

LRN HYDROPOWER O&M MAINTENANCE UPDATE

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US Army Corps
of Engineers®



UNIT AND GATE STATUS



STATUS FOR WEEK OF 4 APR 2021 - 10 APR 2021

GENERATOR UNIT STATUS	Project	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Nameplate Avail. (MW)	Wk. Declaration (MW)
	Barkley	0.0	0.0	35.0	35.0			70.0	40
	Center Hill	45.0	0.0	45.0				90.0	106
	Cheatham	12.0	12.0	12.0				36.0	0
	Cordell Hull	33.3	30.0	33.3				96.6	99
	Dale Hollow	16.0	16.0	16.0				48.0	54
	J. Percy Priest	30.0						30.0	30
	Laurel	61.0						61.0	70
	Old Hickory	25.0	25.0	25.0	0.0			75.0	66
	Wolf Creek	0.0	45.0	0.0	45.0	0.0	45.0	135.0	150
Total w/o Laurel								580.6	545
System Total								641.6	615

GENERATOR UNIT SPECIFICS	Project	Unit #	Reason Out of Service	Date Out of Service	Date Return to Service
	Barkley	1 & 2	Main Transformer Installation	11-Jan-21	28-May-21
	Center Hill	2	Headgate Machinery	23-Mar-21	16-Apr-21
	Old Hickory	4	Turbine Generator Rehab	1-Apr-13	4-Jun-21
	Wolf Creek	1	Generator Differential	31-Mar-21	8-Apr-21
	Wolf Creek	3	Main Exciter Repairs	11-Mar-21	11-Feb-22
	Wolf Creek	5	Main Exciter Repairs	6-May-20	15-Apr-21

SPILLWAY GATE STATUS	Project	Gate 1	Gate 2	Gate 3	Gate 4	Gate 5	Gate 6	Gate 7	Gate 8	Gate 9	Gate 10	Gate 11	Gate 12
	Barkley												
	Center Hill												
	Cheatham												
	Cordell Hull												
	Dale Hollow												
	J. Percy Priest												
	Laurel	UNCONTROLLED OVERFLOW SPILLWAY											
	Old Hickory												
	Wolf Creek												

SPILLWAY GATE SPECIFICS	Project	Gate #	Reason Out of Service	Date Out of Service	Date Return to Service
	Center Hill	8	Gate Machinery Alignment	9-Jul-20	TBD
	Wolf Creek	5 & 7	Emergency Use Only (Deformation in Trunnion Arms)	18-Oct-19	TBD

SLUICE GATE STATUS	Project	Sluice 1	Sluice 2	Sluice 3	Sluice 4	Sluice 5	Sluice 6
	Center Hill						
	Dale Hollow						
	Wolf Creek						

SLUICE GATE SPECIFICS	Project	Sluice #	Reason Out of Service	Date Out of Service	Date Return to Service

LEGEND:		Indicates fully available status
		Indicates non-available status (see unit specifics for justification)
		Indicates a unique status as to why a unit/gate is or will be out of service



CENTER HILL TRUNNION PIN AND SEALS REPLACEMENT / SPILLWAY ELEC/MECH REPAIR



Scope

- Replace the trunnion pin for spillway gate 7
- Replace J-Seals on all spillway gates
- Add metal ladders to each pier to allow for inspection and maintenance of trunnion pins
- Electrical/Mechanical rehabilitation for the spillway gate machinery for each gate



Total Project Cost

- \$7.7 million
 - \$5.7 million for the Spillway Gate Machinery
 - \$1.5 million for the Trunnion Pin / J-Seals
 - \$500K funding pot machinery alignment mod for one gate

Progress

- Machinery work completed on all 8 gates.
- Roadway remote control stations installed.
- Completing trunnion ladder on last gate and alignment on gate 8.
- Gate equipment alignment & concrete repairs mod being finalized.





