



PUBLIC UTILITY DISTRICT NO. 1 OF CHELAN COUNTY

Rock Island Powerhouse 2: Generating Unit Rehabilitation Project



Board of Commissioners Update
John Sagerser - Presenting
June 14, 2021

Why We're Here Today

- Information on Future Resolution(s):
 - Guaranteed Maximum Price (GMP) Amendment No. 2 for First Unit Rehabilitation - \$66.9M over the next 3 years
 - Not-to-Exceed Contract Amount increases to \$104.3M
 - 2021 Capital Budget increases from \$18.5M to \$21M
 - Overall Project Forecast increases from \$324M to \$456M

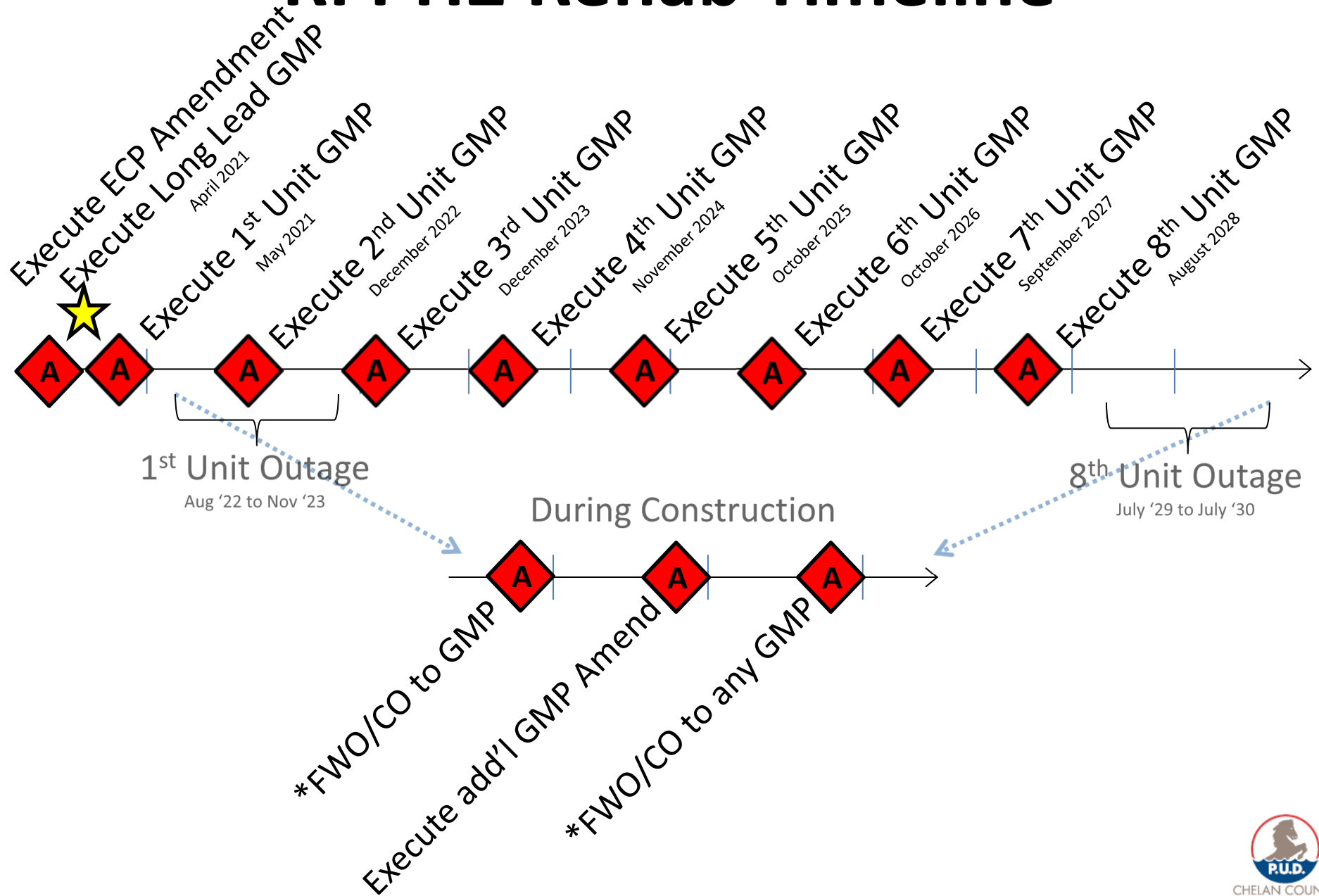
NO ACTION REQUESTED TODAY

Background

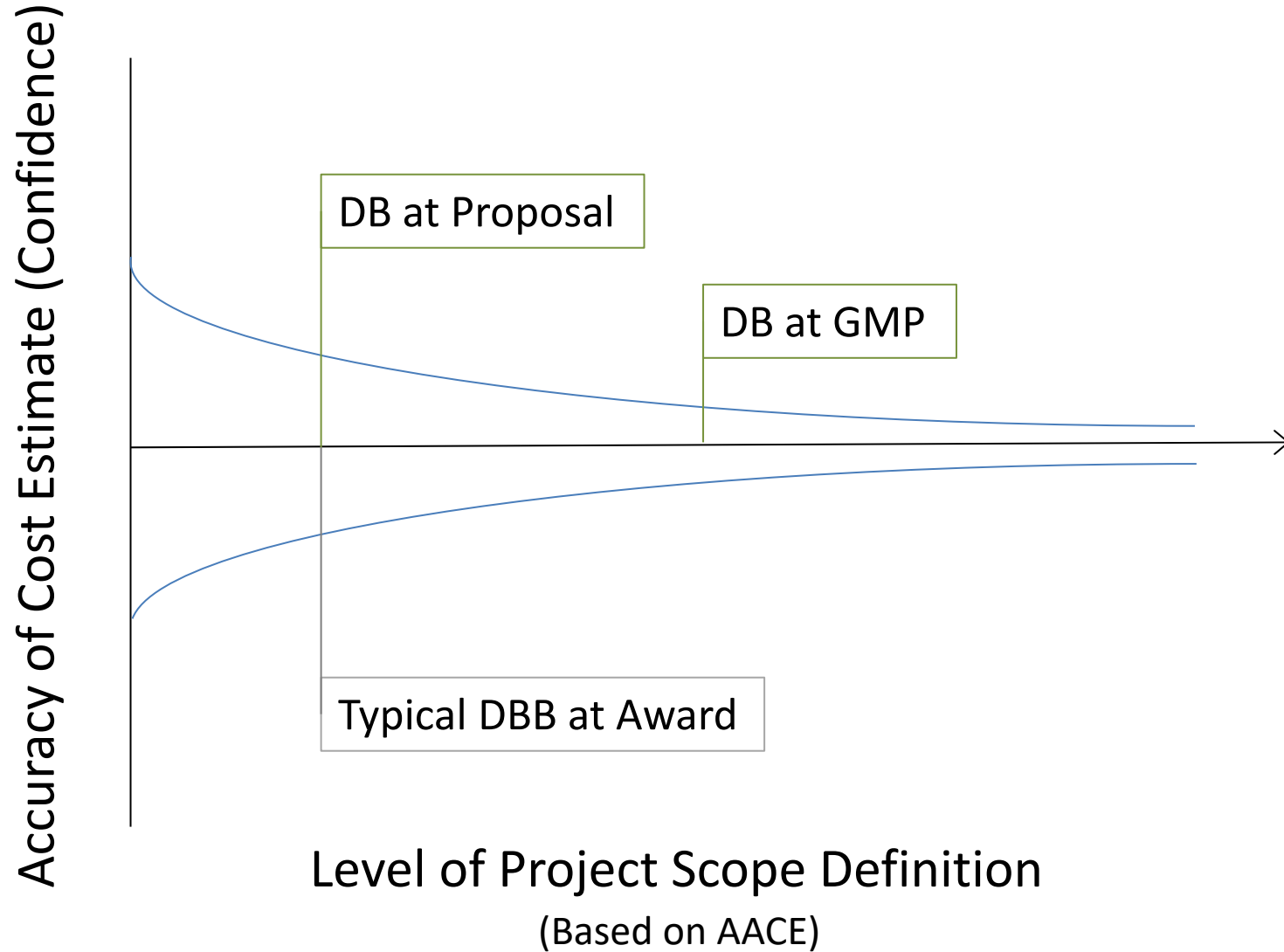


- January 2020 – Proposals received
- July 2020 – Executed DBA, began Preconstruction
- March 2021 – Extended Preconstruction
- May 2021 – Executed ECP and Long Lead GMP

