



U.S. Department of Energy

Categorical Exclusion Determination Form

Proposed Action Title:

Program or Field Office:

Location(s) (City/County/State):

Proposed Action Description:

Categorical Exclusion(s) Applied:

For the DOE procedures regarding categorical exclusions, including the full text of each categorical exclusion, see 10 CFR 1021.102 and Appendix B to [10 CFR Part 1021](#), and also Section 5.4 (Applying one or more categorical exclusions to a proposal) and Appendices B and C of [DOE's National Environmental Policy Act Implementing Procedures](#) (June 30, 2025).

Requirements and guidance in 10 CFR 1021.102 and DOE's NEPA Implementing Procedures: (See full text in regulation and in Implementing Procedures)

The proposal fits within a class of actions that is listed in Appendix B to 10 CFR Part 1021 or Appendix B and C of DOE's NEPA Implementing Procedures (June 30, 2025).

To fit within the classes of actions listed in Appendix B to 10 CFR Part 1021, or Appendix B of DOE's NEPA Implementing Procedures, a proposal must satisfy the conditions that are integral elements of the classes of actions in Appendix B of both 10 CFR Part 1021 and DOE's NEPA Implementing Procedures.

There are no extraordinary circumstances related to the proposal that may affect the significance of the environmental effects of the proposal. DOE or an applicant may modify the proposal to avoid reasonably foreseeable adverse significant effects such that the categorical exclusion would apply.

The proposal has not been segmented to meet the definition of a categorical exclusion.

[Note: For proposals that fit within the categorical exclusions listed in Appendix C of DOE's NEPA Implementing Procedures, see DOE's notice of adoption for the subject Appendix C categorical exclusion for additional considerations. DOE notices of adoption for other agency categorical exclusions may be found on [DOE's Section 109 webpage](#).]

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

NEPA Compliance Officer:

Date Determined:

Attachment A: Projects in the MAGNITO (NOFO Nos. DE-FOA-0003590) Program

Prime Recipient (Control No.)	Project Title	Categorical Exclusion
National Laboratory of the Rockies (3590-1502)	SPIN: Strong Permanent-magnetic Intermetallic Nitrides	B3.6, B3.15
University of Central Florida Board of Trustees (3590-1554)	FUSION: 5f-electron Ultra-Strong Intermetallic Magnets through Optimized Novel Phases	B3.6
Colorado School of Mines (3590-1509)	Development of High Moment Magnets Through Rational Structure Mining	B3.6
University of Minnesota (3590-1597)	Searching and Validating New Magnetic Materials with Superior Performances	B3.6
University of Houston (3590-1518)	GAMBIT: Guided AI for Magnetic Boride/carbide Intermetallic Technologies	B3.6, B3.15
Massachusetts Institute of Technology (3590-1511)	Multimodal Generative AI for Ultra-Powerful Magnet Discovery	B3.6
University of Oregon (3590-1579)	MAPS: Machine-guided Analysis of Phase-space for Strong Spins	B3.6, B3.15
Oak Ridge National Laboratory (3590-1546)	Directed Discovery of Ultra High-Performance Magnets	B3.6, B3.15
Harvard University (3590-1558)	Quantum Accurate Machine Learning for Magnet Discovery	B3.6
Iowa State University of Science and Technology (3590-1507)	Novel Ultra-strong Magnets via Synthesis	B3.6
Idaho National Laboratory (3590-1503)	Uranium Based Permanent Magnets	B3.6
Massachusetts Institute of Technology (3590-1573)	Powerful Bulk Magnets by Accelerated Computational Discovery and Solid-State Fabrication	B3.6
University of Virginia (3590-1566)	Needles in Materials Haystack: Physics-Guided Discovery of Powerful Rare-Earth Magnets	B3.6

Bold text indicates the 1 project included in the Second Amended CX.



U.S. Department of Energy

Categorical Exclusion Determination Form

Proposed Action Title: Magnetic Acceleration Generating New Innovations and Tactical Outcomes -- MAGNITO (NOFO No. DE-FOA-0003590)

Program or Field Office: Advanced Research Projects Agency - Energy

Location(s) (City/County/State): CA, CO, FL, IA, ID, IL, MA, MD, MI, MN, NC, NJ, OH, OR, TN, TX, VA, WI

Proposed Action Description:

FIRST AMENDED PROGRAMMATIC NEPA DETERMINATION (See attached original Determination, dated June 30, 2026). The Magnetic Acceleration Generating New Innovations and Tactical Outcomes (MAGNITO) program supports the small-scale research and development of stronger magnets to improve energy productivity, reduce the cost of electricity generation, and enable smaller, lighter motors for U.S. industry and transportation. Specifically, MAGNITO projects will focus on the development of entirely new physics, chemistries, and structures for ultra-powerful magnets by using high-throughput computation, machine learning and AI, solid state chemistry, and high-throughput synthesis. If successful, MAGNITO projects will result in stronger magnetic materials, reducing the amount of critical minerals needed, ultimately reducing dependence on foreign energy and mineral sources, thereby increasing U.S. energy security.

