

U.S. DEPARTMENT OF ENERGY  
OFFICE OF ENERGY EFFICIENCY AND RENEWABLE ENERGY  
NEPA DETERMINATION



RECIPIENT: [Water Power Technologies Office](#)

STATE: CO

PROJECT TITLE : [Hydropower Operations Optimization \(H2Os\) Prize](#)

Funding Opportunity Announcement Number    Procurement Instrument Number    NEPA Control Number    CID Number  
[GFO-H2OsPrize-001](#)

Based on my review of the information concerning the proposed action, as NEPA Compliance Officer (authorized under DOE Policy 451.1), I have made the following determination:

**CX, EA, EIS APPENDIX AND NUMBER:**

Description:

**A9 Information gathering, analysis, and dissemination**      Information gathering (including, but not limited to, literature surveys, inventories, site visits, and audits), data analysis (including, but not limited to, computer modeling), document preparation (including, but not limited to, conceptual design, feasibility studies, and analytical energy supply and demand studies), and information dissemination (including, but not limited to, document publication and distribution, and classroom training and informational programs), but not including site characterization or environmental monitoring. (See also B3.1 of appendix B to this subpart.)

Rationale for determination:

The U.S. Department of Energy (DOE) is proposing to authorize the administration of a prize competition, known as the “Hydropower Operations Optimization (H2Os) Prize”, designed to solicit multidisciplinary contributions to solve near-term challenges with optimizing hydropower resources. As part of DOE’s HydroWIREs Initiative, the competition would be a three-phase competition offering a combined cash prize of \$75,000. The competition would be administered by DOE and the National Renewable Energy Laboratory (NREL).

For this prize competition, competitors would be tasked to complete simulated scenarios where they fulfill the role of a hydropower manager, responsible for a water system consisting of a river network connected to one or more hydropower-producing reservoirs. An essential task for each simulation would be to create economically viable and environmentally beneficial release schedules for each reservoir in the simulation. To facilitate the creation of innovative solutions, competitors would be expected to create responsive automated processes (i.e. leverage artificial intelligence) to create release schedules. Specific competitors are unknown at this time, but all activities they would complete would be of an intellectual, academic, and analytical nature. Activities would include data analysis, computer modeling, and document preparation.

All phases of the competition would address the same challenges faced in the hydropower sector, but datasets would become increasingly complex with each subsequent phase. Competitors would be allowed to enter at any phase of the competition as each phase would be considered independent from the others. Each phase would last for approximately six weeks.

Any work proposed to be conducted at a federal facility may be subject to additional NEPA review by the cognizant federal official and must meet the applicable health and safety requirements of the facility.

**NEPA PROVISION**

DOE has made a final NEPA determination.

Notes:

[Water Power Technologies Office \(WPTO\)](#)  
NEPA review completed by Dan Cahill, 3/31/2022.

**FOR CATEGORICAL EXCLUSION DETERMINATIONS**

The proposed action (or the part of the proposal defined in the Rationale above) fits within a class of actions that is listed in Appendix A or B to 10 CFR Part 1021, Subpart D. To fit within the classes of actions listed in 10 CFR Part 1021, Subpart D, Appendix B, a proposal must be one that would not: (1) threaten a violation of applicable statutory, regulatory, or permit requirements for environment, safety, and health, or similar requirements of DOE or Executive Orders; (2) require siting and construction or major expansion of waste storage, disposal, recovery, or treatment facilities (including incinerators), but the proposal may include categorically excluded waste storage, disposal, recovery, or treatment actions or facilities; (3) disturb hazardous substances, pollutants, contaminants, or CERCLA-excluded petroleum and natural gas products that preexist in the environment such that there would be uncontrolled or unpermitted releases; (4) have the potential to cause significant impacts on environmentally sensitive resources, including, but not limited to, those listed in paragraph B(4) of 10 CFR Part 1021, Subpart D, Appendix B; (5) involve genetically engineered organisms, synthetic biology, governmentally designated noxious weeds, or invasive species, unless the proposed activity would be contained or confined in a manner designed and operated to prevent unauthorized release into the environment and conducted in accordance with applicable requirements, such as those listed in paragraph B(5) of 10 CFR Part 1021, Subpart D, Appendix B.

There are no extraordinary circumstances related to the proposed action that may affect the significance of the environmental effects of the proposal.

The proposed action has not been segmented to meet the definition of a categorical exclusion. This proposal is not connected to other actions with potentially significant impacts (40 CFR 1508.25(a)(1)), is not related to other actions with individually insignificant but cumulatively significant impacts (40 CFR 1508.27(b)(7)), and is not precluded by 40 CFR 1506.1 or 10 CFR 1021.211 concerning limitations on actions during preparation of an environmental impact statement.

The proposed action is categorically excluded from further NEPA review.

**SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.**

NEPA Compliance Officer Signature:  \_\_\_\_\_ Date: 4/4/2022  
NEPA Compliance Officer

**FIELD OFFICE MANAGER DETERMINATION**

- Field Office Manager review not required
- Field Office Manager review required

**BASED ON MY REVIEW I CONCUR WITH THE DETERMINATION OF THE NCO :**

Field Office Manager's Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Field Office Manager