



Nebraska Power Association 2019 Load & Capability Report

September 2019

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 0.7% per year from 2019 through 2038**
- **This is higher than the 0.4% growth rate shown in last year's report**
- **OPPD projected load growth**
 - 1% growth in this year's report vs 0.1% in last years
- **Demand Reduction Factors**
 - The majority of the other utilities are experiencing lower growth rates
 - Proliferation of more efficient end-use devices
 - Utility initiated demand side resource programs
 - Distributed generation

Existing Resources*

- **7,564 MW of Existing Resources:**

- 1,132 MW Small Coal (<250 MW)
- 3,012 MW Large Coal (>250 MW)
- 770 MW Nuclear
- 433 MW Renewables¹

Accredited	Type	Nameplate
305	Wind	1623
111	In-state Hydro	111
11	Landfill Gas	11
6	Biodiesel	6
0	Solar	0
433	TOTAL	1751

- 2,218 MW Peaking/Intermediate (gas & oil)

- **1,232 MW of Firm Power Purchases** ²

- 846 MW WAPA Hydro Contracts
- 386 MW Other Firm Power Contracts

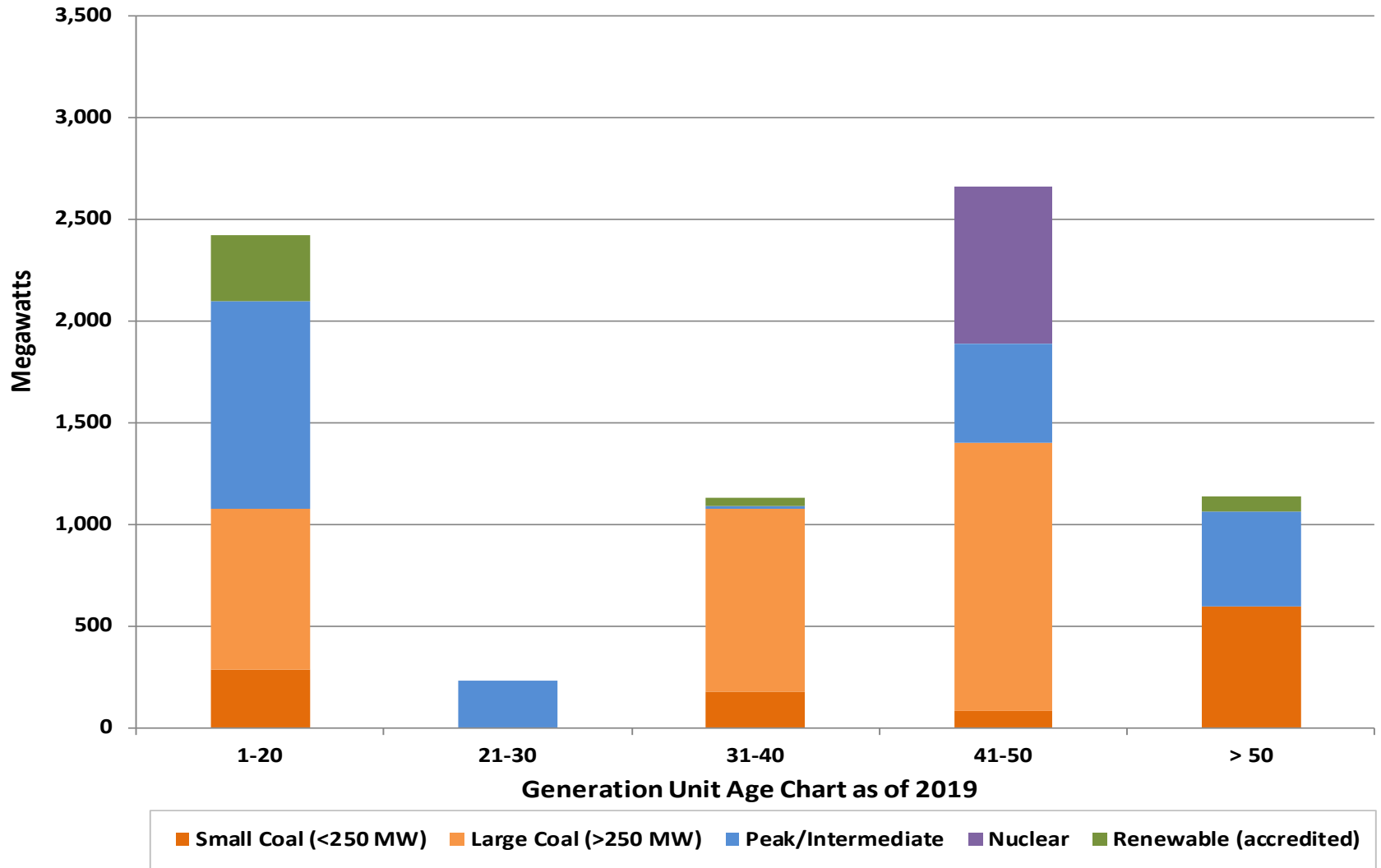
- **52 MW of utility behind the meter nameplate generation**

