



# Update on Byllesby Dam Hydropower Redevelopment Project

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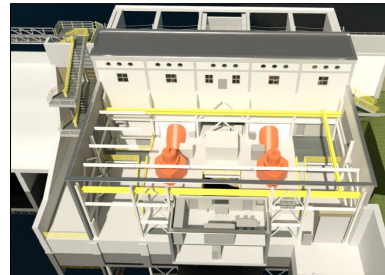
Physical Development Committee  
July 13, 2021

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## Agenda



- Project Status Update
- Project Schedule
- Boldt Phase II Pricing
- Project Budget and Funding
- Amendment to County Ordinance 128 – Water Surface Use Ordinance Regulating Lake Byllesby Reservoir
- Power Sales Options



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## Project Status Update



### Phase I – Initial Work:

- Mobilization/Site Preparation/Crane Pads - **Complete**
- Lead Paint Abatement inside Powerhouse (from Env Res CIP) - **Complete**
- Concrete Mass Fill in Bays for Structural Stability - **Pending**
- Procurement of Items with long lead times - **Ongoing**
  - Precast Walls, Windows, Interior Crane, Mechanical Gates, Etc.
- Construction of Cofferdam downstream of the Dam - **Complete**
- Demolition of Powerhouse – **In Process**

### Phase II – Remaining Construction Tasks:

All remaining project tasks to be completed in this phase

- Construction of Powerhouse
- Installation of Equipment

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## Project Status Update



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## Project Schedule



### **Important Dates:**

July 20, 2021 – Award of Phase 2 Construction Contract to Boldt

September 2021 – Complete Demolition of Existing Powerhouse

December/January 2021 - Completion Foundations of New Powerhouse

February 2022 – Installation of Precast Powerhouse Walls

March 2022 – Installation of Main Turbine Equipment

September 2022 – Installation of Generator and Power Equipment

November 2022 – Project Commissioning and Startup

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## Boldt Phase II Pricing



### **Tentative Phase II Price - \$16,991,612**

- Includes all remaining tasks to complete turbine upgrade project
- Working price ~ will be revised by before award of contract

### **Reasons for Cost Increases:**

#### COVID impact on material availability in the market:

- Steel – Unfabricated material shortages (50%)
- Concrete - Fly ash shortage (25%)
- Roofing material – Insulation costs (300%)
- Electrical - Copper wiring shortage (200%)

#### Labor related impacts to the project:

- Field/Project engineer hours increased to full time
- Increase in supervision / lead tradespersons

#### Other added costs from previous estimate:

- Increased contingency from 3% to 6.5%
- Temporary utilities for building/pumps increase - managing on-site water
- Crane - previous estimate had different crane, additional time with crane on-site
- Tax was excluded ~ project is not exempt
- Added Bond/Insurance Costs

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## Project Budget and Funding



### **2021 Byllesby Turbine Upgrade CIP: \$26,000,000**

\$8M – General Fund - Fund Balance (2018)  
 \$6M – Previous State Bonding (2018)  
 \$6M – State Bonding (2020)  
 \$6M – County Match use of General Fund - Fund Balance (2021)

### **Total Spent (as of 6/30/2021): \$9,682,380.46**

### **Last Total Budget Discussion (PDC 1/12/2021): \$29,000,000**

\$14M - General Fund - Fund Balance (2018 & 2021) (Paid back from future revenues)  
 \$6M – Previous State Bonding (2018)  
\$6M – New State Bonding (2020)  
**\$3M – Additional Funding Needed**

### **New Projected Project Cost: \$36,000,000**

\$14M - General Fund - Fund Balance (2018 & 2021) (Paid back from future revenues)  
 \$6M – Previous State Bonding (2018)  
\$6M – New State Bonding (2020)  
**\$10M – Additional Funding Needed**

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## Project Budget and Funding



### **Funding options for the remaining \$10 million**

- General Fund – Fund Balance(unassigned)\*
- Environmental Legacy Fund (ELF) – Fund Balance\*
- Federal Funds
  - American Rescue Plan Act (ARPA)
- Seek Additional State Funding
  - Renewable Development Account (RDA)
  - Bonding?

*\*General Fund and/or ELF Fund could be reimbursed with future revenues from the sale of energy*

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## Amendment to County Ordinance 128



- Water Surface Use Ordinance Regulating Lake Byllesby Reservoir
- Enhanced concerns now with new portage project downstream of dam
- Restrictions on the river west of pedestrian bridge to Byllesby Dam
- River is a public water ~ DNR approval required



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## Amendment to County Ordinance 128



### Process to Amend Ordinance:

- Submit proposed amendments to Minnesota Department of Natural Resources for Review
- Notice for Dakota County Public Hearing
- Dakota County Public Hearing
- Will need to fulfill similar public hearing process in Goodhue County as well

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## Power Sales Options



- Three viable power sales options:
  - MISO (Open Market)
  - Xcel Energy
  - Minnesota Municipal Power Agency (MMPA)
- Staff has identified MISO as the most viable option at this point
  - Balance between flexibility and value
- Working through MISO process, complete in late 2021

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## Proforma (2.5% Energy Escalation)



Energy Sales Scenarios	20-Year Net Value	50-Year Net Value
No Turbine Upgrade	(\$5,303,292)	(\$12,219,493)
MISO (Open Market)	(\$5,945,985)	\$3,851,966
Xcel Energy (Early 2020) 20-Year Agreement	(\$4,986,595)	\$4,812,427
Minnesota Municipal Power Agency (Mid 2020) 30-Year Agreement	(\$7,540,309)	\$698,523

Assumptions:

- \$12M in Total State Bonding, \$24M Internally Financed
- 1.6% Interest on Capital, 40-Year Repayment Period
- 2.5% Inflation Rate
- **2.5% Energy Escalation Rate**

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## Proforma (3.5% Energy Escalation)



Energy Sales Scenarios	20-Year Net Value	50-Year Net Value
No Turbine Upgrade	(\$3,306,162)	\$1,177,071
MISO (Open Market)	(\$2,657,688)	\$29,702,882
Xcel Energy (Early 2020) 20-Year Agreement	(\$4,986,595)	\$27,375,045
Minnesota Municipal Power Agency (Mid 2020) 30-Year Agreement	(\$7,540,309)	\$18,879,629

Assumptions:

- \$12M in Total State Bonding, \$24M Internally Financed
- 1.6% Interest on Capital, 40-Year Repayment Period
- 2.5% Inflation Rate
- **3.5% Energy Escalation Rate**

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# Questions?

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