BARKLEY TRASH SCREENS



Scope

- To replace the existing trash screens which have missing cross bars making holes and gaps allowing large debris to enter scroll case and damage turbine

Total Project Cost

- \$3.53 Million

Progress

- Contract for fabrication \$2.18 Million.
- All 48 Sections delivered on site.
- \$1.346 Million for installation We've requested funding for FY21 for the installation.
- Installation 26 July to 19 August 2021.





BARKLEY INTAKE CRANE



Scope

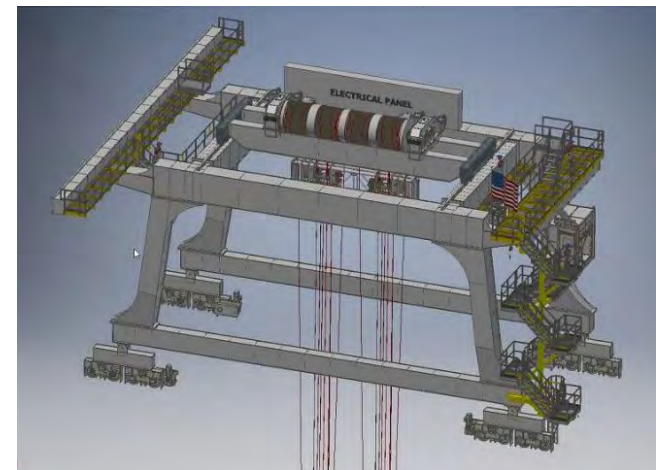
- To replace the existing Intake Gantry Crane and rails with a new 165 Ton Gantry Crane to operate the intake and the spillway.

Total Project Cost

- \$15.5 Million
 - \$7.95 Million has been funded through Funding Pots.
 - Another \$2.9 Million has been funding through Funding Pots for options so far.
 - Still need \$4.65 Million+ for remaining contract options.

Progress

- Contract awarded.
- Market Research conducted.
- Submittals/RFI's/Design being reviewed.





SCADA REPLACEMENT AT CHE/P, JPP/P, CEN/P, DAL/P, LAU/P



Scope

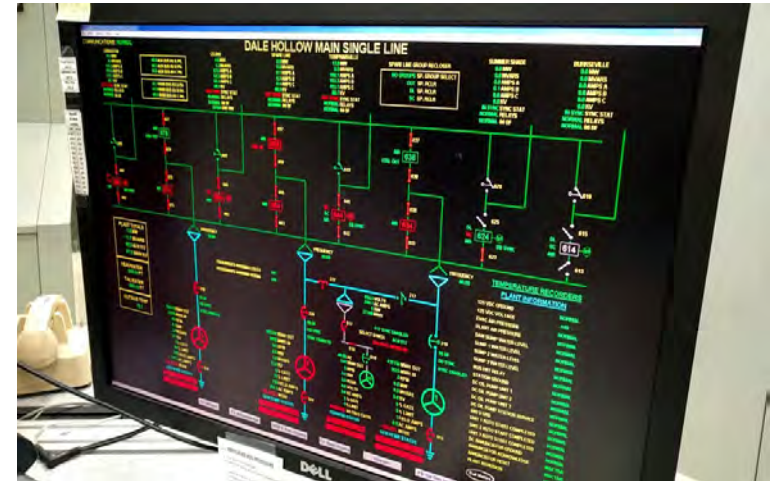
- To replace the five existing SCADA systems (Cheatham, J.P. Priest, Center Hill, Dale Hollow, Laurel)

Total Project Cost

- \$3.9 Million. \$2.5 million for contract with \$1.4 million for engineering (including design) and installation.

