

Nebraska PSC NG-101

Quarterly Meeting – Cybersecurity Update



Industry Standard Frameworks

Black Hills Energy (BHE) has developed a comprehensive security program to address the evolving cyber and physical security risks facing companies managing critical infrastructure

- Maintaining “Defense in Depth” strategy using established security framework
 - Center for Internet Security (CIS) Controls; and
 - National Institutes of Standards and Technology (NIST) Framework
- Layers of administrative and technical security controls
- Corporate Investments paying dividends w/Continuous Improvement

Security Partnerships

➤ U.S. Department of Energy (DOE)

- Participant in Cybersecurity Risk Information Sharing Program (CRISP)
 - A voluntary program where we share threat information that could potentially detect and prevent cyber threats directed at Black Hills Energy and other utilities.

➤ Trade Organizations

- American Gas Association (AGA)
- Edison Electric Institute (EEI)

➤ Public/Private Partnerships

- Department of Homeland Security (DHS)
- Federal Bureau of Investigation (FBI)
- Cybersecurity and Infrastructure Security Agency (CISA)
- Department of Defense (DoD)
- National Security Agency (NSA)

TSA Directives Impact – July 2024

TSA Directive SD Pipeline-2021-02D: (July 26, 2023)

- Identification of Critical Cyber System (CCS) completed.
- TSA impact has been integrated with planned projects.
- The submitted Cybersecurity Implantation Plan (CIP) is approved.
- Inspection was completed successfully on September 9th, 2023.
- TSA Cybersecurity Assessment Plan (CAP) – recently approved – July 2024.

Future Concerns/Implications:

- Security and Compliance activities will be a significant cost for the foreseeable future.
- Reality that the directive process is influenced by the Administrator.
- Nation State Threats to Critical Infrastructure (China & Taiwan)

Current Investments

- New ICS Environments Gas SCADA – target late 2025
- Adding OT Cybersecurity Investments
- CyberSentry (DHS) in addition to CRISP

Threat Awareness

- Nation State Threats to Critical Infrastructure
 - China & Taiwan
 - North Korea
 - Iran
 - Russia & Ukraine
- Conflicting Regulatory Environment
 - Federal Agencies not yet harmonized
 - State vs Federal – potential

1. [Recent Cyber Attacks on US Infrastructure Underscore Vulnerability of Critical US Systems, November 2023–April 2024 \(dni.gov\)](#)
2. [Traversing the 2023 Operational Technology Cyber Threat Landscape | Dragos](#)



Black Hills Energy Damage Prevention

July '24



Safety

We commit to live and work safely every day.



Damage Prevention

Key Strategies:

Enterprise Approach

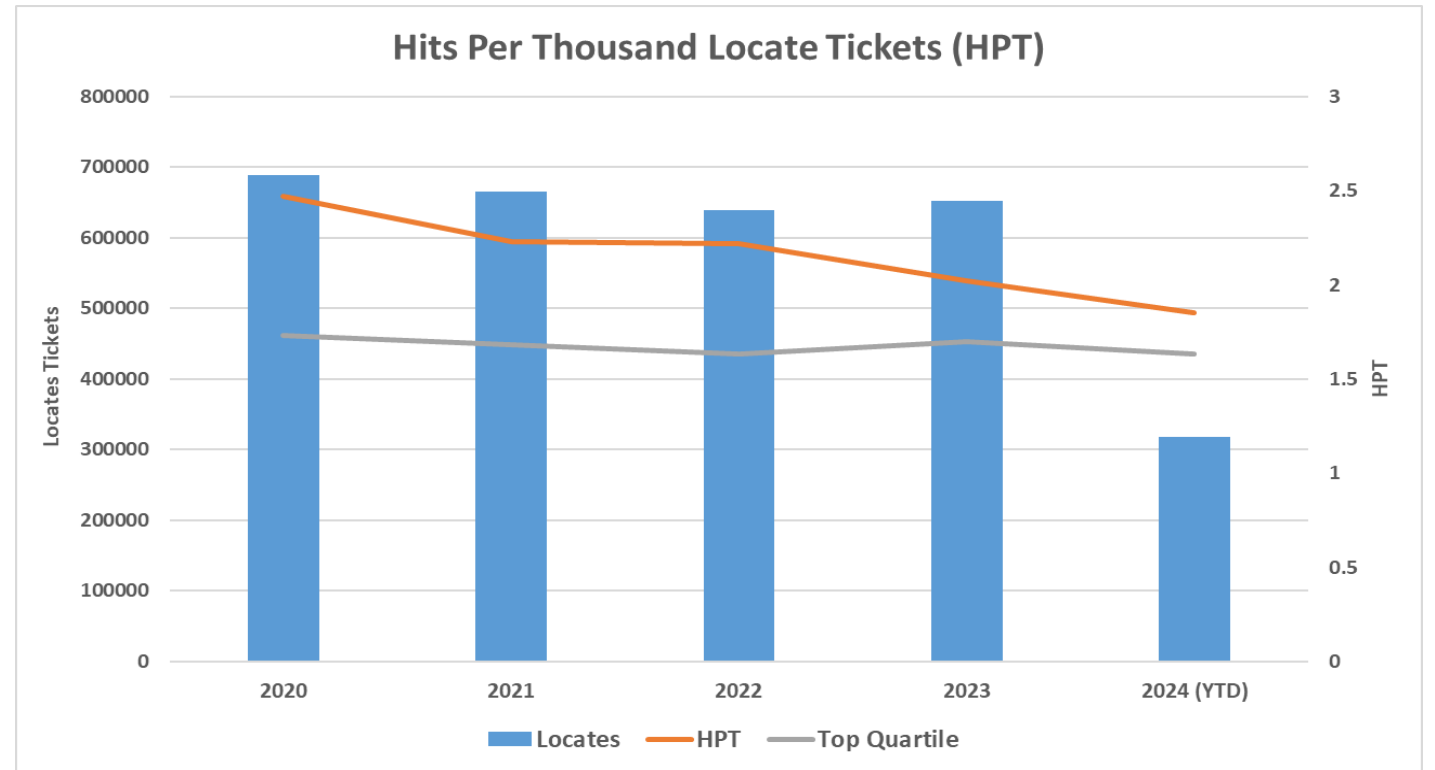
Outreach & Education

Artificial Intelligence

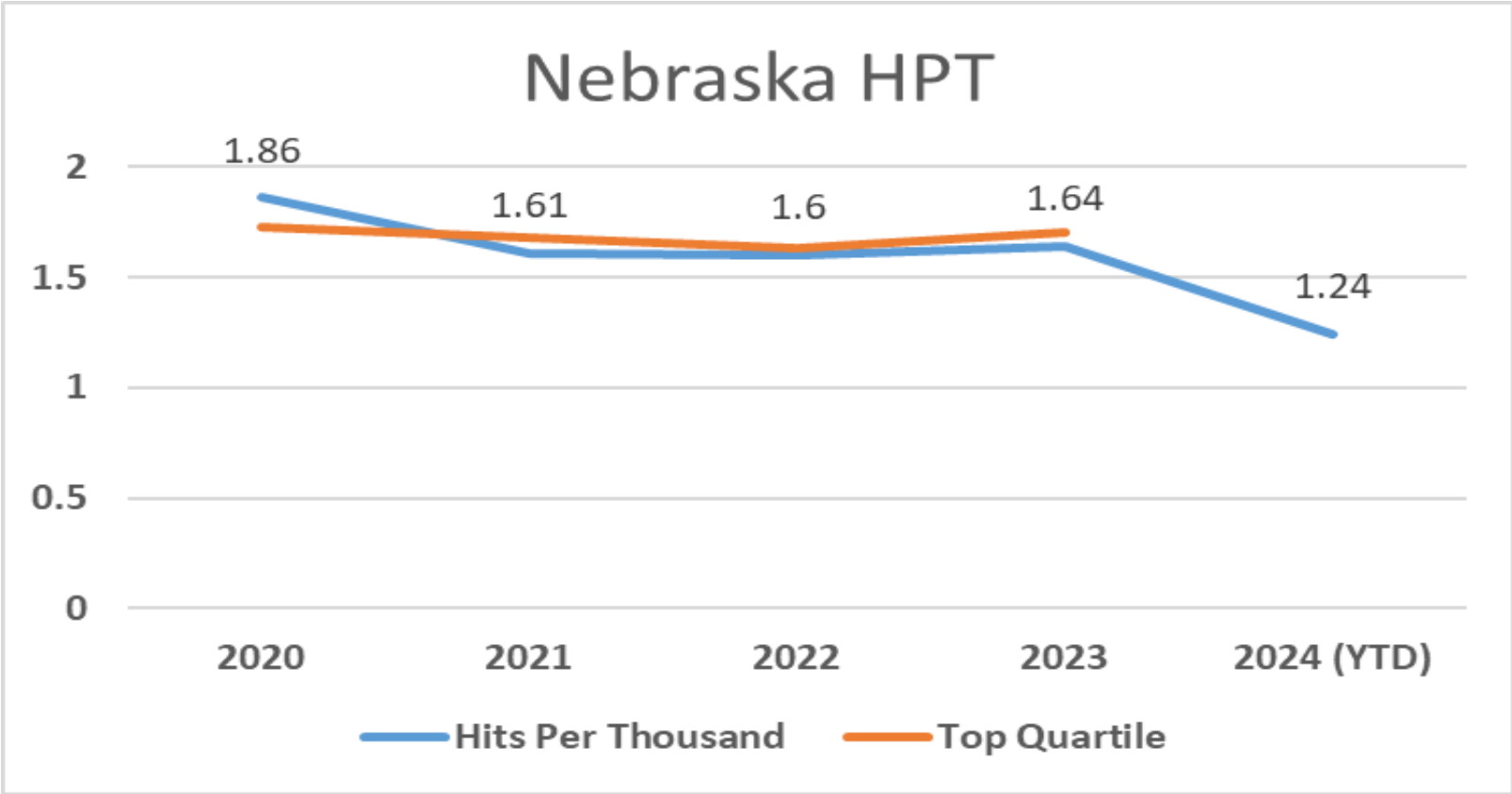
Excavation Site Monitoring

Locating Improvements

