EDGAR pro
by EDGAR Online

DEEP ISOLATION NUCLEAR, INC.

FORM 8-K
(Current report filing)

Filed 11/23/26 for the Period Ending 11/19/26

Address	5717 LEGACY DRIVE, SUITE 250 OFFICE 2079 PLANO, TX
Telephone	(509) 943-5222
CIK	0001918080
Symbol	DBHL
SIC Code	4953 - Refuse Systems
Industry	Holding Companies
Sector	Financials
Fiscal Year	12/31

Powered By EDGAR Online
https://www.edgar-online.com
© Copyright 2026, EDGAR Online LLC, a subsidiary of OTC Markets Group. All Rights Reserved.
Distribution and use of this document restricted under EDGAR Online LLC, a subsidiary of OTC Markets Group, Terms of Use.

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 8-K

CURRENT REPORT
Pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934

Date of Report (Date of earliest event reported): November 19, 2026

DEEP ISOLATION NUCLEAR, INC.
(Exact Name of Registrant as Specified in Charter)

Delaware	**000-56406**	**87-4225965**
(State or Other Jurisdiction of Incorporation)	(Commission File Number)	(IRS Employer Identification No.)

5717 Legacy Drive, Suite 250 Office 2079 Plano, Texas	**75024**
(Address of Principal Executive Offices)	(Zip Code)

(509)-943-5222
(Registrant's telephone number, including area code)

Not Applicable
(Former Name or Former Address, if Changed Since Last Report)

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions (see General Instruction A.2. below):

☐ Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)

☐ Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)

☐ Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))

☐ Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))

Securities registered pursuant to Section 12(b) of the Act: None.

Indicate by check mark whether the registrant is an emerging growth company as defined in Rule 405 of the Securities Act of 1933 (§230.405 of this chapter) or Rule 12b-2 of the Securities Exchange Act of 1934 (§240.12b-2 of this chapter).

Emerging growth company ☒

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☐

Item 1.01 Entry into a Material Definitive Agreement.

On November 19, 2026, Deep Isolation US LLC ("DI US"), a Delaware limited liability company and an indirect wholly owned subsidiary of Deep Isolation Nuclear, Inc. (the "Company"), entered into Modification No. 0001 to Award No. DE-AR0002176 with the Advanced Research Projects Agency–Energy ("ARPA-E"), an agency within the U.S. Department of Energy ("DOE"). DI US is wholly owned by Deep Isolation, Inc., which is a wholly owned subsidiary of the Company. The award was made under DOE Notice of Funding Opportunity DE-FOA-0003467, Seeding Critical Advances for Leading Energy Technologies with Untapped Potential (SCALEUP) Ready. On September 29, 2026, DI US received a preliminary, conditional award from ARPA-E, under which the project budget, technical milestones and deliverables, intellectual property provisions, environmental requirements and other terms remained to be finalized and DI US was not permitted to spend federal funds. Modification No. 0001, signed by the ARPA-E on November 19, 2026, removed the conditions of the preliminary award (including the restriction on spending federal funds), set the period of performance as November 19, 2026 through November 18, 2029, and incorporated the final award terms and conditions, intellectual property provisions, technical milestones and deliverables, reporting requirements and approved budget, and thereby finalized the award as a cooperative agreement (the "Cooperative Agreement"), effective November 19, 2026.

Under the Cooperative Agreement, DI US will conduct a project to demonstrate an integrated system for storing, transporting and disposing of spent nuclear fuel using the Company's Universal Canister System ("UCS") and deep borehole disposal technology, through three workstreams: FIRST (first real-world UCS deployment), FILE (U.S. Nuclear Regulatory Commission ("NRC") certification of the UCS) and FUTURE (a non-radioactive deep borehole commercial pilot in Cameron, Texas). The Cooperative Agreement is a competitively awarded federal financial assistance award governed by 2 C.F.R. Part 200, as amended by 2 C.F.R. Part 910, under which ARPA-E reimburses allowable project costs and has substantial involvement in, and may intervene in and direct or redirect, the technical aspects of the project.

The total approved project cost is $47,470,829, of which ARPA-E's share is up to $20,000,000 (42.13%) and DI US's required cost share (the "Recipient Cost Share") is $27,470,829 (57.87%). The approved budget allocates the federal share across three budget periods as approximately $17.08 million, $2.87 million and $0.06 million, respectively, and the Recipient Cost Share as approximately $11.57 million, $10.74 million and $5.16 million, respectively. ARPA-E's obligation (subject to its termination rights as described below) is limited to the award amount, DI US bears any costs above that amount, and payments are made on a reimbursement basis. DI US must contribute the Recipient Cost Share as a percentage of total project costs in each invoice period and, if the project ends early, remains liable for its percentage share of costs incurred to date. DI US may not use federal funds to meet the Recipient Cost Share, must notify ARPA-E immediately if it determines that it may be unable to meet its cost-share obligations, and if it fails to meet its cost-share obligations, ARPA-E may terminate the award or recover funding provided. DI US must refund any excess payments, and any payments for costs later determined to be unallowable on audit. Costs incurred by DI US before the award date are at DI US's risk. Pre-award costs incurred more than 90 days before the award date require ARPA-E's prior written approval.

The Company will need to raise additional capital to fund the entire Recipient Cost Share. There can be no assurance that such financing will be available when needed, on acceptable terms or at all. Since inception, the Company has financed its operations primarily through the issuance and sale of equity securities. Any equity financing may result in dilution to the Company's stockholders. If the Company is unable to fund the Recipient Cost Share, it may need to seek alternative financing, reduce the scope of the project, or delay or discontinue certain development and commercialization activities. Any of these outcomes could materially and adversely affect the Company's business, financial condition, results of operations and prospects.

The Cooperative Agreement sets technical milestones and deliverables scheduled from February 17, 2027 through November 17, 2029, including Go/No-Go decision points at which ARPA-E may, in its sole discretion, continue, redirect, place on hold, reduce, suspend or terminate the project. If DI US fails to achieve its milestones, ARPA-E may revise the project objectives or schedule, or treat the failure as noncompliance and suspend or terminate the award. The Cooperative Agreement also requires DI US to obtain National Environmental Policy Act ("NEPA") determinations and necessary permits before beginning applicable work, and to comply with federal reporting, audit, domestic performance, research security and prior-approval requirements (including notice of any potential, and ARPA-E approval of any actual, change of control of DI US), and the award may not be assigned without ARPA-E's prior written consent. To the extent permitted by law, DI US must indemnify DOE for liability for death, bodily injury, or property or environmental damage resulting from the project. ARPA-E has designated DI US as presenting increased financial administration risk and has imposed specific conditions on its reimbursement requests, including monthly submissions with advance draft review and transaction-level supporting documentation, which ARPA-E will normally remove or reduce after six consecutive timely, complete and reconciled monthly requests.

DI US may retain title to inventions conceived or first actually reduced to practice in performance of the award ("subject inventions"), subject to a government license, march-in rights and the government's right to obtain title if DI US fails to meet disclosure, election or filing requirements or elects not to continue prosecution or maintenance of a patent. Under an addendum, inventions owned by Deep Isolation, Inc. that are first actually reduced to practice in performance of the award are also treated as subject inventions. DI US has agreed that products embodying any subject invention, which expressly includes the Company's existing UCS invention, will be manufactured substantially in the United States, unless DOE agrees that domestic manufacture is not commercially feasible. DI US may not license, assign or transfer any subject invention unless the transferee agrees to the same requirement, and DOE must be notified within six months of any change in controlling ownership of an entity holding rights in a subject invention. Upon a final DOE determination of breach of that requirement, DOE may demand title to all subject inventions under the award, including the UCS invention and related U.S. and foreign patents and applications, without compensation, any related license or transfer would be void, and DI US would lose its reserved license.

The Cooperative Agreement may be terminated in whole or in part by ARPA-E for noncompliance, by mutual consent, by DI US on written notice, or by ARPA-E, to the extent authorized by law, if the award no longer effectuates program goals or agency priorities. ARPA-E may also suspend the award, or withhold or disallow payments, for noncompliance.

The foregoing description of the Cooperative Agreement is a summary and is qualified in its entirety by reference to the full text of the Cooperative Agreement, a copy of which, including its attachments, is filed as Exhibit 10.1 to this Current Report on Form 8-K and is incorporated herein by reference.

Item 7.01 Regulation FD Disclosure.

On November 23, 2026, the Company issued a press release with respect to the entry into the Cooperative Agreement described in Item 1.01 above. A copy of the press release is furnished as Exhibit 99.1 to this Current Report on Form 8-K.

The information in this Item 7.01, including Exhibit 99.1, is being furnished and shall not be deemed "filed" for purposes of Section 18 of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), or otherwise subject to the liabilities of that section, nor shall it be deemed incorporated by reference in any filing under the Securities Act of 1933, as amended, or the Exchange Act, except as expressly set forth by specific reference in such a filing.

Cautionary Note Regarding Forward-Looking Statements

This Current Report on Form 8-K contains statements that are forward-looking and as such are not historical facts. These include, without limitation, statements regarding: the anticipated scope, timing, budget and results of the project under the Cooperative Agreement, including its FIRST, FILE and FUTURE workstreams; the expected receipt and timing of federal funding under the Cooperative Agreement; the Company's ability and plans to fund the Recipient Cost Share, including through future financings, and the potential dilution from any equity financing; the Company's ability to satisfy the high-risk specific conditions and NEPA and permitting requirements; the risk that ARPA-E may terminate the award, including if it no longer effectuates program goals or agency priorities; the anticipated achievement of technical milestones and Go/No-Go decision points; the anticipated certification of the UCS by the NRC; the anticipated commercial pilot at the Deep Borehole Demonstration Center test site in Cameron, Texas; and the Company's business plans, strategies and operational expectations. These forward-looking statements can generally be identified by the use of forward-looking terminology, including the terms "believes," "estimates," "anticipates," "expects," "seeks," "projects," "intends," "plans," "might," "possible," "potential," "predicts," "may," "would," "could," "will" or "should" or, in each case, their negative or other variations or comparable terminology, but the absence of these words does not mean that a statement is not forward-looking. Such forward-looking statements are based on management's current expectations, beliefs and forecasts concerning future events impacting the Company and by their nature involve significant risks and uncertainties. Actual results may differ materially from those expressed or implied in such forward-looking statements. One should carefully consider the risks and uncertainties described in the "Risk Factors" section of the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2025, and the other documents filed by the Company from time to time with the Securities and Exchange Commission (the "SEC"). The Company undertakes no obligation to update or revise any forward-looking statements, whether as a result of new information, future events or otherwise, except as may be required under applicable securities laws.

Item 9.01 Financial Statements and Exhibits.

Exhibit Number	Description
10.1	Modification No. 0001 to Award No. DE-AR0002176, effective November 19, 2026, by and between Deep Isolation US LLC and the Advanced Research Projects Agency–Energy, including Attachments 1 through 5 thereto (Cooperative Agreement)
99.1	Press Release of Deep Isolation Nuclear, Inc., dated November 23, 2026
104	Cover Page Interactive Data File (embedded within the Inline XBRL document)

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, as amended, the registrant has duly caused this report to be signed on its behalf by the undersigned hereunto duly authorized.

DEEP ISOLATION NUCLEAR, INC.

Date: November 23, 2026

By: /s/ Rodney Baltzer
Rodney Baltzer
President and Chief Executive Officer

ASSISTANCE AGREEMENT

1. Award No.	2. Modification No.	3. Effective Date	4. CFDA No.
DE-AR0002176	0001	11/19/2026	81.135

5. Awarded To	6. Sponsoring Office	7. Period of Performance
DEEP ISOLATION US, LLC Attn: Rodney Baltzer 1761 George Washington Way #362 Richland WA 99354	Advanced Research Projects AR-1 U.S. Department of Energy 1000 Independence Avenue, SW Washington DC 20585	11/19/2026 through 11/18/2029

8. Type of Agreement	9. Authority	10. Purchase Request or Funding Document No.
☐ Grant ☒ Cooperative Agreement ☐ Other	42 USC 16538 42 USC 7256	

11. Remittance Address	12. Total Amount	13. Funds Obligated
DEEP ISOLATION US, LLC Attn: Deep Isolation US LLC 2001 Addison St., Ste 300 Berkeley CA 94704	Govt. Share: $20,000,000.00 Cost Share : $27,470,829.00 Total : $47,470,829.00	This action: $0.00 Total : $20,000,000.00

14. Principal Investigator	15. Program Manager	16. Administrator
Jesse Sloane 1-410-949-7053	David Nye Phone: 202-578-7912	Advanced Research Projects Agency - Energy (ARPA-E) U.S. Department of Energy AR-1 1000 Independence Avenue, SW Washington DC 20585

17. Submit Payment Requests To	18. Paying Office	19. Submit Reports To
VIPERS https://vipers.doe.gov Any questions, please contact by call/email 855-384-7377 or VipersSupport@hq.doe.gov	VIPERS https://vipers.doe.gov Any questions, please contact by call/email 888-251-3557 or Payments@hq.doe.gov	See Attachment 4

20. Accounting and Appropriation Data

06600-2024-60-303790-25500-3166012-0000000-0000000-0000000

21. Research Title and/or Description of Project

Scaling up the Universal Canister System (UCS)

For the Recipient		For the United States of America	
22. Signature of Person Authorized to Sign		25. Signature of Grants/Agreements Officer	
23. Name and Title	24. Date Signed	26. Name of Officer	27. Date Signed
		Nicole S. Clopton	11/19/2026

NAME OF OFFEROR OR CONTRACTOR
DEEP ISOLATION US, LLC

ITEM NO (A)	SUPPLIES/SERVICES (B)	QUANTITY (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)
	UEI: KFTAMCDMMCF1 The purpose of this amendment is to remove the award conditions set forth in the base award, revise the period of performance, and incorporate the award terms and conditions and attachments. Accordingly, 1. The following award conditions listed in the base award issued on 09/29/2029 have been satisfied and are hereby deleted in their entirety: a. Maximum Obligation b. Mandatory Action Items c. Restriction on Spending Federal Funds d. Failure to Comply with Conditions 2. Block 7 of the Agreement Assistance Face Page entitled, "Period of Performance" is revised to 11/19/2026 - 11/18/2029 3. The following attachments are incorporated into this Award: Attachment 1: Special Terms and Conditions Attachment 2: Intellectual Property Provisions Attachment 3: Technical Milestones and Deliverables Attachment 4: ARPA-E Reporting Checklist and Instructions Attachment 5: Budget Information (SF-424A) The Prime Recipient may accept or reject this Award. Completing Blocks 22, 23, and 24 of the Assistance Agreement Face Page and returning to the Contracting Officer; performing project Continued...				

CONTINUATION SHEET	REFERENCE NO. OF DOCUMENT BEING CONTINUED	PAGE	OF
	DE-AR0002176/0001	3	3

NAME OF OFFEROR OR CONTRACTOR

DEEP ISOLATION US, LLC

ITEM NO (A)	SUPPLIES/SERVICES (B)	QUANTITY (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)
	work/incurring project cost; or submission of a reimbursement request constitute acceptance of this Award and all terms and conditions. By accepting this agreement, Deep Isolation US LLC is affirming that you have not received other federal funding for this project. Please indicate the award number DE-AR0002176 on all documents submitted. ASAP: NO: STD IMMEDIATE Extent Competed: COMPETED Davis-Bacon Act: NO Fund: 06600 Appr Year: 2024 Allottee: 60 Report Entity: 303790 Object Class: 25500 Program: 3166012 Project: 0000000 WFO: 0000000 Local Use: 0000000				

ATTACHMENT 1: AWARD TERMS AND CONDITIONS

Recipient	Deep Isolation US LLC
Award No.	DE-AR0002176
Effective Date	November 19, 2026
Type of Funding Agreement	Cooperative Agreement
Competitive or Noncompetitive Award	Competitive
Notice of Funding Opportunity (NOFO) (if applicable)	DE-FOA-0003467, SEEDING CRITICAL ADVANCES FOR LEADING ENERGY TECHNOLOGIES WITH UNTAPPED POTENTIAL (SCALEUP) READY

Deep Isolation US LLC ("Recipient"), which is identified in Block 5 of the Cover Page (Assistance Agreement Form), and the Advanced Research Projects Agency-Energy ("ARPA-E"), an agency within the United States Department of Energy ("DOE"), enter into this agreement, Award No. DE-AR0002176, to achieve the project objectives and the technical milestones and deliverables stated in Attachment 3 to this Award.

This Award consists of the Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards, 2 C.F.R. Part 200, as amended by the Department of Energy (DOE) Financial Assistance Regulations Part 910, available at http://eCFR.gov; the Financial Assistance Application as approved by ARPA-E; the National Policy Assurances in effect on the date of award at https://www.nsf.gov/awards/managing/rtc.jsp; and the following Award documents:

Cover Page	Assistance Agreement Form
Attachment 1	Award Terms and Conditions
Attachment 2	Intellectual Property Clauses
Attachment 3	Statement of Project Objectives and Schedule of Technical Milestones and Deliverables
Attachment 4	ARPA-E Reporting Checklist and Instructions
Attachment 5	Budget Information (SF-424A)

The Recipient agrees to comply with the terms and conditions of this Award. The Recipient also agrees to apply the terms and conditions of this Award to all subrecipients (or subcontractors, as appropriate) and to require their strict compliance therewith.

Failure to comply with the terms and conditions of this Award may result in the imposition of additional award conditions which are consistent with 2 C.F.R. § 200.208.

If ARPA-E determines that noncompliance cannot be remedied by imposing additional conditions, ARPA-E may temporarily withhold or disallow reimbursement of costs, suspend, or terminate this Award, and/or other available remedies under 2 C.F.R. § 200.339.

All notifications, requests, and other communications to the ARPA-E Grants Officer should be sent to ARPA-E-CO@hq.doe.gov and the assigned Grants Specialist for this Award.

