

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



RECIPIENT: Various (all Standard Track Phase 2B and 3 teams and Operating Projects Track Phase 2 teams) **STATE:** CO

PROJECT TITLE : American-Made Large Animal and Solar System Operations (LASSO) Prize

| Notice of Funding Opportunity Number | Procurement Instrument Number | NEPA Control Number | CID Number |
|--------------------------------------|-------------------------------|---------------------|------------|
| | | GFO-LASSO-Prize-002 | |

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.)

A11 Technical advice and assistance to organizations

Technical advice and planning assistance to international, national, state, and local organizations.

B3.1 Site characterization and environmental monitoring

Site characterization and environmental monitoring (including, but not limited to, siting, construction, modification, operation, and dismantlement and removal or otherwise proper closure (such as of a well) of characterization and monitoring devices, and siting, construction, and associated operation of a small-scale laboratory building or renovation of a room in an existing building for sample analysis). Such activities would be designed in conformance with applicable requirements and use best management practices to limit the potential effects of any resultant ground disturbance. Covered activities include, but are not limited to, site characterization and environmental monitoring under CERCLA and RCRA. (This class of actions excludes activities in aquatic environments. See B3.16 of this appendix for such activities.) Specific activities include, but are not limited to: (a) Geological, geophysical (such as gravity, magnetic, electrical, seismic, radar, and temperature gradient), geochemical, and engineering surveys and mapping, and the establishment of survey marks. Seismic techniques would not include large-scale reflection or refraction testing; (b) Installation and operation of field instruments (such as stream-gauging stations or flow-measuring devices, telemetry systems, geochemical monitoring tools, and geophysical exploration tools); (c) Drilling of wells for sampling or monitoring of groundwater or the vadose (unsaturated) zone, well logging, and installation of water-level recording devices in wells; (d) Aquifer and underground reservoir response testing; (e) Installation and operation of ambient air monitoring equipment; (f) Sampling and characterization of water, soil, rock, or contaminants (such as drilling using truck- or mobile-scale equipment, and modification, use, and plugging of boreholes); (g) Sampling and characterization of water effluents, air emissions, or solid waste streams; (h) Installation and operation of meteorological towers and associated activities (such as assessment of potential wind energy

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| | resources); (i) Sampling of flora or fauna; and (j) Archeological, historic, and cultural resource identification in compliance with 36 CFR part 800 and 43 CFR part 7. |
| B5.15 Small-scale renewable energy research and development and pilot projects | Small-scale renewable energy research and development projects and small-scale pilot projects, provided that the projects are located within a previously disturbed or developed area. Covered actions would be in accordance with applicable requirements (such as local land use and zoning requirements) in the proposed project area and would incorporate appropriate control technologies and best management practices. |
| B5.16 Solar photovoltaic systems | The installation, modification, operation, and removal of commercially available solar photovoltaic systems located on a building or other structure (such as rooftop, parking lot or facility, and mounted to signage, lighting, gates, or fences), or if located on land, generally comprising less than 10 acres within a previously disturbed or developed area. Covered actions would be in accordance with applicable requirements (such as local land use and zoning requirements) in the proposed project area and would incorporate appropriate control technologies and best management practices. |

Rationale for determination:

The U.S. Department of Energy (DOE) is proposing to authorize the administration of the American-Made Large Animal and Solar System Operations (LASSO) Prize competition (Prize) to support the design and demonstration of cost-effective co-location of photovoltaic (PV) systems with cattle grazing. Through a multi-phase competitive approach, this Prize aims to establish and expand cattle agrivoltaics sites across the U.S. by incentivizing developers, farmers and ranchers, researchers, and other stakeholders to collaborate, gather comprehensive data, and develop innovative solar cattle grazing systems and best practices. The Prize would be administered by the Solar Energy Technologies Office in partnership with the National Renewable Energy Laboratory.

There are two tracks in the Prize: the STANDARD TRACK and the OPERATING PROJECTS TRACK. The STANDARD TRACK is structured to run in three phases, with each phase focusing on different aspects including teaming, system and grazing plan design, construction, implementation, and multi-year data collection. The OPERATING PROJECTS TRACK is for currently operational cattle agrivoltaics projects and is structured to run in two phases focusing on data collection.

Additionally, three bonus prizes would be awarded. The Largest PV System Bonus Prize would be awarded to the team with the largest DC-rated PV system over 5 MW-dc from eligible Standard Track Phase 2B submissions. The second bonus prize, the Data Bounty Bonus Prize, would be awarded to the team from Standard Track Phase 3 or Operating Projects Track Phase 2 that submits the datasets and analyses deemed most valuable and that go above and beyond the minimum requirements. The third bonus prize, the Impactful Outreach Bonus Prize, would be awarded to up to three teams that plan and execute the most inclusive and impactful outreach about, and implementation of, their field day community event during Standard Track Phase 3 or Operational Projects Track Phase 2.

The Official Rules Prize document was released in September of 2024, and defined only Phase 1 and Phase 2A of the STANDARD TRACK, and Phase 1 of the OPERATING PROJECTS TRACK in a previously written NEPA Determination (ND; GFO-LASSO-Prize-001; CXs A9, A11; 8/8/2024). The remainder of the phases, including Phases 2B and 3 of the STANDARD TRACK, Phase 2 of the OPERATING PROJECTS TRACK, and the three Bonus Prizes have been defined. This NEPA Determination reviews the work being solicited under these phases only, which are summarized below.