Enforcement



Nebraska Results



Safety

We commit to live and work safely every day.

Training and education

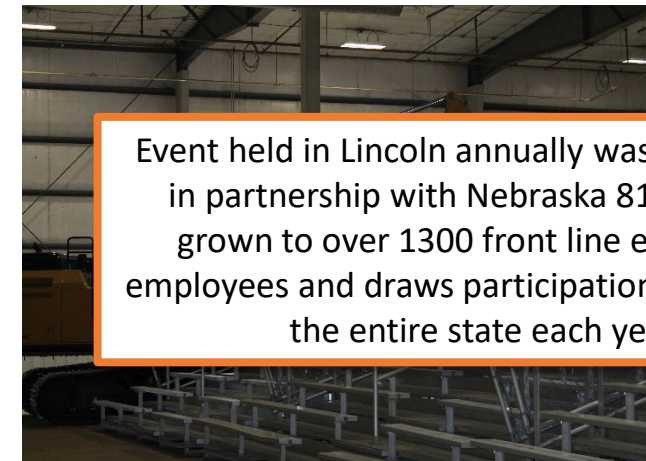
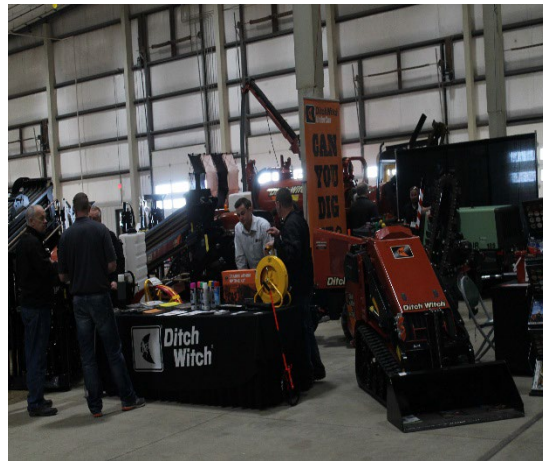