RI PH2 Rehab Timeline



Cost vs Scope Definition



Draft GMP No. 2 Concepts

- GMP Amendment for first Unit rehabilitation
- Based on collaborative design process with District
- First Unit outage start on September 9, 2022
- Substantial Completion on May 30, 2024
- Includes all site work, including Unit disassembly and reassembly
- Time and material for engineering and project management
- Allowance for raw material prices escalation
- Protection against foreign exchange rate escalation
- Design Build Contingency at 4% to cover errors and omissions
- Incentives and Liquidated Damages for Substantial Completion, Trial Operation Period forced outage rate, and generator losses
- “Savings” are shared equally

Draft GMP No. 2 Costs

Description	Cost - \$M
Engineering and Project Management	\$5.6
Generator	\$3.9
Turbine	\$6.1
Governor/BOP	\$7.9
Site Work	\$18.0
Spare Parts	\$3.1
Allowances	\$3.9
Design Build Contingency	\$1.7
Design Build Fee	\$16.7
GMP No. 2 - First Unit Rehab	\$66.9

Contract Not-to-Exceed Costs

Description	Cost - \$M
GMP No. 2 - First Unit Rehab	\$66.9
GMP No. 1 - Long Lead Items	\$12.2
Extended Correction Period Agreement	\$19.7
Preconstruction Services	\$5.5
Revised Contract Not-to-Exceed Amount	\$104.3

Unit Cost Differentials

Description	Cost - \$M
GMP No. 2 - First Unit Rehab	\$66.9
One-Time Costs	-\$15.8
Reduced Outage Duration	-\$2.5
Reduced Design Build Contingency and Allowance	-\$4.1
Reduced Turbine/Generator Work	-\$1.7
Reduced Eng and PM	-\$4.2
Reduced Piping Outside the Bulb	-\$1.6
Reduced Design Build Fee	-\$9.0
Subsequent Unit GMP Estimate	~\$28M

Revised Capital Forecast

Description	Cost - \$M
Current Capital Forecast	\$324.0
Piping Inside and Outside the Bulb	\$32.4
Value Optimization (Quality, Safety, etc.)	\$16.2
Site Work	\$11.6
Design Build Fee	\$12.9
Extended Correction Period	\$19.7
District Contingency	\$28.8
Taxes	\$10.4
Revised Capital Forecast	\$456.0

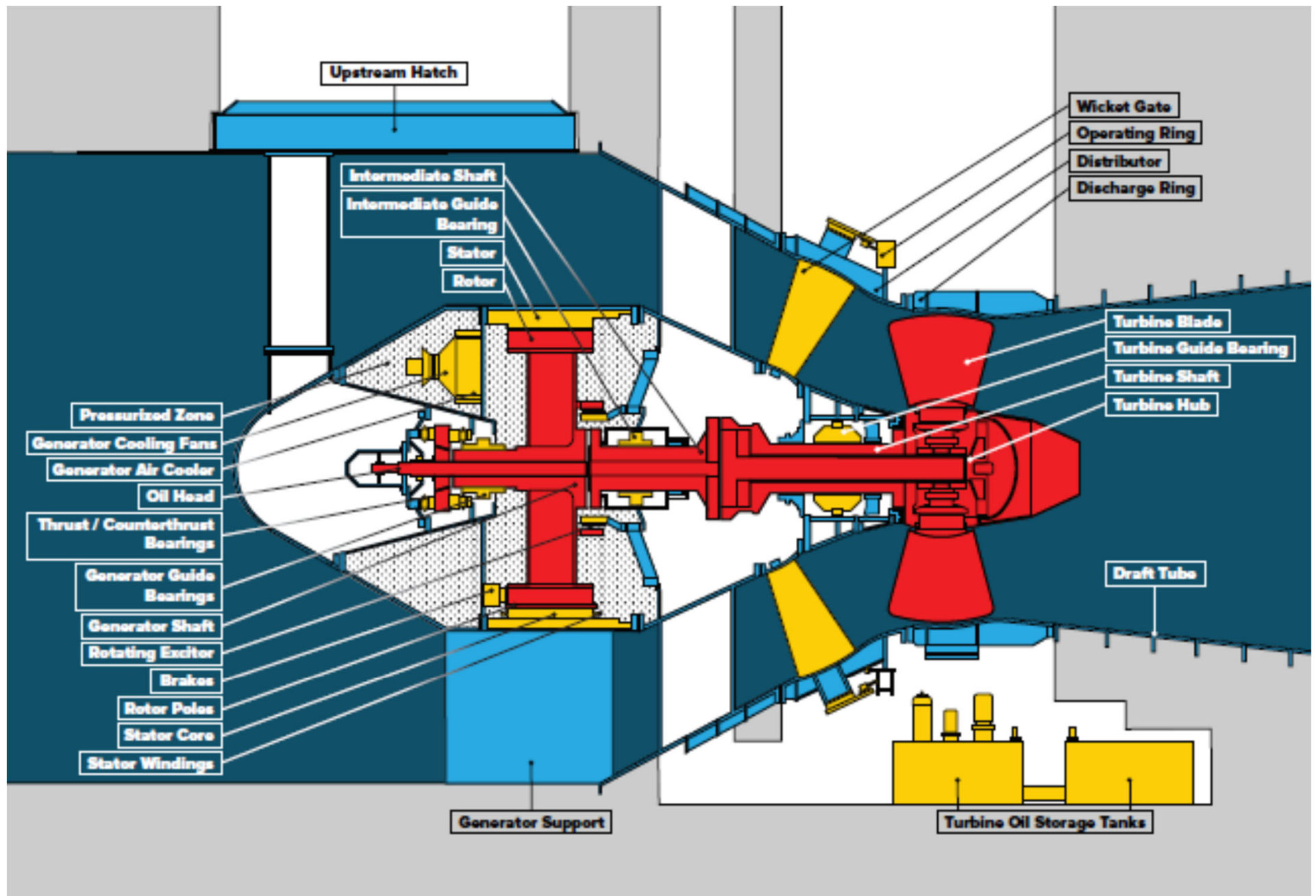
Economics

- Economic evaluation updated in May 2021 to reflect increase in Forecast
 - Total project costs ranging from \$457M to \$665M were evaluated
 - IRR ranged from 14.6% to 18.8%
 - IRR of 12.8% with flat energy rate of \$30/mwh

Next steps

- Authorization to Execute GMP No. 2 on July 6, 2021
- Request to increase 2021 capital budget on July 6, 2021
- Request to increase capital forecast





Appendix - Draft GMP No. 2 Scope

- New turbine components include:
 - Runner hub and wicket gates (first Unit only)
 - Discharge ring
 - Wicket gate levers, bushings, and seals
 - Trunnion bushings and seals for oil-free hub
 - Shaft coupling bolts and seals

Appendix - Draft GMP No. 2 Scope

- New generator components include:
 - Stator frame (first Unit only)
 - Stator bars, core, and core configuration
 - Coolers, piping, and valves
 - Shaft coupling bolts
 - Instrumentation and associated wiring

Appendix - GMP No. 2 Scope

- New governor and balance of plant components include:
 - Governor and injection oil pumps
 - Dry air system for oil-free hub
 - Hatch cover sump pump
 - All associated piping, valves and accessories

Appendix - Draft GMP No. 2 Scope

- All other components will be refurbished
- In general, refurbishment includes:
 - Clean and visual inspection
 - Non-destructive examination of entire component
 - Engineer and perform any necessary repairs
 - Replace existing seals and wear items
 - Repaint and reinstall

Appendix - Forecast Changes

- Contract increase from \$210M to between \$282M - \$330M
 - Piping inside and outside the bulb has increased over 65% or \$32.4M
 - Value optimization (quality, safety, operations, and maintenance improvements) increased costs 27% or \$16.2M
 - Site Work has increased 20% or \$11.6M
 - Design-build fee has increased 25% or \$12.9M
- Remaining Units estimated at between \$28M - \$32M each

Appendix - Forecast Changes

- District cost increase from \$131M to \$174M
 - Extended Correction Period - \$19.7M
 - Contingency - \$28.8M
 - Taxes - \$10.4M
- Increase 2021 capital budget from \$18.5M to \$21M
- Increase overall project forecast from \$324M to \$456M

Appendix - Draft GMP No. 2 Costs

- \$66.9M Guaranteed Maximum Price (GMP)
- One-time costs included in first Unit GMP include:
 - Engineering (design of new components, site work procedures, etc.) - \$3.8M
 - Site preparation and mobilization - \$2.1M
 - Specialty tools - \$3.5M
 - Spare parts - \$3.4M
 - Refurbishment of components for second unit - \$3.0M
- Revised not-to-exceed contract price of \$104.3M

Appendix - Changes Impacting Costs

- Inclusion of pricing for piping scope of work
- Evolution of design and scope of work
- Raw material prices increased average of 68% since December 2020
- Estimated for remaining Units based on current raw material prices

	Proposal Stage - January 2020	GMP No. 2 - May 2021
Copper Prices (\$/lb)	\$2.68	\$4.75
Carbon Steel Prices (\$/tn)	\$595	\$1,204
316 Stainless Steel Prices (\$/lb)	\$0.85	\$1.23