NEBRASKA POWER ASSOCIATION

2024 NEBRASKA POWER ASSOCIATION
LOAD AND CAPABILITY REPORT

September 2024

Disclosure

The 2024 NPA L&C is based on the best information available at the time of development and contains forward-looking statements. Future conditions may differ materially from those discussed. In general, the utility supplied data was current through 6/1/2024, although some modifications were made after that date based on feedback received during the NPA Board's review process.

Acknowledgements

Resource planning is an ongoing process for all Nebraska utilities. These planning processes align with utility board of directors' directives. Directives are designed to guide efforts to address current and future challenges and mitigate risks. The Nebraska Power Association files and publishes a Load and Capability report annually with the Nebraska Power Review Board.

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Acronyms / Definitions

AC – Alternating Current

BESS – Battery Energy Storage System

BTM – Behind the Meter

CCS – Carbon Capture and Sequestration

CNS – Cooper Nuclear Station

DC – Direct Current

DR – Demand Response

EE – Energy Efficiency

EFOR – Estimated Forced Outage Rate

EFORd – Equivalent Forced Outage Rate - Demand

EFORd' – adjusted Equivalent Forced Outage Rate - Demand

EIA – Energy Information Administration

ELCC – Effective Load Carrying Capability

EPA – Environmental Protection Agency

FERC – Federal Energy Regulatory Commission

FORd – Demand Forced Outage Rate

GADS – Generating Availability Data System

GI – Generation Interconnection

HVAC – Heating, Ventilation, and Air Conditioning

IRP – Integrated Resource Plan

kW – Kilowatt

L&C – Load and Capability

LED – Light Emitting Diode

LRE – Load Responsible Entity

LES – Lincoln Electric System

LOI – Letter of Intent

LOLE – Loss of Load Expectation

MEAN – Municipal Energy Agency of Nebraska

MW – Megawatt

MWh – Megawatt Hour

NGC – Net Generating Capability

NPA – Nebraska Power Association

NPPD – Nebraska Public Power District

NPRB – Nebraska Power Review Board

NRC – Nuclear Regulatory Commission

OATT – Open Access Transmission Tariff

OPPD – Omaha Public Power District

PBA – Performance Based Accreditation

PPA – Purchase Power Agreement

PWP – Power with Purpose

PRM – Planning Reserve Margin

PURPA – Public Utility Regulatory Policies Act

REC – Renewable Energy Credits

RTO – Regional Transmission Operator

SAWG – Supply Adequacy Working Group

SEP – Sustainable Energy Program

SPP – Southwest Power Pool

WAPA – Western Area Power Administration

Existing – In-service accreditable generating resource. Seasonal capability typically listed.

Committed – Projects have NPRB approval if required but are not in service. PURPA qualifying and non-utility renewable projects do not need NPRB approval. These resources are generally expected to be available to be placed in service in a one-to-four year timeframe, subject to the SPP generator interconnection study process. Times can vary due to utility procurement and lead times.

Planned – Resources for which utilities have authorized expenditures for engineering analysis, architect/engineer contract, or permitting but do not have required NPRB approval or do not have a contractual offtake commitment. These resources are generally expected to be placed in service in a three-to-seven year timeframe. Times can vary due to utility procurement and lead times.

Studied – Resources that acknowledge future resource requirements beyond Existing, Committed, and Planned resources. For any future years when Existing, Committed, and Planned resources would not meet a utility's minimum obligation, each utility establishes Studied resources in a quantity to meet this deficit gap.

1.0 Executive Summary

The Nebraska Power Association Load and Capability report reflects an annual update inclusive of the collective resource planning efforts of Nebraska Public Power District (NPPD), Omaha Public Power District (OPPD), Lincoln Electric System (LES), Municipal Energy Agency of Nebraska (MEAN), Hastings Utilities, City of Grand Island Utilities, City of Fremont Utilities, City of Beatrice, Falls City Utilities, City of Neligh, Nebraska City Utilities, Northeast Nebraska Public Power District (NNPPD), City of Scribner, South Sioux City, City of Superior, Tri-State Generation & Transmission, City of Valentine, City of Wakefield, Village of Walthill, and City of Wayne. This includes solving for near-term load growth while also providing a foundation for future resource needs.

1.1 Statewide Summer Position

Utilizing Existing, Committed, and Planned resources applied to the current cumulative SPP summer resource adequacy requirement, *Figure 1* illustrates that a statewide capacity deficit would occur starting in 2035. *Table 1* contains the corresponding load and capability data in tabular format. The statewide summer deficit based on the state's minimum load obligation in last year's report occurred in 2027 but was calculated using only Existing and Committed resources. The inclusion of Planned resources in this year's report reflects formulated plans in varying stages of implementation, approved and initiated by utilities. While forecasted loads in the near term are slightly lower than last year's expectations, there is also a corresponding reduction in the utilities' expected net generating capability.

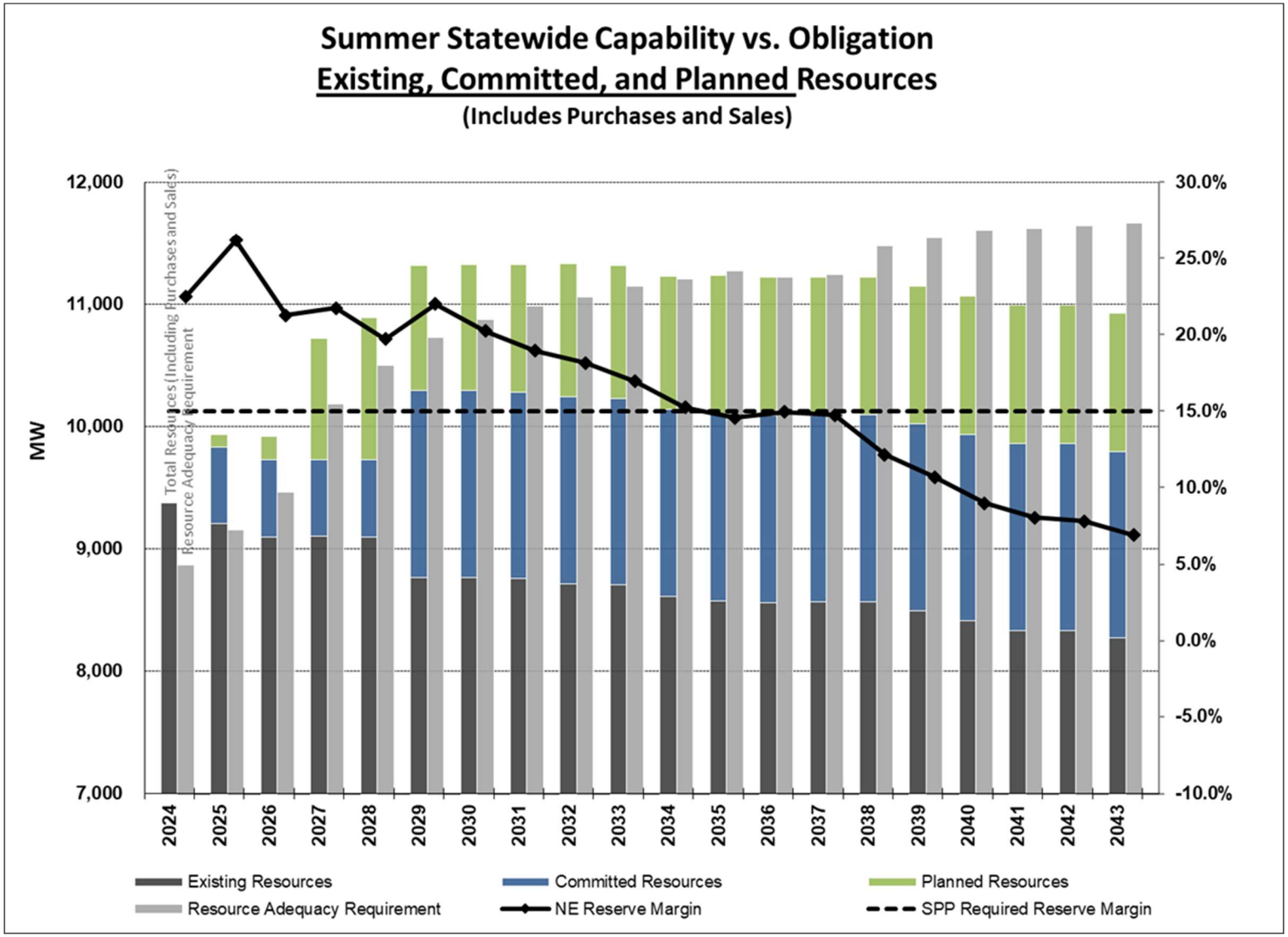

Figure 1 - Summer Statewide Capability vs. Obligation Existing, Committed, and Planned Resources (Includes Purchases and Sales)

NEBRASKA STATEWIDE
Existing & Committed, & Planned Load & Generating Capability in MW
Summer Conditions (June 1 to September 30)

Year	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043
1 Annual System Demand	7,858	8,104	8,373	9,003	9,277	9,472	9,604	9,696	9,760	9,841	9,890	9,946	9,906	9,923	10,129	10,183	10,246	10,259	10,276	10,297
2 Firm Power Purchases - Total	1,173	1,175	1,177	1,179	1,180	1,182	1,184	1,186	1,188	1,189	1,191	1,193	1,195	1,197	1,199	1,201	1,203	1,204	1,206	1,208
3 Firm Power Sales - Total	67	67	67	67	67	67	67	67	67	67	67	67	67	67	67	67	67	67	67	67
4 Annual Net Peak Demand (1-2+3)	6,751	6,996	7,263	7,892	8,163	8,357	8,487	8,577	8,639	8,718	8,765	8,819	8,778	8,793	8,997	9,049	9,110	9,122	9,137	9,156
5 Net Generating Capability (owned)	7,810	8,426	8,166	8,802	8,802	9,702	9,702	9,692	9,692	9,684	9,684	9,684	9,668	9,668	9,668	9,593	9,514	9,441	9,435	9,371
6 Firm Capacity Purchases	1,597	1,308	1,406	1,567	1,694	1,216	1,223	1,230	1,236	1,230	1,135	1,140	1,141	1,141	1,142	1,142	1,134	1,133	1,134	1,135
7 Firm Capacity Sales	1,136	906	763	763	723	721	719	719	719	719	719	719	719	719	719	719	719	719	719	719
8 Adjusted Net Capability (5+6-7)	8,272	8,828	8,809	9,607	9,773	10,197	10,207	10,203	10,208	10,195	10,100	10,105	10,089	10,090	10,090	10,016	9,929	9,855	9,850	9,787
9 Net Reserve Capacity Obligation (4 x PRM)	1,013	1,049	1,089	1,184	1,224	1,254	1,273	1,287	1,296	1,308	1,315	1,323	1,317	1,319	1,350	1,357	1,367	1,368	1,370	1,373
10 Total Firm Capacity Obligation (4+9)	7,764	8,045	8,352	9,075	9,388	9,611	9,760	9,864	9,935	10,026	10,080	10,142	10,094	10,111	10,346	10,406	10,477	10,490	10,507	10,529
11 Surplus or Deficit (-) @ Minimum Obligation (8-10)	508	783	457	531	385	587	446	339	273	169	21	-37	-5	-22	-256	-390	-548	-635	-657	-742
12 Nebraska Reserve Margin ((8-4)/4)	22.5%	26.2%	21.3%	21.7%	19.7%	22.0%	20.3%	19.0%	18.2%	16.9%	15.2%	14.6%	14.9%	14.8%	12.2%	10.7%	9.0%	8.0%	7.8%	6.9%
13 Nebraska Capacity Margin ((8-4)/8)	18.4%	20.8%	17.6%	17.9%	16.5%	18.0%	16.8%	15.9%	15.4%	14.5%	13.2%	12.7%	13.0%	12.9%	10.8%	9.7%	8.2%	7.4%	7.2%	6.4%
Existing, Committed, Planned Resources (MW) (8+2-3)	9,378	9,937	9,919	10,719	10,887	11,313	11,324	11,322	11,329	11,318	11,225	11,231	11,218	11,220	11,222	11,149	11,065	10,993	10,989	10,928
Resource Adequacy Requirement (MW) (1+9)	8,870	9,153	9,462	10,187	10,501	10,726	10,878	10,983	11,056	11,148	11,204	11,269	11,223	11,242	11,478	11,540	11,613	11,628	11,646	11,670
SPP Minimum Reserve Margin	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%
First Year of Deficit - Minimum												2035	2036	2037	2038	2039	2040	2041	2042	2043

Table 1 - Nebraska Statewide Existing, Committed, & Planned Load & Generating Capability in MW - Summer Conditions (June 1 to September 30)

If the proposed Studied resources are added to the Existing, Committed, and Planned resources, the statewide deficit year occurs after 2043, which is the last year of the report's twenty-year study period. Last year's report with all resource categories included depicted a summer season deficit in 2038. The extension of the deficit year is due primarily to a significant quantity of proposed generation being added that outpaces the forecasted load increases. Some of these Studied resources are in response to anticipated future needs resulting from SPP policy changes.

SPP is currently in the process of revising the summer resource adequacy requirement. The pending SPP policy changes would increase the summer resource adequacy requirement from 15% to 16% beginning in the summer of 2026. The statewide deficit year would move to 2034.

1.2 Statewide Winter Position

Utilizing Existing, Committed, and Planned resources applied to the current statewide cumulative SPP winter resource adequacy requirement, *Figure 2* illustrates that a statewide capacity deficit would occur after the end of the study period in 2043. *Table 2* contains the corresponding load and capability data in tabular format. The statewide winter resource adequacy deficit in last year's report occurred in 2029 but was calculated against only Existing and Committed resources. Planned resources were included in this year's report to integrate the plans and actions utilities have initiated in the pursuit of near-term resource additions. The deficit year moved farther into the future relative to last year's report due to the forecasted addition of loads being added within the service territory of the state's larger utilities and the significant quantity of generation proposed to be added with higher winter accreditation values.

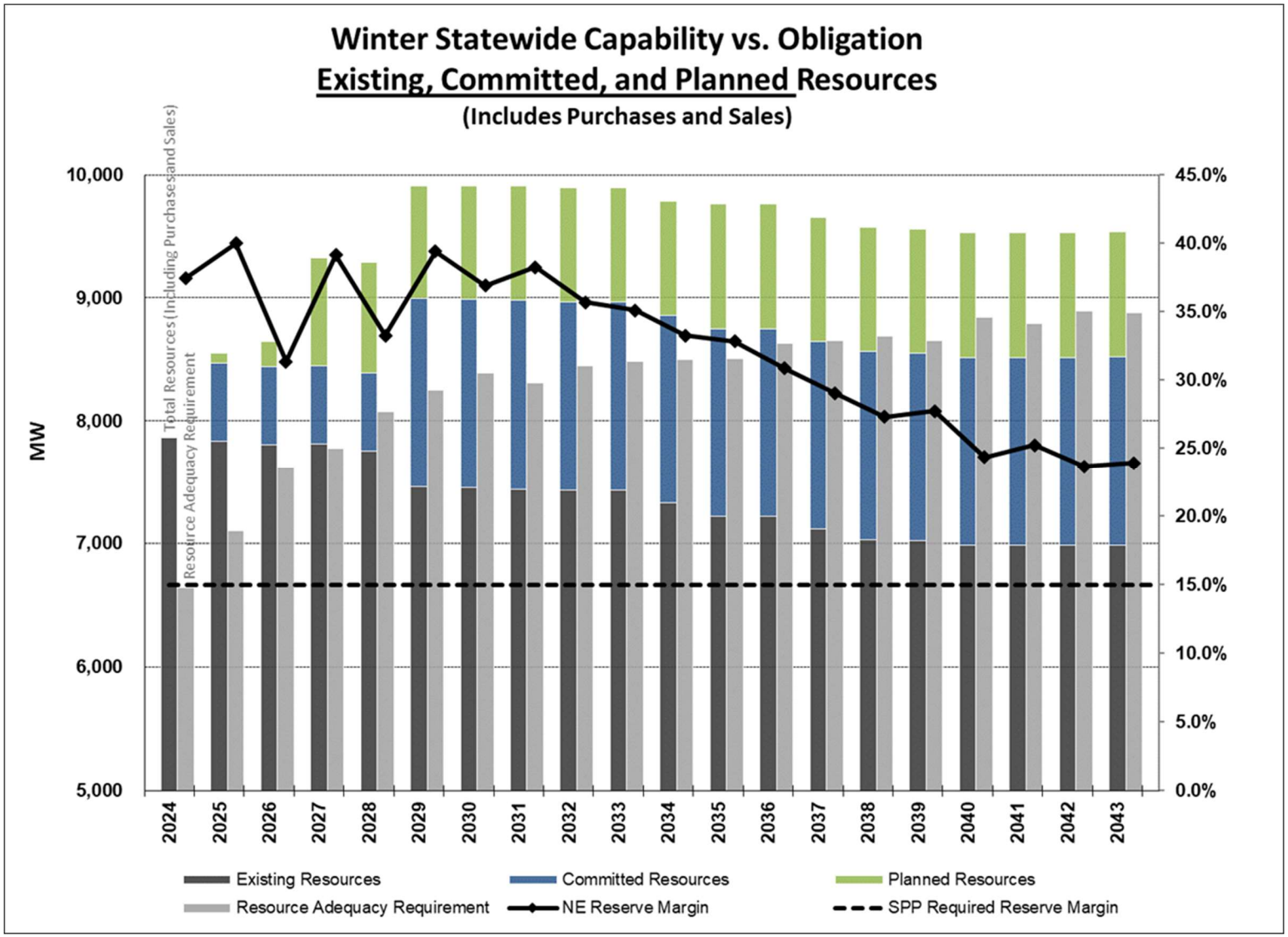

Figure 2 - Winter Statewide Capability vs. Obligation Existing, Committed, and Planned Resources (Includes Purchases and Sales)

NEBRASKA STATEWIDE
Existing, Committed, & Planned Load & Generating Capability in Megawatts
Winter Conditions (Dec 1 to Mar 31)

Year	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043
1 Annual System Demand	5,834	6,229	6,680	6,819	7,077	7,226	7,350	7,282	7,403	7,436	7,447	7,453	7,561	7,580	7,611	7,579	7,746	7,698	7,790	7,776
2 Firm Power Purchases - Total	474	474	475	476	476	477	478	478	479	480	481	482	483	484	485	486	487	488	489	490
3 Firm Power Sales - Total	58	58	58	58	58	58	58	58	58	58	58	58	58	58	58	58	58	58	58	58
4 Annual Net Peak Demand (1-2+3)	5,418	5,813	6,264	6,401	6,659	6,807	6,930	6,862	6,982	7,014	7,024	7,030	7,136	7,154	7,185	7,151	7,317	7,268	7,360	7,345
5 Net Generating Capability (owned)	7,154	7,779	7,584	8,220	8,220	9,120	9,111	9,101	9,101	9,101	9,093	9,065	9,065	8,959	8,875	8,875	8,838	8,838	8,838	8,838
6 Firm Capacity Purchases	1,383	1,262	1,405	1,449	1,415	1,091	1,099	1,107	1,094	1,096	988	993	993	993	994	980	981	984	984	985
7 Firm Capacity Sales	1,089	905	763	763	763	721	721	721	721	721	721	721	721	721	721	721	721	721	721	721
8 Adjusted Net Capability (5+6-7)	7,448	8,136	8,226	8,906	8,872	9,490	9,488	9,487	9,474	9,475	9,359	9,337	9,337	9,231	9,147	9,133	9,098	9,101	9,101	9,102
9 Net Reserve Capacity Obligation (4 x PRM)	813	872	940	960	999	1,021	1,040	1,029	1,047	1,052	1,054	1,054	1,070	1,073	1,078	1,073	1,098	1,090	1,104	1,102
10 Total Firm Capacity Obligation (4+9)	6,231	6,685	7,203	7,362	7,657	7,829	7,970	7,891	8,030	8,066	8,078	8,084	8,207	8,227	8,263	8,224	8,415	8,359	8,464	8,446
11 Surplus or Deficit (-) @ Minimum Obligation (8-10)	1,217	1,452	1,023	1,544	1,215	1,661	1,518	1,596	1,444	1,409	1,281	1,253	1,130	1,003	885	909	683	742	637	656
12 Nebraska Reserve Margin ((8-4)/4)	37.5%	40.0%	31.3%	39.1%	33.2%	39.4%	36.9%	38.3%	35.7%	35.1%	33.2%	32.8%	30.8%	29.0%	27.3%	27.7%	24.3%	25.2%	23.7%	23.9%
13 Nebraska Capacity Margin ((8-4)/8)	27.3%	28.6%	23.9%	28.1%	24.9%	28.3%	27.0%	27.7%	26.3%	26.0%	24.9%	24.7%	23.6%	22.5%	21.5%	21.7%	19.6%	20.1%	19.1%	19.3%
Existing, Committed, Planned Resources (MW) (8+2-3)	7,864	8,552	8,643	9,323	9,290	9,908	9,908	9,907	9,895	9,897	9,782	9,760	9,761	9,656	9,574	9,561	9,526	9,530	9,531	9,533
Resource Adequacy Requirement (MW) (1+9)	6,646	7,101	7,620	7,779	8,075	8,247	8,389	8,311	8,451	8,488	8,501	8,508	8,632	8,653	8,689	8,651	8,843	8,788	8,894	8,878
SPP Minimum Reserve Margin	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%
First Year of Deficit - Minimum																				

Table 2 - Nebraska Statewide Existing, Committed, & Planned Load & Generating Capability in Megawatts - Winter Conditions (Dec. 1 to Mar. 31)

If the proposed Studied resources are added to the Existing, Committed, and Planned resources, the state's utilities maintain an even higher margin until the statewide deficit occurs after 2043, which is the last year of the report's twenty-year study period. Last year's report with all resource categories included also indicated a deficit year that was beyond the twenty-year study period and forecasted a surplus of 856 MW at the end of the twenty-year study period. Many of the Studied resources represent calculated potential future needs resulting from impending SPP policy change.

SPP is currently in the process of approving a separate and significiantly higher winter resource adequacy requirement. The pending SPP policy changes would increase the winter resource adequacy requirement from 15% to 36% beginning in the winter of 2026. This change would materially impact Nebraska's ability to satisfy the regional winter resource adequacy requirement.

1.3 New Generation Timing Uncertainty

There is a significant amount of Committed & Planned resources in this report expected to be installed in the next few years by Nebraska utilities. As already stated, if this generation is constructed and commissioned as planned, the statewide deficit is projected to occur beginning in 2035. However, there are many inherent risks that can impact the actual generator commission date.

- Supply chain issues in the procurement of generation and delivery equipment are being experienced industry wide. Longer-than-expected lead times for critical equipment could delay commission dates.
- Environmental permits, especially at green field sites, along with location specific siting regulations can take considerable time to work through to final approval and authorization.
- SPP's Generation Interconnection (GI) queue currently has more than 85,000 MW of generation, only a portion of which will get built, but nonetheless has asked for an interconnection study. SPP is working on streamlining the GI process, but with the sheer number of generators requesting interconnection studies, this lengthy process can cause delays in commission dates.
- Utility load forecasts and large load requests have recently been at unprecedented levels. Along with this comes uncertainty of whether the new load additions will materialize. Sudden increases and decreases in projected loads create a risk to new generation timing.

Nebraska utilities work closely with their current and prospective customers to satisfy their load timing needs. Given the above risks, it may be necessary to have some flexibility in the expected in-service dates of prospective large loads. Additionally, if new generation project delays occur, shorter term capacity purchases could serve as a bridge until "iron in the ground" generation is commissioned.

Inversely, there are resources being actively pursued that are currently designated in the Studied category and shown in Section 4.4 Seasonal Load and Capability which may ultimately be financed and developed into Planned resources on a more aggressive schedule than what is currently assumed. This provides a potential offset to the impact of schedule delays of Planned resources.

2.0 Background

The Joint Planning Subcommittee of the Nebraska Power Association (NPA) has prepared this annual statewide load and capability report for the Nebraska Power Review Board (NPRB), in accordance with subsection (3) of the statute below. It provides the cumulative position of Nebraska's utilities' peak demand forecasts and resources over a twenty-year period (2024-2043).

2.1 Nebraska Statutes

State Statute (70-1025) Requirement 70-1025. Power supply plan; contents; filing; annual report.(1) The representative organization shall file with the board a coordinated long-range power supply plan containing the following information:(a) The identification of all electric generation plants operating or authorized for construction within the state that have a rated capacity of at least twenty-five thousand kilowatts;(b) The identification of all transmission lines located or authorized for construction within the state that have a rated capacity of at least two hundred thirty kilovolts; and(c) The identification of all additional planned electric generation and transmission requirements needed to serve estimated power supply demands within the state for a period of twenty years.(2) Beginning in 1986, the representative organization shall file with the board the coordinated long-range power supply plan specified in subsection (1) of this section, and the board shall determine the date on which such report is to be filed, except that such report shall not be required to be filed more often than biennially.(3) An annual load and capability report shall be filed with the board by the representative organization. The report shall include statewide utility load forecasts and the resources available to satisfy the loads over a twenty-year period. The annual load and capability report shall be filed on dates specified by the board. Source Laws 1981, LB 302, § 3; Laws 1986, LB 948, § 1.

2.2 Nebraska Power Review Board Requests

In January of 2023, the NPRB and the NPA agreed to the inclusion of additional information beginning with the 2023 Annual Load and Capability Report. *Table 3* lists each information request and the corresponding section of the report that addresses the request.

NPRB Requested Information	Section of Report
How each utility with a zero-carbon or carbon neutral goal approved by its governing body plans to meet the goal (such as decommissioning fossil fuel facilities, etc.)	Section 2.4, Decarbonization Goals
Address what would happen, or need to happen, if all generation facilities over 60 years old were to be suddenly removed from service.	Section 4.4.4, Age-Based Retirement
Number of units or percentage of capacity that are currently dual fuel.	Section 5.1.2, Dual Fuel and On-Site Fuel Storage
The number of facilities and capacity that have onsite fuel storage. Fuel storage data will be in aggregate, providing ranges for information such as coal pile storage, etc. No fuel storage information for any individual facility will be identified.	Section 5.1.2, Dual Fuel and On-Site Fuel Storage
What percentage or megawatts of total statewide capacity is capable of ramping up from startup to reach maximum capacity during certain ranges of time (e.g., 0-15 minutes, 16-60 minutes, 61 minutes to four hours, greater than four hours). The submitted generating unit data will be based on the physical characteristics and capabilities of the units and will not include any external or other subjective factors that may influence the units.	Section 5.1.3, Ramp Rates
Show system stress periods for the aggregate of the large in-state electric suppliers (LES, NPPD and OPPD, and others as applicable) for both the summer and winter peaks, and the aggregate resources that were available to meet the load requirements during those stress periods. Include historical data on stress periods, and what generating capacity was available to meet the load demand. Stress periods will be defined as the statewide summer peak hour and the statewide winter peak hour of the most recent summer and winter seasons for the aggregation of LES, NPPD, and OPPD. The data provided for these two periods will include aggregated load consumption data, generator production	Section 5.1.4, Stress Period(s)/Stress Test

data, and generator availability data for LES, NPPD and OPPD. Additionally, the report will include sensitivity analysis of the stress periods by evaluating the potential impact of selected extreme event scenarios (e.g., extreme weather conditions, extreme localized events).	
Include the winter peak loads and aggregate winter accreditation of units.	Section 4.4.2, Winter Load and Capability
Charts showing the statewide fuel diversity (coal, diesel, hydro, landfill gas, natural gas, nuclear, solar, wind and storage batteries), showing the percentage of the State's generation resources in each category by nameplate capacity, accredited capacity, and the previous year's energy production.	Section 5.1.1, Fuel Diversity
Perform an aggregate calculation based on non-public historical GADS data showing the combined EFOR or FORd for LES, NPPD and OPPD. Compare the result to the SPP regional EFOR or FORd rate to demonstrate how Nebraska's largest generation resources are performing in comparison to the overall SPP. SPP is considering using EFORd and EFORd' for the performance-based accreditation process. Consequently, EFORd and EFORd' will also be acceptable metrics for LES, NPPD and OPPD to use for comparison purposes.	Section 3.4, Resource Accreditation
A brief assessment of reasonably anticipated changes to the grid that might complement or complicate resource adequacy. Examples might include greater penetration of electric vehicles or federal regulatory policies.	Section 3.6, Grid Changes, Section 3.7, Electrification

Table 3 - NPRB Requests for Additional Information

Information for some of these items has been included in previous reports due to prior requests by the NPRB.

2.3 Other requirements

In late 2023, the NPRB requested additional modifications and clarifications to be incorporated into the Report. One clarification included utilizing the most readily available historical forced outage data from SPP – specifically, either the EFORd or EFORd' metric – for the aggregate comparison of Nebraska's generation performance. This comparison is included in Section 3.4 using EFORd data published by SPP on a generation capacity weighted basis. The NPRB also requested better definitions and application of the Committed, Planned, and Studied

generation categories. Estimated timeframes for these future generation additions are now included in definitions for the Report and are utilized by the reporting utilities. After ongoing dialogue, the NPRB and NPA Joint Planning Subcommittee also agreed to provide a more subjective review of a sensitivity case of a system stress period, which for this year's edition of the Report was determined to be a winter storm event. The discussion of this winter storm sensitivity is included at the end of Section 5.1.4. Lastly, the NRPB requested various chart type modifications and formatting modifications for ease of use and readability. These modifications are incorporated throughout the Report.

2.4 Decarbonization Goals

Most power utilities across the nation are addressing decarbonization and are actively evaluating specific goals or have put in place plans to meet these goals 20 to 30 years in the future. Each utility is necessarily unique in their approach, seeking to balance reliability/resiliency, affordability, and sustainability while meeting customer expectations and adhering to their specific market rules regarding resource adequacy. Additionally, as technology is expected to advance rapidly, each plan represents a directional path that will continually adapt with evolving conditions.