811 Day Cooler Giveaway



Partnership with Nebraska 811 has existed for the past 8 years delivering cool drinks and safety messages to job sites all across Nebraska in August

Excavation Safety Summit

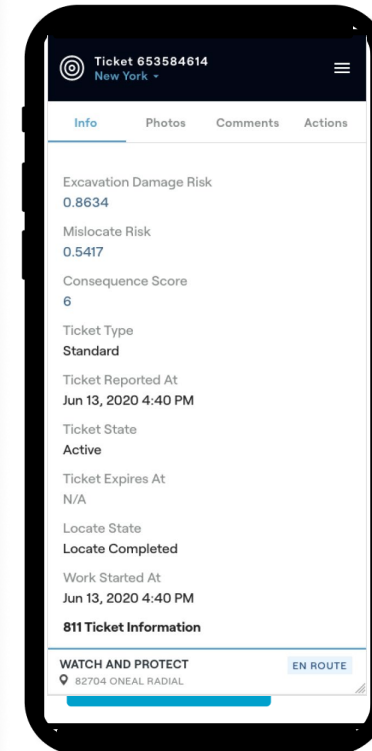
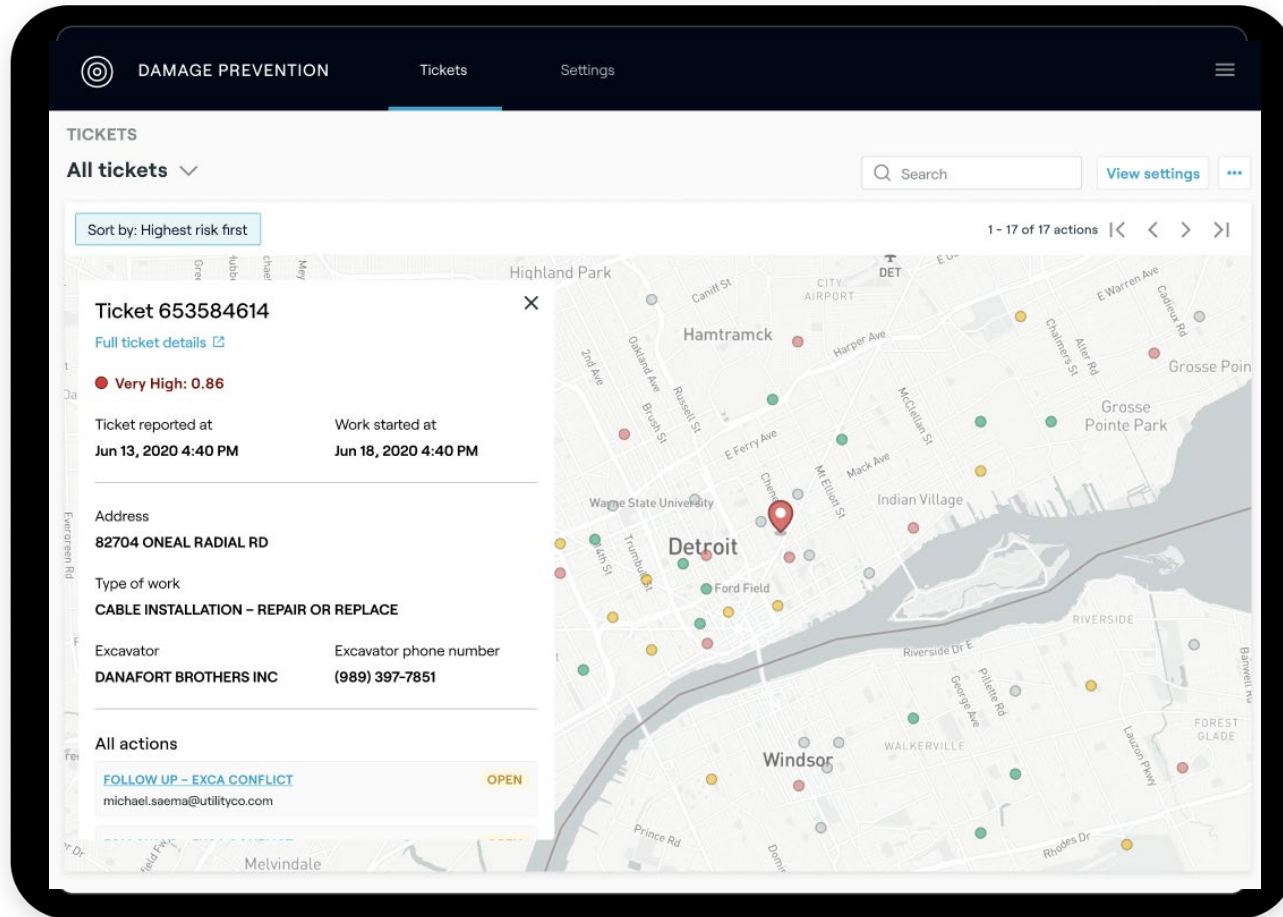


Event held in Lincoln annually was established in partnership with Nebraska 811 and has grown to over 1300 front line excavation employees and draws participation from across the entire state each year

Utilizing AI to Target Outreach Efforts

Integrated daily ticket feeds, GIS and excavation data allow teams to plan and adapt quickly

Geospatial layout supports supervisors in allocating resources



Urbint Lens Risk Scores provide AI-based decision support:

- Consequence
- Excavator Risk
- No Call In Risk

Fiber Expansion

- Have seen raw damages increase correlating with the expansion of fiber installation companywide and in Nebraska
- Many crews are hired from out state and can be unfamiliar with Nebraska 811 rules
- More fiber expansion increases the need for public and contractor education to keep damage rates low and increase public safety





Questions?



