Power with Purpose Open Session
September 2022 Solar Update

September 20, 2022
Power with Purpose Update

Agenda

• Standing Bear Lake Station & Turtle Creek Station
• Solar
• Stakeholder Outreach & Communication
Standing Bear Lake Station & Turtle Creek Station
Power with Purpose Update
Standing Bear Lake Station

• Site Completion: January 8, 2024
• Construction activities
  – Substation: grounding work and drilled piers
  – Generation: underground piping/duct banks, foundation work
  – Gas supply: gas pipeline installation
• Wartsila engine deliveries to site in progress

Engine being placed on trailer at ESC
Engine 1 leaving Elkhorn Service Center

West Facing – Seal Slab Engines 4-6

<table>
<thead>
<tr>
<th>Engine Dimensions</th>
<th>Loaded Dimensions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Length – 42'-0”</td>
<td>Length – 247'-8”</td>
</tr>
<tr>
<td>Width – 12'-3”</td>
<td>Width – 14'-0”</td>
</tr>
<tr>
<td>Height – 14'-7”</td>
<td>Height – 18'-7”</td>
</tr>
<tr>
<td>Weight – 462,750 lbs.</td>
<td>Weight – 796,000 lbs.</td>
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Information as of September 9, 2022
Power with Purpose Update
Turtle Creek Station

• Site Completion: January 26, 2024
• Construction activities
  – Substation: grounding work and drilled piers
  – Generation: underground piping/duct banks, foundation work
  – Gas supply: installation of gas supply infrastructure & pipeline
• Siemens equipment delivery: late Fall 2022
Solar
Solar Update

• Platteview Project
• Federal Policy
• Advocacy & Education
• Deploying Solar
Platteview Solar
September Project Status Update

• Completed Activities
  – Permit for Use of County Right of Way (Saunders County)
  – Road Use and Maintenance Permit (Saunders County)

• Ongoing Activities
  – Procurement of major equipment
  – 30% complete Civil and Electrical design packages
  – Develop ground cover plan (includes pollinator mix)
  – Develop OPPD substation design package

• Community Coordination
  – Outreach to Saunders County officials to update on OPPD and AES project progress
  – Project updates on OPPDCommunityConnect
Federal Policy Updates
Federal Policy Updates: Anti-circumvention Investigation

• Background
  – US Department of Commerce (DOC) investigation began in March 2022
  – Initial investigation severely impacted nearly 80% of US module supply
  – In June 2022, Biden issued executive order placing two-year pause on tariffs
  – Original timeline for preliminary determination was late August 2022

• Update
  – DOC pushed back preliminary determination timeline to November 28, 2022
  – Extension will push deadline for final determination likely to Spring 2023

• Impacts
  – Biden’s executive order brought some relief to supply, however, there are still considerations of the forced labor protection act, which ensures components are not made with slave labor
  – Wood Mackenzie (industry research group) predicted a 6.3 Gigawatt reduction in 2022 installations due to uncertainty of anti-circumvention investigation
Federal Policy Updates: Inflation Reduction Act

• Inflation Reduction Act (IRA) was signed into law in August 2022

• Initial review of IRA shows significant potential for public power and solar deployment, but requires additional review by OPPD and industry experts
  – Extends and expands investment and production tax credits
  – Direct pay allows tax credits to be directly eligible to public power entities

• Next steps
  – Most new programs and rules fall under Department of Treasury and IRS, who are trying to figure out their processes for implementation over the next several weeks
  – OPPD has engaged industry expertise to review and understand the IRA, these include legal, financial, industry groups (LPPC, APPA, SEPA), and solar suppliers
### Highlights of the IRA

- **10 (plus)** years of full-value credits for onshore/offshore wind, solar, storage, and hydrogen.
- **PTC/ITC** (with solar PTC) through the end of 2024; tech-neutral credits from 2025-2032 (or later).
- **Full value credits** tied to prevailing wage and apprenticeship requirements.
- **Adders/bonuses available** for complying with domestic content requirements and investing in projects in certain energy and low-income communities.
- **Direct pay** available for hydrogen and advanced manufacturing PTC for the first 5 years; otherwise mostly limited to tax-exempt entities.
- New **transferability** program is available for entities unable to elect direct pay—allowing the selling of credits to unrelated parties.
- **Accelerated depreciation restored** for clean energy projects (clean energy tax credits already protected) in corporate minimum tax.
- **No transmission ITC**, but transmission eligible for nearly $10 billion through various programs.
- **Offshore**: Trump offshore wind moratorium lifted; offshore wind leases tied to oil and gas leasing on federal waters/lands.
- **Funding for permitting resources** at DOE, FERC, DOI, NOAA and the Federal Permitting Improvement Steering Council.
Local Advocacy & Education
Local Advocacy & Education

