

Nebraska Power Association

2020 Load & Capability Report

September 2020

Jason Fortik
Chair, NPA Joint Planning Subcommittee

Background

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

Peak Demand Growth

- **Average annual demand growth rate is 0.6% per year from 2020 through 2039**
- **This is lower than the 0.7% growth rate shown in last year's report**
- **Lower demand growth rates appear to be the new normal**

Existing Resources*

- **7,607 MW of Existing Resources:**

- 1,132 MW Small Coal (<250 MW)
- 3,012 MW Large Coal (>250 MW)
- 770 MW Nuclear
- 2,249 MW Peaking/Intermediate (gas & oil)
- 445 MW Renewables¹

STATE RENEWABLE RESOURCES		
Accredited	Type	Nameplate
310	Wind	1783
114	In-State Hydro	114
11	Landfill Gas	11
10	Biodiesel	10
0	Solar	0
445	TOTAL	1918

- **1,201 MW of Firm Power Purchases** ²

- 847 MW WAPA Hydro Contracts
- 354 MW Other Firm Power Contracts

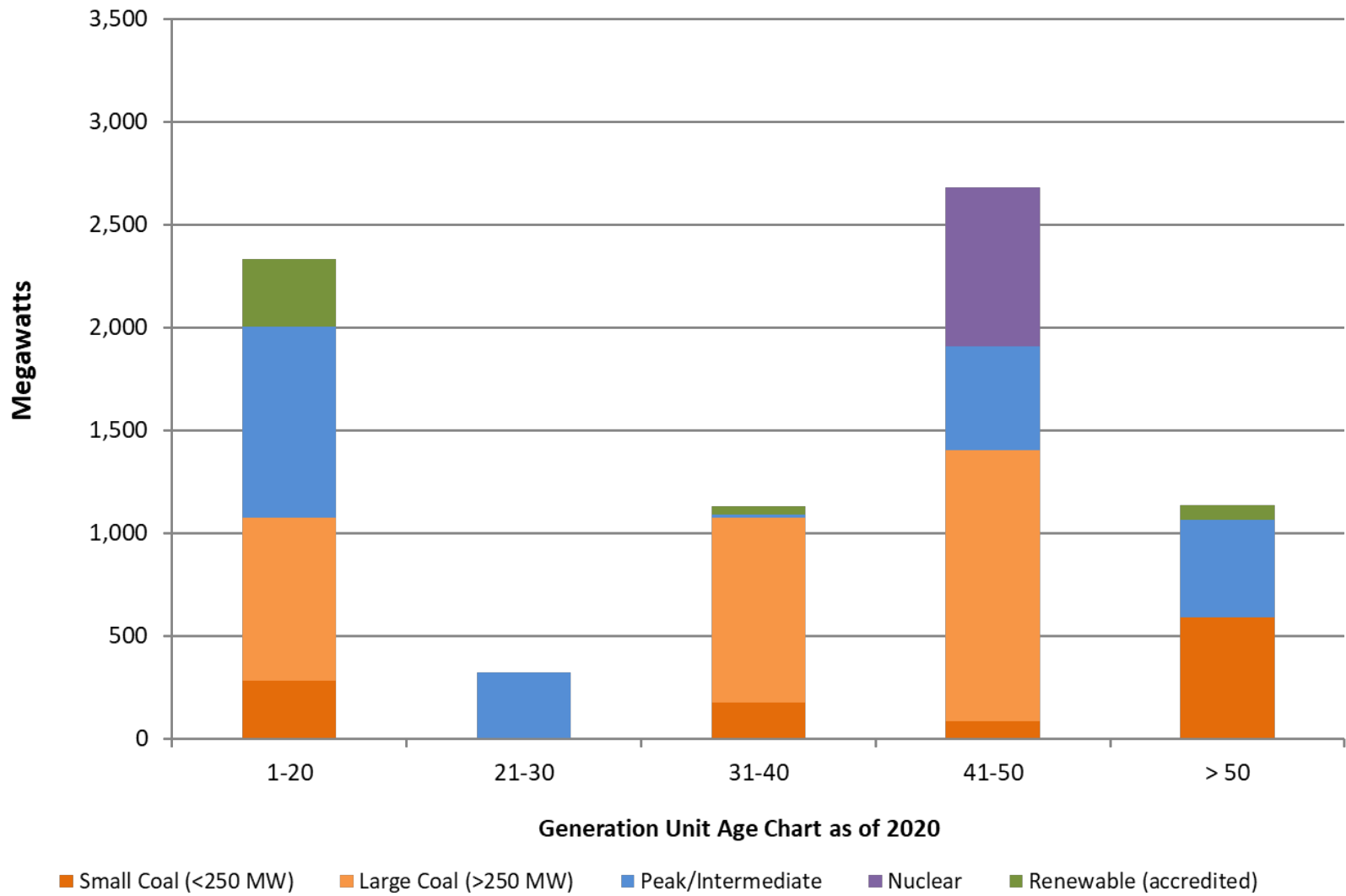
- **70 MW of utility behind the meter nameplate generation (includes solar)**

