Omaha Public Power District

BOARD OF DIRECTORS

# Agenda

**OPPD Board of Directors – All Committees Meeting**
**Tuesday, September 14, 2021**
**CLOSED SESSION – 8:00 AM – PUBLIC SESSION 10:00 A.M.**

***Public may attend by going to www.oppd.com/CommitteeAgenda to access the Webex meeting link and view instructions.***

| | TOPIC | TYPE | PRESENTER | TIME* | |
|---|---|---|---|---|---|
| **1.** | **Chair Opening Statement** | | Bogner | **8:00** | **A.M.** |
| **2.** | **Closed Session** | | | **8:10** | **A.M.** |
| | Enterprise Risk Management Quarterly Update | Reporting | Focht | 45 | min |
| | Appointment of Troy Via to Chief Operating Officer and Vice President – Utility Operations and Compensation Adjustment | Action | Fernandez | 30 | min |
| | ***BREAK*** | | | **9:40** | **A.M.** |
| | ***Open Webex Meeting to Allow Public to Join*** | | | **9:45** | **A.M.** |
| **3.** | **Public Session – Chair Opening Statement** | | Bogner | **10:00** | **A.M.** |
| **4.** | **Safety Briefing** | | Fernandez | **10:05** | **A.M.** |
| **5.** | **Governance Committee** | | | **10:10** | **A.M.** |
| | Governance Chair Report (9/9/21) | Reporting | Moody | 10 | min |
| | OPPD Redistricting and Board Composition | Discussion | Moody | 30 | min |
| | Appointment of Troy Via to Chief Operating Officer and Vice President – Utility Operations and Compensation Adjustment | Action | Fernandez | 30 | min |
| | SD-10: Ethics Monitoring Report | Action | Sedky | 10 | min |
| | Polar Vortex After Action Review Final Report | Reporting | Focht | 30 | min |
| **6.** | **Finance Committee** | | | **11:50** | **A.M.** |
| | Finance Chair Report (9/3/21) | Reporting | Yoder | 5 | min |
| | 2021 Expenditure Approval Increase | Action | Thurber | 10 | min |
| | ***BREAK FOR LUNCH*** | | | **12:05** | **P.M.** |
| **7.** | **System Management & Nuclear Oversight Cmte** | | | **12:35** | **P.M.** |
| | SM&NO Chair Report | Reporting | Williams | 5 | min |
| | Nuclear Oversight Committee Report | Reporting | Fisher | 10 | min |
| **8.** | **Public Information Committee** | | | **12:50** | **P.M.** |
| | Public Information Chair Report | Reporting | Mollhoff | 5 | min |
| | Legislative and Regulatory Update | Reporting | Olson | 30 | min |
| | ***BREAK*** | | | **1:25** | **P.M.** |
| **9.** | **Other Business** | | | **1:35** | **P.M.** |
| | Confirmation of Board Meeting Agenda | Action | Bogner | 5 | min |
| | Review of Board Work Plan | Discussion | Bogner | 5 | min |
| | Power with Purpose Update | Reporting | Fisher | 30 | min |
| | Technology Platform Strategic Initiative Update | Presentation | Brown | 60 | min |

***** All times and duration are estimates. Please use the link below to find board agendas, materials and schedules. Board governance policies and contact information for the board and senior management team also can be found at www.oppd.com/BoardMeetings.

# Pre-Committee Agenda

GOVERNANCE PRE-COMMITTEE MEETING
WEBEX VIDEOCONFERENCE
September 9, 2021 8:00 – 9:00 A.M.

1. COVID-19 Protocols Update (Brown – 10 min)
   a. Objective: Understand proposed protocol related to mask resolution.

2. OPPD Redistricting – Amendment to OPPD's Petition for Creation (Bruckner – 10 min)
   a. Objective: Clarify direction to make a well-informed and timely recommendation regarding OPPD redistricting (including other Constituent-to-Board Members comparisons).

3. Strategic Direction Policy (SD) Monitoring Report Approach Refinement (Yoder/Focht – 10 min)
   a. Objective: Identify potential refinements to SD policy monitoring.

4. 2021 Board Governance Workshop Update (Focht – 5 min)
   a. Objective: Understand progress and next steps.

5. Powering the Future 2050 (Focht – 5 min)
   a. Objective: Understand current status and next steps.

6. SD-10: Ethics Monitoring Report (Sedky – 5 min)
   a. Objective: Confirm recommendation and address any questions.

7. Appointment of Troy Via to Chief Operating Officer and Vice President – Utility Operations and Compensation Adjustment (Fernandez – 10 min)
   a. Objective: Align around recommendation for promotion and compensation adjustment.

8. Confirmation of Board Work Plan – Governance Committee Items (2 min)
   a. Objective: Committee members to review and confirm items on the Board Work Plan.

9. Summary of Committee Direction (2 min)
   a. Objective: Senior management team liaison(s) to summarize direction provided by the committee.

Omaha Public Power District

# OPPD Redistricting and Board Composition

Board of Directors
All Committees Meeting
September 14, 2021

# Redistricting Process

- Public Power Districts must amend Charter and revise election subdivisions after each decennial census.
- No official action to be taken by or on behalf of OPPD until Legislature issues new congressional and legislative district boundaries.
- Upon this issuance, the county election commissioners will begin work to divide the districts into precincts and establish precinct boundaries.
- Once the precinct boundaries are set, OPPD will be able to commence work to revise election subdivision boundaries and amend the District's Charter.
- After Board approval, amended Charter and revised election subdivisions are submitted to Power Review Board for approval.

# Redistricting Process

- Standards:
  - Follow County Lines Wherever Practicable
  - Substantially Equal Population
  - Compact and Contiguous Territory
  - Follow Precinct Lines to Extent Feasible
  - No plan will be considered which results in an overall range of deviation in excess of 10% or a relative deviation in excess of plus or minus 5%, based on the ideal district population.

- Deadline:
  - New district boundaries must be drawn and submitted to the election commissioner or county clerk by December 30, 2021 (Neb. Rev. Stat. 32-553)

# Today's Discussion

- The Governance Committee has discussed and is interested in exploring the addition of a ninth director and is seeking to gain the perspectives of the full board.

# Implications/Considerations

- Such director would be elected in November 2022 general election
- Board considerations include:
  - Review and revision of governance documents, as applicable
  - Standing committee assignments

# Next Steps

- Draft election subdivision boundaries will be prepared for review by Directors and Management

- Likely time frame for Board review and approval is November Board meeting, with update on status at October All-Committee meeting

- Upon approval, amended Charter will be submitted to Power Review Board for review and approval

# Questions and Comments

Omaha Public Power District

**BOARD OF DIRECTORS**

# Action Item

September 14, 2021

ITEM
Appointment of Corporate Officer

PURPOSE
Appointment of Troy R. Via to Chief Operating Officer & Vice President Utility Operations

FACTS

a. Mr. Via brings over 20 years of industry experience to this position. He currently serves as Vice President Energy Delivery for OPPD.

b. Mr. Via joined OPPD in September of 2013 as the Director of Energy Marketing and Trading. During his five-year tenure in that position, Mr. Via played a lead role in OPPD's integration into the Southwest Power Pool and the District's entry into the day-ahead market. In September of 2018, Mr. Via was appointed to his current role. As the Vice President of Energy Delivery, Mr. Via oversees the planning, operations, construction and maintenance of OPPD's transmission and distribution system.

c. The Chief Operating Officer & Vice President Utility Operations will provide overall leadership, strategic planning and long term objectives for OPPD's energy production, energy resources, transmission, and distribution operations, and also will oversee the ongoing decommissioning of the Fort Calhoun nuclear power station. The role will oversee the main energy operational capabilities to ensure OPPD's continued commitment to affordable, reliable, and environmentally sensitive energy solutions.

d. The expanded scope of responsibilities for the new Chief Operating Officer role relative to the Vice President of Energy Delivery role results in higher pricing in the market and substantiates the compensation adjustment reflected in Exhibit A.

e. Prior to joining OPPD, Mr. Via's experience includes progressively responsible positions with Dominion Resources and Aquila Energy.

f. Mr. Via holds a Bachelor of Business Administration degree with a focus in Finance from The University of Central Missouri.

ACTION
Board approval of the appointment of Troy R. Via to the position of Chief Operating Officer & Vice President Utility Operations.

RECOMMENDED:

DocuSigned by:
Martha L. Sedky
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M. L. Sedky
Vice President – Human Capital

APPROVED FOR BOARD CONSIDERATION:

DocuSigned by:
L. Javier Fernandez
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L. Javier Fernandez
President and Chief Executive Officer

Attachments: Exhibit A
Resolution

EXHIBIT A
OMAHA PUBLIC POWER DISTRICT
SALARY ACTION FOR CORPORATE OFFICER
EFFECTIVE OCTOBER 31, 2021

| | Present Salary | Proposed Salary | % Change | % of Midpoint |
|---|---|---|---|---|
| Troy R. Via | $320,781 | $407,392 | 27.0% | 85.0% |

*Moody/Sedky*

***DRAFT***
***RESOLUTION NO. 64xx***

***WHEREAS***, the Board of Directors of the Omaha Public Power District is required by law to establish the compensation of the District's corporate officers.

***NOW, THEREFORE, BE IT RESOLVED*** by the Board of Directors of the Omaha Public Power District that the compensation adjustment for the corporate officer, Troy R. Via, as set forth on the Exhibit A attached hereto, be and hereby is approved.

# Board Action

**BOARD OF DIRECTORS**

September 14, 2021

ITEM

SD-10: Ethics Monitoring Report

PURPOSE

To ensure full board review, discussion and acceptance of the 2021 SD-10: Ethics Monitoring Report

FACTS

a. The first set of Board policies was approved by the Board on July 16, 2015. A second set of Board policies was approved by the Board on October 15, 2015.

b. Each policy was evaluated and assigned to the appropriate Board Committee for oversight of the monitoring process.

c. The Governance Committee is responsible for evaluating Board Policy SD-10: Ethics Monitoring Report.

d. The Governance Committee has reviewed the SD-10: Ethics Monitoring Report and is recommending that OPPD be found to be sufficiently in compliance with the policy as stated.

ACTION

The Governance Committee recommends Board approval of the 2021 SD-10: Ethics Monitoring Report.

RECOMMENDED:

DocuSigned by:
Martha L. Sedky
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Martha L. Sedky
Vice President – Human Capital

APPROVED FOR BOARD CONSIDERATION:

DocuSigned by:
L. Javier Fernandez
AC399FDCE562A7E...

L. Javier Fernandez
President and Chief Executive Officer

MLS:mfh

Attachments:
Exhibit A – Monitoring Report
Resolution

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OPPD
Omaha Public Power District

Exhibit A

# Monitoring Report
# SD-10 Ethics
# Governance Committee
# September 14, 2021

Mart Sedky, Vice President Human Capital

# SD-10: Ethics

It is essential that OPPD maintain the public trust and confidence in the integrity and ethical conduct of its Board of Directors and the OPPD employees. Therefore, to ensure the public interest is paramount in all official conduct, the Board shall adopt and update, as necessary, a Code of Ethics and Business Conduct (the "Code"). OPPD shall also maintain and enforce a code of conduct applicable to all employees.

Among other things the Code shall:

- Require high ethical standards in all aspects of official conduct;
- Establish clear guidelines for ethical standards and conduct by setting forth those acts that may be incompatible with the best interests of OPPD and the public;
- Require disclosure and reporting of potential conflicts of interests; and
- Provide a process for: (i) reporting suspected violations of the Code and policies; (ii) investigating suspected violations of the Code and policies; and (iii) providing an annual report to the Board.

# Require high ethical standards in all aspects of official conduct

| Board of Directors | Employees (Policy 3.01) |
| --- | --- |
| • Loyalty<br>• Compliance with Applicable Laws<br>• Observance of Ethical Standards | • Integrity<br>• Compliance with Applicable Laws and Regulations<br>• Act in a Legal and Ethical Manner |

# Establish clear guidelines for ethical standards and conduct by setting forth those acts that may be incompatible with the best interests of OPPD and the public

| Board of Directors | Employees |
| --- | --- |
| • Conflicts of Interest<br>• Improper Conduct and Activities<br>• Compensation from non-Company Sources<br>• Personal Use of Company Assets<br>• Corporate Opportunities<br>• Gifts<br>• Business Courtesies<br>• Confidentiality<br>• Compliance | • Laws, Regulations, and Personal Conduct<br>• Accuracy of District Records, Reports and Communications<br>• Use of Assets<br>• Confidentiality and Disclosure of Information<br>• Current and Potential Relationships with Vendors<br>• Travel & Lodging for Business/Trade Organizations<br>• Employee and Customer Relations<br>• Political Office, Government Relations, and Public Service<br>• Conflicts of Interest<br>• Purchase sand Sales of Goods and Services<br>• Fraudulent Activities<br>• Retention of OPPD Records<br>• Distribution and Acknowledgement of Policy<br>• Reporting Violations and Seeking Guidance<br>• Disciplinary Action |

# Provide a process for: (i) reporting suspected violations of the Code and policies; (ii) investigating suspected violations of the Code and policies; and (iii) providing an annual report to the Board

| Board of Directors | Employees |
|---|---|
| 1. Communicate violations promptly to the Chair of the Governance Committee<br>2. Potential violations investigated by the Governance Committee or person designated (legal counsel)<br>3. Appropriate actions taken<br>4. Report annually to the Board<br><br>*None reported for the previous 12-month period* | 1. Report anonymously through 3rd Party (Ethics Point)<br>2. Report through Employee Concerns (FCS)<br>3. Report through Human Capital<br>4. Investigated by appropriate party/parties<br>5. Appropriate actions taken<br>6. Reported annually to the Board<br><br>*14 reported for the previous 12-month period – 13 investigated and appropriate action taken; 1 pending investigation* |

# Recommendation

The Governance Committee has reviewed and accepted this Monitoring Report for SD-10 and recommends that the Board finds OPPD to be sufficiently in compliance with Board Policy SD-10.

*Moody/Sedky*

***DRAFT***
***RESOLUTION NO. 64xx***

***WHEREAS,*** the Board of Directors has determined it is in the best interest of the District, its employees, and its customer-owners to establish written policies that describe and document OPPD's corporate governance principles and procedures; and

***WHEREAS,*** each policy was evaluated and assigned to the appropriate Board Committee for oversight of the monitoring process; and

***WHEREAS,*** the Board's Governance Committee (the "Committee") is responsible for evaluating Board Policy SD-10: Ethics on an annual basis. The Committee has reviewed the 2021 SD-10: Ethics Monitoring Report and finds OPPD to be sufficiently in compliance with the policy as stated.

***NOW, THEREFORE, BE IT RESOLVED*** that the Board of Directors accepts the 2021 SD-10: Ethics Monitoring Report, in the form as set forth on Exhibit A attached hereto and made a part hereof, and finds OPPD to be sufficiently in compliance with the policy as stated.

# Reporting Item

**BOARD OF DIRECTORS**

September 14, 2021

ITEM

Polar Vortex After Action Review Report

PURPOSE

Report the findings and recommendations of the Polar Vortex After Action Review

FACTS

a. The Southwest Power Pool (SPP) required load shedding from load-serving entities across their footprint on February 15 and February 16 in response to an imbalance of load and generation.

b. OPPD is required to respond to SPP's order to shed load without intentional delay.

c. On both February 15 and February 16, OPPD customers, in a rotating order, had their electric service temporarily stopped as OPPD complied with SPP's order.

d. At the February 2021 Board Meeting Tim Burke, then President and CEO of OPPD, announced that the organization would conduct an after action review of the load shedding event.

