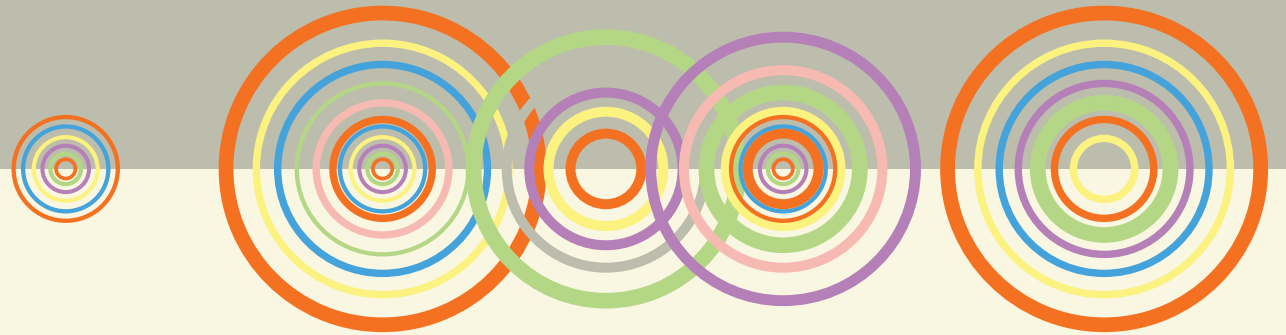


STRATEGIC RISK: NORTH OMAHA RECOMMENDATION

➤ 11.18.25 ➤



AGENDA

NORTH OMAHA STATION (NOS) UPDATE

- Context & History
- Reliability & Grid Resilience
- Affordability & Financial Impact
- Environment & Health
- Community & Economic Prosperity
- Resolution & Path Forward

» **CONTEXT & HISTORY**

IMPORTANCE OF NORTH OMAHA STATION

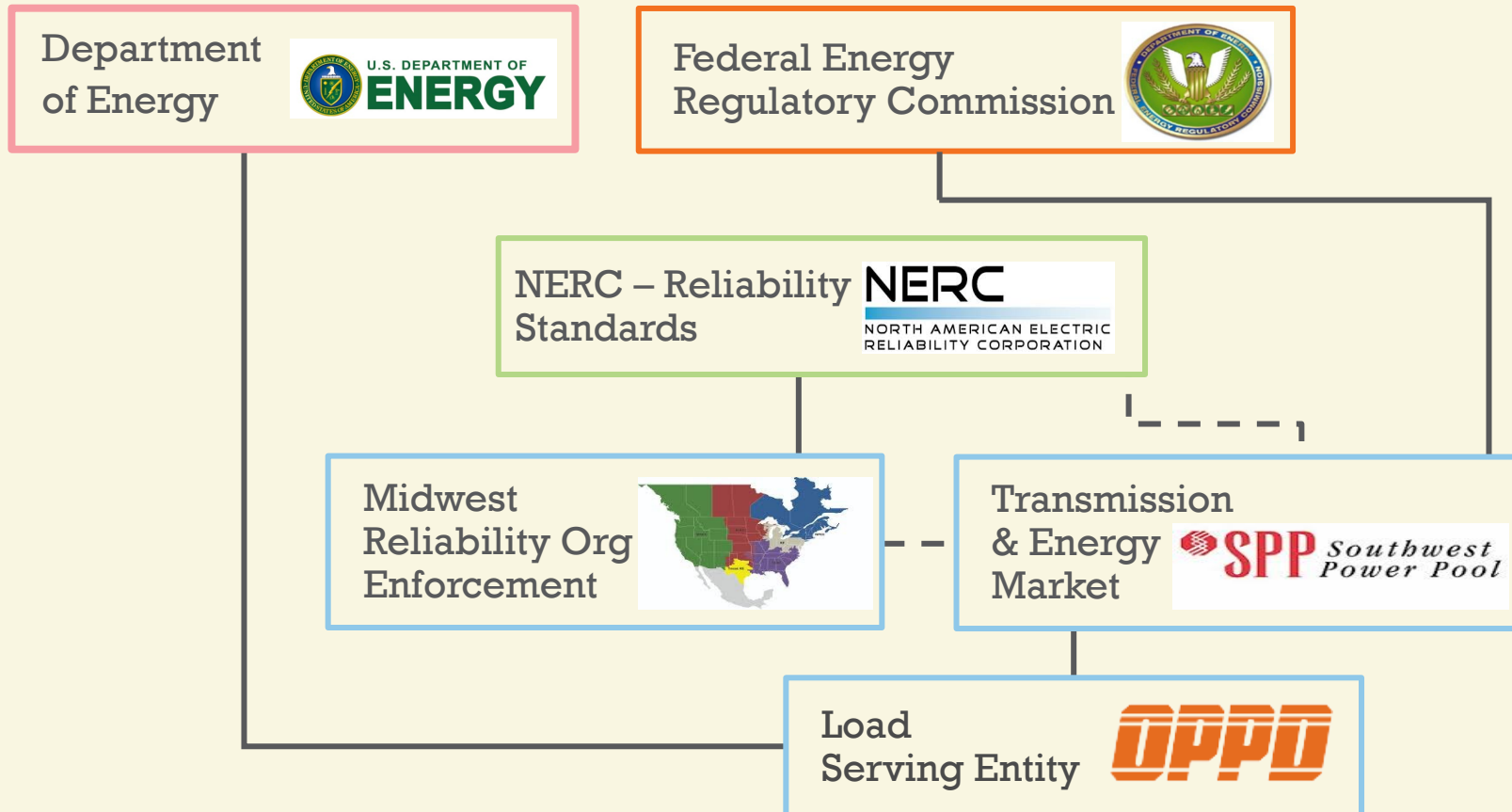
EVENT OVERVIEW

2014	Original decision to refuel & retire NOS made, driven by resource adequacy length and regulations.
2016	First extension of gas generation to facilitate Fort Calhoun decision. Extended to support resource adequacy.
2019	Significant load growth forecasted and system reliability issues surface , to be solved by Standing Bear Lake (SBLs) and Turtle Creek (TCS) stations in the load pocket.
2021	Winter Storm Uri : First-ever rolling blackouts impacting millions of customers. Fatalities are reported. Following the event, SPP initiates resource adequacy policy reform.
2022	SPP Generation Interconnection delays and project delays for TCS & SBLs. Identified grid reliability and resiliency issues if NOS was retired or converted before SBLs and TCS were operational. NOS operations extended.
2023	Incremental, fast load growth creates more resource needs . Work begins on new units at TCS and Cass County, additional generation at Pierce County Energy Center, Milligan Wind and High Banks
2025	SPP sets new reserve margins, notably raising winter margins to 36% from 15%, effective in 2026. Reserve margins then increase to 38% in the winter, effective 2029. Upon NOS retirement/fuel conversion, the station will be unavailable in winter season due to limited gas availability to the site. National resource adequacy issues getting more attention and become front and center, load waiting to be served. New SPP Resource Adequacy major reform approved by FERC.

REGULATORY FRAMEWORK

As a bulk power system owner and operator, OPPD has a regulatory obligation to comply with federal requirements.