* In-Service by summer of 2020

¹ Accredited capability

² Capacity reserves are provided by the Firm Power provider

Existing Generating Fleet



Committed, Planned and Studied Resources

	Renewable	Conventional	Unspecified	Total
Committed	50*	0	0	50
Planned	400	600	0	1000
Studied	0	25	50	75
Total	450	625	50	1125

* 50 MW (Nameplate) Grand Island Prairie Hills Wind Farm in 2021

SPP Generation Interconnection Queue for Nebraska (Nameplate)

≈ 1,100 MW Battery Storage

≈ 4,500 MW Solar

≈ 9,500 MW Wind

≈ 3,600 MW Conventional

Other Non-Utility Wind Projects¹

In Service

- Power purchase by Facebook and Adobe from 318 MW Rattlesnake Creek wind project.
- WEC Energy Group Purchase and Sale Agreement for 80% of 202.5 MW Upstream Wind Energy Center in early 2019. Invenergy to retain 20% interest in project.
- J.M. Smucker Company 60 MW Power Purchase from 230 MW Plum Creek Wind Project in 2020.
- Vail Resorts 310,000 annual MWh Power Purchase from Plum Creek Wind Project in 2020.

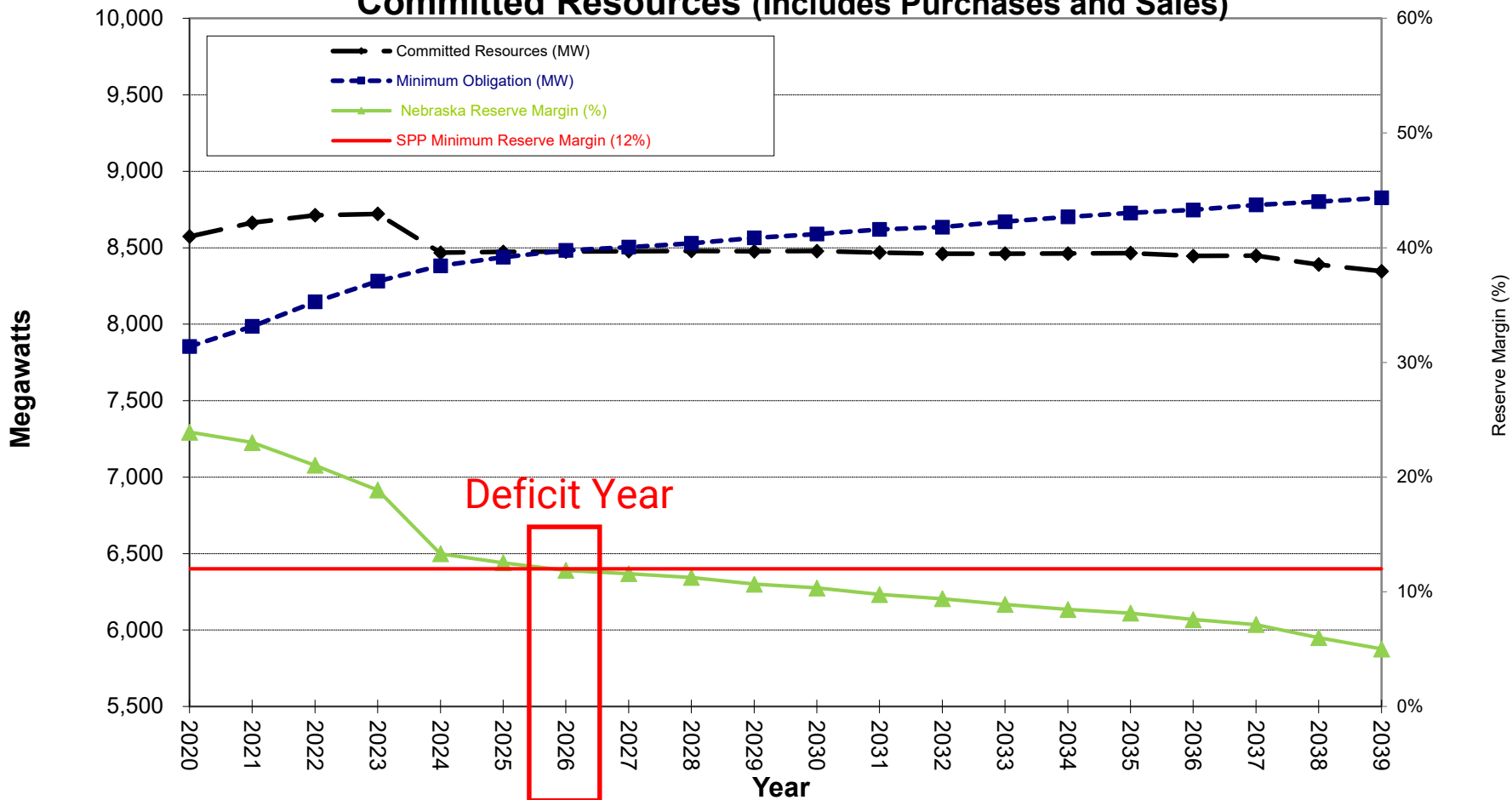
Future

- Hormel Foods 74 MW Power Purchase from Milligan 3 in 2020 .
- Power purchase agreement by AT&T for 300 MW Thunderhead Wind Energy Center in 2020.

1:) Information gathered from publicly available industry publications and newspapers. These projects do not represent retail choice.

Load & Capability with Committed Resources

EXHIBIT 1
Statewide Capability vs. Obligation
Committed Resources (Includes Purchases and Sales)