RECOMMENDED:

DocuSigned by:
Scott M. Focht
B626AD4392E3483...
Scott M. Focht
Vice President Corporate Strategy & Governance

APPROVED FOR REPORTING TO BOARD:

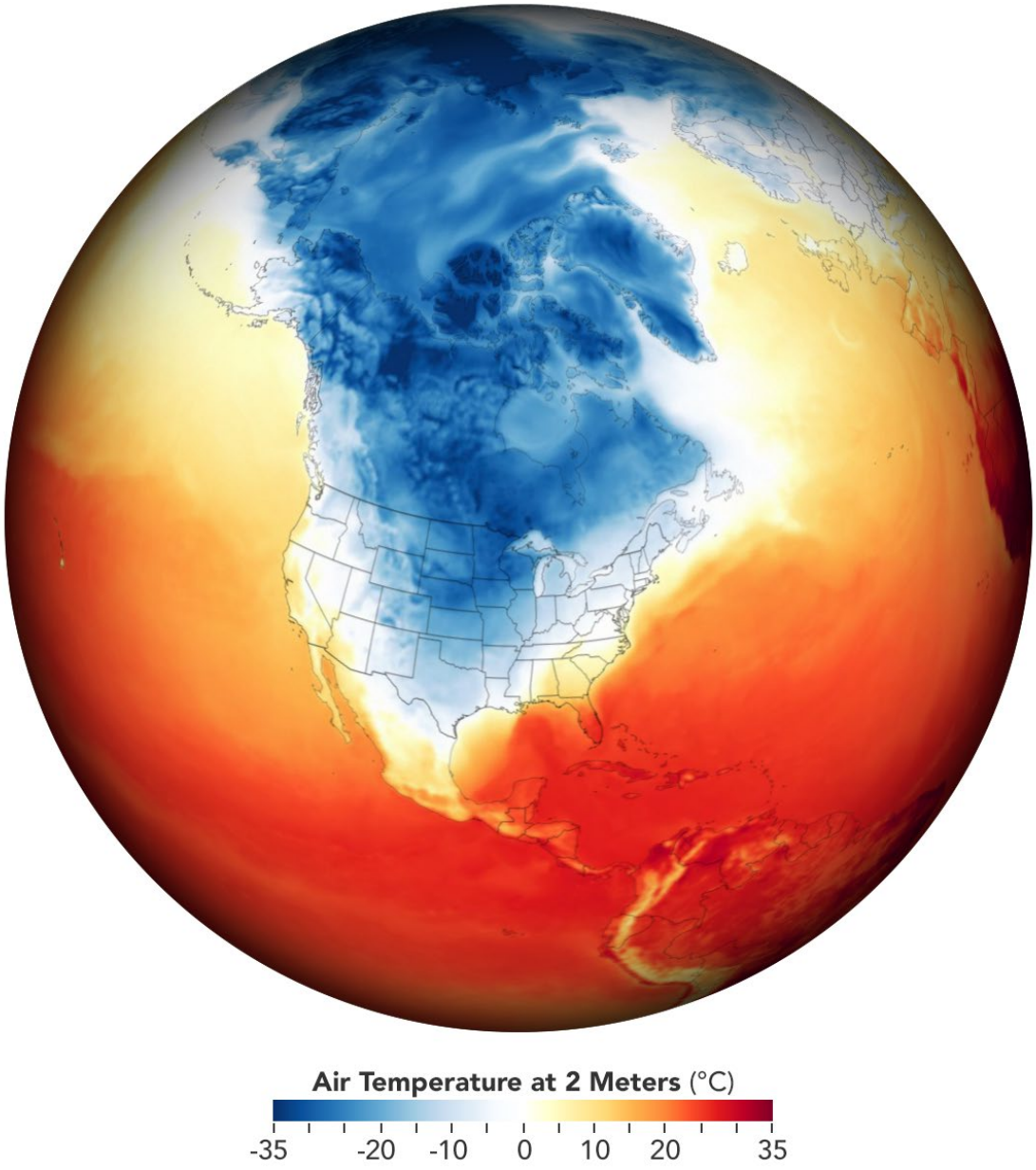
DocuSigned by:
L. Javier Fernandez
AC399EDCE56247E...
L. Javier Fernandez
President & Chief Executive Officer

SMF:dnl

Attachments: Polar Vortex After Action Review Report – The Polar Vortex Load Shedding Event
Polar Vortex After Action Review – Board Committee Meeting Presentation

# The Polar Vortex Load Shedding Event

February 4 – 20, 2021




NASA. *Extreme winter weather causes U.S. blackouts*. NASA. https://earthobservatory.nasa.gov/images/147941/extreme-winter-weather-causes-us-blackouts.

# Event Summary, Lessons Learned, Recommendations for Improvement

# Table of Contents

# ABOUT OPPD

*Mission: To provide affordable, reliable and environmentally sensitive energy services to our customers.*

Omaha Public Power District is a publicly owned electric utility that serves an estimated population of 850,000 people, more than any other electric utility in the state. Operating since 1946, the public utility is governed by an elected board of eight directors. While its headquarters is located in Omaha, Neb., OPPD has several other service locations in its 13–county, 5,000-square-mile service area in southeast Nebraska.

OPPD uses baseload power facilities fueled by coal and natural gas, peaking units fueled by natural gas and oil, and renewable energy, including wind, solar, landfill gas, and hydropower.

www.oppd.com

# ABOUT SPP

*Mission: Working together to responsibly and economically keep the lights on today and in the future.*

According to its website information, Southwest Power Pool (SPP) is about more than power. We're about the power of relationships. We work together with our members and other stakeholders to ensure electricity is delivered reliably and affordably to the millions of people living in our multistate service territory.

SPP is a regional transmission organization (RTO): a nonprofit corporation mandated by the Federal Energy Regulatory Commission (FERC) to ensure reliable supplies of power, adequate transmission infrastructure and competitive wholesale electricity prices on behalf of its members.

SPP was founded in 1941 when 11 regional power companies pooled their resources to keep Arkansas' Jones Mill powered around the clock in support of critical, national defense needs.

Eight decades later, SPP still reflects our early principles of collaboration in the interest of providing a critical service for the good of our region. Our vision is to lead our industry to a brighter future, delivering the best energy value.

https://spp.org/

# Introduction

To the OPPD Community,

I am pleased to deliver this After Action Report examining the Polar Vortex event in February of 2021. The OPPD leadership team requested this review in order to reflect on the event, how we responded, and how we could better respond should future events require a similar response. The men and women of OPPD responded to this unprecedented event with passion, responsibility, and a service attitude exemplifying our core values. I could not be prouder of the effort that went into maintaining the electric grid through this unprecedented event.

In nearly 75 years of OPPD operations, not once had there been an event when customer power was intentionally turned off to save the bulk electric system. We carry the weight of knowing many of our customers use our electricity for life-saving and life-maintaining services, and will always do our utmost to keep the lights on and power flowing. As a customer-owned public utility, our primary obligation is to provide reliable electricity as a fundamental component of modern society.

OPPD employees take great pride in delivering affordable, reliable, environmentally sensitive electricity to our 850,000 customer-owners. When the Southwest Power Pool (SPP) directed us to shed load, it was a very difficult moment for all of us. We have benefited greatly from our membership in SPP, and although a difficult choice was handed to us, we responded as we always do – professionally, immediately, and with the best interests of our customer-owners in mind.

With over 80 employees contributing their experience and reflections to the preparation of this report, I am confident we will continue to learn the necessary lessons that come from such a comprehensive review. We will take positive steps based on the recommendations enclosed herein, so OPPD is better prepared for future emergencies. My deepest hope is that we will never need to shed load again; however, I am confident that if we do, we will be prepared.

Sincerely,

Javier Fernandez

OPPD President and Chief Executive Officer

# Polar Vortex Synopsis

While the Omaha area and the central plains have seen cold weather before, it has been some time since the region saw a weather pattern like the one experienced in February, 2021. The National Oceanic and Atmospheric Administration (NOAA) stated the cold wave experienced by the contiguous U.S. was the strongest seen in 30 years.[1] Much of the plains region averaged more than 30 degrees below normal for the period from February 7-21, 2021. The source of much of these cold temperatures was a phenomenon informally known as the "polar vortex" or what climate scientists call an Artic Oscillation (AO). The intensity for this AO at its peak tied for the most extreme February on record since 1950. For context, 99.9% of all days since 1950 had an intensity lower than those seen during the peak of this event. In short, while it gets cold in this region, it almost never gets this cold over such a large area.

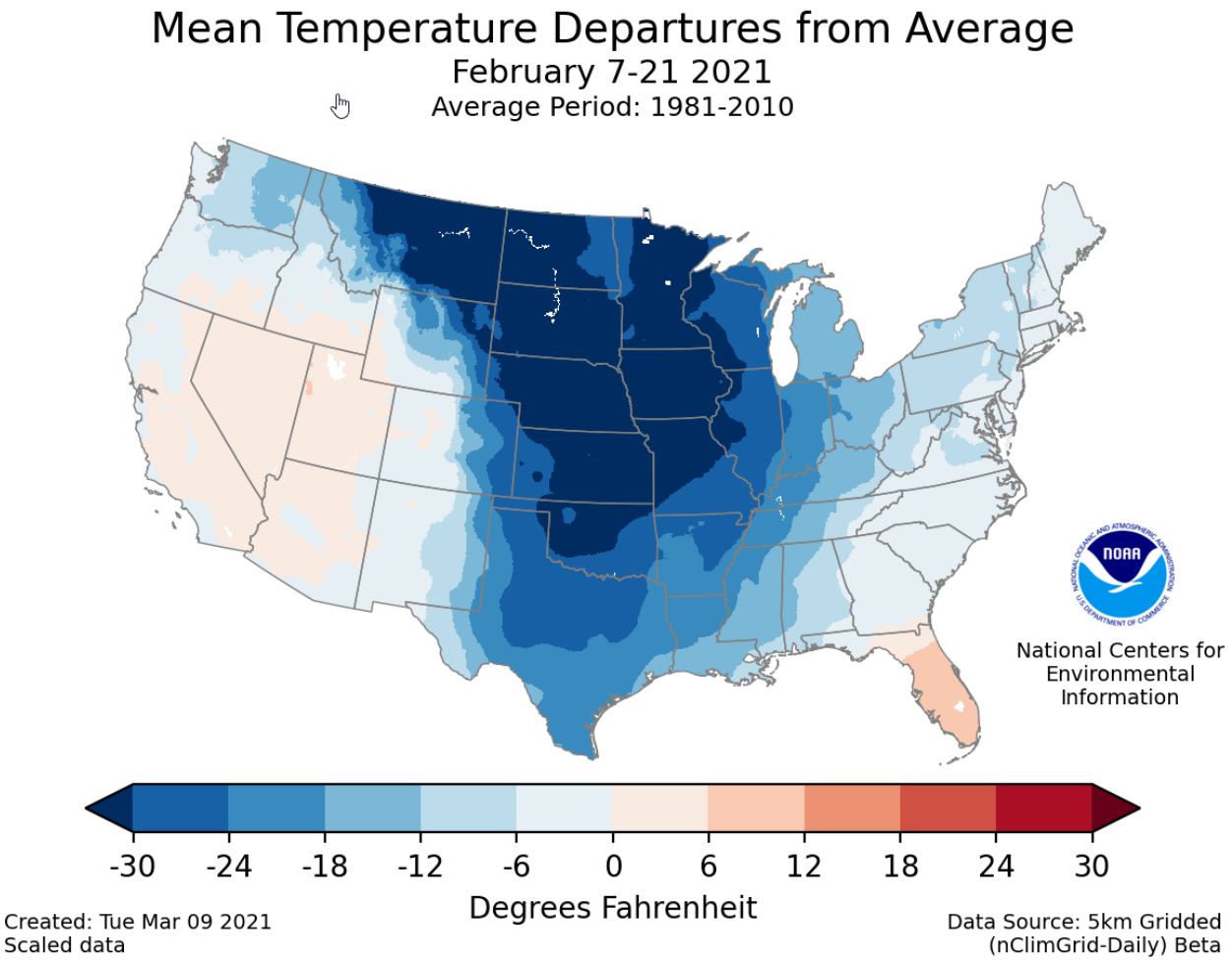



*Figure 1 – NOAA NCEI: Mean Temperature Departures from Average Map*

[1] https://www.ncdc.noaa.gov/sotc/synoptic/202102

The geographic size, duration, and magnitude of this Polar Vortex put considerable strain on the bulk electric system in the SPP region and neighboring regions, as shown in this map provided by SPP.

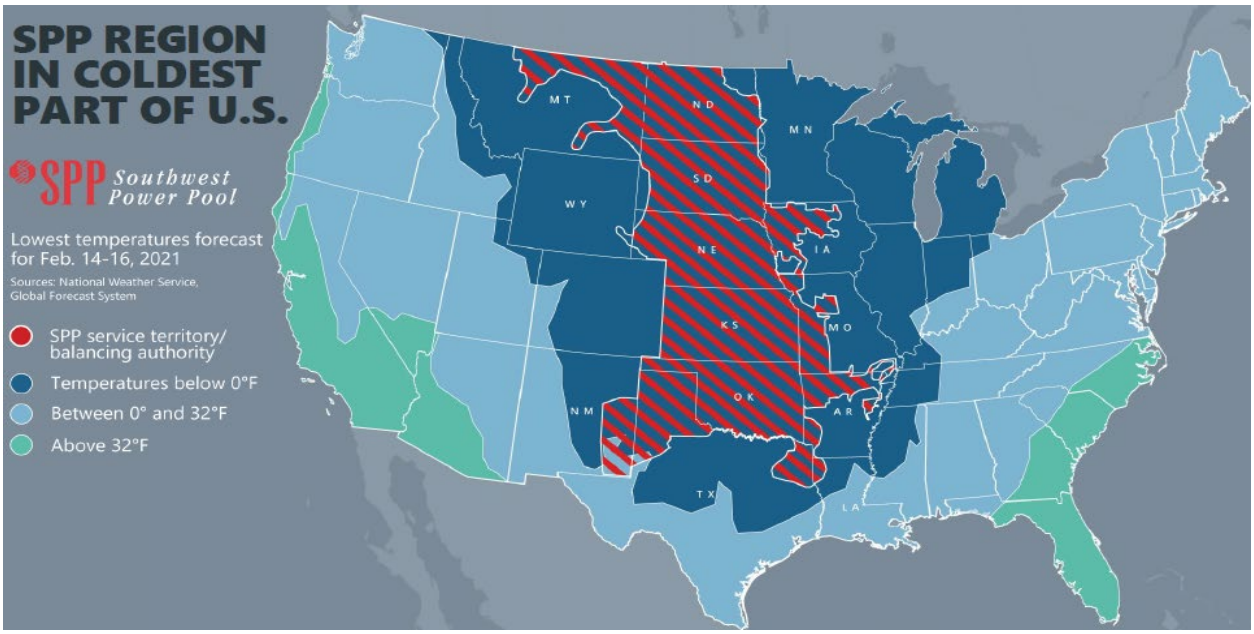



*Figure 2 – SPP: Low-Temperature Map*

With almost the entire SPP footprint experiencing below-zero temperatures from February 14-16, these temperatures created record setting increased demand for home heating and electricity across the entire highlighted SPP region. SPP's after action report on this event will provide more detail on the reasons for the need to enact load shedding to maintain the stability of the regional bulk electric system. This report will focus on review of OPPD's emergency operating plans and how OPPD locally prepares for and responds to these extreme events. Being a member of SPP and required under the shared regulatory requirements from FERC and NERC to maintain the stability of the bulk electric system, OPPD must have a regionally coordinated operating plan in place to be able to respond without intentional delay when the order to shed load is given. Because this was the first time in OPPD's history that the organization had to enact load shedding, and the first time SPP has requested it, both organizations identified the need to learn and improve. This report will focus on the review of OPPD actions so the organization will be better prepared in the future should shedding again be needed to maintain the bulk electric system.

In order to better understand this event and how the electric grid responded, it is critically important to understand that OPPD is part of a regional networked transmission grid, which interconnects our electric system with our neighbors. Being part of this network provides tremendous reliability and economic benefit to our customer-owners in the form of importing and exporting power within the region, which OPPD has leveraged for many years. The Southwest Power Pool (SPP) is the authority over the region of which OPPD and the rest of the large electric utilities in Nebraska are members. OPPD has representatives on several SPP working groups who have performed deeper dives regarding this event and developed recommendations to the SPP Board of Directors. OPPD's involvement includes the review of reliability operations, resource adequacy, transmission planning, market operations and the Comprehensive Review Steering Committee. These recommendation were included in the final report delivered to the SPP Board of Directors at their July 2021 SPP Board

Meeting. OPPD will continue to collaborate with SPP through the various working groups to ensure that SPP's recommendations are implemented in a timely and efficient manner.

It should be noted that OPPD's local electric system performed well during this polar vortex event as evident in the availability of our local power generation and delivery system to meet our customers' needs during the days in which SPP requested load shedding across its entire footprint. However, the combination of increased regional electric demand coupled with reduced availability of power generation in the overall SPP region led to the call by SPP for regional load shedding in order to maintain stability of the reigonal grid. The combination of each SPP member's local after action reviews along with the coordinated SPP regional after action review of this historic event will better prepare us indivually and collectively for future weather events.

# Key Takeaways

This extreme event underscores the stresses that come with providing reliable energy despite the most challenging of circumstances. As OPPD looks to improve upon what it can control in this event, below are the key takeaways that were identified.

