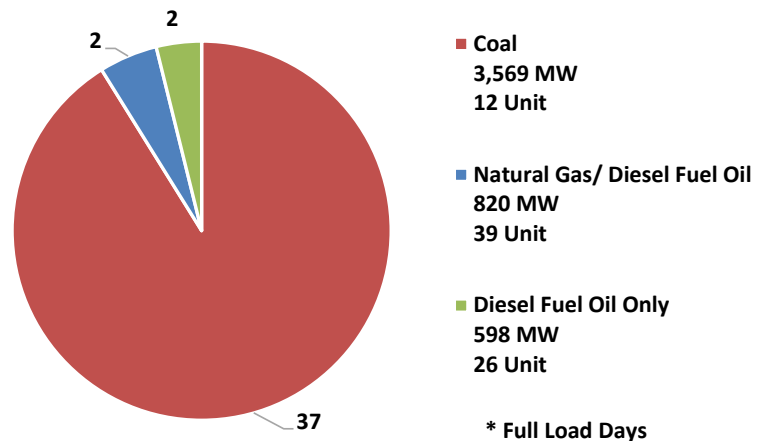
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Dual Fuel Units and On-Site Fuel Storage (Winter Conditions)

**Dual Fuel Resources
(Winter Accredited Capacity)**



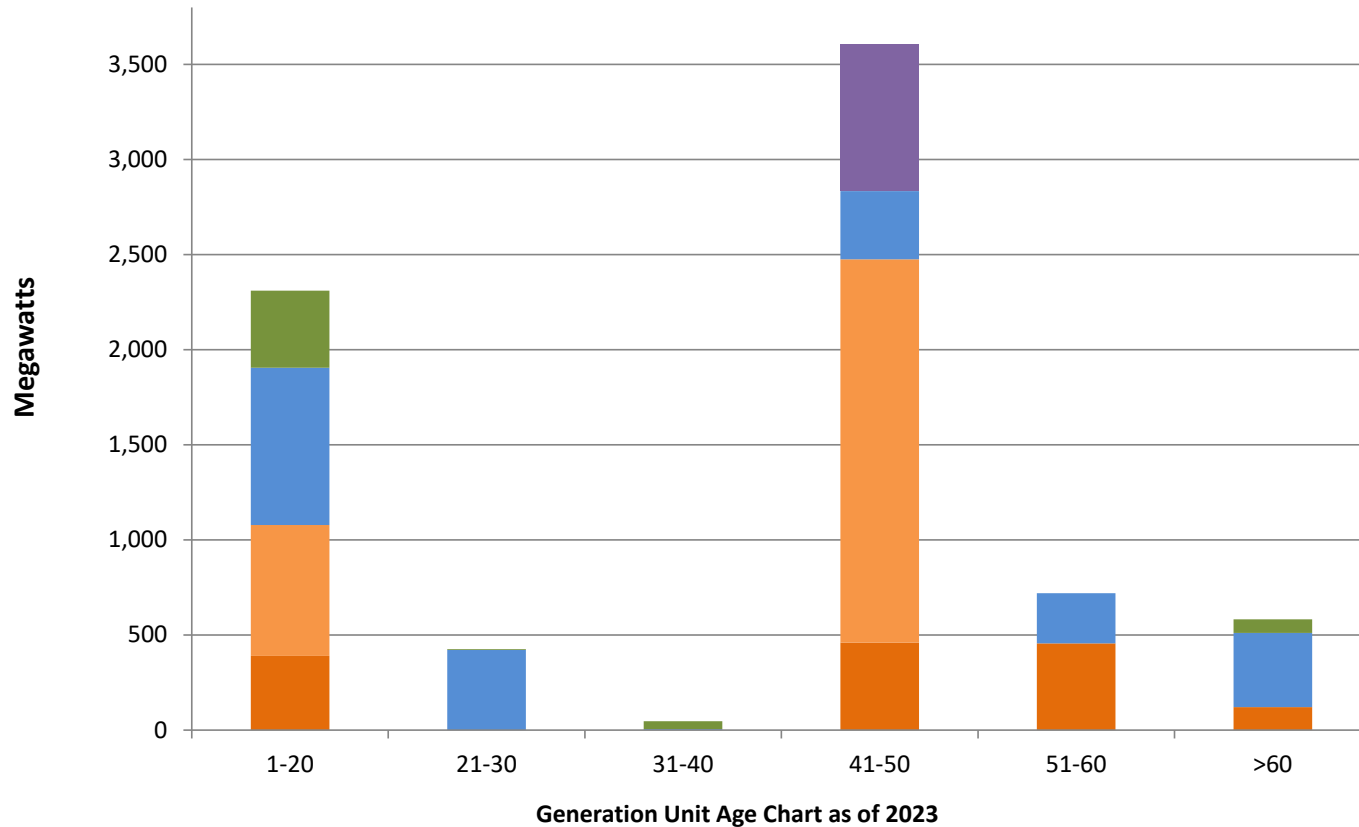
**Average Days on Site Fuel by Type
(Winter Accredited Capacity)**