The following are the current decarbonization goals for Nebraska utilities that have established goals. Utilities will continue to monitor progress and evaluate targets:

2.4.1 NPPD

In 2021, NPPD's Board of Directors established a strategic directive (SD-05) to achieve net-zero carbon emissions from generation resources by 2050. This will be achieved by continuing the use of proven, reliable generation until alternative, reliable sources of generation are developed and by using certified offsets, energy efficiency projects, lower or zero carbon emission generation resources, beneficial electrification projects, or other economic and practical technologies that help NPPD meet the adopted goal at costs that are equal to, or lower than, then current resources.

In addition, NPPD finalized their IRP in 2023. The IRP incorporated SD-05 and provides directionally correct insight to the most favorable approach to adding resources and reducing carbon emissions under various scenarios. Specific resource decisions will require additional analysis. At this time NPPD has no plans to retire or decommission any of its existing generation units.

2.4.2 OPPD

In 2019 OPPD's Board of Directors adopted a goal in its Strategic Directives of achieving net-zero carbon production by 2050. As part of developing plans to meet this goal, OPPD conducted its Pathways to Decarbonization study in 2021. The study focused on identifying potential future resource changes while maintaining reliability and minimizing costs. The study found that continued investment in a

diverse mix of renewable energy, energy storage, and dispatchable thermal generation would continue to be necessary to support growing electric demand while reducing carbon emissions.

In 2022, OPPD began its Near-Term Generation Study to support newly requested and unprecedented growth in OPPD's service territory. At the August 2023 Board Meeting, the OPPD Board of Directors approved a recommendation for up to 2.5 gigawatts of new near-term generation.

The mix of energy resources approved in the Near-Term Generation Study is consistent with the options identified in OPPD's Pathways to Decarbonization. This recommended portfolio expansion includes renewables (1,000-1,500 MW of wind and/or solar), energy storage (up to 125 MW of 4-hour equivalent), dispatchable thermal (600-950 MW of dual fuel combustion turbine), demand response (32+ MW), and added fuel oil capacity and storage at existing facilities (approximately 320 MW). This portfolio expansion will allow OPPD to serve 90% of the forecasted new energy demand with renewable generation.

OPPD will continue to evaluate future technologies and strategies to most efficiently meet its net zero carbon goal while maintaining a foundation of reliability. OPPD's Strategic Directive SD-9 on Integrated System Planning requires that OPPD maintain sufficient year-round capacity reserves to ensure compliance with regional resource adequacy requirements and to ensure that OPPD's system planning accounts for extreme events and extended periods of low renewable production.

At its June 2024 meeting, OPPD's board began discussion of interim emissions goals to its Strategic Directive SD-7, Environmental Stewardship.

2.4.3 MEAN

In January 2020, the MEAN Board of Directors approved a resolution establishing MEAN's 2050 Vision, with a goal of achieving a carbon neutral resource portfolio by the year 2050. MEAN's 2022 Integrated Resource Plan formed the initial direction for future actions and resource decisions to realize the 2050 Vision. Following the IRP's direction, MEAN staff is working in collaboration with Participants to construct policies around resource planning, portfolio optimization, and emissions reduction to achieve the 2050 carbon neutral goal.

MEAN's IRP analysis and modeling favored a plan that would meet future MEAN capacity and energy needs by incorporating additional renewable resources into the portfolio. Renewable resource portfolios offered comparatively low costs in several scenarios as well as the potential to create local benefits for MEAN communities. The Board recommended portfolios for future resource needs as identified in the IRP include natural gas combined cycle with carbon capture, landfill gas, hydropower, wind with energy storage, and solar with energy storage.

Portfolio diversification remains a very high priority for MEAN to balance the need for reliability with the desire for decarbonization.

2.4.4 LES

After participating in a yearlong educational series on establishing a new carbon reduction goal and soliciting public opinion, the LES Administrative Board in November 2020 adopted a goal that LES believes to be one of the more aggressive utilities decarbonization goals in the United States. This new goal will aim to achieve net-zero carbon dioxide production from LES' generation portfolio by 2040.

LES completed a new IRP in 2022, laying out an initial plan for achieving its corporate decarbonization goal. This initial plan included the following steps:

- Maintain LES' wind portfolio and seek to develop additional solar resources.
- Continue the Sustainable Energy Program, a collection of energy efficiency and demand response resources that represents a cost-effective alternative to building new generation.
- Seek to maintain LES' existing fleet of natural gas resources, representing both a low-cost and, because they rarely operate, relatively low-emissions foundation of its future portfolio.
- Continually watch for the right time to either retire or upgrade its existing coal resources with carbon capture technology. The financial impact of these coal plant decisions is considerable, both when (i) retiring them too early, while they still bring considerable financial value to LES, and (ii) retiring them too late, when market forces and/or environmental regulations make them less economically viable.

Based on the future load projections, this preliminary plan would bring LES within approximately 200 MW of meeting its SPP resource requirements in 2041, covering its peak load plus an additional reserve margin of 15%. As of right now, LES intends to leave this gap unprescribed, looking to identify the best choices in the future as more information becomes available. LES believes this preliminary decarbonization plan strikes an important balance, closing enough of the gap to make the goal attainable, while still recognizing that additional decisions will be required as the future unfolds.

2.4.5 Hastings Utilities

Hastings Utilities does not have decarbonization goals currently. Hastings plans to continue to monitor the energy market and all its resources available.

2.4.6 City of Grand Island Utilities

Grand Island does not have any formal decarbonization goals. Retirement of Platte Generating Station (100 MW coal unit) is being considered within the next eight to ten years due to economics as well as the age of the unit and the variable nature of the market it operates in. Options that are being considered for replacement are natural gas fired reciprocating engines with back up diesel supply combined with various sizes of utility grade solar. After City Council's approval this spring, Grand Island Utilities began building a 9.9 MW solar farm, with plans to be online by the end of 2024. Federal grant dollars are being used to lower the cost of this facility.

2.4.7 City of Fremont Utilities

At this point, Fremont has no plans on retiring/decommissioning any of its coal or natural gas units. Fremont will continue to annually look at available generation and capacity options. Unfortunately, there is nothing more to report at this point due to too many unknowns.

3.0 Operational Environment

3.1 Nebraska

Section 2 of this Report describes statutory requirements related to the NPRB and its ongoing mission established in 1963 to regulate certain aspects of Nebraska's publicly owned electric utility industry. The NPRB is governed by a five member Board approved by the Governor and confirmed by the Nebraska Legislature. The NPA is a voluntary organization of the approximately 160 municipal, public power district, and cooperative electric utilities that operate within Nebraska. The NPA was formed in 1980 to address statewide electricity policies and related issues and is currently the organization designated by the NPRB to assemble this Report.

Additionally, the electric utility industry interacts with a variety of other regulatory agencies that address environmental, financial, operational, safety & health, and labor & employment issues. A non-exhaustive list of these agencies includes entities like the U.S. Environmental Protection Agency, U.S. Fish & Wildlife Service, Nebraska Department of Environment and Energy, Nebraska Department of Revenue, Federal Energy Management Agency, Nebraska Public Service Commission, Nebraska State Fire Marshal, U.S. Department of Homeland Security, Nebraska Commission of Industrial Relations, Occupational Safety & Health Administration, and the Federal Energy Regulatory Commission.

3.2 Southwest Power Pool

The Southwest Power Pool (SPP), based in Little Rock, Arkansas, was created in 1941 to provide electric reliability and coordination for eleven regional power companies. SPP has since expanded its scope of services and was approved as a Regional Transmission Organization (RTO) by the Federal Energy Regulatory Commission (FERC) in 2004. In 2007, SPP initiated a real-time energy imbalance services market, which was ultimately transitioned to a full combined day-ahead and real-time market in 2014. The services that SPP currently provides for its members include:

- Transmission tariff administration
- Regional scheduling
- Transmission expansion planning
- Reliability coordination
- Wholesale energy market operations and Integrated Marketplace

- Consolidated balancing authority
- Generation reserve sharing

SPP expanded its services in the west in December 2019 when it launched its Western Reliability Coordination service on a contract basis, and in February 2021 with the successful launch of the Western Energy Imbalance Service (WEIS) Market. SPP employs approximately 600 employees and operates a system footprint spanning across 17 states.

In July 2021, Southwest Power Pool's Board of Directors and Strategic Planning Committee approved the submitted policy-level terms and conditions for RTO expansion in the Western Interconnection. In April 2023, SPP announced the 31 parties who executed agreements to participate in the first phase of Markets+ development. Later in 2023, seven utilities approved their transition from WEIS to membership in SPP's RTO West, which is scheduled to begin full operations in spring of 2026. *Figure 3* shows the current SPP footprint.

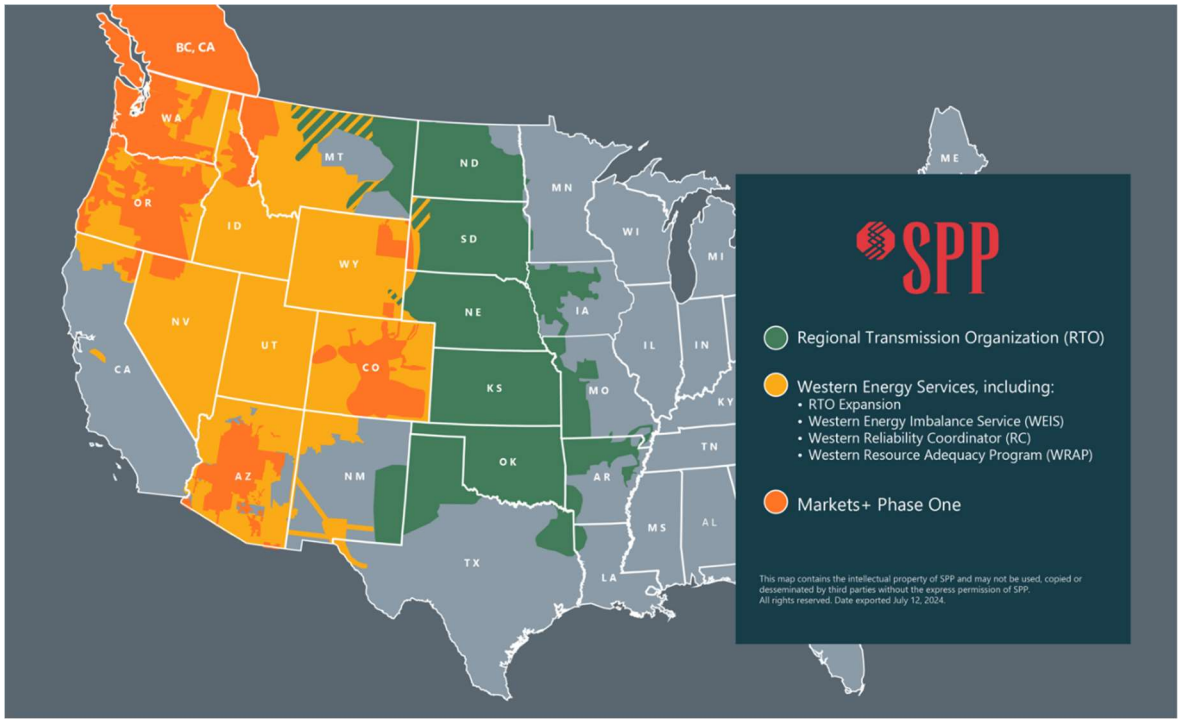

Figure 3 - SPP Footprint Overview

3.3 Planning Reserve Margin

In order to ensure reliability in the face of resource outages, load fluctuations, fuel availability, and intermittent resource generation, SPP established a Planning Reserve Margin (PRM), which requires each Load Responsible Entity (LRE) to maintain resource capability equal to its expected peak load plus an additional capability equal to a calculated margin. This requirement is enforced to ensure LREs have adequate capacity to serve the SPP Balancing Authority Area's peak demand. Failure to meet the resource adequacy requirement results in a deficiency payment as calculated in accordance with Section 14.2 of Attachment AA of the SPP Tariff. LREs submit an annual Resource Adequacy Workbook to SPP to demonstrate compliance to fulfill resource adequacy obligations.

The PRM is determined via a probabilistic Loss of Load Expectation (LOLE) Study which analyzes the ability of resources to reliably serve the SPP Balancing Authority Area's forecasted peak demand. The LOLE study is performed biennially. SPP studies the PRM such that the loss of load for the applicable planning year does not exceed one day in ten years. Historically, SPP has required LREs to provide this margin in relation to the forecasted summer peak load.

As indicated in last year's report, policy revisions to SPP's resource adequacy requirements are actively underway. SPP completed its 2023 LOLE Study, and SPP staff has recommended a summer PRM of 16% and a winter PRM of 36% to become effective starting the summer season of 2026. The significantly increased winter PRM accounts for the increased electric system risks experienced during the winter season. At the time of writing, the increased winter PRM has been approved by SPP's Resource and Energy Adequacy Leadership (REAL) team and is pending approval by SPP's Regional State Committee and Board of Directors. Once approved this will materially impact Nebraska's future load and capability projections.

The anticipated 36% winter PRM will likely involve a calculation that adjusts the PRM based on the historical reliability performance of conventional generators. The forced outage rates of conventional generators across the footprint and the generator outages and derates that are caused by fuel supply related issues would be used in this calculation to develop a PRM that is lower than the 36% base PRM. This adjusted PRM will be recalculated by SPP annually and these recurring adjustments could likely be a source of uncertainty for the LRE's when they are attempting to determine their individual reserve margins relative to a changing footprint wide PRM.

The statewide capacity required to meet SPP's current 15% PRM is significantly higher than the Nebraska load requirement. This amount of capacity equates to 1,013 MW in 2024 and 1,373 MW by 2043.

3.4 Resource Accreditation

Resources being utilized to meet regional resource adequacy requirements must qualify through an SPP administered accreditation process which evaluates the effectiveness of individual resources to meet system resource adequacy needs. There are multiple processes for accrediting resources based on the type of resource.

Thermal resources are currently accredited based on their peak generating capability and are tested during defined summer conditions. Generators must conduct this peak test once every five years and must prove that they can reach 90% of this amount every year. There is no consideration of individual unit reliability within this accreditation method.

As indicated in last year's report, policies for the accreditation of thermal resources have been under development within SPP's working groups. In particular, the Performance Based Accreditation (PBA) and Fuel Assurance (FA) policies will affect the future accreditation of thermal generators. PBA considers the historical reliability of individual generators to calculate individual unit accreditation. Units with increased forced outage rates as calculated by the EFORd reliability metric will receive lower accreditation. This is expected to incent reliability enhancements for poorly performing generators.

In addition to the PBA policy, the FA policy will impact thermal generator accreditation based on the performance during the most critical system periods as defined by the top 3% of net load hours. Net load is defined as the SPP system load less renewable production and may represent periods of tight supply. This policy is intended to further encourage generation to be available when needed most. The FA policy was approved with the recommended PRM increases by SPP's REAL team in June of 2024 and still requires approval by SPP's Regional State Committee and Board of Directors.

It is also important to note that the reductions in thermal unit accreditation associated with the PBA and FA policies will correspond with a change in the basis for determining the regional PRM. As SPP adopts these policies, the seasonal PRM requirements will transition from an Installed Capacity (ICAP) basis to an Accredited Capacity (ACAP) basis. This change in basis will result in a lower overall ACAP PRM than the corresponding ICAP PRM for each season. Thus, LREs with unit reliability that is higher than the SPP system average will achieve the benefits of maintaining high generator accreditation while subject to a lower PRM requirement. LREs with unit reliability that is worse than the system average will be incentivized to continue to invest in reliability improvements. Nebraska's overall capacity position relative to the potential future ACAP PRM requirements is not calculated in this report given the recency of the policy and evolving information.

The table below includes the historical equivalent forced outage rate data published by SPP along with aggregate Nebraska data for the applicable generator categories.

SPP Footprint Fuel and Technology Type	SPP Summer Weighted Average EFORd	SPP Winter Weighted Average EFORd	Nebraska Capacity Weighted Summer EFORd	Nebraska Capacity Weighted Winter EFORd	Nebraska Summer Original Claimed Capacity (MW)	Nebraska Winter Original Claimed Capacity (MW)	Nebraska Summer Adjusted Capacity (ACAP) (MW)	Nebraska Winter Adjusted Capacity (ACAP) (MW)
CombustionTurbine Natural Gas	7.00%	13.80%	10.33%	19.16%	1,157.5	1,275.7	1,037.9	1,031.3
CombustionTurbine Petroleum	10.70%	9.70%	15.31%	21.31%	130.0	130.0	110.1	102.3
Combined Cycle Natural Gas	5.50%	5.00%	5.60%	2.52%	246.3	246.3	232.5	240.1
Internal Combustion Biomass*	0.01%	0.10%	0.00%	0.00%	10.9	10.9	10.9	10.9
Internal Combustion Natural Gas*	4.10%	6.40%	10.68%	14.76%	33.7	184.9	30.1	157.6
Steam Turbine Coal	7.40%	8.20%	7.87%	6.93%	3,522.8	3,475.8	3,245.7	3,235.0
Steam Turbine Natural Gas	11.60%	14.50%	12.29%		240.0	-	210.5	-
Steam Turbine Nuclear	1.60%	0.50%	0.60%	1.81%	768.5	768.5	763.9	754.6
Hydro**	1.40%	0.90%	4.63%	6.60%	108.0	111.7	103.0	104.3
Pumped Storage	7.60%	8.50%						

*Biomass includes Landfill Gas and Other Biomass Liquids

**Class average EFORd data for the Nebraska units, per GlobalScape

Table 4 - Aggregate Outage Metrics

Variable energy resources, such as wind and solar, are currently accredited according to their production during a utility's peak load hours. The current process utilizes the 60th percentile of production during the top 3% of load conditions. In other words, the resource must meet or exceed the accreditation value 60% of the time during top load hours.

The current accreditation methodology for variable energy resources does not account for the diminishing marginal resource adequacy value of these resources with their increasing penetration on the electric system. To properly account for this, SPP is in the process of moving to the effective load carrying capability (ELCC) method for accreditation. ELCC accounts for historical weather variability across the region and periods of regionally low renewable generation.

ELCC and PBA policies have been approved by SPP's Board of Directors and are filed for ruling by FERC. The current direction is to implement both PBA and ELCC starting in the summer of 2026.

3.4.1 Effective Load Carrying Capability

This method, applicable to wind, solar and energy storage, captures correlations between variable energy resources and load. Key outputs from this approach are the total capacity requirement (MW) to meet the 1-day-in-10-year loss of load expectation standard. ELCC values are not static throughout long-term planning horizons. For each resource, ELCC depends on the penetration of the given resource as well as the quantity and type of other resources on the system. There are diminishing return impacts of variable and energy-limited resources, reflected by a decline in ELCC value at higher penetrations. The formula for calculating the accredited capacity of resources using the ELCC percentages is as follows:

*Accredited Capacity = Nameplate Capacity * ELCC*

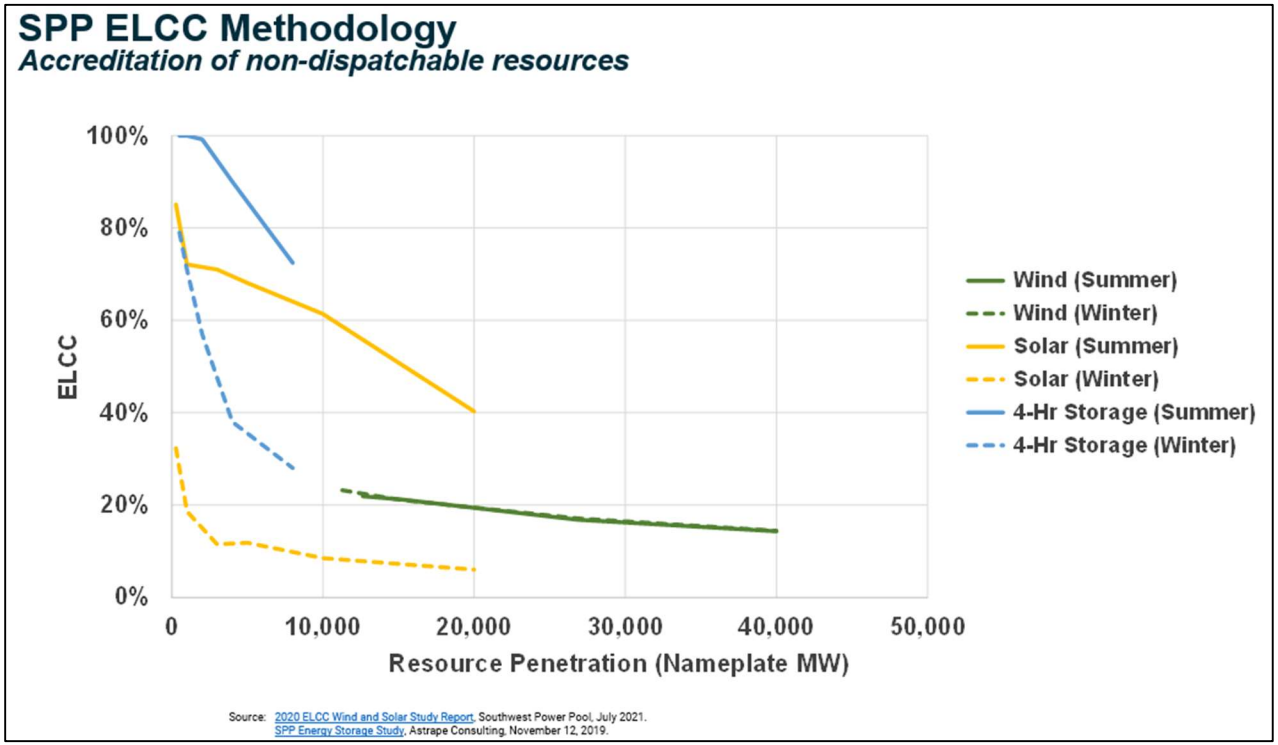

Figure 4 - SPP ELCC Methodology

3.4.2 Performance Based Accreditation

This method calculates each conventional resource's Accredited Capacity. Conventional resources are defined as thermal fuel type resources, pumped storage hydroelectric resources, and hydroelectric resources with reservoir storage capability not subject to hourly river flow limitations similar to run-of-river hydro. Accredited Capacity is determined using the demonstrated Net Generating Capability (NGC) and the resource's calculated EFORd for the applicable season. PBA takes into account actual unit performance over a rolling seven-year historical time period. The formula for calculating the accredited capacity of resources using the EFORd percentages (see *Table 4*) is as follows:

*Accredited Capacity = NGC * (1 – EFORd)*

3.4.3 Fuel Assurance

In addition to PBA, SPP is currently developing a Fuel Assurance (FA) policy that will address the correlated outages that occurred during recent extreme cold weather events. The FA policy will include an additional accreditation reduction for resources not available during the most critical winter periods either due to fuel unavailability or other causes. The amount of reduction will be determined by the total amount of correlated cold weather outages experienced in the region and incorporated into the SPP LOLE study. The reduction will then be allocated according to individual thermal generator equivalent forced outage factors (EFOF) during the top 3% of seasonal net load hours. Generators will be incented to make investments that ensure unit availability during the most critical periods.

3.4.4 Demand Response Accreditation

Demand response programs will also likely be eligible to receive capacity accreditation, subject to the resources' ability to be called upon prior to energy emergency events on the system, the type of demand response program (e.g. Load Modifying, or Resource Modifying), the number of hours of duration the program can operate, the number of events per season the program can provide, and various other factors that could be included in an ELCC evaluation of the program.

3.5 Generation Interconnection Queue

The SPP Generation Interconnection (GI) process provides a means for planners and developers to submit new generation projects for interconnection to the SPP system. SPP requires potential projects to be entered into the GI queue for validation, study, analysis and, ultimately, execution of a Generator Interconnection Agreement. This agreement is required for new generation to be able to connect to the regional

transmission system and receive accreditation to satisfy SPP resource adequacy requirements. Potential transmission system upgrades required to support the new resources are identified during this process, and the costs are allocated to those facilities causing the need for upgrades.

The continued declining costs of renewable generation technologies has led to a large influx of generation interconnection requests into the SPP GI study process in recent years. This growth in the volume of study requests, coupled with the requirement for equal treatment according to federal OATT requirements, has led to a significant backlog in the study process and has caused increased delays in this process. The current study process is approximately 4 to 5 years from the date the request is submitted to study completion, depending on the specific study cluster. This is a national issue with RTOs, FERC, utilities, and industry groups working diligently to improve these processes to allow resources to connect to the transmission system and serve load in faster, more predictable timeframes.

A listing of the projects in the GI Queue from June 10, 2024 within the state of Nebraska shows around 1,762 MW of nameplate capacity for battery storage, 3,591 MW of solar, 5,551 MW of wind, and 1,215 MW considered hybrid. It should be noted that the GI queue for Nebraska includes study requests entered by both Nebraska and non-Nebraska utility entities. For reference, at this time there is approximately 3,500 MW of nameplate wind installed in the state including merchant wind projects and behind the meter wind projects. Also listed in the Queue are conventional combustion turbine and diesel generation amounting to 3,532 MW (about 2,246 more than shown in the 2023 report). Based on history, many or most of these proposed projects listed in the SPP Queue will not get built, but due to FERC policy requiring non-discriminatory and open access to the transmission grid, each request must be equally treated and evaluated.

3.6 Grid changes

Many potential future challenges confront Nebraska utilities in addition to those posed by new and changing SPP requirements, the potential for large load additions, and the pursuit of decarbonization goals. For example, in April of 2024, the U.S. EPA issued the final rule for CO_2 limits for new combustion turbines and CO_2 emissions guidelines for existing coal, oil, and natural gas fired steam generating units. For existing coal units, the regulations would require either retirement date commitments, annual capacity factor restrictions, co-firing with natural gas, or the installation of carbon capture and sequestration (CCS) systems. For applicable combustion turbines, the requirements are based on the anticipated capacity factor of the unit and include restrictions to certain fuel types, limitations on CO_2 emissions rates, or the installation of CCS systems. Given that these regulations include compliance dates ranging from 2031 to 2039, and that effective CCS technologies do not yet exist as commercially viable options, meeting these requirements would no doubt be difficult.

3.7 Electrification

In addition to the regulatory changes mentioned above regarding generating resources and energy supply, there is also support at the national level to electrify more end-user processes, shifting loads to electricity and thereby reducing the related CO_2 emissions. Some of the primary

applications are electrifying transportation and converting building heating from natural gas or other fossil fuels to electrically powered equipment. Transformations like these pose a challenge to Nebraska utilities, as they add to already growing energy demands and resource adequacy needs. Although some of these changes may materialize at a slower pace in Nebraska compared to elsewhere around the country, they appear to continually be gaining momentum.

4.0 Load and Capability

This section assesses the state's load and resource balance, comparing the aggregate forecasted electric load to Existing, Committed, Planned, and Studied resources. Specifically, this section provides detail on the state's reference load forecast, including projections of summer peak demand, winter peak demand, and annual energy requirements.

4.1 Load Forecast

The current combined statewide forecast of non-coincident peak demand is derived by summing the demand forecasts for each individual utility on an annual basis. Each utility supplied an annual peak demand forecast and a load and capability table. The peak demand values represent the P50 value, a statistical level of confidence suggesting the expectation that this demand may be exceeded with 50% probability. Over the twenty-year period of 2024 through 2043, the average annual compounded peak demand growth rate for the state is projected at 1.4% per year (individual utilities range from -0.4%/yr. to 2.6%/yr.) The escalation rate shown in last year's report for 2023 through 2042 was 1.5%.

4.2 Utility Approach to Service Requests and Potential Load

It should be noted that several Nebraska utilities continue to be approached by potential customers regarding the utility's ability to interconnect large, new loads. Many times, the nature of the requests are vague, with uncertain timing and magnitude. Unverified or speculative large loads are often not included in the utilities' demand forecasts submitted to SPP but some are included in this report if the utilities have determined in their judgment that there is a sufficiently high degree of confidence that the load may eventually materialize. The magnitudes of these loads can reach the hundreds of MWs and can represent large percentage increases to a utility's existing peak demand. The inclusion of these large loads here is intended to reflect the potential impacts to statewide demand and capacity expectations for illustrative planning purposes but may remain too uncertain to include in the more specific SPP Balancing Authority (BA) resource planning.

4.3 Statewide Resources

4.3.1 Existing and Committed Resources

The state has an Existing summer accredited generating resource capability of 7,810 MW. Existing resources are those resources that are in-service, are capable of obtaining an accreditation rating, and may have different accreditation values based on the season. This is up slightly from the 7,689 MW shown in the 2023 report. The changes were mostly increases in wind and solar accreditation.

There are 1,817 MW nameplate, or 1,528 MW accredited Committed resources included in this report. Committed projects have Nebraska Power Review Board approval if required. (PURPA qualifying and non-utility renewable projects do not need NPRB approval).

There are several additional Committed projects either currently in development or recently placed in service within Nebraska:

- The 1.0 MW Norfolk Battery Energy Storage System has recently been commissioned.
- The OPPD 1.0 MW BRIGHT Battery system was completed and began operation in 2023.
- Addition of 23.3 MW of Behind-The-Meter renewable generation is forecasted to be added between 2023 and 2024.
- Construction of OPPD's new dual fuel generation, the 150 MW Standing Bear Lake facility and the 442 MW Turtle Creek facility, are expected to be completed in 2024. These resources are part of the 2020 SPP GI Queue Cluster Study which is currently delayed for completion until late 2024 or early 2025 and may identify new regional transmission expansion requirements be built prior to operation.
- Construction of OPPD's 81 MW (58.7 MW accredited) Platteview solar project was completed in May 2024 to meet Summer season accreditation.
- In March of this year, OPPD obtained NPRB approval for the construction of 900 MW of dual fuel combustion turbines to be located at existing OPPD plant sites. These resources are expected to come online in 2029. This generation was approved as part of OPPD's Near Term Generation board resolution authorizing the development of up to 2.5 GW of diverse portfolio additions.