Black Hills Energy

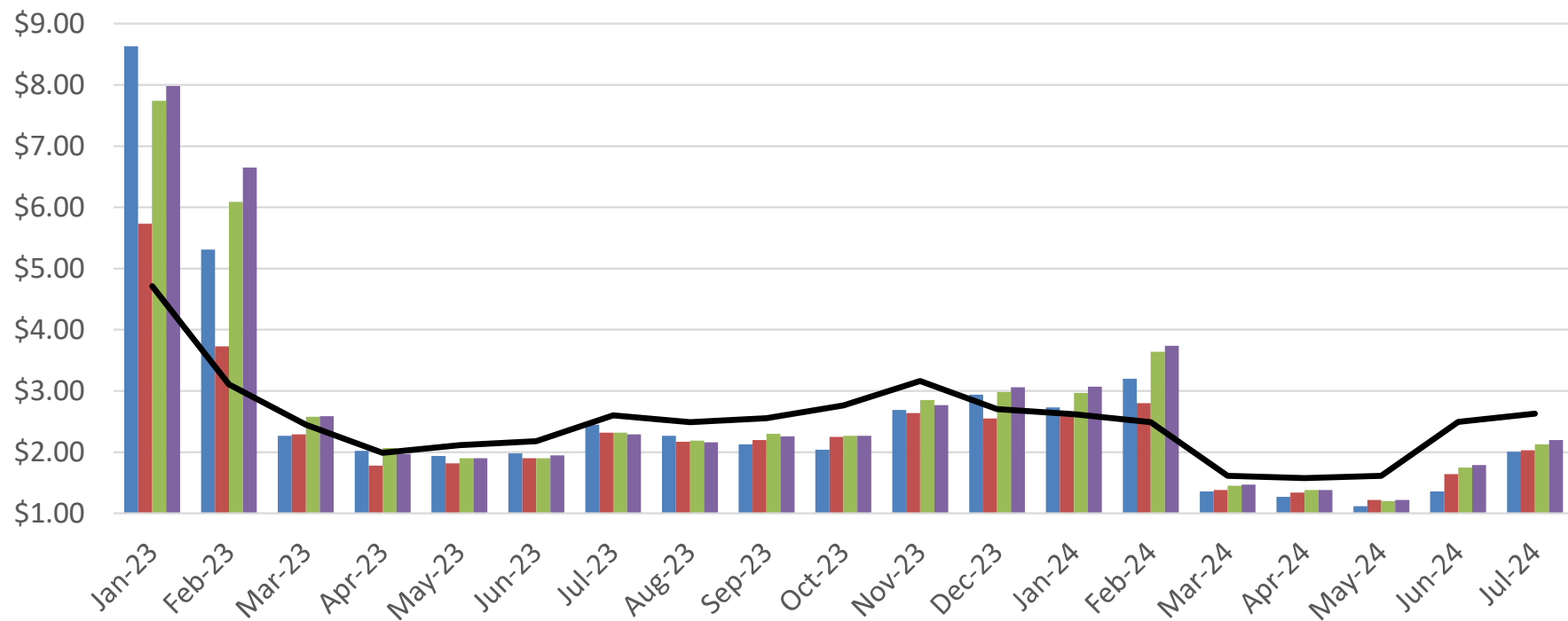
Quarterly Update – Gas Supply

Summer 2024 Market Update

July 23, 2024

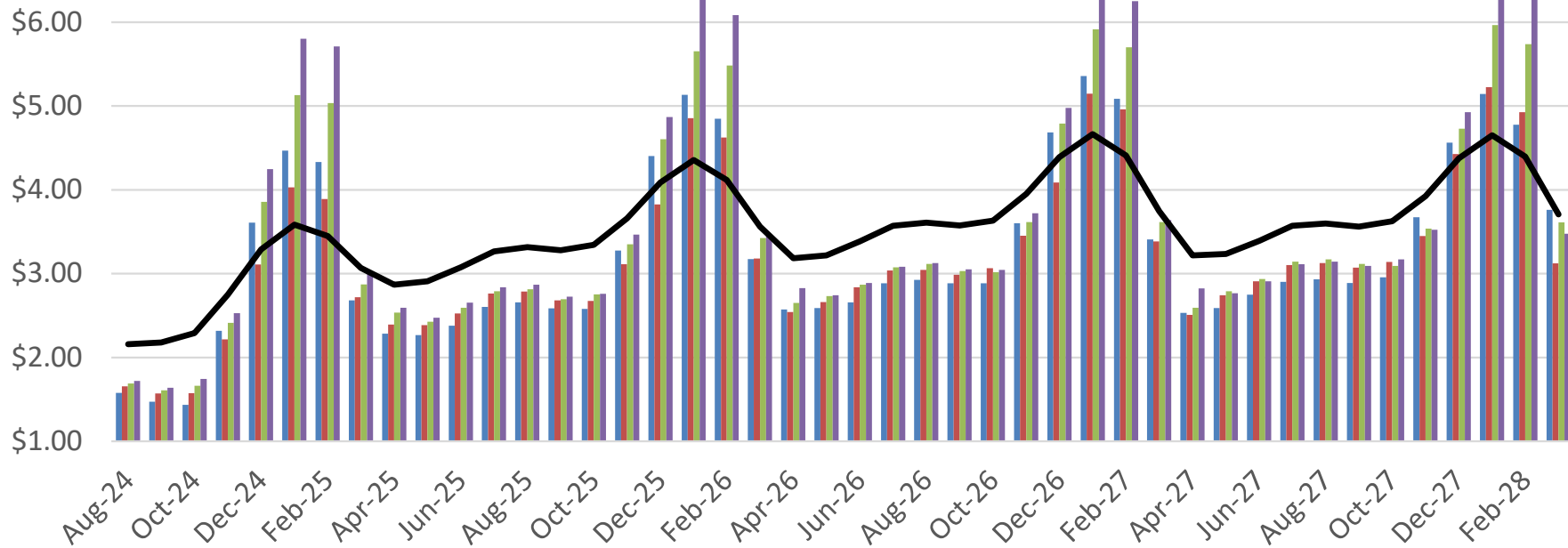


Historical Natural Gas Pricing



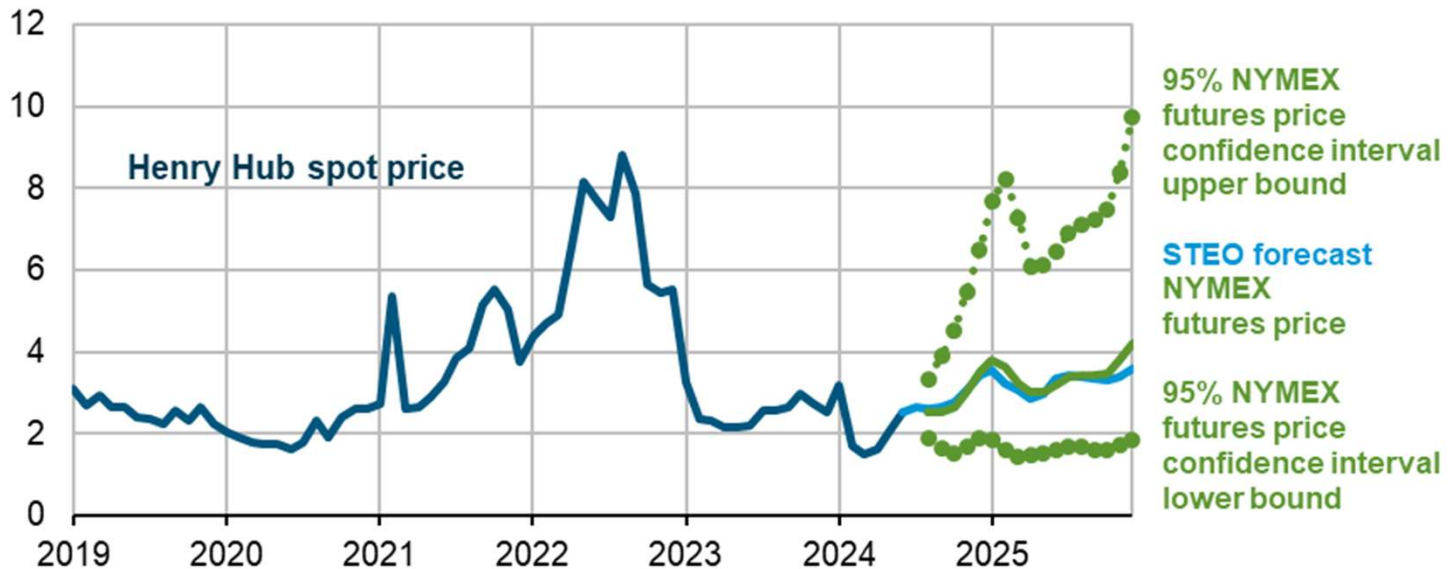
Future Natural Gas Pricing

indicative of market settlements on 7/15/2024



Henry Hub Historical and NYMEX Forecast

Henry Hub natural gas price and NYMEX confidence intervals
dollars per million British thermal units