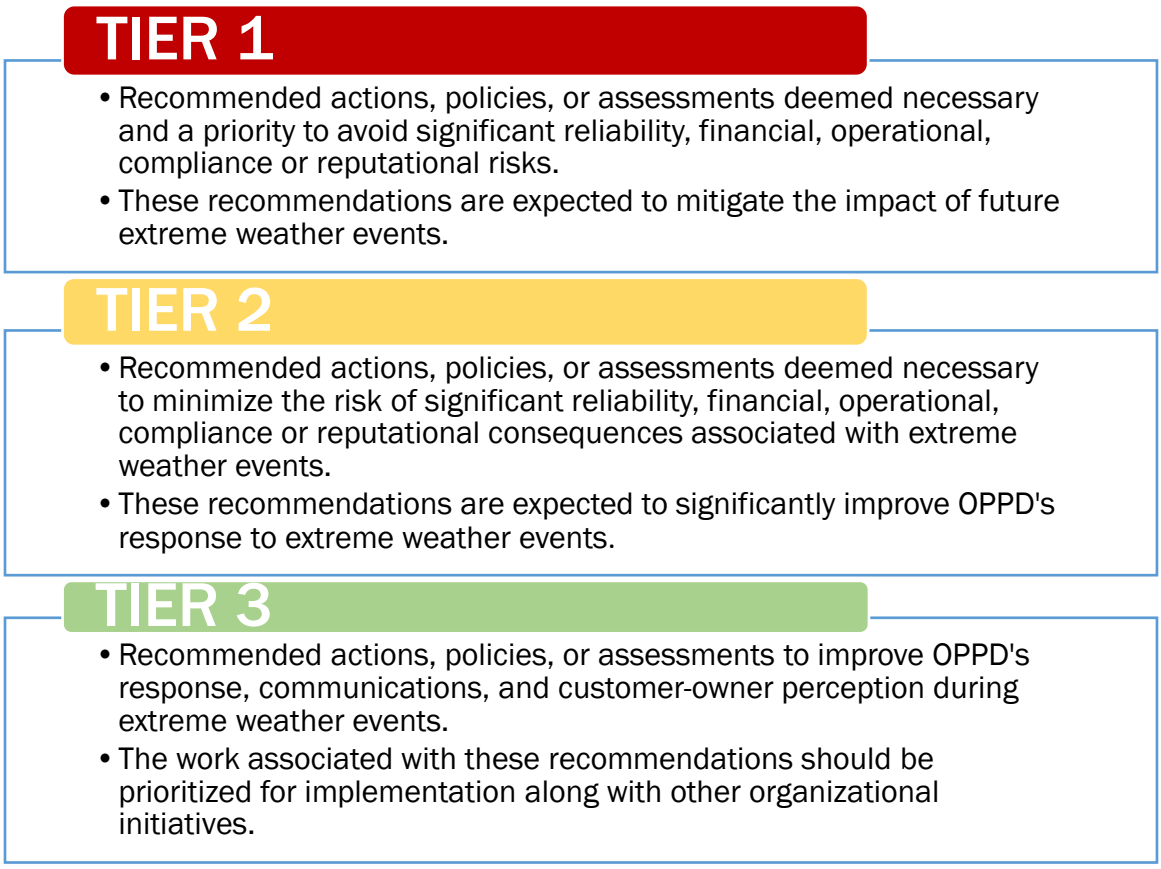
1. More accessible, individualized, and timely communication is critical to our customers during an energy emergency event and OPPD will improve to meet our customer-owner's communications needs.
2. OPPD's emergency event plan should be enhanced and made more robust to better support grid reliability during extreme events.
3. Given the increased financial risk of a more volatile and interconnected energy market, OPPD should review and consider expansion of its energy and fuel risk mitigation options to reduce the potential impact from future extreme events.
4. OPPD should review customer demand for and consider expanding its customer products and services to increase the usage and flexibility of self-generation and curtailment programs to minimize customer impact during extreme events.
5. OPPD's membership in SPP is critical to our organization's ability to meet our strategic goals and support the delivery of reliable energy during local emergency events (e.g. floods). OPPD should continue to extract value from its SPP membership and leverage our expertise and influence in the SPP stakeholder process to enact positive changes to the benefit of our customers

# Recommendations & Prioritization

Recommendations derived from the After Action Review were presented and accepted by OPPD Senior Management and reviewed by the OPPD Board of Directors on June 15, 2021.

Subsequently, each recommendation was evaluated and scored based on the impact to each of the 15 OPPD Strategic Directives, the size of the project, and prioritized by tier for implementation. The evaluation and scores were reviewed and approved by OPPD Senior Management.

The graphic below depicts the prioritization tiers and related definition:



# TIER 1 Recommendations

## Technology Recommendation 1

> *Develop or acquire technology tools to better serve our employees and customer-owners with the ability to efficiently and effectively communicate information. (i.e. Advanced Metering Infrastructure (AMI), Customer Relationship Management (CRM), Geographic Information System (GIS), and a more granular power outage map).*

Having additional tools to better manage customer data and also have the capability to load shed each meter individually instead of at the circuit level would allow OPPD greater flexibility in responding to load-shedding orders while also responding to individual customer needs.

## Enterprise-Wide Recommendation 1

> *Enhance OPPD's blueprint to improve OPPD's resilience to extreme weather and/or extended duration reliability events; including, at a minimum (in no particular order): a) fuel supply capacity & delivery planning, (fuel strategy), b) inventory management (peaking, plant, service centers), (inventory strategy), c) defining critical customer load and process to keep current, (critical load strategy), d) union contract considerations, (staffing strategy), e) physical location of key personnel, (physical location and facility needs), f) maintenance of plants (peaking), (outage & maintenance strategy), g) retain & validate, periodically, a list of customer contact information for those large customers with their own generation, h) employee fatigue considerations (physical and mental well-being), and i) methods and limits for OPPD facility support (e.g. load shedding).*

OPPD's and the SPP regions' generation mix is changing along with the demand on those systems (from extreme weather and evolving customer needs). To continue providing affordable, reliable, and environmentally sensitive energy services to our customers in the future, OPPD needs to evaluate the individual and collective strategies critical to our operations to ensure reliable and resilient energy is provided and processes supporting these strategies are comprehensive and sustainable.

## Customer Experience Recommendation 1

> *Evaluate the priority for a Customer Contact Preference Center to support enhanced customer communications during extreme events.*

Extreme events require communication methods with our customers that normal operations do not. Having a tool to manage and maintain customer contact information, and their preferences for communication would allow for improved customer communication during future extreme events. This should include a process that requires OPPD to periodically review and expand the list of customers on our contact list by reaching out to trade associations to ensure small commercial customers are well represented in our contacts.

## Enterprise-Wide Recommendation 2

> *Develop an enterprise definition for resiliency and consider whether additions to SD-9 are needed to ensure appropriate management focus, oversight, and funding.*

A resilient utility, one that can withstand disruption and quickly resume normal operations after a significant event, is different conceptually than a reliable utility. Having a clear, enterprise-wide definition will better allow for consistency of evaluating and funding various projects that provide increased resilience to the organization.

## Customer Experience Recommendation 2

> *Evaluate additional customer products and services including rates and information sharing systems needed to provide the organization additional options to manage through emergency events.*

Additional distributed energy resources (DER) and demand side management (DSM) via customer products and services would give OPPD additional tools to mitigate potential reliability and financial impacts from extreme events.

# TIER 2 Recommendations

## Financial Recommendation 1

> *Evaluate the energy and fuel hedging & trading strategy and risk policy to consider: a) a more diverse portfolio of hedging and insurance options both physical & financial, b) situational (e.g. Energy Emergency Alerts - EEAs) based trading limits, c) emergency price volatility options (ex. out of the money call options), d) cost/benefit of an OPPD natural gas desk, and e) role and scope of Energy Marketing, Trading and Fuels (EMTF) Risk Management to support these efforts.*

Evaluating various options to improve OPPD's ability to minimize the financial impacts of extreme events will limit the potential for unforeseen costs to impact rates.

## Financial Recommendation 2

> *Evaluate ways to enhance current curtailment rate offerings to customer-owners (more participation, remove seasonal/weekend/holiday restrictions, additional monitoring and control capability by OPPD).*

Requests for energy conservation from our customers involving voluntary demand reduction along with established curtailment programs involving dispatching customer owned generation were effective at reducing the overall demand on the system from what it could have been. However, a majority of OPPD's current curtailment offerings are designed for summer peak-load situations and none of the programs are set up with the required level of advanced OPPD monitoring and control which would be needed to ensure effective response to a Bulk Electric System load shedding event.

These programs should be evaluated for expanded use during non-summer seasons, be equipped with appropriate monitoring and control capability and also identify ways to increase participation in these programs.

## Customer Experience Recommendation 3

> *Evaluate enhancements to our public education program to include basic utility operations, purpose and benefits of SPP, regulatory requirements, etc. to be delivered in a variety of methods (i.e. short video clips, newsletters, OPPD.com, etc.).*

During extreme events, customers need to be able to quickly locate and understand the information they are seeking. OPPD should evaluate the various methods and mediums that information is available on and implement improvements.

## Enterprise-Wide Recommendation 3

> *Evaluate the necessity to conduct a Climate Vulnerability Assessment.*

Partnering with an outside firm or university to understand the potential and likely climate vulnerabilities for our service territory, state, and region will allow OPPD the best opportunity to deliver on its mission despite a changing climate.

## Enterprise-Wide Recommendation 4

> *Develop corporate policy to require cross-functional after action reviews or similar analyses for all significant events, with oversight/management by the Emergency Management team and facilitated by the Continuous Improvement team.*

While many parts of the organization already conduct lessons learned exercises after various events, there is a lack of consistency at the enterprise level after significant events. Requiring this would ensure cross-functional lessons learned are identified and recommendations for improvement implemented in a more formal way.

## Enterprise-Wide Recommendation 5

> *Establish an Emergency Response Team (ERT) similar to or modified from the existing Business Continuity structure to provide clarity, transparency and structure to the emergency response efforts.*

Business continuity plans are generally designed for when normal operations are significantly impacted or impossible to perform. The polar vortex event was about performing normal operations during an extreme event. Creating a new process or modifying the existing BCP process to align and support operations at an enterprise level for these types of events will improve the organization's preparation and response to extreme events.

## Enterprise-Wide Recommendation 6

> *Refresh, socialize, and test/drill the load shedding, black start, and normal communication channels down plans districtwide, on a regular basis.*

Emergency event plans are routinely drilled by the operational teams who would enact them. Teams in supporting roles are not always involved at the level they should be, which creates the potential for execution gaps. A more expansive program to educate and drill these plans with support functions would better prepare the organization for future extreme events.

## Education/Training Recommendation 1

> *Conduct periodic live simulation training exercises for cross-functional emergency response.*

Similar to the above, a more granular recommendation, this recommendation identifies the need for company-wide, live drills of extreme events to ensure organizational readiness.

## Communication Recommendation 1

> *Review/enhance role clarity and authorization levels during emergency events for internal and external communications.*

Internal and external communications during extreme events is critical. Reviewing and streamlining existing processes to expedite communications without compromising accuracy would greatly benefit our customer-owners and employees during extreme events. This effort should also confirm that needed skillsets are broadly present amongst the teams responsible for the various roles.

## Technology Recommendation 2

> *Evaluate the need/benefits of Energy Management System (EMS), Outage Management System (OMS), and Customer Information System (ICIS) integrations to support day to day and emergency operations.*

These different critical systems support various aspect of managing the reliability of the grid, outage events, and customer information. While there is some integration between these systems, they are not fully tied together in a way that the organization can see the individual customer impacts of opening a breaker on the distribution system. Having these systems fully integrated would provide additional visibility during both day to day and emergency operations.

## Communication Recommendation 2

> *Enhance Communication Plan to include the process for advance district wide/targeted area notification of pending extreme events to improve awareness and any necessary preparation and planning. The process should include thresholds/triggers for level of internal/external communications, in alignment with the emergency event plan and processes.*

While specific operating areas were monitoring the potential for grid-related impacts from the polar vortex event in advance, other supporting areas were not made aware of the potential for load shedding until much later in the month, primarily through ad-hoc communication. A more formalized communication plan to alert the organization as needed would improve organization readiness.

## Resources Recommendation 1

*Analyze and develop resource requirements to ensure efficiency while mitigating high market costs and employee fatigue during normal operations and emergency events. Specific considerations: EMTF Risk Management, natural gas traders, meteorologist, two Real Time desk operators, additional external communication surge capacity, etc.*

During the After Action Review interviews, some individuals identified various potential benefits both during normal operations and emergency events of additional staffing resources. Specific staffing recommendations were outside the scope of this review, however it is recommended to have a subject matter expert team perform a more focused review of the items listed above to determine if they are in the best interest of our customer-owners.

# TIER 3 Recommendations

## Resources Recommendation 2

*Develop dedicated role(s) for multi-lingual employees for real-time external communication translation and communication planning.*

All customers need to be able to receive critical communications during extreme events to protect their health and safety. Dedicated multi-lingual employees would allow for improved planning and execution of critical event communications to non-English speaking customers.

## Education/Training Recommendation 2

*Evaluate increasing the frequency and use of scenario-based training for FERC Standards of Conduct to improve employee awareness.*

Improved awareness and understanding by impacted employees of what is and isn't allowed when FERC Standards of Conduct are raised or lowered would improve internal communications during extreme events.

## Education/Training Recommendation 3

*Develop specialized training courses for Customer Service representatives to increase knowledge of utility operations.*

Customer Service Representatives are OPPD's front line when responding to customer inquiries during extreme events. Raising the organizational, regional, and industry knowledge of these representatives will improve their ability to confidently respond to the needs and questions of our customer-owners.

## Education/Training Recommendation 4

*Evaluate the need for a real-time energy marketer simulator to support emergency training and readiness of real-time marketers.*

Adding this best practice functionality to the existing energy marketer simulator would improve this area's ability to prepare and respond to extreme events.

## Resources Recommendation 3

> *Enhance Power Purchase Agreements (PPA's) template language and seek to amend, as applicable, existing PPA language to ensure generation ownership, responsibilities, and expectations are clearly defined.*

Ensuring performance responsibilities and expectations during extreme events are clear for OPPD's non-owned generation partners is beneficial to our ability to manage through such events.

## Communication Recommendation 3

> *Perform a legal review of any and all applicable laws/statutes on what can/cannot be communicated before/during/after emergency events.*

This review would provide OPPD an up-to-date legal basis on what can and cannot be communicated to our customers before, during, and after an extreme event.

## Financial Recommendation 3

> *Develop a financial plan to prioritize and budget for implementation costs associated with the Polar Vortex After Action Review recommendations.*

The above recommendations require various levels of resources to implement. Developing a prioritized plan to resource these recommendations will better ensure their implementation and the realization of the anticipated benefits.

# Summary of Key Activities

## Energy Production & Nuclear Decommissioning (EP&ND)

*Preparation & Planning*

The EP&ND team did what they do best in the days leading up to the Polar Vortex – they produced power, despite a string of extremely cold days. North Omaha Station 5, which had been on a planned outage for winter maintenance, was brought back online 18 hours ahead of schedule to support the grid during the extreme cold. Both Nebraska City Units 1 and 2 tripped offline during the week prior to the load-shedding event, and staff performed extraordinary measures to ensure both units were back online for the coldest days. The team utilized new drone technology to inspect the known tube leak, rather than wait for the boiler to cool down. This saved hours and provided the ability for the unit to be brought back online ahead of predictions.

The Polar Vortex presented unexpected challenges, which should be considered for future emergency event preparation. Due to a delayed inspection, the Sarpy County Station fuel oil tank was not filled prior to the emergency event. This limited the capacity of the Sarpy County Station even before the event started. In addition, Supply Chain Management was not provided sufficient advanced communications regarding the pending reliability event, which created challenges in receiving necessary equipment and parts for repairs/maintenance.

*Response & Execution*

Through the coldest days of the Polar Vortex, when SPP requested all available units to be ready and available to respond in a variety of manners, the EP&ND team ensured all generation units were ready and capable to respond. Given the weather, this was not an easy task. Yet the team braved the frigid weather to keep producing energy for our customers. For example, coal-handling crews kept both Nebraska City and North Omaha stockpiles active and accessible throughout the event, whereas other utilities reported suffering from frozen coal stockpiles. Additionally, Operations staff were in place for fuel offloading, working in harsh conditions to keep units running. These teams ultimately operated OPPD generation at a level sufficient to cover the OPPD load.

The following opportunities were identified and should be improved for future emergency events; insufficient stock of heaters for use at the plants to keep all critical systems warm, asset inventory was inaccurate, causing delays on repairing key parts, and communication was inconsistent, leading to some challenges – challenges, in part, exacerbated by the pandemic and inability to gather in person.

## Energy Delivery (ED)

*Preparation & Planning*

The ED team is comprised of multiple critical teams, and each played an important and valuable role in preparing for and responding to the Polar Vortex. The teams were well-trained and demonstrated situational awareness of potential issues and prepared accordingly, for this first-time emergency event. Leaders reviewed the load-shedding plan in advance and began preparing colleagues for the potential event prior to the actual load-shedding requests from SPP. In addition to reviewing the load-

shedding plan, the Black-Out Team met regularly after the California outages in the summer of 2020 and have been preparing and training for this kind of scenario.

OPPD's planning and preparation benefited from a well-maintained grid, prepared operators, and up-to-date command and control facilities. The Energy Control Center upgrade provided the necessary capability and capacity for critical communication, situational awareness, and safe operations supporting pandemic protocols. The ED team coordinated well with SPP, SMT, Customer Service, and Corporate Communications.

*Response & Execution*

Load shedding was executed in accordance with the Load Shedding Plan and the ED team demonstrated agility and flexibility addressing the emergency event. ED quickly responded to SPP requests and dynamically acted to establish additional load-shedding blocks to reduce the chance of areas or customers being repeatedly impacted.

Improvements, for future events, were noted regarding the Energy Management System (EMS) and Outage Management System (OMS) integration. As of today, OPPD does not have the capability to test load shedding down to the user level.

While SPP and internal communication with key stakeholders proved beneficial, customer engagement and communication of the load-shedding plan, throughout the utility, needs improvement.

ED should consider involving cross-functional departments in the review/validation of plan(s) and in maintaining information on critical load. Additionally for consideration, the plan was developed for summer load, and OPPD should evaluate and revise it for seasonal differences as part of the validation of the current plan.

## Financial Services (FS)

*Preparation & Planning*

While all FS staff were ready to support, two departments within the Business Unit – Energy Marketing & Trading (EM&T) and Supply Chain Management (SCM) – played large and important roles in preparing OPPD for the Polar Vortex.

