Near Term Resource Update

February 2023
Our area is growing

Activity Heat Map
Higher concentrations of permits appear brighter in this view to show where the most activity is occurring.

OPPD load growth has increased from ~4MW per year to ~100MW per year

SOURCE: MAPA
Regional Growth Trends and Stats
2022 Greater Omaha Chamber Annual Report

61
Landed projects

$2.1 billion
Capital investment

7,871
New + retained jobs

24.3% increase
Commercial construction permits (CSA, December 2021 vs. December 2022)

<table>
<thead>
<tr>
<th>Landed Projects</th>
<th>Capital Investment</th>
</tr>
</thead>
<tbody>
<tr>
<td>2018</td>
<td>$1,426,371,220</td>
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<tr>
<td>2019</td>
<td>$1,034,369,494</td>
</tr>
<tr>
<td>2020</td>
<td>$481,715,397</td>
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<tr>
<td>2021</td>
<td>$1,532,650,144</td>
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</tbody>
</table>
Policy and Planning to Prepare for Growth

• $110M of recent legislation passed and dedicated toward site development over the last two sessions
  – Rail-served sites, electric infrastructure, LB 1024 – business park, inland ports
  – Note that previously only roughly $2M annual total state funding dispersed to sites statewide since 2011

• 2023 legislative session - $430+M proposed for site development and industry
  – Mega site, CHIPS Act, LB 1024 Project Selection and more

• Other projects, planning and funding in development
  • Water resources, lake proposal, sewer infrastructure and capacity, streetcar, urban core, etc.
We are having growth of all types across our service area – the result of both economic development and organic expansion.

Economic prosperity and growth is foundational to cultivating vibrant and thriving communities.

Local and state strategy increasingly is focused on redevelopment, including the urban core.

The value of economic development helps optimize our energy system and benefits ratepayers.

The value of growth

Growth contributes to increased tax revenue, more jobs and affordable electricity.

- Tax Growth
- Infrastructure Development
- Jobs
- Community Support
- Multiplier Effect
- In-lieu-of-tax Growth
- OPPD Revenue
- Capital Investment

Growth contributes to increased tax revenue, more jobs and affordable electricity.
Look back: Power with Purpose

Power with Purpose was previously announced to solve for the following:

• Provide critical capacity and energy when OPPD’s system experiences the highest demand.
• Provide power generation during winter’s less-sunny days and during extreme weather events — supporting resiliency and reliability.
• Provide incremental generation diversity as our community continues to grow and thrive.
• Power with Purpose assets are the most efficient optimization of cost, reliability, and environmental sensitivity.
• We are projecting more growth and currently have an increased planning reserve margin.

Power with Purpose

- Up to 600 MW of utility-scale solar
  - Platteview Solar (81)
  - Other projects under development
- 600 MW of backup natural gas generation
  - Turtle Creek Station
  - Standing Bear Lake Station
Planning to Meet Growth
Key: Gas Coal Landfill Gas Wind Solar Nuclear Hydro

Timeline: Generation additions

1946
NO1: 63
NO2: 83.4
NO3: 89.3

1960
WAPA Hydropower: 81

1970
FCS: 478
Sarpy1: 55.4
Jones1: 61.2

1980
Nebraska City1: 650.3
Sarpy2: 55.9
Jones2: 62.2
Sarpy3: 107.7
Cass1: 162
Cass2: 161.8

1990
Sarpy4: 48.7
Sarpy5: 47.9
Elk City: 6.5

2000
Nebraska City 2: 691

2010
Broken Bow I: 18
Sholes: 160

2020
Future resources?
Standing Bear Lake: 150
Platteview Solar (81)

Turtle Creek Station: 450
Ft Calhoun Solar: 5

Platteview Solar (81)

Ainsworth: 10
Elkhorn Ridge: 25
Crofton Bluffs: 13.7

Petersburg: 40.5
Broken Bow II: 43.9

Flat Water: 60
Prairie Breeze: 200.6

Grande Prairie: 400

Remaining PwP Solar

Remaining PwP Solar
Preparing for future growth

• **GENERATION:** As part of ongoing capacity planning, OPPD is planning for needs beyond Power with Purpose for 2027-2032
  • Analysis will update with most recent data and identify what resources are needed to support expected load growth. E3 is supporting.
  • All options that are being evaluated are consistent with affordable, reliable, environmentally sensitive energy services and near-term timing feasibility considerations.