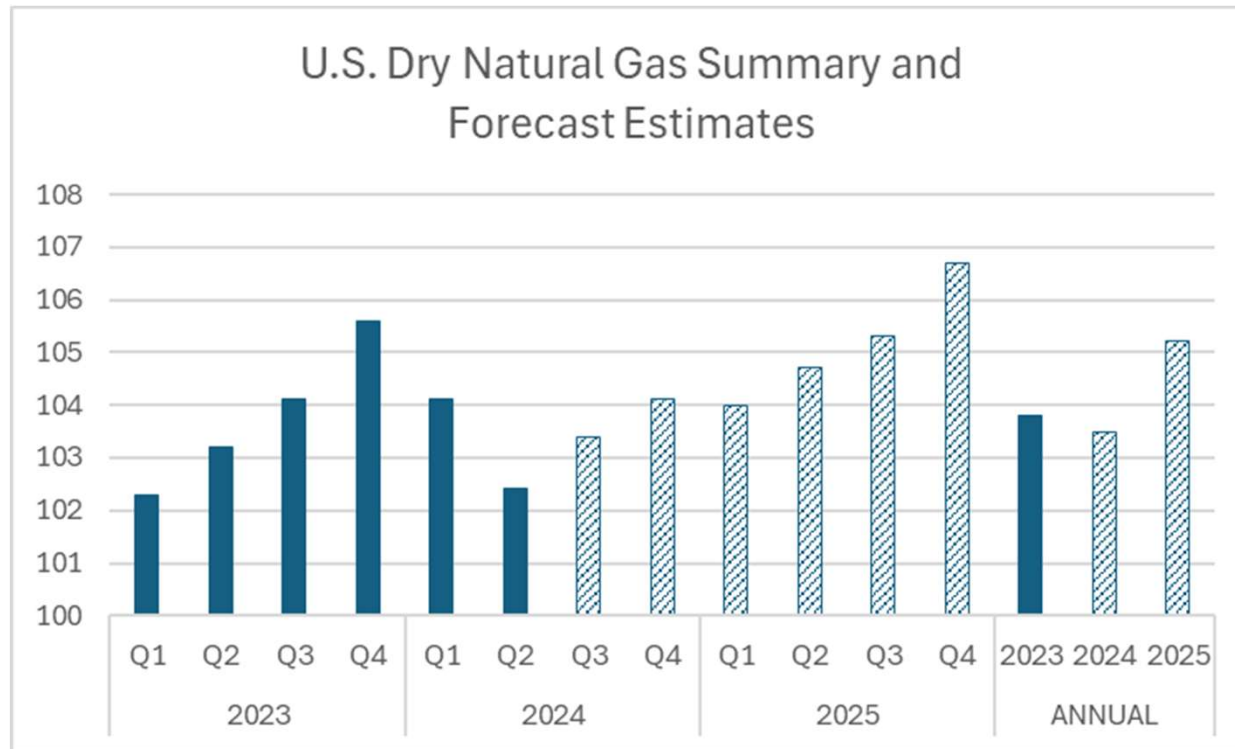


Data source: U.S. Energy Information Administration, Short-Term Energy Outlook, July 2024, CME Group, and Refinitiv an LSEG Business

Note: Confidence interval derived from options market information for the five trading days ending July 3, 2024. Intervals not calculated for months with sparse trading in near-the-money options contracts.



U.S. Production

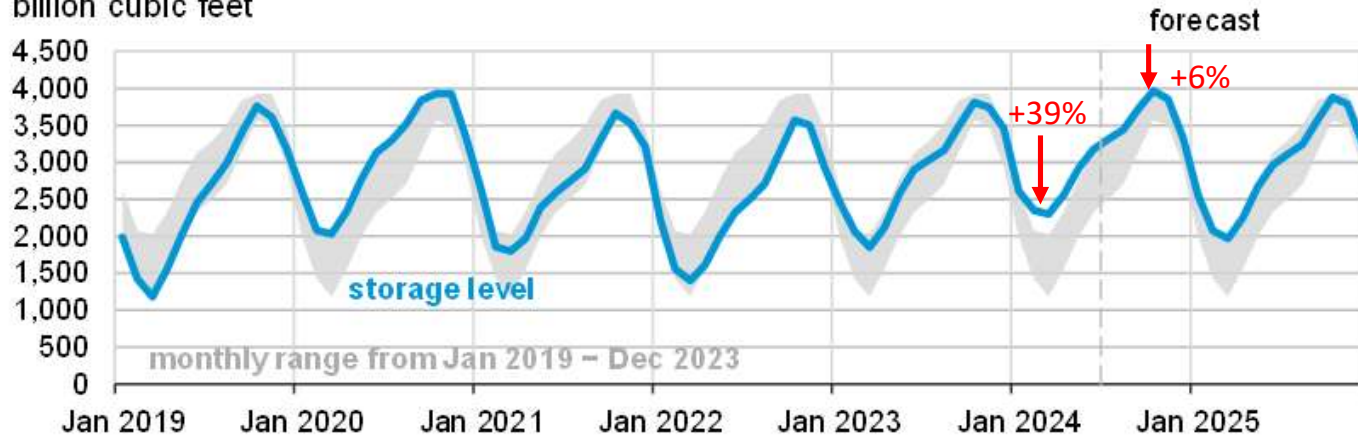


U.S. Energy Markets Summary | U.S. Energy Information Administration | Short-Term Energy Outlook - July 2024
 Dry Natural Gas Production
 (Bcf/day)

2023				2024				2025				ANNUAL		
Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2023	2024	2025
102.3	103.2	104.1	105.6	104.1	102.4	103.4	104.1	104	104.7	105.3	106.7	103.8	103.5	105.2

U.S. Working Gas Storage Inventory Forecast

U.S. working natural gas in storage
billion cubic feet



Percentage deviation from 2019 – 2023 average



Data source: U.S. Energy Information Administration, Short-Term Energy Outlook, July 2024



Summary

- Natural gas prices remain relatively low
- U.S. natural gas storage inventory remains strong and is forecasted to enter Winter 2024-2025 with ~6% surplus to the 5-year historic average
- U.S. dry natural gas production remain strong, with forecasted increases into 2025