4.3.1.1 Firm Dispatchable Resources

The state has 7,306 MW of commercially operating firm dispatchable accredited resources for the summer peak of 2024. These resources are accredited based on the current unit accreditation methodologies since the SPP PBA based methodologies are not in use yet.

4.3.1.2 Renewable and Demand Side Resources

The state has 2,294 MW (nameplate) of commercially operating renewable resources for the summer peak of 2024. There are also 108 MW of accredited in-state hydro for Nebraska's use not included in this total. These amounts do not include wind installed by developers in Nebraska for export to load outside the state. Due to its intermittency, Nebraska utilities rely upon wind for only a small percentage of its full nameplate rating to meet peak load conditions. Correspondingly, SPP has criteria for wind and solar to determine the specific accredited capacity percentage. The criteria are based on actual performance of solar and wind facilities specifically during actual utility peak load hours. The accredited rating based on actual performance generally requires a minimum

of three years of operating history. For new installations with less than three years of historical generation, SPP criteria allows for a 5% accreditation rating for new wind installations and a 10% accreditation rating for solar.

Demand side resources are loads that can be reduced, shifted, turned off or taken off the grid with the goal of lowering the overall load utilities are required to serve. Ideally this load is best reduced to correspond to utilities' peak load hours. The advantage for utilities is avoidance of the need to add accredited generation in current or future years due to the reduction in peak demand obligation.

Figure 5 shows the existing and committed statewide renewable and greenhouse gas mitigating generation by both nameplate and accredited capacity.

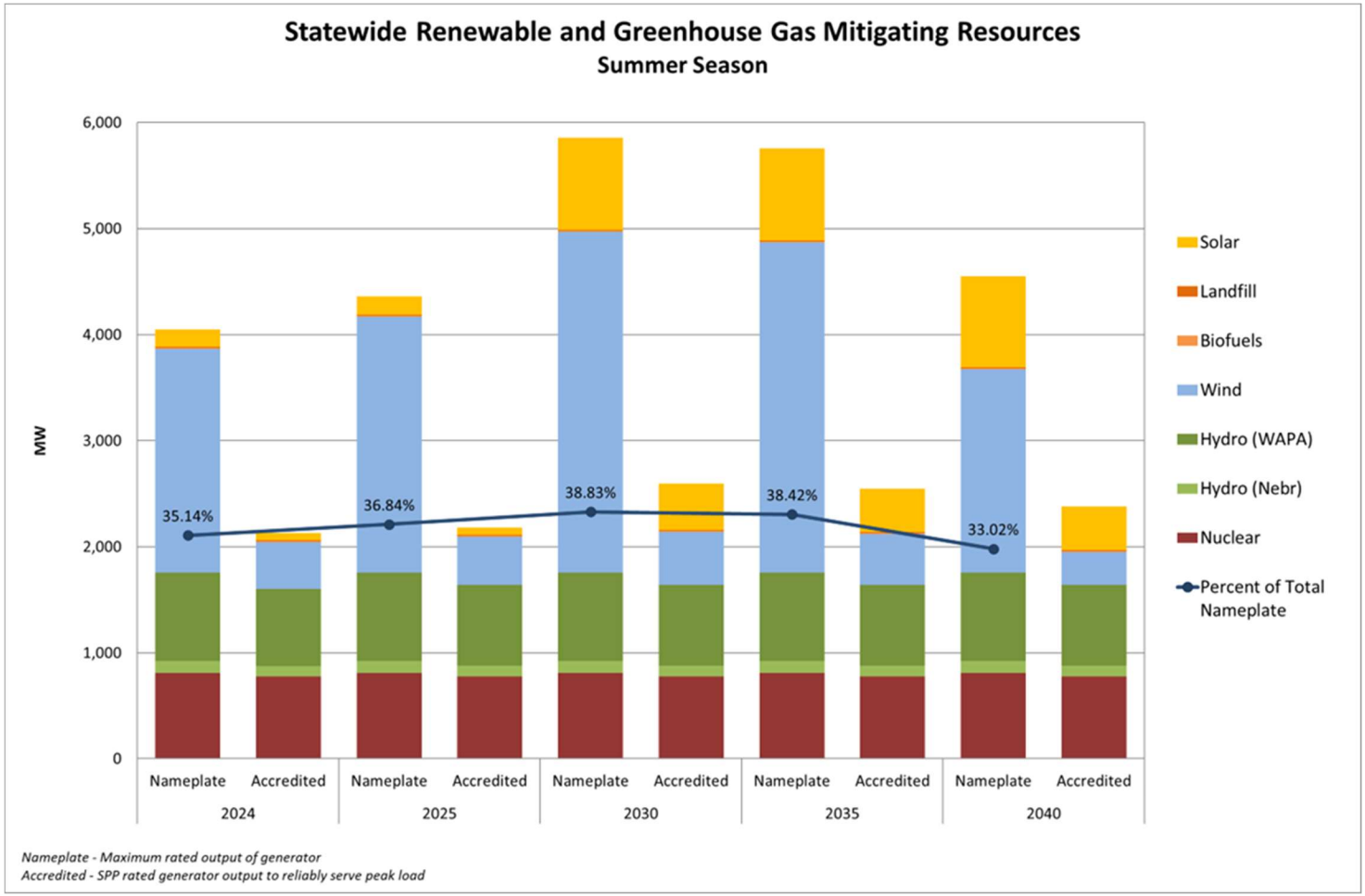

Figure 5 - Statewide Renewable and Greenhouse Gas Mitigating Resources - Summer Season

4.3.1.3 Distributed Generation

Distributed generation generally refers to a variety of technologies that generate electricity at or near the point of consumption. These resources are providing wholesale and retail power suppliers numerous new opportunities to interface with customers. Power purchase agreements with smaller wind developers are available to retail power suppliers in the magnitude of 1.5 to 10 MW. This capacity is facilitated through agreements between wholesale and retail power suppliers. These agreements allow for a portion of the retail power supplier's energy requirements to come from renewable energy resources located behind the wholesale power supplier's meter.

With the decline in the cost of solar installations, the continuation of tax benefits and net metering rates, retail customers are installing small scale solar arrays and energy storage systems. These installations are being installed in both rural and residential applications. Also, larger solar array installations that are not eligible for net metering rates are being considered and installed. Many of these arrays are community solar projects. For example, Lincoln Electric System contracted with a developer to install a 4 MW array and offered the ability for customers to purchase shares. NPPD has retail communities with operating community solar facilities ranging in size from 100 kW to 9.7 MW. OPPD has a community solar facility sized at 5 MW, and OPPD's customers have already subscribed to the full production of this facility. With these applications, private involvement with local utilities is providing additional opportunities to increase the utilization of renewable energy.

In addition, an NPPD retail community has recently commissioned a 1 MW / 2 MWh battery energy storage system (BESS) at a community solar project. The BESS will be charged through generation provided by the solar facility and discharged to accomplish several goals, such as demand management, voltage support, and smoothing and shifting variable renewable energy generation. The BESS unit will store approximately the amount of electricity that a small home would use over the course of two months.

4.3.2 Planned

Planned resources are units for which utilities have authorized expenditures for engineering analysis, an architect/engineer contract, or permitting, but do not have required NPRB approval, or do not have a contractual offtake commitment.

There are 736 MW of accredited Planned resources anticipated in this report that includes 420 MW of combustion turbines, 216 MW of reciprocating engines, and 100 MW of energy storage. There is also 10 MW of Planned nameplate solar generation that is located behind the meter for which no accredited capacity is being claimed. (This is exclusive of Planned future capacity purchases.)

4.3.3 Studied

Resources identified as Studied for this report provide a perspective of future resource requirements beyond the timeframes of Existing, Committed, and Planned resources. For any future years when existing, committed, and planned resources would not meet a utility's minimum load obligation, each utility establishes Studied resources in a quantity to meet this deficit gap. These Studied resources are identified as renewable, base load, intermediate, peaking, or unspecified resources considering current and future needs. The result is a listing of the preferable mix of resources for each year. The summation of Studied resources will provide the basis for the NPRB and the state's utilities to understand the forecasted future need by year and by resource type. This can be used as a joint planning document and a tool for coordinated, long-range power supply planning.

There are 2,076 MW of accredited Studied resources anticipated in the final year of this report that includes 114 MW of energy storage, 346 MW of solar, 125 MW of wind, 630 MW of thermal, and 860 MW of unspecified capacity.

4.4 Seasonal Load and Capability

Nebraska utilities' goals are to support the achievement of resource adequacy by ensuring sufficient capacity to meet the needs of all end-use customers in their service territory. The SPP OATT requires LREs to maintain adequate capacity to meet its resource adequacy requirement for the summer season. SPP will also be enforcing the winter requirement starting presumably in the winter year 2024/25. In preparation for the winter resource adequacy requirement and in response to NPRB inquiries, this report addresses both summer and winter positions for the study period.

4.4.1 Summer Load and Capability

Utilizing Existing, Committed, and Planned resources applied to the current cumulative SPP summer resource adequacy requirement, *Figure* 6 illustrates that a statewide capacity deficit would occur starting in 2035. *Table 5* contains the corresponding load and capability data in tabular format. The statewide deficit based on the state's resource adequacy requirement in last year's report occurred in 2027 but was calculated using only Existing and Committed resources. The inclusion of Planned resources in this year's report reflects formulated plans in varying stages of implementation, approved and initiated by utilities. While forecasted loads in the near term are slightly lower than last year's expectations, there is also a corresponding reduction in the utilities' expected net generating capability.

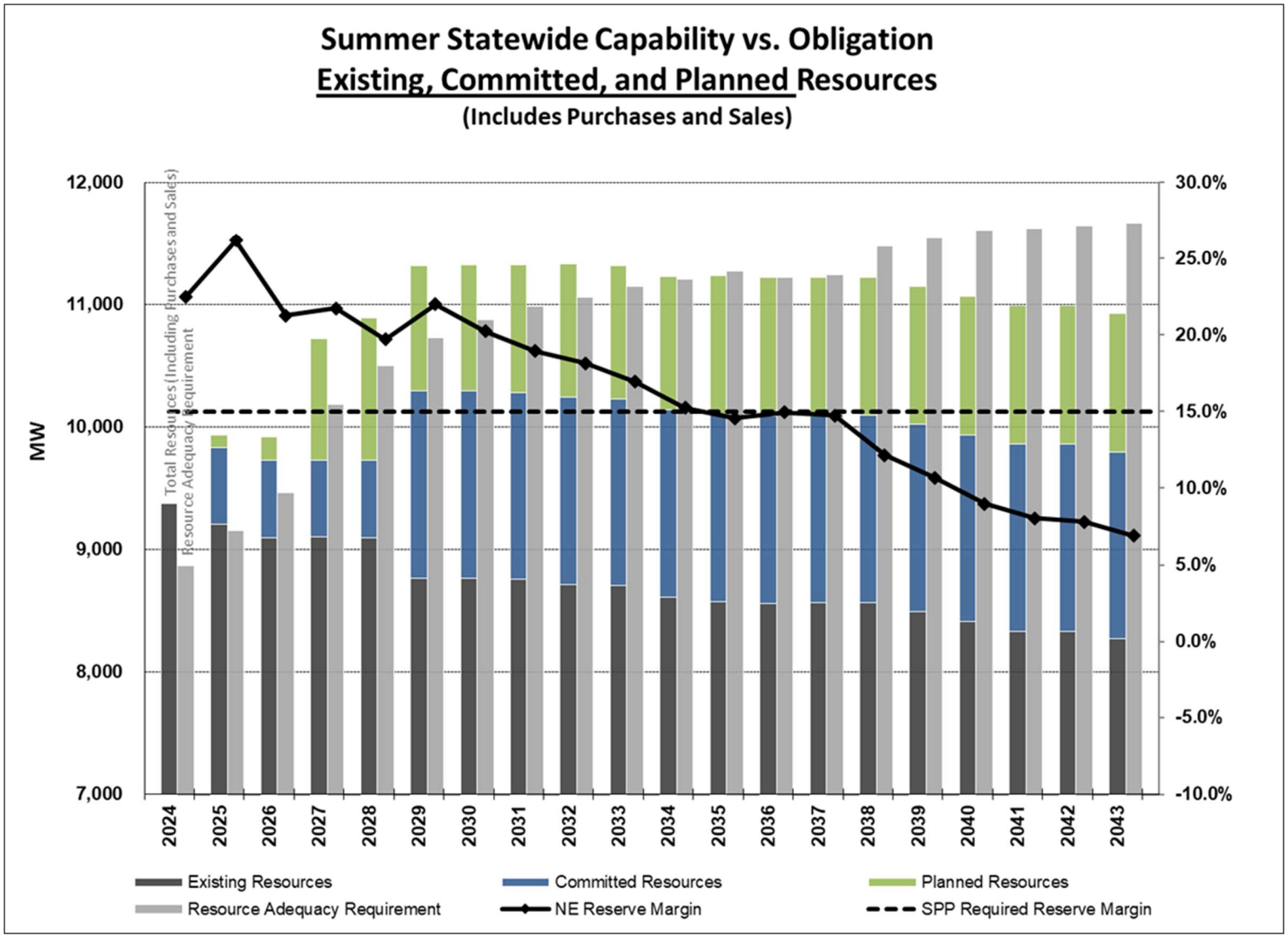

Figure 6 - Summer Statewide Capability vs. Obligation Existing, Committed, and Planned Resources (Includes Purchases and Sales)

NEBRASKA STATEWIDE
Existing & Committed, & Planned Load & Generating Capability in MW
Summer Conditions (June 1 to September 30)

Year	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043
1 Annual System Demand	7,858	8,104	8,373	9,003	9,277	9,472	9,604	9,696	9,760	9,841	9,890	9,946	9,906	9,923	10,129	10,183	10,246	10,259	10,276	10,297
2 Firm Power Purchases - Total	1,173	1,175	1,177	1,179	1,180	1,182	1,184	1,186	1,188	1,189	1,191	1,193	1,195	1,197	1,199	1,201	1,203	1,204	1,206	1,208
3 Firm Power Sales - Total	67	67	67	67	67	67	67	67	67	67	67	67	67	67	67	67	67	67	67	67
4 Annual Net Peak Demand (1-2+3)	6,751	6,996	7,263	7,892	8,163	8,357	8,487	8,577	8,639	8,718	8,765	8,819	8,778	8,793	8,997	9,049	9,110	9,122	9,137	9,156
5 Net Generating Capability (owned)	7,810	8,426	8,166	8,802	8,802	9,702	9,702	9,692	9,692	9,684	9,684	9,684	9,668	9,668	9,668	9,593	9,514	9,441	9,435	9,371
6 Firm Capacity Purchases	1,597	1,308	1,406	1,567	1,694	1,216	1,223	1,230	1,236	1,230	1,135	1,140	1,141	1,141	1,142	1,142	1,134	1,133	1,134	1,135
7 Firm Capacity Sales	1,136	906	763	763	723	721	719	719	719	719	719	719	719	719	719	719	719	719	719	719
8 Adjusted Net Capability (5+6-7)	8,272	8,828	8,809	9,607	9,773	10,197	10,207	10,203	10,208	10,195	10,100	10,105	10,089	10,090	10,090	10,016	9,929	9,855	9,850	9,787
9 Net Reserve Capacity Obligation (4 x PRM)	1,013	1,049	1,089	1,184	1,224	1,254	1,273	1,287	1,296	1,308	1,315	1,323	1,317	1,319	1,350	1,357	1,367	1,368	1,370	1,373
10 Total Firm Capacity Obligation (4+9)	7,764	8,045	8,352	9,075	9,388	9,611	9,760	9,864	9,935	10,026	10,080	10,142	10,094	10,111	10,346	10,406	10,477	10,490	10,507	10,529
11 Surplus or Deficit (-) @ Minimum Obligation (8-10)	508	783	457	531	385	587	446	339	273	169	21	-37	-5	-22	-256	-390	-548	-635	-657	-742
12 Nebraska Reserve Margin ((8-4)/4)	22.5%	26.2%	21.3%	21.7%	19.7%	22.0%	20.3%	19.0%	18.2%	16.9%	15.2%	14.6%	14.9%	14.8%	12.2%	10.7%	9.0%	8.0%	7.8%	6.9%
13 Nebraska Capacity Margin ((8-4)/8)	18.4%	20.8%	17.6%	17.9%	16.5%	18.0%	16.8%	15.9%	15.4%	14.5%	13.2%	12.7%	13.0%	12.9%	10.8%	9.7%	8.2%	7.4%	7.2%	6.4%
Existing, Committed, Planned Resources (MW) (8+2-3)	9,378	9,937	9,919	10,719	10,887	11,313	11,324	11,322	11,329	11,318	11,225	11,231	11,218	11,220	11,222	11,149	11,065	10,993	10,989	10,928
Resource Adequacy Requirement (MW) (1+9)	8,870	9,153	9,462	10,187	10,501	10,726	10,878	10,983	11,056	11,148	11,204	11,269	11,223	11,242	11,478	11,540	11,613	11,628	11,646	11,670
SPP Minimum Reserve Margin	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%
First Year of Deficit - Minimum												2035	2036	2037	2038	2039	2040	2041	2042	2043

Table 5 - Nebraska Statewide Existing, Committed, & Planned Load & Generating Capability in MW - Summer Conditions (June 1 to September 30)

There is a significant amount of Committed & Planned resources in this report expected to be installed in the next few years by Nebraska utilities. As already stated, if this generation is constructed and commissioned as planned, the statewide deficit is projected to occur beginning in 2035. However, there are many inherent risks that can impact the actual generator commission date.

- Supply chain issues in the procurement of generation and delivery equipment are being experienced industry wide. Longer-than-expected lead times for critical equipment could delay commission dates.
- Environmental permits, especially at green field sites, along with location specific siting regulations can take considerable time to work through to approval and authorization.
- SPP's Generation Interconnection (GI) queue currently has more than 85,000 MW of generation, only a portion of which will get built, but nonetheless has asked for an interconnection study. SPP is working on streamlining the GI process, but with the sheer number of generators requesting interconnection studies, this lengthy process can cause delays in commission dates.
- Utility load forecasts and large load requests have recently been at unprecedented levels. Along with this comes uncertainty of whether the new load additions will materialize. Sudden increases and decreases in projected loads create a risk to new generation timing.

Nebraska utilities work closely with their current and prospective customers to satisfy their load timing needs. Given the above risks, it may be necessary to have some flexibility in the expected in-service dates of prospective large loads. Additionally, if new generation project delays occur, shorter term capacity purchases could serve as a bridge until "iron in the ground" generation is commissioned.

Inversely, there are resources being actively pursued that are currently designated in the Studied category and shown in the figures below which may ultimately be financed and developed into Planned resources on a more aggressive schedule than what is currently assumed. This provides a potential offset to the impact of schedule delays of Planned resources.

Figure 7 shows the statewide projected load and capability position inclusive of 7,810 MW of accredited Existing, 1,*528* MW accredited Committed, 736 MW accredited Planned, and 2,076 MW of accredited Studied resources. Some existing wind renewables are currently shown with no accredited capability due to the small accreditation values allowable under SPP's Criteria. *Table 6* provides the corresponding load and capability data. As intended, these exhibits show how the Resource Adequacy Requirement can be met with the addition of Studied resources through the twenty year study period.

The Committed, Planned, and Studied resources are summarized in *Table 7*.

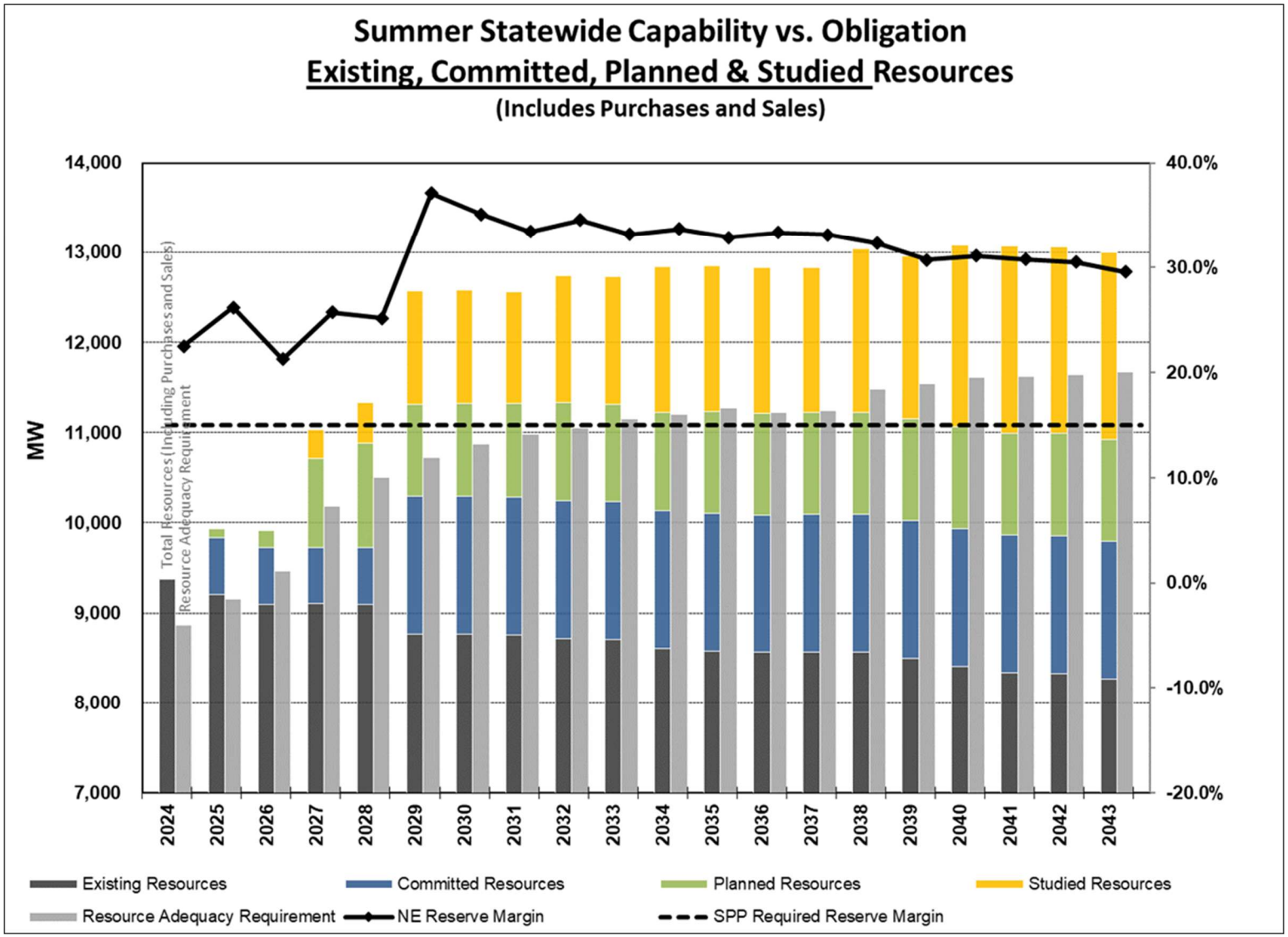

Figure 7 - Summer Statewide Capability vs. Obligation Existing, Committed, Planned & Studied Resources (Includes Purchases and Sales)

NEBRASKA STATEWIDE

Existing, Committed, Planned & Studied Load & Generating Capability in MW

Summer Conditions (June 1 to September 30)

Year	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043
1 Annual System Demand	7,858	8,104	8,373	9,003	9,277	9,472	9,604	9,696	9,760	9,841	9,890	9,946	9,906	9,923	10,129	10,183	10,246	10,259	10,276	10,297
2 Firm Power Purchases - Total	1,173	1,175	1,177	1,179	1,180	1,182	1,184	1,186	1,188	1,189	1,191	1,193	1,195	1,197	1,199	1,201	1,203	1,204	1,206	1,208
3 Firm Power Sales - Total	67	67	67	67	67	67	67	67	67	67	67	67	67	67	67	67	67	67	67	67
4 Annual Net Peak Demand (1-2+3)	6,751	6,996	7,263	7,892	8,163	8,357	8,487	8,577	8,639	8,718	8,765	8,819	8,778	8,793	8,997	9,049	9,110	9,122	9,137	9,156
5 Net Generating Capability (owned)	7,810	8,426	8,166	9,118	9,246	10,965	10,963	10,932	11,107	11,100	11,300	11,300	11,283	11,283	11,483	11,408	11,530	11,517	11,510	11,447
6 Firm Capacity Purchases	1,597	1,308	1,406	1,567	1,694	1,216	1,223	1,230	1,236	1,230	1,135	1,140	1,141	1,141	1,142	1,142	1,134	1,133	1,134	1,135
7 Firm Capacity Sales	1,136	906	763	763	723	721	719	719	719	719	719	719	719	719	719	719	719	719	719	719
8 Adjusted Net Capability (5+6-7)	8,272	8,828	8,809	9,923	10,217	11,460	11,467	11,443	11,624	11,611	11,716	11,720	11,705	11,705	11,906	11,831	11,945	11,931	11,926	11,863
9 Net Reserve Capacity Obligation (4 x PRM)	1,013	1,049	1,089	1,184	1,224	1,254	1,273	1,287	1,296	1,308	1,315	1,323	1,317	1,319	1,350	1,357	1,367	1,368	1,370	1,373
10 Total Firm Capacity Obligation (4+9)	7,764	8,045	8,352	9,075	9,388	9,611	9,760	9,864	9,935	10,026	10,080	10,142	10,094	10,111	10,346	10,406	10,477	10,490	10,507	10,529
11 Surplus or Deficit (-) @ Minimum Obligation (8-10)	508	783	457	847	829	1,850	1,707	1,580	1,689	1,585	1,636	1,578	1,611	1,594	1,559	1,425	1,468	1,441	1,419	1,333
12 Nebraska Reserve Margin ((8-4)/4)	22.5%	26.2%	21.3%	25.7%	25.2%	37.1%	35.1%	33.4%	34.6%	33.2%	33.7%	32.9%	33.4%	33.1%	32.3%	30.8%	31.1%	30.8%	30.5%	29.6%
13 Nebraska Capacity Margin ((8-4)/8)	18.4%	20.8%	17.6%	20.5%	20.1%	27.1%	26.0%	25.0%	25.7%	24.9%	25.2%	24.8%	25.0%	24.9%	24.4%	23.5%	23.7%	23.5%	23.4%	22.8%
Existing, Committed, Planned, Studied Resources (MW) (8+2-3)	9,378	9,937	9,919	11,034	11,330	12,576	12,585	12,562	12,745	12,733	12,841	12,847	12,834	12,836	13,038	12,965	13,081	13,068	13,065	13,004
Resource Adequacy Requirement (MW) (1+9)	8,870	9,153	9,462	10,187	10,501	10,726	10,878	10,983	11,056	11,148	11,204	11,269	11,223	11,242	11,478	11,540	11,613	11,628	11,646	11,670
SPP Minimum Reserve Margin	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%
First Year of Deficit - Minimum																				

Table 6 - Nebraska Statewide Existing, Committed, Planned & Studied Load & Generating Capability in MW - Summer Conditions (June 1 to September 30)

Committed, Planned and Studied Resources, MW

Utility	Unit Name	Unit Status	Duty Cycle	Unit Type	Fuel Type	Commercial Operation Date	End of Contract/ Retire Date	Nameplate Capacity	Accredited Capacity 2024	Accredited Capacity 2029	Accredited Capacity 2034	Accredited Capacity 2039	Accredited Capacity 2043
Hastings	Hastings Community Solar Phase 2	C	I	S	SUN	2024	2054	4.6	0.0	0.0	0.0	0.0	0.0
NPPD	Custer PPD - Prairie Hills Wind	C	I	WT	WND	2025	2049	8.0	0.0	0.0	0.0	0.0	0.0
NPPD	City of Madison Solar	C	I	S	SUN	2025	2049	2.0	0.0	0.0	0.0	0.0	0.0
NPPD	Norris PPD - Tobias Solar	C	I	S	SUN	2025	2049	1.0	0.0	0.0	0.0	0.0	0.0
NPPD	Norris PPD - Diller Solar	C	I	S	SUN	2025	2049	1.0	0.0	0.0	0.0	0.0	0.0
NPPD	Norris PPD - Hoag Solar	C	I	S	SUN	2025	2049	1.0	0.0	0.0	0.0	0.0	0.0
OPPD	Future Wind 1	C	I	WT	WND	2024	0	300.0	0.0	34.4	34.4	34.4	34.4
OPPD	Future Thermal CT #1	C	P	CT	NG/DFO	2029	0	225.0	0.0	225.0	225.0	225.0	225.0
OPPD	Future Thermal CT #2	C	P	CT	NG/DFO	2029	0	225.0	0.0	225.0	225.0	225.0	225.0
OPPD	Future Thermal CT #3	C	P	CT	NG/DFO	2029	0	225.0	0.0	225.0	225.0	225.0	225.0
OPPD	Future Thermal CT #4	C	P	CT	NG/DFO	2029	0	225.0	0.0	225.0	225.0	225.0	225.0
OPPD	Standing Bear Lake #1	C	P	GT	NG/DFO	2024	0	17.2	0.0	16.8	16.8	16.8	16.8
OPPD	Standing Bear Lake #2	C	P	GT	NG/DFO	2024	0	17.2	0.0	16.8	16.8	16.8	16.8
OPPD	Standing Bear Lake #3	C	P	GT	NG/DFO	2024	0	17.2	0.0	16.8	16.8	16.8	16.8
OPPD	Standing Bear Lake #4	C	P	GT	NG/DFO	2024	0	17.2	0.0	16.8	16.8	16.8	16.8
OPPD	Standing Bear Lake #5	C	P	GT	NG/DFO	2024	0	17.2	0.0	16.8	16.8	16.8	16.8
OPPD	Standing Bear Lake #6	C	P	GT	NG/DFO	2024	0	17.2	0.0	16.8	16.8	16.8	16.8
OPPD	Standing Bear Lake #7	C	P	GT	NG/DFO	2024	0	17.2	0.0	16.8	16.8	16.8	16.8
OPPD	Standing Bear Lake #8	C	P	GT	NG/DFO	2024	0	17.2	0.0	16.8	16.8	16.8	16.8
OPPD	Standing Bear Lake #9	C	P	GT	NG/DFO	2024	0	17.2	0.0	16.8	16.8	16.8	16.8
OPPD	Turtle Creek #1	C	P	GT	NG/DFO	2024	0	222.0	0.0	221.1	221.1	221.1	221.1
OPPD	Turtle Creek #2	C	P	GT	NG/DFO	2024	0	222.0	0.0	221.1	221.1	221.1	221.1
Grand Island	Grand Island Solar II	P	I	S	SUN	2024	2049	10.0	0.0	0.0	0.0	0.0	0.0
NPPD	New CT	P	P	CT	NG/DFO	2027	0	478.0	0.0	420.0	420.0	420.0	420.0
NPPD	New RICE	P	P	RE	NG/DFO	2027	0	217.0	0.0	216.0	216.0	216.0	216.0
NPPD	Ainsworth Battery	P	I	ES	ES	2026	0	50.0	0.0	50.0	50.0	50.0	50.0
NPPD	Steele Flats Battery PPA	P	I	ES	ES	2026	2046	50.0	0.0	50.0	50.0	50.0	50.0
LES	Future Unspecified	S	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0	60.0
NPPD	New CT_Ph3	S	P	CT	NG/DFO	2029	0	717.0	0.0	630.0	630.0	630.0	630.0
NPPD	New Wind	S	I	WT	WND	2027	0	200.0	0.0	36.0	36.0	36.0	36.0
NPPD	New Solar	S	I	S	SUN	2027	0	175.0	0.0	45.0	45.0	45.0	45.0
OPPD	Future Unspecified	S	I	0	0	0	0	0.0	0.0	0.0	400.0	600.0	800.0
OPPD	Future Solar	S	I	S	SUN	2027-29	0	520.0	0.0	335.9	301.2	301.2	301.2
OPPD	Future Wind 2	S	I	WT	WND	2027	0	600.0	0.0	92.0	89.5	89.5	89.5
OPPD	Future DR	S	DR	DR	DR	2030	0	0.0	0.0	0.0	0.0	0.0	0.0
OPPD	Future Battery	S	I	ES	ES	2027	0	242.0	0.0	123.9	114.0	114.0	114.0

Table 7 - Committed, Planned and Studied Resources, MW

4.4.2 Winter Load and Capability

Figure 8 and *Table 8* provide a view of the statewide winter load and capability with the application of only Existing, Committed, and Planned resources. The 2024/25 winter reserve margin is currently 15%, but the expectation is that the winter reserve margin will increase notably for the 2026/27 winter season. As a state, Nebraska meets the planning reserve margin throughout the twenty-year study period. The winter load and capability calculations include each utility's projected winter peak load values, reduced WAPA allocations, and lower winter accreditation of solar resources.