* In-Service by summer of 2019

¹ Accredited capability

² Capacity reserves are provided by the Firm Power provider

Existing Generating Fleet



Committed, Planned and Studied Resources (MW)

Nameplate Values

	Renewables	Conventional	Unspecified	Total
Committed	210*	0	0	210
Planned	0	0	0	0
Studied	0	25	850	875
Total	210	25	850	1085

*160 MW OPPD Sholes Wind Farm in 2019 and 50 MW Grand Island Prairie Hills Wind Farm in 2020

SPP Generation Interconnection Queue for Nebraska

≈ 1,100 MW Battery Storage

≈ 2,000 MW Solar

≈ 10,000 MW Wind

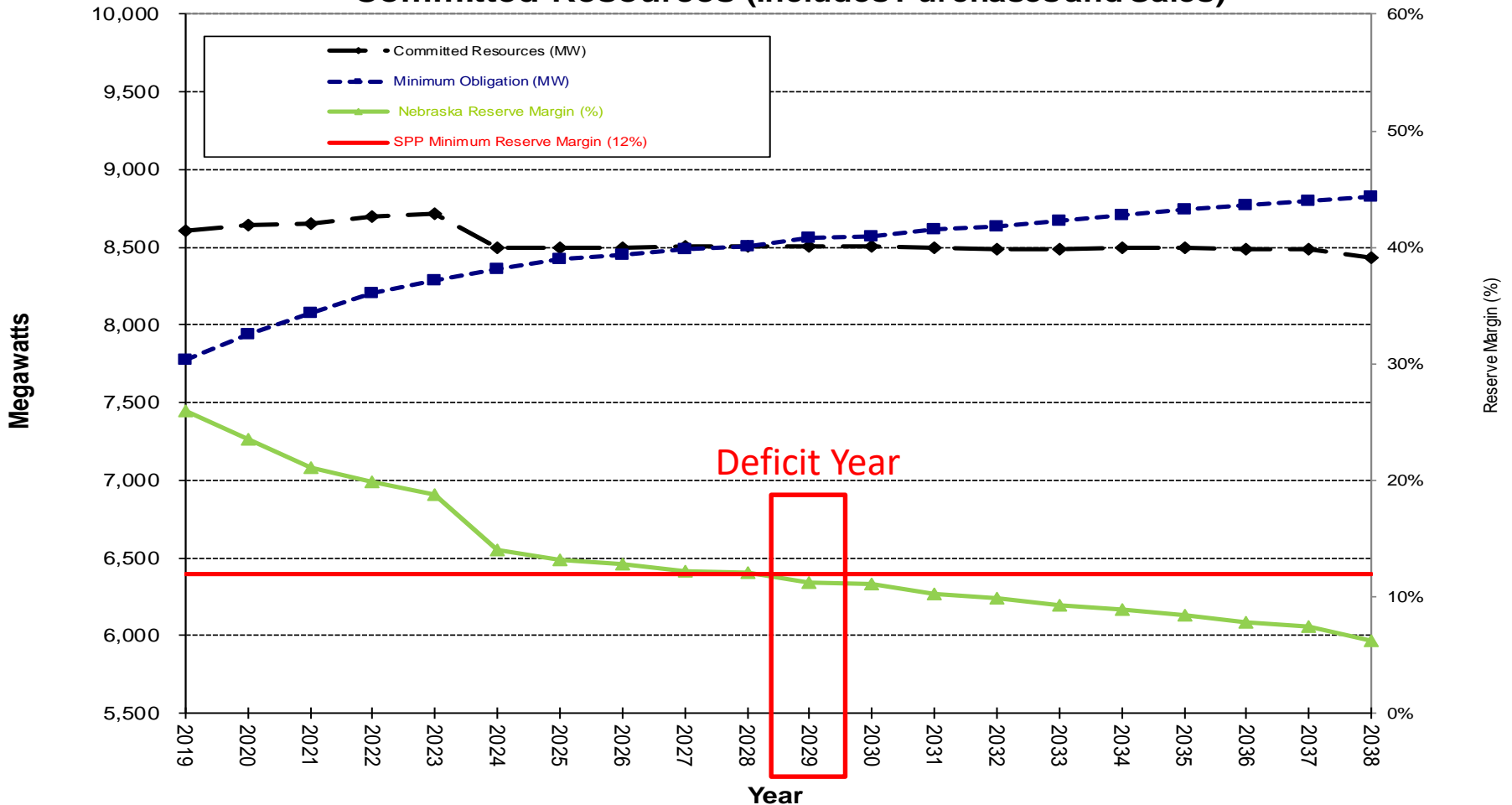
OTHER NON-UTILITY WIND PROJECTS¹

- 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
- Hormel Foods 74 MW Power Purchase from Milligan 3 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, and Studied Resources

EXHIBIT 3
Statewide Capability vs. Obligation
Committed, Planned & Studied Resources (Includes Purchases and Sales)