The EM&T team declared OPPD Conservative Operations days before SPP issued their own Conservative Operations directions, which provided key OPPD staff warning and lead time that a significant weather event was approaching. Due to semi-annual black start drills, the real-time energy marketers were prepared leading up to the event.

Unit commitments to SPP reflected unusual activity in the days leading up to the load shedding event, and the Day-Ahead team executed those commitments and related gas acquisition without error under significant time, staffing, and considerable financial pressure.

The Supply Chain Management team expanded the list of fuel oil providers and established contracts quickly, to assist the fuels team in acquiring sufficient fuel oil for the weather event. Supply Chain also acquired a range of key parts and consumables on short notice to keep plants operational.

Opportunities for OPPD to consider going forward include:

- **Risk Policy Refinement:** The Energy Marketing & Trading Risk Policy caps trading activity at a certain level, which then requires additional approvals. These approvals impede trading and may lead to higher prices paid. Energy emergency heightened approval levels would still have appropriate oversight.
- **Gas Supply Capabilities:** With a single gas supplier, OPPD lacked visibility in the gas market for real-time prices.
- **Inventory Control Investment:** Some inventory records were inaccurate, leading to last-minute purchasing and high shipping costs.
- **Communications:** Communication from SCM on material and service needs could have been more effective in establishing next steps, timelines, and setting specific expectations for business partners.

*Response & Execution*

During the event, EM&T and SCM stepped up and coordinated necessary activities throughout the event. The Day-Ahead team committed large dollar amounts in the market for purchasing both fuel and energy, roughly 100 times normal prices, and acknowledged receiving the full support from SMT leadership and across the organization.

The real-time energy marketers brought in an additional colleague to assist with the many activities, providing enhanced organizational coordination and response. The Transportation & Construction Equipment team members were responsive and effective in maintaining and restarting vehicles and equipment throughout the brutally cold conditions.

Improvements to consider going forward, include:

- Improved real-time communications between SCM staff and users, ensuring clarity on timelines and expectations.
- Notify all wholesale customers with generation and retail customers with behind the meter generation to lessen the overall demand on the grid, which in turn could have saved money.
- Remote work led to several key fuel procurement telephone conversations not being recorded, which is a requirement during emergency events.

## Customer Service (CS)

*Preparation & Planning*

The CS team took a proactive approach in planning and preparing for the Polar Vortex. OPPD communicated and worked with our large commercial & industrial customers to achieve additional voluntary load reductions or self-generation to lessen the demand on the grid. Overall, customers responded positively for these requests to start generation, though a few customers were resistant at first due to environmental concerns.

The communication and coordination within CS and between EM&T, Energy Delivery, and Corporate Communications were noteworthy. Product Development and Marketing, in particular, led the effort to support residential customer communications to ensure messaging was customer-centric.

The collaboration between EM&T and CS facilitated agile, creative, and responsive options to design payments for those customers generating electricity. Additionally, the transition of Customer Care's

social media efforts to Public Affairs (Corporate Communications) occurred seamlessly and as planned.

The internal CS meetings increased overall situational awareness and ability to respond to the customer-owner inquiries.

Two areas to improve customer engagement surfaced during this phase of the event. First, an earlier review of the load-shedding blocks may have better prepared CS to develop messaging and services targeted to the customers who were going to be impacted. Secondly, the Customer Care representatives did not have talking points prior to the commencement of load shedding. This limited their ability to respond to general customer questions/concerns.

### *Response & Execution*

The CS team demonstrated commitment, flexibility, and patience throughout the emergency event. OPPD received more than 4,000 calls during the load-shedding event and Customer Care representatives quickly adapted to the changing situation and increased call volume.

During this phase of the event, CS's collaboration with Energy Delivery's system operations specialists was critical. The Substation team was postured to quickly respond to circuits that would not close remotely.

Throughout the event, the following areas were identified for future consideration:

- Process – insufficient ability to identify critical-load customers and curtailment programs that are designed only for summer loads.
- Communication – external mass communication with small and medium-sized businesses was insufficient and the established procedure between CS and Public Affairs (total of five departments) delayed the approval process.
- Resources - resource materials were not provided early enough leaving Customer Care representatives challenged to address customer questions and concerns. Translation was not available at first for outbound customer messages.
- Technology – upgrades (or additions) to the outage map, customer notification preference center and CRM tool would improve OPPD's ability to manage customers (as required) through a load-shedding event.

## Public Affairs

### *Preparation & Planning*

The Public Affairs team was engaged and aware as the weather forecast worsened. Energy Regulatory Affairs was in touch with multiple external groups, including SPP and FERC, to better understand the challenges and implications of the impending weather event.

Environmental Affairs coordinated with city and state governmental entities, in particular the Nebraska Department of Environment and Energy, to secure waivers and approval to run additional generation which might exceed permit limits under normal circumstances.

The Corporate Communications team coordinated with the Customer Care team regarding social media messaging to achieve two goals: first, to relieve resources to allow Customer Care to respond more quickly to customers, and second to maintain a common and consistent message through all

external sources. Due to uncertainty around what could transpire during the Polar Vortex, the team prepared a set of general materials for multiple media sources.

Areas identified for improvement include: Improved coordination with Energy Delivery on the load-shed plan and better understanding how to communicate it would be beneficial. Plus the development of communication templates for impending weather events, particularly in the days leading up to a potential event when the goal is to advise but not raise fear, would be helpful to develop in advance.

*Response & Execution*

The Public Affairs team was highly engaged during the most intense two days of the polar vortex. With the initial unprecedented request from SPP to implement region wide load shedding for the first time in this region's history there were initial internal and external communication challenges, but by Monday afternoon the communications team was able to fully meet internal and external needs.

Energy Regulatory Affairs established regular communications with SPP and FERC to inform decision-making and influence how outages were coordinated in an effort to protect the bulk electric system. Existing relationships with utility peers, including Nebraska Public Power District (NPPD) and Lincoln Electric System (LES), were invaluable to ensure the industry was aligned regarding to public communication, and the overall messaging aligned with SPP.

Initially, it was challenging to develop communications with proper messaging at the beginning of the load shedding event. As an example, Employees noted the home page of the Intranet site did not focus messaging on the emergency event, but on more trivial, in comparison, information.

Additionally, enhanced technology would provide improved and efficient messaging, to create a more streamlined approach for different messaging across both media and customer recipients. The approach of the CEO providing individual interviews, rather than holding a press conference, led to layers of messaging which would not have happened with a press conference approach. Social media communications capabilities and staffing should be re-evaluated for these types of events.

## Business Technology & Building Services (BTBS) / Safety & Technical Training (S&TT) / Human Capital (HC) / Corporate Strategy & Governance (CS&G) / Executive

*Preparation & Planning*

This section captures the planning and preparation efforts from an enterprise perspective. OPPD continuously prepares for extreme weather events. A significant aspect of preparation is OPPD's strong commitment and investment in preventative maintenance; to ensure critical assets perform under stress. Preventative maintenance coupled with the organization's ability to quickly and effectively prepare for and execute the load-shedding plan is noteworthy. Additionally, the agile communication with the Board of Directors and the Board's support positively impacted OPPD's ability to prepare for and respond to the Polar Vortex event.

The BTBS team played a critical role in this phase. Corporate Security proactively coordinated with NPPD and LES to share information and resources with the intent of protecting OPPD's critical infrastructure. This effort also extended to the partnering with law enforcement organizations and the monitoring of social media for signals or warnings.

Per executive feedback, there were two areas warranting further review and consideration include: providing one initial press conference versus multiple media outlet engagements to efficiently and effectively communicate a clear and consistent message. And, SMT's management of the event was largely ad-hoc in nature, and while prudent decisions were made based on the successful execution of the controlled outage process and maintaining our fleet generating power, a more structured approach would have been beneficial.

*Response & Execution*

This section captures the response and execution efforts from an enterprise perspective. OPPD is exceptional in responding to an emergency or extreme weather event. The passion of OPPD employees to serve and the agile communication and collaboration amongst the SMT are noteworthy and to be recognized. The District's training, preparation, caring, and leadership resulted in zero injuries, DARTs, or SIFs the week of and after load shedding.

A few areas were identified for future consideration and refinement:

Ensure appropriate personnel are informed and trained to execute the plan. For example, an increased legal review of load shedding, black start and any other NERC-required plans could have been requested and conducted either ahead of the event, or as the event unfolded. Overall, there were varying levels of knowledge/understanding of the load-shedding plan and potential impacts to OPPD facilities (e.g. EP, ECC).

OPPD's primary command, control and communications plan performed well. However, there was limited awareness of and ability to execute the secondary and tertiary back-up plans.

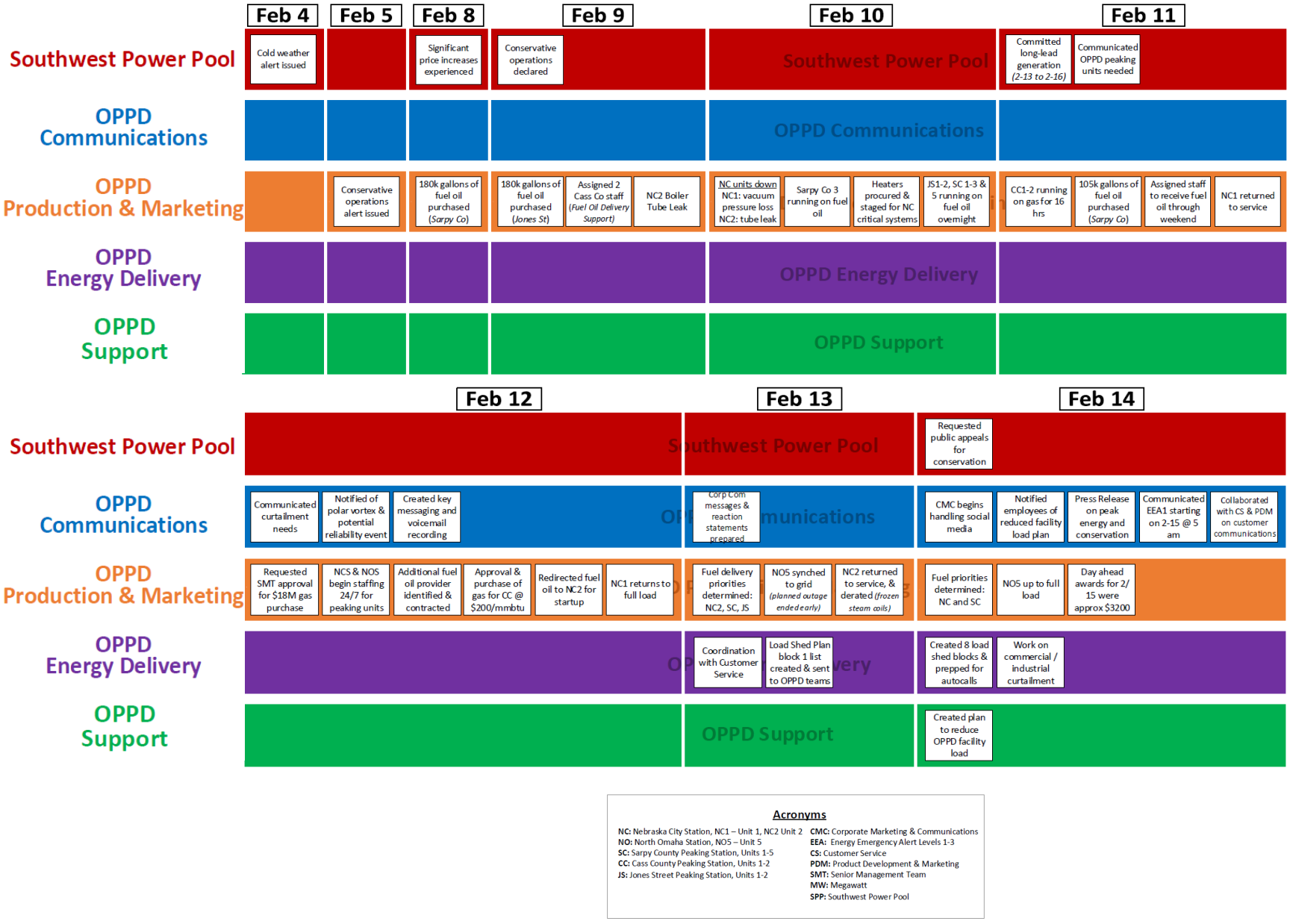
Also the ability to increase awareness of the potential of increased cyber-attacks could have been identified sooner.

Beyond the load-shedding plan, it was noted OPPD does have a robust framework for storm events and business continuity events but no specific (District-level) plan for non-storm grid emergency events.

Lastly, OPPD should focus on employee fatigue and mental well-being throughout the enterprise during and after any stressful event. Specifically focus on the operational areas most heavily called upon during a resiliency event including the Call Center, the Energy Control Center, Energy Marketing & Trading, and the Generation sites.

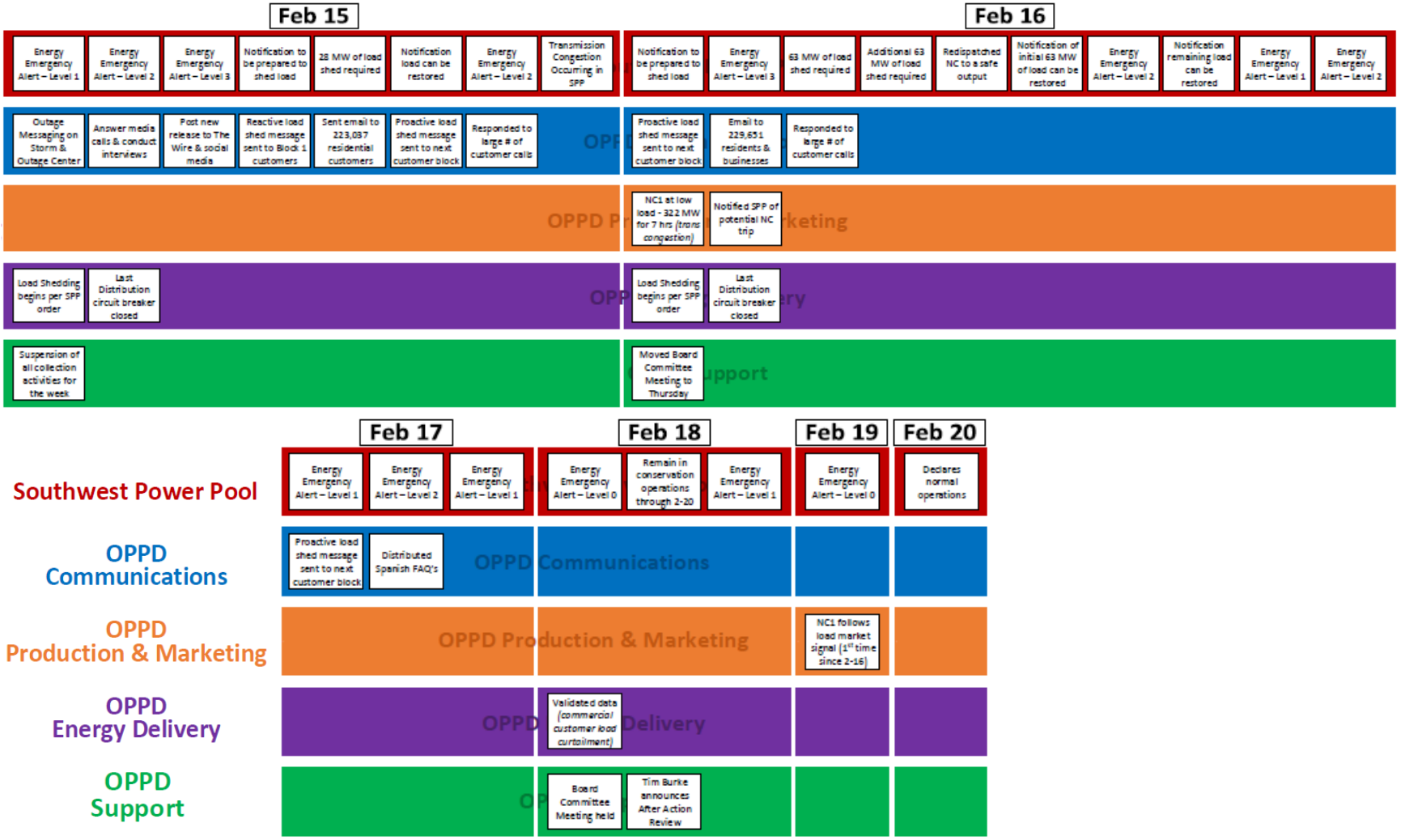
## Visual Timeline (Pages 21 and 22)

The next two pages provide a high level summary view of the significant actions that took place during each day of the event. The goal of this view is to quickly show what actions, many happening simultaneously, were occurring as OPPD prepared and responded to this event. This event was a first of its kind for both OPPD and SPP and a visual layout of each day's actions better convey its complex nature and the heroic efforts of OPPD employees to maintain the integrity of the bulk electric system.