Progress

- Contract awarded to HSQ Technology.
- November 2020 LRN notified operating system no longer on approved list.
- Contract terminated for convenience March 2021
- District exploring path forward





OLD HICKORY SWITCHYARD CONDUIT & CABLE REPLACEMENT



Scope

- Supply new cable in Switchyard
- Install a new concrete trench system
- Supply new cable termination cabinets inside the switchyard vault
- Supply new switchyard panelboards

Total Project Cost

- \$1.98M

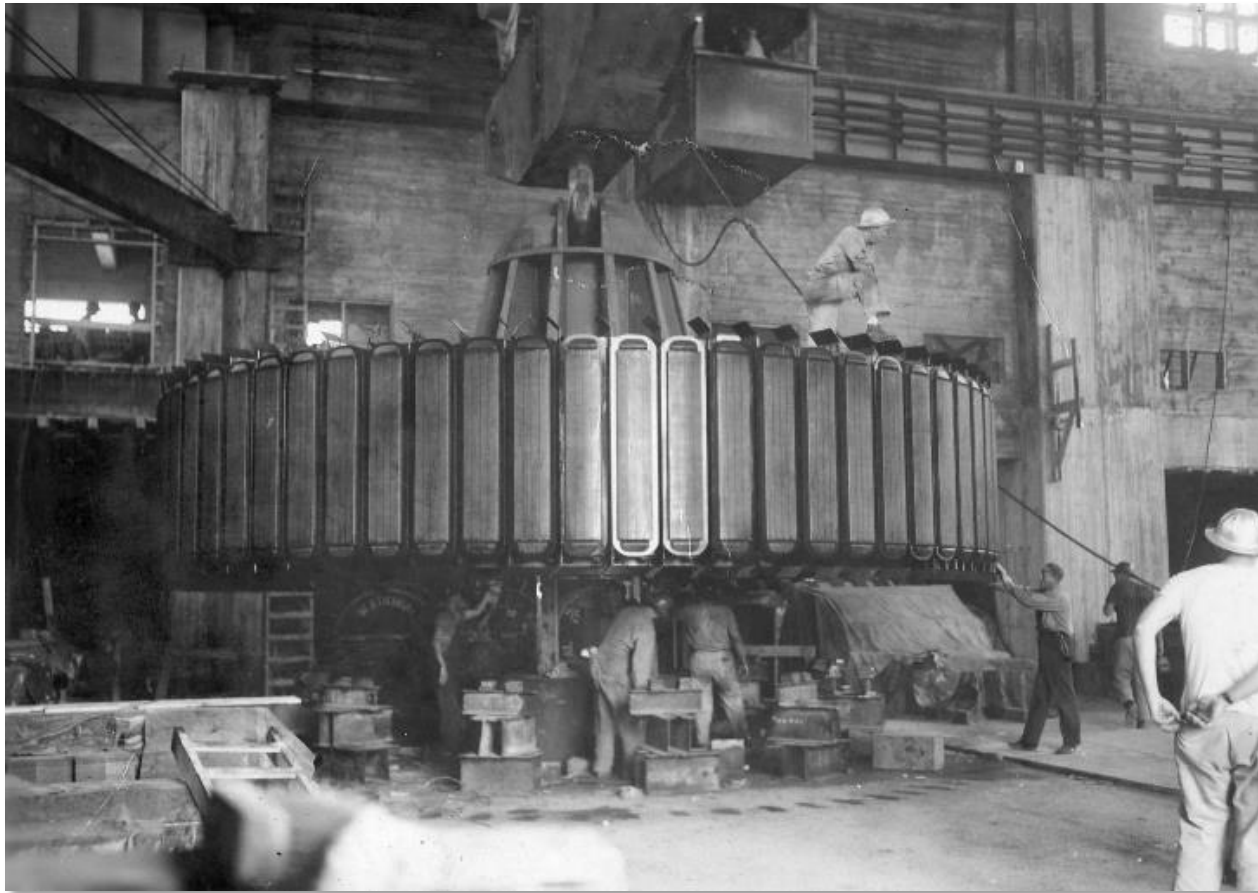
Progress

- Projected Award Date is 6 August 21
- Package is scheduled to be Delivered to Contracting on 9 April 21
- Projected Outage dates May 22-July 22





QUESTIONS?



Wolf Creek Generator Rotor