Figure 9 and *Table 9* incorporate Studied resources into the state's generation fleet.

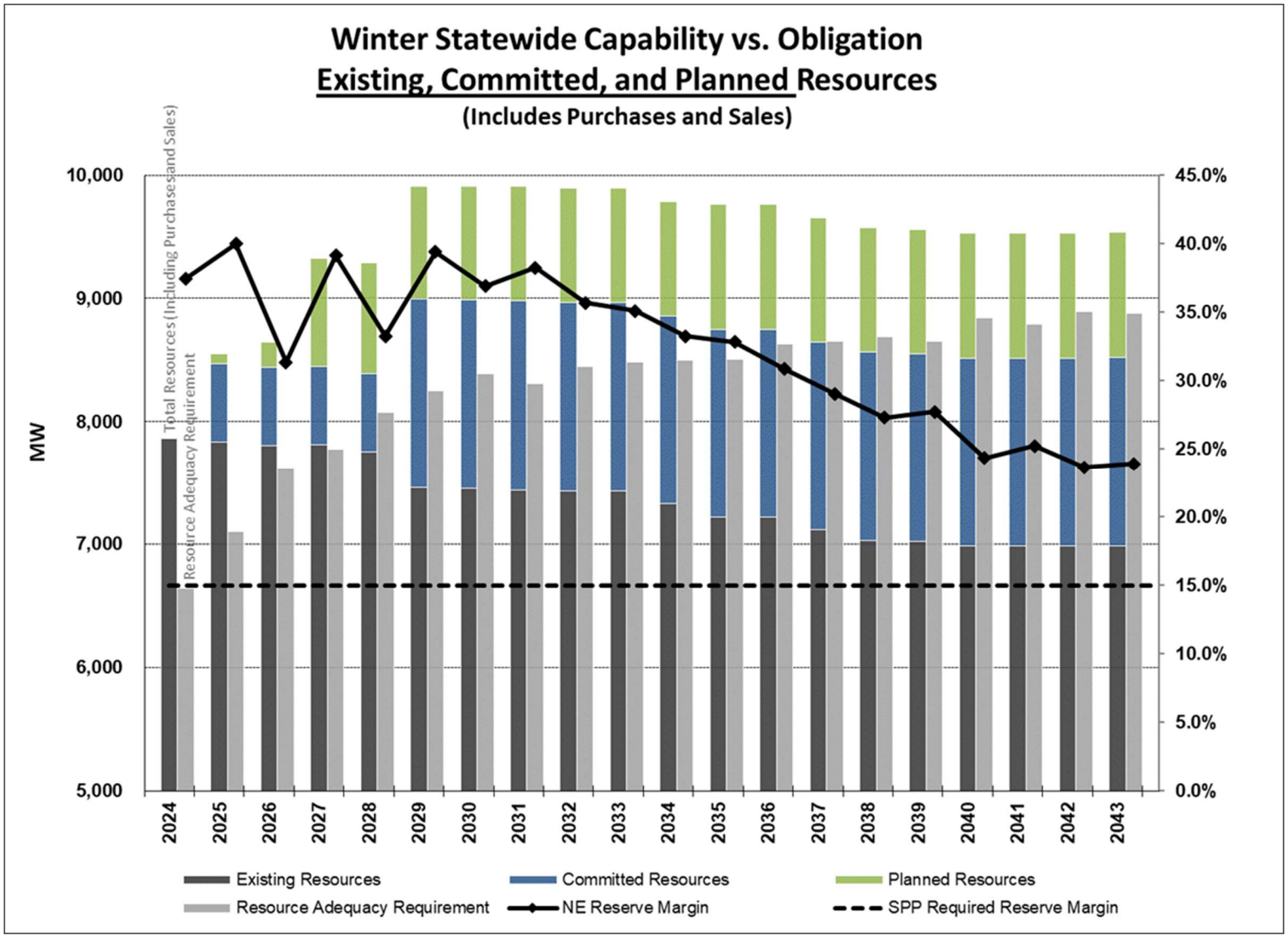

Figure 8 - Winter Statewide Capability vs. Obligation Existing, Committed, and Planned Resources (Includes Purchases and Sales)

NEBRASKA STATEWIDE

Existing, Committed, & Planned Load & Generating Capability in Megawatts

Winter Conditions (Dec 1 to Mar 31)

Year	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043
1 Annual System Demand	5,834	6,229	6,680	6,819	7,077	7,226	7,350	7,282	7,403	7,436	7,447	7,453	7,561	7,580	7,611	7,579	7,746	7,698	7,790	7,776
2 Firm Power Purchases - Total	474	474	475	476	476	477	478	478	479	480	481	482	483	484	485	486	487	488	489	490
3 Firm Power Sales - Total	58	58	58	58	58	58	58	58	58	58	58	58	58	58	58	58	58	58	58	58
4 Annual Net Peak Demand (1-2+3)	5,418	5,813	6,264	6,401	6,659	6,807	6,930	6,862	6,982	7,014	7,024	7,030	7,136	7,154	7,185	7,151	7,317	7,268	7,360	7,345
5 Net Generating Capability (owned)	7,154	7,779	7,584	8,220	8,220	9,120	9,111	9,101	9,101	9,101	9,093	9,065	9,065	8,959	8,875	8,875	8,838	8,838	8,838	8,838
6 Firm Capacity Purchases	1,383	1,262	1,405	1,449	1,415	1,091	1,099	1,107	1,094	1,096	988	993	993	993	994	980	981	984	984	985
7 Firm Capacity Sales	1,089	905	763	763	763	721	721	721	721	721	721	721	721	721	721	721	721	721	721	721
8 Adjusted Net Capability (5+6-7)	7,448	8,136	8,226	8,906	8,872	9,490	9,488	9,487	9,474	9,475	9,359	9,337	9,337	9,231	9,147	9,133	9,098	9,101	9,101	9,102
9 Net Reserve Capacity Obligation (4 x PRM)	813	872	940	960	999	1,021	1,040	1,029	1,047	1,052	1,054	1,054	1,070	1,073	1,078	1,073	1,098	1,090	1,104	1,102
10 Total Firm Capacity Obligation (4+9)	6,231	6,685	7,203	7,362	7,657	7,829	7,970	7,891	8,030	8,066	8,078	8,084	8,207	8,227	8,263	8,224	8,415	8,359	8,464	8,446
11 Surplus or Deficit (-) @ Minimum Obligation (8-10)	1,217	1,452	1,023	1,544	1,215	1,661	1,518	1,596	1,444	1,409	1,281	1,253	1,130	1,003	885	909	683	742	637	656
12 Nebraska Reserve Margin ((8-4)/4)	37.5%	40.0%	31.3%	39.1%	33.2%	39.4%	36.9%	38.3%	35.7%	35.1%	33.2%	32.8%	30.8%	29.0%	27.3%	27.7%	24.3%	25.2%	23.7%	23.9%
13 Nebraska Capacity Margin ((8-4)/8)	27.3%	28.6%	23.9%	28.1%	24.9%	28.3%	27.0%	27.7%	26.3%	26.0%	24.9%	24.7%	23.6%	22.5%	21.5%	21.7%	19.6%	20.1%	19.1%	19.3%
Existing, Committed, Planned Resources (MW) (8+2-3)	7,864	8,552	8,643	9,323	9,290	9,908	9,908	9,907	9,895	9,897	9,782	9,760	9,761	9,656	9,574	9,561	9,526	9,530	9,531	9,533
Resource Adequacy Requirement (MW) (1+9)	6,646	7,101	7,620	7,779	8,075	8,247	8,389	8,311	8,451	8,488	8,501	8,508	8,632	8,653	8,689	8,651	8,843	8,788	8,894	8,878
SPP Minimum Reserve Margin	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%
First Year of Deficit - Minimum																				

Table 8 - Nebraska Statewide Existing, Committed & Planned Load & Generating Capability in Megawatts - Winter Conditions (Dec. 1 to Mar. 31)

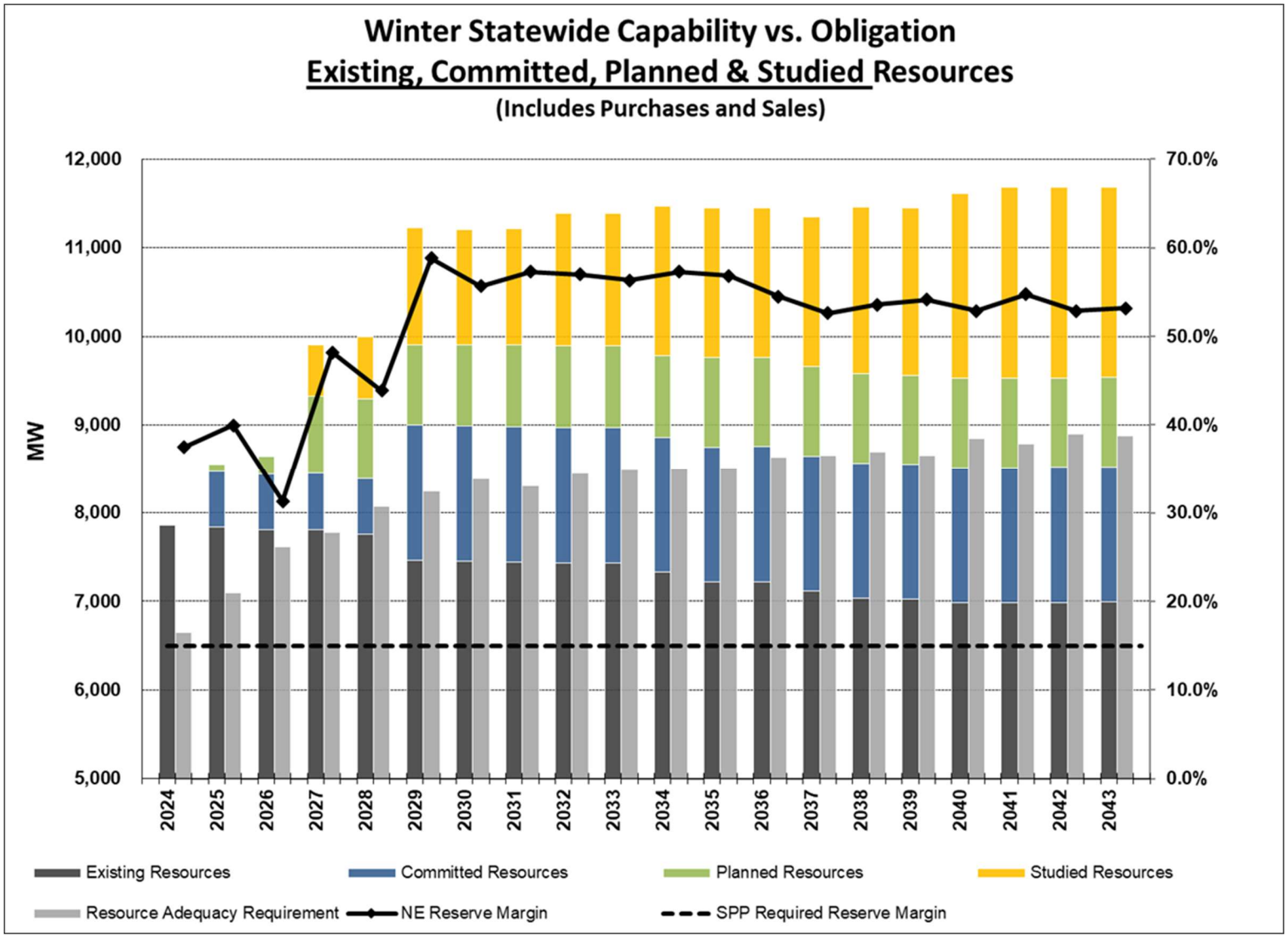

Figure 9 - Winter Statewide Capability vs. Obligation Existing, Committed, Planned & Studied Resources (Includes Purchases and Sales)

NEBRASKA STATEWIDE
Existing, Committed, Planned, & Studied Load & Generating Capability in Megawatts
Winter Conditions (Dec 1 to Mar 31)

Year	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043
1 Annual System Demand	5,834	6,229	6,680	6,819	7,077	7,226	7,350	7,282	7,403	7,436	7,447	7,453	7,561	7,580	7,611	7,579	7,746	7,698	7,790	7,776
2 Firm Power Purchases - Total	474	474	475	476	476	477	478	478	479	480	481	482	483	484	485	486	487	488	489	490
3 Firm Power Sales - Total	58	58	58	58	58	58	58	58	58	58	58	58	58	58	58	58	58	58	58	58
4 Annual Net Peak Demand (1-2+3)	5,418	5,813	6,264	6,401	6,659	6,807	6,930	6,862	6,982	7,014	7,024	7,030	7,136	7,154	7,185	7,151	7,317	7,268	7,360	7,345
5 Net Generating Capability (owned)	7,154	7,779	7,584	8,799	8,926	10,441	10,411	10,408	10,590	10,590	10,782	10,754	10,754	10,648	10,764	10,764	10,927	10,987	10,987	10,987
6 Firm Capacity Purchases	1,383	1,262	1,405	1,449	1,415	1,091	1,099	1,107	1,094	1,096	988	993	993	993	994	980	981	984	984	985
7 Firm Capacity Sales	1,089	905	763	763	763	721	721	721	721	721	721	721	721	721	721	721	721	721	721	721
8 Adjusted Net Capability (5+6-7)	7,448	8,136	8,226	9,485	9,578	10,810	10,789	10,795	10,963	10,964	11,048	11,026	11,026	10,920	11,036	11,022	11,187	11,250	11,250	11,251
9 Net Reserve Capacity Obligation (4xPRM)	813	872	940	960	999	1,021	1,040	1,029	1,047	1,052	1,054	1,054	1,070	1,073	1,078	1,073	1,098	1,090	1,104	1,102
10 Total Firm Capacity Obligation (4+9)	6,231	6,685	7,203	7,362	7,657	7,829	7,970	7,891	8,030	8,066	8,078	8,084	8,207	8,227	8,263	8,224	8,415	8,359	8,464	8,446
11 Surplus or Deficit (-) @ Minimum Obligation (8-10)	1,217.1	1,451.7	1,023.0	2,123.4	1,921.1	2,981.9	2,819.1	2,903.8	2,933.2	2,897.7	2,970.3	2,941.6	2,819.0	2,692.4	2,773.7	2,798.4	2,772.2	2,891.3	2,786.2	2,804.6
12 Nebraska Reserve Margin ((8-4)/4)	37.5%	40.0%	31.3%	48.2%	43.9%	58.8%	55.7%	57.3%	57.0%	56.3%	57.3%	56.8%	54.5%	52.6%	53.6%	54.1%	52.9%	54.8%	52.9%	53.2%
13 Nebraska Capacity Margin ((8-4)/8)	27.3%	28.6%	23.9%	32.5%	30.5%	37.0%	35.8%	36.4%	36.3%	36.0%	36.4%	36.2%	35.3%	34.5%	34.9%	35.1%	34.6%	35.4%	34.6%	34.7%
Existing, Committed, Planned, Studied Resources (MW) (8+2-3)	7,864	8,552	8,643	9,902	9,996	11,229	11,208	11,215	11,384	11,386	11,471	11,449	11,450	11,345	11,463	11,450	11,615	11,679	11,680	11,682
Resource Adequacy Requirement (MW) (1+9)	6,646	7,101	7,620	7,779	8,075	8,247	8,389	8,311	8,451	8,488	8,501	8,508	8,632	8,653	8,689	8,651	8,843	8,788	8,894	8,878
SPP Minimum Reserve Margin	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%
First Year of Deficit																				

Table 9 - Nebraska Statewide Existing, Committed, Planned, & Studied Load & Generating Capability in Megawatts - Winter Conditions (Dec. 1 to Mar. 31)

4.4.3 Resource Expected Service Life

The Nebraska utilities are cognizant of the age of their existing generating fleets and strive to maximize resource viability and value while making long term planning decisions on a portfolio-wide basis. The diverse mix of nuclear, fossil fuel fired, and renewable resources presents an array of regulatory, economic, reliability, and contractual based factors that should be considered when performing resource life evaluations. These considerations are discussed below in relation to the implications of age-related retirements.

4.4.3.1 Nuclear Resources

The Nuclear Regulatory Commission (NRC) determined in August 2014 that a new rule making was not required and confirmed that existing license renewals, where granted, provided a robust framework for second license renewals beyond the initial twenty-year renewal term. In addition, no changes are needed to environmental regulations to allow for future license renewal activities.

CNS' operating license is set to expire January 18, 2034. NPPD's 2023 IRP indicated CNS reduces future C02 restriction risk and provides resiliency and generation diversity to NPPD's overall generation mix. NPPD's Board of Directors has approved proceeding with a second relicense renewal process. Therefore, it is assumed CNS will continue to operate through the end of the study period.

4.4.3.2 Hydroelectric Resources

NPPD's listed North Platte and Columbus hydro facilities operate under a Federal Energy Regulatory Commission license. The North Platte facility is presently operating under a 40-year license, with the license requiring renewal in 2038. The Columbus Hydro facility received a new 30-year operating license, with the license requiring renewal in 2047. Given the focus on carbon free generation resources, NPPD and Loup are assuming these facilities will continue to be maintained and licensed and will remain an essential part of NPPD's generation mix for an extended period of time.

4.4.3.3 Fossil Fuel Resources

In August of 2022 the OPPD Board of Directors approved the staff recommended extension of its North Omaha Station in its current state until at least 2026. OPPD had previously planned on converting units 4 and 5 from coal to natural gas and retiring units 1, 2, and 3 at the end of 2023. The continued operation of these facilities will mitigate risks associated with the delayed SPP GI study process for OPPD's new Turtle Creek and Standing Bear Lake stations. OPPD seeks to have certainty on its ability to interconnect and generate from these two new dual fuel facilities prior to converting North Omaha Station, which demonstrates OPPD's commitment to ensuring reliability and resiliency for its system.

4.4.3.4 Renewable Resource Power Purchase Agreements

The wind plants included in this report are shown at the life listed in the various Power Purchase Agreements (PPA), typically 20 or 25 years. Most agreements have an option for life extension. Utilities will decide whether to exercise those options when the PPAs near their end. In order for those utilities to maintain their renewable and/or carbon reduction goals, these utilities will have to either exercise those options or develop other renewable resources.

4.4.4 Age-Based Retirement

Nebraska's existing generating resources are listed by unit in *Appendix 1 (Summer) and Appendix 2 (Winter)*. Nebraska has 7,810 MW of existing resources. 2,346 MW or 30% of that total are greater than 50 years old today. Another 2,560 MW or 33% are 41 to 50 years old today. Most of these units have no planned retirement date. By 2043 approximately 4,906 MW will reach 60 years of age. Utilities may face increased environmental restrictions that could require the retirement of older fossil units. This would potentially advance the statewide deficit date several years earlier.

For illustration purposes only, if a 60-year age-based retirement for fossil units is arbitrarily chosen, the state would hover near the planning reserve margin for the next few years but fall permanently below the margin in 2028, while a 70-year age-based retirement date would show a state deficit even farther into the future. *Figure 10* shows the 60-year in-service life chart. Since a statewide deficit occurs in 2028 for a 60-year retirement date, utilities would have little time to plan their next steps but could acquire short term capacity, evaluate methods to re-rate their units, or develop additional resources to alleviate the deficit. This 60-year unit retirement example is considered conservative since fossil units are capable of operating for more than 70 years. Each utility will make its own determination on the life of their generating plants while considering many factors, including economics. At this time, there are no plans to retire these older units unless stated in the Report.

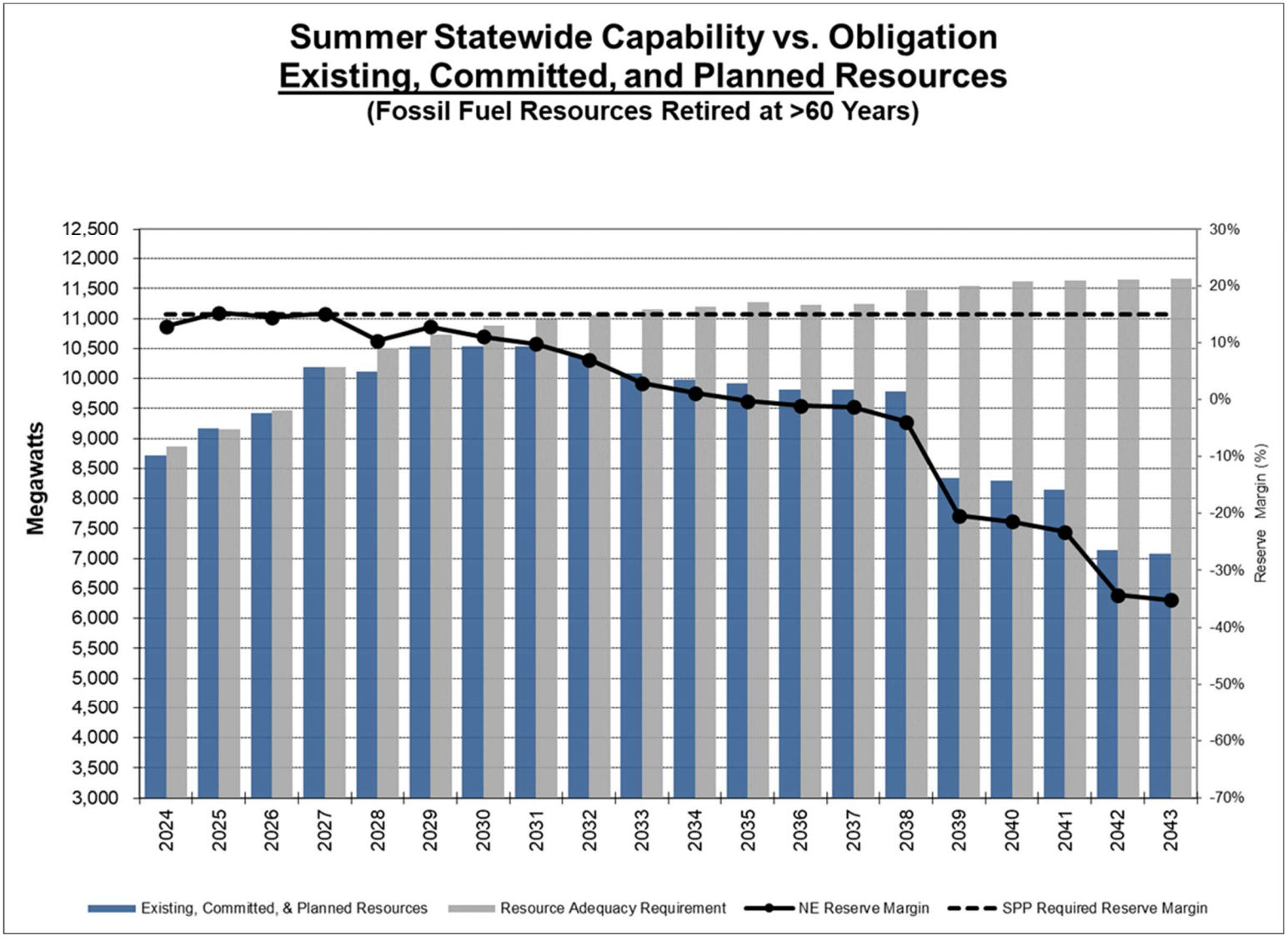

Figure 10 - Summer Statewide Capability vs. Obligation Existing, Committed, and Planned Resources (Fossil Fuel Resources Retired at >60 Years)

4.5 Utility Resource Plans

This section of the report focuses on the individual utility resource plans. These plans include Existing and Committed resources as well as Planned and Studied resources. Resources discussed include both supply side and demand side resources. Supply side resources include firm dispatchable, renewable, and energy storage solutions. Demand side resources include distributed generation resources and demand response applications. These plans are reflected in the corresponding resource categories throughout this report.

4.5.1 NPPD

For more than five decades, NPPD has provided low cost, reliable electricity to Nebraskans through a diverse generation mix. Recently, there are many companies, particularly in the agriculture industry, that have shown interest in locating in NPPD's service territory. NPPD plans to support this coming expansion by pursuing cost-effective, responsive solutions that will add new generation capacity to complement its existing generation mix.

NPPD's New "Planned" and "Studied" Generation Resources

- Planned - 50 MWs of battery storage located near NPPD's Ainsworth Wind Energy Facility.
- Planned - 50 MWs of battery storage capacity purchased from an existing privately-owned wind facility.
- Planned - 216 MWs of dual fuel reciprocating internal combustion engines (RICE) that would use natural gas as a primary fuel source and have the option to utilize diesel.
- Planned - 420 MWs of dual fuel combustion turbines (CT) that would use natural gas as a primary fuel source and have the option to utilize diesel.
- Studied - 630 MWs of dual fuel combustion turbines that would use natural gas as a primary fuel source and have the option to utilize diesel.

Based on indicative cost and delivery estimates provided to NPPD by equipment vendors in early 2023, the "Planned" resources are scheduled to be online by 2027. The "Studied" resources are scheduled for 2029 start-up. NPPD will update the schedule for having these resources in service when formal equipment bids are received in late 2024. In the event any of these resources are delayed in their completion, NPPD would pursue available capacity purchases to cover any resource adequacy shortfall. NPPD also recently implemented a new load queue process where they have informed new, prospective loads (beyond those currently in the load forecast) that they can expect service no sooner than 2029.

NPPD owns or has agreements with these non-carbon resources:

- 558 MW of hydroelectric generation, including the Western Area Power Administration agreement.
- 770 MW of nuclear power at Cooper Nuclear Station.
- 320 MW of nameplate wind (NPPD's share).

For 2023, non-carbon generation resources were approximately 62% of NPPD's Native Load Energy Sales from the resources discussed above. Most of the non-carbon generation is due to nuclear.

NPPD's Demand Side Management program consists of Demand Response and Energy Efficiency. NPPD presently has a successful demand response program, called the Demand Waiver Program, to reduce summer billable peaks. The majority of savings in this program are due to irrigation load control by various wholesale customers, which accounted for approximately 758 MW of demand reduction from NPPD's billable peak during the summer of 2023. Another 4 MW of demand reduction was realized from other sources.

NPPD implemented an interruptible rate, Special Power Product #8, allowing qualified large end-use customers (served by wholesale or retail) to curtail demand during NPPD specified peak periods. NPPD is anticipating more customers to take advantage of this rate in the future.

NPPD has a series of energy efficiency and demand-side management initiatives under the EnergyWise℠ name. Annually, these programs have sought to achieve first-year savings of more than 12,000 MWh and demand reductions greater than 2 MW. Accumulated first year energy savings through 2023 are 414 GWh and demand reductions are 67 MW.