• **TRANSMISSION:** OPPD is expanding our sub-regional transmission grid to accommodate both near-term and long-term needs for reliability/resiliency, growth and future generation capacity options
Transmission Expansion Projects

Sarpy Southwest Transmission Project (SSWTP)
- ~12 miles of three new 161kV transmission lines interconnecting Turtle Creek Power Station to OPPD’s existing power grid
- Portions will be built to high-capacity double circuit 345kV/161kV standards to support future growth and system expansion
- Estimated completion -- 2023

Cass County to Gretna 345kV Transmission Project
- 345kV transmission line between OPPD’s Cass County Power Station substation and OPPD substation at 180 and Giles
- Project will support reliability/resiliency, growth and future generation expansion and integrate into SSWTP using double circuit 345/161kV capability
- ~29 miles total length
- Estimated completion – 2026 with routing, siting and public involvement process expected this year

*Line drawn for illustrative purposes only, route is TBD*
# Resource Planning Recap

## Challenges

- Changing generation landscape
- Largest load growth in OPPD history
- Maintaining reliability and resiliency
- Increasing capacity margin requirements
- Purchase power market becoming more volatile as utilities look to expand capacity
- Increasing timeline for resources due to regional transmission planning process and supply chain

## Framework

- OPPD’s Mission
  - Affordable, Reliable & Environmentally Sensitive
- Strategic Directives
- Legal and Regulatory Obligations
- All options will be consistent with reliability, near-term timing feasibility, and decarbonization goals

## Solution

- Planning for resource needs beyond Power with Purpose
- More information coming over the next few months
## Informing our direction

Customer, employee and public feedback through workshops, surveys and other outreach.

<table>
<thead>
<tr>
<th>Year</th>
<th>Event Description</th>
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<tbody>
<tr>
<td>2019</td>
<td>Power with Purpose (PwP)</td>
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<tr>
<td>2019-2021</td>
<td>Pathways to Decarbonization</td>
</tr>
<tr>
<td>January 2022</td>
<td>Integrated Resource Plan</td>
</tr>
<tr>
<td>June 2022</td>
<td>North Omaha Extension</td>
</tr>
<tr>
<td>2023</td>
<td>Near-term planning</td>
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- **2019**
  - OPPD launches plans to add solar power and national gas to meet load growth through 2026.

- **2019-2021**
  - Study determines it is possible to reliably operate with a mix of renewable, storage, and low-carbon firm resources to achieve net-zero.

- **January 2022**
  - Regulatory plan finds that OPPD’s forecasted load is fully supported through 2026 with new solar and natural gas resources (PwP).

- **June 2022**
  - PwP delays require OPPD to temporarily extend the capability for coal operations at NOS.

- **2023**
  - As part of on-going planning, OPPD studies how to meet growing energy needs.
Communication and outreach

Our community is growing, how do we support it?

Objective: Educate about our generation journey with a focus on new transmission and generation assets

Outcome: Ensure stakeholders understand situation and recommended solutions.

Tactics: Education, communication and outreach to build understanding about load growth as well as trust in OPPD’s near- and long-term generation strategies. Tactics:

- OPPDCommunityConnect.com
- Wire stories
- Social media
- News releases
- OPPD and community events
- Additional outreach tactics TBD between resolution and vote

TIMELINE

- **December 2022**
  - State of the Utility

- **Q1 2023**
  - Education and communication: Power with Purpose North Omaha Station
  - Solar updates
  - New resources

- **Q2 2023**
  - Outreach: Recommendation and resolution

December 2022
State of the Utility

Q1 2023
Education and communication: Power with Purpose North Omaha Station Solar updates New resources

Q2 2023
Outreach: Recommendation and resolution