



Department of Energy  
National Nuclear Security Administration  
Categorical Exclusion Determination Form



**Categorical Exclusion ID#:** NA-24-0005

**Proposed Action Title:** High Energy Density Laboratory Plasmas (HEDLP) Program Awards

**Program or Field Office:** NNSA/Office of Experimental Sciences, NA-113

**Location(s) (City/County/State):** Various locations

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**Proposed Action Description:**

The High Energy Density Laboratory Plasmas (HEDLP) program is sponsored jointly by the National Nuclear Security Administration, Office of Experimental Sciences, and the Department of Energy, Office of Science, Fusion Energy Sciences Program. High energy-density (HED) science is central to many aspects of nuclear weapons and maintaining a strong HED academic community in this unique field will be critical for future needs of a modern nuclear stockpile. The HEDLP is designed to steward the study of laboratory HED plasma physics by funding academic research of ionized matter in laboratory experiments where the stored energy reaches approximately 100 billion joules per cubic meter. Funds will be used to perform research and development in existing research facilities at the chosen institution/company. The specific areas of research and development to be funded are: HED Hydrodynamics (HEDH), Radiation-Dominated Dynamics and Material Properties (RDDMP), Magnetized HED Plasma Physics (MHED), Nonlinear Optics of Plasmas and Laser-Plasma Interactions (NO-LPI), Relativistic HED Plasmas and Intense Beam Physics (RHED), Warm Dense Matter (WDM), HED Atomic Physics (HEDAP), and Diagnostics for HED Laboratory Plasmas (DHED).

Research would be conducted in existing research facilities. This determination would cover minor equipment modifications, upgrades, and/or purchases at existing research facilities. This determination does not include facility upgrades that require new construction, the installation of major stationary sources or equipment, or the interior/exterior renovation of a historic or potentially historic building. If federal funds are proposed to be used for these purposes or the scope of the awards changes, a new environmental checklist is required to be submitted to NNSA for additional NEPA analysis.

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**Categorical Exclusion(s) Applied:**

- A 9 Information gathering, analysis, and dissemination
  - B 1.31 Installation or relocation of machinery and equipment
  - B 3.6 Small-scale research and development, laboratory operations, and pilot projects
  - B 3.10 Particle accelerators
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**Regulatory Requirements in 10 CFR 1021:**

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 1021.

**To find that a proposal is categorically excluded, DOE shall determine the following:**

- (1) The proposal fits within a class of actions listed in Appendix A or B to 10 CFR Part 1021, Subpart D;



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- (2) There are no extraordinary circumstances related to the proposal that may affect the significance of the environmental effects of the proposal; and
- (3) The proposal has not been segmented to meet the definition of a categorical exclusion. The 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 classes of actions listed in 10 CFR Part 1021, Subpart D, Appendix B, include the following conditions as integral elements of the classes of actions. To fit within the classes of actions in 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 of the Department of Agriculture, the Environmental Protection Agency, and the National Institutes of Health.

**NEPA Compliance Officer Determination:**

Based on my review of information conveyed to me and in my possession concerning the proposed action, as NEPA Compliance Officer (as authorized under NNSA NAP 451.1 and DOE P 451.1), I have determined that the proposed action fits within the specified class(es) of action and I have reviewed the proposal for integral elements. I have determined that there are no extraordinary circumstances present and that the proposal has not been segmented to meet the definition of a categorical exclusion. Therefore, the application of a categorical exclusion is appropriate.

NEPA Compliance Officer:

Date Determined: