

LRN HYDROPOWER O&M MAINTENANCE UPDATE

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LRD/Nashville District
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STATUS FOR WEEK OF 03 MAY 2020 - 09 MAY 2020

GENERATOR UNIT STATUS	Project	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Nameplate Avail. (MW)	Wk. Declaration (MW)
	Barkley	32.5	32.5	32.5	32.5			130.0	90
	Center Hill	0.0	52.0	0.0				52.0	52
	Cheatham	12.0	12.0	12.0				36.0	30
	Cordell Hull	33.3	33.3	33.3				99.9	99
	Dale Hollow	18.0	18.0	18.0				54.0	48
	J. Percy Priest	28.0						28.0	30
	Laurel	61.0						61.0	70
	Old Hickory	25.0	25.0	25.0	0.0			75.0	83
	Wolf Creek	45.0	45.0	45.0	45.0	45.0	45.0	270.0	300

GENERATOR UNIT SPECIFICS	Project	Unit #	Reason Out of Service	Date Out of Service	Date Return to Service
	Center Hill	1	Turbine Generator Rehab	21-Aug-17	11-Oct-20
	Center Hill	3	Turbine Generator Rehab	29-Aug-18	13-Jun-20
	Old Hickory	4	Turbine Generator Rehab	1-Apr-13	11-Dec-20

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	7	Emergency Use Only (Trunnion Pin Friction)	4-Nov-13	TBD
	Center Hill	1	Spillway Machinery Contract Work	4-May-20	21-May-20
	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	Project	Gate #	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
- Rehabilitation for the spillway gate machinery for each gate



Total Project Cost

- \$7.2 million
 - \$5.7 million for the Spillway Gate Machinery
 - \$1.5 million for the Trunnion Pin / J-Seals

Progress

- Machinery work completed on Gates 2 thru 8.
- Roadway remote control stations installed.
- Working on ladders and Gate 1 machinery.





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.





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

- \$14 Million
 - \$7.95 Million has been funded through Funding Pots.

Progress

- 100% Design being finalized through BCOES.
- Market Research conducted.





SECURITY SYSTEM UPGRADE



Scope

- Security systems are being replaced at Barkley, Center Hill, Cheatham, Cordell Hull, Dale Hollow, J.P. Priest, and Old Hickory.

Total Project Cost

- \$3.5 million (Joint)
- \$1.2 million (Hydro portion)

Progress

- Performance verification tests at Cheatham, J.P. Priest and Old Hickory in October. Currently on hold do to COVID 19.





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



Scope

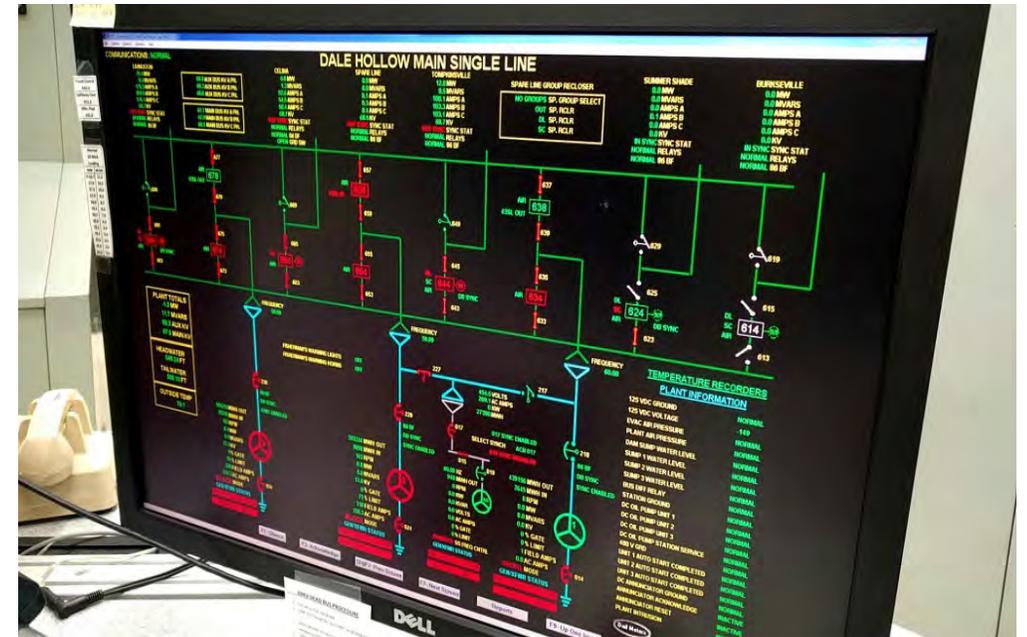
- To replace the five existing SCADA systems (Cheatham, J.P. Priest, Center Hill, Dale Hollow, Laurel)

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. Installation at Old Hickory and Cordell Hull (master plants) beginning in late summer or early fall 2020.



NASHVILLE DISTRICT HYDROPOWER MASTER PLAN PROGRESS UPDATE

Ryan Frye

Prepared for Team Cumberland

01 May 2020



HYDROPOWER MASTER PLAN

NASHVILLE DISTRICT



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MASTER PLAN STATUS



General Organization:

- Purpose and Objectives of the Master Plan
- Nashville District Overview and History
- Hydropower Rehabilitation Program and History
- Program Authorization and Funding (both Section 212 & Appropriated)
- 20 Year Master Program Plan
- 5 Year Program Detailed Plan
- Hydropower Asset Management Program
- LRN Hydropower Program Statistics
- Individual Power Plant Development Plans

Communication Objectives:

- Provide information on the past, present and future of the LRN Hydropower Rehabilitation Program.
- The Master Plan will be the document used for both appropriated and Section 212 funding requests.

Activities:

- Rough draft of the report has been developed.
- Cost Estimates for all projects have been developed and are under review.





QUESTIONS?

