

## HYDROELECTRIC DEPARTMENT PROJECT STATUS AS OF AUGUST 16, 2021

<u>Prty</u>	<u>Proj Mgr</u>		<u>Facility Name</u>	<u>WO#</u>	<u>Description</u>	<u>Status</u>	<u>Comments</u>
<b>10-1 - HYDRO NON-PROGRAMMATIC (\$250,000) 50112-52915</b>							
01	KEANE SOMMERS	2020	Hydro Field Office	2432	Design and construction of the new Hydroelectric Field Office	Hold	The Energy Center program components are under development. The new maintenance facility and storage yard draft pre-design by the architect is complete. The three energy/carbon concept studies are complete; forest carbon sequestration, pumped storage, and solar field. A draft Energy Management Strategy Summary has been received and is under review. Once all efforts are completed, findings will be summarized to present options and alternatives for developing the site into various levels of renewable energy generation and carbon zero footprint.
<b>10-2 - HYDRO POWERHOUSE IMPROV (\$1,925,000) 50112-52920</b>							
01	NATHAN DROIVOLD	2021	Chicago Park Powerhouse Governor Replacement	2402	Replace governor, install instrumentation that will enable operators to monitor flow, temperature, and pressure of vital powerhouse components.	Construction	Final design complete. Procurement of project materials is nearly complete. Construction is underway. Bench testing of new system is scheduled for August. The new cooling water system will be installed during the 2021 annual outage for Chicago Park Powerhouse in September.
02	NATHAN DROIVOLD	2020	Rollins Powerhouse	2351	Replace the existing oil circuit breaker (OCB) at the Rollins Powerhouse with a more environmentally acceptable vacuum circuit breaker.	Design	New drawing package and bill of materials for breaker interconnection to Rollins PH is nearly complete. Breaker is in manufacturing until late August (NID will witness production testing virtually prior to shipment). Coordination with PG&E is ongoing. Procurement will begin in August. Installation is planned for October/November of 2021.
03	NATHAN DROIVOLD	2020	Rollins Powerhouse Balance of Plant	2393	Install an expandable balance of plant to monitor critical plant systems such as excess vibration of the turbine and generator, temperature, and flow.	Construction	Design is complete. Procurement is underway. Construction is also underway. Installation is scheduled for October/November of 2021 during the annual plant outage for RPH.
04	ADRIAN SCHNEIDER	2019	Chicago Park Fire Suppression System (DIV 2)	2164	Upgrade of existing CO2 system (piping, alarms, sensors) to protect Generator. Includes installation of new Clean Agent suppression system for control room and the addition of a fire detection system for electrical cable trays.	Construction	Final items include replacement of faulty valve handle and programming new alarm points into existing SCADA on August 11th. As-builts to be delivered to NID from Contractor. New safety procedures are being developed and will be implemented prior to putting the new fire suppression system into service later in 2021.
05	NATHAN DROIVOLD	2021	SFPH Fire Detection Upgrades	2552	Install new smoke detection systems in the Scotts Flat Powerhouse that includes alarming and callout features to notify staff in case of fire while unoccupied.	Design	Hydro is reviewing the draft basis of design report and 50% design submittal for the new fire detection systems. Design and installation is scheduled to be completed by the end 2021.
06	NATHAN DROIVOLD	2021	CNPH Fire Detection Upgrades	2553	Install new smoke detection systems in the Combie North Powerhouse that includes alarming and callout features to notify staff in case of fire while unoccupied.	Design	Hydro is reviewing the draft basis of design report and 50% design submittal for the new fire detection systems. Design and installation is scheduled to be completed by the end 2021.
07	NATHAN DROIVOLD	2021	CSPH Fire Detection Upgrades	2554	Install new smoke detection systems in the Combie South Powerhouse that includes alarming and callout features to notify staff in case of fire while unoccupied.	Design	Hydro is reviewing the draft basis of design report and 50% design submittal for the new fire detection systems. Design and installation is scheduled to be completed by the end 2021.
08	ADRIAN SCHNEIDER	2019	Combie Reservoir	6943	Combie South Access Road. Develop approx. 3,000 ft. from south abutment.	Design	NID Right of Way received counter-offer from Arroyo on August 13, 2021. Will review and respond. Construction is planned for Fall/Winter 2021.
09	NATHAN DROIVOLD	2019	Combie South Electrical Upgrades	2168	Combie South Electrical Upgrades	Design	The new 12kV transformer has been delivered to Hydro. Plans for the new containment pad are complete. Installation is scheduled for September/October 2021.
10	NATHAN DROIVOLD	2020	Rollins Powerhouse Relay Protection Upgrade	2394	Replace aging relay protection system to improve protection of the powerhouse relay, transformer, and generator.	Planning	An RFP for design services has been prepared and will be released in August. Construction is scheduled for the fall of 2022.
11	THOMAS KLUGE	2021	Dutch Flat #2 Powerhouse	2483	Dutch Flat #2 Powerhouse Backup Generator: All costs associated with the installation of new backup generator at Dutch Flat #2 Powerhouse.	Design	Design is underway. A project kickoff meeting was held in late July.
12	NATHAN DROIVOLD	2021	Chicago Park PH Transformer Replacement	2362	Procure and install a new main transformer at the Chicago Park Powerhouse.	Planning	Hydro is working with an engineering consultant to perform a condition assessment of the existing equipment in the Chicago Park PH to make recommendations for future repair or replacement. A site visit was made in late April to complete a facility inspection. First draft of the condition assessment report has been reviewed by Hydro. The project scope will be developed after reviewing this report in 2021.

## HYDROELECTRIC DEPARTMENT PROJECT STATUS AS OF AUGUST 16, 2021

Prty	Proj Mgr		Facility Name	WO#	Description	Status	Comments
<b>10-2 - HYDRO POWERHOUSE IMPROV (\$1,925,000) 50112-52920</b>							
13	NATHAN DROIVOLD	2021	Chicago Park PH Turbine Overhaul	2353	Replace worn turbine and appurtenances.	Planning	Hydro is working with an engineering consultant to perform a condition assessment of the existing equipment in the Chicago Park PH to make recommendations for future repair or replacement. A site visit was made in late April to complete a facility inspection . First draft of the condition assessment report has been reviewed by Hydro. The project scope will be developed after reviewing this report in 2021.
14	NATHAN DROIVOLD	2020	Deer Creek Powerhouse	2290	Deer Creek Powerhouse Upgrades - Cost of upgrades necessary to sell power upon close of sale	Hold	Hydro is finalizing plans for a new gaging station on the South Yuba Canal that will measure flow supplying Deer Creek PH. Discussions with PG&E are ongoing. These plans will be sent to PG&E for approval prior to installation.
15	THOMAS KLUGE	2022	Combie North Powerhouse	2581	Combie North Powerhouse Capacitor Bank Upgrade: Design and replace existing capacitor bank at Combie North Powerhouse to improve the reliability and efficiency of power generation of the facility.	Hold	Project setup complete. Project will remain on hold until 2022.
16	NATHAN DROIVOLD	2021	Rollins PH Governor Replacement	2392	Replace worn governor and appurtenances.	Hold	Hydro to begin project scoping later in 2021. Installation is scheduled for 2022.
17	NATHAN DROIVOLD	2021	Dutch Flat #2 PH Cooling Water System Upgrades	2544	Install new instrumentation that will enable operators to monitor flow, temperature, and pressure of vital powerhouse components	Hold	Hydro will solicit proposals to complete the design of a new cooling water system in 2021. Installation is planned for 2022.
18	NATHAN DROIVOLD	2020	Dutch Flat #2 Powerhouse Fire Supression System	2240	Designing, installing and commissioning a new CO2 fire suppression system for the Dutch Flat #2 Powerhouse.	Hold	Hydro has received a draft basis of design report from its consultant for a new fire suppression system at the Dutch Flat #2 Powerhouse. Hydro has reviewed and provided comments for revisions to the document. A final draft of the basis of design report is expected during Q1 2021.
19	NATHAN DROIVOLD	2020	Bowman Intertie	2354	Replace the existing Bowman Inter-tie SF6 breaker with a more environmentally friendly vacuum circuit breaker	Hold	Hydro will replace the existing SF6 breaker with a vacuum circuit breaker after completion of the oil circuit breaker replacement at Rollins PH ( FATR# 2351).
20	NATHAN DROIVOLD	2021	Rollins PH Fire Protection System	2379	Provide fire protection system for Rollins Powerhouse (design, installation and commissioning).	Hold	Hydro to begin project scoping in 2021. Installation is scheduled for 2022.
21	NATHAN DROIVOLD	2021	Deer Creek PH Controls and Automation	2342	Install programmable logic controller and automate the Deer Creek Powerhouse.	Hold	Hydro to begin project scoping in 2021 with construction scheduled to start in 2022. Project schedule assumes NID will takeover PG&E facilities in 2021.
22	NATHAN DROIVOLD	2021	Deer Creek PH Exciter Replacement	2395	Replace exciter & appurtenances.	Hold	Hydro to begin project scoping in 2021 with construction scheduled to start in 2022. Project schedule assumes NID will takeover PG&E facilities in 2021.
23	NATHAN DROIVOLD	2021	Deer Creek PH Generator Breaker Replacement	2343	Replace the existing generator breaker with a generator breaker and cabinet to mitigate an arc flash safety hazard at the Deer Creek Powerhouse and improve reliability.	Hold	Hydro to begin project scoping in 2021 with construction scheduled to start in 2022. Project schedule assumes NID will takeover PG&E facilities in 2021.
<b>10-3 - HYDRO DAM &amp; WATER IMPROV (\$2,660,000) 50112-52921</b>							
01	MIN CHEN	2020	Scotts Flat Spillway Repair	2094	Scotts Flat Spillway Repair & Upgrades	Design	Model construction is nearly complete. FERC and DSOD approved the start of trial testing of the model which is currently underway. The final alternatives report including the preferred solution is expected later in 2021. Preliminary results indicated capacity concerns which required Hydro to execute an additional task order for further modeling.
02	ADRIAN SCHNEIDER	2020	French Dam Upgrades & Gaging Station	2007/ 2360	Replace the damaged sections of the concrete lining on the upstream dam face to minimize leakage, modify the spillway training walls to prevent over topping, and construct a gaging station on the dam outlet to measure flow.	Construction	Contract awarded to Glissman Excavating. Construction to begin August 16, 2021. Anticipated completion by end of October 2021.
03	MIN CHEN	2022	Bowman North Dam	2359	Bowman North Upstream Lining Repair. Replace damaged sections of the lining on the upstream dam face of the Bowman North and South Dams to minimize leakage through the dams.	Planning	NID Maintenance is completing in-house repairs in 2021. Work includes joint sealing above the water line.
04	MIN CHEN	2019	Combie / Van Giessen Dam	20140 2	Dam stabilization, abutments protection against scouring, and water supply upgrade.	Hold	The final alternatives report has been received and a preferred solution has been selected. Construction is planned for 2025-2026.
<b>10-4 - HYDRO LOWER DIV (\$100,000) 50112-52922</b>							

**HYDROELECTRIC DEPARTMENT PROJECT STATUS  
AS OF AUGUST 16, 2021**

<u>Prty</u>	<u>Proj Mgr</u>		<u>Facility Name</u>	<u>WO#</u>	<u>Description</u>	<u>Status</u>	<u>Comments</u>
<b>10-4 - HYDRO LOWER DIV (\$100,000) 50112-52922</b>							
01	NATHAN DROIVOLD	2020	Chicago Park Forebay Canal Liner Replacement	2511	Repair segments of the Chicago Park Canal where existing shotcrete liner needs replacement.	Hold	Hydro received a report from Engineering reviewing the findings of the September site visit and damage assessment with Hydro. Hydro and Engineering will hold scoping discussions and start the development of a design report with an alternatives analysis in Q1 2021.
02	NATHAN DROIVOLD	2021	Chicago Park Powerhouse Tailrace Repair	2551	Evaluate and address erosion concerns of the tailrace foundation.	Hold	Hydro received a report from Engineering reviewing the findings of the September site visit and damage assessment with Hydro. Hydro will hold scoping discussions and start the development of a design report with an alternatives analysis in Q1 2021.
03	NATHAN DROIVOLD	2021	Dutch Flat Canal Liner Replacement	2545	Repair segments of the Dutch Flat Canal where existing shotcrete liner needs replacement.	Hold	Hydro will solicit a condition assessment of the existing liner system in 2021 in order to plan for future repairs.
<b>10-5 - HYDRO UPPER DIV (\$300,000) 50112-52923</b>							
01	DOUGLAS RODERICK	2021	Rucker Creek Spillgate	2339	Replace existing radial gate at Rucker Creek Diversion with an overshot gate to improve personnel safety and operational performance.	Design	Hydro and Engineering made a site visit to discuss the project scope and proposed approach in December. Engineering is working with Hydro to develop specifications for the new gate and a preliminary construction plan ahead of contacting gate manufacturer's for quotes. Engineering will make a site visit during the June annual outage to collect measurements inside of the canal while dry.
02	PHILIP NEDVED	2021	Fall Creek Flume Upgrades	2404	Bowman-Spaulding Canal Improvements - Make structural enhancements to improve the reliability of the Fall Creek Flume.	Planning	Hydro has received quotes for the project bill of materials. Hydro made a site visit in June to evaluate the condition of flume hardware to determine what can be reused in future upgrades. Hydro will request an updated material quote based on these findings.
03	PHILIP NEDVED	2021	Fall Creek Diversion Improvements	2576	Fall Creek Diversion Improvements. Make structural enhancements to improve the reliability of the Fall Creek Diversion Flume	Planning	Hydro has received quotes for the project bill of materials. Hydro made a site visit in June to evaluate the condition of flume hardware to determine what can be reused in future upgrades. Hydro will request an updated material quote based on these findings.
04	MIN CHEN	2020	Texas Creek Flume Repairs	2525	Repairs along the Bowman-Spaulding Canal below the Texas Creek Diversion.	Design	NID Board approved contract to Glissman Excavating on July 28, 2021. Construction is planned for Q3 2021 pending FERC approval.
05	NATHAN DROIVOLD	2020	Wilson Creek Diversion Rehab	2546	Repair and modify the Wilson Creek Diversion Dam structure to ensure diverted flows are measurable and accurate.	Planning	Engineering prepared a preliminary design for a temporary solution to improve flow measurement and diversion for the 2021-22 winter season. Hydro submitted this package to USFS for approval and is awaiting a response.
<b>10-6 - HYRDO SCADA/COMMS (\$200,000) 50112-52924</b>							
01	KEANE SOMMERS	2022	Hydro Office Radio Tower	2405	Construct a new hydroelectric field office radio tower to improve communication of critical infrastructure.	Planning	First draft of the line of site report and survey findings was submitted to NID for review. Revisions are being made with the final report expected by the end of 2021.