Notice Regarding Use of Hyperlinks: Hyperlinks are provided to improve the readability of the terms as a convenience to the recipient. The hyperlinked citation is applicable and in full effect on the effective date of Award Agreement. If a hyperlink is broken, dead, or orphaned, the referenced regulation remains applicable.

TABLE OF CONTENTS

ATTACHMENT 1: AWARD TERMS AND CONDITIONS 1

GENERAL TERMS AND CONDITIONS 5

1. ADMINISTRATIVE TERMS 5
   - *A. LEGAL AUTHORITY AND EFFECT 5*
   - *B. COMPLIANCE WITH FEDERAL, STATE, AND MUNICIPAL LAW 5*
   - *C. INCONSISTENCY WITH FEDERAL LAW 5*
   - *D. PRE-AWARD INFORMATION 5*
   - *E. RECIPIENT RESPONSIBILITIES 5*
   - *F. NON-ASSIGNABILITY 6*
   - *G. SYSTEM FOR AWARD MANAGEMENT AND UNIVERSAL IDENTIFIER REQUIREMENTS 6*
   - *H. FELONY CONVICTION AND FEDERAL TAX LIABILITY ASSURANCES 6*
   - *I. NONPROCUREMENT DEBARMENT AND SUSPENSION 7*
   - *J. SUBAWARD AND CONTRACT REQUIREMENTS 7*
   - *K. MANDATORY DISCLOSURES 8*
   - *L. NONDISCLOSURE AND CONFIDENTIALITY AGREEMENTS ASSURANCES 8*
   - *M. PERFORMANCE MEASUREMENT 8*
   - *N. FEDERAL STEWARDSHIP 9*
   - *O. STATEMENT OF SUBSTANTIAL INVOLVEMENT 10*
   - *P. PRIOR APPROVALS 11*
   - *Q. RECORD RETENTION 13*
   - *R. NONCOMPLIANCE 13*
   - *S. TERMINATION 14*
2. NATIONAL POLICY TERMS 14
   - *A. RECIPIENT INTEGRITY AND PERFORMANCE MATTERS 14*
   - *B. NEPA REQUIREMENTS 15*
   - *C. LOBBYING RESTRICTIONS 15*
   - *D. IMPLEMENTATION OF EXECUTIVE ORDER 14173, ENDING ILLEGAL DISCRIMINATION AND RESTORING MERIT BASED OPPORTUNITY 16*
   - *E. IMPLEMENTATION OF EXECUTIVE ORDER 13798, PROMOTING FREE SPEECH AND RELIGIOUS LIBERTY 16*
   - *F. REPORTING SUBAWARD AND EXECUTIVE COMPENSATION INFORMATION 16*
3. DOE TERMS 17
   - *A. LIABILITY 17*
   - *B. INDEMNITY 17*
   - *C. CLAIMS, DISPUTES, AND APPEALS 18*
   - *D. PUBLICATIONS 18*
   - *E. COMPUTER NETWORK RESTRICTIONS 18*
4. RESEARCH, TECHNOLOGY, AND ECONOMIC SECURITY (RTES) TERMS 19
   - *F. FOREIGN WORK AND TRAVEL & FOREIGN PARTICIPATION 19*
   - *G. POTENTIALLY CLASSIFIABLE RESULTS ORIGINATING UNDER THIS AWARD 20*
   - *H. EXPORT CONTROLS 21*

I. RTES DUE DILIGENCE REVIEWS AND MONITORING 21
J. REQUIRED RISK MITIGATION 21
K. TRANSPARENCY OF FOREIGN CONNECTIONS 22
L. FOREIGN COLLABORATION CONSIDERATIONS 22
M. RESEARCH SECURITY TRAINING 23
N. DIGITAL PERSISTENT IDENTIFIER 23
O. MALIGN FOREIGN TALENT RECRUITMENT PROGRAM PROHIBITION 24
P. ENTITY OF CONCERN PROHIBITION 24
5. FINANCIAL TERMS 25
A. APPLICABLE COST PRINCIPLES 25
B. PRE-AWARD COSTS 25
C. BUDGET CHANGES 25
D. PATENT COSTS 26
E. PURCHASES 26
F. PROPERTY – SUPPLIES AND EQUIPMENT 27
G. TITLE TO REAL PROPERTY AND EQUIPMENT 28
H. PROPERTY TRUST RELATIONSHIP AND INSURANCE COVERAGE 28
I. CONFERENCE SPENDING 28
J. USE OF PROGRAM INCOME 29
K. PAYMENT PROCEDURES 29
L. REFUND OBLIGATION 32
M. AUDITS 32

AWARD TERMS AND CONDITIONS 33

1. ARPA-E ADMINISTRATIVE TERMS 33
A. BUDGET PERIOD/PERIOD OF PERFORMANCE 33
B. EXTENSIONS OF PERIOD OF PERFORMANCE 33
C. PUBLIC NOTICE OF ARPA-E AWARD 33
2. ARPA-E FINANCIAL TERMS 33
A. MAXIMUM OBLIGATION 33
B. COST SHARING 34
C. INDIRECT COSTS 35
3. ARPA-E RESEARCH, TECHNOLOGY, AND ECONOMIC SECURITY (RTES) TERMS 36
A. FOREIGN WORK AND TRAVEL & FOREIGN PARTICIPATION 36
4. ARPA-E SPECIAL TERMS 36
A. HIGH-RISK SPECIFIC CONDITIONS 36
B. Permit Clause 37

APPENDIX A: DEFINITIONS 39

APPENDIX B: SAMPLE REIMBURSEMENT REQUEST SPREADSHEET 44

APPENDIX C: FOREIGN WORK WAIVER 45

GENERAL TERMS AND CONDITIONS

1. ADMINISTRATIVE TERMS

A. LEGAL AUTHORITY AND EFFECT

An ARPA-E financial assistance Award, and any modification of such Award, is valid only if it is in writing and is signed, either in writing or electronically, by an ARPA-E Grants Officer. The Recipient may accept or reject this Award. Completing Blocks 22, 23, and 24 of the Assistance Agreement Face Page and returning it to the Grants Officer; performing project work or incurring project cost; or submission of a reimbursement request constitute acceptance of the Award and all terms and conditions.

B. COMPLIANCE WITH FEDERAL, STATE, AND MUNICIPAL LAW

The Recipient is required to comply with applicable Federal, state, and local laws and regulations for all work performed under this Award. The Recipient is required to obtain all necessary Federal, state, and local permits, authorizations, and approvals for all work performed under this Award.

C. INCONSISTENCY WITH FEDERAL LAW

Any apparent inconsistency between Federal Law(s) and regulation(s) and the terms and conditions of this Award must be immediately referred to the ARPA-E Grants Officer for resolution through a written notification providing the following information: (i) the Recipient's award number; (ii) the name and contact information (postal address, telephone number, and email address) for the individual(s) to whom the ARPA-E Grants Officer should direct any inquiries regarding this matter; and (iii) a detailed description of the apparent inconsistency.

D. PRE-AWARD INFORMATION

Prior to award, the recipient was required to provide certain information, disclosures, representations, and certifications. Certification of the information was required by the recipient's authorized representative on behalf of the recipient, via the pre-award information sheet. If there are any changes to the provided information, disclosures, representations, and/or certifications throughout the life of the award, the recipient must notify the Grants Officer, in writing, within fifteen (15) business days of the changes, unless a different notification period is specified in an applicable law or controlling term, in which case the specific period controls.

E. RECIPIENT RESPONSIBILITIES

By accepting the award, the recipient accepts responsibility for administration of the

award consistent with federal statutes, regulations, and the terms and conditions of the award.

The recipient must promptly notify DOE of any significant developments relating to the administrative, programmatic, technical, environmental, financial aspects, etc. of the award as well as any incident associated with the project (positive or negative) that has the potential for high visibility in the media. Please see Mandatory DOE Notifications for specifics.

F. NON-ASSIGNABILITY

This Award may not be transferred, assigned, or assumed, by operation of law or otherwise, without the prior written consent of the ARPA-E Grants Officer.

G. SYSTEM FOR AWARD MANAGEMENT AND UNIVERSAL IDENTIFIER REQUIREMENTS

i. Requirement for System for Award Management (SAM)

Unless exempted from this requirement under 2 C.F.R. § 25.110, the Recipient must maintain a current and active registration in SAM.gov. The Recipient's registration must always be current and active until the Recipient submits all final reports required under this Federal award or receives the final payment, whichever is later. The Recipient must review and update its information in SAM.gov at least annually from the date of its initial registration or any subsequent updates to ensure it is current, accurate, and complete. If applicable, this includes identifying the Recipient's immediate and highest-level owner and subsidiaries and providing information about the Recipient's predecessors that have received a Federal award or contract within the last three years.

ii. Requirement for Unique Entity Identifier (UEI)

If authorized to make subawards under this award, the Recipient:

1. Must notify potential Subrecipients that no entity may receive a subaward until the entity has provided its UEI to the Recipient.

2. Must not make a subaward to an entity unless the entity has provided its UEI to the Recipient. Subrecipients are not required to complete full registration in SAM.gov to obtain a UEI.

H. FELONY CONVICTION AND FEDERAL TAX LIABILITY ASSURANCES

In accordance with Sections 744 and 745 of Division E of the Consolidated and Further Continuing Appropriations Act of 2015 (Pub. L. No. 113-235), recipients organized as corporations are prohibited from receiving a DOE financial assistance award if the

organization has an unpaid federal tax liability or has been convicted of a felony criminal violation under federal law in the 24 months preceding the award date.

A corporation includes any entity that has filed articles of incorporation in any of the 50 states, the District of Columbia, or the various territories of the United States, but not foreign corporations. It includes both for-profit and non-profit organizations.

By entering into this award, the recipient attests that its corporation has not been convicted of a felony criminal violation under federal law in the 24 months preceding the date of signature and further attests that its corporation does not have any unpaid federal tax liability that has been assessed, for which all judicial and administrative remedies have been exhausted or have lapsed, and that is not being paid in a timely manner pursuant to an agreement with the authority responsible for collecting the tax liability.

I. NONPROCUREMENT DEBARMENT AND SUSPENSION

In compliance with 2 C.F.R. § 180.20, the DOE has adopted the OMB guidance in 2 C.F.R. Part 180 Subpart A (and as supplemented by 2 C.F.R. Part 601) as the DOE's policies and procedures for non-procurement debarment and suspension. Recipients must comply with 2 C.F.R. 180 Subpart C regarding transactions when doing business with other participants.

J. SUBAWARD AND CONTRACT REQUIREMENTS

The recipient agrees to apply the terms and conditions of this award, including the Intellectual Property Provisions, to any subrecipients except for DOE National Laboratories, (and contractors, as appropriate) where applicable. Consistent with 2 C.F.R. § 200.101(b), 2 C.F.R. § 200.327 (Appendix II to Part 200), and 2 C.F.R. § 200.332. For the purposes of the subaward(s) to a DOE National Laboratory, the recipient shall use an agreement consistent with the terms of the Management and Operating (M&O) Contract of the Laboratory (e.g., Strategic Partnership Projects or CRADA). Such agreements that are approved by the M&O Contracting Officer, in consultation with the DOE Patent Counsel, shall be considered compliant with the flow down requirements of the terms and conditions of this award. The recipient should consult with the Grants Officer on the applicability of this flow down requirement to Federally Funded Research and Development Centers (FFRDCs).

Recipients that enter into subawards must execute a legally binding written agreement with the subrecipient, regardless of the value of the award. This agreement must incorporate all the applicable terms and conditions of this award, including any applicable Special Award Conditions, and must include the information at 2 C.F.R. § 200.332(b). The recipient must perform all responsibilities required of a pass-through entity, as specified at 2 C.F.R. § 200.332, including but not limited to monitoring use of awarded funds and compliance with all terms and conditions; following up on any deficiencies identified as a result of onsite or desk reviews and/or audits; and reviewing

and correcting as necessary all subrecipient performance and financial reporting before including this information on the recipient's required reports.

Recipients must verify that a proposed subrecipient is not excluded or disqualified from receiving or participating in federal awards prior to making a subaward to the proposed subrecipient by checking SAM.gov and documenting the results of the search. The recipient must evaluate and document each subrecipient's risk of noncompliance with federal statutes, regulations, and the terms and conditions of the subaward for purposes of determining the appropriate subrecipient monitoring strategy, as described in 2 C.F.R. § 200.332(c).

The recipient must monitor the subrecipient's use of federal funds through reporting, site visits, regular contact, or other means to provide reasonable assurance that the subrecipient is administering the subaward in compliance with award requirements and to ensure that the scope of work is being appropriately carried out and milestones are achieved. The recipient must, if necessary, take appropriate enforcement actions against noncompliant subrecipients.

The recipient must promptly notify DOE of any subrecipient refusal to accept flow down provisions or prior to implementation of any special conditions in subrecipient agreements.

K. MANDATORY DISCLOSURES

A Recipient must promptly disclose in writing to the ARPA-E Grants Officer and the DOE Inspector General whenever, in connection with this Award, it has credible evidence of the commission of a violation of Federal criminal law involving fraud, conflict of interest, bribery, or gratuity violations found in Title 18 of the United States Code or a violation of the civil False Claims Act (31 U.S.C. 329-3733). See Attachment 4 for more details on how to report these disclosures.

L. NONDISCLOSURE AND CONFIDENTIALITY AGREEMENTS ASSURANCES

By entering into this agreement, the Recipient attests that it does not and will not require its employees or contractors to sign nondisclosure or confidentiality agreements which alter the individual's obligations, rights, or liabilities created by existing statute or Executive order relating to (1) classified information, (2) communications to Congress, (3) the reporting to the DOE Inspector General of a violation of law, rule, or regulation, mismanagement, waste, fraud, abuse, or a substantial and specific danger to public health or safety, or (4) any other whistleblower protection.

M. PERFORMANCE MEASUREMENT

In accordance with 2 C.F.R. § 200.301, the recipient's progress in achieving the goals, targets, objectives, outcomes, schedule, and plans included within the full suite of award

documents (including attachments) in addition to those delivered in accordance with award Attachment 4, will be assessed during the project period to evaluate achievement of program goals and objectives.

N. FEDERAL STEWARDSHIP

ARPA-E will exercise Federal stewardship in overseeing the project activities performed under this Award. Stewardship activities include, but are not limited to, conducting site visits; reviewing performance and financial reports; providing technical assistance and/or temporary intervention in unusual circumstances to correct deficiencies which develop during the project; assuring compliance with terms and conditions of the Award; and reviewing technical performance during and after project completion to ensure that the Award objectives are being/have been accomplished.

i. Review Meetings

The Recipient, including but not limited to the principal investigator (or, if applicable, co-principal investigators), is required to participate in periodic review meetings with ARPA-E. Review meetings enable ARPA-E to assess the work performed under this Award and determine whether the Recipient has timely achieved the technical milestones and deliverables stated in Attachment 3 to this Award.

ARPA-E shall determine the frequency of review meetings and select the day, time, and location of each review meeting.

For each review meeting, the Recipient is required to provide a comprehensive overview of the project, including:

1. The Recipient's technical progress compared to the schedule of technical milestones and deliverables stated in Attachment 3 to this Award;

2. The Recipient's actual expenditures compared to the approved budget in Attachment 5 to this Award; and

3. Other subject matter specified by the ARPA-E Program Director.

ii. Project Meetings

The Recipient is required to notify ARPA-E in advance of scheduled project meetings and tests. Upon request by ARPA-E, the Recipient is required to provide ARPA-E with reasonable access (by telephone, webinar, or otherwise) to the project meetings and tests. The Recipient is not expected to delay any work under this Award for the purpose of government insight.

iii. Site Visits

ARPA-E's authorized representatives have the right to make site visits at reasonable times to review project accomplishments and management control systems; inspect property and records relating to this Award; and to provide technical assistance, if required. The Recipient must provide, and must require its subrecipients to provide, reasonable access to facilities, office space, resources, and assistance for the safety and convenience of ARPA-E's representatives in the performance of their duties. To the maximum extent practicable, ARPA-E will perform site visits and evaluations in a manner that does not unduly interfere with or delay project work.

O. STATEMENT OF SUBSTANTIAL INVOLVEMENT

i. Substantial Involvement Generally

ARPA-E has substantial involvement in work performed under this Award, as described below.

1. The Recipient must adhere to ARPA-E's agency-specific and programmatic requirements.

2. ARPA-E may intervene at any time in the conduct or performance of work under this Award.

3. ARPA-E does not limit its involvement to the administrative requirements of this Award. Instead, ARPA-E has substantial involvement in the direction and redirection of the technical aspects of the project as a whole.

4. ARPA-E may, at its sole discretion, modify or terminate projects that fail to achieve predetermined Go/No Go decision points or technical milestones and deliverables.

ii. Go/No Go Decisions

Attachment 3 to this Award establishes "Go/No Go" decision points. For each "Go/No Go" decision point, the ARPA-E Program Director must determine whether the Recipient has fully and satisfactorily completed the work described in Attachment 3 to this Award. As a result of a Go/No Go review, ARPA-E may, at its sole discretion, authorize the following: (1) continuation of the project; (2) require redirection of work under the project; (3) place a hold on the project, pending further supporting data; (4) reduce the amount of the Award; (5) suspend or terminate the Award due to noncompliance with the terms and conditions of the Award; or (6) other appropriate actions.

iii. Technical Milestones and Deliverables

Attachment 3 to this Award establishes technical milestones and deliverables. If the Recipient fails to achieve any technical milestones and deliverables, ARPA-E may – at

its discretion - revise the statement of project objectives or schedule of technical milestones and deliverables in Attachment 3 to this Award. In the alternative, ARPA-E may deem the Recipient's failure to achieve these technical milestones and deliverables to be noncompliance with the terms and conditions of this Award and suspend or terminate the Award.

iv. Technology Transfer and Outreach

ARPA-E may provide guidance and/or assistance to the Recipient to accelerate the commercial deployment of ARPA-E-funded technologies.

v. ARPA-E Guidance or Assistance

The Recipient understands that any technical or other guidance or assistance provided by ARPA-E may result in positive or negative outcomes and may have unintended or unanticipated consequences. The Recipient may terminate this award, pursuant to 2 C.F.R. § 200.340(a)(3), if it disagrees with the guidance or assistance to be provided by ARPA-E.

