

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



RECIPIENT: Dover Pumps & Process Solutions Segment, Inc dba Cook Compression

STATE: TX

PROJECT TITLE : Advanced Dynamic Sealing for Hydrogen Compression in Fueling Applications

Funding Opportunity Announcement Number	Procurement Instrument Number	NEPA Control Number	CID Number
DE-FOA-0002864	DE-EE0011025	GFO-0011025-001	GO11025

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.)

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

Siting, construction, modification, operation, and decommissioning of facilities for smallscale research and development projects; conventional laboratory operations (such as preparation of chemical standards and sample analysis); and small-scale pilot projects (generally less than 2 years) frequently conducted to verify a concept before demonstration actions, provided that construction or modification would be within or contiguous to a previously disturbed or developed area (where active utilities and currently used roads are readily accessible). Not included in this category are demonstration actions, meaning actions that are undertaken at a scale to show whether a technology would be viable on a larger scale and suitable for commercial deployment.

B5.22 Alternative fuel vehicle fueling stations

The installation, modification, operation, and removal of alternative fuel vehicle fueling stations (such as for compressed natural gas, hydrogen, ethanol and other commercially available biofuels) on the site of a current or former fueling station, or within a previously disturbed or developed area within the boundaries of a facility managed by the owners of a vehicle fleet. 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 provide funding Dover Pumps & Processes Solutions, doing business as Cook Compression, for the development of an advanced coating process of nearly frictionless carbon coating and the application of that coating on reciprocating hydrogen fuel compressors. Sample production, testing, and characterization would occur at Dover Pearland Operations in Houston, Texas. Coating development, testing, and assessment would occur at Argonne National Lab in Lemont, Illinois. Design, development, and fabrication of the hydrogen test seal loop would occur at GTI Energy in Des Plaines, Illinois.

Activities would take place over 3 budget periods (BPs). BP1 would consist of coating process design and development. BP2 would consist of coating and polymer characterization. BP3 would consist of component and product level testing. At this time, the component test site is unknown and there is insufficient information to review BP3 subtask 3.4. As such, this NEPA determination applies only to BP1 and BP2 (all subtasks), and BP3 subtasks 3.1, 3.2, 3.3, and 3.5. An additional NEPA review would be required for activities listed under BP3 subtask 3.4.

Award activities would involve the use and handling of high-pressure hydrogen and hazards related to manufacturing and material coating. Handling, storage, and disposal of hazardous materials would occur within controlled settings. Existing health and safety policies and procedures would be followed, including employee training, proper protective equipment, engineering controls, monitoring, and internal assessments. Additional policies and procedures would be implemented as necessary as new health and safety risks are identified.

All work would be performed at existing, purpose-built facilities. No modifications to existing facilities, ground disturbing activities, or changes to the use, mission, or operation of existing facilities would be required.

DOE has considered the scale, duration, and nature of proposed activities to determine potential impacts on

resources, including those of an ecological, historical, 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.

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 conditional NEPA determination.

The NEPA Determination applies to the following Topic Areas, Budget Periods, and/or tasks:

BP1 and BP2 (all subtasks), and BP3 subtasks 3.1, 3.2, 3.3, and 3.5

The NEPA Determination does not apply to the following Topic Area, Budget Periods, and/or tasks:

BP3 subtask 3.4

Notes:

Advanced Materials & Manufacturing Technologies Office (AMMTO)
NEPA review completed by Jason Spencer, 06/17/2024

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.

A portion of the proposed action is categorically excluded from further NEPA review. The NEPA Provision identifies Topic Areas, Budget Periods, tasks, and/or subtasks that are subject to additional NEPA review.

SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.

NEPA Compliance Officer Signature: _____



Signed By: Andrew Montano

NEPA Compliance Officer

Date: 6/18/2024

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: _____
Field Office Manager

Date: _____