4.5.2 OPPD

OPPD values a diverse resource mix as a means of achieving its mission of providing affordable, reliable, and environmentally sensitive energy services to its customers. At the close of 2023, 35.1% of OPPD's portfolio generation was produced by wind energy, energy from landfill gas, hydro energy, and solar energy. OPPD's renewable portfolio at 2023 year-end consisted of 973 MW of wind by nameplate, 5 MW of nameplate solar, 6.3 MW of landfill gas generation as well as purchased hydro power.

Last year, OPPD energized the state's first stand-alone utility-scale battery storage facility. This resource will be utilized as a generation and transmission asset providing energy arbitrage, voltage support and various other functions, with a power rating of 1 MW and a storage

capacity of 2 MWh. The project was partially funded through the BRIGHT grant from the Nebraska Environmental Trust and became operational in 2023.

Platteview Solar, a new 81 MW (nameplate) utility-scale solar facility located on an approximately 500-acre site in Saunders County south of Yutan, achieved commercial operation in May of 2024. Also in the summer of 2024, OPPD entered into a collaborative agreement with Google and NextEra Energy to acquire the capacity of the 600 MW High Banks wind farm.

As described in the Decarbonization section of this report, the OPPD Board of Directors approved at its August 2023 meeting a recommendation from staff to adopt a Near Term Generation expansion plan that includes an additional 1,000-1,500 MW of renewable wind and/or solar facilities, up to 125 MW of 4-hour equivalent battery storage, and a minimum of 32 MW of future demand response capacity by 2030. Specific projects will be determined through future feasibility and siting analysis and planned in conjunction with Power Review Board authorization. Also included in the resolution was the authorization of 950 MW of dual fuel combustion turbine technology, 900 MW of which was approved by the NPRB in March 2024 and is scheduled for operation in 2029.

OPPD's demand side resource programs can achieve over 120.7 MW of peak load reduction ability as of the summer of 2024. Existing programs consist of a customer air conditioner management program, thermostat control, lighting incentive programs, and various innovative energy efficiency projects. Additionally, OPPD can reduce its demand with assistance from a number of large customers who utilize OPPD's curtailable rate options. During summer peak days, any demand reductions from these customers are coordinated with OPPD in advance of the peak afternoon hours. OPPD will continue to grow its demand side programs in the next 10 years.

OPPD makes available a net-metering rate to all consumers that have a qualified generator. The qualified generator must be interconnected behind the consumer's service meter located on their premises and may consist of one or more sources as long as the aggregate nameplate capacity of all generators is 100 kW or less AC nameplate capacity. The qualified generator must use as its energy source methane, wind, solar, biomass, hydropower or geothermal.

4.5.3 MEAN

In serving the needs of its total membership, MEAN's system-wide resource portfolio includes 54% non-carbon resources on the basis of nameplate capacity, consisting of 31% contracted hydro, small hydro, and WAPA hydro allocations, 23% renewables (wind, WAPA Displacement, and landfill gas). Portfolio diversification remains a high priority for MEAN to balance the need for reliability with the desire for decarbonization.

As a member driven and member owned utility, MEAN procures renewable energy assets at the direction of its owners. Currently, MEAN maintains a Green Energy Program, which allows member communities to subscribe for purchase of a requested amount of renewable energy on an annual basis. This allows each community to tailor its resource portfolio to meet its specific demands and obligations as individual municipal utilities have renewable goals that can range from 0% to 100% of energy requirements. MEAN annually surveys its owners to determine individual goals for renewable energy requirements. When there are significant changes in demand for renewable energy, the MEAN Board considers the approval of new renewable purchases. MEAN's Green Energy Program is currently fully subscribed, and the Board has approved power purchase agreements for additional carbon free energy.

In 2019, MEAN surveyed member communities regarding interest in installation of community-owned solar assets. On behalf of these communities, MEAN released a Request for Proposals for community-owned solar facilities. The interested communities were required to supply a controlled site adequate for the project size and would contract directly with the solar developer. MEAN would administer and negotiate the contract and assist members in sizing and specifications of the installation. The aggregated Request for Proposals was pursued as the increased volume of solar installation required of the combined projects provided advantageous pricing compared to a standalone project in one community. The RFP was released in July 2021 and bids received in September 2021. After evaluation of bids and consultation with members, MEAN awarded the bid to eight of its Nebraska member communities for a total of 9.4 MW-DC of community-sited and -owned solar facilities. Project installation is scheduled to begin in early Summer of 2024 with all commercial operation dates by January of 2025.

MEAN previously established a committee to focus on the integration of renewable resources within member communities. The increasing presence of renewable distributed generation offers unique opportunities that can benefit both MEAN and local residents. In 2017 and again in 2019, MEAN revised its Renewable Distributed Generation policy to increase the size of allowable community owned and locally-sited renewable energy resources. Should Participant communities desire a larger allowance for community-owned renewables, the Board can take up the issue for an increase in this limitation. MEAN communities have also expressed interest in the installation of alternate distributed generation technologies, such as fuel cells, cogeneration facilities, and energy storage. Under evolving policy, projects may be incorporated into MEAN's load and resource balance into the future and would ultimately decrease the need for other resources.

MEAN has identified the investigation of new MEAN-contracted generation opportunities located in Participant communities as a goal in MEAN's Strategic Plan and also as a portfolio preference in the IRP. MEAN initiated discussion on this concept with the Membership as it relates to potential solar facilities, and policy updates were approved in 2022 by the Power Supply Committee and the MEAN Board of Directors to accommodate MEAN Distributed Generation resources located in MEAN member communities. As communities are installing generation under the Renewable Distribution Generation Policy, there is potential to concurrently install Distributed Generation directly owned or contracted to MEAN, provided participating communities have sufficient space available for lease to MEAN and the facilities are

sized below the threshold that would require an interconnection study. This concept has numerous benefits: renewable resources generating directly on member distribution systems, lower interconnection costs, incremental sizing for resource portfolio changes, potential savings on property leases, public appeal, and grid modernization with distributed generation and micro-grid systems. To date, three Nebraska members have expressed interest in allowing MEAN to install 12.53 MW-DC of MEAN contracted solar within their community. Project installation for these projects are expected to follow the community solar projects mentioned previously, with installation to begin in early Summer of 2024 with commercial operation dates of January 2025. In addition to these communities, MEAN will continue to explore opportunities with several additional members to potentially host MEAN contracted solar for further project expansion.

MEAN has utilized a variety of demand side management tools to help reduce load and energy requirements. MEAN presently administers an ENERGYsmart commercial LED lighting program, which includes cash incentives paid directly to commercial customers to help cover the cost of lighting upgrades and replacements. This program is available to commercial businesses of MEAN long-term power participants. In 2019, MEAN initiated additional energy efficiency incentives offered to residential end-use customers of its Participants. These new programs include rebates for programmable thermostats, residential insulation, and HVAC tune-ups. In May of 2021, the Board again approved an expansion of this program to include a residential heat pump program. MEAN staff continues to evaluate the benefits of additional energy efficiency and demand side management options to decrease demand-related costs for MEAN and its participants. Discussions are planned with the Board and Committees regarding an incentive program for residential vehicle chargers.

4.5.4 LES

Over the last decade-plus, LES' renewable footprint has grown significantly. On a nameplate basis, approximately 34% of LES' resources are renewable (primarily wind and hydro), with 35% fueled by natural gas and 31% by coal. From 2010 – 2023 LES reduced its carbon dioxide emissions by 46%.

LES' SEP offers customers and contractors incentives for energy-efficient installations and upgrades at their home or business. First adopted in 2009, the SEP now offsets the energy use of about 15,000 average Lincoln homes.

Under the Peak Rewards program, LES leverages residential customers' own smart thermostats to pre-cool spaces prior to the initiation of an LES-controlled demand response event, allowing for a reduction in summer peak demand while still maintaining residential comfort. LES has also introduced various pilot programs to investigate similar demand response initiatives. These included a one-year plug-in electric vehicle program in 2021, incentivizing vehicle owners to also avoid charging during peak load periods, and a water heater demand response program established in 2023 and planned to operate for 2024 – 2026.

LES has two programs that support customers wishing to pursue their own renewable generation. Under LES' net-metering rate rider, customers can install a 25-kW or smaller renewable generator to serve their homes or small businesses. LES also has a renewable generation rate for customers interested in generating and selling all output to the utility rather than serving a home or small business. Systems greater than 25 kW up to 100 kW will qualify for this rate. Customers under each rate receive a one-time capacity payment based on the value of the avoided generating capacity on system peak. The energy payment amount for new installations is based on LES' existing retail rates and is scheduled to be reduced as predetermined, total service area renewable-installation thresholds are met over time.

In August 2014, LES launched the SunShares program, allowing customers to voluntarily support a local community solar project through their monthly bill. This program led to LES contracting for a local, approximately 5-MWDC/4-MWAC solar facility, which began commercial operation in June 2016. The facility represented the first utility-scale solar project in Nebraska.

The community solar project also supports LES' virtual net metering program. As part of this program, customers receive a credit on their monthly bill based on their level of enrollment and the actual output of the facility. Enrollment began in December 2016, with the first credits appearing on bills in January 2017. The enrollment fee was originally a one-time, upfront payment, but in 2019 LES also added the option for customers to pay the associated fee over 36 months via their normal LES bill. The program will run for nearly twenty years, coinciding with the life of the solar project contract.

4.5.5 Hastings Utilities

Hastings Utilities will work with customers who are interested in pursuing renewable energy to find mutual benefit for a successful project. Hastings Utilities worked with its customer, Central Community College, to implement a 1.7 MW wind turbine on the Hastings CCC campus.

Hastings Utilities has completed the construction of a 1.5 MW Community Solar Project to respond to customer requests for renewable energy. Customers can participate by purchase of solar panels or solar shares. The project was completed in September of 2019. Phase 2 of the community solar farm is planned to be online fall of 2024. Phase 2 will be an additional 4.6 MW. Hastings Utilities will continue monitoring the economics and interest of renewable energy.

4.5.6 City of Grand Island Utilities

Grand Island currently participates in five wind farms with an approximate total amount of 31 MW (nameplate).

Grand Island Utilities approved its first small scale residential solar installation in 2015. Changes were made to City Code to accommodate demand side resources with an expectation that more resources will follow. Since then, several smaller scale residential solar generators

have been installed. Additional changes to City Code have been made to allow larger renewable generation facilities between 25 KW and 100 KW. Two facilities in this category are currently installed and operating.

In 2017, Grand Island Utilities signed a Power Purchase Agreement for a 1 MW behind the meter solar installation with Sol Systems. This facility went into service in 2018. A Request for Proposals was issued in February 2023 for the development of a 9.9 MW solar farm to be installed on City owned property. Eight proposals were received and evaluated. Contract details were finalized with the preferred developer. City Council approved this project with expected completion by the end of 2024.

4.5.7 City of Fremont Utilities

Fremont currently operates two solar arrays, which offers residents two options on the project. Electric customers can either purchase their own solar panels or purchase solar shares from the Community Solar Farm. Seventy six percent (76%), which can vary month to month, of the panels are either owned or purchased shares by the rate payers of Fremont. Solar array #1 is 1.32 MW and solar array #2 is 0.99 MW. Both have been in operation since 2018. In 2017 Fremont signed a Purchase Power Agreement with NextEra for 40.89 MW of wind energy from the Cottonwood Wind Farm in Webster County, NE. Fremont will continue to evaluate the needs for renewable energy.

4.5.8 Non-Utility Resources

The Nebraska Department of Environment and Energy tracks renewable developments within the State on its website. At this time there are no new non-utility wind developments to report being added since last year's report. Previously reported non-utility resources are summarized below.

Non-utility wind purchases are summarized as follows. This information is gathered from publicly available industry publications and newspapers and may not be complete. These projects also do not represent retail choice, as they are not directly attributed to serving retail customers within the state.

- The 318 MW (nameplate rated) Rattlesnake Creek wind facility began commercial operation in December 2018. Energy and capacity from this facility are purchased by Meta and Adobe Systems. Meta procures energy from Rattlesnake Creek for their data facility in Sarpy County.
- The WEC Energy Group (an electric generation and distribution and natural gas delivery holding company), based in Milwaukee, Wisconsin, signed a Purchase and Sale Agreement for 80% of the Upstream Wind Energy Center (202.5 MW nameplate) located just north of the City of Neligh. Invenergy, the developer, has retained a 20% interest in the project which went commercial in the first part of 2019.

- The J.M. Smucker Company and Vail Resorts have Power Purchase Agreements in place to purchase energy from the 230 MW (nameplate) Plum Creek Wind Project in Wayne County which went commercial in July 2020. Smucker's purchase is for 60 MW while Vail Resorts will purchase 310,000 MWh annually for 12 years.
- The Milligan 1 300 MW wind plant built in Saline County by EDF Renewables went commercial in May 2021. It was announced that the generated energy would be sold into the Southwest Power Pool.
- Hormel Foods has announced a Power Purchase Agreement for wind energy from a new wind plant near Milligan (Milligan 3), located in Saline County 60 miles southwest of Lincoln which now has a projected completion date of December 2024. This wind plant has a planned capacity of 73.4 MW (nameplate) of power.
- The 300 MW Thunderhead Wind Energy Center was built in Antelope and Wheeler counties and began producing energy in late 2022.
- NextEra's 250 MW Little Blue Wind Project located in Webster and Franklin Counties became commercial in December 2021. No information on off-takers is available.
- The 300 MW Haystack Wind Farm built by Oersted in Wayne County (5 MW wind turbines) went commercial in 2022. Hormel, Target, and PepsiCo are the off takers.

5.0 Resource Adequacy

A core responsibility of Nebraska's utilities is to plan for sufficient resources to reliably and predictably serve current and future customer electric demand. Utilities must plan to have sufficient resources to supply power under a variety of stressed grid conditions, such as unexpected generator outages, extreme weather events, and periods of low renewable production.

Participating in a larger regional reserve sharing pool such as SPP helps the Nebraska utilities to mitigate system risks and support reliability. This pool connects many different types of generation resources across a large geographic area with the goal of enhancing system reliability and resiliency. However, there are many considerations beyond simply meeting SPP's PRM requirements.

5.1 Reliability and Resilience

Maintaining system reliability and resilience is foundational for Nebraska utilities. This becomes increasingly important as the electric grid transitions to lower-carbon sources of energy, as customers increasingly rely on the electric grid for basic needs, and as weather becomes more volatile due to the impacts of climate change. These reliability and resilience considerations form the basis of several information requests from the NPRB, discussed below.

5.1.1 Fuel Diversity

One benefit of fuel diversity is that it allows utilities to absorb instability in one energy source by increasing the use of a different energy source. Fuel diversity also provides varying levels of protection from price volatility, fuel unavailability, and shifting regulatory practices. These characteristics all help maintain the stability and reliability of the overall supply of electricity.

Figures 11 and *12* illustrate the statewide resource mix in terms of fuel diversity (coal, diesel, hydro, landfill gas, natural gas, nuclear, solar, wind and battery storage), showing the nameplate and accredited capacity and percentage of the state's generation resources in each category. *Figure 13* shows the 2023 annual energy production for these resources.

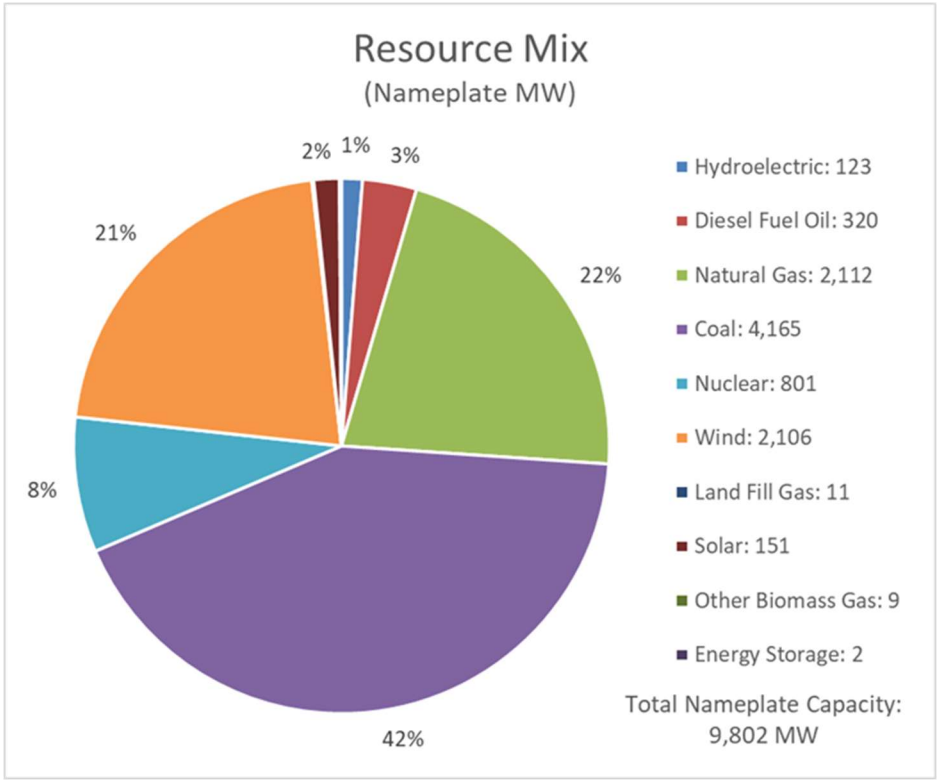

Figure 11 - Resource Mix (Nameplate MW)

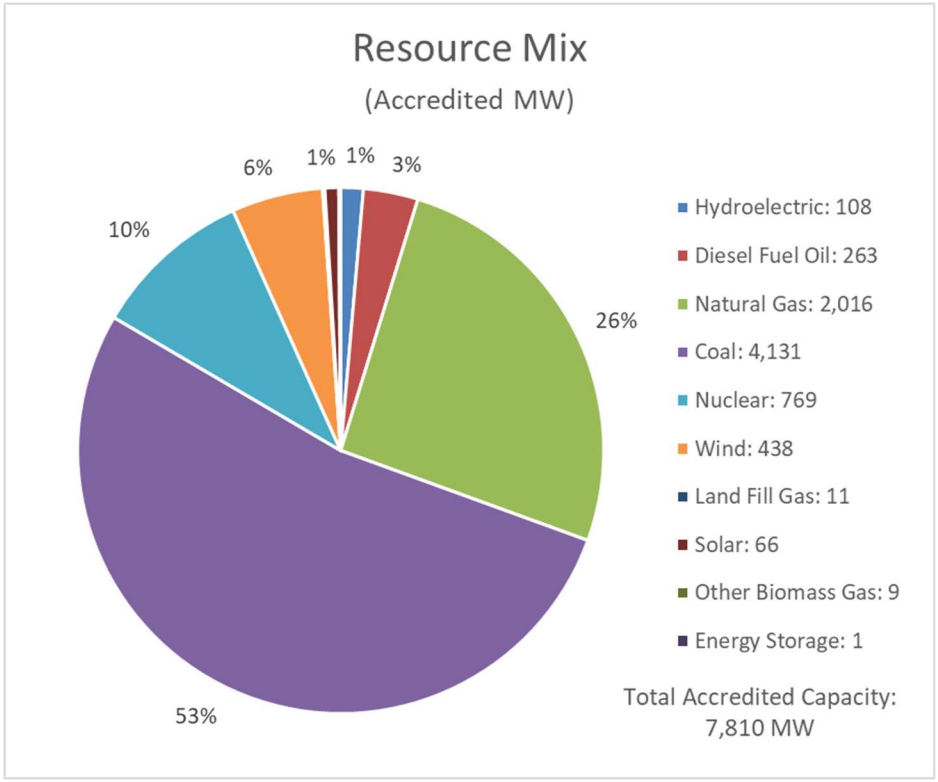

Figure 12 - Resource Mix (Accredited MW)

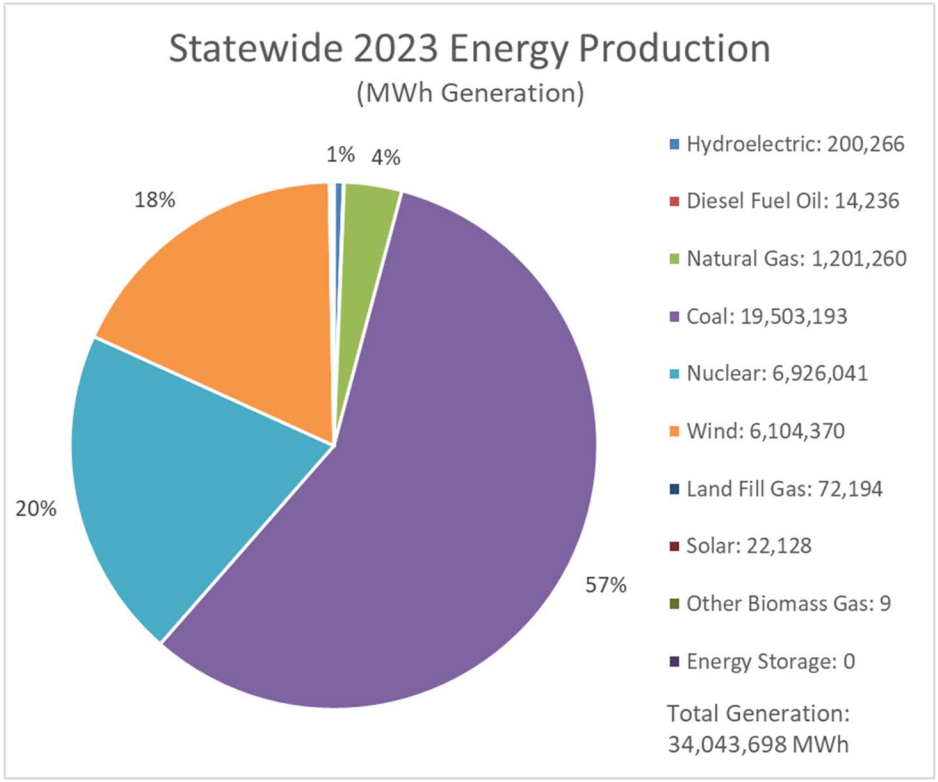

Figure 13 - Statewide 2023 Energy Production (MWh Generation)

5.1.2 Dual Fuel and On-Site Fuel Storage

In support of reliability and resilience, Nebraska utilities have generation resources that utilize on-site fuel storage and dual fuel sources. Dual fuel resources increase energy assurance in the event the primary fuel is unavailable. On-site fuel storage allows for unit operation in the event of temporary fuel supply chain interruptions. *Figure* 14 illustrates that 17% (1,183 MW) of the State's winter accredited capacity is provided by dual fuel generating units. Many of the dual fuel generating units are very small internal combustion or reciprocating units.

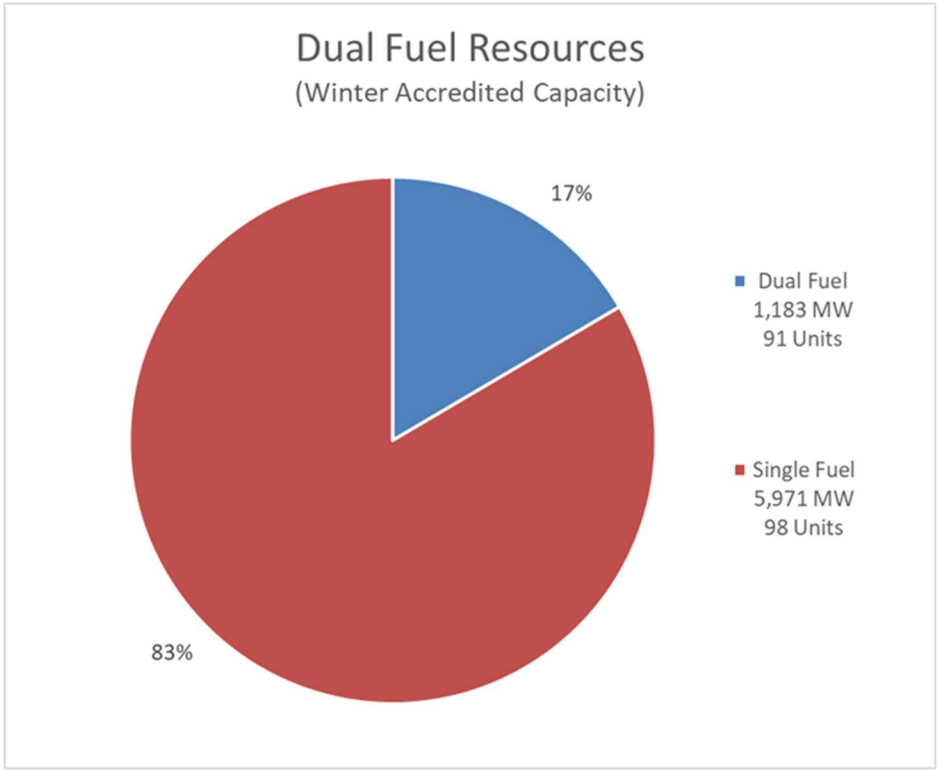

Figure 14 - Dual Fuel Resources (Winter Accredited Capacity)

NPPD, OPPD and LES own or operate coal units amounting to 3,568 MW of winter accredited generating capability with onsite fuel storage, with an average of 36.7 days of storage available as shown in *Figure 15*. Also, 911 MW of dual fuel natural-gas/diesel-fuel-oil generating units and 233 MW of diesel fuel only generating units have diesel fuel storage on site. On average, NPPD, OPPD, and LES's dual fuel generating units could operate at full output for 1.4 to 1.9 days with the quantity of fuel the generating units have in storage.

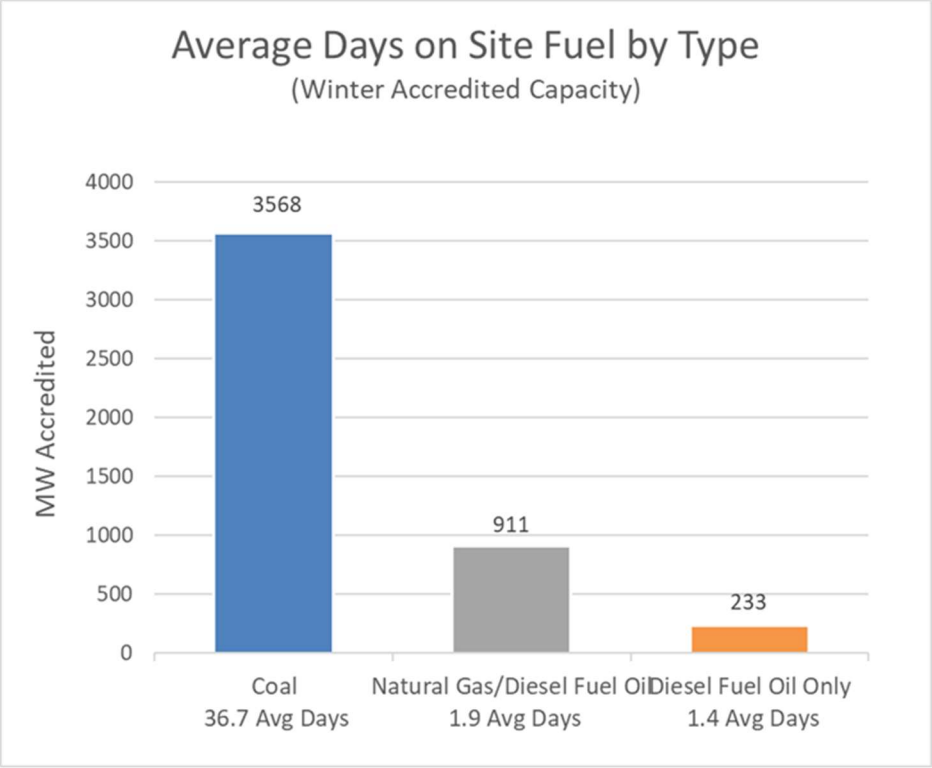

Figure 15 - Average Days on Site Fuel by Type (Winter Accredited Capacity)

5.1.3 Ramp Rates

The generation ramp rate, or time required for a unit to reach maximum capacity, is shown in *Figure 16.* The ramp rate categories are defined by the EIA in their EIA 860 information gathering. These four ramp rate categories range from 0-10 minutes to over 12+ hours. 769 MW of in-state resources can ramp to full load in 0 -10 minutes, 876 MW can ramp to full load in 10 – 60 minutes, 2,150 MW can ramp to full load in 1 – 12 hours, and 2,880 MW can ramp to full load in 12+ hours. The remainder of the state's Existing resource capacity is not dispatchable.

The generating unit data is based on the physical characteristics and capabilities of the units and does not include any subjective factors.