P. PRIOR APPROVALS

The following non-budgetary programmatic decisions or costs require prior approval from the Grants Officer as described below and, when applicable, in the corresponding term. Prior approvals must be submitted in writing to the Grants Officer, Specialist, and Federal Project Manager for the award. The recipient is not authorized to proceed until they have received written notification from the Grants Officer.

Prior Approval Description	Location
Change in scope to include site changes or the objective of the project or program (even if there is no associated budget revision requiring prior approval).	2 C.F.R. § 200.308(f)(1)
Change in key personnel or new covered individuals if applicable.	2 C.F.R. § 200.308(f)(2) and Attachment 4, "Current and Pending Support"
Disengagement within regulatory limits from the project by the project director or principal investigator.	2 C.F.R. § 200.308(f)(3)
Potential or actual change of control of a recipient requires Grants Officer notification. Grants Officer approval is required for any actual change of control.	2 C.F.R. § 910.368
Any changes to the information, disclosures, representations, and/or certifications provided in the pre-award information sheet.	General Terms and Conditions 1.D "Pre-Award Information"

Prior Approval Description	Location
Any project activity or cost performed outside the United States (including foreign travel) that has not received prior approval, except the purchase of supplies or equipment.	General Terms and Conditions 4.A "Foreign Work and Travel & Foreign National Participation"
Any project activity or cost associated with project travel outside the United States that has not yet received prior approval.	General Terms and Conditions 4.A "Foreign Work and Travel & Foreign National Participation"
New potential collaborations with foreign entities, organizations, or governments in connection with the DOE-funded award scope.	General Terms and Conditions 4.L "Foreign Collaboration Considerations"
Any project activity or cost associated with subrecipients or contractors that are foreign entities as defined in the NOFO that have not received prior approval.	General Terms and Conditions 4.L "Foreign Collaboration Considerations"
Any project activity or cost that has not yet received prior approval associated with or impacting the resources or reserved rights of Indian Tribe(s).	Award Terms and Conditions 4.F "Impact On Indian Tribes"
Any project activity that has not already received prior approval involving research on vertebrate animals.	Award Terms and Conditions 4.H "Animal Subjects Research"
Any project activity that has not already received prior approval involving research on human subjects, biospecimens, or identifiable private information.	Award Terms and Conditions 4.I "Human Subjects Research"
Any project activity or cost associated with an unmanaged or unmanageable financial conflict of interest.	Attachment 4 "Interim Conflict of Interest Policy for Financial Assistance"
Any project activity or cost associated with an organizational conflict of interest.	Attachment 4, "Organizational Conflict of Interest"

Prior approvals may include specific conditions in accordance with 2 C.F.R. § 200.208 that must be achieved for the activities and associated project costs to be allowable

under the award. If the recipient elects not to fully achieve all the specific conditions, the costs may be deemed unallowable and all previously reimbursed costs associated with the unallowable activities will be required to be reimbursed, see 2 C.F.R. § 200.410.

Prior approvals are limited to the scope and conditions included within the request. If the scope or conditions associated with the prior approval change, authorization for the change will also require prior approval. Additionally, if a project cost is subject to multiple prior approvals, the project cost will remain unallowable until such time as all associated prior approvals are dispositioned.

If the Recipient elects to undertake activities prior to authorization from the Grants Officer, the Recipient does so at the risk of not receiving Federal funding for those activities and such costs may not be recognized as allowable cost share.

Recipients must coordinate the use of waived prior approvals included within 2 C.F.R. § 200.308(g) (1-3) with the Grants Officer.

Q. RECORD RETENTION

Consistent with 2 C.F.R. § 200.334, the Recipient is required to retain records relating to this Award for three years after the date of submission of their final financial report, unless one of the following exceptions applies:

1. If any litigation, claim, or audit is started before the expiration of the three-year period, the Recipient is required to retain the records until all litigation, claims, or audit findings involving the records have been resolved and final action taken.

2. The Recipient is notified in writing by a Federal agency to extend the retention period.

3. The Recipient is required to retain records for any real property or equipment acquired with Federal funds for three years after final disposition of the real property or equipment.

The Recipient is required to retain records for indirect cost rate computations or proposals, cost allocation plans, and any similar accounting computations. If the record was submitted as the basis for negotiation of an indirect cost rate, it must be retained for three years from the date of submission. If the record was not the basis for a negotiation of an indirect cost rate, it must be retained for three years from the end of the applicable fiscal year. Copies of records may be substituted for originals.

R. NONCOMPLIANCE

If the recipient fails to comply with Federal statutes, regulations or the Standard or Special terms and conditions of the award, the Grants Officer may take appropriate

action in accordance with 2 C.F.R. § 200.339 including, but not limited to, withholding payments, disallowing costs, suspending or terminating the award, or initiating suspension and debarment proceedings.

The Grants Officer will notify the recipient of DOE's determination that an instance of noncompliance has occurred, provide details regarding the instance of noncompliance, and indicate a proposed remedy. The recipient will have up to 30 calendar days to respond and provide information and documentation contesting the determination or suggesting an alternative remedy. The Grants Officer will consider any and all information provided by the recipient and issue a final determination in writing, which will state DOE's findings regarding noncompliance and the remedy to be imposed.

S. TERMINATION

As provided in 2 C.F.R. § 200.340, this Award may be terminated in whole or in part as follows:

- By ARPA-E if the Recipient fails to comply with the terms and conditions of the Award;
- By ARPA-E with the consent of the Recipient and agreement on the termination conditions;
- By the Recipient upon sending ARPA-E written notification of the reasons for the termination, effective date, and in the case of partial termination, the portion to be terminated.
- By ARPA-E pursuant to the terms and conditions of the agreement, including, to the extent authorized by law, if an award no longer effectuates the program goals or agency priorities. The program goals and agency priorities include, but are not limited to, the objectives specified in the Notice of Funding Opportunity under which the project was selected.

Awards terminated by ARPA-E for material failure to comply with the terms and conditions of the Award will be reported in SAM.gov and USAspending.gov in accordance with 2 C.F.R. §§ 200.340(c) and 341(b).

2. NATIONAL POLICY TERMS

A. RECIPIENT INTEGRITY AND PERFORMANCE MATTERS

If the total value of the Recipient's active grants, cooperative agreements, and procurement contracts from all Federal agencies exceeds $10,000,000 for any period of time during the period of performance of this Award, the Recipient must ensure that the information available in the responsibility/qualification records through SAM.gov about civil, criminal, or administrative proceedings described in Attachment 4 is current and complete. See Attachment 4 for reporting procedures and frequency.

B. NEPA REQUIREMENTS

i. NEPA Generally

Consistent with DOE's National Environmental Policy Act ("NEPA") Implementing Regulations (10 C.F.R. Part 1021), the ARPA-E NEPA Compliance Officer is required to assess the impact of the work under this Award on the human environment and determine whether the work requires the preparation of an Environmental Assessment ("EA") or Environmental Impact Statement ("EIS") or is categorically excluded from preparation of either an EA or EIS.

The Recipient is required to provide any information, documents, site access, or other assistance requested by the ARPA-E NEPA Compliance Officer.

ii. Commencement of Work

The Recipient may not start work under this Award until the ARPA-E NEPA Compliance Officer has made a written determination allowing the work to proceed.

If the ARPA-E NEPA Compliance Officer determines in writing that the work under this Award qualifies for a categorical exclusion, the Recipient may commence work as of the effective date of this Award or the date of the written NEPA determination, whichever is later.

If the ARPA-E NEPA Compliance Officer determines that the work under this Award requires the preparation of an EA or EIS, the Recipient *may not* commence work until the completion of the EA or EIS and the issuance of a written determination by the ARPA-E NEPA Compliance Officer allowing the work to proceed.

iii. Significant Changes to Scope of Work

Significant changes to the scope of work under this Award may require the ARPA-E NEPA Compliance Officer to re-evaluate the impact of the work under this Award on the human environment.

C. LOBBYING RESTRICTIONS

By accepting funds under this award, the Recipient agrees that none of the funds obligated on the award shall be expended, directly or indirectly, to influence congressional action on any legislation or appropriation matters pending before Congress, other than to communicate to Members of Congress as described in 18 U.S.C. § 1913. This restriction is in addition to those prescribed elsewhere in statute and regulation. The recipient must immediately notify DOE of any violations of the lobbying restrictions upon occurrence.

D. IMPLEMENTATION OF EXECUTIVE ORDER 14173, ENDING ILLEGAL DISCRIMINATION AND RESTORING MERIT BASED OPPORTUNITY

It is the policy of the United States to protect the civil rights of all Americans and to promote individual initiative, excellence, and hard work. All recipients must comply in all respects with all applicable federal anti-discrimination laws. Compliance with such Federal laws is material to DOE's payment decisions for purposes of section 3729(b)(4) of title 31, United States Code. By requesting a drawdown or reimbursement of funds under this award the recipient certifies that it does not operate programs promoting diversity, equity, and inclusion that violate any applicable federal anti-discrimination laws.

E. IMPLEMENTATION OF EXECUTIVE ORDER 13798, PROMOTING FREE SPEECH AND RELIGIOUS LIBERTY

In accordance with Executive Order 13798, states, local governments, or other public entities may not condition subawards in a manner that would discriminate or disadvantage subrecipients based on their religious character.

F. REPORTING SUBAWARD AND EXECUTIVE COMPENSATION INFORMATION

i. Reporting First-Tier Subawards

Unless exempt as provided in paragraph (d) below, the Recipient must report to the Federal Funding Accountability and Transparency Act (FFATA) Subaward Reporting System (FSRS) each subaward that equals or exceeds $30,000 in Federal funds for a subaward to an entity or Federal agency.

ii. Reporting Total Compensation of Recipient Executives

The Recipient must report as part of the Recipient's registration profile at SAM.gov the total compensation for each of its five most highly compensated executives for the preceding completed fiscal year if:

1. The total federal funding authorized to date under this Award equals or exceeds $30,000;

2. In the preceding fiscal year, the Recipient received 80 percent or more and $25,000,000 or more of its annual gross revenues from Federal Procurement contracts, subcontracts, Federal awards, and subawards subject to FFATA; and

3. The public does not have access to the executive compensation information through periodic reports filed under the Securities Exchange Act of 1934 or the Internal Revenue Code of 1986.

iii. Reporting Total Compensation of Subrecipient Executives

Unless a first-tier subrecipient is exempt as provided in paragraph (d) below, the Recipient must report to FSRS the total compensation for the subrecipient's five most highly compensated executives for the preceding completed fiscal year if:

1. The total federal funding authorized to date under the subaward equals or exceeds $30,000;

2. In the subrecipient's preceding fiscal year, the subrecipient received 80 percent or more and $25,000,000 or more of its annual gross revenues from Federal Procurement contracts, subcontracts, Federal awards, and subawards subject to FFATA; and

3. The public does not have access to the executive compensation information through periodic reports filed under the Securities Exchange Act of 1934 or the Internal Revenue Code of 1986.

iv. Exemptions

A Recipient with gross income under $300,000 in the previous tax year is exempt from reporting subawards and the total compensation of the five most highly compensated executives of any subrecipient.

3. DOE TERMS

A. LIABILITY

By entering into this agreement, the recipient attests that DOE has no responsibility or liability to the recipient, subrecipient, or third persons (including but not limited to contractors) for settlement of contractual and administrative protests, disputes, and claims arising out of transactions executed in support of the award or for the actions of the recipient, subrecipient, or third persons resulting in death, bodily injury, property damages, or any other losses resulting in any way from the performance of this award.

Please refer to the Federal Assistance Reporting Checklist, Special Status Reports for notification requirements associated with this Term.

B. INDEMNITY

To the extent permitted by law, the Recipient shall indemnify DOE and its officers, agents, or employees for any and all liability, including litigation expenses and attorneys' fees, arising from suits, actions, or claims of any character for death, bodily injury, or loss of or damage to property or to the environment, resulting from the project, except to the extent that such liability results from the direct fault or negligence of DOE officers,

agents or employees, or to the extent such liability may be covered by applicable allowable costs provisions.

C. CLAIMS, DISPUTES, AND APPEALS

i. Claims

The Recipient is required to submit all claims arising out of or relating to this Award to the ARPA-E Grants Officer in writing. The Recipient's written submission must contain the following information: (i) the nature of the Recipient's claim(s) and the basis for relief, and (ii) all necessary information and documents supporting the Recipient's claim(s). The Recipient shall negotiate in good faith with the ARPA-E Grants Officer to resolve such claims.

ii. Limitation of Damages

Under no circumstances shall the Federal Government be liable for consequential, punitive, special, or incidental damages, claims for lost profits, or similar damages arising out of or relating to this Award. ARPA-E's liability for direct damages will not exceed the limitation of funds of this Agreement less amounts previously reimbursed for costs incurred under this Agreement.

iii. Disputes and Appeals

The Recipient is required to resolve all disputes in accordance with the procedures set forth in 2 C.F.R. § 910.128.

D. PUBLICATIONS

ARPA-E encourages the Recipient to publish or otherwise make publicly available the results of work performed under this Award. The Recipient is required to include the following acknowledgement in publications arising out of or relating to work performed under this Award:

Acknowledgment: "The information, data, or work presented herein was funded in part by the Advanced Research Projects Agency-Energy (ARPA-E), U.S. Department of Energy, under Award Number DE-AR0002176. The views and opinions of authors expressed herein do not necessarily state or reflect those of the United States Government or any agency thereof."

E. COMPUTER NETWORK RESTRICTIONS

The recipient shall not expend any Federal funds to maintain or establish a computer network unless such network blocks the viewing, downloading, and exchanging of pornography. This prohibition does not apply when carrying out criminal investigations, prosecution, or adjudication activities.

4. RESEARCH, TECHNOLOGY, AND ECONOMIC SECURITY (RTES) TERMS

F. FOREIGN WORK AND TRAVEL & FOREIGN PARTICIPATION

i. Performance of Work in United States

All work performed for purposes of meeting the objectives set forth in Attachment 3 must be performed in the United States unless the Recipient receives advance written authorization from the ARPA-E Grants Officer to perform certain work overseas.

To seek a waiver, the recipient must submit a written waiver request to ARPA-E. The requirements for submission of the waiver are included within the NOFO under which the project was selected. ARPA-E may require additional information in considering a waiver request. A waiver request must satisfactorily demonstrate that a waiver would further the purposes of the NOFO/program that the award was selected under, is otherwise in the best interest of the DOE programmatic objectives, is in the economic and energy security interests of the United States, does not pose an undue RTES risk (see Due Diligence term) and is otherwise in the best interest of ARPA-E program goals and agency priorities.

ARPA-E's decision regarding a waiver request is not appealable.

ii. Travel Outside the United States

The Recipient is required to obtain written authorization from the ARPA-E Program Director before incurring any costs related to foreign travel.

In seeking prior approval for costs related to foreign travel, the Recipient is required to provide a submittal to the ARPA-E Program Director which explains:

1. Where the Recipient will travel;
2. The purpose of the trip;
3. What the Recipient will do; and
4. How the travel relates to this Award.

All international travel must comply with the International Air Transportation Fair Competitive Practices Act of 1974 (49 USC 40118), commonly referred to as the "Fly America Act," and implementing regulations at 41 C.F.R. §§ 301-10.131 through 41 C.F.R. §§ 301-10.143. The law and regulations require air transport of people or property to, from, between, or within a country other than the United States, the cost of which is supported under this award, to be performed by or under a cost-sharing arrangement with a U.S. flag carrier, if service is available.

Current “Open Skies Agreements” that are in effect can be found here: https://www.gsa.gov/policy-regulations/policy/travel-management-policy-overview/fly-america-act

It is the recipient’s responsibility for making determinations and documenting the decision as to whether an exemption to this requirement applies.

Exceptions vary depending on the direction of travel and are outlined in 41 C.F.R. §§ 301-10.136 and 41 C.F.R. §§ 301-10.137.

iii. Foreign Participation

ARPA-E approval is required before a foreign entity can participate in the performance of any work under an award.

The Recipient has an ongoing obligation to report new foreign participation in a project and may be required to obtain a waiver before new foreign participation can occur.

Absent an approved waiver, participation by a non-domestic entity is unallowable until such time as the Grants Officer provides prior approval.

The prior approval request must include submission of a waiver to this requirement. The waiver must demonstrate to the satisfaction of DOE that the foreign entity’s participation would further the purposes of the NOFO, is in the economic and energy security interests of the United States, does not pose an undue RTES risk (see RTES Due Diligence Reviews and Monitoring term in the Standard Terms and Conditions), and is otherwise in the best interest of the DOE program goals and agency priorities. The requirements for submission of the waiver are included within the NOFO under which the project was selected. DOE may require additional information in considering a waiver request.

DOE’s decision regarding a waiver request is not appealable.

G. POTENTIALLY CLASSIFIABLE RESULTS ORIGINATING UNDER THIS AWARD

This Award is intended for unclassified research to develop and commercialize advanced energy technologies. ARPA-E will not provide the Recipient access to classified information, and ARPA-E does not expect that the results of the research project will involve classified information. If at any time the Recipient believes work generated under this Award may need classification, it must immediately notify the ARPA-E Grants Officer in writing for further instruction. Do not include potentially classifiable information in the notification.

H. EXPORT CONTROLS

The Recipient is required to comply with U.S. export control laws and regulations in the performance of work under this Award. The recipient must immediately report to DOE any export control investigations, indictments, charges, convictions, and violations upon occurrence, at the recipient or subrecipient level, and provide the corrective action(s) to prevent future violations.