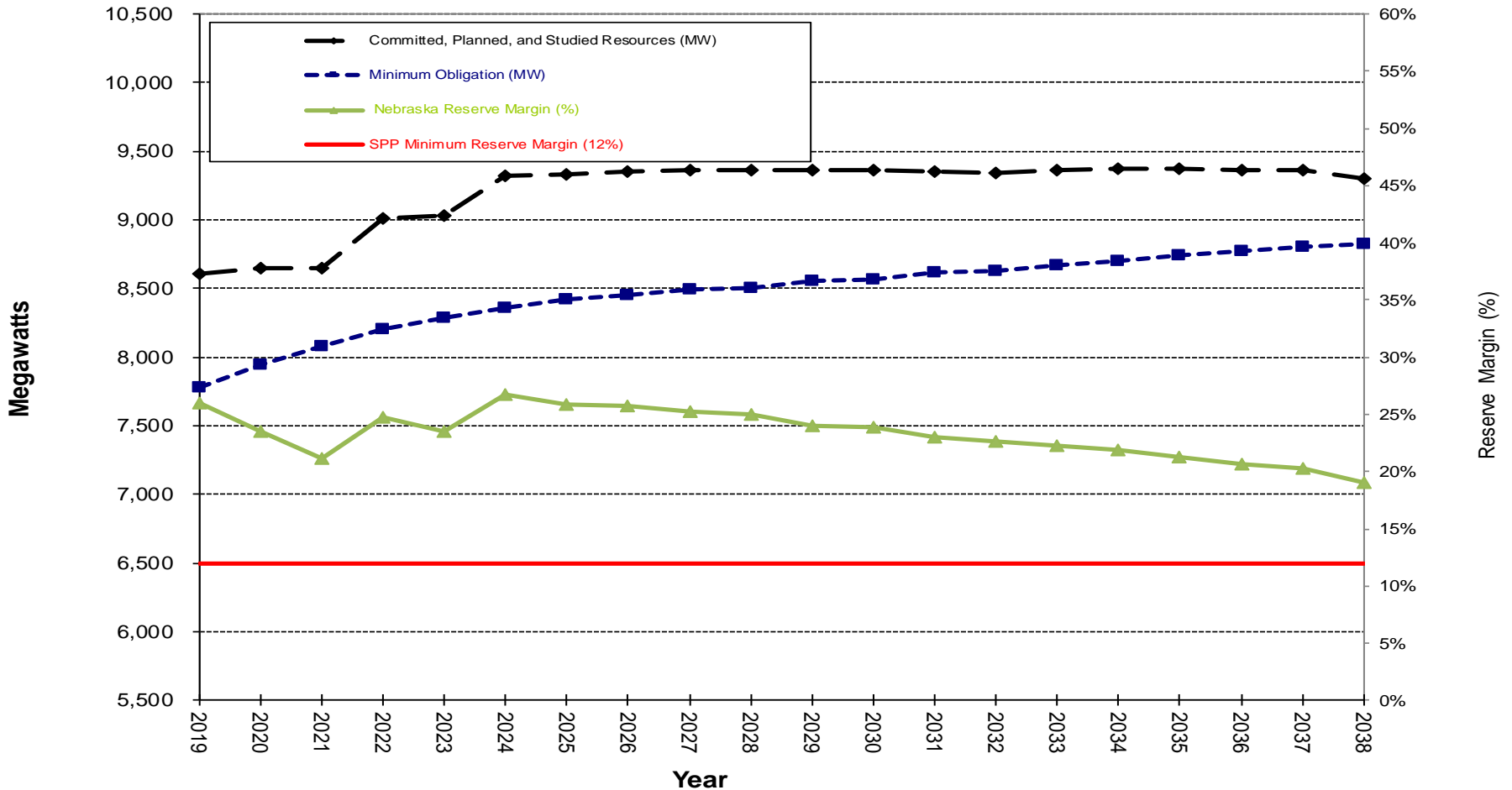
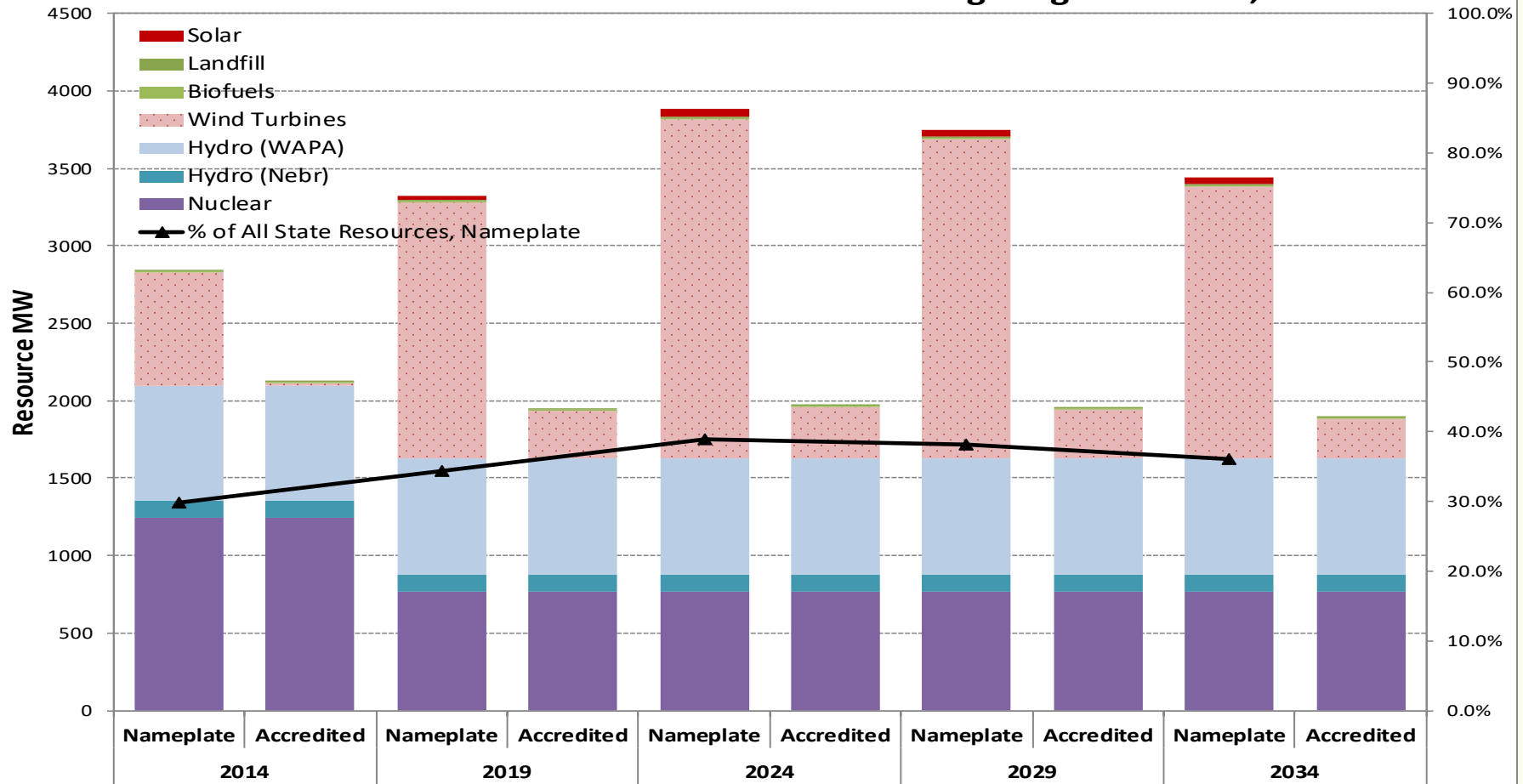


EXHIBIT 7.1

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 0.7% per year is higher than the 0.4% shown in last year's report
- Nebraska has sufficient existing and committed resources to meet its SPP Reserve Margin requirements through 2029
- OPPD is experiencing load growth that may require future generating capacity modifications
- Wind generation additions are expected to occur for the next several years in the absence of significant statewide demand growth