FEDERAL REGULATORY FRAMEWORK



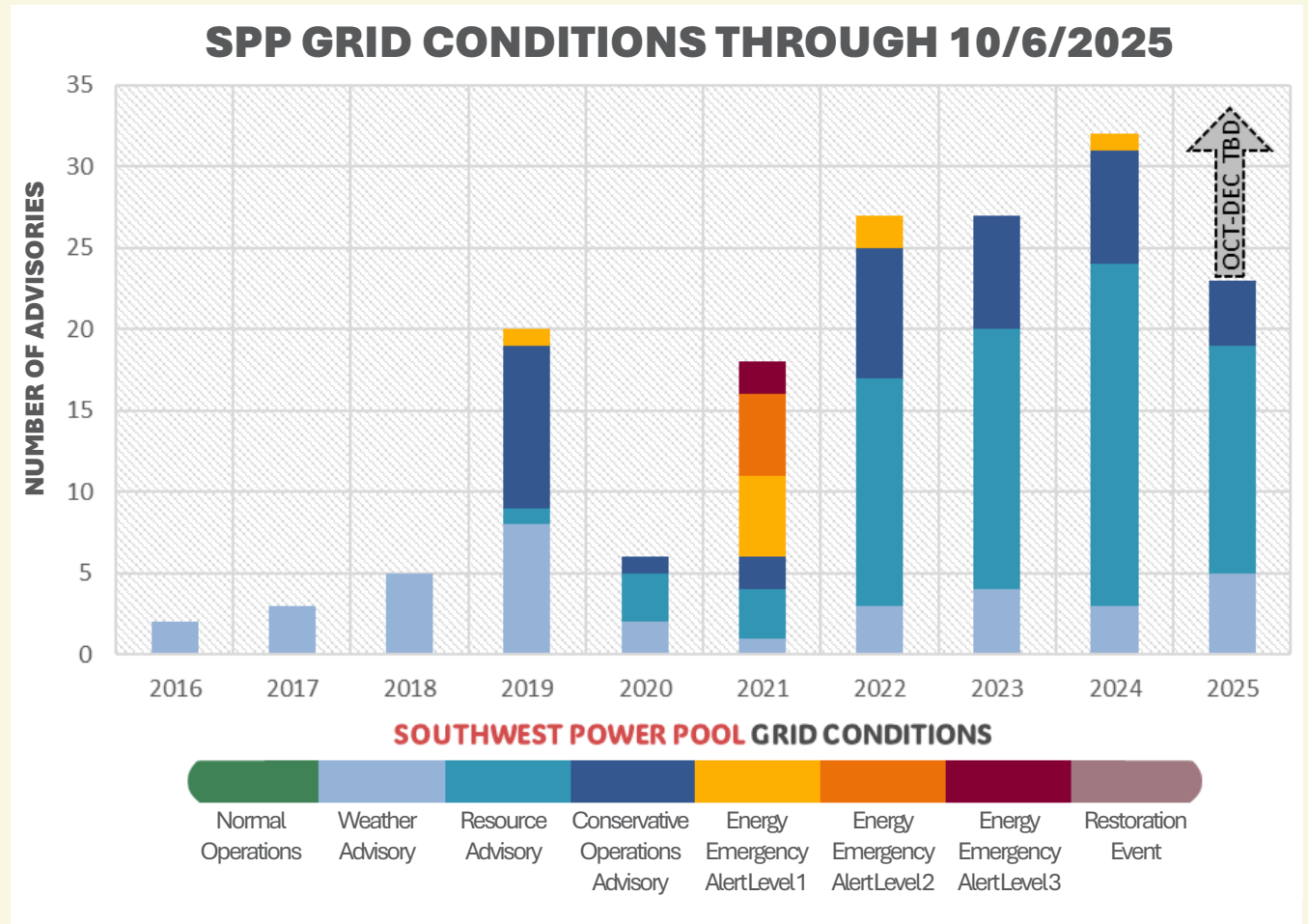
» **RELIABILITY & GRID RESILIENCE**

Strategic Directives 4, 7 & 9

A RAPIDLY CHANGING GRID

A new reality of rapid growth, tighter regulations, generation retirements and technological changes.

- Increasing amount of grid alerts, signaling real concerns
- Regionally rapidly increasing load & less than optimal levels of excess generation.
- Extreme weather such as Winter Storm Uri in 2021
- Significant new generation and transmission is needed across the US to address this troubling trend.



Source: SPP.org

SIGNS OF REGIONAL RISKS

GRID TRAFFIC JAMS

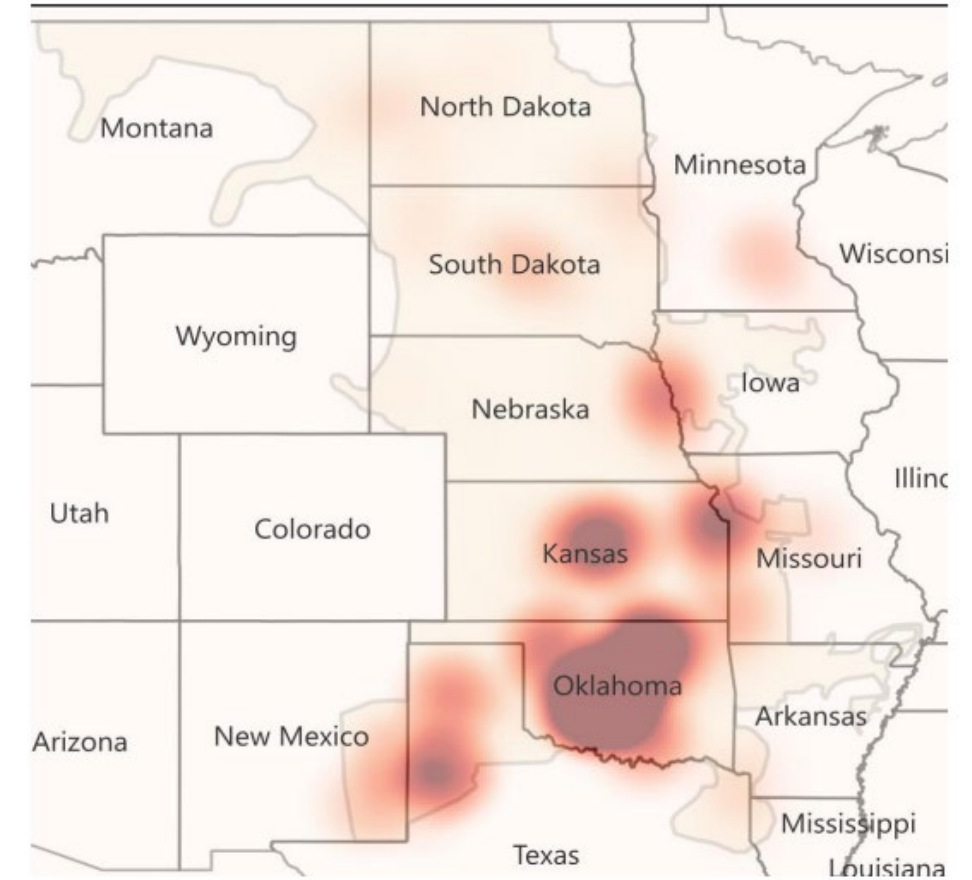
Risk: SPP has identified Omaha as one of the 5 highest power flow constrained areas WITH North Omaha operational. (*Not the case just 2 years ago*)

- Significant changes to load and generation resources in the US have impacted grid reliability margins.
- **NERC CEO:** “We’re seeing an increasing number of small-scale events and near misses that continue to reinforce what we can’t call anything but a five-alarm fire when it comes to reliability.”*

NOS's location and its capability to provide essential grid reliability services is a 'significant tool' in keeping power flowing into Omaha.