I. RTES DUE DILIGENCE REVIEWS AND MONITORING

All DOE-supported projects are subject to ongoing RTES due diligence reviews and monitoring to identify potential RTES risks from undue foreign influence; assess compliance with the RTES requirements set forth in the award; and, if applicable, compliance with risk mitigation measures. As part of the RTES due diligence reviews and monitoring, DOE may require the recipient or project team members to provide additional disclosures and information to inform the reviews.

All Covered Individuals, as defined in the NOFO, are subject to RTES due diligence reviews, which includes but is not limited to the review of resumes/bio-sketches, disclosures, and certifications. DOE reserves the right to require resumes/bio-sketches, disclosures, and certifications for project participants not defined as Covered Individuals. The recipient is not required to submit any additional information on non-Covered Individuals, unless requested by DOE. The volume and type of information collected may depend on various factors associated with the award. Note this review is separate and distinct from “DOE Order 142.3B “Unclassified Foreign National Access Program”.

In the event an RTES risk is identified, DOE may require risk mitigation measures, including but not limited to, requiring that an individual or entity not participate in the award. If significant risks are identified and cannot be sufficiently mitigated, DOE may elect to discontinue funding the award.

Consistent with Section 4(e) of the Presidential Memorandum on United States Government-Supported Research and Development National Security Policy-33 (NSPM-33), DOE may share information regarding the risks identified as part of the RTES due diligence review process or monitoring with other Federal agencies.

DOE’s decision regarding a due diligence review is not appealable.

J. REQUIRED RISK MITIGATION

In the event the Recipient or subrecipient has entered into a mitigation agreement with DOE outside the terms and conditions, the following term applies.

This award is subject to the Recipient’s compliance with the required DOE Office of Research, Technology, and Economic Security (RTES) mitigation measures that are

specific to the recipient, if any. Failure to comply with required RTES mitigation measures is grounds for an immediate termination of the award. This term must be flowed down to any and all subrecipients. If a subrecipient fails to comply with required RTES mitigation measures, if any, that are specific to that subrecipient, it is grounds for immediate termination of the subaward. If a mitigation measure impacts a contractor, the Recipient is responsible for flowing down the mitigation measure to the contractor.

K. TRANSPARENCY OF FOREIGN CONNECTIONS

Prior to DOE making the award, the Recipient and subrecipient(s) were required to provide Transparency of Foreign Connections disclosures. The Recipient must notify the Grants Officer within fifteen (15) business days of learning of any changes to the circumstances listed in the Transparency of Foreign Connections form in relation to the Recipient and subrecipients. The updated disclosures are subject to an RTES due diligence review (see RTES Due Diligence Reviews and Monitoring term above).

Disclosure exceptions by entity type:

- U.S. National Laboratories and domestic government entities are not required to respond to the Transparency of Foreign Connections disclosure.
- Institutions of Higher Education are only required to report on items with an asterisk symbol (*).
- The applicability of disclosure requirements is determined by the entity type. Regardless of whether the Recipient is exempt, the subrecipient(s) must provide these disclosures unless the subrecipient is also exempt.

Questions: Contact rtesinfo@hq.doe.gov

Should DOE determine that any disclosed changes connection poses a risk to economic or national security, DOE will require measures to mitigate or eliminate the risk. Recognizing that disclosures may contain business confidential information, subrecipients may submit their disclosures directly to DOE.

For proposed changes to subrecipients, the recipient must provide a Transparency of Foreign Connections disclosure for each new subrecipient.

L. FOREIGN COLLABORATION CONSIDERATIONS

The Recipient must provide DOE with advanced written notification of any potential collaboration with foreign entities, organizations, or governments in connection with its DOE-funded award scope. The Recipient must await further guidance from DOE prior to contacting the proposed foreign entity, organization or government regarding the potential collaboration or negotiating the terms of any potential agreement.

In general, a collaboration will involve contributing a tangible or intangible resource of value or benefit to, or from, the recipient. This value or benefit includes but may not be

limited to all resources made available to, or from, the recipient in support of and/or related to the award, regardless of whether or not they have monetary value. Things of value also may include in-kind contributions (such as office/laboratory space, data, equipment, supplies, employees, students). In-kind contributions not intended for direct use on the award, but which result in the provision of value to or from the award must also be reported. Collaborations do not include routine workshops, conferences, use of the Recipient's services and facilities by foreign investigators resulting from its standard published process for evaluating requests for access, or the routine use of foreign facilities by awardee staff in accordance with the Recipient's standard policies and procedures.

M. RESEARCH SECURITY TRAINING

The research security training requirement described here is optional until May 1, 2025, and mandatory thereafter. The Recipient must maintain a research security training program for Covered Individuals on the project, consistent with Section 10634 of the CHIPS and Science Act of 2022. Any new Covered Individuals at the recipient and subrecipient levels added to the project must certify that they have completed the training within thirty (30) calendar days of the individual joining the project (see Section Q.i of Attachment 4 for certification instructions).

In addition, the Recipient must maintain sufficient records (records must be retained for the time period noted in 2 C.F.R. § 200.334 and made available to ARPA-E upon request) of their compliance with this requirement for Covered Individuals at the recipient organization and must extend this requirement to any and all subrecipients. To fulfill this requirement, the Recipient may utilize the four one-hour training modules developed by the National Science Foundation at https://new.nsf.gov/research-security/training or develop and implement their own research security training program aligned with the requirements in Section 10634(B) of the CHIPS and Science Act of 2022. Acceptance of the award or use of the first dollar of award funds constitutes the Recipient's acceptance of this requirement and all other applicable award requirements. Covered Individuals previously identified by the Recipient who have already certified and completed the research security training do not need to complete it again, even if they are submitting an updated Current and Pending Support Form during the life of the award.

N. DIGITAL PERSISTENT IDENTIFIER

Throughout the lifetime of the award, those individuals conducting research and development (R&D) under the award at the Recipient and Subrecipient level must obtain and use a digital persistent identifier (PID) for themselves that meets the common/core standards specified in the NSPM-33 Implementation Guidance or successor guidance (e.g., an ORCID iD).

DOE requires recipients of federal awards with R&D activities, or technical assistance that supports R&D activities, to use the PID when publishing R&D outputs when that is

an available option. Individuals conducting R&D activities at the Recipient and Subrecipient level must report their R&D outputs as outlined in the DOE F 4600.2, U.S. Department of Energy "Federal Assistance Reporting Checklist" (FARC). The PID for individuals must be provided when reporting R&D outputs to the Department of Energy Office of Scientific and Technical Information (DOE OSTI)

O. MALIGN FOREIGN TALENT RECRUITMENT PROGRAM PROHIBITION

Individuals participating in a Malign Foreign Talent Recruitment Program are prohibited from participating in this award.

The recipient must exercise ongoing due diligence to reasonably ensure that no individuals participating on the DOE-funded project are participating in a Malign Foreign Talent Recruitment Program. Consequences for violations of this prohibition will be determined according to applicable law, regulations, and policy. Further, the recipient must notify DOE within five (5) business days upon learning that an owner of the recipient or subrecipient or individual on the project team is or is believed to be participating in a Malign Foreign Talent Recruitment Program. DOE may modify and add requirements related to this prohibition to the extent required by law.

DOE will ensure that the Malign Foreign Talent Recruitment Program Prohibition is carried out in a manner that does not target, stigmatize, or discriminate against individuals on the basis of race, ethnicity, or national origin, consistent with IAW Sections 10637 of P.L. 117-167 (42 USC 19231-19232).

P. ENTITY OF CONCERN PROHIBITION

No Entity of Concern as defined in Section 10114 of Public Law 117-167 (42 USC 18912), may receive any grant, contract, cooperative agreement, or loan of $10 million or more in Department of Energy funds including funds made available by the Consolidated Appropriations Act, 2024 (Public Law 118-42).

In addition, for all awards involving Departmental activities authorized under Public Law 117-167, no Entity of Concern (including an individual that owns or controls, is owned or controlled by, or is under common ownership or control with an Entity of Concern) may receive DOE funds or perform work under the award, subject to certain penalties. See Section 10114 of Public Law 117-167 (42 USC 18912) and Division D, Title III, Section 310 of Division D of the Consolidated Appropriations Act of 2024 (Pub. L. No. 118-42) for additional information.

The recipient shall include this Term, suitably modified to identify the parties, in all subawards/contracts, regardless of tier, under this award.

The recipient must exercise ongoing due diligence to reasonably ensure that no such Entity of Concern is participating on the award. If, at any time, the recipient becomes aware that any participant on the award is an Entity of Concern and therefore is unable

to fully comply with this term, the recipient shall promptly stop all work on this award, notify the Grants Officer within five (5) business days, and not proceed with the award work without further authorization.

5. FINANCIAL TERMS

A. APPLICABLE COST PRINCIPLES

i. Cost Principles for For-Profit Entities

Pursuant to 2 C.F.R. § 910.352, the cost principles in the Federal Acquisition Regulations (48 C.F.R. Part 31.2) apply to for-profit entities.

ii. Cost Principles for Entities other than For-Profits

The cost principles contained in 2 C.F.R. Part 200 Subpart E apply to all entities other than for-profits.

B. PRE-AWARD COSTS

The Recipient may incur pre-award costs in accordance with 2 C.F.R. § 200.308(g)(1) and 2 C.F.R. § 200.458. Pre-award costs incurred more than 90 calendar days before the award date, set forth in Block 27 of the cover page require the prior written approval of the ARPA-E Grants Officer. All costs incurred prior to the award date are at the Recipient's risk.

C. BUDGET CHANGES

i. Budget Changes Generally

The ARPA-E Grants Officer has reviewed and approved the SF-424A in Attachment 5 to this Award; including any costs requiring prior approval set forth in Attachment 5, per 2 C.F.R. § 200.308(f)(4). Any increase in the total project cost, which is stated as "Total" in Block 12 to the Cover Page (Assistance Agreement Form) of this Award, must be approved in advance and in writing by the ARPA-E Grants Officer.

ii. Revision of Budget and Program Plans

Per 2 C.F.R. § 200.308(f), prior written approval of the ARPA-E Grants Officer is required for:

Budget Prior Approval Description	Location
Inclusion of costs that require prior approval in accordance with 2 C.F.R. 200 Subpart E.	2 C.F.R. § 200.308(f)(4)

Transfer of participant support costs to other budget categories.	2 C.F.R. § 200.308(f)(5)
Change in subrecipients (including national laboratories) from those in the original Federal award.	2 C.F.R. § 200.308(f)(6)
Changes in total approved cost sharing amount.	2 C.F.R. § 200.308(f)(7)
Need for additional federal funds to complete the project.	2 C.F.R. § 200.308(f)(8)
Transfer of funds between construction and non-construction activities.	2 C.F.R. § 200.308(f)(9)
The use of unrecovered indirect costs as cost share.	2 C.F.R. § 200.306(c)

D. PATENT COSTS

i. Reimbursable Patent Costs

ARPA-E will reimburse the Recipient up to $30,000 for filing and prosecution of United States patent applications, including international applications ("PCT application") submitted to the USPTO that are related to subject inventions disclosed to DOE in accordance with Attachment 2 to this Award. The Recipient may request a waiver of the $30,000 reimbursement limit which is subject to review by the ARPA-E Program Director and approval by the Grants Officer. Allowable costs associated with reporting subject inventions are not included in this $30,000 limitation.

ii. Unrecovered Patent Costs

The Recipient may use unrecovered patent costs that are reasonable and allowable to meet its cost sharing obligations under this Award.

E. PURCHASES

i. Sense of Congress

It is the sense of the Congress that, to the greatest extent practicable, all equipment and products purchased with funds made available under this award should be made in the United States.

ii. Purchase of Equipment/Supplies

Any new equipment acquired under this Award must be made or manufactured in the United States, to the maximum extent practicable. This requirement does not apply to used or leased equipment. Any supplies acquired under this Award must be made or manufactured in the United States, to the maximum extent practicable.

iii. Purchase of Foreign Equipment/Supplies

The Recipient shall notify the ARPA-E Grants Officer reasonably in advance of purchasing any equipment with a total acquisition cost of $250,000 or more not made or manufactured in the United States. The notification shall include: (a) a description of the equipment or supplies to be purchased, (b) identification of the proposed supplier, (c) the proposed price, (d) identification of the country of origin and the reason for acquiring the equipment or supplies outside of the United States.

The ARPA-E Grants Officer will provide consent to purchase or reject within 30 calendar days of receipt of the Recipient's notification. If the ARPA-E Grants Officer fails to respond within the timeframe above, the Recipient may proceed with the purchase.

F. PROPERTY – SUPPLIES AND EQUIPMENT

i. Supplies

The Recipient takes title to any supplies acquired in whole or in part with Federal funds under the Award.

If the total aggregate value of unused supplies is $10,000 or less at the termination, discontinuation or completion of the project or program the Recipient may retain the unused supplies with no further obligation to ARPA-E.

If the total aggregate value of unused supplies exceeds $10,000 at the termination, discontinuation, or completion of the project and the supplies are not needed for any other Federal award, the Recipient may retain the supplies for use on other activities or sell them. In either case, the Recipient must compensate ARPA-E for the ARPA-E funded share as specified in 2 C.F.R. § 200.314.

Upon request by ARPA-E, the Recipient is required to provide information on the condition, location, value, and use of remaining supplies.

ii. Equipment

Post-Award equipment purchases with a total acquisition cost of $250,000 or greater may be purchased only with the prior approval of the Grants Officer.

The Recipient takes title to any equipment purchased in whole or in part with Federal funds subject to the following conditions:

1. The equipment must be used for the authorized purposes of the project during the period of performance, or until the property is no longer needed for the purposes of the project;

2. The equipment shall not be encumbered without approval of ARPA-E; and

3. The equipment shall be used and disposed by for-profit entities in accordance with 2 C.F.R. § 910.360, and by all other entities in accordance with 2 C.F.R. § 200.313.

If the current per unit fair market value of particular equipment is $10,000 or less at the end of the period of performance (or the termination of the Award, if applicable), the Recipient may retain, sell, or otherwise dispose of the equipment with no further obligation to ARPA-E.

If the current per unit fair market value of particular equipment exceeds $10,000 at the end of the period of performance (or the termination of the Award, if applicable), the equipment must be disposed of by for-profit entities in accordance with 2 C.F.R. § 910.360(g) and by all other entities in accordance with 2 C.F.R. § 200.313(e).

Upon request by ARPA-E, the Recipient is required to provide information on the condition, location, value, and use of remaining equipment.

G. TITLE TO REAL PROPERTY AND EQUIPMENT

Pursuant to Section 309 of Division D of the Consolidated Appropriations Act of 2023 (Pub. L. No. 117-328) for energy development, demonstration, and deployment programs awarded in fiscal year 2022 or later, DOE may, at its discretion, vest unconditional title or other property interests acquired under projects in the recipient, a subrecipient, or successor in interest, including the United States, at the conclusion of the award period.

H. PROPERTY TRUST RELATIONSHIP AND INSURANCE COVERAGE

Property acquired in whole or in part with Federal funds under this award may not be encumbered in any way without the written permission of the ARPA-E Grants Officer, who may require the recording of liens or other appropriate notices of record such property. The Recipient will ensure full replacement insurance coverage for such property.

Federally-owned property provided under the award need not be insured unless required by the terms and conditions of this Award.

I. CONFERENCE SPENDING

The Recipient shall not use any Federal funds to:

- Defray the cost to the United States Government of a conference held by any Executive branch department, agency, board, commission, or office which is not directly and programmatically related to the purpose for which its ARPA-E Award

is made and for which the cost to the United States Government is more than $20,000; or

- To circumvent the required notification by the head of any such Executive Branch department, agency, board, commission, or office to the Inspector General (or senior ethics official for any entity without an Inspector General), of the date, location, and number of employees attending such a conference.

J. USE OF PROGRAM INCOME

If the Recipient earns program income during the period of performance as a result of this Award, it may use the program income as defined by 2 C.F.R. § 200.1 to meet its cost sharing requirement.

K. PAYMENT PROCEDURES

i. Reimbursement Requests Generally

Only the Recipient may submit reimbursement requests to ARPA-E. Subrecipients must submit reimbursement requests to the Recipient, which is responsible for conveying reimbursement requests to ARPA-E on behalf of subrecipients. Subrecipients may not submit reimbursement requests directly to ARPA-E.

The Recipient is required to submit reimbursement requests electronically through DOE's Oak Ridge Financial Service Center Vender Inquiry Payment Electronic Reporting System (VIPERS). To access and use VIPERS, the Recipient is required to enroll and login to the VIPERS website (https://vipers.oro.doe.gov/).

To facilitate the expeditious processing of reimbursement requests, the Recipient is required to send a copy of every reimbursement request by email to the ARPA-E support personnel designated by the ARPA-E Program Director.

The Recipient's submission of reimbursement requests should coincide with the Recipient's normal billing pattern. Reimbursement requests may be submitted no more frequently than every two weeks. Reimbursement requests must be submitted no less frequently than once in any consecutive thirteen-week period.

With the exception of Budget Plan Payments, reimbursement requests must be limited to the amount of disbursements during the billing period.

ii. Documentation Required

Every reimbursement request submitted by the Recipient must include:

1. A Standard Form (SF) 270 ("Request for Advance or Reimbursement");

2. A "Reimbursement Request Spreadsheet," which must contain the information shown in Appendix B hereto; and

3. Supporting documentation, which may consist of summary information (e.g., printouts from internal financial systems) or detailed documentation (e.g., invoices on appropriate letterhead, timecards, travel vouchers). The supporting documentation must show the method by which the Recipient calculated the total Federal share and non-Federal cost share.

Upon request by ARPA-E, the Recipient is required to provide ARPA-E with additional supporting documentation to explain or justify particular expenditures for which it is seeking reimbursement.

iii. Cost Share Reporting

Every reimbursement request submitted by the Recipient must show the Federal share and the non-Federal cost share contribution for the invoice period, and the method by which the Recipient calculated the total Federal share and non-Federal cost share.

