



U.S. Department of Energy 247 Hydroelectric Grant Funding Agreements

Facilities Committee
January 8, 2025

Background

- U.S. Department of Energy (DOE) - Grid Deployment Office (GDO) selected 293 capital improvement projects to enhance the hydroelectric grid resiliency, dam safety and environmental improvements over 33 states to receive over \$430 Million under the Infrastructure Investment and Jobs Act – 11/15/2021 also known as the Bipartisan Infrastructure Law (BIL)
- The BIL Provision 40333 (EPAAct 2005 Section 247) allows up to \$5,000,000 in funding per FERC License Project, which includes up to 30% in reimbursable funding for project costs

DOE 247 Grant Funding Projects – Fiscal Impact

NCPA Hydroelectric Facilities filed (6) projects under FERC P2409 and P11563 licenses

- FERC Project 2409:

Project Title	Grant Reimbursement
Clarks Creek Flood Risk Reduction Project	\$631,241
Collierville Powerhouse Sump Oil Water Separator	\$117,000
Collierville Transformer Maintenance	\$431,528
McKays 17KV Hardening Project	\$173,321
McKays Point Sediment Removal Project	\$3,646,910
	\$5,000,000

- FERC Project 11563:

Project Title	Grant Reimbursement
Upper Utica Dam Maintenance	\$185,939.68
	\$185,939.68

Clarks Creek Flood Reduction Project

- Collierville powerhouse and adjoining switchyard are susceptible to damage and being forced offline during flooding events with the current configuration
- Existing surface water drainage features are inadequate for significant floods
- Existing drainage features were damaged in the December 2019 and January 2023 storm events causing partial flooding and threatening powerhouse operations
- This project will remove an existing hydraulic constriction and harden the drainage system to improve resilience

Collierville Powerhouse Sump Oil Water Separator

- Collierville utilizes a variety of lubricants and turbine oils, which are well-contained
- Water, which flows through the powerhouse to the tailrace, passes through a utility vault sump to minimize the risk of contaminated water leaving the powerhouse
- As part of NCPA's ongoing commitment to protect valuable environmental resources, an oil water separator will be installed in line with the water leaving the sump as an additional level of protection
- The separator will remove all potential contaminants introduced by power generation and improve existing water quality protection measures, ensuring that only clean water leaves the powerhouse, minimizing the environmental impact of NCPA's operations

Collierville Transformer Maintenance

- Collierville Powerhouse is a 253 MW, highly flexible, fast-ramping generator, which is used by the project operator, NCPA, as well as the California Independent System Operator (CAISO), and the Grid Operator (PG&E) to help balance loads, integrate other renewables, and provide ancillary services including voltage control service and frequency response service.
- The generator step-up transformers at Collierville Powerhouse are critical components in providing these services
- Project objective is to increase the reliability and resiliency of the transformers by upgrading and replacing key components, including bushings and tank seals. This will minimize the environmental footprint of the transformers by reducing the risk of oil leakage.
- This will extend the operational life of the transformers and allow Collierville to continue to provide needed flexibility and ramping to the grid.

McKays 17KV Hardening Project

- McKays Point Diversion Dam, 17KV power is run from the local distribution network to the dam for various operational and surveillance apparatus
- Most of the circuit is underground, with a short section running overhead. This section is susceptible to wildfire and storm damage, which can result in loss of power at the dam site. This would mean losing control of the Collierville Intake structure and force the Collierville Powerhouse offline.
- This Project will replace the overhead portion of the 17KV feeder circuit with fire-resistant materials to improve resiliency and reliability.
- Ensure that dam safety monitoring and power generation are uninterrupted.

McKays Point Sediment Removal Project

- McKays Point reservoir has collected 460,000 cubic yards of sedimentation due largely driven by atmospheric river storms that induced landslides upstream of the reservoir.
- Sediment from these events has traveled into the reservoir and into other critical zones of the hydroelectric facility, including the power tunnel intake, low level outlet, and accumulated sediment sitting against the dam.
- This sediment deposited removal project will restore storage capacity to the reservoir to increase powerhouse generation flexibility, reduce sediment loading on the dam, restore the sediment trap upstream of the cofferdam, reduce the likelihood of turbine damage due to sediment, and reduce the hazard of the power intake tunnel infilling with sediment.

Upper Utica Dam Maintenance – FERC P11563

The DOE grant agreement for this project was signed by NCPA General Manager. We received the agreement on 12/19/2024 and had to be signed by 01/07/2025 for \$185,939.68. The objective of this work is to correct potential stability deficiencies, enhance dam safety, and responsibly preserve the historic character of the over 100-year-old Lake Alpine, Utica, and Union Dams.

- Lake Alpine Dam; repair the upstream gunite, restore the downstream face dry-laid stone (as mandated by DSOD and FERC), and repair the seepage weir to restore structural integrity of the dam, reduce seepage, and allow for more accurate seepage monitoring, as required by the FERC Dam Safety Surveillance Monitoring Plan.
- Union Dam; repair areas of mortar deficiency to reduce increased seepage and comply with dam safety best management practices, while preserving the historic character of the structure.
- Utica Dam; repair concrete spalling to reduce seepage and ensure the continued structural integrity of the dam face, replace the low level outlet operator motor to maintain critical dam safety remote operability.

Environmental Analysis

- The approval of the DOE generated agreements has no impact on the environment and therefore not a project under CEQA. Each project is individually reviewed for CEQA compliance.

Proposal

- Staff is seeking a recommendation from the Facilities Committee authorizing the Commission to accept the conditional grant funding agreements associated with The Infrastructure Investment and Jobs Act Provision 40333 (Energy Policy Act 2005 Section 247) and delegating the authority to the General Manager or his designee to execute Department of Energy (DOE)-generated agreements for the funding towards five (5) NCPA projects for a total funding value not-to-exceed \$5,000,000. Individual projects receiving grant funding have either already been approved by the Commission or are set to be brought to the Commission for approval at a later date and all relate to FERC Project No. 2409.