**Acronyms**

**NC:** Nebraska City Station, NC1 – Unit 1, NC2 Unit 2
**NO:** North Omaha Station, NO5 – Unit 5
**SC:** Sarpy County Peaking Station, Units 1-5
**CC:** Cass County Peaking Station, Units 1-2
**JS:** Jones Street Peaking Station, Units 1-2
**CMC:** Corporate Marketing & Communications
**EEA:** Energy Emergency Alert Levels 1-3
**CS:** Customer Service
**PDM:** Product Development & Marketing
**SMT:** Senior Management Team
**MW:** Megawatt
**SPP:** Southwest Power Pool

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# Polar Vortex Explained

## What is the Polar Vortex?

The polar vortex is a circulation of strong, upper-level winds that surround the artic. These winds tend to hold the bitterly cold polar air in the Artic regions of the Northern Hemisphere. Occasionally, the vortex is disturbed, begins to wobble, and these distortions reach much farther south than is normal. Given the wobbly nature of such an event, only portions of the Northern Hemisphere will experience the extremely cold temperatures that come with a polar vortex event. Each event is different, not only by the area it impacts, but the severity of the event itself can also vary greatly. All polar vortex events bring cold weather, however the most impactful events bring extremely cold temperatures for an extended period of time. When this occurs, especially when an event is particularly strong in both intensity and duration, it is a significant risk to the health and safety of the populations impacted.

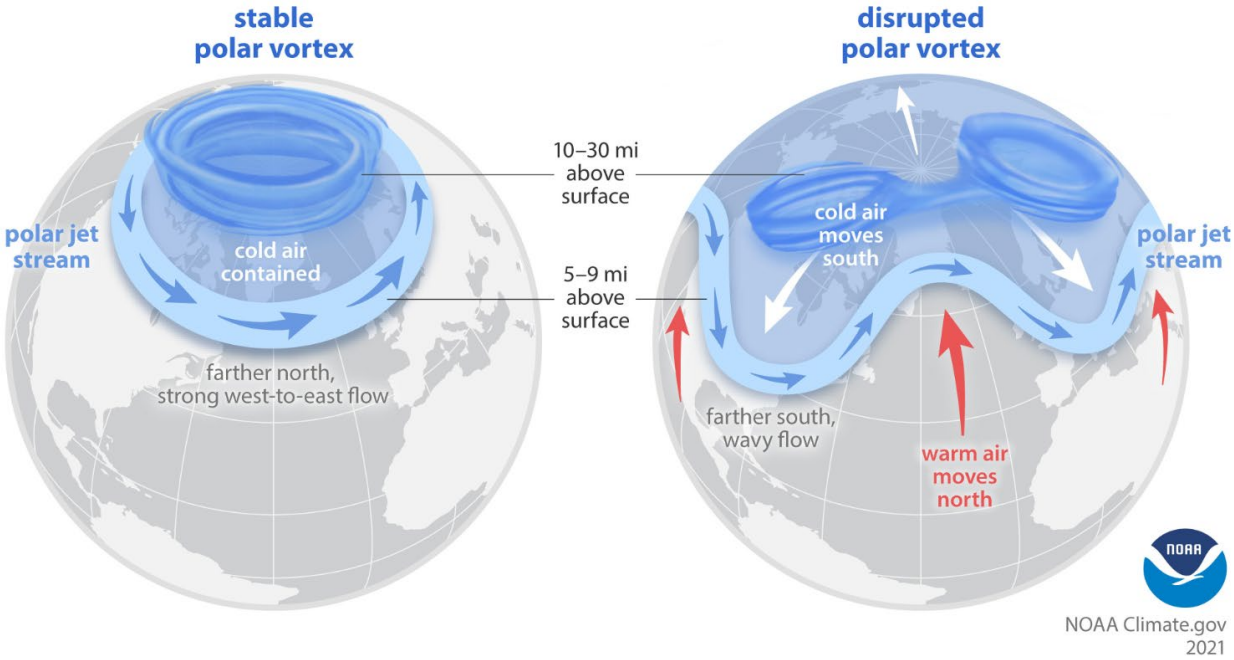


*Figure 3 – NOAA: What is the Polar Vortex?*

**Some additional external links with more information on this topic are:**


Jones, J., Miller, B., & Duke, A. (2019, January 30). *Polar vortex: Your questions answered.* CNN. https://www.cnn.com/2019/01/28/us/polar-vortex-explained-wxc/index.html.

US Department of Commerce, N. O. A. A. (2018, March 27). *What is the POLAR VORTEX?* National Weather Service. https://www.weather.gov/safety/cold-polar-vortex.

*Understanding the arctic polar vortex: NOAA Climate.gov*. Understanding the Arctic polar vortex | NOAA Climate.gov. (2021, March 5). https://www.climate.gov/news-features/understanding-climate/understanding-arctic-polar-vortex.

## How significant was this event?

The February 2021 polar vortex event was significant compared to other polar vortex events or extreme cold snaps, at least as far as observational data allows for historical comparisons. The geographic area impacted and the duration of the extreme cold were both historic in their intensity. The earlier section on the weather event covered how severe this polar vortex event was compared to normal. To understand this event at a more local level, additional research was conducted by the National Weather Service office in Valley, Neb.

For the Omaha area in particular, the region sees three or more consecutive days of below zero average temperatures roughly every 5 years, when reviewing temperature data from 1900 to current. This past February the region saw a 3-day event (Feb 7-9) followed by a 5-day event (Feb. 12-16). Prior to the 2021 event, the region hadn't see an event meeting this definition since 2004, which was the longest period of time between events in different years in the entire period analyzed. The most significant events in the period analyzed was the winter of 1936, which was an 11-day, consecutive below-zero average temperature event, and the winter of 1983, which was a 9-day event.

It is important to note that any period of extreme cold in Omaha doesn't always indicate a polar vortex event. Extreme cold in Omaha does not always correlate with extreme cold across the SPP footprint. However, when extreme cold is seen in larger cities to our south (ex. Kansas City, Oklahoma City, and Dallas) there is generally extreme cold in Omaha at the same time. However, there are outliers to this data. For example, Texas experienced its last extreme cold load-shedding event from Feb. 1-5, 2011. Temperatures in Omaha at this time were not significantly cold, with the coldest day being 3 degrees above zero on average and the remaining days were above 10 degrees.

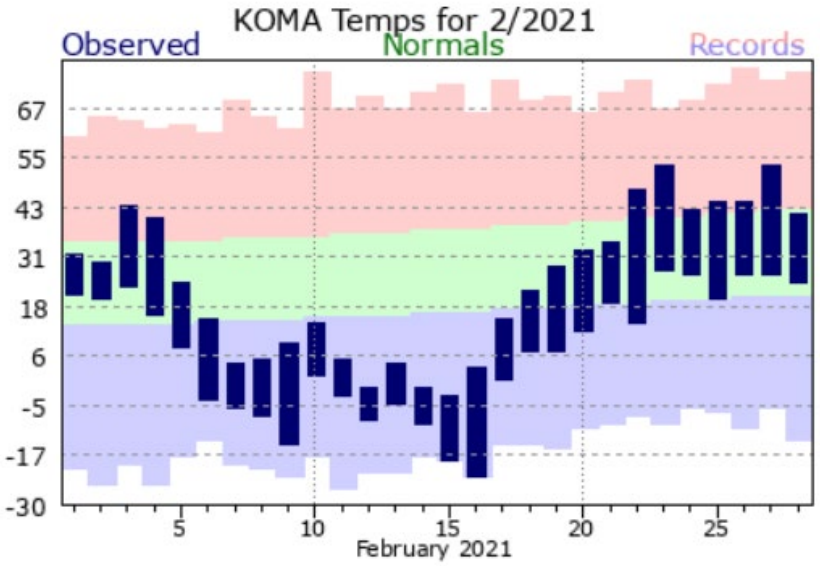


*Figure 4 – National Weather Service (NWS) – Valley: Omaha Observed Temperatures Feb. 2021*

Previous polar vortex events:

Wikimedia Foundation. (2021, March 24). *January–February 2019 North American Cold wave*. Wikipedia. https://en.wikipedia.org/wiki/January_February_2019_North_American_cold_wave.

Wikimedia Foundation. (2021, July 26). *December 2017–January 2018 North American Cold wave*. Wikipedia. https://en.wikipedia.org/wiki/December_2017_January_2018_North_American_cold_wave.

Wikimedia Foundation. (2021, February 22). *February 2015 North American Cold wave*. Wikipedia. https://en.wikipedia.org/wiki/February_2015_North_American_cold_wave.

Wikimedia Foundation. (2021, April 17). *November 2014 North American Cold wave*. Wikipedia. https://en.wikipedia.org/wiki/November_2014_North_American_cold_wave.

Wikimedia Foundation. (2021, June 30). *Early 2014 North American Cold wave*. Wikipedia. https://en.wikipedia.org/wiki/Early_2014_North_American_cold_wave.

Other external link to understand the significance of this event.

US Department of Commerce, N. O. A. A. (2018, February 8). *Monthly climate and records*. National Weather Service. https://www.weather.gov/oax/monthly_climate_records.

NOAA National Centers for Environmental Information, *State of the Climate: Synoptic Discussion for February 2021*, published online March 2021, retrieved on July 29, 2021 from https://www.ncdc.noaa.gov/sotc/synoptic/202102.

*Assessing the U.S. climate in February 2021*. National Centers for Environmental Information (NCEI). (2021, March 11). https://www.ncei.noaa.gov/news/national-climate-202102.

## How often do polar vortex events occur?

The polar vortex, which is always present in the Artic during the winter, has been disturbed on average every other year since 2000, and even back to the 1970's when satellite data became widely available. That being said, each polar vortex event is different and will impact different portions of the Northern Hemisphere differently. The 1990's was an unusually quiet decade for polar vortex disturbances. This may be the result of some natural variability in the atmosphere, or it may be impacted by other external factors that scientists are still trying to understand. Direct measurements of the stratosphere, where the polar vortex resides, go back to the 1950s, which makes it difficult to understand what, if any, longer-term natural variability might exist with the polar vortex.

*On the sudden stratospheric warming and polar vortex of early 2021: NOAA Climate.gov*. On the sudden stratospheric warming and polar vortex of early 2021 | NOAA Climate.gov. (2021, January 28). https://www.climate.gov/news-features/blogs/enso/sudden-stratospheric-warming-and-polar-vortex-early-2021.

## Was this event foreseeable?

Yes and no. It is possible to monitor and forecast the strength of the polar vortex around the North Pole. Climate scientists already identify when the polar vortex weakens and is disturbed, and even sometimes splits. When this happens it generally leads to greater variability in mid-latitude temperatures in the coming weeks.

That being said, as shown in the article provided below, the ability to predict where the polar vortex might bring extreme cold, and the duration and expanse of that cold, is beyond current weather forecasting capabilities. Surface-level and lower atmosphere conditions have a large impact on where and when this surge of Artic air will occur. Meteorology is generally only able to accurately predict coming weather conditions 7-14 days into the future. This is why it took until early February for various weather services to begin signaling the coming cold, despite the breakdown of the polar vortex in early January.

Kaufman, M. (2021, January 7). *The polar vortex has been disrupted. What does that bode?* Mashable. https://mashable.com/article/polar-vortex-explained.

## Polar Vortex & Climate Change

The Earth's climate is an immensely complex system impacted by a multitude of factors along various time scales. The majority of climate scientists agree that the climate is warming overall and the National Weather Service-Valley analysis shows that Omaha's average temperature has warmed in the years 1900 to current. In general, this warming trend should result in winters that are less cold on average in the future compared to historical averages. Despite an overall warming trend, it is still possible to experience extreme cold spells and record low temperatures in any given winter.

The exact connection between climate change and how it will impact the polar vortex is not fully understood at this time. Some models indicate warming will strengthen the polar vortex, while others show it will weaken it. Regardless, more research is needed to better understand this phenomenon and its impact on weather and climate in the future.

*Understanding the arctic polar vortex: NOAA Climate.gov*. Understanding the Arctic polar vortex | NOAA Climate.gov. (2021, March 5). https://www.climate.gov/news-features/understanding-climate/understanding-arctic-polar-vortex.

# Conclusion

The polar vortex event of February 2021 was an unprecedented event for the electric industry, OPPD, and our customer-owners. While the event was historic in its size, magnitude, duration, and the response necessary to preserve the integrity of the bulk electric system, it also was an opportunity for OPPD to learn and improve.

This after action report is intended to be the record of how OPPD prepared for and responded to this regional energy emergency event as well as to capture the improvements and lessons learned to be better next time. While the organization hopes that load shedding will never again be needed to maintain the stability of the grid, it is prudent to prepare in the event that it is. There are many factors that are beyond any utility's control when facing the threats of extreme weather events. This report demonstrates OPPD's responsibility to improve on what it can control to safeguard our mission of providing affordable, reliable, and environmentally sensitive energy services to our customers even in the most challenging of circumstances. As the recommendations included in this report are prioritized and implemented, the organization will continue to improve and advance our commitment as the trusted energy partner for the communities it serves.

# Appendix

List of Polar Vortex After Action Review Interviews by Business Unit

List of Related External Reports on the 2021 Polar Vortex Event

| List of Polar Vortex After Action Review Interviews by BU | | |
|---|---|---|
| Name | Position | Business Unit |
| Jake Farrell | Manager, Building Services & Operation | BTBS |
| Owen Yardley | Director, Building Services & Corp Security | BTBS |
| Dave Whisinnand | Director, Ent Infrastructure | BTBS |
| Kate Brown | VP & CIO, Business Technology & Building Services | BTBS |
| Meredith Comstock | Supervisor, Building Services & Operations | BTBS |
| Chris Fosmer | Supervisor, Building Services & Operations | BTBS |
| Nicole Luna | Customer Experience Designer | CS |
| Nitin Gambhir | Customer Care Coordinator | CS |
| Pat Almgren | Supervisor, Customer Care Services | CS |
| Hallie Rodis | Supervisor, Customer Care Services | CS |
| Shenisa Neal | Supervisor, Customer Care Services | CS |
| Beth Klauschie-Perez | Supervisor, Customer Care Services | CS |
| Tracy Herman | QA & Metrics Specialist | CS |
| Lindsay Grashorn | Business Solution Representative | CS |
| Omar Alnazer | Lead Representative | CS |
| Gabi McVay | Call Center Representative | CS |
| Andrew Ciurej | Call Center Representative | CS |
| Aaron Smith | Director, Customer Experience | CS |
| Steve Sauer | Manager, Large C&I Sales & Services | CS |
| Jim Krist | Director, Customer Sales & Services | CS |
| Ron Mahoney | Senior Account Executive | CS |
| Donna Miner | Manager, Customer Operations | CS |
| Heather Siebken | Director, Product Development & Marketing | CS |
| Corey DeJong | Manager, Product Marketing | CS |
| Wyndell Young | Manager, Mid/Small C&I Sales & Services | CS |
| Jay Schubert | Engineer III | CS |
| Juli Comstock | VP, Customer Service | CS |
| Moe Hinners | Senior Corporate Governance Specialist | CSG |
| Scott Focht | VP, Corporate Strategy & Governance | CSG |
| Neal Faltys | Principal Engineer | ED |
| Amanda Underwood | Senior Engineer | ED |
| Mike Herzog | Manager, Distribution Planning | ED |
| Todd Gosnell | Manager, Ops Engineering & Training | ED |
| Matt Shanzt | Lead Distribution Operations | ED |
| Joel Adams | Distribution System Operator | ED |
| Doug Peterchuck | Manager, Transmission Operations | ED |
| Rita Hatfield | System Operations Specialist | ED |
| Brad Heimes | Lead Transmission Operations | ED |
| Joel Adams | Distribution System Operator | ED |
| Troy Via | VP, Energy Delivery | ED |

| Name | Position | Business Unit |
|---|---|---|
| Eric Yowell | Transmission System Operator | ED |
| Lee O'Neal | Director, T&D Construction | ED |
| Brian Kramer | Manager, Substation & System Protection | ED |
| Adam Staebell | Manager, Maintenance Services | EPND |
| Kyle Brinkcerhoff | Manager, Maintenance Services | EPND |
| Clint Zavadil | Manager, System Engineering | EPND |
| Gary Ruhl | Manager, Programs | EPND |
| Claude Strope | Lead Engineer | EPND |
| Tim Uehling | Senior Director, FCS Decom | EPND |
| Todd Anderson | Lead Engineer | EPND |
| Scott Eidem | Director, Engineering Services | EPND |
| Barb Parolek | Fuels Supply Manager | EPND |
| Deb Burns | Fuels Supply Manager | EPND |
| Ryan Stigge | Program Manager, Decarbonization SI | EPND |
| Kelly Anderson | Supply Doc Control Admin Support | EPND |
| Joseph Mise | Engineer III | EPND |
| Bud Chapin | Director, Maintenance Services | EPND |
| Mary Fisher | VP, Energy Production & Nuclear Decommissioning | EPND |
| Ryan Gerdts | Manager, Station Operations | EPND |
| Allan Vacek | Manager, Station Operations | EPND |
| Justin Wiemer | Supervisor, Peaking Stations | EPND |
| Ryan Headley | Manager, Energy Marketing | FS |
| Justin Kathol | Manager, Settlements & Risk | FS |
| David Theobald | Senior Term Trader | FS |
| Rick Yanovich | Structured Deal & Congestion Trade Manager | FS |
| Mark Trumble | Director, Energy Marketing & Trading | FS |
| Joel Robles | Senior Energy Coord NERC Comp & Training | FS |
| Mike Donahue | Manager, Transportation & Construction Equip | FS |
| Tim McAreavey | Director, Supply Chain Management | FS |
| Jane Metzer | Supervisor, SCM Warehousing | FS |
| Javier Fernandez | VP & CFO, Financial Services | FS |
| Joe Waszak | Senior Settlement Analyst | FS |
| Chris Campos | Day Ahead Energy Marketer | FS |
| Ryan Murphy | Day Ahead Energy Marketer | FS |
| Brad Underwood | Director, Financial Plans & Analysis | FS |
| Mart Sedky | VP, Human Capital | HC |
| Steve Bruckner | General Counsel | LEGAL |
| Tim Burke | President & CEO | OPPD |
| Joe Lang | Director, Energy Regulatory Affairs | PA |
| Mahmood Safi | NERC Compliance Manager | PA |
| Kate Thomas | Director, Corporate Market & Communication | PA |

| Name | Position | Business Unit |
|---|---|---|
| Mary Oswald | Manager, EE Communication & Collaboration | PA |
| Jeremy Bowers | Director, Environmental & Regulatory Affairs | PA |
| Bryan Lorence | Manager, Environmental Operations | PA |
| Kerri Teter | Sr. Environmental Specialist | PA |
| Bob Holmes | Program Administrator | PA |
| Lisa Olson | VP, Public Affairs | PA |
| Kevin McCormick | Senior Director, Safety & Technical Training | S&TT |

| Count by Business Unit | TOTAL |
|---|---|
| BTBS | 6 |
| CS | 21 |
| CSG | 2 |
| ED | 14 |
| EPND | 18 |
| FS | 14 |
| HC | 1 |
| LEGAL | 1 |
| OPPD | 1 |
| PA | 9 |
| S&TT | 1 |
| All Business Units | 88 |