Upon request by ARPA-E, the Recipient is required to provide ARPA-E with additional supporting documentation to verify the Recipient's compliance with its cost sharing obligations.

iv. Payments

ARPA-E will approve reimbursement requests within 30 days of receipt, unless the billing is improper, or the Recipient fails to comply with the terms and conditions of this Award.

Among other things, failure to submit reimbursement requests with the frequency set forth in this paragraph a may be considered as non-compliance with this Award and its terms and conditions. This may result in partial payments, delayed payments (i.e., approval of reimbursement requests in an amount of time exceeding 30 days of receipt), suspension or termination of the award (in whole or in part), or implementation of any other remedies that may legally be available per 2 C.F.R. § 200.339.

ARPA-E will disburse payments under this Award through Automated Clearing House (ACH) VIPERS. The Recipient may check the status of its payments at the VIPERS website. All payments are made by electronic funds transfer to the bank account identified on the ACH Vendor/Miscellaneous Payment Enrollment Form (SF 3881) filed by the Recipient.

v. Budget Plan Payments

In exceptional circumstances, ARPA-E may, at its discretion, reimburse the Recipient on a prospective basis through Budget Plan Payments. All requests for Budget Plan

Payments must be submitted in writing to the ARPA-E Associate Director for Finance and the support personnel designated by the ARPA-E Program Director. Consistent with 30(a), all Budget Plan Payment requests must be submitted by the Recipient.

Each request must be limited to a single quarter, unless otherwise authorized by the ARPA-E Associate Director for Finance.

Requests for Budget Plan Payments must include:

1. A signed cover letter on appropriate letterhead stating the basis for the request, the total amount of funding requested, the duration of funding, and the technical milestone(s) and deliverable(s) to be achieved with the prospective funding;

2. A detailed budget spreadsheet showing how the prospective funding will be spent during each month of the quarter in each of the following categories:

    a. *Personnel* – include descriptions of the types of positions (e.g., engineer, risk manager, communications director) that will be funded during the quarter;

    b. *Travel* – include description of trips (i.e., destinations, persons traveling, purpose of trip) that will be funded during the quarter;

    c. *Equipment* – include description of equipment that will be purchased or leased during the quarter;

    d. *Supplies* – include description of supplies (e.g., lab supplies) that will be purchased or leased during the quarter;

    e. *Contractual* – include description of contractors that will be funded during the quarter;

    f. *Construction* – include description of approved construction that will be funded during the quarter;

    g. *Other Direct Costs* – include description of miscellaneous expenses; and

    h. *Cost Share* – include the Recipient's cost share contributions for the quarter; and

3. A one-page invoice showing the total amount requested; and

4. If the Budget Plan Payment will be used to purchase equipment, the Recipient is required to provide supporting documentation (e.g., vendor quote, catalog price).

Upon request by ARPA-E, the Recipient is required to provide ARPA-E with additional supporting documentation for its Budget Plan Payment request.
Variances between the prospective monthly budgets and amounts actually incurred will be reconciled at the end of each quarter. Failure to provide a reconciliation invoice may be considered non-compliant with this Award's terms and conditions and subject to the same remedies set forth in this clause's paragraph d.

The Recipient is required to submit reimbursement requests electronically through DOE's Oak Ridge Financial Service Center Vender Inquiry Payment Electronic Reporting System (VIPERS). To access and use VIPERS, the Recipient is required to enroll and login to the VIPERS website (https://vipers.doe.gov/).

L. REFUND OBLIGATION

The Recipient is required to refund any excess payments received from ARPA-E. At the end of the period of performance (or the termination of the Award, if applicable), the Recipient is required to refund to ARPA-E the difference between (i) the total payments received from ARPA-E, and (ii) the Federal share of the costs incurred.

M. AUDITS

i. Audits Generally

The Recipient is required to provide any information, documents, site access, or other assistance requested by ARPA-E or Federal auditing agencies (e.g., DOE Inspector General, Government Accountability Office) for the purpose of audits and investigations. Such assistance may include, but is not limited to, reasonable access to the Recipient's records relating to this Award. ARPA-E will provide reasonable advance notice of audits and will minimize interference with ongoing work, to the maximum extent practicable.

ii. Government Audits

Consistent with 2 C.F.R. § 200.503(b), ARPA-E may audit the Recipient's financial records or administrative records relating to this Award at any time.

ARPA-E may conduct a final audit at the end of the period of performance (or the termination of the Award, if applicable). Upon completion of the audit, the Recipient is required to refund to ARPA-E any payments for costs that were determined to be unallowable.

iii. Compliance Audits for For-Profit Recipients

For-profit Recipients are required to comply with the annual compliance audit requirements in 2 C.F.R. 910 Subpart F. An audit conducted in accordance with this part must be in lieu of any financial audit of DOE awards which a for-profit entity is

required to undergo under any other Federal statute or regulation.

iv. Single Audits for Entities Other than For-Profit Recipients

Recipients other than for-profits are required to comply with the single audit requirements in 2 C.F.R. 200 Subpart F. An audit conducted in accordance with this part must be in lieu of any financial audit of Federal awards the Recipient is required to undergo under any other Federal statute or regulation.

AWARD TERMS AND CONDITIONS

1. ARPA-E ADMINISTRATIVE TERMS

A. BUDGET PERIOD/PERIOD OF PERFORMANCE

The budget period and period of performance are stated in Block 7 of the Cover Page (Assistance Agreement Form) to this Award.

B. EXTENSIONS OF PERIOD OF PERFORMANCE

The Recipient may request an extension of the period of performance of this Award. Requests must be submitted in writing to the ARPA-E Grants Officer at least 60 calendar days before the end of the period of performance. The ARPA-E Grants Officer will promptly exercise discretion to grant or deny such requests.

C. PUBLIC NOTICE OF ARPA-E AWARD

Awardee will make reasonable efforts to educate its employees, partners, investors, engineering community, and the general public of receipt of the award from ARPA-E, including the research to be conducted. Such educational effort/notice will include press releases, announcement on awardee's web page and social media networks/accounts, and other appropriate means.

2. ARPA-E FINANCIAL TERMS

A. MAXIMUM OBLIGATION

The maximum obligation of ARPA-E/DOE for this Award is shown in Block 13 of the Cover Page (Assistance Agreement Form) to this Award. Costs incurred in excess of this amount shall be borne solely by the Recipient. In the event that costs incurred under this Award are less than this amount, ARPA-E shall be liable only for actual costs incurred.

B. COST SHARING

i. Cost Sharing Obligations

All cost share contributions must be provided in accordance with 2 C.F.R. § 200.306 and 2 C.F.R. § 910.130. The Recipient is required to pay the "Cost Share" amount stated in Block 12 of the Cover Page (Assistance Agreement Form) to this Award. By accepting federal funds under this Award, the Recipient agrees that it is liable for its percentage of the total allowable project costs as specified below:

Funding Instrument	Federal Funding $/%	Cost Share $/%	Total Cost
Cooperative Agreement	$20,000,000/42.13%	$27,470,829/57.87%	$47,470,829.00

The Recipient is required to pay the "Cost Share" amount as a percentage of the total project costs in each invoice period for the duration of the period of performance. If the Recipient receives advance written authorization from the ARPA-E Associate Director for Finance, the Recipient may pay the "Cost Share" amount on a basis as mutually agreed by the non-Federal entity and ARPA-E.

If the Recipient is a small business and has been granted a "Cost Share Grace Period" by ARPA-E, the Recipient will not be required to pay cost share during the first 12 months of the period of performance. If the project is continued beyond the Cost Share Grace Period, the Recipient is required to pay at least 10% of the Total Project Cost (including the costs incurred during the Cost Share Grace Period) as cost share over the remaining period of performance.

If the project is terminated or is otherwise not funded to completion, the Recipient is not required to pay the entire "Cost Share" amount stated in Block 12 of the Cover Page (Assistance Agreement Form) to this Award; however, the Recipient is required to pay its share (i.e., percentage) of the total project cost incurred to date as of the termination or end date of the Award (except for instances where agreements are terminated during the Cost Share Grace Period).

ii. Source of Cost Share

The Recipient may not use Federal funds to meet its cost sharing obligations, unless otherwise allowed by Federal law.

iii. Cost Share Recordkeeping

The Recipient is required to document and maintain records of project costs paid by ARPA-E and project costs that the Recipient claims as cost sharing, including in-kind contributions. Upon request, the Recipient is required to provide such records to ARPA-E.

iv. Inability to Comply with Cost Sharing Obligations

If the Recipient determines that it might be unable to meet its cost sharing obligations, the Recipient is required to notify the ARPA-E Grants Officer in writing immediately. The notification must include the following information: (i) whether the Recipient intends to continue or phase out the project, and (ii) if the Recipient intends to continue the project, how the Recipient will pay (or secure replacement funding for) the Recipient's share of the total project cost.

If the Recipient fails to meet its cost sharing obligations, ARPA-E may terminate this Award or otherwise recover some or all of the financial assistance provided.

v. Modifying Cost Sharing Contributions

The Recipient must notify and receive written authorization from the ARPA-E Grants Officer before modifying the amount of cost share contributions.

C. INDIRECT COSTS

i. Lower-than-Expected Indirect Costs

If the Recipient's actual allowable indirect costs are less than those budgeted in Attachment 5 to this Award, the Recipient may use the difference to pay additional allowable direct costs during the period of performance.

ii. Higher-than-Expected Indirect Costs

The Recipient understands that it is solely and exclusively responsible for managing its indirect costs. The Recipient further understands that ARPA-E will not amend this Award solely to provide additional funds to cover increases in the Recipient's indirect cost rate.

iii. Indirect Cost Rates

Pending modification to this agreement, the Recipient shall be reimbursed for its indirect costs and the Recipient's cost share calculated at the following rates:

Type	Category	Rate	Effective Dates	Allocation Base
ARPA-E Negotiated	Fringe Benefits	50.96	10/01/2026-9/30/2027	Direct and Indirect Salaries and Wages
ARPA-E Negotiated	Indirect	25.37%	10/01/2026-9/30/2027	Direct Salaries and Wages, Direct Fringe and Consultant/Vendor costs

The Recipient is responsible for application of Federally approved indirect cost rates or negotiation of rates in accordance with 2 C.F.R. § 200.332(b)(4) with its subrecipients. Documentation of any approved changes to the indirect rates applicable to this award listed above will be maintained in the Government's official award file.

3. ARPA-E RESEARCH, TECHNOLOGY, AND ECONOMIC SECURITY (RTES) TERMS

A. FOREIGN WORK AND TRAVEL & FOREIGN PARTICIPATION

i. Performance of Work in United States

Based on the waiver request and justification submitted by the recipient via email, dated May 06, 2026, DOE provides authorization to perform certain work overseas as described in Appendix C to this document.

This authorization is specific to the project activities and locations described in Appendix C. If the recipient later intends to add to or modify the activities or locations, those new activities/locations or modified activities/locations are not covered under this waiver approval unless and until the Grants Officer provides written authorization on those additions or modifications. If the scope of work to be performed outside the United States, as described in Appendix C, substantially changes or increases, an additional waiver must be submitted by the recipient and approved by the Grants Officer. Should the recipient elect to undertake activities or change locations prior to authorization from the Grants Officer, the recipient does so at risk of not receiving federal funding for those activities and such costs may not be recognized as allowable cost share.

ii. Foreign Participation

Based on the waiver request and justification submitted by the recipient via email dated May 06, 2026, DOE provides authorization for the participation of specific Orpington, United Kingdom as described in Appendix C/D to this document

4. ARPA-E SPECIAL TERMS

A. HIGH-RISK SPECIFIC CONDITIONS

The Recipient has been determined to present increased financial administration risk based on documented invoicing and financial administration issues under a prior ARPA-E award. These issues include but are not limited to labor allocation, travel claim timing and support, duplicate claims, and reconciliation issues, and limited demonstrated experience administering a Federal cost-reimbursement award of comparable size, complexity, and anticipated expenditure volume.

Pursuant to 2 C.F.R. §§ 200.208 and 910.372, the following specific conditions apply:

1. Financial personnel and orientation. Within 15 calendar days after the effective date of this Award, the Recipient must identify the individuals responsible for preparing, reviewing, and approving reimbursement requests and describe their roles, relationship to the Recipient, and relevant experience. A Recipient employee or officer with financial authority must approve each draft (reimbursement request) and formal request. Before the first draft request, these personnel must participate in an ARPA-E orientation covering the approved budget and award terms, actual-cash-disbursement requirements, labor and timekeeping, travel, contractual and subrecipient costs, outreach and marketing, indirect costs, and applicable 48 C.F.R. Part 31 requirements under 2 C.F.R. § 910.352. Use of a third party does not relieve the Recipient of responsibility.

2. Monthly draft review. Until removed or modified by award modification, and unless the ARPA-E Grants Officer authorizes otherwise in writing, the Recipient must submit requests monthly, no later than 30 calendar days after month-end, and each request may cover no more than one calendar month. At least 14 calendar days before formal submission, the Recipient must provide a substantially complete draft package. The draft is not a billing or request for payment and does not start the payment period under 2 C.F.R. § 910.354. Formal requests may include only actual cash disbursements unless otherwise authorized in writing.

3. Supporting documentation. Each package must include a transaction-level reconciliation to the general ledger and approved budget; labor, payroll, timekeeping, and allocation support; trip-level travel support, including purpose, receipts, approvals, amounts paid and claimed, and compliance with 48 C.F.R. § 31.205-46; contractor and subrecipient invoices and evidence of review and payment; itemized outreach and marketing costs showing project purpose, direct-charge basis, and treatment under 48 C.F.R. § 31.205-1; indirect-cost calculations; and other documentation requested by the ARPA-E Grants Officer. The Recipient must not submit Protected Personally Identifiable Information. Draft review does not approve costs, and budget inclusion or reimbursement under corporate policy does not establish allowability under this Award.

4. Removal and remedies. The Recipient may request modification or removal at any time. ARPA-E will normally remove or reduce the conditions after six consecutive monthly requests are timely, complete, reconciled, and free of material or repeated deficiencies. The Grants Officer may act earlier, continue, or modify the conditions if warranted. A noncompliant request may be returned for correction or treated as improper under 2 C.F.R. § 910.354, and failure to comply may result in remedies under 2 C.F.R. § 200.339 and the Award.

B. PERMIT CLAUSE

Applicable project work in Attachment 3, Milestone M4.3.2 and all related milestones, may commence only after the Prime Recipient certifies, per Attachment 3, Milestone M4.3.2(i) that it has secured all necessary permits, approvals and authorizations in accordance with applicable local, state, and federal regulations and the Recipient has

received an amended NEPA Determination (if necessary, as determined by ARPA-E) covering the applicable project work. Additionally, Prime Recipient must notify the Grants Officer whenever additional permits or authorizations become required.

If the Recipient moves forward with applicable project work without securing all necessary permits, approvals and authorizations, it is doing so at the risk of not receiving federal funding. In addition, any costs incurred for those activities may not be recognized as allowable cost share.

This restriction does not prevent the use of funding to apply for or obtain the necessary permits or authorizations, as stipulated within this award.

APPENDIX A: DEFINITIONS

The terms defined in 2 C.F.R. Part 200, Subpart A and this Appendix apply to this Award.

ARPA-E is the Advanced Research Projects Agency – Energy, an agency within the U.S. Department of Energy.

Award is defined on the first page of Attachment 1 to this Award.

Budget Plan Payments are prospective payments that are intended to allow ARPA-E Recipients and subrecipients to obtain necessary technical equipment, employ approved third parties to perform necessary services, or perform other functions that are necessary to achieve the technical milestones described in the underlying funding agreement.

Covered Individual means an individual who (a) contributes in a substantive, meaningful way to the development or execution of the scope of work of the project, and (b) is designated as a Covered Individual by ARPA-E.

ARPA-E designates as Covered Individuals any principal investigator (PI); project director (PD); co-principal investigator (Co-PI); co-project director (Co-PD); project manager; and any individual regardless of title that is functionally performing as a PI, PD, Co-PI, Co-PD, or project manager. Status as a consultant, graduate (master's or PhD) student, or postdoctoral associate does not automatically disqualify a person from being designated as a Covered Individual if they meet the definition in (a) above.

The Recipient is responsible for assessing the applicability of (a) against each person listed on the project (i.e., listed by the non-Federal entity in the application for Federal financial assistance, approved budget, progress report, or any other report submitted to ARPA-E by the non-Federal entity regarding the subject project). Further, the Recipient is responsible for identifying any such individual to ARPA-E for designation as a Covered Individual, if not already designated by ARPA-E as described above.

The Recipient's submission of a current and pending support disclosure and/or biosketch/resume for a particular person serves as an acknowledgement that ARPA-E designates that person as a Covered Individual.

ARPA-E may further designate Covered Individuals during the award period of performance.

Current and Pending Support is all resources made available, or expected to be made available, to an individual in support of the individual's RD&D efforts, regardless of:

- Whether the funding source is foreign or domestic;
- Whether the resource is made available through the entity applying for an award or directly to the individual; or
- Whether the resource has monetary value; and

This includes in-kind contributions requiring a commitment of time and directly supporting the individual's RD&D efforts, such as the provision of office or laboratory space, equipment, supplies, employees, or students. This term has the same meaning

as the term Other Support as applied to researchers in National Security Presidential Memorandum – 33 (NSPM-33): For researchers, Other Support includes all resources made available to a researcher in support of and/or related to all of their professional RD&D efforts, including resources provided directly to the individual or through the organization, and regardless of whether or not they have monetary value (e.g., even if the support received is only in-kind, such as office/laboratory space, equipment, supplies, or employees). This includes resource and/or financial support from all foreign and domestic entities, including but not limited to, gifts provided with terms or conditions, financial support for laboratory personnel, and participation of student and visiting researchers supported by other sources of funding.