The MAGNITO Program is composed of 14 small-scale research and development projects that will be conducted by universities, large businesses, and national laboratories. This First Amended Determination adds 8 projects to the original Determination (see Attachment A for all 12). All 12 projects fit within the class of actions identified under the DOE Categorical Exclusions identified below. This assessment was based on a review of the proposed scope of work and the potential environmental impacts of each project. All project tasks will be conducted in accordance with established safety and materials/waste management protocols and pursuant to applicable Federal, State, and Local regulatory requirements.

Categorical Exclusion(s) Applied:

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

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

For the DOE procedures regarding categorical exclusions, including the full text of each categorical exclusion, see 10 CFR 1021.102 and Appendix B to [10 CFR Part 1021](#), and also Section 5.4 (Applying one or more categorical exclusions to a proposal) and Appendices B and C of [DOE's National Environmental Policy Act Implementing Procedures](#) (June 30, 2025).

Requirements and guidance in 10 CFR 1021.102 and DOE's NEPA Implementing Procedures: (See full text in regulation and in Implementing Procedures)

- ☒ The proposal fits within a class of actions that is listed in Appendix B to 10 CFR Part 1021 or Appendix B and C of DOE's NEPA Implementing Procedures (June 30, 2025).
To fit within the classes of actions listed in Appendix B to 10 CFR Part 1021, or Appendix B of DOE's NEPA Implementing Procedures, a proposal must satisfy the conditions that are integral elements of the classes of actions in Appendix B of both 10 CFR Part 1021 and DOE's NEPA Implementing Procedures.
- ☒ There are no extraordinary circumstances related to the proposal that may affect the significance of the environmental effects of the proposal. DOE or an applicant may modify the proposal to avoid reasonably foreseeable adverse significant effects such that the categorical exclusion would apply.
- ☒ The proposal has not been segmented to meet the definition of a categorical exclusion.

[Note: For proposals that fit within the categorical exclusions listed in Appendix C of DOE's NEPA Implementing Procedures, see DOE's notice of adoption for the subject Appendix C categorical exclusion for additional considerations. DOE notices of adoption for other agency categorical exclusions may be found on [DOE's Section 109 webpage](#).]

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

NEPA Compliance Officer: **GEOFFREY GOODE**

Digitally signed by GEOFFREY GOODE
Date: 2026.07.13 16:21:58 -04'00'

Date Determined:

Attachment A: Projects in the MAGNITO (NOFO Nos. DE-FOA-0003590) Program

Prime Recipient (Control No.)	Project Title	Categorical Exclusion
University of Central Florida Board of Trustees (3590-1554)	FUSION: 5f-electron Ultra-Strong Intermetallic Magnets through Optimized Novel Phases	B3.6
Colorado School of Mines (3590-1509)	Development of High Moment Magnets Through Rational Structure Mining	B3.6
University of Minnesota (3590-1597)	Searching and Validating New Magnetic Materials with Superior Performances	B3.6
University of Houston (3590-1518)	GAMBIT: Guided AI for Magnetic Boride/carbide Intermetallic Technologies	B3.6, B3.15
Massachusetts Institute of Technology (3590-1511)	Multimodal Generative AI for Ultra-Powerful Magnet Discovery	B3.6
University of Oregon (3590-1579)	MAPS: Machine-guided Analysis of Phase-space for Strong Spins	B3.6, B3.15
Oak Ridge National Laboratory (3590-1546)	Directed Discovery of Ultra High-Performance Magnets	B3.6, B3.15
Harvard University (3590-1558)	Quantum Accurate Machine Learning for Magnet Discovery	B3.6
Iowa State University of Science and Technology (3590-1507)	Novel Ultra-strong Magnets via Synthesis	B3.6
Idaho National Laboratory (3590-1503)	Uranium Based Permanent Magnets	B3.6
Massachusetts Institute of Technology (3590-1573)	Powerful Bulk Magnets by Accelerated Computational Discovery and Solid-State Fabrication	B3.6
University of Virginia (3590-1566)	Needles in Materials Haystack: Physics-Guided Discovery of Powerful Rare-Earth Magnets	B3.6

Bold text indicates the 8 projects included in the First Amended CX.