Links to Related External Reports on the 2021 Polar Vortex Event:

Southwest Power Pool (SPP)

https://www.spp.org/documents/65037/comprehensive%20review%20of%20spp's%20response%20to%20the%20feb.%202021%20winter%20storm%202021%2007%2019.pdf

SPP Independent Market Monitoring Unit

https://www.spp.org/documents/64975/spp_mmu_winter_weather_report_2021.pdf

Midwest Independent System Operator (MISO)

https://cdn.misoenergy.org/2021%20Arctic%20Event%20Report554429.pdf

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# 2021 Polar Vortex After Action Review

Lead: Dan Laskowsky – Director Risk Management
Team Members: Gina Langel, Michelle DeSeure, Bob Kaminski, Brian Adams, Jim Macnamara, Laura King-Homan
September 14, 2021

# Agenda

- Problem Statement
- Information Gathering
- Extreme Cold in Context
- Key Takeaways
- Next Steps

# Problem Statement

- During the 2021 Midwest Polar Vortex Event (Feb. 4 – Feb. 20) the Omaha Public Power District had to enact controlled outages for the first time in the organization's history.  This came at the request of the Southwest Power Pool (SPP), a Regional Transmission Organization (RTO) and Balancing Authority, of which OPPD is a member.

- SPP declared a Level 3 Energy Emergency multiple times during the polar vortex event as a urgent effort to maintain the stability of the Bulk Electric System (BES).

- An after action report is necessary to review what went well, what could have gone better, and what changes are needed to prepare for the future.

# Information Gathering

- 88 internal subject matter expert all lines of business
  - Front Line Employees
  - Front Line Supervisors and Managers
  - Directors
  - Senior Management

| Business Unit | # |
|---|---|
| Customer Service | 21 |
| Energy Production & Nuclear Decommissioning | 18 |
| Energy Delivery | 14 |
| Financial Services | 14 |
| Public Affairs | 9 |
| Business Technology & Building Services | 6 |
| Safety & Technical Training / Corporate Strategy & Governance / Human Capital / Executive & Legal Counsel | 6 |

- National Weather Service Omaha assisting in the analysis of this event compared to the historical record

# Extreme Cold in Context – National Weather Service

- From 1900 to current, roughly every 5 years Omaha experienced a 3+ day below zero average temperature event.
- Feb 2021 Event : 3 day event (Feb 7-9) closely followed by a 5 day event (Feb 12-16).
- This polar vortex event impacted the entire SPP footprint, which challenged the RTO as a whole.  Not all previous events impacted the region to this degree.
- Prior to the 2021 event, the last extreme cold event was in 2004. This was the longest stretch between events in the period analyzed.
- Other significant historical events:
  - Winter of 1936: 11 day below zero event
  - Winter of 1983: 9 day below zero event

# Key Takeaways

1. More accessible, individualized, and timely communication is critical to our customers during an energy emergency event and OPPD will improve to meet our customer-owner's communications needs.
2. OPPD's emergency event plan should be enhanced and made more sustainable to better support grid reliability during extreme events.
3. Given the increased financial risk of a more volatile and interconnected energy market, OPPD should review and consider expansion of its energy and fuel risk mitigation options to reduce the potential impact from future extreme events.
4. OPPD should review customer demand for and consider expanding its customer products and services to increase the usage and flexibility of self-generation and curtailment programs to minimize customer impact during extreme events.
5. OPPD's membership in SPP is critical to our organization's ability to meet our strategic goals and support the delivery of reliable energy during local emergency events (e.g. floods). OPPD should continue to extract value from its SPP membership and leverage our expertise and influence in the SPP stakeholder process to enact positive changes to the benefit of our customers

# Next Steps

- The Executive Leadership Team will guide the execution of the 24 recommendations outlined in the Polar Vortex After Action Report according to their priority level while accounting for resource availability and capacity management considerations. Progress updates will be provided periodically.

- The Polar Vortex After Action Report will be made available on OPPD.com for our customer-owners.

- OPPD representatives will continue to support the various SPP working groups supporting the implementation of SPP's recommendations as a result of the polar vortex.

# Pre-Committee Agenda

FINANCE PRE-COMMITTEE MEETING
VIDEOCONFERENCE
September 3, 2021  8:00 – 9:30 AM

1. 2021 Expenditure Increase Approval (Thurber – 15 min)
   a. Objective:  Review request to increase expenditure authorization.

2. SD-2: Rates Policy Revision (Yoder – 60 min)
   a. Objective:  Committee members to discuss proposed revisions to policy with respect to monitoring affordability.

3. Confirmation of Board Work Plan – Finance Committee Items (3 min)
   a. Objective:  Committee members to review and confirm items on the Board Work Plan.

4. Summary of Committee Direction (2 min)
   a. Objective:  Senior management team liaison(s) to gain alignment and summarize direction provided by the committee.

Omaha Public Power District

# Action Item

**BOARD OF DIRECTORS**

September 14, 2021

ITEM
Revised 2021 Corporate Operating Plan Expenditure Amount

PURPOSE
Approval of the Revised 2021 Expenditure Amount

FACTS

a. The 2021 Corporate Operating Plan (COP), including an authorized expenditure amount of $1,443.1 million, was approved by the Board of Directors on December 9, 2020.

b. The 2021 COP included estimated revenues and expenditures for operating within the Southwest Power Pool (SPP) Integrated Marketplace. The COP also included estimated fuel expenses based on dispatch modeling and resource planning performed by a collaboration of OPPD employees.

c. Actual operations and maintenance experience in 2021 included several unexpected expenditures:

- Due to the February Polar Vortex, OPPD purchased more energy than was estimated and experienced energy price volatility, resulting in purchased power expenditures above the COP ($157 Million).
- Due to the February Polar Vortex impact on generation and fuel expenses, OPPD incurred fuel expenses in excess of the COP ($65 Million).
- Due to a severe July storm that resulted with over 50% of retail customers without power, recovery expenses for maintenance exceeded the COP ($14 Million).

d. Capital expenditures are projected to exceed the annual approved budget by $20 million, primarily due to refined estimates and timelines related to the Power with Purpose projects.

e. Decommissioning expenditures are projected to exceed the annual approved budget by $25 million, primarily due to the completion of work earlier than originally planned.

f. It is estimated that the 2021 expenditures may exceed the 2021 COP by $295 million. An incremental $295 million above the original 2021 approved expenditures is $1,738.1 million.

g. Off-system sales revenue is expected to exceed the COP and will mostly mitigate the unplanned additional expenditure impact of the Polar Vortex, helping to achieve the planned debt service coverage.

ACTION
Approval of the Revised 2021 Corporate Operating Plan Expenditure Amount of $1,738.1 million.

RECOMMENDED:

DocuSigned by:
John W. Thurber
BA3998CC33CC4D3...

John W. Thurber
Interim Chief Financial Officer and Director - Treasury & Financial Operations
JWT: bru
Attachments: Resolution

APPROVED FOR BOARD CONSIDERATION:

DocuSigned by:
L. Javier Fernandez
AC399FDCE56247E...

L. Javier Fernandez
President and Chief Executive Officer

*Yoder/Thurber*

***DRAFT***
***RESOLUTION NO. 64xx***

***WHEREAS***, in Resolution No. 6412, the Board of Directors approved the Omaha Public Power District's 2021 Corporate Operating Plan (COP) which includes projected expenditures for the District's operations, all phases of the District's Capital Expenditure Plan and the District's fuel needs, in the amount of $1,443.1 million; and

***WHEREAS***, additional expenditures above the authorized amounts in the COP were incurred in 2021 in connection with the February Polar Vortex weather event, resulting in additional fuel and purchased power expenditures; and

***WHEREAS***, a July storm resulted in additional expenditures above the COP level for maintenance and system restoration; and

***WHEREAS***, refined project estimates and completion timelines resulted in increased 2021 capital expenditures for the Power with Purpose generation project; and

***WHEREAS***, Nuclear Decommissioning expenditures are projected to exceed the annual approved budget by $25 million, primarily due to the completion of work earlier than originally planned; and

***WHEREAS***, in accordance with the Nebraska Revised Statutes, Management seeks approval of a revised 2021 Corporate Operating Plan expenditure amount of $1,738.1 million for the additional expenditures described in this resolution.

***NOW, THEREFORE, BE IT RESOLVED*** that the Board of Directors of the Omaha Public Power District hereby approves the 2021 revised Corporate Operating Plan expenditure amount of $1,738.1 million.

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# 2021 Excess Expenditures Request

# Executive Summary

- **Additional Expenditures Requested for Weather Events, Capital Needs & Decommissioning:**
  - Requesting excess expenditures of $295 million for an adjusted 2021 total of $1,738.3 million
    - February 2021 Polar Vortex resulted in increased Purchased Power (+$157 million) and Fuel (+$65 million) expenditures
    - July 2021 Wind Storm resulted in additional O&M of $14 million. The 2021 projected O&M overage is partially offset by cost management efforts to a net of $8 million over the annual budget
    - Power with Purpose capital estimates for 2021 are higher than original requested due to timing differences and refined contract estimates, resulting in a net increase to the capital expenditure plan of $20 million
    - Nuclear Decommissioning efforts are able to complete $30 million of work earlier than originally planned, partially offset by reduced expenditures in other Decommissioning efforts, which nets to $25 million increase

- **2021 Year End Financial Outlook:**
  - Off-System Sales experienced a favorable boost (+$162 million) from the February 2021 Polar Vortex weather event, which helped to off-set the Purchased Power and Fuel expenditure increases
  - 2021 Retail Revenues are projected to be $33 million better than plan, which is driven by the Commercial and Industrial customer classes
  - Management is actively monitoring and managing the financial health of the District to deliver a 2.0 times Debt Service Coverage metric for 2021

# 2021 Expenditure Summary

## 2021 Year End Projection vs COP *($s in 000's)*

| Expenditure | Current Total | COP | Var. |
|---|---|---|---|
| Fuel Costs and Purchased Power | $587,283 | $365,021 | $222,262 |
| Non-Fuel Operations & Maintenance | 411,500 | 403,292 | 8,208 |
| Total Debt Service and Other Expenses | 122,491 | 131,145 | (8,654) |
| Payments in Lieu of Taxes | 37,883 | 36,139 | 1,744 |
| Capital Expenditures* | 389,554 | 370,000 | 19,554 |
| Regulatory Amortization | 14,837 | 14,838 | (1) |
| Decommissioning Expenditures** | 147,914 | 122,688 | 25,226 |
| TOTAL EXPENDITURES | $1,711,462 | $1,443,123 | $268,339 |

- **Items of Note:**
  - Current projections results in an estimated excess expenditure need of $268.3 million
  - Requesting $295 million of additional expenditure authority *(+10% over current projection)*
  - Current projections show OPPD exceeding board approved expenditures in November
  - Recommended that additional expenditures are proposed to the board in the September board meeting

**Capital Expenditures are shown net of Contributions in Aid of Construction.*
***Decommissioning Expenditures represent expenditures related to Decommissioning activity, which differs from Decommissioning Funding.*

Omaha Public Power District

# Reporting Item

**BOARD OF DIRECTORS**

September 14, 2021

ITEM

Nuclear Oversight Committee Report

PURPOSE

The Nuclear Oversight Committee provides a regular oversight of items related to the Fort Calhoun Station (FCS) nuclear plant.

FACTS

In addition to safe and secure dry cask storage of fuel, the required Preventative Maintenance tasks and Surveillance Tests, the following major decommissioning activities were conducted in August:

- The equipment necessary for reactor vessel internal segmentation is being moved into the recently expanded containment opening. Also in preparation of this work, the reactor cavity has been cleaned and a coating applied.

- The firing range structures have been demolished and soil from the area excavated and screened in preparation for removal from site in the near future.

- A complex and coordinated effort is underway to establish the containment waste structure. Foundation work including perimeter excavation, rebar/form placement, and pouring of concrete is in progress. Upon completion of the aforementioned tasks, the fabric building will be erected and a rail system installed to transport material from containment.

RECOMMENDED:

DocuSigned by:
Mary J. Fisher
C185DDBBB12A4BA...

Mary J. Fisher
Vice President – Energy Production and Nuclear Decommissioning

APPROVED FOR REPORTING TO BOARD:

DocuSigned by:
L. Javier Fernandez
AC399FDCE56247E...

L. Javier Fernandez
President and Chief Executive Officer

MJF:tsu

# Reporting Item

**BOARD OF DIRECTORS**

September 14, 2021

ITEM

Legislative and Regulatory Update

PURPOSE

To provide an update on 2021 state and federal legislative matters and regulatory matters

FACTS

a. Nebraska's 107th Legislature began on January 6, 2021 and ended on May 27, 2021.

b. The Special Session of the Nebraska Legislature for redistricting began on September 13, 2021 and will end on September 30, 2021.

c. The 117th Congress began on January 3, 2021 and is expected to end January 3, 2023.

ACTION

Reporting item

RECOMMENDED:

DocuSigned by:
Lisa A. Olson
46058A9ADE8A409...

Lisa A. Olson
Vice President – Public Affairs

APPROVED FOR REPORTING TO BOARD:

DocuSigned by:
L. Javier Fernandez
AC399FDCE56247E...

L. Javier Fernandez
President and Chief Executive Officer

Attachment: State and Federal Legislative Update

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# Legislative Update
# 9/14/2021

Tim O'Brien, Director – Economic Development & External Relations

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# State Legislative Update

# 2021 Nebraska Legislative Calendar

Nebraska's 107th Legislature

- January 6th – Legislature convened at 10 am
- January 20th – Last day of bill introduction
- January 25th – All day public hearings begin
- March 4th - Date to complete committee hearings, except Judiciary Committee on introduced bills
- March 10th – Deadline for Speaker priority requests
- March 12th – Deadline for designation of Committee and Senator priority bills (extended)
- March 12th - Judiciary Committee hearings to be completed
- March 15th – Full-day debate
- May 27th – Sine die
- September 13th – 30th Special Session on redistricting

# 2021 Special Session

- Convene September 13th - Sine Die September 30th
  - September 27th, 28th, 29th Recess days
- The Redistricting Committee could not agree on which plan to forward, so they will be presenting both sets of maps for the hearings on September 14-16.
  - Committee members consist of Senators: Carol Blood, Tom Briese, Tom Brewer, Suzanne Geist, Steve Lathrop, John Lowe, Adam Morfeld, Justin Wayne
- Maps have been provided to Senators of the various existing districts with their deviation rates from the ideal size. This will be the basis of their work.
- The Committee will hold hearings in the 3 congressional districts
  - September 14th - Grand Island
  - September 15th - Capitol in Lincoln
  - September 16th - Omaha at the Scott Conference Center

# 2021 Special Session

- September 14th – 16th Standing Committees will conduct gubernatorial appointments for the following committees;
  - Education, General Affairs, Government, HHS, Natural Resources, Judiciary, Business and Labor and Retirement
- General File debate will begin on September 17th
  - Saturday, September 18th is a working day
- September 24th work must be completed

# 2021 Legislative Resolutions - Interim Studies

| LR & Current Status | Summary |
|---|---|
| LR 23<br>Erdman | Interim study to examine the progress of natural resources districts in fulfilling their originally intended purpose. Includes a study of flood control |
| | *5/20/21 Referred to Natural Resources Committee* |
| LR 34<br>Slama | Interim study to examine the structure and funding of the Nebraska Environmental Trust. OPPD has received $600,000 for battery storage, butterfly and EV charging station grants over the years |
| | *5/20/21 Referred to Natural Resources Committee* |
| LR 83<br>M. Hansen | Interim study to examine the gubernatorial appointment process of members to boards, commissions and similar entities |
| | *5/20/21 Referred to Executive Board* |
| LR 102<br>Wishart | Provide the Legislature take steps to combat the climate and ecological crisis |
| | *4/22/21 Referred to Natural Resources Committee* |
| LR 106<br>Kolterman | Interim Study to monitor underfunded defined benefit plans administered by political subdivisions as required by 13-2402. |
| | *5/20/21 Referred to Nebraska Retirement Systems Committee. 11/6/21 Hearing scheduled* |