* Source: Utility Dive Publication

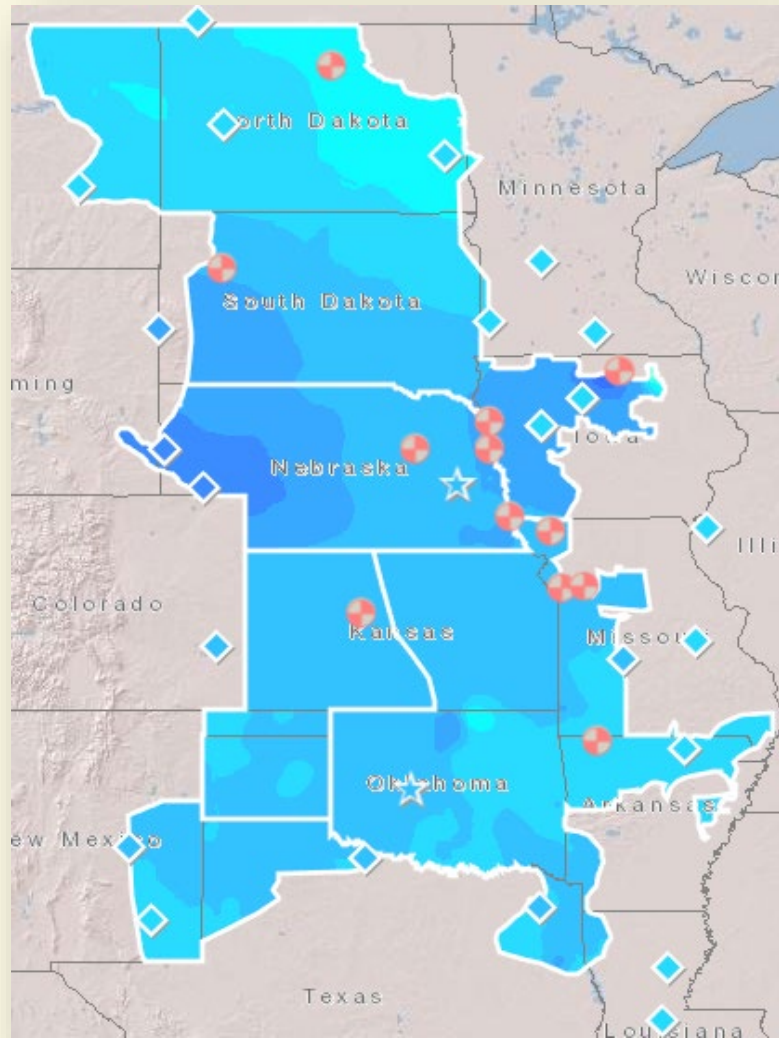
Figure 4-3 Pivotal supplier hours, 2024 study period, heat map



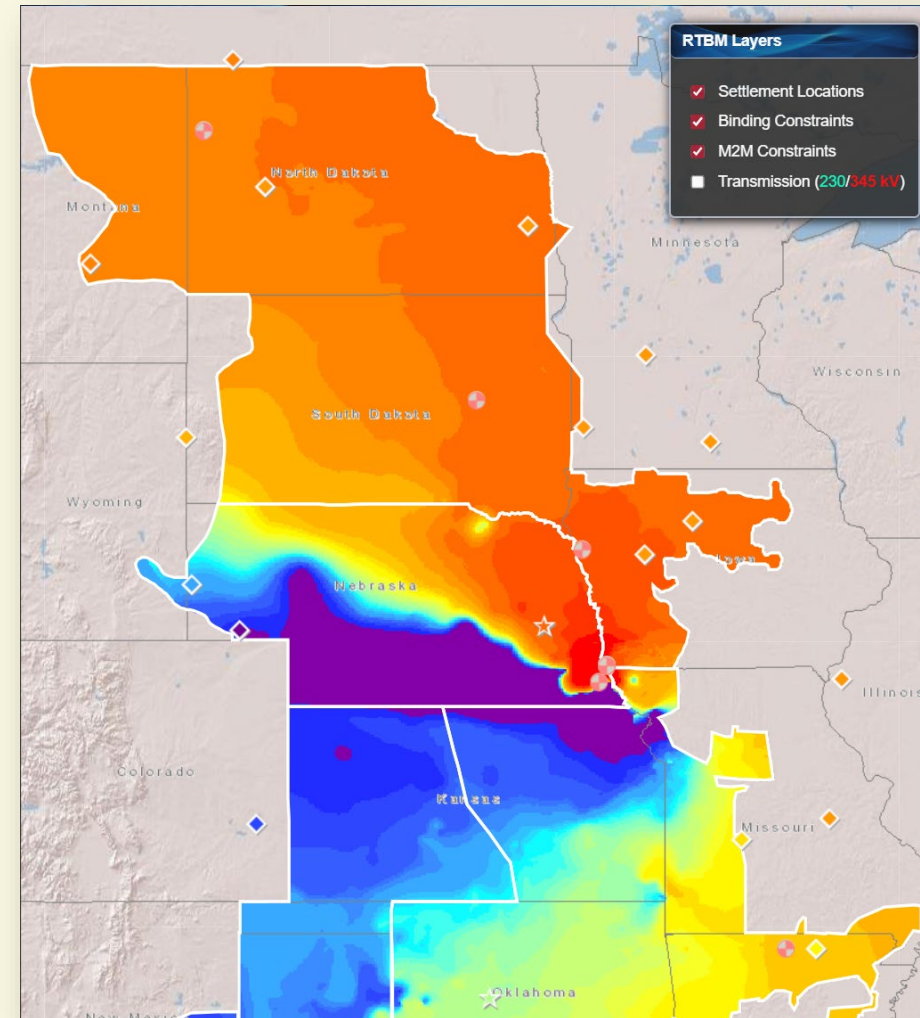
Frequently constrained areas heat map. Source: SPP

REGIONAL POWER FLOWS HEAT MAP

LIMITED CONSTRAINTS



HEAVY CONSTRAINTS



SIGNS OF LOCAL RISK

Strong, stable voltage is crucial for maintaining grid reliability and resiliency.

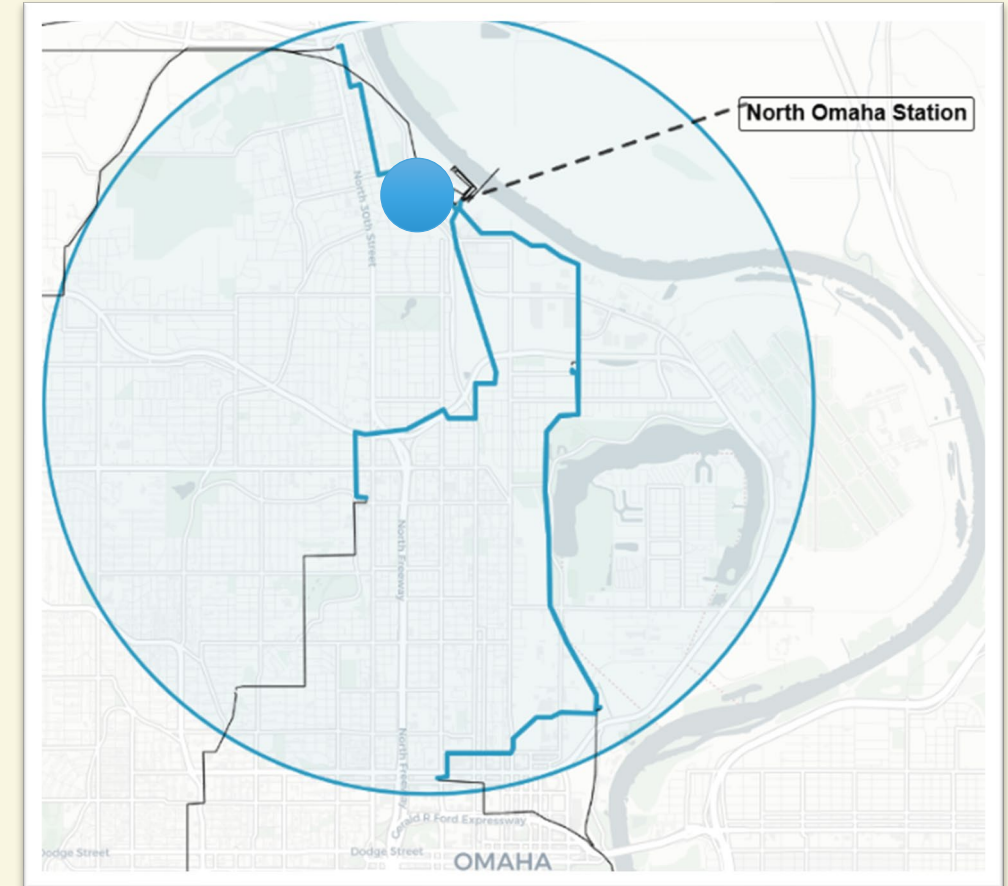
A nearly 3x increase in low-voltage warning alarms observed in the North Omaha area since 2021.