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Age of Existing Generating Fleet



■ Small Coal (<250 MW)
 ■ Large Coal (>250 MW)
 ■ Oil/ Gas
 ■ Nuclear
 ■ Renewable

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Committed, Planned, and Studied Generating Resources (Accredited)

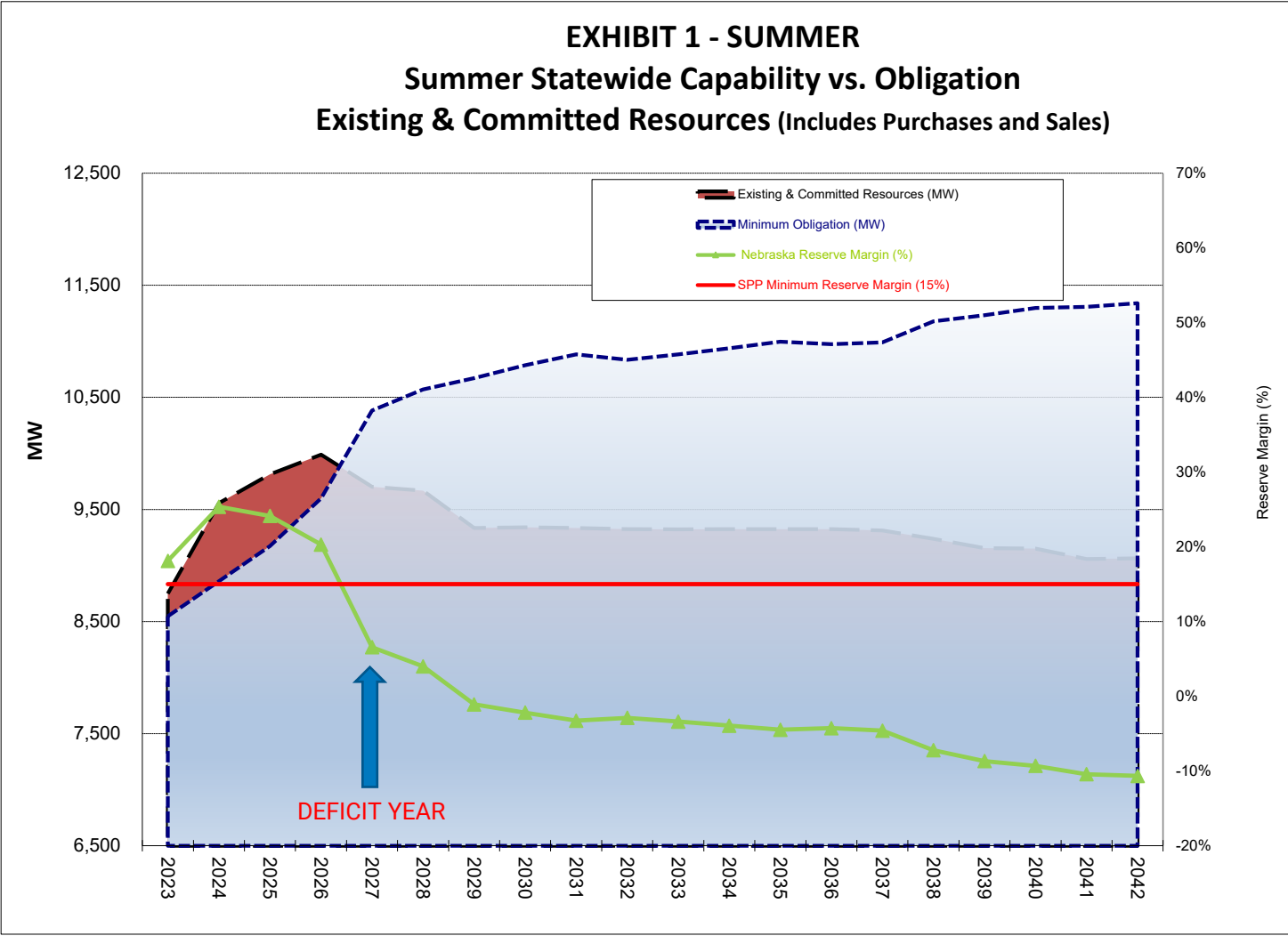
	Renewable	Conventional	Unspecified	Total
Committed	56 (OPPD Platteview Solar)	593 (OPPD Standing Bear Lake NG) (OPPD Turtle Creek NG)	0	649
Planned	0	0	0	0
Studied	872 (OPPD Solar, Wind, Battery Storage, DR)	750 (OPPD CT)	391 (NPPD)	2,013
Total	928	1,343	391	2,662