EIA: 2022 Nebraska State Profile and Energy Estimates

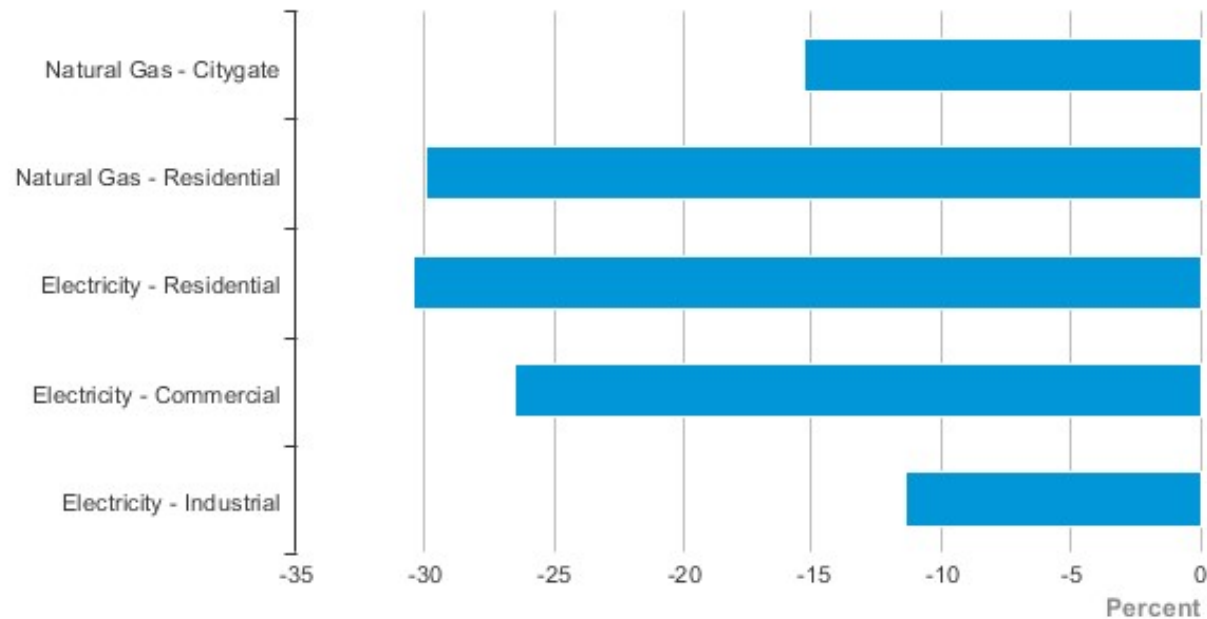
QUICK FACTS

- Nebraska produces more than 13% of the nation's fuel ethanol and ranks second in the nation, after Iowa, in ethanol production and capacity.
- In 2022, Nebraska obtained 49% of its total in-state electricity net generation from coal, 31% from wind, and 14% from nuclear power. Almost all of the rest was generated from natural gas (3%) and hydropower (3%).
- Nebraska ranks sixth in the nation in per capita total energy consumption in part because of its small population, energy-intensive industrial sector, and because of the state's hot summers and harsh winters.
- In 2022, Nebraska ranked third in the nation, after Texas and California, in its number of industrial electricity customers. About 39% of electricity retail sales in the state went to the industrial sector, which includes agriculture, where electricity is used to run irrigation systems.
- A larger share of the petroleum used in Nebraska is consumed as distillate fuel oil than in all other states except Wyoming and North Dakota.

Last Updated: July 20, 2023

Nebraska Prices relative to U.S. Average Prices, per EIA as of March 2024

Nebraska Price Differences from U.S. Average, Most Recent Monthly



Source: Energy Information Administration, Petroleum Marketing Monthly; Natural Gas Monthly; Electric Power Monthly

Overview

We are a customer focused, growth-oriented utility company with a tradition of improving life with energy and a vision to be the energy partner of choice. Based in Rapid City, South Dakota, the company serves 1.34 million natural gas and electric utility customers in eight states: Arkansas, Colorado, Iowa, Kansas, Montana, Nebraska, South Dakota and Wyoming.

Gas Utilities

Arkansas
Colorado
Iowa
Kansas
Nebraska
Wyoming*

Electric Utilities

South Dakota
Colorado
Wyoming*

*Utility supplies electric and gas service to Cheyenne, Wyoming and vicinity and gas service to northeast and northwest Wyoming

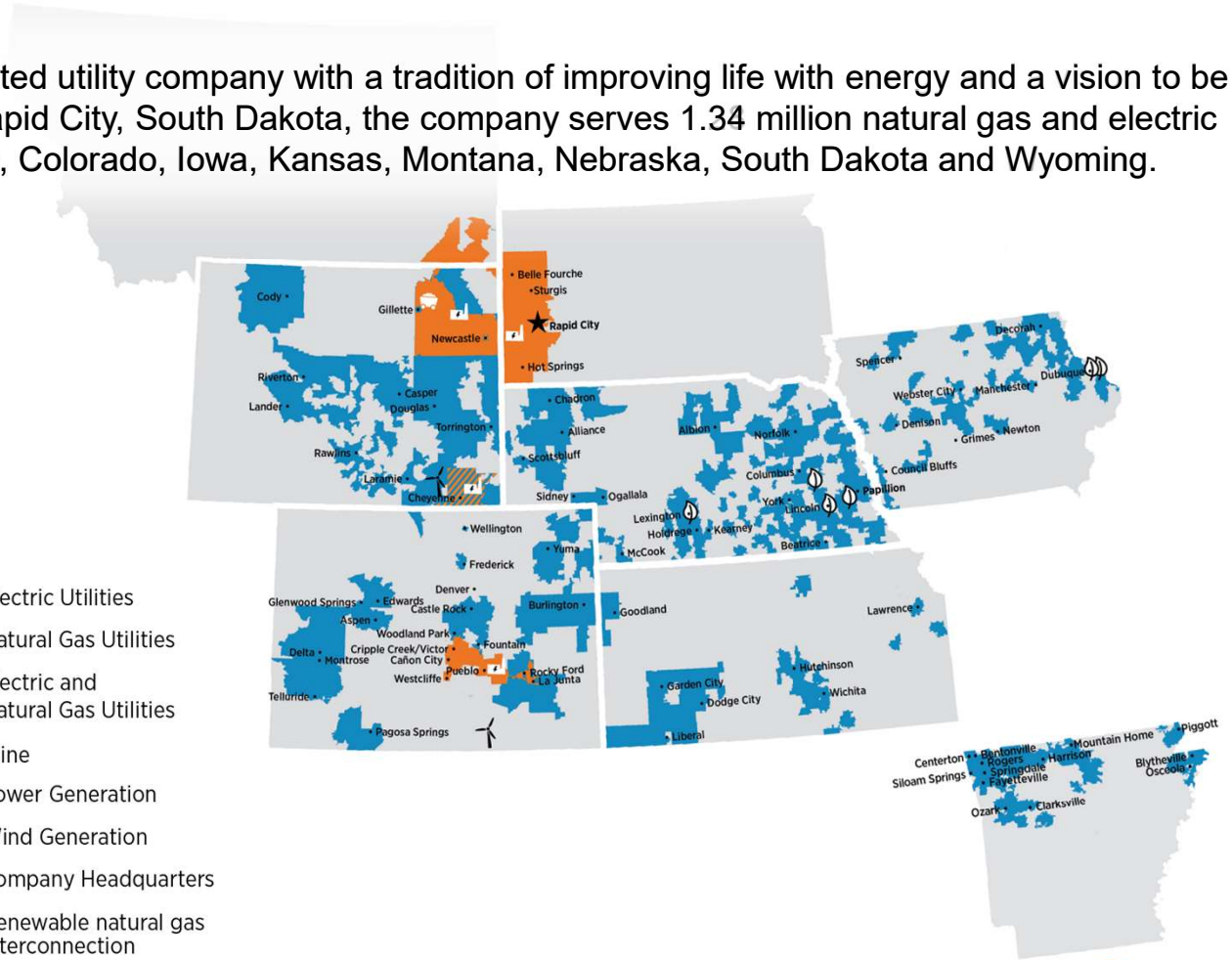
Power Generation

Black Hills Electric
Generation

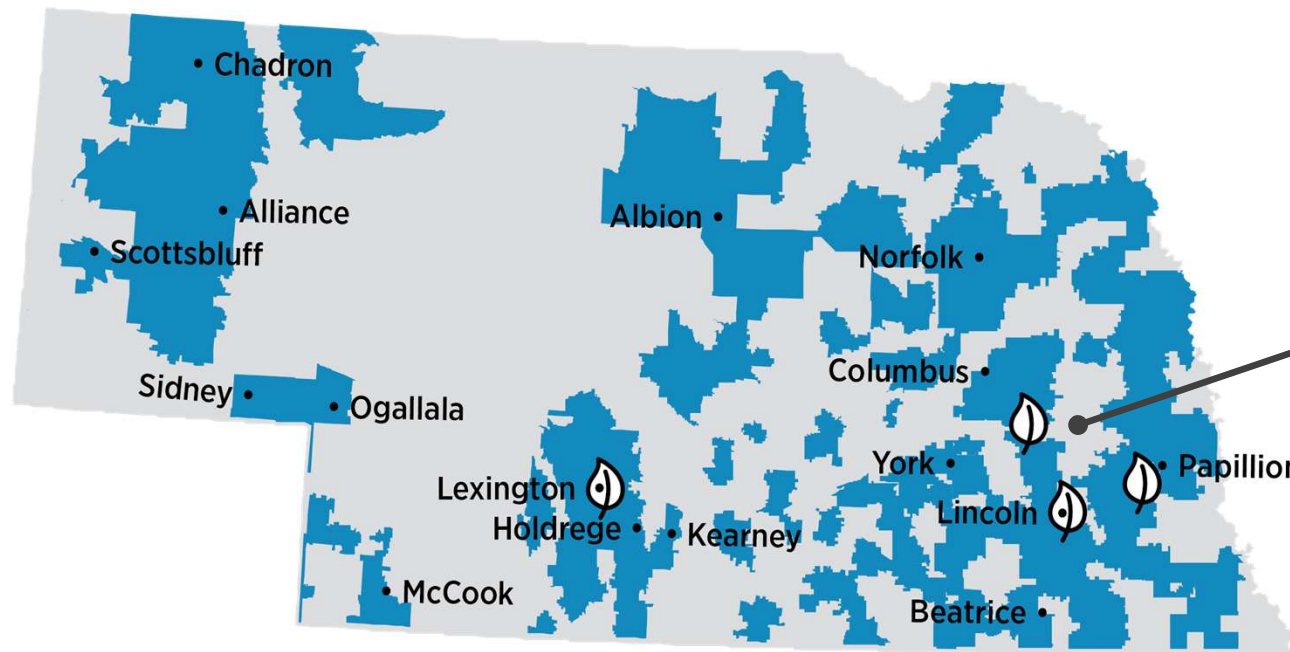
Mining

Wyodak Resources

-  Electric Utilities
-  Natural Gas Utilities
-  Electric and Natural Gas Utilities
-  Mine
-  Power Generation
-  Wind Generation
-  Company Headquarters
-  Renewable natural gas interconnection



Black Hills Energy – Nebraska Gas



Nebraska
302,167 customers
319 communities served

● Natural Gas Utilities

VISION

Be the Energy Partner of Choice.

MISSION

Improving Life with Energy.

COMPANY VALUES



Agility

We embrace change and challenge ourselves to adapt quickly to opportunities.



Customer Service

We are committed to providing a superior customer experience every day.



Partnership

Our partnerships with shareholders, communities, regulators, customers and each other make us all stronger.



Communication

Consistent, open and timely communication keeps us focused on our strategy and goals.



Integrity

We hold ourselves to the highest standards based on a foundation of unquestionable ethics.



Respect

We respect each other. Our unique talents and diversity anchor a culture of success.



Creating Value

We are committed to creating exceptional value for our shareholders, employees, customers and the communities we serve...always.



Leadership

Leadership is an attitude. Everyone must demonstrate the care and initiative to do things right.



Safety

We commit to live and work safely every day.