U.S. Department of Energy

Categorical Exclusion Determination Form

Proposed Action Title: Magnetic Acceleration Generating New Innovations and Tactical Outcomes -- MAGNITO (NOFO No. DE-FOA-0003590)

Program or Field Office: Advanced Research Projects Agency - Energy

Location(s) (City/County/State): CO, FL, IA, ID, MA, MD, NC, TN, TX, VA

Proposed Action Description:

The Magnetic Acceleration Generating New Innovations and Tactical Outcomes (MAGNITO) program supports the small-scale research and development of stronger magnets to improve energy productivity, reduce the cost of electricity generation, and enable smaller, lighter motors for U.S. industry and transportation. Specifically, MAGNITO projects will focus on the development of entirely new physics, chemistries, and structures for ultra-powerful magnets by using high-throughput computation, machine learning and AI, solid state chemistry, and high-throughput synthesis. If successful, MAGNITO projects will result in stronger magnetic materials, reducing the amount of critical minerals needed, ultimately reducing dependence on foreign energy and mineral sources, thereby increasing U.S. energy security.

The MAGNITO Program is composed of 14 small-scale research and development projects that will be conducted by universities, large businesses, and national laboratories. This Determination covers 4 of the 14 projects (listed in Attachment A). These projects fit within the class of actions identified under the DOE Categorical Exclusions identified below. This assessment was based on a review of the proposed scope of work and the potential environmental impacts of each project. All project tasks will be conducted in accordance with established safety and materials/waste management protocols and pursuant to applicable Federal, State, and Local regulatory requirements.

Categorical Exclusion(s) Applied:

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

For the DOE procedures regarding categorical exclusions, including the full text of each categorical exclusion, see 10 CFR 1021.102 and Appendix B to [10 CFR Part 1021](#), and also Section 5.4 (Applying one or more categorical exclusions to a proposal) and Appendices B and C of [DOE's National Environmental Policy Act Implementing Procedures](#) (June 30, 2025).

Requirements and guidance in 10 CFR 1021.102 and DOE's NEPA Implementing Procedures: (See full text in regulation and in Implementing Procedures)

- ☒ The proposal fits within a class of actions that is listed in Appendix B to 10 CFR Part 1021 or Appendix B and C of DOE's NEPA Implementing Procedures (June 30, 2025).
To fit within the classes of actions listed in Appendix B to 10 CFR Part 1021, or Appendix B of DOE's NEPA Implementing Procedures, a proposal must satisfy the conditions that are integral elements of the classes of actions in Appendix B of both 10 CFR Part 1021 and DOE's NEPA Implementing Procedures.
- ☒ There are no extraordinary circumstances related to the proposal that may affect the significance of the environmental effects of the proposal. DOE or an applicant may modify the proposal to avoid reasonably foreseeable adverse significant effects such that the categorical exclusion would apply.
- ☒ The proposal has not been segmented to meet the definition of a categorical exclusion.

[Note: For proposals that fit within the categorical exclusions listed in Appendix C of DOE's NEPA Implementing Procedures, see DOE's notice of adoption for the subject Appendix C categorical exclusion for additional considerations. DOE notices of adoption for other agency categorical exclusions may be found on [DOE's Section 109 webpage](#).]

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

NEPA Compliance Officer: **GEOFFREY GOODE**

Digitally signed by GEOFFREY GOODE
Date: 2026.06.30 16:23:17 -04'00'

Date Determined:

Attachment A: Projects in the MAGNITO (NOFO No. DE-FOA-0003590) Program

Prime Recipient (Control No.)	Project Title	Categorical Exclusion
Iowa State University of Science and Technology (3590-1507)	Novel Ultra-strong Magnets via Synthesis	B3.6
Idaho National Laboratory (3590-1503)	Uranium Based Permanent Magnets	B3.6
Massachusetts Institute of Technology (3590-1573)	Powerful Bulk Magnets by Accelerated Computational Discovery and Solid-State Fabrication	B3.6
University of Virginia (3590-1566)	Needles in Materials Haystack: Physics-Guided Discovery of Powerful Rare-Earth Magnets	B3.6