WHY DOES LOW VOLTAGE MATTER?

- Can trigger localized rolling blackouts to prevent large-scale events
- Damage to utility and customer equipment

2025 CONTROLLED CUSTOMER BLACKOUTS EVENTS

- **Southeastern New Mexico – March - May 2025 (3 events)**
 - Local load shed (blackouts) initiated to 54,000 customers to avoid larger grid impact/blackout, due to system outages
- **Shreveport, LA - April 2025**
 - Local load shed (blackouts) initiated to 30,000 customers to avoid larger grid impact/blackout, due to transmission outage
- **New Orleans, LA – May 2025**
 - Local load shed (blackouts) initiated to 100,000 customers due to heat and planned/emergent transmission & generation outage



OPPD IS TAKING ACTION

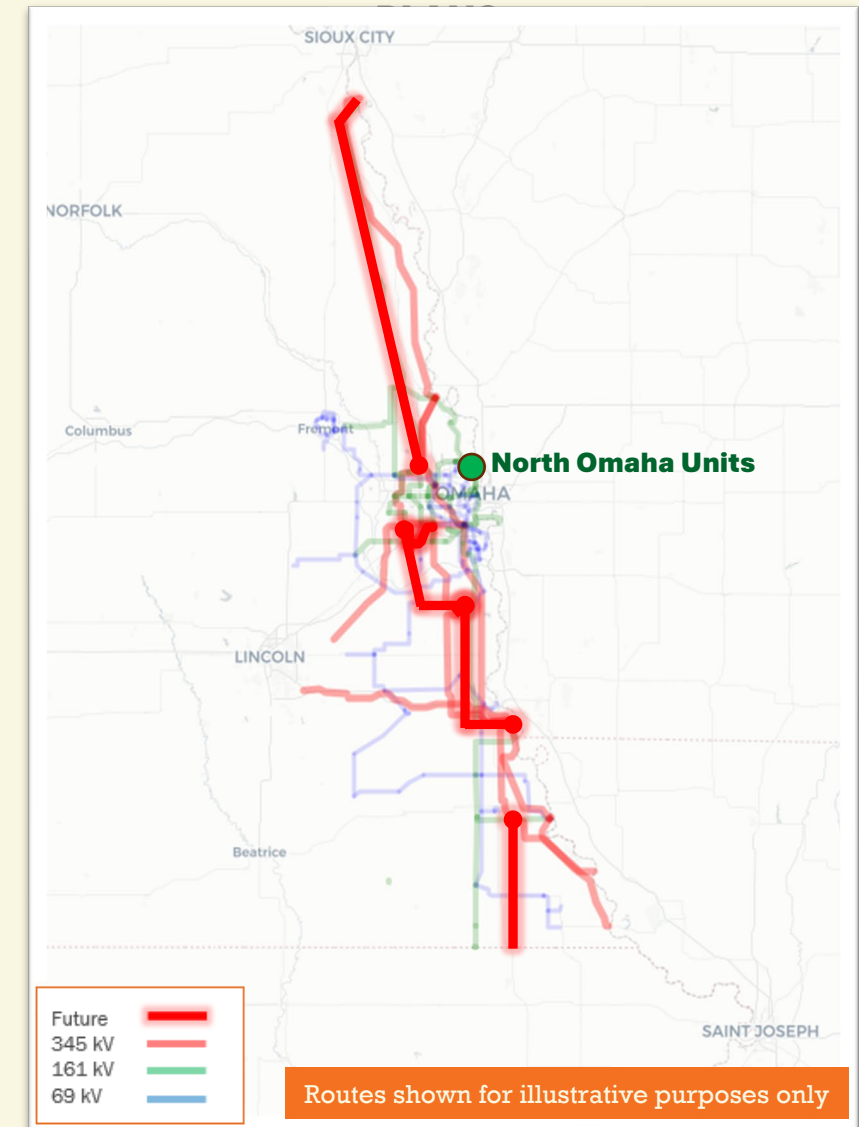
MAJOR 345/161KV TRANSMISSION BUILDOUT (more than 190 miles):

- Sarpy Southwest Transmission Project 161/345kV, in service 2024
- Cass-Sarpy 345kV, in service 2026
- Northern Douglas County 161kV, in service 2027
- Cass-Neb City 345kV, in service 2030
- JTIQ North NE (Sioux City – Fort Calhoun 345kV), in service ~ 2032
- JTIQ South NE (Auburn, NE – KS Border 345kV), in service ~ 2032
- Other projects on the radar

MAJOR GENERATION EXPANSIONS (3,381MW):

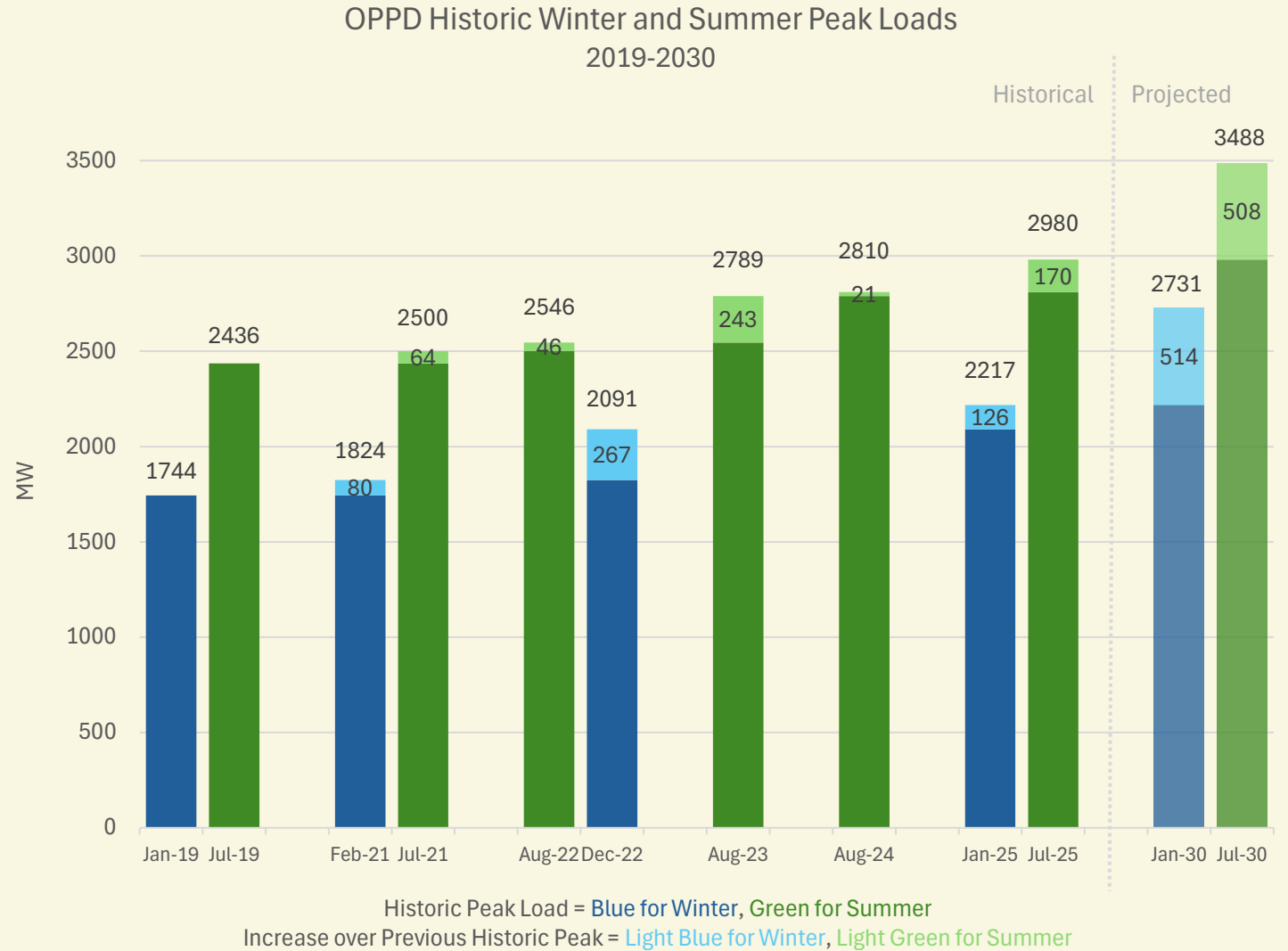
- Standing Bear & TCS 1 & 2 (600MW) - in service 2025
- Turtle Creek Expansion 3 (225MW) - in service 2029
- Cass Expansion 3, 4, 5 (675MW) - in service 2029
- Milligan Wind (300MW) - service started 2024
- High Banks Wind (600MW) - service started 2024
- Platteview Solar (81MW) – service started 2024
- Pierce County (Solar 420MW + Storage 170MW) - in service 2027
- K Junction Solar (310MW) – in service TBD

OPPD AREA TRANSMISSION EXPANSION



GROWTH IS REAL, AND IT'S CHANGING HOW WE PLAN

- **23,000** new residential meters since 2020—equivalent to adding Grand Island.
- Adding 500 MW is like Grand Island, Fremont and Hastings **combined**.
- **New winter peak**
2,217 MW in Jan. 2025 —
+ **473 MW** since 2019
- **New summer peak**
2,980 MW in July 2025 —
+ **544 MW** since 2019



WE NEED MORE ENERGY EVEN IF LOAD DOES NOT GROW

	NOV 2019	FEB 2021	FEB 2022	AUG 2022	DEC 2022	FEB 2023	JUL 2023	AUG 2023	AUG 2024	FEB 2025
WINTER PRM	No enforceable reserve margin = 0%						SPP approves winter Resource Adequacy Requirement with 15% PRM effective 2024/25 (+325 MW)		SPP approves winter PRM of 36% effective 2026/27 (+809 MW)	SPP approves winter PRM of 38% effective 2029/30 (+933 MW)
ACTION/EVENT	Power with Purpose (PWP) generation approved	Winter Storm Uri occurs, resulting in rolling blackouts for first time in SPP history	MISO approves 25.5% winter PRM effective 2023/24	NOS conversion timeline extended due to SPP GIA delays and project delays	Near Term Generation study includes projected winter PRM: 15% 2024 20% 2025 25% 2026	Board informed of expected future SPP winter PRM		OPPD Board approves Near Term Generation resolution		

RELIABILITY & GRID RESILIENCE: PROTECTING ESSENTIAL SERVICES

- Families and businesses depend on OPPD's essential services.
- We are adding massive quantities of new generation (natural gas, wind, storage and solar), hundreds of miles of transmission, multiple new substations, and demand response over the next 10 years.
- The grid has changed. If North Omaha Station (NOS) is converted now, given known constraints, customers are more exposed to the potential for rolling blackouts, outages, or rationing.

» **AFFORDABILITY & FINANCIAL IMPACT**

Strategic Directives 2 & 3

**THE
PROJECTED
COSTS OF NEW
FACILITIES
HAVE
INCREASED
EACH YEAR.**

~2.5x↑

NEW 345-KV LINES

2021: \$1.73 million (per mile)

2025: \$4.39 million (per mile)

~5x↑

NEW 138-KV LINES

2021: \$0.43 million (per mile)

2025: \$2.16 million (per mile)

~2.4x↑

**NEW 345/115-KV
TRANSFORMERS**

2021: \$6.72 million

2025: \$15.86 million

**IT'S MORE
CHALLENGING
THAN EVER TO
BUILD NEW
GENERATION,
AND WE NEED
ALL AVAILABLE
SOURCES.**

3-4 YEARS 3-4 YEARS

SOUTHWEST POWER POOL

- Accreditation
- Generator Interconnection (GI) requests
- GI studies
- GI agreements

UTILITIES + GENERATION DEVELOPERS

- Develop Integrated Resource Plan
- Request for proposals
- Gain regulatory approval
- Secure land and materials
- Construction
- Connect new resources to SPP

**POTENTIALLY 7 YEARS
TO DELIVER**

NOS EXTENSION RESULTS IN FAVORABLE FINANCIAL IMPACT

- **5-year extension:** net savings of **\$36.3 million net present value**
- **15-year extension:** net savings of **\$438.9 million net present value**
- Including estimated capital costs, fixed and variable O&M costs, production costs, market revenue, and attributable retail revenue from 2025-2040.
 - NOS extension would result in projected **annual rate increase mitigation of 1-3%**



Work on a North Omaha Station auxiliary boiler in 2024

SUPPORTING AFFORDABILITY & MITIGATING STEEPER RATE INCREASES

- ▶ Rates are increasing across the industry due to rising net power costs, infrastructure investment and inflationary pressures.
- ▶ OPPD's customers care deeply about factors that affect rates and affordability.
- ▶ If we convert NOS without sufficient replacement for capacity/energy, we are more exposed to market power prices.
- ▶ We must balance environmental goals with affordability, ensuring lower-income households aren't disproportionately burdened.
- ▶ NOS extension results in projected annual rate mitigation of 1-3%, beginning as early as 2027. The longer the extension, the higher expected rate relief.

» ENVIRONMENT & HEALTH

Strategic Directives 4 & 7

WORKING TO BETTER UNDERSTAND HUMAN HEALTH DATA RELATED TO NORTH OMAHA STATION

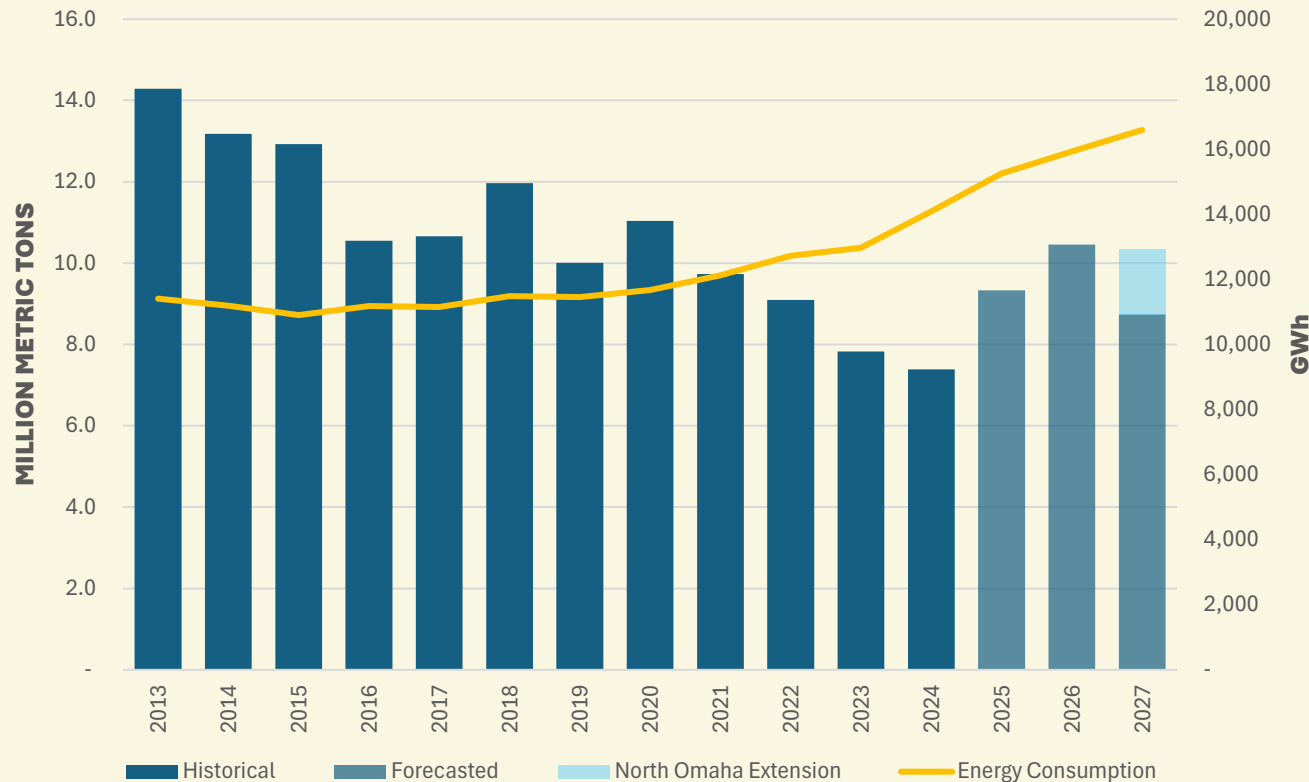
- ▶ Listen to the concerns of the public and our employees regarding NOS emissions.
- ▶ Review pertinent information on our emissions including data cited by the communities in public meetings (where citations are provided).
- ▶ Use observational data to gain a better perspective on the situation.
- ▶ Conduct a detailed, objective, site specific, and repeatable risk assessment of the North Omaha Station utilizing USEPA methodology.

WHY HAVE WE DONE THIS?

- ▶ It's part of our values - We have a PASSION to serve - We HONOR our community - We CARE about each other.
- ▶ The decision to convert or extend North Omaha Station is complex with consequential risks. We need the best data to guide this decision.

SIGNIFICANTLY REDUCING EMISSIONS WHILE INCREASING LOAD

ANNUAL CO2 EMISSIONS VS ENERGY CONSUMPTION



DISTRICTWIDE (2013-2024)

- **42%** Reduction in absolute emissions
- **19%** Increase in load
- **50%** reduction in carbon intensity

AT NORTH OMAHA STATION (2013-2024)

- SO₂, NO_x **down by more than 40%**
- Mercury **down 90%**
- NOS units 4-5 both hold **low-emitter status** (PM, HCL, HG)

NORTH OMAHA STATION EXTENSION

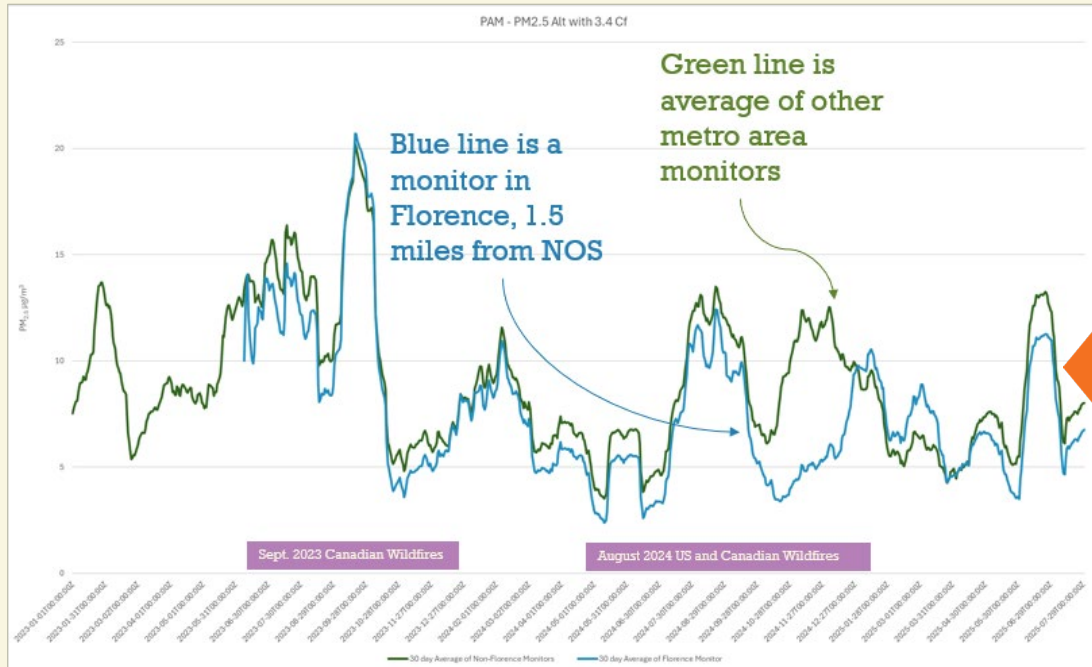
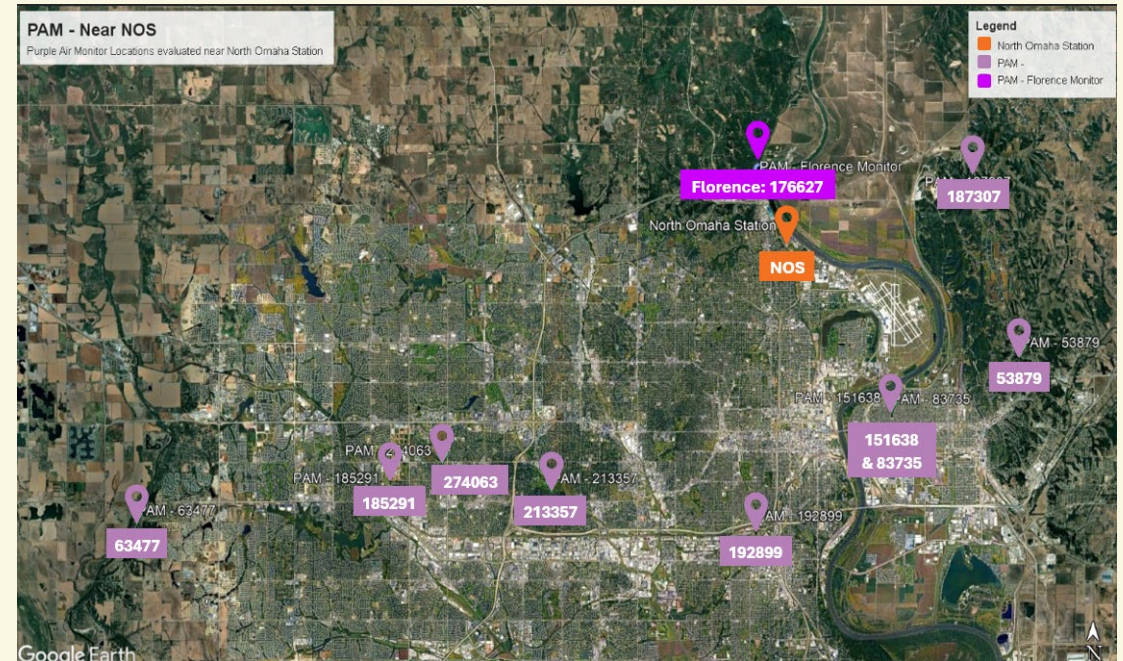
- Each year of a delayed conversion equates to an estimated **1.6 million tons CO₂e**.