• Ongoing support of regulations for City/County jurisdictions
  – Cass County Planning Commission is currently reviewing all regulations, which also includes review of solar in the Transitional Agriculture zone
  – Active review of solar regulations in Sarpy County
  – Ongoing discussions and support in other jurisdictions

• Development of education materials
  – “Solar 101” includes technology overview, utility-scale solar development process steps and timelines, and what to expect at end of life
  – OPPD staff developing additional topics, such as battery and other technologies

• Ongoing delivery of solar education materials
  – Cass County in August; also scheduled for September
**TYPICAL TIMELINE**

**UTILITY-SCALE SOLAR**

**SITE DEVELOPMENT**
- 1 – 3 YEARS
  - Site Selection
  - Land Agreements
  - Interconnection Request & Study
  - Public Outreach
  - Use Permitting
  - Preliminary Design

**CONTRACTING/DESIGN**
- 1 – 2 YEARS
  - Requests for Proposal
  - Contractor Selection
  - Design
  - Major Equipment Procurement
  - Financing

**CONSTRUCTION**
- 1 – 2 YEARS
  - Mobilize
  - Prepare Site
  - Final Permits (Enviro as required)
  - Construction Activities
  - Commissioning

**OPERATION**
- Up to 35 YEARS*
  - Regular Site Maintenance
  - Performance monitoring
  - Asset management
  - Equipment upgrades or repowering

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*Utility-scale PV Solar facilities are designed to operate 25 – 35 years with regular equipment maintenance throughout the life of the plant*
TYPICAL TIMELINE

UTILITY-SCALE SOLAR

Up to 35 YEARS*

- Regular Site Maintenance
- Performance monitoring
- Asset management
- Equipment upgrades or repowering

1 – 2 YEARS

- Decommissioning
- Material Recycling & Disposal
- Site Restoration

OPERATION

DECOMMISSIONING

*Utility-scale PV Solar facilities are designed to operate 25 – 35 years with regular equipment maintenance throughout the life of the plant
Regulatory Involvement for Solar Projects

**SOLAR PROJECT REGULATORY APPROVALS**

- **OPPD**
  - Interconnection Requirements
  - Design Standards & Reviews

- **County**
  - Conditional Use Permitting
  - Decommissioning
  - Access or Driveway Permits
  - Building Permit

- **State**
  - Nebraska Power Review Board
  - Stormwater
  - Game & Parks
  - Floodplain Permit

- **Federal**
  - FERC interconnection process (through SPP)
  - National Standards
  - Threatened & Endangered Species
  - Wetlands
  - Cultural
Deploying Solar
Ongoing Efforts to Deploy Solar

• Continuing to study sites and develop risk mitigation strategies for solar deployment
  – Progress on sourcing and specific sites will be announced in the coming months

• Significant engagement with suppliers to:
  – Maintain key relationships with developers and equipment suppliers for upcoming sourcing activities
  – Understand volatile solar market
  – Further understand how the Inflation Reduction Act will impact project pricing and timelines
  – Keep updated on development milestones for active projects in OPPD territory/Nebraska

• OPPD submitted an application to the Nebraska Environmental Trust (NET) annual grant process in early September 2022
  – Application is to study the feasibility of solar on the closed landfill in Douglas County
  – NET will announce recipients in Spring 2023
  – If recommended, OPPD and Douglas County would collaborate on potential next steps
Stakeholder Outreach & Communication
Stakeholder Outreach and Communication
SBLS/TCS

- OPPDCommunityConnect continued project page updates
  - Standing Bear Lake project page
  - Turtle Creek Station project page
  - Sarpy Southwest Transmission Project

- Use of social media to share project milestones

- 1:1 touchpoints with M.U.D., HOAs, neighbors and stakeholders as needed
Solar Community Outreach - Ongoing

• OPPD continues advocacy and education to community leaders, customers and stakeholders across the service territory and on a statewide level

• Further development of outreach materials and education including a new video on our YouTube page

• These ongoing, coordinated efforts ensure OPPD is the best source of information

• Follow our journey at OPPDCommunityConnect.com