# 2021 Legislative Resolutions - Interim Studies

| LR & Current Status | Summary |
|---|---|
| LR 136<br>Brewer | Interim Study to examine and evaluate the causes, costs, and impacts of rolling electrical power outages during the extreme weather events of February 2021 |
| | *5/20/21 Referred to Natural Resources Committee* |
| LR 147<br>J. Cavanaugh | Interim study to examine the transfer of state-owned property to local political subdivisions |
| | *5/20/21 Referred to Transportation and Telecommunications Committee* |
| LR 170<br>McKinney | Interim study to examine the potential impact that innovation hubs could have in Nebraska |
| | *5/20/21 Referred to Business and Labor Committee. 8/11/21 hearing held* |
| LR 193<br>De Boer | Interim study to examine broadband mapping and broadband speed testing in Nebraska |
| | *5/20/21 Referred to Transportation and Telecommunications Committee* |
| LR 199<br>Slama | Interim study to examine the creation of rural economic development program |
| | *5/20/21 Referred to Banking, Commerce and Insurance Committee* |

# 2021 Legislative Resolutions - Interim Studies

| LR & Current Status | Summary |
|---|---|
| LR 202<br>HHS Committee | Interim study to examine federal legislation regarding COVID-19 pandemic assistance |
| | *5/20/21 Referred to HHS Committee* |
| LR 211<br>Lowe | Interim study to examine issues related to adopting construction codes |
| | *5/20/21 Referred to Urban Affairs Committee, Hearing held August 6* |
| LR 234<br>Friesen | Interim study to examine issues related to the regulation and taxation of electric vehicles |
| | *5/20/21 Referred to Transportation and Telecommunication Committee* |
| LR 246<br>NR Committee | Interim study to examine issues within the jurisdiction of the Natural Resources Committee |
| | *5/26/21 Referred to Natural Resources Committee* |

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# Federal Legislative Update

# Federal Update

- Infrastructure and budget reconciliation packages are the major focus.
  - The bipartisan $1.2 trillion, infrastructure package (H.R. 3684) passed Senate 69-30 on August 10th. House scheduled to vote September 27th.
  - Committee markups for $3.5 trillion budget reconciliation due September 15th.
- Other major bills of interest:
  - H.R. 848, the GREEN Act (renewable energy tax incentives).
  - H.R. 1512, the CLEAN Future Act (Clean Energy Standard) – the basis for the House Climate Package.
  - H.R. 1848, LIFT America Act

  *House committees are expected to incorporate components of these bills into the budget reconciliation package.
- 7850 bills introduced in the 117th Congress as of September 2nd

SOURCE Congress.gov, Politico, Whitehouse.gov

# Infrastructure and Budget Reconciliation Negotiations

The $3.5 trillion budget resolution passed the House on August 24, prompting Senate committees to draft legislation for the final spending bill by a target date of September 15.

- Instructions given to House and Senate Committees may provide funding for various programs including the following:
- A Clean Electricity Payment Program (CEPP)
- Clean energy, manufacturing, and transportation tax incentives and grants
- New polluter fees (methane and carbon imports)
- Investments in climate, smart agriculture, and forest management for farmers and rural communities
- Coastal and ocean resiliency programs
- Investments in drought and wildfire prevention and the Department of the Interior
- New consumer rebates for home electrification and weatherization
- Environmental justice and climate resilience
- Investments in federal vehicle fleet and buildings electrification

SOURCE Axios, Senate.gov

Omaha Public Power District
BOARD OF DIRECTORS

# Agenda

**OPPD BOARD OF DIRECTORS**
**REGULAR BOARD MEETING**
**Thursday, September 16, 2021 at 5:00 P.M.**

***Attend in person at Omaha Douglas Civic Center, 1819 Farnam Street, 2nd Floor – Legislative Chamber, Omaha, NE 68183***

***Public may attend remotely by going to www.oppd.com/BoardAgenda to access the Webex meeting link and view instructions.***

**Preliminary Items**

1. Chair Opening Statement
2. Safety Briefing
3. Guidelines for Participation
4. Roll Call
5. Announcement regarding public notice of meeting

**Board Consent Action Items**

6. Approval of the July 2021 Comprehensive Financial and Operating Report, August 2021 Meeting Minutes and the September 16, 2021 Agenda
7. SD-10: Ethics Monitoring Report – Resolution No. 64xx
8. 2021 Expenditure Approval Increase – Resolution No. 64xx

**Board Discussion Action Items**

9. Appointment of Troy Via to Chief Operating Officer and Vice President – Utility Operations and Compensation Adjustment – Resolution No. 64xx
10. [To be determined]

**Other Items**

11. President's Report (30 mins)
12. Opportunity for comment on other items of District business
13. Adjournment

Please use the link below to find all committee and board agendas, materials and schedules. Board governance policies and contact information for the board and senior management team also can be found at www.oppd.com/BoardMeetings.

Omaha Public Power District

# Board Work Plan

# Board Work Plan Process

1. Board member requests Senior Corporate Governance Specialist to add topic to Parking Lot
2. At the next regular monthly All Committee meeting, the Board as a whole discusses with SMT Parking Lot items to move to Board Work Plan. The following steps occur once an item is moved to the Work Plan:
   a. Evaluate and determine resource requirements and availability of resources to complete research, etc. [Board Chair/Committee Chair/CEO]
   b. Confirm proposed steps and timing of when work will be reasonably completed [Board Chair/Committee Chair/CEO]
   c. Insert "Target Completion Date" on Board Work Plan [Senior Corporate Governance Specialist]
   d. Provide regular updates to Board and public on items [Committee Chair]
   e. If assignment of a particular topic to a standing committee is unclear, determine if an ad hoc committee should be created [Board Chair]
3. When appropriate, topic moves from Board Work Plan to SMT agenda for Board meeting Report (Discussion or Presentation), or Action

*Note the process outlined in Step 2 is iterative and could repeat for many months before going to Step 3 for Board presentation and/or action.*

**BOARD IDENTIFIED WORK PLAN PRIORITIES**
**(as of 9/3/21)**

| TOPIC | ACKNOWLEDGED | CMTE | SMT | STATUS | STATUS DESCRIPTION | TARGET COMPLETION DATE |
|---|---|---|---|---|---|---|
| SD-11: Economic Development Policy Revision *(Next monitoring report 11/16/21 )* | 1/19/2021 | PI | Olson | Work In Progress | Yoder shared notes with PI Cmte on 2/9/21; PI Cmte consensus on 3/9/21 that other Board work and policy revisions should be prioritized at this time; The PI Cmte intends to reconsider the potential prioritization of SD-11 and SD-13 in late 2nd/early 3rd quarter 2021; 5/11/21 PI Cmte members will review SD-11 documents and target June/July for pre-cmte discussion; 6/8/21 PI Cmte consensus to put SD-11 on agenda for discussion at Board Governance Workshop, scheduled for October 5 | |
| SD-13: Stakeholder Outreach & Engagement *(Next monitoring report 10/12/21 )* | 1/19/2021 | PI | Olson | Work In Progress | Yoder shared notes with PI Cmte on 2/9/21; PI Cmte consensus on 3/9/21 that other Board work and policy revisions should be prioritized at this time; The PI Cmte intends to reconsider the potential prioritization of SD-11 and SD-13 in late 2nd/early 3rd quarter 2021; 5/11/21 PI Cmte members will review SD-13 documents and target June/July for pre-cmte discussion; 6/8/21 PI Cmte consensus to put SD-13 on agenda for discussion at Board Governance Workshop, scheduled for October 5 | |
| SD-9: Resource Planning Policy Revision *(Most recent monitoring report approved 8/17/21; next monitoring report tentatively August 2022)* | 8/26/2020 | SM | Fisher / Fernandez | Work In Progress | System Committee (Mollhoff, Williams, Moody & Yoder) discussion 12/3/20; Met 1/7/21; Met 1/25/21; per 3/31/21 meeting, Williams spoke with Bogner and Burke re scope, prioritization and timing; SMT discussed on 5/12. | |
| SD-2: Rates Policy Revision *(Most recent monitoring report approved 6/15/21; next monitoring report tentatively June 2022)* | 8/26/2020 | FIN | Thurber | Work In Progress | Finance Cmte discussed 4/2/21; Management will provide a proposal to replace the 5-year no-general rate increase language in the current SD-2. The Committee Chair provided proposed language to address the concept of affordability in SD-2, which was discussed at the July 1, August 4 and Sept. 3 pre-cmte meetings; Committee discussion will continue at next pre-committee scheduled for October 8 and shared with full Board in November. | |

**BOARD IDENTIFIED WORK PLAN PRIORITIES**
**(as of 9/3/21)**

| TOPIC | ACKNOWLEDGED | CMTE | SMT | STATUS | STATUS DESCRIPTION | TARGET COMPLETION DATE |
|---|---|---|---|---|---|---|
| SD-4: Reliability Policy Revision<br>*(Most recent monitoring report approved 4/13/21; next monitoring report tentatively April 2022)* | 8/26/2020 | SM | Via | Not Started | System Committee to propose revisions related to resiliency. Awaiting external guidance from SPP et al. | |

**BOARD IDENTIFIED WORK PLAN PRIORITIES -**
**COMPLETED**

| TOPIC | ACKNOWLEDGED | CMTE | SMT | STATUS | STATUS DESCRIPTION | TARGET COMPLETION DATE |
|---|---|---|---|---|---|---|
| SD-7: Environmental Stewardship<br>*(Next monitoring report 10/19/21)* | 1/19/2021 | SM | Fisher | Completed | Revise policy to include statement on climate change; System Cmte discussed proposed language 3/10/21; System Cmte reviewed and finalized changes 3/31/21 and recommended to Board during 4/13/21 meeting; Public comment period through Friday, May 14; Discussed during 5/18/21 All Cmtes meeting; Board approved 5/20/21 | 5/20/2021 |
| BL-5: Unity of Control Policy Revision | 8/26/2020 | GOV | Focht | Completed | Proposed revisions reviewed by Gov Cmte 9/10/20; Gov Cmte determined more review required; Board approved 12/9/20 | 12/9/2020 |
| BL-7: Delegation to the President & CEO | 8/26/2020 | GOV | Focht | Completed | Revise policy with regard to communication from CEO; Board approved 9/17/2020 | 9/17/2020 |
| GP-4: Agenda Planning | 8/26/2020 | GOV | Focht | Completed | Revise policy to include development of a Board Work Plan; Board approved 9/17/2020 | 9/17/2020 |
| BL-9: Delegation to President & CEO - Local, State and Federal Legislation and Regulation -- Legislative Resolution | 2019 | PI | Olson | Completed | Discussed in PI Cmte and with full Board in August and September 2020; referred back to PI Cmte for further review; 10/13/20 All Committee meeting determined to include topics of interest in OPPD's annual legislative agenda and the PI Cmte and Board would receive timely updates on emerging issues and positions. | 10/13/2020 |

2021 Agenda Planning Calendar

**PARKING LOT - For Board Discussion**

| TOPIC | SUGGESTED BY | ACKNOWLEDGED | STATUS |
|---|---|---|---|
| SD-1: Strategic Foundation Monitoring Report Discussion and Refinement | Yoder | 2/12/2021 | 4/13/21 All Cmtes discussion: Yoder, Burke and Focht discussed SD-1 monitoring report 4/14/21; Per 5/13/21 Governance pre-cmte, SMT will share revised format of monitoring report with the Cmte; Per 7/2/21 pre-cmte, Yoder/Focht updated committee on discussion during 8/12/21 pre-cmte |
| Goverance discussion re: handling of concepts that span multiple SDs | Yoder | 2/12/2021 | 4/13/21 All Cmtes discussion: Yoder to define potential scope for discussion with Governance Committee; Per 5/13/21 Governance pre-cmte, to be considered as a topic for the 2021 Governance Workshop |
| Ad Hoc Committee on Market Transformation | Gov Workshop discussion | 8/26/2020 | 4/13/21 All Cmtes discussion: Paused; SD-9 potential revisions may address part of this topic |

Omaha Public Power District

# Reporting Item

**BOARD OF DIRECTORS**

September 14, 2021

ITEM
Power with Purpose Report

PURPOSE
Provide updates on the Power with Purpose project for September 2021.

SOLAR FACTS

1. Evaluating for additional solar options.

FUEL SUPPLY FACTS

1. Natural gas supply infrastructure agreements are being finalized with Metropolitan Utilities District (MUD) for the Standing Bear Lake Station and Northern Natural Gas (NNG) for the Turtle Creek Station. The gas supply agreement with MUD for Standing Bear Lake Station is being coordinated with a land lease for the site.

NATURAL GAS STATION FACTS

1. The Engineer, Procure, and Construct (EPC) bids for both the Turtle Creek and Standing Bear Lake Stations' generation facilities and substation infrastructure are being evaluated internally and negotiations are in progress.

2. Ames Construction, Inc. will be conducting preliminary earthwork at both the Turtle Creek and Standing Bear Lake Station sites. Grading at Turtle Creek Station commenced August 23, 2021. Associated technical assessments of both project sites continue in parallel with the grading.

3. The Southwest Power Pool (SPP) Generator Interconnection Agreement (GIA) for Standing Bear Lake Station was revised to reflect the selected major equipment and an Interim GIA for Standing Bear Lake was submitted to SPP on August 19, 2021.

ENERGY DELIVERY FACTS

1. Initial discussions taking place with the developer on the Platteview Solar Project regarding detailed engineering coordination between substation facilities.

2. The Public Hearing for the Sarpy Southwest Transmission Project has been scheduled for October 5, 2021 and will mark the beginning of the easement acquisition stage of the project.

RECOMMENDED:

DocuSigned by:
Mary J. Fisher
C185DDBBB12A4BA...

Mary J. Fisher
Vice President – Energy Production and Nuclear Decommissioning

APPROVED FOR REPORTING TO BOARD:

DocuSigned by:
L. Javier Fernandez
AC399FDCE56247E...

L. Javier Fernandez
President and Chief Executive Officer

MJF:sae
Information as of August 27, 2021

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Omaha Public Power District

# Power with Purpose Open Session September 2021 Update

September 14, 2021

# Power with Purpose Updates

- Natural Gas Generation Project and Fuel Supply

# Natural Gas Generation Engineer, Procure, and Construct (EPC) Sourcing Progress – Part 2

## Reminder of EPC Two-Part Process

- Part 1 Request For Qualifications (RFQ): Determine EPC vendors that meet qualifications (financial, technical, managerial) and select shortlist of vendors
  - Black & Veatch, Kiewit, and Zachry
- Part 2 Request For Proposal (RFP): Send RFP to selected qualified EPC vendors from RFQ process
- EPC RFP issued April 16th to Black & Veatch, Kiewit, and Zachry
- Proposals received on June 28th
- Evaluation and negotiations in progress

| EPC RFP Schedule Item | Milestone (Past/Future) |
|---|---|
| EPC RFP Development | Nov 2020 – Apr 2021 ✓ |
| Issue EPC RFP | April 16, 2021 ✓ |
| RFP Overview Meeting w/ Vendors | April 26, 2021 (virtual) ✓ |
| SBL & TCS site visits w/ Vendors | May 4, 2021 ✓ |
| EPC Proposals Due | June 28, 2021 ✓ |
| EPC Contractor Target Award | Mid-September 2021 |
| SBL Commercial Operation | May 1, 2023 |
| TCS Commercial Operation | May 31, 2023 |

*Information as of September 8, 2021*

# Natural Gas Generation Preliminary Earthwork

## Turtle Creek Station

Preliminary grading commenced August 23

- Scope is preliminary grading at sites for Standing Bear Lake and Turtle Creek Stations to prepare for major construction by EPC vendor
- Ames Construction Inc. awarded contract

| Earthwork RFP Schedule Item | Milestone |
|---|---|
| Earthwork RFP Development | May-June 2021 ✓ |
| Issue Earthwork RFP #5904 | June 22, 2021 ✓ |
| SBL & TCS site visits w/ Vendors | June 29, 2021 ✓ |
| Earthwork Proposals Due | July 12, 2021 ✓ |
| Earthwork Contractor Award | July 30, 2021 ✓ |
| TCS Earthwork Begins | August 23, 2021 ✓ |
| SBL Earthwork Begins | September 2021 |

# Natural Gas Generation Project & Fuel Supply Update

- Fuel Supply
  - Facilities Reimbursement Agreement executed with Northern Natural Gas (NNG) for Turtle Creek Station
    - Construction occurring summer 2022 with facilities in service targeted for November 1, 2022
  - Main Extension Agreement, Ground Lease Agreement and Gas Supply Agreements are being finalized with Metropolitan Utilities District (MUD) for Standing Bear Lake Station
    - MUD board approval October 2021
    - Construction occurring summer 2022 with facilities in service targeted for November 1, 2022