*Inclusive of only scope 1 direct portfolio emissions, does not include emissions from purchased market energy.

**In 2023 and 2024, OPPD experienced prolonged forced outages on multiple conventional generating units.

PUBLIC MONITOR DATA FOR FLORENCE NEARLY IDENTICAL TO OTHER PARTS OF THE METRO

We have publicly available data on 10 PurpleAir monitors, including the monitor located in Florence.



North Omaha particulate matter 2.5 levels are similar to the rest of the metro.

HUMAN HEALTH AND ECOLOGICAL RISK ASSESSMENT

- OPPD has contracted for a human health and ecological risk assessment leveraging the expertise of Electric Power Research Institute and risk assessors from AECOM (\$16 billion global engineering firm).
- In alignment with our SD-7 commitment to Environmental Justice, OPPD pursued this study to ensure decisions are made with a full understanding of community impact, beyond regulatory compliance.
- This risk assessment uses tools developed by the EPA to be used in agency decision-making (e.g. site-specific cleanups, regulations). These assessments are tiered, well-respected and repeatable.
- The study looks at inhalation, multi-pathway and ecological risks, using peer-reviewed modeling tools and toxicity factors (EPA Science Advisory Board, others). More information on Human Health Risk Assessments can be found [at this EPA fact sheet](#).

RIGOROUS

- 2019 emissions data (highest capacity year for NOS units 4-5)
- Conservative terrain and downwash effects included.
- Evaluates Contaminants of Potential Concern (COPCs) developed by EPA and CalEPA.
- Assumes exposure to emissions from birth to 70 years for all carcinogenic constituents.

OBJECTIVE

- Used USEPA methodology and tools.
- Conducted by Electric Power Research Institute and AECOM (both with extensive utility and risk assessment expertise).

SITE SPECIFIC

- Uses Eppley airport meteorological data
- 2020 census tract data
- Focus on residential adult and child exposures

RISK ASSESSMENT SCREENING RESULTS

Inhalation Risk	Unit	North Omaha Station	Screening Threshold	Exceeds Screening Threshold
Max. Cancer Risk	1 in 1-million over 70 years	0.38	1.0	No
Max. Chronic Hazard Index	Unitless	0.07	1.0	No
Max. Acute Hazard Quotient	Unitless	0.002	1.0	No

- ▶ Comparative inhalation health risks from cancer, chronic non-cancer and acute exposure are **below the EPA screening threshold**.
- ▶ Health risks for multi-pathway exposure were **below the EPA screening thresholds**.
- ▶ Environmental risks were evaluated for potential adverse impact to plant species, aquatic and terrestrial wildlife, and screened **below the EPA screening thresholds**.

Examples of comparative risks to human health	
Risk	Mortality Incident Rate*
Motor Vehicles Fatalities	120 per million
Secondhand Smoke	56 per million
Ladders	0.5 per million
Bicycles	4 per million

** Source: National Safety Council, Center for Disease Control, US Bureau of Labor Statistics and the US Census Bureau.*

NOS Units 4 and 5 do not pose a significant risk to the public or environment as defined by the U.S. Environmental Protection Agency (EPA).

ENERGY RELIABILITY IS CRITICAL TO HUMAN HEALTH & WELFARE

SD7-"The board understands that climate change is a significant issue that requires pragmatic solutions recognizing technology advancement, energy supply sufficiency and climate resilience as being co-equally important to emissions reductions."

INSIGHTS FROM WINTER STORM URI

- Official Texas death toll from the storm (including causes related to cold/utility failure): 246 people across 77 counties.
- Since 2020, OPPD's customers have experienced 15 severe weather events, including tornadoes, thunderstorms, windstorms, heat domes, flooding, ice jams, polar vortices and blizzards. This is a notable increase from the seven severe weather events experienced in the preceding 10 year period from 2010-2019.
- Transitioning North Omaha Station from coal to gas will reduce current station capability by ~50% during the summer months and eliminate all capability in the winter months.
 - **Unavailability of gas supply** will last from Nov. 1 to May 31.
 - **60% of the severe weather events** occurred between November and May.
 - In a dynamically changing grid landscape, the **absence of NOS baseload coal generation during the winter season will reduce local reliability margins** to help withstand the impact of a widespread winter outage event.

REDUCING EMISSIONS, PROTECTING OUR COMMUNITY AND HELPING PEOPLE THRIVE.

- NOS Units 4 and 5 do not pose a significant risk to the public or environment as defined by the U.S. Environmental Protection Agency (EPA).
- Human health risks are below standard thresholds. The human health risks from the continued operations of NOS Units 4 and 5 are all below EPA thresholds.
- Regional air quality meets applicable standards. The Omaha metropolitan area remains in attainment for all EPA criteria pollutants, including the newly revised PM2.5 standard.
- The impacts of climate change are happening faster than carbon reductions can be achieved. Adaptation is critical to protecting our community.
- In alignment with SD7's commitment to environmental justice we will continue to listen and pursue honest and open dialogue with our customer owners.
- We are committed to our net zero goal and will continue to strive to reduce the emissions and discharges from our operations.



COMMUNITY & ECONOMIC PROSPERITY

Strategic Directive 11

ENERGY AT THE HEART OF THE COMMUNITY AND REGION'S PROSPERITY

➤ *Nebraska's Economic Review*, Development Counsellors International, August 2025

"Lack of growth in employment and wages has slowed the state's economy."

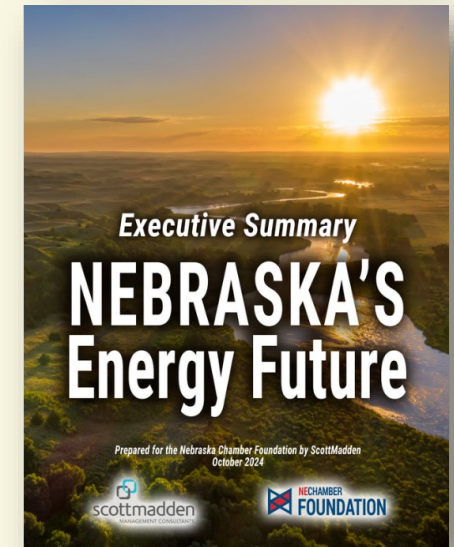
"Another important consideration for companies assessing where to invest to add people and grow jobs is the access to affordable power."

➤ *Nebraska's Energy Future*, October 2024

"The availability of affordable, reliable electricity is critical to economic development. More and more, our society depends on electricity to power its vital industries, and those industries are expanding. Nowhere is this more true than in Nebraska."

