

# **Lignite Energy Council 2019 spring meeting**

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**Great River Energy plant updates  
2019 & beyond**

**Ryan Repnow  
Leader, Plant Operations**

# Coal Creek Station

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# 2019 major O&M items

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- ▶ Turbine major unit 2
  - Boiler feed pump 22 rebuild
  - Scrubber 24" valve repairs
  - Precipitator grit blasting
  - Boiler tube panel replacement and chemical cleaning
  - Boiler, fans and pulverizer ductwork and expansion joint repair
  - Air heater cold end basket replacement and grate repair
- ▶ Pulverizer overhauls
- ▶ Railroad rail replacement on main line 9100
- ▶ Coal dryer maintenance

# 2020-2023 major O&M items

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- ▶ Turbine valve and bearing outage (2020)
- ▶ Unit 1 boiler cleaning, inspections & repairs
- ▶ Feedwater heater testing
- ▶ Scrubber valve repairs
- ▶ Absorber transition floors and walls
- ▶ Boiler feed pump rebuild & turning gear modifications
- ▶ Roof maintenance

# 2020-2023 major O&M items continued...

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- ▶ Circ water line inspection & repairs
- ▶ Circ water outlet pipe spool piece replacement
- ▶ Condensate pump motor & rebuild
- ▶ FWH inlet valve repair/replacement
- ▶ AH hot end radial seal repair
- ▶ ID fan motor repairs
- ▶ Pulverizer main drive motor rewind

# Construction projects

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- ▶ Boiler controls HPM, burner management, FSC upgrade
- ▶ U1 expanded over-fire air and low NOX burner upgrades
- ▶ U2 scrubber reaction tank wall/floor upgrade
- ▶ U2 precipitator wall installation
- ▶ Stacker/reclaimer bucket wheel drive/reducer
- ▶ Precipitator TR main breaker replacement U2
- ▶ Enameled cold end baskets

# Capital equipment expenditures

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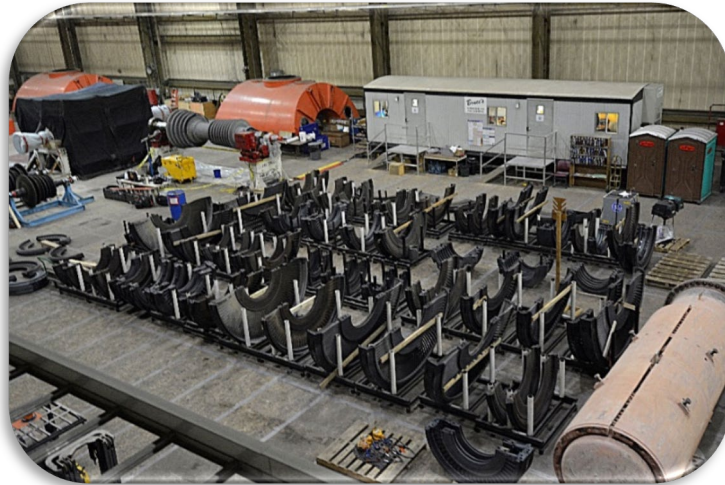
- ▶ Inductively coupled plasma-optical emission spectrometer
- ▶ Sulfur analyzer
- ▶ Portable dust collector
- ▶ Rotalign machine
- ▶ Bobcat Toolcat
- ▶ Handheld HART, Honeywell DE
- ▶ Communicators (2)
- ▶ UAS equipment
- ▶ Vehicles (3)
- ▶ Mowers (2)
- ▶ Air compressor



# Coal Creek Station outage schedule

## 2019

- Unit 1: May 11 - May 17
- Unit 2: March 16 – May 11
  - Turbine major overhaul
  - Screen outage May 15 - May 16
  - DC converter station upgrades



## 2020

- Unit 1: March 14 – May 8
  - Overfire air modifications
- Unit 2: May 16 – May 25

## 2021

- Unit 1: May 8- May 14
- Unit 2: May 11 – May 17

## 2022

- Unit 1: April 25 – May 1
- Unit 2: March 12 – April 22



# Spiritwood Station

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# Major O&M items

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- ▶ Consumables (lime, limestone, ammonia, carbon & sand)
- ▶ Ash disposal, trucking
- ▶ Water purchase & treatment
- ▶ Equipment rentals
- ▶ Boiler maintenance
- ▶ Bearing & valve inspections
- ▶ Atomizer maintenance
- ▶ Fan motor reconditioning

# Construction projects

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- ▶ TCS upgrade
- ▶ Coal bucket elevator insulation
- ▶ Install second boiler feed pump/motor assembly
- ▶ Primary & secondary air heater tube replacement
- ▶ Platform additions



# Capital equipment expenditures

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- ▶ Portable power packs (6)
- ▶ Plant overhead doors (2)
- ▶ Welders
- ▶ Conveyor belt beater
- ▶ Custom bridge systems
- ▶ Plant floor sweeper
- ▶ Diesel portable air compressor
- ▶ Plasma cutter
- ▶ Warehouse forklift scale
- ▶ Oily water separator for air system

# Spiritwood Station outage schedule

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## 2019

- September 7-September 21 (prelim)
  - Turbine controls upgrade

## 2020

- September 12-October 2 (prelim)

## 2021

- September 11-October 1 (prelim)
  - Major turbine and valve overhaul

## 2022

- September 10-September 30 (prelim)
  - Generator inspection

# Great River Energy Supply Chain Management

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Thank you, vendor partners, for helping Great River Energy have a successful year!