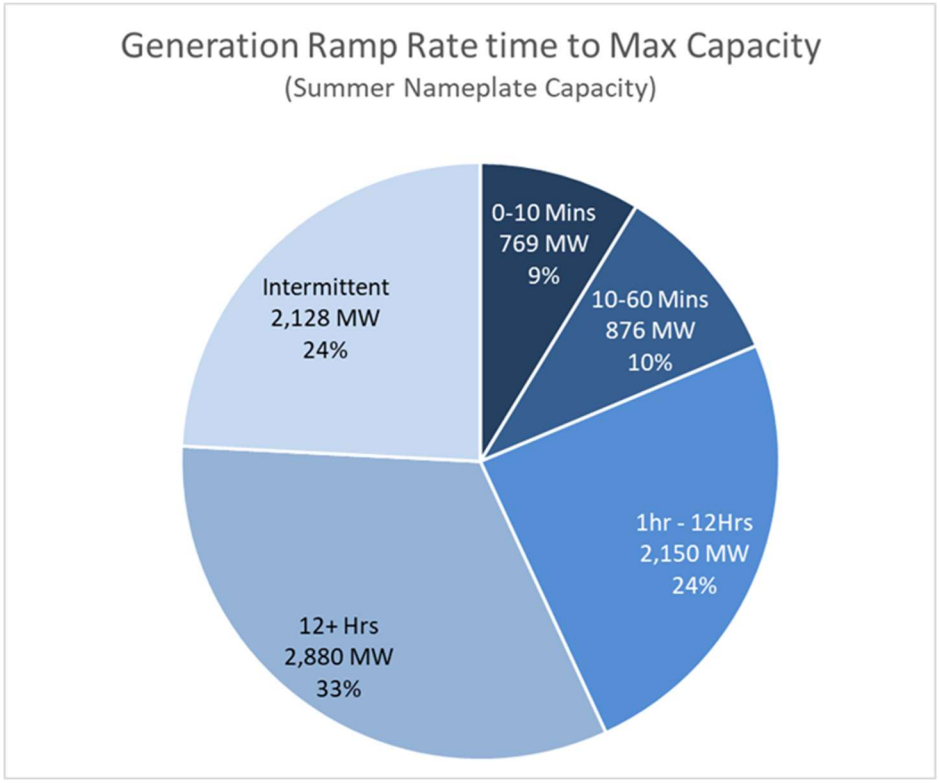

Figure 16 - Generation Ramp Rate time to Max Capacity (Summer Nameplate Capacity)

5.1.4 Stress Period(s)/ Stress Test

In response to the NPRB request to demonstrate the state's actual performance during peak load periods, this report summed the coincident hourly loads of the largest state utilities (NPPD, OPPD, and LES) to determine the seasonal stress periods. In this manner, the NPA identified that the peak summer load occurred on 8/21/2023, with a peak statewide demand of 6,692 MW. Likewise, the peak winter load occurred on 1/15/2024, with a peak demand of 4,980 MW. To calculate the cumulative state capability to serve these peak loads, the report sums the resources available to generate as well as the resources that were actively generating at the time of the peak. A dispatchable generating resource was deemed "Available" if the unit was believed to be in operable condition and was expected to be capable of starting and running if called upon by the SPP Integrated Marketplace. Units that were derated to partial capability at the peak hours were considered "Available" and were included in the summation at that derated capacity level. The "Available" generation capability listed for non-dispatchable generating resources such as wind was determined by the resources' day-ahead offers into the SPP Marketplace for the peak hour. It should also be noted that the winter peak load occurred at a time of extreme winter weather, river icing, and reduced river flows in the eastern part of the state. Despite these conditions, Nebraska's "Available" generation still exceeded its load.

Figure 17 and *Figure 18* respectively display the peak load, available generation, and actual generation for the aggregate of LES, NPPD and OPPD during the identified summer peak hour and winter peak hour. This historical information indicates that these utilities had available resources that exceeded the summer and winter peak loads, but that the actual generation from these resources was less than the summer and winter peak loads. This discrepancy might appear to be problematic but instead is an illustration of the successful operation of the SPP Integrated Marketplace generation dispatch functionality since other available, deliverable, and economical generation in the SPP footprint was being utilized to serve the Nebraska load that was in excess of the Nebraska generation being dispatched.

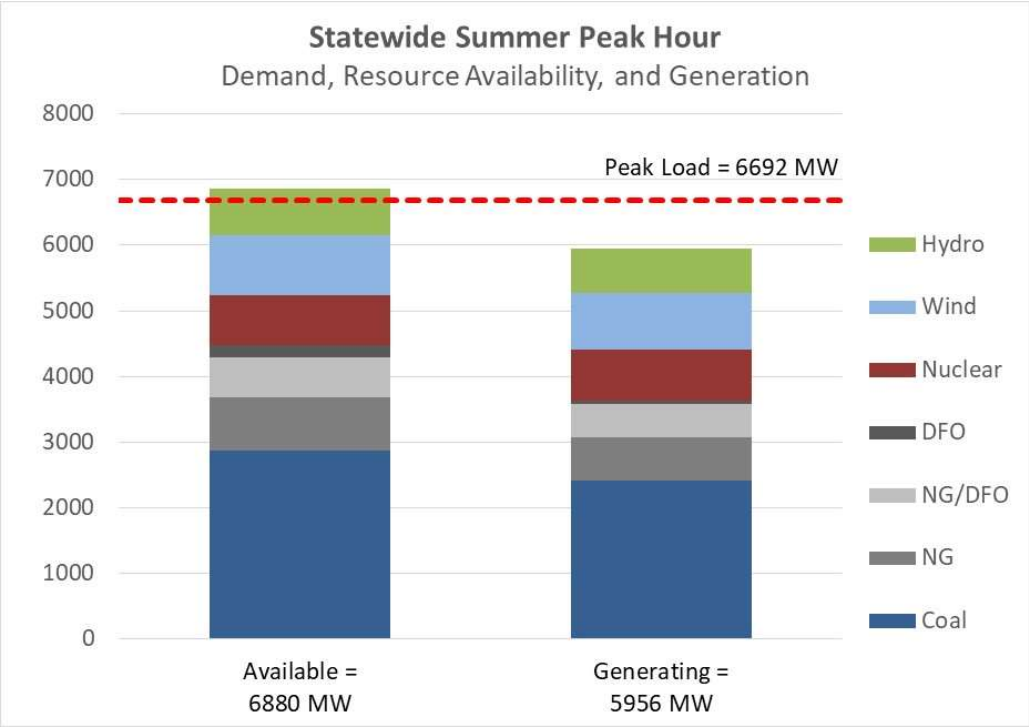

Figure 17 - Statewide Summer Peak Hour - Demand, Resource Availability, and Generation

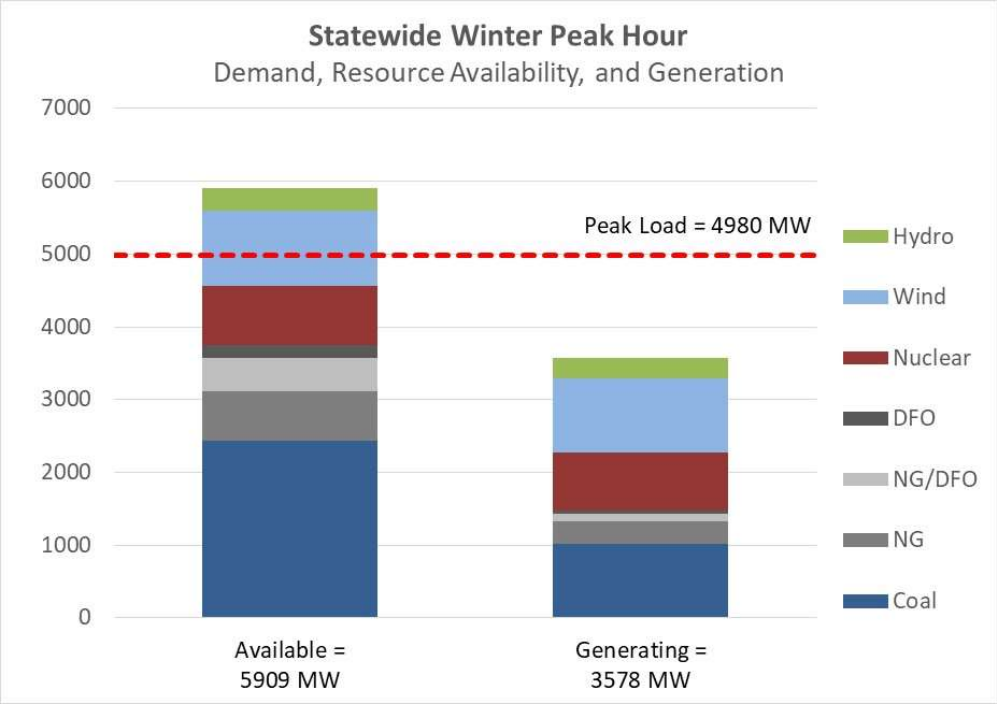

Figure 18 - Statewide Winter Peak Hour - Demand, Resource Availability, and Generation

5.1.5 Extreme Scenario Analysis

A sensitivity case was conducted for the winter stress period, examining the potential compounding impacts of a severe winter storm in the western-central part of the state. Gerald Gentleman Station (GGS), Nebraska's largest generation facility, is located in western Nebraska near Sutherland. GGS is a two-unit coal plant with 1,365 MW of accredited generation capability. A winter storm would not likely impact GGS' fuel availability due to its large coal pile, which always has several weeks of fuel reserves. GGS also has emergency contingency plans for employees that may be confined to the site, including sleeping bags and multiple weeks of food rations on hand. However, there is a risk if one or both GGS units goes into forced outage and natural gas (NG) supply to the site is impacted by the storm. The coal units need NG as a start-up igniter fuel. Another potential, but unlikely risk, is the amount of diesel fuel stored on site for coal dozers, scrapers and other transportation equipment. There are approximately two (2) weeks of around the clock fuel on-site for those purposes.

Other, smaller generation units that use NG, or other fuel oils as their primary fuel could have a higher risk of being impacted by a severe winter storm. If NG and/or diesel fuel delivery is obstructed by the storm, there is approximately 159 MW of natural gas, diesel, or dual fuel (natural gas units with diesel fuel as a back-up) in that area of the state. The diesel or diesel back-up units have about 2 days of full generator output fuel on site.

Hydro facilities in that area of the state include the North Platte Hydro (24 MW) facility, owned by NPPD. North Platte Hydro personnel adjust flows within the canals to account for the snow and ice effects on the hydro. NPPD works to stay in contact with the National Weather Service in North Platte and they alert unit operators to upcoming events in advance of the storms with potential snow amounts, temperatures, and wind predictions. Those reports and other forecasts are utilized to modify flows prior to the event that will keep the canals and hydro operating through the event. Kingsley Hydro (37 MW), located near Ogallala on Lake McConaughy, utilizes similar procedures as North Platte Hydro and is also expected to be available to generate during an extreme winter weather event.

For wind generation, icing on the blades could be an issue that could shut down their output. Ainsworth Wind Energy Facility and Broken Bow I and II, all located in central Nebraska, comprise 212 MW of nameplate capacity.

In addition, there is approximately 32 MW of known behind-the-meter (BTM) generation in the west-central part of the state. Approximately 80 percent of that is solar and the remaining 20 percent is wind generation. It is believed that this generation would not likely be operable during a severe snow and ice storm.

During a severe winter storm in west central Nebraska, the units with the relatively highest risk of lost generation are powered by natural gas or diesel fuel (159 MW) or are renewables (212 MW wind, 5.6 MW BTM wind, and 26.5 MW BTM solar, all nameplate), particularly if icing is an issue. Gerald Gentleman Station (1,365 MW) is comparatively lower risk due to its large coal stock and emergency contingency plans, while hydro generation (61 MW) is also thought to be low risk.

In summary, if the generation that is believed to be at the highest risk for being unavailable during a severe western-central winter storm event is removed from service (i.e. 159 MW of natural gas/diesel, 212 MW wind, 5.6 MW BTM wind, and 26.5 MW BTM solar), this represents a 403.1 MW (nameplate) generation reduction. *Figure 19* depicts the storm event with the loss of this availability and generation and illustrates that Nebraska would still have sufficient available generation to meet the winter peak demand.

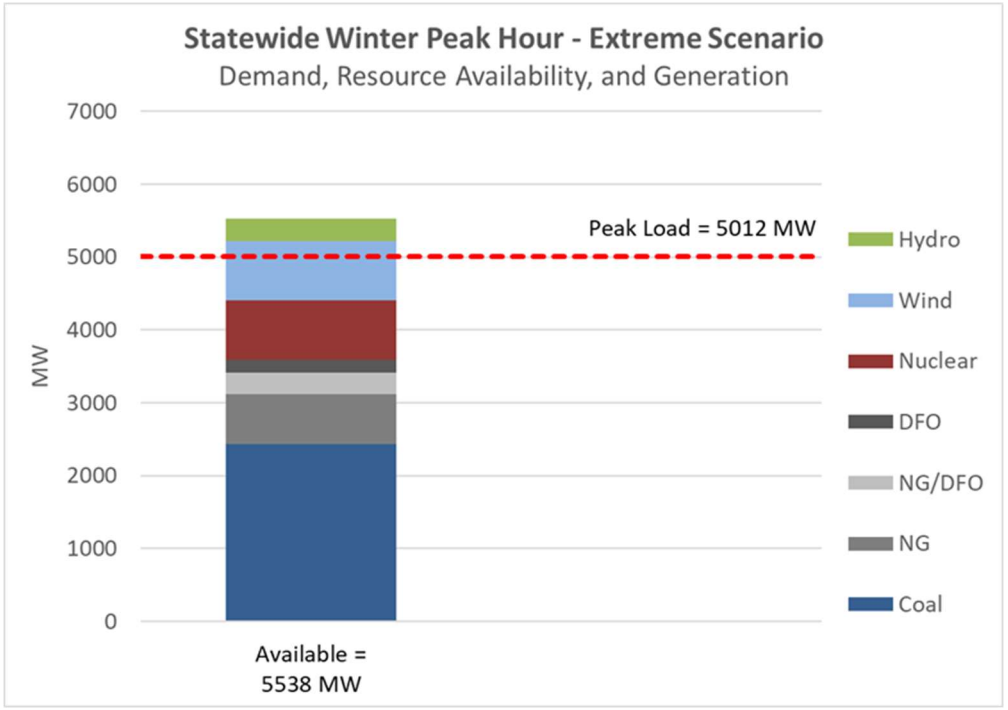

Figure 19 - Statewide Winter Peak Hour - Extreme Scenario - Demand, Resource Availability, and Generation

APPENDIX 1 - SUMMER

2024 Statewide Existing Generating Capability Data

Utility	Unit Name	Unit Status	Duty Cycle	Unit Type	Fuel Type	Commercial Operation Date	On Site Fuel Storage (Y/N)	Behind the Meter	Nameplate Capacity	Total Generation 2023 (MWh)	Accredited Capacity 2024
Beatrice	Cottonwood Wind Farm Beatrice	E	I	WT	WND	2017	N	N	16.1	0.0	6.3
Beatrice Total									**16.1**	**0**	**6.3**
Falls City	Falls City #7	E	P	RE	NG/DFO	1972	Y	N	6.2	0.0	5.2
Falls City	Falls City #8	E	P	RE	NG/DFO	1981	Y	N	6.0	0.0	5.3
Falls City	Falls City #9	E	P	RE	NG/DFO	2018	Y	N	9.3	0.0	9.2
Falls City	Falls City #1	E	E	RE	DFO	1930	Y	Y	2.8	0.0	0.0
Falls City	Falls City #2	E	E	RE	DFO	1937	Y	Y	1.0	0.0	0.0
Falls City	Falls City #3	E	E	RE	NG/DFO	1965	Y	Y	2.0	0.0	0.0
Falls City	Falls City #4	E	E	RE	NG/DFO	1946	Y	Y	2.0	0.0	0.0
Falls City	Falls City #5	E	E	RE	NG/DFO	1951	Y	Y	6.3	0.0	0.0
Falls City	Falls City #6	E	E	RE	NG/DFO	1958	Y	Y	6.0	0.0	0.0
Falls City Total									**41.5**	**0**	**19.7**
Fremont	Fremont Unit 6	E	B	ST	SUB/NG	1958	Y	N	16.9	0.0	15.4
Fremont	Fremont Unit 7	E	B	ST	SUB/NG	1963	Y	N	22.0	0.0	19.9
Fremont	Fremont Unit 8	E	B	ST	SUB/NG	1976	Y	N	85.3	0.0	86.4
Fremont	Fremont CT	E	P	CT	NG/DFO	2003	Y	N	37.6	0.0	37.5
Fremont	Fremont Cottonwood Wind	E	I	WT	WND	2018	N	N	40.4	0.0	17.1
Fremont	Fremont Solar	E	I	S	SUN	2018	N	Y	2.3	0.0	0.0
Fremont Total									**204.3**	**0**	**176.3**
Grand Island	Burdick GT1	E	P	GT	NG/DFO	1968	Y	N	13.0	740.0	13.0
Grand Island	Burdick GT2	E	P	GT	NG/DFO	2003	Y	N	34.0	1,427.0	35.0
Grand Island	Burdick GT3	E	P	GT	NG/DFO	2003	Y	N	34.0	4,669.0	35.0
Grand Island	Platte Generating Station	E	B	ST	SUB	1982	Y	N	100.0	361,807.0	100.0
Grand Island	Prairie Breeze 3 Wind	E	I	WT	WND	2016	N	N	35.8	131,355.0	0.0
Grand Island	Grand Island Solar I	E	I	S	SUN	2019	Y	Y	1.0	2,016.0	0.0
Grand Island Total									**217.8**	**502,014**	**183**
Hastings	CCC Hastings Wind	E	I	WT	WND	2016	N	N	1.7	6,880.0	0.0
Hastings	DHPC-#1	E	P	GT	NG/DFO	1972	Y	N	18.0	1,213.0	18.0
Hastings	Hastings-NDS#4	E	P	ST	NG/DFO	1957	Y	N	15.5	2,461.0	16.0
Hastings	Hastings-NDS#5	E	P	ST	NG/DFO	1967	Y	N	23.6	2,888.0	24.0
Hastings	Whelan Energy Center #1	E	B	ST	SUB	1981	Y	N	76.0	344,000.0	76.0
Hastings	Whelan Energy Center #2	E	B	ST	SUB	2011	Y	N	220.0	752,376.0	220.0
Hastings	Hastings Community Solar	E	I	S	SUN	2019	N	Y	1.5	3,543.0	0.0
Hastings Total									**356.3**	**1,113,361**	**354**
LES	Laramie River Station	E	B	ST	SUB	1982	Y	N	198.0	616,210.0	198.0
LES	J St	E	P	GT	NG/DFO	1972	Y	N	29.0	4,984.0	30.1
LES	Rokeby 1	E	P	GT	NG/DFO	1975	Y	N	71.0	38,853.0	69.5
LES	Rokeby 2	E	P	GT	NG/DFO	1997	Y	N	90.0	19,307.0	90.3
LES	Rokeby 3	E	P	GT	NG/DFO	2001	Y	N	94.0	26,617.0	94.5
LES	TBS CT1/CC1	E	P	CC	NG/DFO	2003	Y	N	119.0	65,649.0	118.9
LES	TBS CT 3	E	P	GT	NG/DFO	2003	Y	N	45.0	0.0	45.4
LES	WSEC4	E	B	ST	SUB	2007	Y	N	104.0	232,072.0	102.4
LES	Rokeby Black Start	E	E	RE	DFO	1997	Y	N	3.0	0.0	0.0

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Utility	Unit Name	Unit Status	Duty Cycle	Unit Type	Fuel Type	Commercial Operation Date	On Site Fuel Storage (Y/N)	Behind the Meter	Nameplate Capacity	Total Generation 2023 (MWh)	Accredited Capacity 2024
LES	TBS Black Start	E	E	RE	DFO	2004	Y	N	1.6	0.0	0.0
LES	Landfill Gas Generator	E	B	RE	LFG	2014	N	N	5.0	23,388.0	4.8
LES	Arbuckle Mountain Wind	E	I	WT	WND	2016	N	N	100.0	355,110.0	14.0
LES	Buckeye Wind	E	I	WT	WND	2016	N	N	100.0	320,064.0	55.9
LES	Prairie Breeze 2 Wind	E	I	WT	WND	2016	N	N	73.4	270,413.0	17.0
LES	LES Community Solar	E	B	S	SUN	2016	N	Y	3.6	6,526.0	2.6
LES	LES Wind	E	I	WT	WND	1999	N	Y	1.3	2,046.0	0.0
LES Total									**1,037.9**	**1,981,239**	**843.4**
MEAN	Alliance #1	E	P	RE	DFO	2002	Y	N	1.8	0.0	1.9
MEAN	Alliance #2	E	P	RE	DFO	2002	Y	N	1.8	0.0	1.9
MEAN	Alliance #3	E	P	RE	DFO	2002	Y	N	1.8	0.0	1.8
MEAN	Ansley #2	E	P	RE	NG/DFO	1972	Y	N	0.9	0.0	0.9
MEAN	Ansley #3	E	P	RE	NG/DFO	1968	Y	N	0.7	0.0	0.6
MEAN	Benklemen	E	P	RE	NG/DFO	1968	Y	N	0.9	0.0	0.8
MEAN	Broken Bow #2	E	P	RE	NG/DFO	1971	Y	N	3.5	0.0	3.0
MEAN	Broken Bow #4	E	P	RE	NG/DFO	1949	Y	N	0.8	0.0	0.8
MEAN	Broken Bow #5	E	P	RE	NG/DFO	1959	Y	N	1.0	0.0	1.0
MEAN	Broken Bow #6	E	P	RE	NG/DFO	1961	Y	N	2.3	0.0	2.1
MEAN	Burwell #2	E	P	RE	NG/DFO	1962	Y	N	1.4	0.0	1.3
MEAN	Burwell #3	E	P	RE	NG/DFO	1967	Y	N	1.1	0.0	1.1
MEAN	Burwell #4	E	P	RE	NG/DFO	1972	Y	N	0.9	0.0	0.8
MEAN	Callaway #3	E	P	RE	DFO	1958	Y	N	0.5	0.0	0.5
MEAN	Callaway #4	E	P	RE	DFO	2004	Y	N	0.4	0.0	0.4
MEAN	Chappell #5	E	P	RE	DFO	1982	Y	N	1.1	0.0	0.9
MEAN	Crete #7	E	P	RE	NG/DFO	1972	Y	N	6.0	0.0	6.3
MEAN	Curtis #1	E	P	RE	NG/DFO	1975	Y	N	1.4	0.0	0.0
MEAN	Curtis #2	E	P	RE	NG/DFO	1969	Y	N	1.1	0.0	1.1
MEAN	Curtis #4	E	P	RE	NG/DFO	1955	Y	N	0.9	0.0	0.8
MEAN	Kimball #1	E	P	RE	NG/DFO	1955	Y	N	1.0	0.0	0.0
MEAN	Kimball #2	E	P	RE	NG/DFO	1956	Y	N	1.0	0.0	0.0
MEAN	Kimball #3	E	P	RE	NG/DFO	1959	Y	N	1.3	0.0	1.0
MEAN	Kimball #4	E	P	RE	NG/DFO	1960	Y	N	1.3	0.0	1.1
MEAN	Kimball #5	E	P	RE	NG/DFO	1951	Y	N	0.9	0.0	0.0
MEAN	Kimball #6	E	P	RE	NG/DFO	1975	Y	N	3.9	0.0	3.5
MEAN	Oxford #2	E	P	RE	NG/DFO	1952	Y	N	0.7	0.0	0.6
MEAN	Oxford #3	E	P	RE	NG/DFO	1956	Y	N	0.9	0.0	0.9
MEAN	Oxford #4	E	P	RE	NG/DFO	1956	Y	N	0.7	0.0	0.7
MEAN	Oxford #5	E	P	RE	DFO	1972	Y	N	1.4	0.0	1.4
MEAN	Pender #1	E	P	RE	NG/DFO	1968	Y	N	1.6	0.0	1.6
MEAN	Pender #2	E	P	RE	NG/DFO	1973	Y	N	1.6	0.0	1.6
MEAN	Pender #3	E	P	RE	DFO	1953	Y	N	0.6	0.0	0.0
MEAN	Pender #4	E	P	RE	DFO	1961	Y	N	0.9	0.0	0.7

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2024 Statewide Existing Generating Capability Data

Utility	Unit Name	Unit Status	Duty Cycle	Unit Type	Fuel Type	Commercial Operation Date	On Site Fuel Storage (Y/N)	Behind the Meter	Nameplate Capacity	Total Generation 2023 (MWh)	Accredited Capacity 2024
MEAN	Red Cloud #2	E	P	RE	NG/DFO	1953	Y	N	1.0	0.0	0.8
MEAN	Red Cloud #3	E	P	RE	NG/DFO	1960	Y	N	1.4	0.0	1.2
MEAN	Red Cloud #4	E	P	RE	NG/DFO	1968	Y	N	1.4	0.0	1.1
MEAN	Red Cloud #5	E	P	RE	NG/DFO	1974	Y	N	2.3	0.0	1.9
MEAN	Stuart #1	E	P	RE	NG/DFO	1965	Y	N	0.7	0.0	0.8
MEAN	Stuart #4	E	P	RE	NG/DFO	1996	Y	N	0.8	0.0	0.8
MEAN	West Point #2	E	P	RE	NG/DFO	1947	Y	N	2.3	0.0	2.2
MEAN	West Point #3	E	P	RE	NG/DFO	1959	Y	N	1.3	0.0	1.1
MEAN	West Point #4	E	P	RE	NG/DFO	1965	Y	N	0.9	0.0	0.8
MEAN	Wisner #4	E	P	RE	DFO	2008	Y	N	1.5	0.0	1.5
MEAN	Wisner #5	E	P	RE	DFO	2008	Y	N	1.5	0.0	1.5
MEAN	Arnold #1	E	E	RE	NG/DFO	1960	Y	Y	0.0	0.0	0.0
MEAN	Arnold #2	E	E	RE	NG/DFO	1942	Y	Y	0.0	0.0	0.0
MEAN	Arnold #3	E	E	RE	NG/DFO	1946	Y	Y	0.0	0.0	0.0
MEAN	Beaver City #1	E	E	RE	NG/DFO	1958	Y	Y	0.0	0.0	0.0
MEAN	Beaver City #2	E	E	RE	NG/DFO	1961	Y	Y	0.0	0.0	0.0
MEAN	Beaver City #4	E	E	RE	NG/DFO	1968	Y	Y	0.0	0.0	0.0
MEAN	Blue Hill#1	E	E	RE	NG/DFO	1964	Y	Y	0.8	0.0	0.0
MEAN	Blue Hill#2	E	E	RE	DFO	1948	Y	Y	0.4	0.0	0.0
MEAN	Broken Bow #1	E	E	RE	DFO	1933	Y	Y	0.6	0.0	0.0
MEAN	Broken Bow #3	E	E	RE	NG/DFO	1936	Y	Y	0.9	0.0	0.0
MEAN	Burwell#1	E	E	RE	NG/DFO	1955	Y	Y	0.7	0.0	0.0
MEAN	Chappell #2	E	E	RE	DFO	1945	Y	Y	0.2	0.0	0.0
MEAN	Crete #1	E	E	RE	NG/DFO	1939	Y	Y	0.0	0.0	0.0
MEAN	Crete #2	E	E	RE	NG/DFO	1955	Y	Y	0.0	0.0	0.0
MEAN	Crete #3	E	E	RE	NG/DFO	1951	Y	Y	0.0	0.0	0.0
MEAN	Crete #4	E	E	RE	NG/DFO	1947	Y	Y	0.0	0.0	0.0
MEAN	Crete #5	E	E	RE	NG/DFO	1962	Y	Y	0.0	0.0	0.0
MEAN	Crete #6	E	E	RE	NG/DFO	1965	Y	Y	0.0	0.0	0.0
MEAN	Sidney #1	E	E	RE	NG/DFO	1967	Y	Y	1.3	0.0	0.0
MEAN	Sidney #2	E	E	RE	NG/DFO	1973	Y	Y	0.0	0.0	0.0
MEAN	Sidney #3	E	E	RE	DFO	1953	Y	Y	0.8	0.0	0.0
MEAN	Sidney #4	E	E	RE	NG/DFO	1961	Y	Y	0.0	0.0	0.0
MEAN	Sidney #5	E	E	RE	NG/DFO	1939	Y	Y	3.1	0.0	0.0
MEAN	Stuart #2	E	E	RE	DFO	1960	Y	Y	0.3	0.0	0.0
MEAN	Stuart #3	E	E	RE	DFO	1954	Y	Y	0.3	0.0	0.0
MEAN	Stuart #4	E	E	RE	DFO	1946	Y	Y	0.8	0.0	0.0
MEAN Total									**72.8**	**0**	**54.8**
NELIGH	Neligh #1	E	P	RE	OBL	2012	Y	N	1.8	2.6	1.8
NELIGH	Neligh #2	E	P	RE	OBL	2012	Y	N	1.8	1.6	1.8
NELIGH	Neligh #3	E	P	RE	OBL	2012	Y	N	1.8	4.0	1.8
NELIGH	Neligh #4	E	P	RE	OBL	2012	Y	N	0.3	0.8	0.3
Neligh Total									**5.7**	**9.0**	**5.7**

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2024 Statewide Existing Generating Capability Data