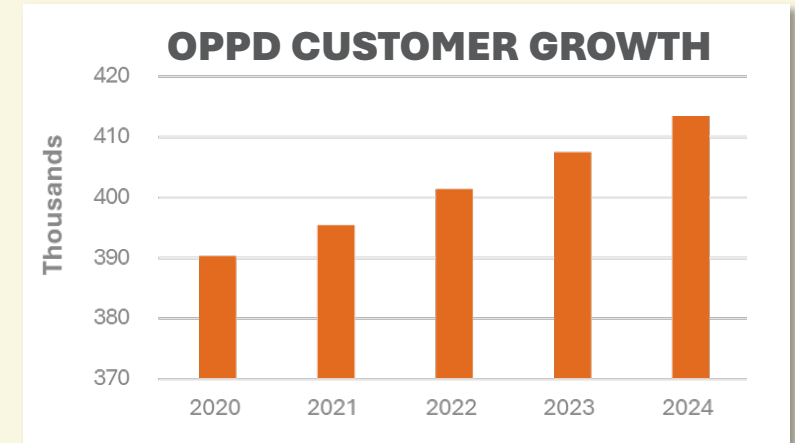
➤ Energy is one of Gov. Jim Pillen's priorities and focus areas

➤ Leading chambers of commerce (Nebraska, Greater Omaha and Lincoln) cite "Energy" as key federal legislative priority area



WE'RE SERVING CUSTOMER GROWTH ... AND NEED TO SERVE MUCH MORE

- ▶ Macro trends driving unprecedented demand
 - **23,000+** new customers served in past 5 years across 13 counties (equivalent to Grand Island utilities)
 - By 2028: **+3,200 GWh growth** (OPPD's 2025–2028 growth $\approx$ the size of Lincoln Electric System)



- ▶ Rising demand requires significant near- and long-term planning
- ▶ OPPD forecasting 1,000 MW of load growth and navigating **2,000+ MW** active project requests over next 10 years
- ▶ Like utilities across the nation, OPPD is focused on minimizing delays and connecting customers quickly
- ▶ Businesses and community development seeking answers and support
- ▶ OPPD committed to delivering solutions that keep the region competitive, resilient, and future-ready



LOAD GROWTH CONTINUES

CONTINUED EXPANSION: OPPD is experiencing sustained growth across all customer classes

NATIONAL & LOCAL DEMAND DRIVERS

- New manufacturing and industrial projects (including biofuels and advanced industries)
- Rising data center requests
- Electrification of transportation and buildings

COMMUNITY & STATE PRIORITIES

- Urban core redevelopment, streetcar expansion, and revitalization projects
- Target industries: biotechnology, defense, medical, and advanced manufacturing
- Inland port, business parks, rail funding, and other state/local economic development initiatives
- Thousands of jobs and billions of capital investment from industry and the community associated with requested load growth



COMMUNITY, WORKFORCE & PROSPERITY

- Community prosperity and growth are keys to achieving well-being for every resident and is a recognized priority for economic development orgs. OPPD is committed to cultivating the growth of vibrant and thriving communities.
- Available and reliable energy is a prerequisite for businesses to expand for new industries to locate here, and for jobs and prosperity to grow.
- An NOS extension ensures greater energy availability – strengthening our community.

WHY EXTENDING NOS MATTERS

- **RELIABILITY FIRST:** Converting NOS too soon increases the risk of rolling blackouts, outages, and even energy rationing. Extension keeps the grid stable and customers protected.
- **AFFORDABLE POWER:** Extending NOS helps mitigate rates by 1–3% annually starting in 2027, easing the burden on households and businesses.
- **COMMUNITY WELL-BEING:** Any transition must safeguard continuous energy flow while protecting the health and resilience of our community.
- **STRENGTH FOR GROWTH:** Energy powers prosperity. Extending NOS sustains opportunities for local businesses to expand and attracts new industries to grow here.

➤ **RESOLUTION & PATH FORWARD**

**MODIFICATION OF RESOLUTION NO. 6518 REGARDING
NORTH OMAHA STATION OPERATIONS**

WHEREAS, the Board of Directors of the Omaha Public Power District (the “District”) previously adopted Resolution No. 6518 on August 16, 2022, authorizing the extension of operations at North Omaha Station (NOS) Units 1, 2, and 3 and delaying the refueling of Units 4 and 5; and

WHEREAS, the District is operating in a rapidly evolving energy environment characterized by accelerated customer demand growth, inflationary pressures, extended infrastructure timelines, and increasing federal, state and local regulatory constraints; and

WHEREAS, since 2019, the District’s peak load has increased by nearly 470 megawatts (MW) in both winter and summer, and the Southwest Power Pool (SPP) has established a winter planning reserve margin that did not previously exist to a new requirement of 38% by 2028, significantly raising the threshold to ensure system reliability; and

WHEREAS, the new generation capacity identified in Resolution No. 6518—specifically the Power with Purpose natural gas assets at Turtle Creek and Standing Bear Lake Stations—is needed to serve continuing load growth and also is now required to meet these elevated reserve margin requirements and support overall system reliability, rather than replacing capacity from the planned North Omaha Station conversion or serving new electrical usage; and

WHEREAS, North Omaha Station provides essential local generation that supports voltage stability, frequency regulation, and grid resiliency, particularly during periods of peak demand or extreme weather events; and

WHEREAS, the District is actively managing approximately 2,000 MW of new customer requests and OPPD’s forecasted load growth is currently estimated 1,000 MW over the next ten years, and the continued operation of NOS is critical to maintaining reliability and supporting economic growth while new generation resources are studied, approved brought online; and

WHEREAS, the District’s forthcoming 2026 Integrated System Plan will provide additional guidance on long-term resource requirements which will guide future conversations on refuel/retire NOS based on system reliability, energy availability and affordability constraints; and

WHEREAS, the District remains committed to its long-term goal of achieving net-zero carbon emissions by 2050, and has already reduced absolute emissions by 41.6% from its 2013 baseline; and, accounting for a 19% increase in energy demand over the same period, this progress reflects a 53% reduction in carbon intensity across the District; and

WHEREAS, the District recognizes that available, reliable, affordable and environmentally sensitive power is foundational to strong communities, and is committed to working collaboratively with neighboring communities to the North Omaha station through respectful engagement and meaningful investment in infrastructure, programs, and resources that collectively reflect community priorities, advance OPPD’s mission, and cultivate the growth and well-being of vibrant and thriving communities; and

WHEREAS, the District will continue to provide updates to the Board and the public regarding operational decisions, environmental performance, and community engagement efforts related to NOS.

NOW, THEREFORE, BE IT RESOLVED, that the Board of Directors of the Omaha Public Power District hereby modifies Resolution No. 6518 to authorize the continued operation of North Omaha Station in its current configuration—Units 1, 2, and 3 operating primarily on natural gas and Units 4 and 5 on coal—until such time as system conditions, customer demand, regulatory requirements, and infrastructure readiness enable a responsible transition of the NOS generation units; and

BE IT FURTHER RESOLVED, that the District shall continue to monitor and assess the operational status of North Omaha Station and provide updates to the Board and the public; and

BE IT FURTHER RESOLVED, that the Board of Directors commits to formalizing a sub-committee of the Board to work with public officials and OPPD management to recommend a community development framework to the OPPD Board of Directors by [xxx]. The framework will outline objectives and measures of success designed to reflect community development priorities while remaining consistent with OPPD’s financial and legal responsibilities and obligations, and is balanced with all other strategic and operational priorities of our Mission.

2021

INTEGRATED RESOURCE PLAN

Your Energy Partner
OPPD
Omaha Public Power District

WHAT'S NEXT?

- The next round of system planning kicks off in 2026, which will identify more generation above the ~3GW the District has built/bought or is building.
- The Integrated Systems Plan (ISP) considers a variety of technologies and the needs of the OPPD system to recommend the next round of investments.
- **Key considerations:** Affordability and environmental sensitivity of resources, system reliability and feasibility of technology