SPP Generation Interconnection Queue for Nebraska (Nameplate) as of June 4, 2023

- ≈ 1,830 MW Battery Storage
- ≈ 5,575 MW Solar
- ≈ 4,573 MW Wind
- ≈ 1,952 MW Hybrid (Typically Solar + Storage)
- ≈ 1,286 MW Conventional

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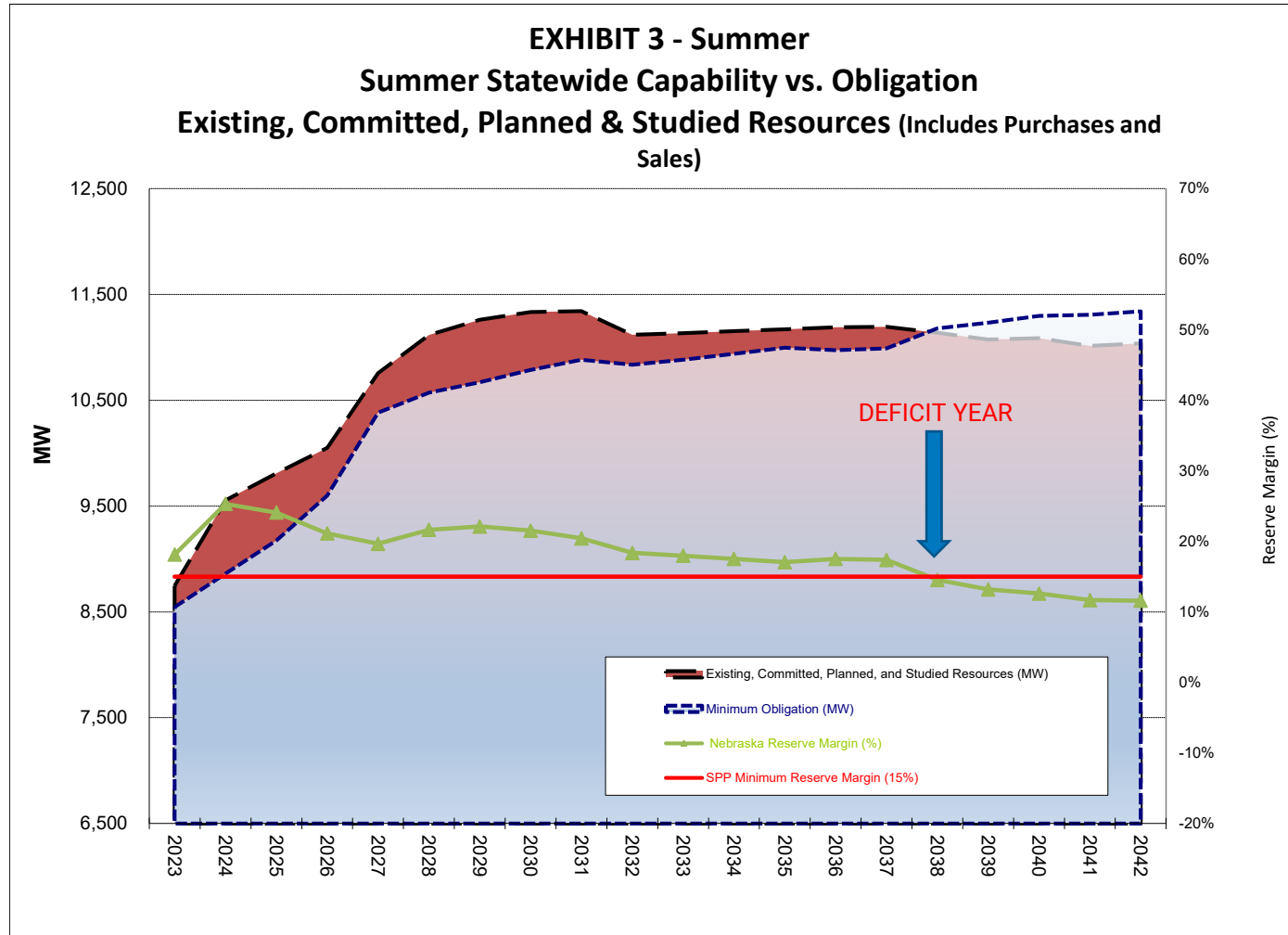
Load & Capability with Existing & Committed Resources