Data means recorded information, regardless of form or the media on which it may be recorded. The term includes technical data and computer software. The term does not include information incidental to administration, such as financial, administrative, cost or pricing or management information.

Direct Costs are those that can be identified specifically with a particular final cost objective (i.e., a particular award, project, service, or other direct activity of an organization).

DOE is the U.S. Department of Energy.

Entity is defined at 2 C.F.R. § 25.400 and includes all of the following types as defined at 2 C.F.R. § 200.1: (1) Non-Federal entity (2) Foreign organization; (3) Foreign public entity; (4) Domestic for-profit organization; and (5) Federal agency.

Grants Officer means the ARPA-E official who is authorized to execute federal financial awards and amendments on behalf of ARPA-E and is responsible for the business management and non-program aspects of the financial assistance process.

In-kind contributions are the value of non-cash contributions made by a Recipient or non-Federal third parties toward cost sharing. Such in-kind contributions may be in the form of real property, equipment, supplies and other expendable property, and the value of goods and services directly benefiting and specifically identifiable to ARPA-E.

Limited Rights Data means data (other than computer software) developed at private expense that embody trade secrets or are commercial or financial and confidential or privileged.

Malign Foreign Talent Recruitment Program means any program, position, or activity that includes compensation in the form of cash, in-kind compensation, including research funding, promised future compensation, complimentary foreign travel, things of non de minimis value, honorific titles, career advancement opportunities, or other types of remuneration or consideration directly provided by a foreign country at any level (national, provincial, or local) or their designee, or an entity based in, funded by, or affiliated with a foreign country, whether or not directly sponsored by the foreign

country, to the targeted individual, whether directly or indirectly stated in the arrangement, contract, or other documentation at issue, in exchange for the individual—

- Engaging in the unauthorized transfer of intellectual property, materials, data products, or other nonpublic information owned by a United States entity or developed with a federal research and development award to the government of a foreign country, or an entity based in, funded by, or affiliated with a foreign country regardless of whether that government or entity provided support for the development of the intellectual property, materials, or data products;
- Being required to recruit trainees or researchers to enroll in such program, position, or activity;
- Establishing a laboratory or company, accepting a faculty position, or undertaking any other employment or appointment in a foreign country or with an entity based in, funded by, or affiliated with a foreign country if such activities are in violation of the standard terms and conditions of a federal research and development award;
- Being unable to terminate the foreign talent recruitment program contract or agreement except in extraordinary circumstances;
- Through funding or effort related to the foreign talent recruitment program, being limited in the capacity to carry out a research and development award or required to engage in work that would result in substantial overlap or duplication with a federal research and development award;
- Being required to apply for and successfully receive funding from the sponsoring foreign government's funding agencies with the sponsoring foreign organization as the recipient;
- Being required to omit acknowledgment of the recipient institution with which the individual is affiliated, or the federal research agency sponsoring the research and development award, contrary to the institutional policies or standard terms and conditions of the federal research and development award;
- Being required to not disclose to the federal research agency or employing institution the participation of such individual in such program, position, or activity; or
- Having a conflict of interest or conflict of commitment contrary to the standard terms and conditions of the federal research and development award; and

A program that is sponsored by—

- A foreign country of concern or an entity based in a foreign country of concern, whether or not directly sponsored by the foreign country of concern.
- An academic institution on the list developed under section 1286(c)(8) of the John S. McCain National Defense Authorization Act for Fiscal Year 2019 (10 U.S.C. 2358 note; Public Law 115–232); or
- A foreign talent recruitment program on the list developed under section 1286(c)(9) of the John S. McCain National Defense Authorization Act for Fiscal Year 2019 (10 U.S.C. 2358 note; Public Law 115–232).

Consistent with applicable law, this term does not prohibit, unless such activities are funded, organized, or managed by an academic institution or a foreign talent recruitment program on the lists developed under paragraphs (8) and (9) of section 1286(c) of the John S. McCain National Defense Authorization Act for Fiscal Year 2019 (10 U.S.C. 4001 note; Public Law 115–232)—

- Making scholarly presentations and publishing written materials regarding scientific information not otherwise controlled under current law;
- Participation in international conferences or other international exchanges, research projects or programs that involve open and reciprocal exchange of scientific information, and which are aimed at advancing international scientific understanding and not otherwise controlled under current law;
- Advising a foreign student enrolled at an institution of higher education or writing a recommendation for such a student, at such student's request; and
- Other international activities determined appropriate by the federal research agency head or designee.

Participation includes any activities performed under an ARPA-E award, including, but not limited to, all work described in the milestone schedule of an award (commonly referred to as “Attachment 3” or the “Statement of Project Objectives (SOPO)”) and any services that include testing, including services performed by contractors. Participation also includes activities that involve the procurement of foreign equipment or supplies.

Program Director is the ARPA-E official who is responsible for managing the technical program carried out under this Award.

Project means the set of activities described in the Award that is approved by ARPA-E for financial assistance (whether such financial assistance represents all or only a portion of the support necessary to carry out those activities).

System for Award Management (SAM) means the Federal repository into which a recipient must provide information required for the conduct of business as a recipient. Additional information about registration procedures may be found at the SAM internet site (currently at Page 15 https://www.sam.gov).

Total project cost means the sum of the Federal Government share plus the Recipient share of total allowable costs. The Federal Government share generally includes costs incurred by Federally Funded Research and Development Centers and Government-Owned Government-Operated laboratories.

Unique Entity Identifier means the identifier assigned by SAM to uniquely identify business entities.

VIPERS means DOE’s Oak Ridge Financial Service Center Vender Inquiry Payment Electronic Reporting System.

APPENDIX B: SAMPLE REIMBURSEMENT REQUEST SPREADSHEET

TOTAL BUDGET

		Total Project Cost		Expenditures during Invoice Period		Cumulative Expenditures To Date		
	Category	ARPA-E	Cost Share	ARPA-E	Cost Share	ARPA-E	Cost Share	Remaining Balance
a.	Personnel	342,518	171,259	32,154	22,596	73,659		268,859
b.	Fringe Benefits	137,007	68,504	45,852	25,000	124,588	95,852	12,419
c.	Travel	25,000	12,500	4,569	2,500	11,526	41,268	13,474
d.	Equipment	312,338	156,169	26,987	50,000	144,589		167,749
e.	Supplies	216,346	108,173	35,648	50,000	142,633		73,713
f.	Contractual							0
	Subrecipient							0
	FFRDC							0
	Vendor	3,600	1,800	1,256				3,600
	Total Contractual	3,600	1,800	1,256				3,600
g.	Construction							0
h.	Other Direct Charges	336,598	30,522	56,985				336,598
i.	Indirect Charges	308,191	154,096	35,698	18,526			308,191
	Total Project Cost	1,685,198	704,823	240,405	168,622	496,995	137,120	1,188,203

SEPARATE TT&O WORKSHEET

		Total Project Cost		Expenditures during Invoice Period		Cumulative Expenditures To Date		
	Category	ARPA-E	Cost Share	ARPA-E	Cost Share	ARPA-E	Cost Share	Remaining Balance
a.	TT&O Personnel	85,695		9,584		11,569		74,126
b.	TT&O Fringe Benefits	15,326		3,563		5,643		9,683
c.	TT&O Travel	15,496				6,985		8,511
d.	TT&O Equipment							0
e.	TT&O Supplies	35,265				12,548		22,717
f.	TT&O Contractual							0
	TT&O Subrecipient							0
	TT&O FFRDC							0
	TT&O Vendor							0
	Total TT&O Contractual							0
g.	TT&O Construction							0
h.	TT&O Other Direct Charges							0
i.	TT&O Indirect Charges	59,878		4,985		9,965		49,913
	Total TT&O Cost	211,660		18,132		46,710		164,950

APPENDIX C: Foreign Work Waiver

Foreign Work Waiver Details

Deep Isolation, DE-AR0002176

1. Entity Name: Deep Isolation EMEA
2. Individuals Performing the Work (Name, Position Title, Company):
    a. Chris Parker, Managing Director of Deep Isolation EMEA Limited and Chief Commercialization Officer of Deep Isolation
3. Location/s where work will be performed (City and Country):
    a. Orpington, United Kingdom
4. Description of work to be performed outside of the U.S. (provide a detailed narrative describing the work to be performed):

    The work to be performed by Deep Isolation EMEA will focus on stakeholder engagement, technoeconomic analysis (TEA), and commercialization planning activities that support the overall deployment strategy for the Universal Canister System (UCS) and deep borehole disposal technology. The majority of the work on these tasks will be performed in the U.S. by U.S.-based personnel, but with elements undertaken by one individual employed by our UK subsidiary, Deep Isolation EMEA Limited: its Managing Director, Chris Parker. The work in each of these areas is described below, along with details of Mr. Parker's costs as a percentage of total budget for the work.

    Stakeholder Engagement (M1.4.2, M1.4.3):

    Foreign-based personnel will support development and execution of a structured stakeholder outreach program targeting international stakeholders, including regulators, waste management organizations, reactor developers, and potential customers. This includes preparation of a stakeholder outreach plan, participation in technical exchanges and industry forums, and documentation of engagement outcomes. These activities are intended to inform regulatory alignment, identify market requirements, and support future international deployment pathways. (Mr. Parker's cost as a percentage of total labor budget for this effort: 66%.)

    Technoeconomic Analyses (M1.6.1–M1.6.4):

Foreign-based personnel will contribute to development and refinement of technoeconomic analyses evaluating the lifecycle cost, economic viability, and market competitiveness of the UCS across storage, transportation, and disposal. This includes establishing the TEA framework, developing initial and updated cost models, incorporating supply chain and deployment data, and producing a final TEA that reflects validated system performance and market inputs. These analyses will assess cost drivers, pricing strategies, and deployment scenarios, and will incorporate international market perspectives and data where relevant. (Mr. Parker's cost as a percentage of total labor budget for this effort: 66%.)

Commercialization Planning (M1.6.5):

Foreign-based personnel will support development of a 5-year commercialization plan, including identification of target markets, evaluation of international deployment opportunities, development of partnership strategies, and assessment of regulatory pathways in key regions. This work will translate TEA insights and stakeholder engagement outcomes into actionable commercialization strategies, including market entry approaches, business models, and scaling pathways for global deployment of the UCS technology. (Mr. Parker's cost as a percentage of total labor budget for this effort: 59%.)

Overall, the foreign work is analytical, strategic, and engagement-focused in nature, does not involve hardware development or testing, and directly supports the successful commercialization and deployment of the technology being developed under this project.

5. Total estimated cost of the proposed work in each foreign country (differentiate between Federal and non-Federal funds) (mark N/A for unfunded work):

   Federal Funds: $220,768.00

   Non-Federal Funds: $0.00

   Total Amount: $220,768.00

   Percentage of total project costs (of entire project): 0.5%

6. Rationale for performing work overseas (i.e., Why does this work need to be performed in a foreign country? Do these capabilities exist in the U.S., and if they do exist in the U.S., why should ARPA-E grant the waiver?)

   The proposed foreign work will be performed by Chris Parker, Chief Commercialization Officer, who leads Deep Isolation's global commercialization and stakeholder engagement activities. Mr. Parker has extensive experience working with government organizations, regulators, waste management organizations, utilities, reactor developers, and international institutions on technology deployment, market development, and strategic partnerships within the nuclear sector. He is responsible for Deep Isolation's engagement with international organizations, including the International Atomic Energy Agency (IAEA), the OECD Nuclear Energy Agency (OECD-NEA), and national waste management programs, and has developed relationships with stakeholders that

are directly relevant to commercialization of the Universal Canister System (UCS). His experience in evaluating international market opportunities, regulatory frameworks, and deployment strategies supports the stakeholder engagement, technoeconomic analyses, and commercialization planning activities included in this project.

International stakeholder engagement is an important component of this project because commercialization of the Universal Canister System (UCS) depends on understanding the requirements, priorities, and deployment pathways of organizations involved in spent fuel and radioactive waste management worldwide. Deep Isolation's business model includes deployment opportunities in both domestic and international markets. Accordingly, successful commercialization requires engagement with government waste management organizations, reactor developers, regulators, utilities, and international organizations that influence waste management strategies and future deployment opportunities. Throughout its history, Deep Isolation has maintained active engagement with organizations such as the International Atomic Energy Agency (IAEA), the OECD Nuclear Energy Agency (OECD-NEA), and national waste management programs to inform technology development and commercialization planning.

The stakeholder engagement, technoeconomic analyses, and commercialization planning activities covered by this waiver require incorporation of both U.S. and international market information. While U.S. data and regulatory frameworks are important inputs, development of comprehensive technology-to-market strategies also requires consideration of international waste inventories, geologic settings, policy frameworks, waste management approaches, and commercialization opportunities. Engagement with international stakeholders provides information that cannot be fully obtained through U.S. sources alone and helps ensure that project analyses and commercialization plans reflect the broader markets in which the technology may ultimately be deployed.

While similar commercialization capabilities exist within the United States, Mr. Parker possesses unique experience and established relationships with many of the international stakeholders relevant to this work and is responsible for Deep Isolation's engagement with these organizations. These relationships have been developed over many years and provide access, credibility, and market insight that would be difficult to replicate through a new hire or reassignment of existing U.S.-based personnel. A U.S.-based employee could perform portions of this work, but would require additional international travel and sustained in-person engagement to develop comparable relationships and credibility with international organizations and country-specific waste management programs. Deep Isolation does not currently have another employee with equivalent responsibility for international commercialization activities. Utilizing Mr. Parker in this role therefore reduces commercialization risk and provides the most effective means of executing the stakeholder engagement, technoeconomic analysis, and commercialization planning activities included in the project.

7. Description of how the foreign work will benefit the United States, including

manufacturing and/or services, contributions to employment in the United States and growth in new markets and jobs in the United States:

The foreign work supports commercialization of the Universal Canister System (UCS), a U.S.-developed technology. Stakeholder engagement, technoeconomic analysis, and commercialization planning conducted overseas will inform regulatory alignment, market adoption, and deployment strategies.

These activities are expected to strengthen U.S. leadership in nuclear waste management technologies and expand access to international markets for U.S.-developed solutions. They also support future economic activity in the United States through continued technology development, project execution, and associated services.

8. Description of the likelihood of IP being created from foreign work and the treatment of any such IP:

The likelihood of new intellectual property (IP) being generated from the foreign work is low, as the activities are primarily focused on stakeholder engagement, technoeconomic analysis, and commercialization planning rather than technical development.

To the extent that any IP is generated, it will be owned and managed by Deep Isolation US LLC in accordance with the terms of the ARPA-E award. Any such IP will be incorporated into the broader project IP portfolio and used to support commercialization and deployment of the technology in a manner consistent with U.S. interests.

ATTACHMENT 2:

ARPA-E INTELLECTUAL PROPERTY PROVISIONS FOR COOPERATIVE AGREEMENT WITH DOMESTIC SMALL BUSINESSES INCLUDING ENHANCED U.S. COMPETITIVENESS

1. 2 CFR Part 910, Subpart D, Appendix A, Patent Rights (Small Business Firms and Nonprofit Organizations) MODIFIED

2. 2 CFR Part 910, Subpart D, Appendix A, Rights in Data - Programs Covered Under Special Data Statutes

3. Authorization and Consent 2 CFR 910.362(g)(2)

4. Notice and Assistance Regarding Patent and Copyright Infringement 2 CFR 910.362(g)(3)

   The above clause is not applicable if the award is for less than $100,000, in aggregate.

5. Subawards

NOTE: In reading these provisions, any reference to "*Contractor*" shall mean "*Recipient*," and any reference to "*contract*" or "*subcontract*" shall mean "*award*" or "*subaward*."

*The recipient and any subrecipients are subject to the policy of the Determination of Exceptional Circumstances (DEC) under the Bayh-Dole Act to Further Promote Domestic Manufacture of DOE Science and Energy Technologies executed by DOE on June 7,2021. A copy of the DEC is available at https://www.energy.gov/gc/determination-exceptional-circumstances-decs.

NOTE: Please refer to Attachment 4 (ARPA-E Reporting Checklist and Instructions) for guidance on complying with the intellectual property reporting obligations referenced herein.

1. 2 CFR Part 910, Subpart D, Appendix A, Patent Rights (Small Business Firms and Nonprofit Organizations) MODIFIED

(a) Definitions

(1) Invention means any invention or discovery which is or may be patentable or otherwise protectable under Title 35 of the United States Code, or any novel variety of plant which is or may be protected under the Plant Variety Protection Act (7 U.S.C. 2321et seq.).

(2) Subject invention means any invention of the Recipient conceived or first actually reduced to practice in the performance of work under this agreement, and pursuant to the agreement with Deep Isolation Inc, the parent of the Recipient, attached hereto as an ADDENDUM, any invention whose title is owned by Deep Isolation Inc. that is first actually reduced to practice in performance of the work under this agreement, provided that in the case of a variety of plant, the date of determination (as defined in section 41(d) of the Plant Variety Protection Act, 7 U.S.C. 2401(d)) must also occur during the period of agreement performance.

(3) Practical Application means to manufacture in the case of a composition or product, to practice in the case of a process or method, or to operate in the case of a machine or system; and, in each case, under such conditions as to establish that the invention is being utilized and that its benefits are, to the extent permitted by law or government regulations, available to the public on reasonable terms.

(4) Made when used in relation to any invention means the conception or first actual reduction to practice of such invention.

(5) Small Business Firm means a small business concern as defined at section 2 of Pub. L. 85-536 (15 U.S.C. 632) and implementing regulations of the Administrator of the Small Business Administration. For the purpose of this clause, the size standards for small business concerns involved in government procurement and subcontracting at 13 CFR 121.3-8 and 13 CFR 121.3-12, respectively, will be used.

(6) Nonprofit Organization means a university or other institution of higher education or an organization of the type described in section 501(c)(3) of the Internal Revenue Code of 1954 (26 U.S.C. 501(c) and exempt from taxation under section 501(a) of the Internal Revenue Code (25 U.S.C. 501(a)) or any nonprofit scientific or educational organization qualified under a state nonprofit organization statute.