Utility	Unit Name	Unit Status	Duty Cycle	Unit Type	Fuel Type	Commercial Operation Date	On Site Fuel Storage (Y/N)	Behind the Meter	Nameplate Capacity	Total Generation 2023 (MWh)	Accredited Capacity 2024
Nebraska City	Nebraska City #5	E	P	RE	NG/DFO	1964	Y	N	2.0	0.0	1.6
Nebraska City	Nebraska City #6	E	P	RE	NG/DFO	1967	Y	N	2.1	0.0	1.5
Nebraska City	Nebraska City #7	E	P	RE	NG/DFO	1969	Y	N	2.1	0.0	1.5
Nebraska City	Nebraska City #8	E	P	RE	NG/DFO	1970	Y	N	4.1	0.0	3.5
Nebraska City	Nebraska City #9	E	P	RE	NG/DFO	1974	Y	N	6.4	0.0	5.6
Nebraska City	Nebraska City #10	E	P	RE	NG/DFO	1979	Y	N	6.5	0.0	5.8
Nebraska City	Nebraska City #11	E	P	RE	NG/DFO	1998	Y	N	4.6	0.0	4.0
Nebraska City	Nebraska City #12	E	P	RE	NG/DFO	1998	Y	N	4.6	0.0	4.0
Nebraska City	Nebraska City #2	E	E	RE	NG/DFO	1953	Y	Y	1.5	0.0	0.0
Nebraska City	Nebraska City #3	E	E	RE	NG/DFO	1955	Y	Y	2.5	0.0	0.0
Nebraska City	Nebraska City #4	E	E	RE	NG/DFO	1957	Y	Y	3.1	0.0	0.0
Nebraska City	Nebraska City #13	E	E	RE	DFO	1998	Y	Y	4.6	0.0	0.0
Nebraska City	Nebraska City #14	E	E	RE	DFO	2013	Y	Y	0.6	0.0	0.0
Nebraska City Total									**44.7**	**0.0**	**27.5**
Northeastern NPPD	Cottonwood	E	I	WT	WND	2018	N	N	17.5	0.0	6.0
Northeastern NPPD	Osmond 1	E	I	RE	DFO	2024	N	0	1.6	0.0	1.6
Northeastern Total									**19.1**	**0.0**	**7.6**
NPPD	ADM	E	B	ST	SUB	2009	Y	N	71.4	-54,856.0	66.4
NPPD	Ainsworth Wind	E	I	WT	WND	2005	N	N	59.4	85,548.0	4.1
NPPD	Auburn #1	E	P	RE	NG/DFO	1982	Y	N	2.4	144.0	2.0
NPPD	Auburn #2	E	P	RE	NG/DFO	1949	Y	N	1.0	0.0	1.0
NPPD	Auburn #4	E	P	RE	NG/DFO	1993	Y	N	3.8	0.0	3.0
NPPD	Auburn #5	E	P	RE	NG/DFO	1973	Y	N	3.4	0.0	3.0
NPPD	Auburn #6	E	P	RE	NG/DFO	1967	Y	N	2.8	0.0	2.0
NPPD	Auburn #7	E	P	RE	NG/DFO	1987	Y	N	5.6	0.0	5.0
NPPD	Beatrice Power Station	E	I	CC	NG	2005	N	N	247.1	579,594.0	219.5
NPPD	Belleville 4	E	P	RE	NG/DFO	1955	Y	N	0.0	172.0	0.0
NPPD	Belleville 5	E	P	RE	NG/DFO	1961	Y	N	1.8	0.0	1.3
NPPD	Belleville 6	E	P	RE	NG/DFO	1966	Y	N	3.8	0.0	2.6
NPPD	Belleville 7	E	P	RE	NG/DFO	1971	Y	N	5.1	0.0	3.3
NPPD	Belleville 8	E	P	RE	NG/DFO	2006	Y	N	2.8	0.0	2.8
NPPD	Broken Bow Wind	E	I	WT	WND	2013	N	N	80.0	231,035.0	7.9
NPPD	Broken Bow II Wind	E	I	WT	WND	2014	N	N	73.1	285,684.0	4.7
NPPD	Cambridge	E	P	RE	DFO	1972	Y	N	4.0	12.0	3.9
NPPD	Canaday	E	P	ST	NG	1958	N	N	108.8	24,033.0	99.3
NPPD	Columbus 1	E	B	H	WAT	1936	Y	N	15.2	30,261.0	15.0
NPPD	Columbus 2	E	B	H	WAT	1936	Y	N	15.2	44,708.0	15.0
NPPD	Columbus 3	E	B	H	WAT	1936	Y	N	15.2	46,149.0	15.0
NPPD	Cooper	E	B	ST	NUC	1974	N	N	801.0	6,926,041.0	768.5
NPPD	Crofton Bluffs Wind	E	I	WT	WND	2013	N	N	42.0	119,796.0	3.6
NPPD	David City 1	E	P	RE	NG/DFO	1960	Y	N	1.5	8.0	1.3
NPPD	David City 2	E	P	RE	DFO	1949	Y	N	1.0	0.0	0.8
NPPD	David City 3	E	P	RE	NG/DFO	1955	Y	N	1.0	0.0	0.9
NPPD	David City 4	E	P	RE	NG/DFO	1966	Y	N	2.3	0.0	1.8
NPPD	David City 5	E	P	RE	DFO	1996	Y	N	1.6	0.0	1.3
NPPD	David City 6	E	P	RE	DFO	1996	Y	N	1.6	0.0	0.0
NPPD	David City 7	E	P	RE	DFO	1996	Y	N	1.6	0.0	1.3
NPPD	Elkhorn Ridge Wind	E	I	WT	WND	2009	N	N	80.0	157,745.0	4.3

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Utility	Unit Name	Unit Status	Duty Cycle	Unit Type	Fuel Type	Commercial Operation Date	On Site Fuel Storage (Y/N)	Behind the Meter	Nameplate Capacity	Total Generation 2023 (MWh)	Accredited Capacity 2024
NPPD	Franklin 1	E	P	RE	NG/DFO	1963	Y	N	0.7	33.0	0.9
NPPD	Franklin 2	E	P	RE	NG/DFO	1974	Y	N	1.4	0.0	1.0
NPPD	Franklin 3	E	P	RE	NG/DFO	1968	Y	N	1.1	0.0	1.0
NPPD	Franklin 4	E	P	RE	NG/DFO	1955	Y	N	0.9	0.0	0.8
NPPD	Gentleman 1	E	B	ST	SUB	1979	Y	N	681.3	3,768,437.0	665.0
NPPD	Gentleman 2	E	B	ST	SUB	1982	Y	N	681.3	3,909,039.0	700.0
NPPD	Hallam	E	P	GT	NG/DFO	1973	Y	N	56.7	2,436.0	42.9
NPPD	Hebron	E	P	GT	DFO	1973	N	N	56.7	4,510.0	42.1
NPPD	Kearney	E	B	H	WAT	1921	N	N	1.5	448.0	0.0
NPPD	Kingsley (CNPPID)	E	B	H	WAT	1985	Y	N	41.7	30,262.0	37.0
NPPD	Laredo Ridge Wind	E	I	WT	WND	2011	N	N	80.0	237,489.0	10.1
NPPD	Madison 1	E	P	RE	NG/DFO	1969	Y	N	2.1	28.0	1.3
NPPD	Madison 2	E	P	RE	NG/DFO	1959	Y	N	1.4	0.0	1.0
NPPD	Madison 3	E	P	RE	NG/DFO	1953	Y	N	1.1	0.0	1.0
NPPD	Madison 4	E	P	RE	DFO	1946	Y	N	1.4	0.0	0.7
NPPD	McCook	E	P	GT	DFO	1973	Y	N	56.7	1,450.0	40.9
NPPD	Monroe	E	B	H	WAT	1936	N	N	8.4	0.0	2.0
NPPD	North Platte 1	E	B	H	WAT	1935	Y	N	13.1	28,336.0	12.0
NPPD	North Platte 2	E	B	H	WAT	1935	Y	N	13.1	20,102.0	12.0
NPPD	Ord 1	E	P	RE	NG/DFO	1973	Y	N	5.0	59.0	5.0
NPPD	Ord 2	E	P	RE	NG/DFO	1966	Y	N	1.5	0.0	1.0
NPPD	Ord 3	E	P	RE	NG/DFO	1963	Y	N	2.5	0.0	2.0
NPPD	Ord 4	E	P	RE	DFO	1997	Y	N	1.5	0.0	1.4
NPPD	Ord 5	E	P	RE	DFO	1997	Y	N	1.5	0.0	1.4
NPPD	Sheldon 1	E	B	ST	SUB	1961	Y	N	108.8	369,707.0	104.0
NPPD	Sheldon 2	E	B	ST	SUB	1965	Y	N	119.9	351,348.0	112.0
NPPD	Springview Wind	E	I	WT	WND	2012	N	N	3.0	7,386.0	0.3
NPPD	Steele Flats Wind	E	I	WT	WND	2013	N	N	75.0	289,269.0	22.2
NPPD	Wahoo #1	E	P	RE	NG/DFO	1960	Y	N	2.1	60.0	1.7
NPPD	Wahoo #3	E	P	RE	NG/DFO	1973	Y	N	4.4	0.0	3.6
NPPD	Wahoo #5	E	P	RE	NG/DFO	1952	Y	N	2.2	0.0	1.8
NPPD	Wahoo #6	E	P	RE	NG/DFO	1969	Y	N	3.5	0.0	2.9
NPPD	Western Sugar	E	B	ST	SUB	2014	Y	N	5.0	0.0	4.6
NPPD	Wilber 4	E	P	RE	DFO	1949	Y	N	0.9	33.0	0.8
NPPD	Wilber 5	E	P	RE	DFO	1958	Y	N	0.8	0.0	0.6
NPPD	Wilber 6	E	P	RE	DFO	1997	Y	N	1.6	0.0	1.5
NPPD	Loup PPD - Creston Ridge Wind	E	I	WT	WND	2016	N	Y	6.8	0.0	0.0
NPPD	Loup PPD - Creston Ridge (#2)	E	I	WT	WND	2017	N	Y	6.9	0.0	0.0
NPPD	Loup PPD - City of Schuyler Solar	E	I	S	SUN	2019	N	Y	0.5	0.0	0.0
NPPD	Loup PPD - City of Schuyler Solar Phase 2	E	I	S	SUN	2021	N	Y	0.5	0.0	0.0
NPPD	Scottsbluff Community Solar 1	E	I	S	SUN	2017	N	Y	0.1	0.0	0.0
NPPD	Scottsbluff Community Solar 2	E	I	S	SUN	2020	N	Y	4.4	0.0	0.0
NPPD	Venango Community Solar	E	I	S	SUN	2017	N	Y	0.1	0.0	0.0
NPPD	Kearney Community Solar	E	I	S	SUN	2018	N	Y	5.7	0.0	0.0
NPPD	City of Central City Solar Park	E	I	S	SUN	2015	N	Y	0.2	0.0	0.0
NPPD	City of Central City Solar Park (2)	E	I	S	SUN	2017	N	Y	0.4	0.0	0.0

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Utility	Unit Name	Unit Status	Duty Cycle	Unit Type	Fuel Type	Commercial Operation Date	On Site Fuel Storage (Y/N)	Behind the Meter	Nameplate Capacity	Total Generation 2023 (MWh)	Accredited Capacity 2024
NPPD	City of Cozad Solar	E	I	S	SUN	2021	N	Y	2.0	0.0	0.0
NPPD	City of Gothenburg Solar 1	E	I	S	SUN	2018	N	Y	0.5	0.0	0.0
NPPD	City of Gothenburg Solar 2	E	I	S	SUN	2019	N	Y	0.5	0.0	0.0
NPPD	Village of Hemingford Solar	E	I	S	SUN	2021	N	Y	1.0	0.0	0.0
NPPD	City of Holdrege Housing Proj Solar	E	I	S	SUN	2017	N	Y	0.1	0.0	0.0
NPPD	City of Lexington Solar	E	I	S	SUN	2017	N	Y	3.6	0.0	0.0
NPPD	City of Lexington Airport Solar	E	I	S	SUN	2021	N	Y	1.0	0.0	0.0
NPPD	City of Seward Wind	E	I	WT	WND	2018	N	Y	1.7	0.0	0.0
NPPD	Cornhusker PPD - Renewable Solar LLC	E	I	S	SUN	2019	N	Y	0.3	0.0	0.0
NPPD	Cuming County RPPD - Wisner Wind	E	I	WT	WND	2020	N	Y	2.5	0.0	0.0
NPPD	Custer PPD - Stemer Solar	E	I	S	SUN	2017	N	Y	0.5	0.0	0.0
NPPD	Custer PPD - Sunny Delight Solar	E	I	S	SUN	2017	N	Y	0.3	0.0	0.0
NPPD	Custer PPD - Blowers Solar	E	I	S	SUN	2017	N	Y	0.3	0.0	0.0
NPPD	Custer PPD - JDRM LLC Solar	E	I	S	SUN	2016	N	Y	0.3	0.0	0.0
NPPD	Custer PPD - B&R LLC Solar	E	I	S	SUN	2016	N	Y	0.3	0.0	0.0
NPPD	Custer PPD - Pandorf Solar	E	I	S	SUN	2017	N	Y	0.6	0.0	0.0
NPPD	Custer PPD - Cockerill Fertilizer Solar 1	E	I	S	SUN	2018	N	Y	0.5	0.0	0.0
NPPD	Custer PPD - Cockerill Fertilizer Solar 2	E	I	S	SUN	2019	N	Y	0.5	0.0	0.0
NPPD	Dawson PPD - Willow Island Solar	E	I	S	SUN	2017	N	Y	0.3	0.0	0.0
NPPD	Howard Greeley RPPD - St Paul North Solar	E	I	S	SUN	2024	N	Y	1.0	0.0	0.0
NPPD	Loup Valleys RPPD - North Loup Solar	E	I	S	SUN	2020	N	Y	0.2	0.0	0.0
NPPD	Perennial PPD - Fairmont Area Wind Farm	E	I	WT	WND	2019	N	Y	6.9	0.0	0.0
NPPD	Polk Co PPD - Osceola Wind	E	I	WT	WND	2019	N	Y	2.5	0.0	0.0
NPPD	Polk Co PPD Solar	E	I	S	SUN	2024	N	Y	1.0	0.0	0.0
NPPD	South Central PPD Solar Project	E	I	S	SUN	2022	N	Y	1.0	0.0	0.0
NPPD	Burt Co PPD - Dodge Co Solar	E	I	S	SUN	2022	N	Y	1.0	0.0	0.0
NPPD	Burt Co PPD - Burt Co Solar	E	I	S	SUN	2022	N	Y	1.0	0.0	0.0
NPPD	Norfolk Community Solar	E	I	S	SUN	2023	N	Y	8.7	0.0	0.0
NPPD	Norfolk Battery Energy Storage System	E	ES	ES	ES	2023	N	Y	1.0	0.0	0.0
NPPD	Ainsworth Solar	E	I	S	SUN	2022	N	Y	0.5	0.0	0.0
NPPD	Elkhorn RPPD - Acklic	E	I	S	SUN	2021	N	Y	3.0	0.0	0.0
NPPD	Elkhorn RPPD - Uecker	E	I	S	SUN	2021	N	Y	2.0	0.0	0.0
NPPD	Elkhorn RPPD - Poulsen	E	I	S	SUN	2021	N	Y	1.5	0.0	0.0
NPPD	Southern PD Franklin County Wind	E	I	WT	WND	2023	N	Y	5.6	0.0	0.0
NPPD	Ogallala Solar	E	I	S	SUN	2023	N	Y	1.5	0.0	0.0
NPPD	York Solar	E	I	S	SUN	2023	N	Y	3.2	0.0	0.0
NPPD	Norris PPD - Centerville Solar	E	I	S	SUN	2024	N	Y	1.0	0.0	0.0
NPPD	Norris PPD - Deshler Solar	E	I	S	SUN	2024	N	Y	1.0	0.0	0.0
NPPD	Norris PPD - Ruby Solar	E	I	S	SUN	2024	N	Y	1.0	0.0	0.0
NPPD	City of Wahoo Solar	E	I	S	SUN	2024	N	Y	2.0	0.0	0.0
NPPD	York 1	E	E	RE	DFO	1980	Y	Y	1.0	0.0	0.0
NPPD	York 2	E	E	RE	DFO	1996	Y	Y	1.6	0.0	0.0
NPPD Total									**3,786.1**	**17,496,506.0**	**3,099.2**

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Utility	Unit Name	Unit Status	Duty Cycle	Unit Type	Fuel Type	Commercial Operation Date	On Site Fuel Storage (Y/N)	Behind the Meter	Nameplate Capacity	Total Generation 2023 (MWh)	Accredited Capacity 2024
OPPD	BRIGHT Battery	E	I	ES	ES	2022	N	Y	1.0	0.0	0.5
OPPD	Platteview Solar	E	I	S	SUN	2024	N	N	81.0	0.0	63.6
OPPD	Jones St. #1	E	P	GT	DFO	1973	Y	N	61.2	3,586.8	61.2
OPPD	Jones St. #2	E	P	GT	DFO	1973	Y	N	62.2	4,504.9	62.3
OPPD	Sarpy Co. Black Start	E	E	RE	DFO	1996	Y	Y	3.4	0.0	0.0
OPPD	Tecumseh #1	E	P	RE	DFO	1949	Y	N	0.6	27.9	0.6
OPPD	Tecumseh #2	E	P	RE	DFO	1968	Y	N	1.4	27.9	1.4
OPPD	Tecumseh #3	E	P	RE	DFO	1952	Y	N	1.0	27.9	1.0
OPPD	Tecumseh #4	E	P	RE	DFO	1960	Y	N	1.2	27.9	1.2
OPPD	Tecumseh #5	E	P	RE	DFO	1993	Y	N	2.3	27.9	2.3
OPPD	Elk City Station #1-4	E	B	RE	LFG	2002	N	N	3.1	24,402.8	3.2
OPPD	Elk City Station #5-8	E	B	RE	LFG	2006	N	N	2.9	24,402.8	2.9
OPPD	Cass County #1	E	P	GT	NG	2003	N	N	162.0	99,494.8	162.0
OPPD	Cass County #2	E	P	GT	NG	2003	N	N	161.8	101,153.1	161.8
OPPD	North Omaha #1	E	B	ST	NG	1954	N	N	63.0	7,177.3	63.0
OPPD	North Omaha #2	E	B	ST	NG	1957	N	N	71.8	3,677.8	83.4
OPPD	North Omaha #3	E	B	ST	NG	1959	N	N	92.5	70,129.2	93.6
OPPD	Sarpy County #1	E	P	GT	NG/DFO	1972	Y	N	55.4	21,227.2	54.9
OPPD	Sarpy County #2	E	P	GT	NG/DFO	1972	Y	N	55.9	26,134.0	57.1
OPPD	Sarpy County #3	E	P	GT	NG/DFO	1996	Y	N	107.8	52,120.8	106.6
OPPD	Sarpy County #4	E	P	GT	NG/DFO	2000	Y	N	48.7	24,373.6	46.0
OPPD	Sarpy County #5	E	P	GT	NG/DFO	2000	Y	N	47.9	20,397.2	47.9
OPPD	Nebraska City #1	E	B	ST	SUB	1979	Y	N	650.3	3,445,490.9	650.3
OPPD	Nebraska City #2	E	B	ST	SUB	2009	Y	N	691.0	3,709,181.0	687.2
OPPD	North Omaha #4 (NG)	E	P	ST	NG	1963	N	N	106.0	0.0	0.0
OPPD	North Omaha #4 (Coal)	E	B	ST	SUB/NG	1963	Y	N	117.7	629,932.5	117.7
OPPD	North Omaha #5 (NG)	E	P	ST	NG	1968	Y	N	172.0	0.0	0.0
OPPD	North Omaha #5 (Coal)	E	B	ST	SUB/NG	1968	Y	N	216.2	1,068,449.0	206.2
OPPD	OPPD Community Solar	E	I	S	SUN	2020	N	Y	5.0	10,043.4	0.0
OPPD	*Rattlesnake Creek Wind	E	I	WT	WND	2019	N	N	318.2	0.0	0.0
OPPD	Flat Water Wind	E	I	WT	WND	2011	N	N	60.0	230,776.6	8.3
OPPD	Grande Prairie Wind	E	I	WT	WND	2016	N	N	400.0	1,515,867.7	115.1
OPPD	Petersburg Wind	E	I	WT	WND	2012	N	N	40.5	180,367.0	9.0
OPPD	Prairie Breeze Wind	E	I	WT	WND	2014	N	N	200.6	905,022.8	52.3
OPPD	Sholes Wind	E	I	WT	WND	2019	N	N	160.0	772,515.9	72.2
OPPD	Demand Response	E	DR	DR	DR	NA	N	Y	0.0	0.0	0.0
OPPD	BTM	E	DR	DR	DR	NA	N	Y	30.0	0.0	0.0
OPPD Total									**4,255.6**	**12,950,568.7**	**2,994.8**
SCRIBNER	Scribner #1	E	P	RE	OBL	2020	N	N	1.9	0.0	1.5
SCRIBNER	Scribner #2	E	P	RE	OBL	2020	N	N	1.9	0.0	1.5
SCRIBNER TOTAL									**3.8**	**0.0**	**3.0**
South Sioux City	SSC Solar	E	I	S	SUN	2018	N	Y	2.1	3,955.34	0.0
South Sioux City	Cotttonwood Wind	E	I	WT	WND	2020	N	N	15.6	70,633.42	7.4
South Sioux City	WWTP Gen	E	I	RE	DFO	2023	Y	Y	1.8	0.0	1.8
South Sioux City	NG Generation Plant	E	P	RE	NG	2022	N	Y	5.0	4,480.70	2.5
South Sioux City Total									**24.4**	**0.0**	**11.6**

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Utility	Unit Name	Unit Status	Duty Cycle	Unit Type	Fuel Type	Commercial Operation Date	On Site Fuel Storage (Y/N)	Behind the Meter	Nameplate Capacity	Total Generation 2023 (MWh)	Accredited Capacity 2024
Superior	Community Solar	E	I	S	SUN	2018	N	Y	0	0	0.00
Superior Total									**0.0**	**0.0**	**0.0**
WAKEFIELD	Wakefield 2	E	P	RE	NG/DFO	1955	Y	N	0.5	0.0	0.5
WAKEFIELD	Wakefield 4	E	P	RE	NG/DFO	1961	Y	N	0.8	0.0	0.8
WAKEFIELD	Wakefield 5	E	P	RE	NG/DFO	1966	Y	N	1.2	0.0	1.2
WAKEFIELD	Wakefield 6	E	P	RE	NG/DFO	1971	Y	N	1.1	0.0	1.1
WAKEFIELD Total									**3.6**	**0.0**	**3.6**
WAYNE	Wayne 1	E	P	RE	DFO	1951	Y	N	0.8	0.0	0.7
WAYNE	Wayne 3	E	P	RE	DFO	1956	Y	N	1.9	0.0	1.9
WAYNE	Wayne 4	E	P	RE	DFO	1960	Y	N	2.1	0.0	2.1
WAYNE	Wayne 5	E	P	RE	DFO	1966	Y	N	3.5	0.0	3.3
WAYNE	Wayne 6	E	P	RE	DFO	1968	Y	N	5.3	0.0	5.2
WAYNE	Wayne 7	E	P	RE	DFO	1998	Y	N	3.3	0.0	3.2
WAYNE	Wayne 8	E	P	RE	DFO	1998	Y	N	3.6	0.0	3.6
Wayne Total									**20.4**	**0.0**	**20.0**
NE Total									**10,110.0**	**34,043,697.8**	**7,810.5**

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Utility	Unit Name	Unit Status	Duty Cycle	Unit Type	Fuel Type	Commercial Operation Date	On Site Fuel Storage	Behind the Meter	Nameplate Capacity	Total Generation 2023 (MWh)	Accredited Capacity 2024
Beatrice	Cottonwood Wind Farm Beatrice	E	I	WT	WND	2017	N	N	16.1	0.0	8.5
Beatrice Total									**16.10**	**0**	**8.50**
Falls City	Falls City #7	E	P	RE	NG/DFO	1972	Y	N	6.2	0.0	5.2
Falls City	Falls City #8	E	P	RE	NG/DFO	1981	Y	N	6.0	0.0	5.3
Falls City	Falls City #9	E	P	RE	NG/DFO	2018	Y	N	9.3	0.0	9.2
Falls City	Falls City #1	E	E	RE	DFO	1930	Y	Y	2.8	0.0	0.0
Falls City	Falls City #2	E	E	RE	DFO	1937	Y	Y	1.0	0.0	0.0
Falls City	Falls City #3	E	E	RE	NG/DFO	1965	Y	Y	2.0	0.0	0.0
Falls City	Falls City #4	E	E	RE	NG/DFO	1946	Y	Y	2.0	0.0	0.0
Falls City	Falls City #5	E	E	RE	NG/DFO	1951	Y	Y	6.3	0.0	0.0
Falls City	Falls City #6	E	E	RE	NG/DFO	1958	Y	Y	6.0	0.0	0.0
Falls City Total									**41.50**	**0**	**19.70**
Fremont	Fremont Unit 6	E	B	ST	SUB/NG	1958	Y	N	16.9	0.0	15.4
Fremont	Fremont Unit 7	E	B	ST	SUB/NG	1963	Y	N	22.0	0.0	19.9
Fremont	Fremont Unit 8	E	B	ST	SUB/NG	1976	Y	N	85.3	0.0	86.4
Fremont	Fremont CT	E	P	CT	NG/DFO	2003	Y	N	37.6	0.0	37.5
Fremont	Fremont Cottonwood Wind	E	I	WT	WND	2018	N	N	40.4	0.0	13.0
Fremont	Fremont Solar	E	I	S	SUN	2018	N	Y	2.3	0.0	0.0
Fremont Total									**204.3**	**0**	**172.2**
Grand Island	Burdick GT1	E	P	GT	NG/DFO	1968	Y	N	13.0	740.0	13.0
Grand Island	Burdick GT2	E	P	GT	NG/DFO	2003	Y	N	34.0	1,427.0	35.0
Grand Island	Burdick GT3	E	P	GT	NG/DFO	2003	Y	N	34.0	4,669.0	35.0
Grand Island	Platte Generating Station	E	B	ST	SUB	1982	Y	N	100.0	361,807.0	100.0
Grand Island	Prairie Breeze 3 Wind	E	I	WT	WND	2016	N	N	35.8	131,355.0	0.0
Grand Island	Grand Island Solar	E	I	S	WND	2019	Y	Y	1.0	2,016.0	0.0
Grand Island Total									**217.80**	**502,014**	**183**
Hastings	CCC Hastings Wind	E	I	WT	WND	2016	N	N	1.7	6,880.0	0.0
Hastings	DHPC-#1	E	P	GT	NG/DFO	1972	Y	N	18.0	1,213.0	18.0
Hastings	Hastings-NDS#4	E	P	ST	NG/DFO	1957	Y	N	15.5	2,461.0	16.0
Hastings	Hastings-NDS#5	E	P	ST	NG/DFO	1967	Y	N	23.6	2,888.0	24.0
Hastings	Whelan Energy Center #1	E	B	ST	SUB	1981	Y	N	76.0	344,000.0	76.0
Hastings	Whelan Energy Center #2	E	B	ST	SUB	2011	Y	N	220.0	752,376.0	220.0
Hastings	Hastings Community Solar	E	I	S	SUN	2019	N	Y	1.5	3,543.0	0.0
Hastings Total									**356.30**	**1,113,361**	**354**
LES	Laramie River Station	E	B	ST	SUB	1982	Y	N	198.0	0.0	198.0
LES	J St	E	P	GT	NG/DFO	1972	Y	N	29.0	0.0	30.1
LES	Rokeby 1	E	P	GT	NG/DFO	1975	Y	N	71.0	0.0	69.5
LES	Rokeby 2	E	P	GT	NG/DFO	1997	Y	N	90.0	0.0	90.3
LES	Rokeby 3	E	P	GT	NG/DFO	2001	Y	N	94.0	0.0	94.5
LES	TBS CT1/CC1	E	P	CC	NG/DFO	2003	Y	N	119.0	0.0	118.9
LES	TBS CT 3	E	P	GT	NG/DFO	2003	Y	N	45.0	0.0	45.4
LES	WSEC4	E	B	ST	SUB	2007	Y	N	104.0	0.0	103.6
LES	Rokeby Black Start	E	E	RE	DFO	1997	Y	N	3.0	0.0	0.0

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Utility	Unit Name	Unit Status	Duty Cycle	Unit Type	Fuel Type	Commercial Operation Date	On Site Fuel Storage	Behind the Meter	Nameplate Capacity	Total Generation 2023 (MWh)	Accredited Capacity 2024
LES	TBS Black Start	E	E	RE	DFO	2004	Y	N	1.6	0.0	0.0
LES	Landfill Gas Generator	E	B	RE	LFG	2014	N	N	5.0	0.0	4.8
LES	Arbuckle Mountain Wind	E	I	WT	WND	2016	N	N	100.0	0.0	28.0
LES	Buckeye Wind	E	I	WT	WND	2016	N	N	100.0	0.0	19.8
LES	Prairie Breeze 2 Wind	E	I	WT	WND	2016	N	N	73.4	0.0	13.2
LES	LES Community Solar	E	B	S	SUN	2016	N	Y	3.6	0.0	0.0
LES	LES Wind	E	I	WT	WND	1999	N	Y	1.3	0.0	0.0
LES Total									**1,037.90**	**0**	**816.10**
MEAN	Alliance #1	E	P	RE	DFO	2002	Y	N	1.8	0.0	1.9
MEAN	Alliance #2	E	P	RE	DFO	2002	Y	N	1.8	0.0	1.9
MEAN	Alliance #3	E	P	RE	DFO	2002	Y	N	1.8	0.0	1.8
MEAN	Ansley #2	E	P	RE	NG/DFO	1972	Y	N	0.9	0.0	0.9
MEAN	Ansley #3	E	P	RE	NG/DFO	1968	Y	N	0.7	0.0	0.6
MEAN	Benklemen	E	P	RE	NG/DFO	1968	Y	N	0.9	0.0	0.8
MEAN	Broken Bow #2	E	P	RE	NG/DFO	1971	Y	N	3.5	0.0	3.0
MEAN	Broken Bow #4	E	P	RE	NG/DFO	1949	Y	N	0.8	0.0	0.8
MEAN	Broken Bow #5	E	P	RE	NG/DFO	1959	Y	N	1.0	0.0	1.0
MEAN	Broken Bow #6	E	P	RE	NG/DFO	1961	Y	N	2.3	0.0	2.1
MEAN	Burwell #2	E	P	RE	NG/DFO	1962	Y	N	1.4	0.0	1.3
MEAN	Burwell #3	E	P	RE	NG/DFO	1967	Y	N	1.1	0.0	1.1
MEAN	Burwell #4	E	P	RE	NG/DFO	1972	Y	N	0.9	0.0	0.8
MEAN	Callaway #3	E	P	RE	DFO	1958	Y	N	0.5	0.0	0.5
MEAN	Callaway #4	E	P	RE	DFO	2004	Y	N	0.4	0.0	0.4
MEAN	Chappell #5	E	P	RE	DFO	1982	Y	N	1.1	0.0	0.9
MEAN	Crete #7	E	P	RE	NG/DFO	1972	Y	N	6.0	0.0	6.3
MEAN	Curtis #1	E	P	RE	NG/DFO	1975	Y	N	1.4	0.0	0.0
MEAN	Curtis #2	E	P	RE	NG/DFO	1969	Y	N	1.1	0.0	1.1
MEAN	Curtis #4	E	P	RE	NG/DFO	1955	Y	N	0.9	0.0	0.8
MEAN	Kimball #1	E	P	RE	NG/DFO	1955	Y	N	1.0	0.0	0.0
MEAN	Kimball #2	E	P	RE	NG/DFO	1956	Y	N	1.0	0.0	0.0
MEAN	Kimball #3	E	P	RE	NG/DFO	1959	Y	N	1.3	0.0	1.0
MEAN	Kimball #4	E	P	RE	NG/DFO	1960	Y	N	1.3	0.0	1.1
MEAN	Kimball #5	E	P	RE	NG/DFO	1951	Y	N	0.9	0.0	0.0
MEAN	Kimball #6	E	P	RE	NG/DFO	1975	Y	N	3.9	0.0	3.5
MEAN	Oxford #2	E	P	RE	NG/DFO	1952	Y	N	0.7	0.0	0.6
MEAN	Oxford #3	E	P	RE	NG/DFO	1956	Y	N	0.9	0.0	0.9
MEAN	Oxford #4	E	P	RE	NG/DFO	1956	Y	N	0.7	0.0	0.7
MEAN	Oxford #5	E	P	RE	DFO	1972	Y	N	1.4	0.0	1.4
MEAN	Pender #1	E	P	RE	NG/DFO	1968	Y	N	1.6	0.0	1.6
MEAN	Pender #2	E	P	RE	NG/DFO	1973	Y	N	1.6	0.0	1.6
MEAN	Pender #3	E	P	RE	DFO	1953	Y	N	0.6	0.0	0.0
MEAN	Pender #4	E	P	RE	DFO	1961	Y	N	0.9	0.0	0.7