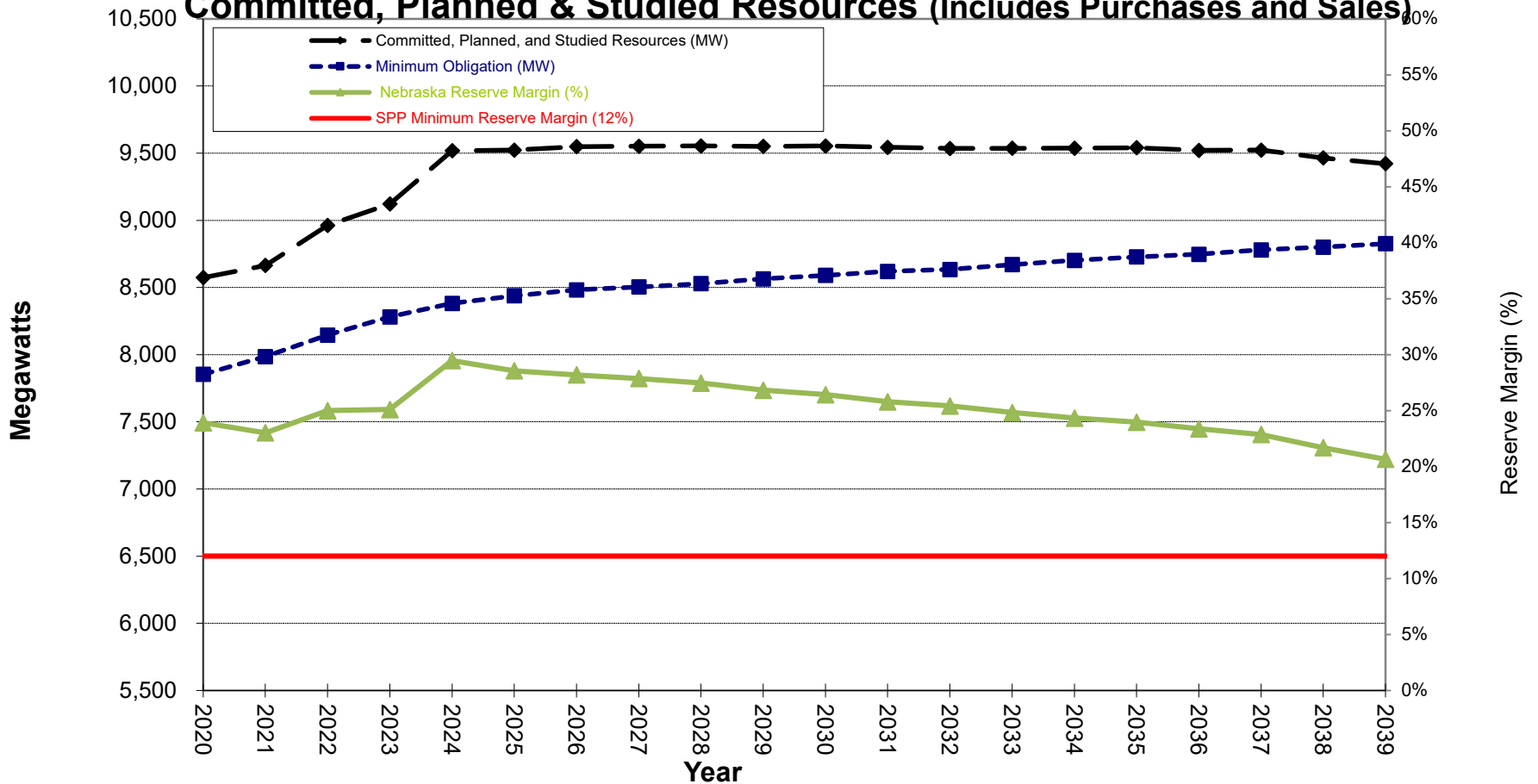


Load & Capability with Committed, Planned & Studied Resources

EXHIBIT 3

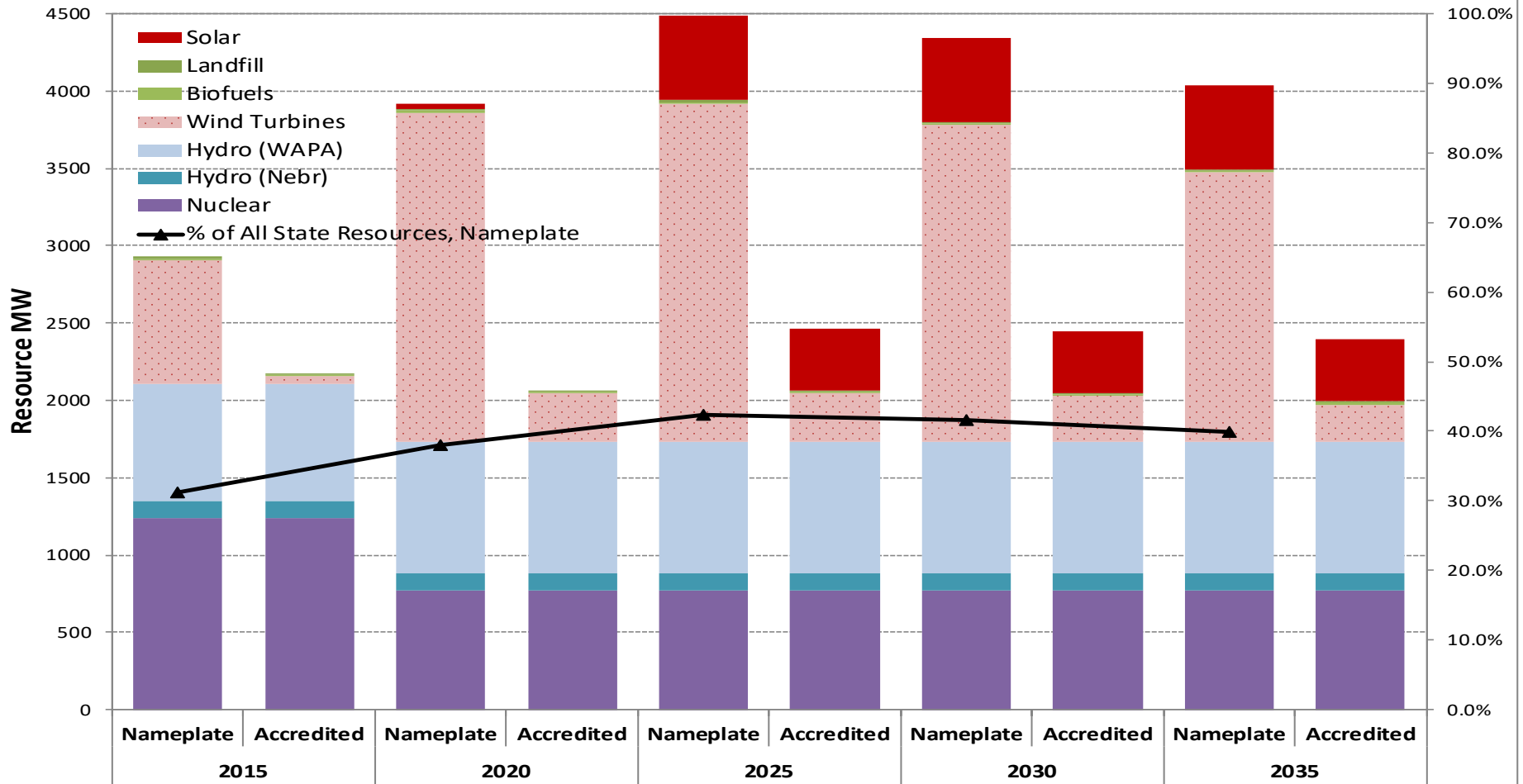
Statewide Capability vs. Obligation

Committed, Planned & Studied Resources (Includes Purchases and Sales)



Renewable and Greenhouse Gas Mitigating Resources

Statewide Renewable and Greenhouse Gas Mitigating Resources, MW



Nameplate – maximum rated output of generator

Accredited – SPP rated generator output to reliably serve peak load

Conclusions

- Demand growth of 0.6% per year is lower than the 0.7% shown in last year's report.
- Nebraska has sufficient existing and committed resources to meet its SPP Reserve Margin requirements through 2026.
- Due to load growth OPPD is continuing to study options for additions to its resource portfolio.