(7) The term statutory period means the one-year period before the effective filing date of a claimed invention during which exceptions to prior art exist per 35 U.S.C. 102(b) as amended by the Leahy-Smith America Invents Act, Public Law 112-29.

(b) Allocation of Principal Rights

The Recipient may retain the entire right, title, and interest throughout the world to each subject invention subject to the provisions of this clause and 35 U.S.C. 203. With respect to any subject invention in which the Recipient retains title, the Federal government shall have a nonexclusive, nontransferable, irrevocable, paid-up license to practice or have practiced for or on behalf of the United States the subject invention throughout the world.

(c) Invention Disclosure, Election of Title and Filing of Patent Application by Recipient

(1) The Recipient will disclose each subject invention to the Federal Agency within two months after the inventor discloses it in writing to Recipient personnel responsible for patent matters. The disclosure to the agency shall be in the form of a written report and shall identify the agreement under which the invention was made and the inventor(s). It shall be sufficiently complete in technical detail to convey a clear understanding to the extent known at the time of the disclosure, of the nature, purpose, operation, and the physical, chemical, biological or electrical characteristics of the invention. The disclosure shall also identify any publication, on sale or public use of the invention and whether a manuscript describing the invention has been submitted for publication and, if so, whether it has been accepted for publication at the time of disclosure. In addition, after disclosure to the agency, the Recipient will promptly notify the agency of the acceptance of any manuscript describing the invention for publication or of any on sale or public use planned by the Recipient.

(2) The Recipient will elect in writing whether or not to retain title to any such invention by notifying the Federal agency within two years of disclosure to the Federal agency. However, in any case where a patent, a printed publication, public use, sale, or other availability to the public has initiated the one year statutory period wherein valid patent protection can still be obtained in the United States, the period for election of title may be shortened by the agency to a date that is no more than 60 days prior to the end of the statutory period.

(3) The Recipient will file its initial patent application on a subject invention to which it elects to retain title within one year after election of title or, if earlier, prior to the end of any statutory period wherein valid patent protection can be obtained in the United States after a publication, on sale, or public use. If the Recipient files a provisional application as its initial patent application, it shall file a non-provisional application within 10 months of the filing of the provisional application. The Recipient will file patent applications in additional countries or international patent offices within either ten months of the first filed patent application or six months from the date permission is granted by the Commissioner of Patents to file foreign patent applications where such filing has been prohibited by a Secrecy Order.

(4) For any subject invention with Federal agency and Recipient co-inventors, where the Federal agency employing such co-inventor determines that it would be in the interest of the government, pursuant to 35 U.S.C. 207(a)(3), to file an initial patent application on

the subject invention, the Federal agency employing such co-inventor, at its discretion and in consultation with the Recipient, may file such application at its own expense, provided that the Recipient retains the ability to elect title pursuant to 35 U.S.C. 202(a).

(5) Requests for extension of the time for disclosure, election, and filing under paragraphs (1), (2), and (3) of this clause may, at the discretion of the Federal agency, be granted. When a Recipient has requested an extension for filing a non-provisional application after filing a provisional application, a one-year extension will be granted unless the Federal agency notifies the Recipient within 60 days of receiving the request.

(d) Conditions When the Government May Obtain Title

The Recipient will convey to the Federal agency, upon written request, title to any subject invention -

(1) If the Recipient fails to disclose or elect title to the subject invention within the times specified in paragraph (c) of this clause, or elects not to retain title.

(2) In those countries in which the Recipient fails to file patent applications within the times specified in paragraph (c) of this clause; provided, however, that if the Recipient has filed a patent application in a country after the times specified in paragraph (c) of this clause, but prior to its receipt of the written request of the Federal agency, the Recipient shall continue to retain title in that country.

(3) In any country in which the Recipient decides not to continue the prosecution of any non-provisional patent application for, to pay a maintenance, annuity or renewal fee on, or to defend in a reexamination or opposition proceeding on, a patent on a subject invention.

(4) Upon breach of paragraph (m) U.S. Competitiveness on of this Patent Rights clause.

(e) Minimum Rights to Recipient and Protection of the Recipient Right to File

(1) The Recipient will retain a nonexclusive royalty-free license throughout the world in each subject invention to which the Government obtains title, except if the Recipient fails to disclose the invention within the times specified in (c), above. The Recipient's license extends to its domestic subsidiary and affiliates, if any, within the corporate structure of which the Recipient is a party and includes the right to grant sublicenses of the same scope to the extent the Recipient was legally obligated to do so at the time the agreement was awarded. The license is transferable only with the approval of the Federal agency except when transferred to the successor of that party of the Recipient's business to which the invention pertains.

(2) The Recipient's domestic license may be revoked or modified by the funding Federal agency to the extent necessary to achieve expeditious practical application of the subject invention pursuant to an application for an exclusive license submitted in accordance with applicable provisions at 37 CFR part 404 and agency licensing regulations (if any). This license will not be revoked in that field of use or the geographical areas in which the Recipient has achieved practical application and continues to make the benefits of the invention reasonably accessible to the public. The license in any foreign country may be revoked or modified at the discretion of the funding Federal agency to the extent the Recipient, its licensees, or the domestic subsidiaries or affiliates have failed to achieve practical application in that foreign country.

(3) Before revocation or modification of the license, the funding Federal agency will furnish the Recipient a written notice of its intention to revoke or modify the license, and the Recipient will be allowed thirty days (or such other time as may be authorized by the funding Federal agency for good cause shown by the Recipient) after the notice to show cause why the license should not be revoked or modified. The Recipient has the right to appeal, in accordance with applicable regulations in 37 CFR part 404 and agency regulations (if any) concerning the licensing of Government-owned inventions, any decision concerning the revocation or modification of the license.

(f) Recipient Action to Protect the Government's Interest

(1) The Recipient agrees to execute or to have executed and promptly deliver to the Federal agency all instruments necessary to (i) establish or confirm the rights the Government has throughout the world in those subject inventions to which the Recipient elects to retain title, and (ii) convey title to the Federal agency when requested under paragraph (d) above and to enable the government to obtain patent protection throughout the world in that subject invention.

(2) The Recipient agrees to require, by written agreement, its employees, other than clerical and nontechnical employees, to disclose promptly in writing to personnel identified as responsible for the administration of patent matters and in a format suggested by the Recipient each subject invention made under agreement in order that the Recipient can comply with the disclosure provisions of paragraph (c) of this clause, to assign to the Recipient the entire right, title and interest in and to each subject invention made under agreement, and to execute all papers necessary to file patent applications on subject inventions and to establish the government's rights in the subject inventions. This disclosure format should require, as a minimum, the information required by paragraph (c)(1) of this clause. The Recipient shall instruct such employees through employee agreements or other suitable educational programs on the importance of reporting inventions in sufficient time to permit the filing of patent applications prior to U.S. or foreign statutory bars.

(3) For each subject invention, the Recipient will, no less than 60 days prior to the expiration of the statutory deadline, notify the Federal agency of any decision: Not to continue the prosecution of a non-provisional patent application; not to pay a maintenance, annuity or renewal fee; not to defend in a reexamination or opposition proceeding on a patent, in any country; to request, be a party to, or take action in a trial proceeding before the Patent Trial and Appeals Board of the U.S. Patent and Trademark Office, including but not limited to post-grant review, review of a business method patent, inter partes review, and derivation proceeding; or to request, be a party to, or take action in a non-trial submission of art or information at the U.S. Patent and Trademark Office, including but not limited to a pre-issuance submission, a post-issuance submission, and supplemental examination.

(4) The Recipient agrees to include, within the specification of any United States patent applications and any patent issuing thereon covering a subject invention, the following statement, "This invention was made with government support under (identify the agreement) awarded by (identify the Federal agency). The government has certain rights in the invention."

(g) Subawards

(1) The Recipient will include this clause, suitably modified to identify the parties, in all subawards, regardless of tier, for experimental, developmental or research work to be performed by a domestic small business firm or nonprofit organization. The subrecipient will retain all rights provided for the Recipient in this clause, and the Recipient will not, as part of the consideration for awarding the subaward, obtain rights in the subrecipient's subject inventions.

(2) The Recipient will include in all other subawards, regardless of tier, for experimental developmental or research work the patent rights clause directed by the Grants Officer.

(h) Reporting on Utilization of Subject Inventions

The Recipient agrees to submit on request periodic reports no more frequently than annually on the utilization of a subject invention or on efforts at obtaining such utilization that are being made by the Recipient or its licensees or assignees. Such reports shall include information regarding the status of development, date of first commercial sale or use, gross royalties received by the Recipient, and such other data and information as the agency may reasonably specify. The Recipient also agrees to provide additional reports as may be requested by the agency in connection with any march-in proceeding undertaken by the agency in accordance with paragraph (j) of this clause. As required by 35 U.S.C. 202(c)(5), the agency agrees it will not disclose such information to persons outside the government without permission of the Recipient.

(i) Preference for United States Industry

Notwithstanding any other provision of this clause, the Recipient agrees that neither it nor any assignee will grant to any person the exclusive right to use or sell any subject inventions in the United States unless such person agrees that any products embodying the subject invention or produced through the use of the subject invention will be manufactured substantially in the United States. However, in individual cases, the requirement for such an agreement may be waived by the Federal agency upon a showing by the Recipient or its assignee that reasonable but unsuccessful efforts have been made to grant licenses on similar terms to potential licensees that would be likely to manufacture substantially in the United States or that under the circumstances domestic manufacture is not commercially feasible.

(j) March-in Rights

The Recipient agrees that with respect to any subject invention in which it has acquired title, the Federal agency has the right in accordance with the procedures in 37 CFR 401.6 and any supplemental regulations of the agency to require the Recipient, an assignee or exclusive licensee of a subject invention to grant a nonexclusive, partially exclusive, or exclusive license in any field of use to a responsible applicant or applicants, upon terms that are reasonable under the circumstances, and if the Recipient, assignee, or exclusive licensee refuses such a request the Federal agency has the right to grant such a license itself if the Federal agency determines that:

(1) Such action is necessary because the Recipient or assignee has not taken, or is not expected to take within a reasonable time, effective steps to achieve practical application of the subject invention in such field of use.

(2) Such action is necessary to alleviate health or safety needs which are not reasonably satisfied by the Recipient, assignee or their licensees;

(3) Such action is necessary to meet requirements for public use specified by Federal regulations and such requirements are not reasonably satisfied by the Recipient, assignee or licensees; or

(4) Such action is necessary because the agreement required by paragraph (i) of this clause has not been obtained or waived or because a licensee of the exclusive right to use or sell any subject invention in the United States is in breach of such agreement.

(k) Special Provisions for Agreements with Nonprofit Organizations

If the Recipient is a nonprofit organization, it agrees that:

(1) Rights to a subject invention in the United States may not be assigned without the approval of the Federal agency, except where such assignment is made to an organization which has as one of its primary functions the management of inventions, provided that such assignee will be subject to the same provisions as the Recipient;

(2) The Recipient will share royalties collected on a subject invention with the inventor, including Federal employee co-inventors (when the agency deems it appropriate) when the subject invention is assigned in accordance with 35 U.S.C. 202(e) and37 37 CFR 401.10;

(3) The balance of any royalties or income earned by the Recipient with respect to subject inventions, after payment of expenses (including payments to inventors) incidental to the administration of subject inventions, will be utilized for the support of scientific research or education; and

(4) It will make efforts that are reasonable under the circumstances to attract licensees of subject inventions that are small business firms and that it will give a preference to a small business firm when licensing a subject invention if the Recipient determines that the small business firm has a plan or proposal for marketing the invention which, if executed, is equally as likely to bring the invention to practical application as any plans or proposals from applicants that are not small business firms; provided, that the Recipient is also satisfied that the small business firm has the capability and resources to carry out its plan or proposal. The decision whether to give a preference in any specific case will be at the discretion of the Recipient. However, the Recipient agrees that the Federal agency may review the Recipient's licensing program and decisions regarding small business applicants, and the Recipient will negotiate changes to its licensing policies, procedures, or practices with the Federal agency when the Federal agency's review discloses that the Recipient could take reasonable steps to implement more effectively the requirements of this paragraph (k)(4). In accordance with 37 CFR 401.7, the Federal agency or the Recipient may request that the Secretary review the Recipient's licensing program and decisions regarding small business applicants.

(l) Communication

Unless other directed by DOE Patent Counsel, all reports and notifications required by this clause shall be submitted in accordance with the instructions provided in the Federal Assistance Reporting Checklist (FARC) of this agreement.

(m) U.S. Competitiveness

(1) The Recipient agrees that any products embodying any subject invention or produced through the use of any subject invention will be manufactured substantially in the United States unless the Recipient can show to the satisfaction of DOE that it is not commercially feasible. In the event DOE agrees to foreign

manufacture, there will be a requirement that the Government's support of the technology be recognized in some appropriate manner, e.g., alternative binding commitments to provide an overall net benefit to the U.S. economy. The Recipient agrees that it will not license, assign or otherwise transfer any subject invention to any entity, at any tier, unless that entity agrees to these same requirements. In the event that the Recipient or other such entity receiving rights in the Subject Invention undergoes a change in ownership amounting to a controlling interest, the Recipient or other such entity receiving rights shall ensure continual compliance with the requirements of this paragraph (m) and shall inform DOE, in writing, of the change in ownership within 6 months of the change. The Recipient and any successor assignee will convey to DOE, upon written request from DOE, title to any subject invention, upon a breach of this paragraph (m). The Recipient will include this paragraph (m) in all subawards/contracts, regardless of tier, for experimental, developmental or research work.

(2) The Recipient agrees that "subject invention" includes the following technology:

(a) elected subject inventions arising under this award,
(b) the following invention made and disclosed under ARPA-E UPWARDS award DE-No. DE-AR0001621 iEdison number 455436603-23-0001, Provisional 63/412,688 and PCT PCT/US2023/034389 "Universal Canister System" and
(c) pursuant to the agreement with Deep Isolation Inc, the parent of the Recipient, any invention whose title is owned by Deep Isolation Inc. that is first actually reduced to practice in performance of the work under this agreement.

(n) The requirements, rights and administration of paragraph (m) are further clarified as follows:

(1) Waivers. The Recipient (or any entity subject to paragraph (m)) may request a waiver or modification of paragraph (m). Such waivers or modifications may be granted when DOE determines that (1) the Recipient (or any entity subject to paragraph (m)) has demonstrated, with quantifiable data, that manufacturing in the United States is not commercially feasible and (2) a waiver or modification would best serve the interests of the United States and the general public.

(2) Final determination of breach of paragraph (m). If DOE determines the Recipient is in breach of paragraph (m), the Department may issue a final written determination of such breach. If such determination includes a demand for title to the subject inventions under the award, the demand for title will cause an immediate conveyance and assignment of all rights to all subject inventions under the award to the United States Government, including all pending U.S. and foreign patent applications and all U.S. and foreign patents that cover any subject invention, without compensation. Any such final determination shall be signed by the cognizant DOE Grants Officer with the concurrence of the Assistant General Counsel for Technology Transfer & Intellectual Property.

Advanced notice will be provided for comment to the Recipient before any final written determination by DOE is issued.

(3) Pursuant to Recipient's agreement in paragraph (m) to not license, assign or otherwise transfer rights to subject inventions at any tier unless the entity agrees to paragraph (m): any such license, assignment, or other transfer of right to any subject invention developed under the award shall contain paragraph (m) suitably modified to properly identify the parties. If a licensee, assignee, or other transferee of rights to any subject invention is finally determined by DOE in writing to be in breach of paragraph (m), the applicable license, assignment or other transfer shall be deemed null and void. Advanced notice will be provided for comment to the non-complying party before any final written determination by DOE is made.

(4) For clarity, if the forfeiture of title to any subject invention is due to a breach of paragraph (m), the Recipient shall not be entitled to any compensation, or to a license to the subject invention including the reserved license in section (e)(1), unless DOE grants a license through a separately agreed upon licensing agreement.

(End of Clause)

2. 2 CFR Part 910, Subpart D, Appendix A, Rights in Data - Programs Covered Under Special Data Statutes

(a) Definitions

Computer databases, as used in this clause, means a collection of data in a form capable of, and for the purpose of, being stored in, processed, and operated on by a computer. The term does not include computer software.

Computer software, as used in this clause, means (i) computer programs which are data comprising a series of instructions, rules, routines, or statements, regardless of the media in which recorded, that allow or cause a computer to perform a specific operation or series of operations and (ii) data comprising source code listings, design details, algorithms, processes, flow charts, formulae and related material that would enable the computer program to be produced, created or compiled. The term does not include computer data bases.

Data, as used in this clause, means recorded information, regardless of form or the media on which it may be recorded. The term includes technical data and computer software. The term does not include information incidental to administration, such as financial, administrative, cost or pricing or management information.

Form, fit, and function data, as used in this clause, means data relating to items, components, or processes that are sufficient to enable physical and functional

interchangeability as well as data identifying source, size, configuration, mating and attachment characteristics, functional characteristics, and performance requirements except that for computer software it means data identifying source, functional characteristics, and performance requirements but specifically excludes the source code, algorithm, process, formulae, and flow charts of the software.

Limited rights data, as used in this clause, means data (other than computer software) developed at private expense that embody trade secrets or are commercial or financial and confidential or privileged.

Restricted computer software, as used in this clause, means computer software developed at private expense and that is a trade secret; is commercial or financial and confidential or privileged; or is published copyrighted computer software; including modifications of such computer software.

Protected data, as used in this clause, means technical data or commercial or financial data first produced in the performance of the award which, if it had been obtained from and first produced by a non-federal party, would be a trade secret or commercial or financial information that is privileged or confidential under the meaning of 5 U.S.C. 552(b)(4) and which data is marked as being protected data by a party to the award.