* SPP's Recently Revised 15% Planning Reserve Margin in Use

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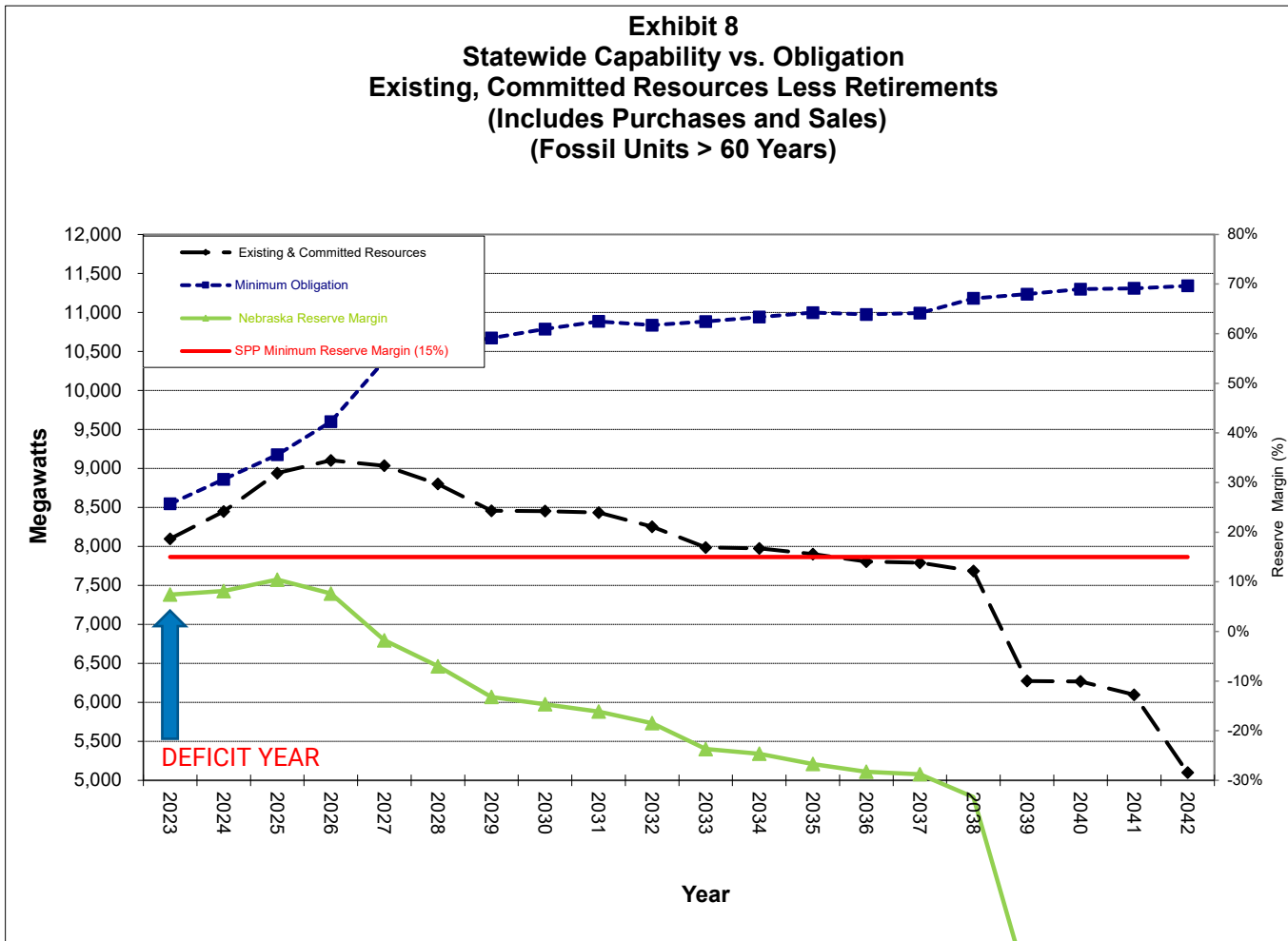
Load & Capability with Existing, Committed, Planned & Studied Resources



* SPP's Recently Revised 15% Planning Reserve Margin in Use

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Load & Capability with Existing & Committed Resources Less 60+ Year Fossil Retirements



* SPP's Recently Revised 15% Planning Reserve Margin in Use

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Utility Decarbonization Goal Summary

- **Nebraska Public Power District**
 - Board of Directors established strategic directive (SD-05) in 2021
 - The goal is to achieve net-zero carbon emissions from generation resources by 2050
- **Omaha Public Power District**
 - Board of Directors adopted a goal in its Strategic Directives to achieve net-zero carbon production by 2050
- **Lincoln Electric System**
 - Administrative Board approved a resolution in late 2020
 - The goal is to achieve net-zero carbon dioxide production from its generation portfolio by 2040
- **Municipal Energy Agency of Nebraska**
 - Board of Directors approved a resolution in early 2020
 - The goal is to achieve a carbon neutral power resource portfolio by 2050

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Summary

- Demand growth of 1.5% per year is higher than the 0.4% shown in last year's report due to modifications in the methods for including large loads in each utility's forecast.
- Nebraska meets its SPP Reserve Margin requirements with existing and committed resources through 2026.
- Each utility that has set decarbonization goals will continue to evaluate their options in the coming years.

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Panel Discussion