STANDARD TRACK

- Phase 2B: Agrivoltaic construction, system interconnection and commissioning, cattle introduction, and agrivoltaic system operation demonstration
 - o Teams would construct their agrivoltaics systems, demonstrate operational viability, obtain interconnection approval,

and begin cattle integration. Submissions must include comprehensive documentation including system photos, as-built drawings, Permission to Operate documentation, an independent engineering report, and evidence of cattle integration. Teams are also required to submit historical cattle data, a detailed two-year data collection plan, and a communications plan that includes field day event planning. While cattle must be on-site by phase end, full integration with the PV array isn't immediately required if soil or vegetation needs recovery time.

- Phase 3: Data collection and analysis

- o Teams would collect and analyze data over two years, submitting reports every six months. Teams would track and report PV system performance, energy production, maintenance activities, cattle health and behavior, and financial metrics including costs and revenue.

OPERATING PROJECTS TRACK

- Phase 2: Data Collection and analysis

- o Teams would collect and analyze data over two years, submitting reports every six months. Teams would track and report PV system performance, energy production, maintenance activities, cattle health and behavior, and financial metrics including costs and revenue.

Bonus Prizes

1) Largest Photovoltaic System Bonus Prize

- a. The Largest PV System Bonus Prize would be awarded to the Standard Track Phase 2B submission with the largest DC-rated PV system over 5 MW-dc.

2) LASSO Data Bounty Bonus Prize

- a. The LASSO Data Bounty Bonus Prize would be awarded to the team that shares the most valuable, information-rich datasets and analyses from their cattle agrivoltaics projects that go above and beyond the minimum data requirements.

3) Inclusive Outreach Bonus Prize

- a. The Inclusive Outreach Bonus Prize would be awarded to up to 3 teams (\$15,000 total prize pool) that plan and execute the most inclusive and impactful outreach about, and implementation of, their field day community event during Standard Track Phase 3 or Operational Projects Track Phase 2. Efforts should include providing for accessibility needs, outreach to as many relevant audiences as possible, approachable messaging, the use of a variety of communication methods and formats, and a well-run field day. Teams should also communicate about their field days and the outcomes after hosting them.

The types of activities associated with these phases of the Prize would be limited exclusively to site inspection, equipment procurement, site seeding/vegetation, the installation of solar PV mounting and racking equipment, the installation of PV modules, the installation of wiring and balance-of-system equipment, the installation of inverters and other control mechanisms, the interconnection of the PV system to the electric distribution system, the installation of equipment to contain and manage cattle, bringing cattle onsite, data collection, monitoring, maintenance, and data analysis.

The specifics of these activities would vary between projects but would be detailed in each team's individual submission for NEPA Determination during STANDARD TRACK Phase 2A before they begin any construction or land disturbing activities (and before they are allowed to begin such activities, according to the prize rules).

Each team is required to submit proposed project information to the cognizant Prize Administrator and must receive a NEPA Determination prior to commencing work associated with subsequent phases. This ND reviews only the rules of the LASSO Prize, which govern how the prize is administered and the requirements placed on competing teams. The individual LASSO Prize recipients have not been selected yet. LASSO Prize rules require all teams intending to build a new cattle agrivoltaics system to submit their projects for NEPA Determination before any construction or ground disturbing activities may begin, which is specified in the rules for Standard Track Phase 2A. No construction or ground disturbing activities could take place without an individual ND to review the individual LASSO Prize recipient when the

relevant details are known.

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.

DOE has considered the nature of the proposed activities to determine potential impacts on sensitive resources, including those of a biological, ecological, cultural, and socioeconomic nature. DOE does not anticipate impacts on these resources which would be considered significant or require DOE to consult with other agencies or stakeholders.

EERE is aware of the November 12, 2024, decision in *Marin Audubon Society v. FAA*, No. 23-1067 (D.C. Cir. Nov. 12, 2024). To the extent that a court may conclude that the Council on Environmental Quality (CEQ) regulations implementing NEPA are not judicially enforceable or binding on this agency action, EERE has nonetheless elected to follow those regulations at 40 C.F.R. Parts 1500-1508, in addition to DOE's procedures/regulations implementing NEPA at 10 C.F.R. Part 1021, to meet the agency's obligations under NEPA, 42 U.S.C. §§ 4321 et seq.

NEPA PROVISION

DOE has made a final NEPA determination.

Include the following condition in the financial assistance agreement:

Each team is required to submit proposed project information to the cognizant Prize Administrator and must receive a NEPA Determination (ND) prior to commencing work associated with subsequent phases. This ND reviews only the rules of the LASSO Prize, which govern how the prize is administered and the requirements placed on competing teams. The individual LASSO Prize recipients have not been selected yet. LASSO Prize rules require all teams intending to build a new cattle agrivoltaics system to submit their projects for NEPA Determination before any construction or ground disturbing activities may begin, which is specified in the rules for Standard Track Phase 2A. No construction or ground disturbing activities could take place without an individual ND to review the individual LASSO Prize recipient when the relevant details are known.

Notes:

Solar Energy Technologies Office (SETO)
This NEPA Determination requires legal review of the tailored NEPA provision.
Review completed by Alex Colling on 12/11/2024.

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: 12/16/2024
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