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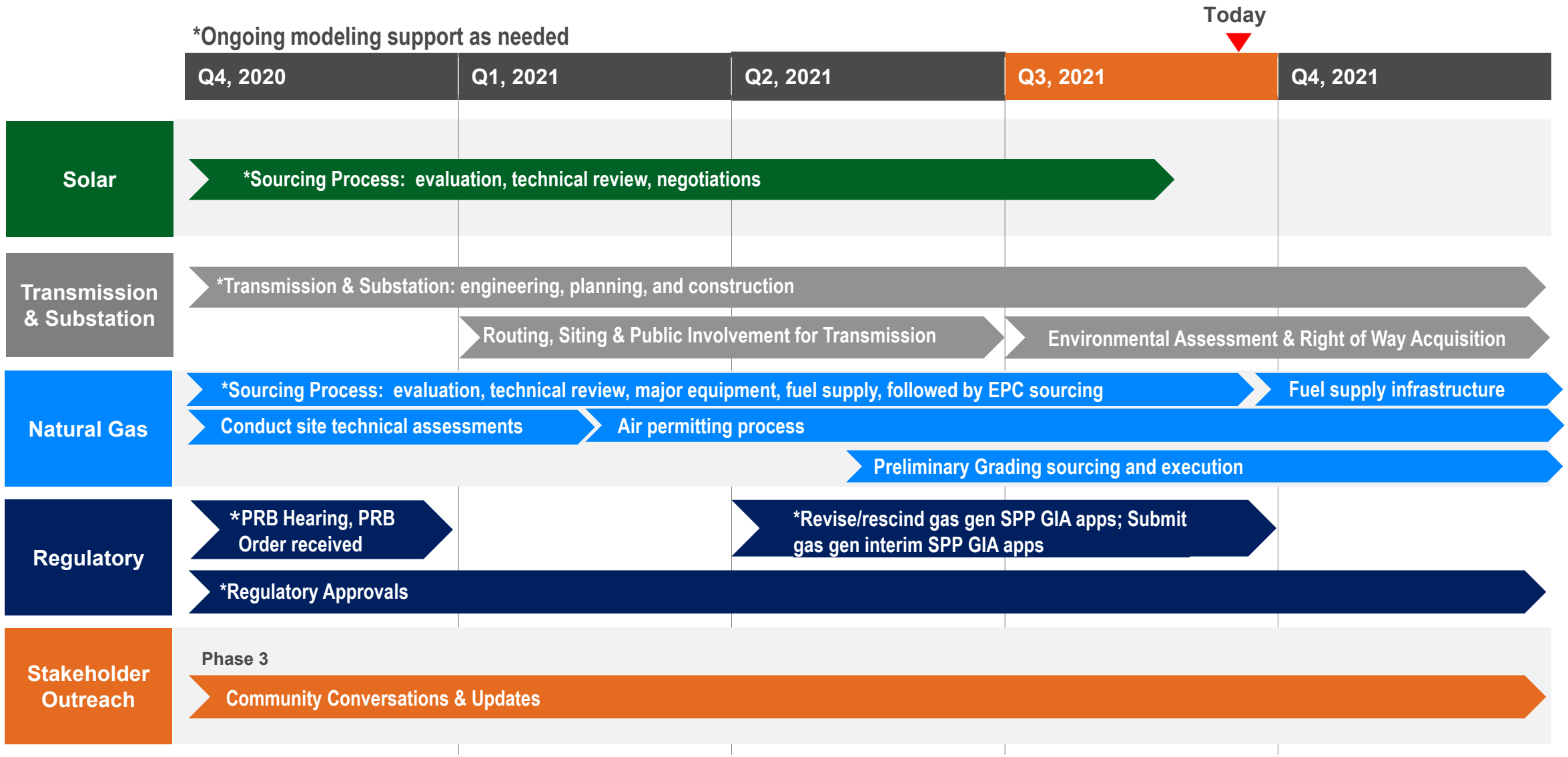
# Appendix

# Power with Purpose – Where We Are



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# Technology Platform Strategic Initiative Update

Steve Brown, Director Enterprise Architect
Board of Directors All Committees Meeting
September 14, 2021

# Purpose & Goals

**PURPOSE**

To update the OPPD Board of Directors on progress made by the Technology Platform Strategic Initiative during Phase 1 and our plans for Phase 2

**GOALS**

- Review our progress
- Review future plans
- Share how we'll get there

# Technology Platform Objective & Vision

**OBJECTIVE**

To create a sustainable technology base that cultivates customer and employee confidence and directly aligns with the holistic goals of OPPD.

**VISION**

- Use **core** technology to create a foundation
- Create **mobility** to access services anywhere
- Understand enterprise wide **assets**
- Create enterprise-wide **data** visibility

# Strategic Initiative Timeline

Partner Selection & Strategic Planning

Strategic Planning & Prioritization

Selected Project Execution Started

Cross-SI Alignment on Budgets

Execution Planning On Pull-Forward Projects

Q3-Q4 2021

Q1-Q2 2022

Q3-Q4 2022

# Commitment to Alignment – it's working

Customer Engagement Framework

Pathways to Decarbonization


Workplace Transformation

Electric System Evaluation & Modernization

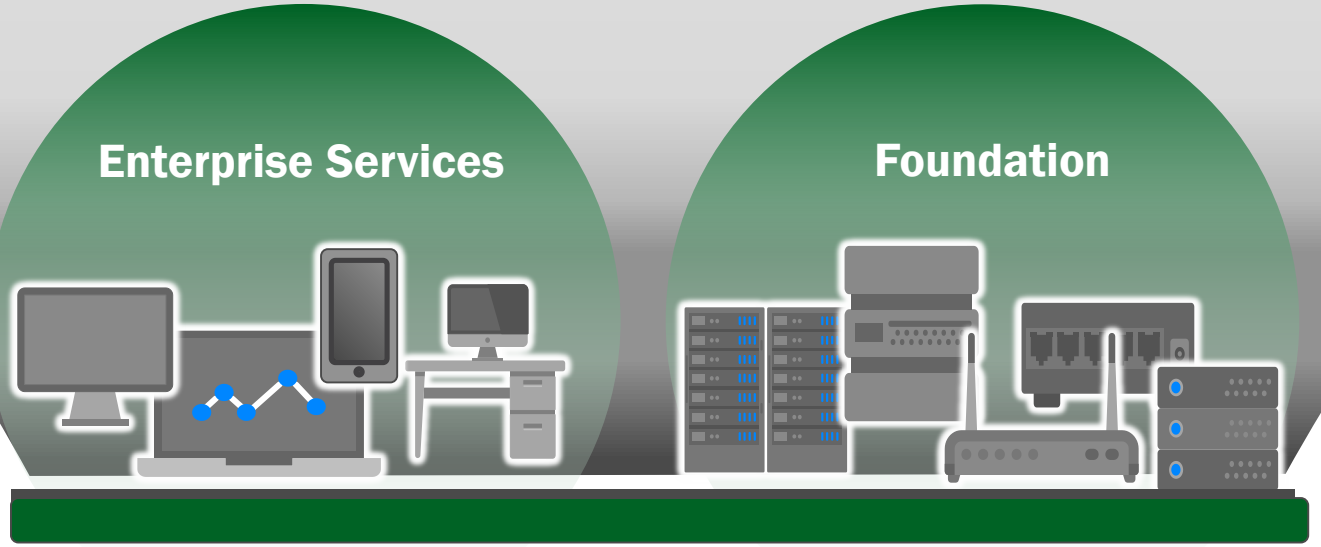
# How we'll get there

Electric System Evaluation & Modernization

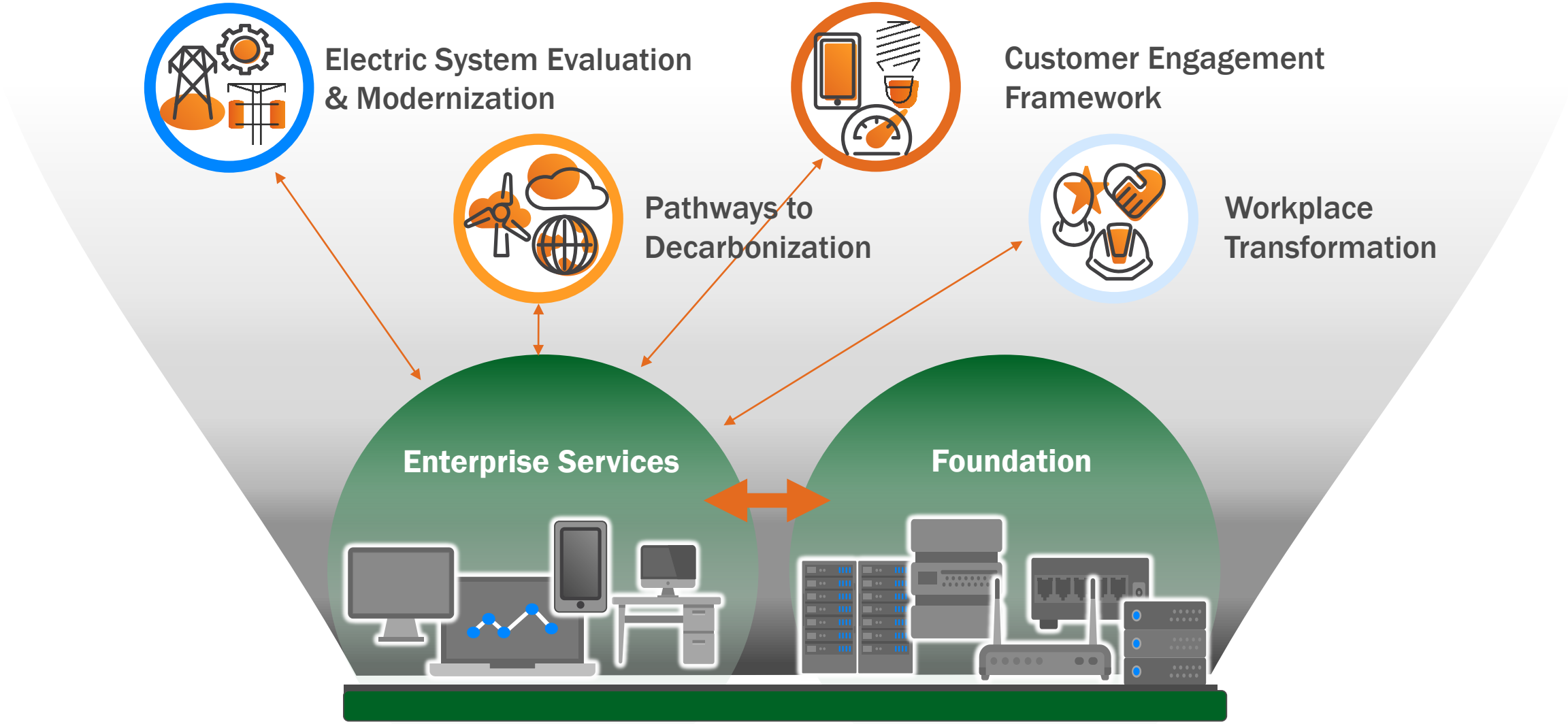
Customer Engagement Framework

Pathways to Decarbonization

Workplace Transformation



# How we'll get there



# Starting Work in 2022




| | | |
|---|---|---|
| Geographic Information Service | Cybersecurity Enhancements | Enterprise Mobility |
| Portfolio Management | Collaboration Enhancements | Data Management |

# Starting Work in 2022




Geographic Information Service

Cybersecurity Enhancements

Enterprise Mobility

Portfolio Management

Collaboration Enhancements

Data Management

# Starting Work in 2022




Geographic Information Service

**Cybersecurity Enhancements**

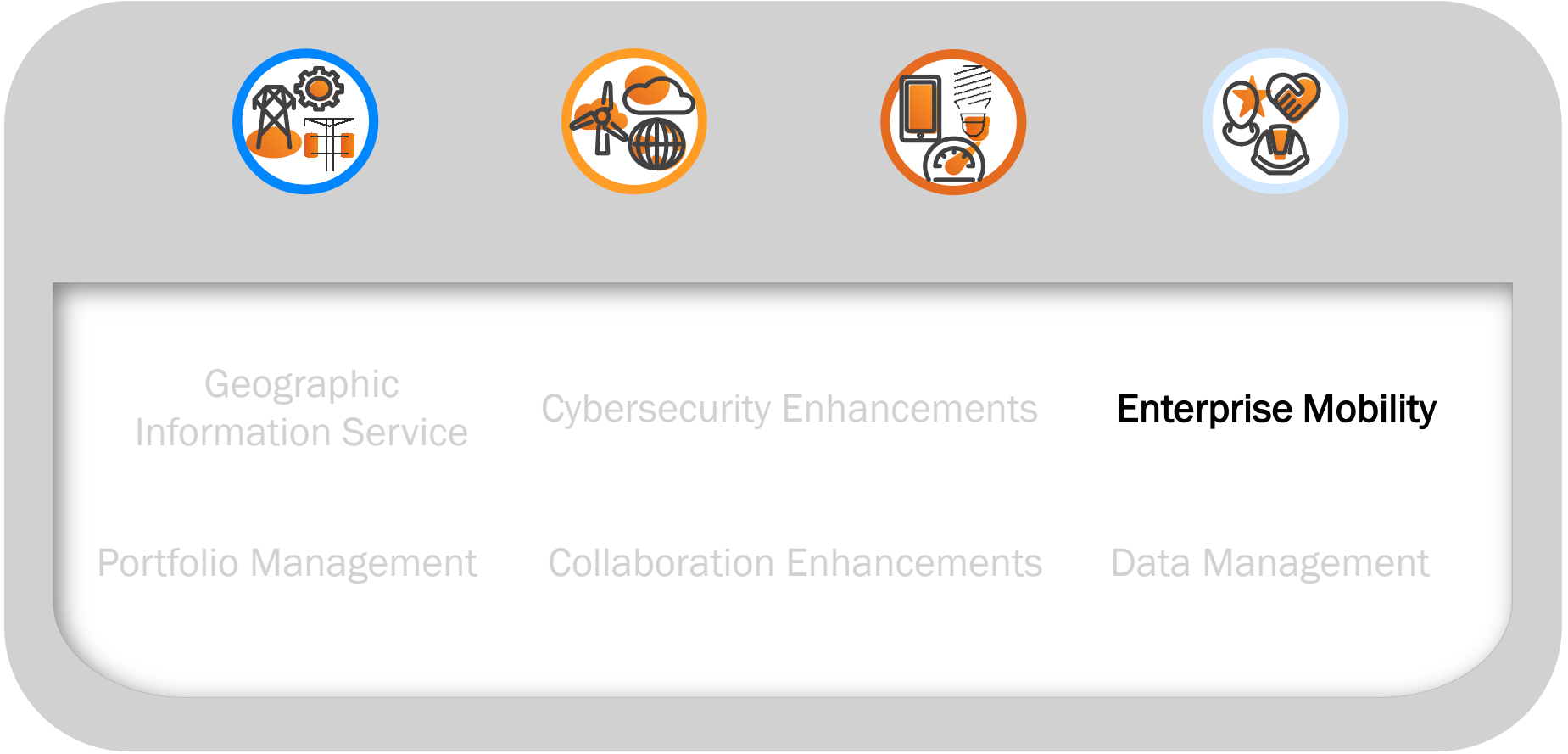
Enterprise Mobility

Portfolio Management

Collaboration Enhancements

Data Management

# Starting Work in 2022



# Starting Work in 2022




| | | |
|---|---|---|
| Geographic Information Service | Cybersecurity Enhancements | Enterprise Mobility |
| **Portfolio Management** | Collaboration Enhancements | Data Management |

# Starting Work in 2022




Geographic Information Service

Cybersecurity Enhancements

Enterprise Mobility

Portfolio Management

**Collaboration Enhancements**

Data Management

# Starting Work in 2022




Geographic Information Service

Cybersecurity Enhancements

Enterprise Mobility

Portfolio Management

Collaboration Enhancements

**Data Management**

# Aligning our future

- Creating actionable 5 year plans
- Staggering work
- Fiscally responsible and thoughtful on amount of change
- Adapting our plan as District initiatives change

# Strengthening Data Management

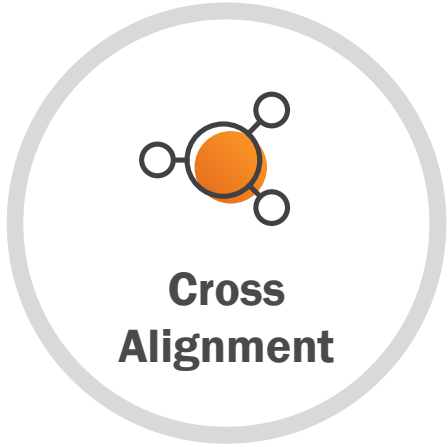
CORE | MOBILTY | ASSET | DATA





# Continuing Work





# Questions

# Glossary of Terms

- **Integrated System** – A system that is connected to other systems that share information
- **Advanced Metering Infrastructure (AMI)** – A component of an energy intelligent grid that is directly connected to the customer enabling two-way communications between the utility and customers
- **Enterprise Mobility** – Enabling access to needed information regardless of location, applicable to all OPPD employees and customers
- **Geographic Information Service (GIS)** – A centralized and highly integrated service to ensure awareness of asset locations in almost real time
- **Portfolio Management** – A centralized view of activities across the district, allowing for unified prioritization, cross organizational impact clarity, and resource management
- **Data Management** – Maintaining a clear understanding of OPPD data, ensuring it is secure, available, and privacy is preserved