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Utility	Unit Name	Unit Status	Duty Cycle	Unit Type	Fuel Type	Commercial Operation Date	On Site Fuel Storage	Behind the Meter	Nameplate Capacity	Total Generation 2023 (MWh)	Accredited Capacity 2024
MEAN	Red Cloud #2	E	P	RE	NG/DFO	1953	Y	N	1.0	0.0	0.8
MEAN	Red Cloud #3	E	P	RE	NG/DFO	1960	Y	N	1.4	0.0	1.2
MEAN	Red Cloud #4	E	P	RE	NG/DFO	1968	Y	N	1.4	0.0	1.1
MEAN	Red Cloud #5	E	P	RE	NG/DFO	1974	Y	N	2.3	0.0	1.9
MEAN	Stuart #1	E	P	RE	NG/DFO	1965	Y	N	0.7	0.0	0.8
MEAN	Stuart #4	E	P	RE	NG/DFO	1996	Y	N	0.8	0.0	0.8
MEAN	West Point #2	E	P	RE	NG/DFO	1947	Y	N	2.3	0.0	2.2
MEAN	West Point #3	E	P	RE	NG/DFO	1959	Y	N	1.3	0.0	1.1
MEAN	West Point #4	E	P	RE	NG/DFO	1965	Y	N	0.9	0.0	0.8
MEAN	Wisner #4	E	P	RE	DFO	2008	Y	N	1.5	0.0	1.5
MEAN	Wisner #5	E	P	RE	DFO	2008	Y	N	1.5	0.0	1.5
MEAN	Arnold #1	E	E	RE	NG/DFO	1960	Y	Y	0.0	0.0	0.0
MEAN	Arnold #2	E	E	RE	NG/DFO	1942	Y	Y	0.0	0.0	0.0
MEAN	Arnold #3	E	E	RE	NG/DFO	1946	Y	Y	0.0	0.0	0.0
MEAN	Beaver City #1	E	E	RE	NG/DFO	1958	Y	Y	0.0	0.0	0.0
MEAN	Beaver City #2	E	E	RE	NG/DFO	1961	Y	Y	0.0	0.0	0.0
MEAN	Beaver City #4	E	E	RE	NG/DFO	1968	Y	Y	0.0	0.0	0.0
MEAN	Blue Hill#1	E	E	RE	NG/DFO	1964	Y	Y	0.8	0.0	0.0
MEAN	Blue Hill#2	E	E	RE	DFO	1948	Y	Y	0.4	0.0	0.0
MEAN	Broken Bow #1	E	E	RE	DFO	1933	Y	Y	0.6	0.0	0.0
MEAN	Broken Bow #3	E	E	RE	NG/DFO	1936	Y	Y	0.9	0.0	0.0
MEAN	Burwell#1	E	E	RE	NG/DFO	1955	Y	Y	0.7	0.0	0.0
MEAN	Chappell #2	E	E	RE	DFO	1945	Y	Y	0.2	0.0	0.0
MEAN	Crete #1	E	E	RE	NG/DFO	1939	Y	Y	0.0	0.0	0.0
MEAN	Crete #2	E	E	RE	NG/DFO	1955	Y	Y	0.0	0.0	0.0
MEAN	Crete #3	E	E	RE	NG/DFO	1951	Y	Y	0.0	0.0	0.0
MEAN	Crete #4	E	E	RE	NG/DFO	1947	Y	Y	0.0	0.0	0.0
MEAN	Crete #5	E	E	RE	NG/DFO	1962	Y	Y	0.0	0.0	0.0
MEAN	Crete #6	E	E	RE	NG/DFO	1965	Y	Y	0.0	0.0	0.0
MEAN	Sidney #1	E	E	RE	NG/DFO	1967	Y	Y	1.3	0.0	0.0
MEAN	Sidney #2	E	E	RE	NG/DFO	1973	Y	Y	0.0	0.0	0.0
MEAN	Sidney #3	E	E	RE	DFO	1953	Y	Y	0.8	0.0	0.0
MEAN	Sidney #4	E	E	RE	NG/DFO	1961	Y	Y	0.0	0.0	0.0
MEAN	Sidney #5	E	E	RE	NG/DFO	1939	Y	Y	3.1	0.0	0.0
MEAN	Stuart #2	E	E	RE	DFO	1960	Y	Y	0.3	0.0	0.0
MEAN	Stuart #3	E	E	RE	DFO	1954	Y	Y	0.3	0.0	0.0
MEAN	Stuart #4	E	E	RE	DFO	1946	Y	Y	0.8	0.0	0.0
MEAN Total									**72.79**	**0**	**54.81**
NELIGH	Neligh #1	E	P	RE	OBL	2012	Y	N	1.8	2.0	1.8
NELIGH	Neligh #2	E	P	RE	OBL	2012	Y	N	1.8	3.0	1.8
NELIGH	Neligh #3	E	P	RE	OBL	2012	Y	N	1.8	1.1	1.8
NELIGH	Neligh #4	E	P	RE	OBL	2012	Y	N	0.3	0.0	0.3
Neligh Total									**5.73**	**6.11**	**5.73**

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Utility	Unit Name	Unit Status	Duty Cycle	Unit Type	Fuel Type	Commercial Operation Date	On Site Fuel Storage	Behind the Meter	Nameplate Capacity	Total Generation 2023 (MWh)	Accredited Capacity 2024
Nebraska City	Nebraska City #5	E	P	RE	NG/DFO	1964	Y	N	2.0	0.0	1.6
Nebraska City	Nebraska City #6	E	P	RE	NG/DFO	1967	Y	N	2.1	0.0	1.5
Nebraska City	Nebraska City #7	E	P	RE	NG/DFO	1969	Y	N	2.1	0.0	1.5
Nebraska City	Nebraska City #8	E	P	RE	NG/DFO	1970	Y	N	4.1	0.0	3.5
Nebraska City	Nebraska City #9	E	P	RE	NG/DFO	1974	Y	N	6.4	0.0	5.6
Nebraska City	Nebraska City #10	E	P	RE	NG/DFO	1979	Y	N	6.5	0.0	5.8
Nebraska City	Nebraska City #11	E	P	RE	NG/DFO	1998	Y	N	4.6	0.0	4.0
Nebraska City	Nebraska City #12	E	P	RE	NG/DFO	1998	Y	N	4.6	0.0	4.0
Nebraska City	Nebraska City #2	E	E	RE	NG/DFO	1953	Y	Y	1.5	0.0	0.0
Nebraska City	Nebraska City #3	E	E	RE	NG/DFO	1955	Y	Y	2.5	0.0	0.0
Nebraska City	Nebraska City #4	E	E	RE	NG/DFO	1957	Y	Y	3.1	0.0	0.0
Nebraska City	Nebraska City #13	E	E	RE	DFO	1998	Y	Y	4.6	0.0	0.0
Nebraska City	Nebraska City #14	E	E	RE	DFO	2013	Y	Y	0.6	0.0	0.0
Nebraska City Total									**44.69**	**0**	**27.45**
Northeastern NPPD	Cottonwood	E	I	WT	WND	2018	N	N	17.5	0.0	6.0
Northeastern NPPD	Osmond 1	E	I	RE	DFO	2024	N	0	1.6	0.0	1.6
Northeast Total									**19.10**	**0**	**7.60**
NPPD	ADM	E	B	ST	SUB	2009	Y	N	71.4	0.0	66.4
NPPD	Ainsworth Wind	E	I	WT	WND	2005	N	N	59.4	0.0	9.1
NPPD	Auburn #1	E	P	RE	NG/DFO	1982	Y	N	2.4	0.0	2.0
NPPD	Auburn #2	E	P	RE	NG/DFO	1949	Y	N	1.0	0.0	1.0
NPPD	Auburn #4	E	P	RE	NG/DFO	1993	Y	N	3.8	0.0	3.0
NPPD	Auburn #5	E	P	RE	NG/DFO	1973	Y	N	3.4	0.0	3.0
NPPD	Auburn #6	E	P	RE	NG/DFO	1967	Y	N	2.8	0.0	2.0
NPPD	Auburn #7	E	P	RE	NG/DFO	1987	Y	N	5.6	0.0	5.0
NPPD	Beatrice Power Station	E	I	CC	NG	2005	N	N	247.1	0.0	219.5
NPPD	Belleville 4	E	P	RE	NG/DFO	1955	Y	N	0.0	0.0	0.0
NPPD	Belleville 5	E	P	RE	NG/DFO	1961	Y	N	1.8	0.0	1.3
NPPD	Belleville 6	E	P	RE	NG/DFO	1966	Y	N	3.8	0.0	2.6
NPPD	Belleville 7	E	P	RE	NG/DFO	1971	Y	N	5.1	0.0	3.3
NPPD	Belleville 8	E	P	RE	NG/DFO	2006	Y	N	2.8	0.0	2.8
NPPD	Broken Bow Wind	E	I	WT	WND	2013	N	N	80.0	0.0	12.9
NPPD	Broken Bow II Wind	E	I	WT	WND	2014	N	N	73.1	0.0	9.1
NPPD	Cambridge	E	P	RE	DFO	1972	Y	N	4.0	0.0	3.9
NPPD	Canaday	E	P	ST	NG	1958	N	N	108.8	0.0	99.3
NPPD	Columbus 1	E	B	H	WAT	1936	Y	N	15.2	0.0	15.0
NPPD	Columbus 2	E	B	H	WAT	1936	Y	N	15.2	0.0	15.0
NPPD	Columbus 3	E	B	H	WAT	1936	Y	N	15.2	0.0	15.0
NPPD	Cooper	E	B	ST	NUC	1974	N	N	801.0	0.0	768.5
NPPD	Crofton Bluffs Wind	E	I	WT	WND	2013	N	N	42.0	0.0	5.5
NPPD	David City 1	E	P	RE	NG/DFO	1960	Y	N	1.5	0.0	1.3
NPPD	David City 2	E	P	RE	DFO	1949	Y	N	1.0	0.0	0.8
NPPD	David City 3	E	P	RE	NG/DFO	1955	Y	N	1.0	0.0	0.9
NPPD	David City 4	E	P	RE	NG/DFO	1966	Y	N	2.3	0.0	1.8
NPPD	David City 5	E	P	RE	DFO	1996	Y	N	1.6	0.0	1.3
NPPD	David City 6	E	P	RE	DFO	1996	Y	N	1.6	0.0	0.0
NPPD	David City 7	E	P	RE	DFO	1996	Y	N	1.6	0.0	1.3

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Utility	Unit Name	Unit Status	Duty Cycle	Unit Type	Fuel Type	Commercial Operation Date	On Site Fuel Storage	Behind the Meter	Nameplate Capacity	Total Generation 2023 (MWh)	Accredited Capacity 2024
NPPD	Elkhorn Ridge Wind	E	I	WT	WND	2009	N	N	80.0	0.0	6.4
NPPD	Franklin 1	E	P	RE	NG/DFO	1963	Y	N	0.7	0.0	0.9
NPPD	Franklin 2	E	P	RE	NG/DFO	1974	Y	N	1.4	0.0	1.0
NPPD	Franklin 3	E	P	RE	NG/DFO	1968	Y	N	1.1	0.0	1.0
NPPD	Franklin 4	E	P	RE	NG/DFO	1955	Y	N	0.9	0.0	0.8
NPPD	Gentleman 1	E	B	ST	SUB	1979	Y	N	681.3	0.0	665.0
NPPD	Gentleman 2	E	B	ST	SUB	1982	Y	N	681.3	0.0	700.0
NPPD	Hallam	E	P	GT	NG/DFO	1973	Y	N	56.7	0.0	42.9
NPPD	Hebron	E	P	GT	DFO	1973	N	N	56.7	0.0	42.1
NPPD	Kearney	E	B	H	WAT	1921	N	N	1.5	0.0	0.0
NPPD	Kingsley (CNPPID)	E	B	H	WAT	1985	Y	N	41.7	0.0	41.7
NPPD	Laredo Ridge Wind	E	I	WT	WND	2011	N	N	80.0	0.0	12.8
NPPD	Madison 1	E	P	RE	NG/DFO	1969	Y	N	2.1	0.0	1.3
NPPD	Madison 2	E	P	RE	NG/DFO	1959	Y	N	1.4	0.0	1.0
NPPD	Madison 3	E	P	RE	NG/DFO	1953	Y	N	1.1	0.0	1.0
NPPD	Madison 4	E	P	RE	DFO	1946	Y	N	1.4	0.0	0.7
NPPD	McCook	E	P	GT	DFO	1973	Y	N	56.7	0.0	40.9
NPPD	Monroe	E	B	H	WAT	1936	N	N	8.4	0.0	1.0
NPPD	North Platte 1	E	B	H	WAT	1935	Y	N	13.1	0.0	12.0
NPPD	North Platte 2	E	B	H	WAT	1935	Y	N	13.1	0.0	12.0
NPPD	Ord 1	E	P	RE	NG/DFO	1973	Y	N	5.0	0.0	5.0
NPPD	Ord 2	E	P	RE	NG/DFO	1966	Y	N	1.5	0.0	1.0
NPPD	Ord 3	E	P	RE	NG/DFO	1963	Y	N	2.5	0.0	2.0
NPPD	Ord 4	E	P	RE	DFO	1997	Y	N	1.5	0.0	1.4
NPPD	Ord 5	E	P	RE	DFO	1997	Y	N	1.5	0.0	1.4
NPPD	Sheldon 1	E	B	ST	SUB	1961	Y	N	108.8	0.0	104.0
NPPD	Sheldon 2	E	B	ST	SUB	1965	Y	N	119.9	0.0	112.0
NPPD	Springview Wind	E	I	WT	WND	2012	N	N	3.0	0.0	0.4
NPPD	Steele Flats Wind	E	I	WT	WND	2013	N	N	75.0	0.0	14.8
NPPD	Wahoo #1	E	P	RE	NG/DFO	1960	Y	N	2.1	0.0	1.7
NPPD	Wahoo #3	E	P	RE	NG/DFO	1973	Y	N	4.4	0.0	3.6
NPPD	Wahoo #5	E	P	RE	NG/DFO	1952	Y	N	2.2	0.0	1.8
NPPD	Wahoo #6	E	P	RE	NG/DFO	1969	Y	N	3.5	0.0	2.9
NPPD	Western Sugar	E	B	ST	SUB	2014	Y	N	5.0	0.0	4.6
NPPD	Wilber 4	E	P	RE	DFO	1949	Y	N	0.9	0.0	0.8
NPPD	Wilber 5	E	P	RE	DFO	1958	Y	N	0.8	0.0	0.6
NPPD	Wilber 6	E	P	RE	DFO	1997	Y	N	1.6	0.0	1.5
NPPD	Loup PPD - Creston Ridge Wind	E	I	WT	WND	2016	N	Y	6.8	0.0	0.0
NPPD	Loup PPD - Creston Ridge (#2)	E	I	WT	WND	2017	N	Y	6.9	0.0	0.0
NPPD	Loup PPD - City of Schuyler Solar	E	I	S	SUN	2019	N	Y	0.5	0.0	0.0
NPPD	oup PPD - City of Schuyler Solar Phase :	E	I	S	SUN	2021	N	Y	0.5	0.0	0.0
NPPD	Scottsbluff Community Solar 1	E	I	S	SUN	2017	N	Y	0.1	0.0	0.0
NPPD	Scottsbluff Community Solar 2	E	I	S	SUN	2020	N	Y	4.4	0.0	0.0
NPPD	Venango Community Solar	E	I	S	SUN	2017	N	Y	0.1	0.0	0.0
NPPD	Kearney Community Solar	E	I	S	SUN	2018	N	Y	5.7	0.0	0.0
NPPD	City of Central City Solar Park	E	I	S	SUN	2015	N	Y	0.2	0.0	0.0
NPPD	City of Central City Solar Park (2)	E	I	S	SUN	2017	N	Y	0.4	0.0	0.0

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2024 Statewide Existing Generating Capability Data

Utility	Unit Name	Unit Status	Duty Cycle	Unit Type	Fuel Type	Commercial Operation Date	On Site Fuel Storage	Behind the Meter	Nameplate Capacity	Total Generation 2023 (MWh)	Accredited Capacity 2024
NPPD	City of Cozad Solar	E	I	S	SUN	2021	N	Y	2.0	0.0	0.0
NPPD	City of Gothenburg Solar 1	E	I	S	SUN	2018	N	Y	0.5	0.0	0.0
NPPD	City of Gothenburg Solar 2	E	I	S	SUN	2019	N	Y	0.5	0.0	0.0
NPPD	Village of Hemingford Solar	E	I	S	SUN	2021	N	Y	1.0	0.0	0.0
NPPD	City of Holdrege Housing Proj Solar	E	I	S	SUN	2017	N	Y	0.1	0.0	0.0
NPPD	City of Lexington Solar	E	I	S	SUN	2017	N	Y	3.6	0.0	0.0
NPPD	City of Lexington Airport Solar	E	I	S	SUN	2021	N	Y	1.0	0.0	0.0
NPPD	City of Seward Wind	E	I	WT	WND	2018	N	Y	1.7	0.0	0.0
NPPD	Cornhusker PPD - Renewable Solar LLC	E	I	S	SUN	2019	N	Y	0.3	0.0	0.0
NPPD	Cuming County RPPD - Wisner Wind	E	I	WT	WND	2020	N	Y	2.5	0.0	0.0
NPPD	Custer PPD - Stemer Solar	E	I	S	SUN	2017	N	Y	0.5	0.0	0.0
NPPD	Custer PPD - Sunny Delight Solar	E	I	S	SUN	2017	N	Y	0.3	0.0	0.0
NPPD	Custer PPD - Blowers Solar	E	I	S	SUN	2017	N	Y	0.3	0.0	0.0
NPPD	Custer PPD - JDRM LLC Solar	E	I	S	SUN	2016	N	Y	0.3	0.0	0.0
NPPD	Custer PPD - B&R LLC Solar	E	I	S	SUN	2016	N	Y	0.3	0.0	0.0
NPPD	Custer PPD - Pandorf Solar	E	I	S	SUN	2017	N	Y	0.6	0.0	0.0
NPPD	Custer PPD - Cockerill Fertilizer Solar 1	E	I	S	SUN	2018	N	Y	0.5	0.0	0.0
NPPD	Custer PPD - Cockerill Fertilizer Solar 2	E	I	S	SUN	2019	N	Y	0.5	0.0	0.0
NPPD	Dawson PPD - Willow Island Solar	E	I	S	SUN	2017	N	Y	0.3	0.0	0.0
NPPD	oward Greeley RPPD - St Paul North Sol	E	I	S	SUN	2024	N	Y	1.0	0.0	0.0
NPPD	Loup Valleys RPPD - North Loup Solar	E	I	S	SUN	2020	N	Y	0.2	0.0	0.0
NPPD	'erennial PPD - Fairmont Area Wind Farr	E	I	WT	WND	2018	N	Y	6.9	0.0	0.0
NPPD	Polk Co PPD - Osceola Wind	E	I	WT	WND	2019	N	Y	2.5	0.0	0.0
NPPD	Polk Co PPD Solar	E	I	S	SUN	2024	N	Y	1.0	0.0	0.0
NPPD	South Central PPD Solar Project	E	I	S	SUN	2022	N	Y	1.0	0.0	0.0
NPPD	Burt Co PPD - Dodge Co Solar	E	I	S	SUN	2022	N	Y	1.0	0.0	0.0
NPPD	Burt Co PPD - Burt Co Solar	E	I	S	SUN	2022	N	Y	1.0	0.0	0.0
NPPD	Norfolk Community Solar	E	I	S	SUN	2022	N	Y	8.7	0.0	0.0
NPPD	Norfolk Battery Energy Storage System	E	ES	ES	ES	2022	N	Y	1.0	0.0	0.0
NPPD	Ainsworth Solar	E	I	S	SUN	2022	N	Y	0.5	0.0	0.0
NPPD	Elkhorn RPPD - Acklic	E	I	S	SUN	2021	N	Y	3.0	0.0	0.0
NPPD	Elkhorn RPPD - Uecker	E	I	S	SUN	2021	N	Y	2.0	0.0	0.0
NPPD	Elkhorn RPPD - Poulsen	E	I	S	SUN	2021	N	Y	1.5	0.0	0.0
NPPD	Southern PD Franklin County Wind	E	I	WT	WND	2023	N	Y	5.6	0.0	0.0
NPPD	Ogallala Solar	E	I	S	SUN	2023	N	Y	1.5	0.0	0.0
NPPD	York Solar	E	I	S	SUN	2023	N	Y	3.2	0.0	0.0
NPPD	Norris PPD - Centerville Solar	E	I	S	SUN	2024	N	Y	1.0	0.0	0.0
NPPD	Norris PPD - Deshler Solar	E	I	S	SUN	2024	N	Y	1.0	0.0	0.0
NPPD	Norris PPD - Ruby Solar	E	I	S	SUN	2024	N	Y	1.0	0.0	0.0
NPPD	City of Wahoo Solar	E	I	S	SUN	2024	N	Y	2.0	0.0	0.0
NPPD	York 1	E	E	RE	DFO	1980	Y	Y	1.0	0.0	0.0
NPPD	York 2	E	E	RE	DFO	1996	Y	Y	1.6	0.0	0.0
NPPD Total									**3,786.1**	**0**	**3,116.5**

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2024 Statewide Existing Generating Capability Data

Utility	Unit Name	Unit Status	Duty Cycle	Unit Type	Fuel Type	Commercial Operation Date	On Site Fuel Storage	Behind the Meter	Nameplate Capacity	Total Generation 2023 (MWh)	Accredited Capacity 2024
OPPD	BRIGHT Battery	E	I	ES	ES	2022	N	N	1.0	0.0	0.5
OPPD	Platteview Solar	E	I	S	SUN	2024	N	N	81.0	0.0	0.4
OPPD	Jones St. #1	E	P	GT	DFO	1973	Y	N	61.2	3,586.8	64.9
OPPD	Jones St. #2	E	P	GT	DFO	1973	Y	N	62.2	4,504.9	64.9
OPPD	Sarpy Co. Black Start	E	E	RE	DFO	1996	Y	Y	3.4	0.0	0.0
OPPD	Tecumseh #1	E	P	RE	DFO	1949	Y	N	0.6	27.9	0.6
OPPD	Tecumseh #2	E	P	RE	DFO	1968	Y	N	1.4	27.9	1.4
OPPD	Tecumseh #3	E	P	RE	DFO	1952	Y	N	1.0	27.9	1.0
OPPD	Tecumseh #4	E	P	RE	DFO	1960	Y	N	1.2	27.9	1.2
OPPD	Tecumseh #5	E	P	RE	DFO	1993	Y	N	2.3	27.9	2.3
OPPD	Elk City Station #1-4	E	B	RE	LFG	2002	N	N	3.1	24,402.8	3.1
OPPD	Elk City Station #5-8	E	B	RE	LFG	2006	N	N	2.9	24,402.8	3.0
OPPD	Cass County #1	E	P	GT	NG	2003	N	N	162.0	99,494.8	0.0
OPPD	Cass County #2	E	P	GT	NG	2003	N	N	161.8	101,153.1	0.0
OPPD	North Omaha #1	E	B	ST	NG	1954	N	N	63.0	7,177.3	0.0
OPPD	North Omaha #2	E	B	ST	NG	1957	N	N	71.8	3,677.8	0.0
OPPD	North Omaha #3	E	B	ST	NG	1959	N	N	92.5	70,129.2	0.0
OPPD	Sarpy County #1	E	P	GT	NG/DFO	1972	Y	N	55.4	21,227.2	60.9
OPPD	Sarpy County #2	E	P	GT	NG/DFO	1972	Y	N	55.9	26,134.0	60.9
OPPD	Sarpy County #3	E	P	GT	NG/DFO	1996	Y	N	107.8	52,120.8	117.6
OPPD	Sarpy County #4	E	P	GT	NG/DFO	2000	Y	N	48.7	24,373.6	62.2
OPPD	Sarpy County #5	E	P	GT	NG/DFO	2000	Y	N	47.9	20,397.2	63.0
OPPD	Nebraska City #1	E	B	ST	SUB	1979	Y	N	650.3	3,445,490.9	650.3
OPPD	Nebraska City #2	E	B	ST	SUB	2009	Y	N	691.0	3,709,181.0	687.2
OPPD	North Omaha #4 (NG)	E	P	ST	NG	1963	N	N	106.0	0.0	0.0
OPPD	North Omaha #4 (Coal)	E	B	ST	SUB/NG	1963	Y	N	117.7	629,932.5	101.8
OPPD	North Omaha #5 (NG)	E	P	ST	NG	1968	Y	N	172.0	0.0	0.0
OPPD	North Omaha #5 (Coal)	E	B	ST	SUB/NG	1968	Y	N	216.2	1,068,449.0	174.9
OPPD	OPPD Community Solar	E	I	S	SUN	2020	N	Y	5.0	10,043.4	0.0
OPPD	*Rattlesnake Creek Wind	E	I	S	WND	2019	N	N	318.2	0.0	0.0
OPPD	Flat Water Wind	E	I	WT	WND	2011	N	N	60.0	230,776.6	12.6
OPPD	Grande Prairie Wind	E	I	WT	WND	2016	N	N	400.0	1,515,867.7	101.5
OPPD	Petersburg Wind	E	I	WT	WND	2012	N	N	40.5	180,367.0	11.4
OPPD	Prairie Breeze Wind	E	I	WT	WND	2014	N	N	200.6	905,022.8	63.3
OPPD	Sholes Wind	E	I	WT	WND	2019	N	N	160.0	772,515.9	39.6
OPPD	BTM	E	DR	DR	DR	NA	N	Y	30.0	0.0	0.0
OPPD Total									**4,255.56**	**12,950,568.83**	**2,350.49**
SCRIBNER	Scribner #1	E	P	RE	OBL	2020	N	N	1.9	0.0	1.5
SCRIBNER	Scribner #2	E	P	RE	OBL	2020	N	N	1.9	0.0	1.5
Scribner Total									**3.75**	**0**	**3**

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2024 Statewide Existing Generating Capability Data

Utility	Unit Name	Unit Status	Duty Cycle	Unit Type	Fuel Type	Commercial Operation Date	On Site Fuel Storage	Behind the Meter	Nameplate Capacity	Total Generation 2023 (MWh)	Accredited Capacity 2024
South Sioux City	SSC Solar	E	I	S	SUN	2018	N	Y	2.1	3,955.34	0.0
South Sioux City	Cotttonwood Wind	E	I	WT	WND	2020	N	N	15.6	70,633.42	7.4
South Sioux City	WWTP Gen	E	I	RE	DFO	2023	Y	Y	1.8	0.0	1.8
South Sioux City	NG Generation Plant	E	P	RE	NG	2022	N	Y	5.0	4,480.70	2.5
South Sioux City Total									**24.4**	**0**	**11.6**
Superior	Community Solar	E	I	S	SUN	2018	N	Y	0.0	0.0	0.0
Superior Total									**0**	**0**	**0**
OPPD	Nebraska City #2	E	B	ST	SUB	2009	Y	N	691.0	3,709,181.0	687.2
OPPD	North Omaha #4 (NG)	E	P	ST	NG	1963	N	N	106.0	0.0	0.0
OPPD	North Omaha #4 (Coal)	E	B	ST	SUB/NG	1963	Y	N	117.7	629,932.5	101.8
OPPD	North Omaha #5 (NG)	E	P	ST	NG	1968	Y	N	172.0	0.0	0.0
WAKEFIELD Total									**1,086.70**	**4,339,113.52**	**789**
WAYNE	Wayne 1	E	P	RE	DFO	1951	Y	N	0.8	0.0	0.7
WAYNE	Wayne 3	E	P	RE	DFO	1956	Y	N	1.9	0.0	1.9
WAYNE	Wayne 4	E	P	RE	DFO	1960	Y	N	2.1	0.0	2.1
WAYNE	Wayne 5	E	P	RE	DFO	1966	Y	N	3.5	0.0	3.3
WAYNE	Wayne 6	E	P	RE	DFO	1968	Y	N	5.3	0.0	5.2
WAYNE	Wayne 7	E	P	RE	DFO	1998	Y	N	3.3	0.0	3.2
WAYNE	Wayne 8	E	P	RE	DFO	1998	Y	N	3.6	0.0	3.6
Wayne Total									**20.4**	**0**	**20**
NE Total									**11,193.1**	**18,905,063.5**	**7,939.6**