



# U.S. Department of Energy Categorical Exclusion Determination Form

Proposed Action Title: Energy-Water Desalination Program

Program or Field Office: Bay Area Site Office, Lawrence Berkeley National Laboratory

Location(s) (City/County/State): Berkeley, California (and other locations to be determined)

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Proposed Action Description: The US Department of Energy (DOE) proposes to fund, conduct, and support a nationwide, early-stage research: the Energy-Water Desalination Program (the Program). The Program would be administered by the National Alliance for Water Innovation (NAWI), a consortium of national laboratories, universities, and private institutions that is led by the Lawrence Berkeley National Laboratory (LBNL). In its lead NAWI role, LBNL would coordinate Program efforts, which would include reviewing, awarding, and overseeing funded research by a variety of nationwide applicants. This NEPA determination considers both LBNL's key administrative role in implementing the Program as well as the actual Program-funded research activities that would take place at various research institutions.

The objective of the Energy-Water Desalination Program is to support early-stage research and development for energy-efficient and cost-competitive desalination technologies and for treating nontraditional water sources for various end uses.

Under the Program, applicants (expected to be government and university laboratories and some private research institutions) would apply for and be awarded funding for research that meets the Program objective. Program prioritization and goal-setting, application reviews, funding decisions, and other administrative activities would be undertaken by the NAWI consortium; such efforts would be led by and centralized at LBNL. The NAWI consortium currently consists of LBNL, Oak Ridge National Laboratory, the National Renewable Energy Laboratory, the National Energy Technology Laboratory, 19 universities, and 10 industry partners. Federal funding would be total approximately \$100 million and the Program is expected to last five years.

Research supported by the Program would be conventional bench-scale laboratory activities, could include investigations into novel membrane separation materials and processes as well as adsorption materials and processes, and development of computational models and simulations of water treatment processes. Research would be conducted by qualified scientific staff; all legal and regulatory requirements governing laboratory protocols and environmental, health, and safety issues would be met. Research would take place indoors and in existing, appropriately designed and outfitted laboratory and research facilities under controlled conditions. Such research would not include unconventional hazards, such as work with special nuclear or heightened biosafety-level materials, nor would it include large-scale "demonstration" activities. The Program would not support the construction of new facilities or the expansion of existing facilities. Related research would also be conducted by LBNL and the other NAWI consortium members at their respective sites, all under the conditions described above.

LBNL and the NAWI Consortium would ensure that future funded activities meet the above research conditions by implementing "flow-through" requirements through the application and contracting processes. In any cases where it is not clear whether these activities would meet those conditions, DOE would conduct individual NEPA reviews of the specified research at such times.

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Categorical Exclusion(s) Applied:

A1 - Routine DOE business actions

A2 - Clarifying or administrative contract actions

A9 - Information gathering, analysis, and dissemination

B3.6 - Small-scale research and development, laboratory operations, and pilot projects

B3.15 - Small-scale indoor research and development projects using nanoscale materials

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For the complete DOE National Environmental Policy Act regulations regarding categorical exclusions, including the full text of each categorical exclusion, see Subpart D of [10 CFR Part 1021](#).

Regulatory Requirements in 10 CFR 1021.410(b): (See full text in regulation)

The proposal 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 proposal that may affect the significance of the environmental effects of the proposal.

The proposal 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.

I concur that the above description accurately describes the proposed action.

**LBNL Environmental Planner:**



1/7/2020

\_\_\_\_\_  
Jeff Philliber

\_\_\_\_\_  
Date Determined

**BASO Project Manager:**

[Click here to enter a date.](#)

\_\_\_\_\_  
Mary Gross

\_\_\_\_\_  
Date Determined

The above description accurately describes the proposed action, which reflects the requirements of the CX cited above. Therefore, I recommend that the proposed action be categorically excluded from further NEPA review and documentation.

**BASO NEPA Program Manager:**

[Click here to enter a date.](#)

\_\_\_\_\_  
Mary Gross

\_\_\_\_\_  
Date Determined

Based on my review of the proposed action, as NEPA Compliance Officer (as authorized under DOE Order 451.1 B), I have determined that the proposed action fits within the specified class(es) of action, the other regulatory requirements set forth above are met, and the proposed action is hereby categorically excluded from further NEPA review.

**NEPA Compliance Officer:**

[Click here to enter a date.](#)

\_\_\_\_\_  
Peter Siebach

\_\_\_\_\_  
Date Determined