Protected rights, as used in this clause, mean the rights in protected data set forth in the Protected Rights Notice of paragraph (g) of this clause.

Technical data, as used in this clause, means that data which are of a scientific or technical nature. Technical data does not include computer software, but does include manuals and instructional materials and technical data formatted as a computer data base.

Unlimited rights, as used in this clause, means the right of the Government to use, disclose, reproduce, prepare derivative works, distribute copies to the public, and perform publicly and display publicly, in any manner and for any purpose whatsoever, and to have or permit others to do so.

(b) Allocation of Rights

(1) Except as provided in paragraph (c) of this clause regarding copyright, the Government shall have unlimited rights in:

(i) Data specifically identified in this agreement as data to be delivered without restriction;

(ii) Form, fit, and function data delivered under this agreement;

(iii) Data delivered under this agreement (except for restricted computer software) that constitute manuals or instructional and training material for installation, operation, or routine maintenance and repair of items, components, or processes delivered or furnished for use under this agreement; and

(iv) All other data delivered under this agreement unless provided otherwise for protected data in accordance with paragraph (g) of this clause or for limited rights data or restricted computer software in accordance with paragraph (h) of this clause.

(2) The Recipient shall have the right to:

(i) Protect rights in protected data delivered under this agreement in the manner and to the extent provided in paragraph (g) of this clause;

(ii) Withhold from delivery those data which are limited rights data or restricted computer software to the extent provided in paragraph (h) of this clause;

(iii) Substantiate use of, add, or correct protected rights or copyrights notices and to take other appropriate action, in accordance with paragraph (e) of this clause; and

(iv) Establish claim to copyright subsisting in data first produced in the performance of this agreement to the extent provided in subparagraph (c)(1) of this clause.

(c) Copyright

(1) Data first produced in the performance of this agreement. Except as otherwise specifically provided in this agreement, the Recipient may establish, without the prior approval of the Grants Officer, claim to copyright subsisting in any data first produced in the performance of this agreement. If claim to copyright is made, the Recipient shall affix the applicable copyright notice of 17 U.S.C. 401 or 402 and acknowledgment of Government sponsorship (including agreement number) to the data when such data are delivered to the Government, as well as when the data are published or deposited for registration as a published work in the U.S. Copyright Office. For such copyrighted data, including computer software, the Recipient grants to the Government, and others acting on its behalf, a paid-up nonexclusive, irrevocable, worldwide license to reproduce, prepare derivative works, distribute copies to the public, and perform publicly and display publicly,

by or on behalf of the Government, for all such data.

(2) Data not first produced in the performance of this agreement. The Recipient shall not, without prior written permission of the Grants Officer, incorporate in data delivered under this agreement any data that are not first produced in the performance of this agreement and that contain the copyright notice of 17 U.S.C. 401 or 402, unless the Recipient identifies such data and grants to the Government, or acquires on its behalf, a license of the same scope as set forth in subparagraph (c)(1) of this clause; provided, however, that if such data are computer software, the Government shall acquire a copyright license as set forth in subparagraph (h)(3) of this clause if included in this agreement or as otherwise may be provided in a collateral agreement incorporated or made a part of this agreement.

(3) Removal of copyright notices. The Government agrees not to remove any copyright notices placed on data pursuant to this paragraph (c), and to include such notices on all reproductions of the data.

(d) Release, Publication and Use of Data

(1) The Recipient shall have the right to use, release to others, reproduce, distribute, or publish any data first produced or specifically used by the Recipient in the performance of this contract, except to the extent such data may be subject to the Federal export control or national security laws or regulations, or unless otherwise provided in this paragraph of this clause or expressly set forth in this contract.

(2) The Recipient agrees that to the extent it receives or is given access to data necessary for the performance of this agreement which contain restrictive markings, the Recipient shall treat the data in accordance with such markings unless otherwise specifically authorized in writing by the Grants Officer.

(e) Unauthorized Marking of Data

(1) Notwithstanding any other provisions of this agreement concerning inspection or acceptance, if any data delivered under this agreement bears any restrictive or limiting markings not authorized by this agreement, the Grants Officer may at any time either return the data to the Recipient or cancel or ignore the markings. However, the following procedures shall apply prior to canceling or ignoring the markings.

(i) The Grants Officer shall make written inquiry to the Recipient affording the Recipient 30 days from receipt of the inquiry to provide written

justification to substantiate the propriety of the markings;

(ii) If the Recipient fails to respond or fails to provide written justification to substantiate the propriety of the markings within the 30-day period (or a longer time not exceeding 90 days approved in writing by the Grants Officer for good cause shown), the Government shall have the right to cancel or ignore the markings at any time after said period and the data will no longer be made subject to any disclosure prohibitions.

(iii) If the Recipient provides written justification to substantiate the propriety of the markings within the period set in subdivision (e)(1)(i) of this clause, the Grants Officer shall consider such written justification and determine whether or not the markings are to be cancelled or ignored. If the Grants Officer determines that the markings are authorized, the Recipient shall be so notified in writing. If the Grants Officer determines, with concurrence of the head of the contracting activity, that the markings are not authorized, the Grants Officer shall furnish the Recipient a written determination, which determination shall become the final agency decision regarding the appropriateness of the markings unless the Recipient files suit in a court of competent jurisdiction within 90 days of receipt of the Grants Officer's decision. The Government shall continue to abide by the markings under this subdivision (e)(1)(iii) until final resolution of the matter either by the Grants Officer's determination become final (in which instance the Government shall thereafter have the right to cancel or ignore the markings at any time and the data will no longer be made subject to any disclosure prohibitions), or by final disposition of the matter by court decision if suit is filed.

(2) The time limits in the procedures set forth in subparagraph (e)(1) of this clause may be modified in accordance with agency regulations implementing the Freedom of Information Act (5 U.S.C. 552) if necessary to respond to a request thereunder.

(f) Omitted or Incorrect Markings

(1) Data delivered to the Government without either the limited rights or restricted rights notice as authorized by paragraph (h) of this clause, the protected data notice as authorized in paragraph (g), or the copyright notice required by paragraph (c) of this clause, shall be deemed to have been furnished with unlimited rights, and the Government assumes no liability for the disclosure, use, or reproduction of such data. However, to the extent the data has not been disclosed without restriction outside the Government, the Recipient may

request, within 6 months (or a longer time approved by the Grants Officer for good cause shown) after delivery of such data, permission to have notices placed on qualifying data at the Recipient's expense, and the Grants Officer may agree to do so if the Recipient:

(i) Identifies the data to which the omitted notice is to be applied;

(ii) Demonstrates that the omission of the notice was inadvertent;

(ii) Establishes that the use of the proposed notice is authorized; and

(iii) Acknowledges that the Government has no liability with respect to the disclosure, use, or reproduction of any such data made prior to the addition of the notice or resulting from the omission of the notice.

(2) The Grants Officer may also:

(i) Permit correction at the Recipient's expense of incorrect notices if the Recipient identifies the data on which correction of the notice is to be made, and demonstrates that the correct notice is authorized; or

(ii) Correct any incorrect notices.

(g) Rights to Protected Data

(1) The Recipient may, with the concurrence of DOE, claim and mark as protected data, any data first produced in the performance of this award that would have been treated as a trade secret if developed at private expense. Any such claimed ”protected data'' will be clearly marked with the following Protected Rights Notice, and will be treated in accordance with such Notice, subject to the provisions of paragraphs (e) and (f) of this clause.

PROTECTED RIGHTS NOTICE

These protected data were produced under agreement no.____ with the U.S. Department of Energy and may not be published, disseminated, or disclosed to others outside the Government until twenty (20) years after development of information under this agreement, unless express written authorization is obtained from the recipient. Upon expiration of the period of protection set forth in this Notice, the Government shall have unlimited rights in this data. This Notice shall be marked on any reproduction of this data, in whole or in part. (End of notice).

(2) Any such marked Protected Data may be disclosed under obligations of confidentiality for the following purposes:

(a) For evaluation purposes under the restriction that the ``Protected Data'' be retained in confidence and not be further disclosed; or

(b) To subcontractors or other team members performing work under the Government's program of which this award is a part, for information or use in connection with the work performed under their activity, and under the restriction that the Protected Data be retained in confidence and not be further disclosed.

(3) The obligations of confidentiality and restrictions on publication and dissemination shall end for any Protected Data.

(a) At the end of the protected period;

(b) If the data becomes publicly known or available from other sources without a breach of the obligation of confidentiality with respect to the Protected Data;

(c) If the same data is independently developed by someone who did not have access to the Protected Data and such data is made available without obligations of confidentiality; or

(d) If the Recipient disseminates or authorizes another to disseminate such data without obligations of confidentiality.

(4) However, the Recipient agrees that the following types of data are not considered to be protected and shall be provided to the Government when required by this award without any claim that the data are Protected Data. The parties agree that notwithstanding the following lists of types of data, nothing precludes the Government from seeking delivery of additional data in accordance with this award, or from making publicly available additional non-protected data, nor does the following list constitute any admission by the Government that technical data not on the list is Protected Data.

- General (non-enabling) description of basic operational principles, functionalities, and novelty of the universal canister system, surface handling equipment, generic interface points of combined facility, and other subsystems.

- General (non-enabling) illustrations/images of the universal canister system, surface handling equipment, generic interface points of combined facility, and other subsystems.
- Information related to follow-on funding raised during the project, including overall dollar amount, timing, and type of investor group.
- Qualitative descriptions from the results from the technoeconomic analyses, without disclosure of any specifics of the underlying analyses. For example, a permitted description might be, by way of clarification but not limitation: "The SCALEUP investment in Deep Isolation's technology reduced the cost of radioactive material disposal by X%;" and a non-permissible disclosure under this bullet would be "…improved disposal economics for spent fuel generated by a named commercial reactor by X%." All results will be presented in a relative versus absolute term (e.g. % improvement relative to traditional/incumbent technology), and will not be described by reference to a specific, single product unless an exception to either is mutually agreed upon by ARPA-E and awardee.
- As required, any data and/or information mutually determined by the ARPA-E project Federal Lead and awardee to be critical and important for ARPA-E to use in both internal DOE and external communications, reports, etc.
- All data and information publicly released by the performer team, such as through journal articles, workshop, and conference presentations, press releases, social media, etc

(5) The Government's sole obligation with respect to any protected data shall be as set forth in this paragraph (g).

(h) Protection of Limited Rights Data

When data other than that listed in subparagraphs (b)(1)(i), (ii), and (iii) of this clause are specified to be delivered under this agreement and such data qualify as either limited rights data or restricted computer software, the Recipient, if the Recipient desires to continue protection of such data, shall withhold such data and not furnish them to the Government under this agreement. As a condition to this withholding the Recipient shall identify the data being withheld and furnish form, fit, and function data

in lieu thereof.

(i) Subaward/Contract

The Recipient has the responsibility to obtain from its subrecipients/contractors all data and rights therein necessary to fulfill the Recipient's obligations to the Government under this agreement. If a subrecipient/contractor refuses to accept terms affording the Government such rights, the Recipient shall promptly bring such refusal to the attention of the Grants Officer and not proceed with subaward/contract award without further authorization. See Section 6 of this Attachment 2 for instructions regarding intellectual property provisions for subawards under this agreement.

(j) Additional Data Requirements

In addition to the data specified elsewhere in this agreement to be delivered, the Grants Officer may, at any time during agreement performance or within a period of 3 years after acceptance of all items to be delivered under this agreement, order any data first produced or specifically used in the performance of this agreement. This clause is applicable to all data ordered under this subparagraph. Nothing contained in this subparagraph shall require the Recipient to deliver any data the withholding of which is authorized by this clause or data which are specifically identified in this agreement as not subject to this clause. When data are to be delivered under this subparagraph, the Recipient will be compensated for converting the data into the prescribed form, for reproduction, and for delivery.

(k) The Recipient agrees, except as may be otherwise specified in this agreement for specific data items listed as not subject to this paragraph, that the Grants Officer or an authorized representative may, up to three years after acceptance of all items to be delivered under this contract, inspect at the Recipient's facility any data withheld pursuant to paragraph (h) of this clause, for purposes of verifying the Recipient's assertion pertaining to the limited rights or restricted rights status of the data or for evaluating work performance. Where the Recipient whose data are to be inspected demonstrates to the Grants Officer that there would be a possible conflict of interest if the inspection were made by a particular representative, the Grants Officer shall designate an alternate inspector.

(End of Clause)

3. Authorization and Consent 2 CFR 910.362(g)(2)

(a) The Government authorizes and consents to all use and manufacture of any invention described in and covered by a United States patent in the performance of this contract or any subcontract at any tier.

(b) The Recipient shall include the substance of this clause, including this paragraph (b), in all subcontracts that are expected to exceed the simplified acquisition threshold. However, omission of this clause from any subcontract, including those at or below the simplified acquisition threshold, does not affect this authorization and consent.

(End of clause)

4. Notice and Assistance Regarding Patent and Copyright Infringement 2 CFR 910.362(g)(3)

(a) The Recipient shall report to the Grants Officer, promptly and in reasonable written detail, each notice or claim of patent or copyright infringement based on the performance of this contract of which the Recipient has knowledge.

(b) In the event of any claim or suit against the Government on account of any alleged patent or copyright infringement arising out of the performance of this contract or out of the use of any supplies furnished or work or services performed under this contract, the Contractor shall furnish to the Government, when requested by the Grants Officer, all evidence and information in the Recipient's possession pertaining to such claim or suit. Such evidence and information shall be furnished at the expense of the Government except where the Recipient has agreed to indemnify the Government.

(c) The Contractor shall include the substance of this clause, including this paragraph (c), in all subcontracts that are expected to exceed the simplified acquisition threshold.

(End of clause)

5. Subawards.

(a) Small Business Subawardees: The Recipient shall incorporate all of the intellectual property provisions found in Attachment 2 (Domestic Small Businesses) INCLUDING ENHANCED U.S. COMPETITIVENESS of the ARPA-E Model Cooperative Agreement (published at http://arpa-e.energy.gov/) in all subawards with domestic small businesses. In incorporating the above-referenced intellectual property provisions, the Recipient shall expressly require compliance with their terms and conditions.

(b) University and Nonprofit Organization Subawardees: The Recipient shall incorporate all of the intellectual property provisions found in Attachment 2 (Domestic Universities and Nonprofit Organizations) INCLUDING ENHANCED U.S. COMPETITIVENESS of the ARPA-E

Model Cooperative Agreement (published at http://arpa-e.energy.gov/) into all subawards with domestic universities or domestic nonprofit organizations. In incorporating the above-referenced intellectual property provisions, the Recipient shall expressly require compliance with their terms and conditions.

(c) Large Business and Foreign Entity Subawardees:

(1) If a large business receiving a subaward provides cost sharing of at least 20% under its subaward the Recipient shall incorporate all of the intellectual property provisions found in Attachment 2 (Large Businesses)—Waiver (Patent Rights) INCLUDING ENHANCED U.S. COMPETITIVENESS IN SUBAWARDS of the ARPA-E Model Cooperative Agreement (published at http://arpa-e.energy.gov/) into its subaward with the large business.

(2) If a large business receiving a subaward does not provide cost sharing of at least 20% under its subaward or a foreign entity receiving a subaward, the Recipient shall incorporate all of the intellectual property provisions found in Attachment 2 (Large Businesses)—No Waiver (Patent Rights) INCLUDING ENHANCED U.S. COMPETITIVENESS IN SUBAWARDS of the ARPA-E Model Cooperative Agreement (published at http://arpa-e.energy.gov/) into its subaward with the large business or foreign entity. Upon request to Patent Counsel for good cause shown, the right to use the Attachment 2 (Large Businesses)—Waiver (Patent Rights) INCLUDING ENHANCED U.S. COMPETITIVENESS IN SUBAWARDS in the award to the large business or foreign entity may be granted.

(3) In incorporating the above-referenced intellectual property provisions, the Recipient shall expressly require compliance with their terms and conditions.

(d) Subaward Unlimited Rights Data List: For any subaward/subcontract with a for-profit entity (including subcontracts with for-profit vendors) for experimental, developmental or research work, the Recipient will insert the unlimited rights data list found in paragraph (g)(4) under the Rights in Data clause into the corresponding Rights in Data provision in the subaward/subcontract.

(End of Clause)

ADDENDUM

AGREEMENT by DEEP Isolation Inc. to address the appearance of a conflict of Interest in an award by ARPA-E to DEEP Isolation LLC

Whereas Deep Isolation US LLC, a Delaware limited liability company ("DI LLC") is wholly owned by Deep Isolation, Inc., a Delaware corporation ("DI");

Whereas DI LLC and DI, in an agreement entitled "INTELLECTUAL PROPERTY TRANSFER AND ASSUMPTION AGREEMENT," have agreed that all DI LLC's right, title, and interest in, and to, any and all inventions, discoveries, improvements, patent rights, copyrights, technical data rights, know-how, and other intellectual property rights now or hereafter owned or acquired by DI LLC are assigned, transferred, and conveyed to DI including any subject inventions arising from an award to be made by ARPA-E to DI LLC, DE-AR0002176 under the SCALEUP READY NOFO ("Award");

Whereas DI LLC and DI share the same officers and have the same address thereby having the appearance of a conflict of interest in that DI can influence the activities to be conducted by DI LLC in performance of the Award;

Whereas DI owns inventions or discoveries which are or may be patentable or otherwise protectable under Title 35 of the United States Code, and/or any novel variety of plant which is or may be protected under the Plant Variety Protection Act (7 U.S.C. 2321et seq.) that are or were not made by DI LLC in performance of the Award;

Therefore, as partial consideration for ARPA-E making the Award to DI LLC, DI hereby agrees that any invention to which DI has title, and which is not made by DI LLC in performance of the Award, but which is first actually reduced to practice in performance of the Award, by any party to the Award, shall be treated as a subject invention made in performance of the Award, and shall be reported by DI as a subject invention made in performance of the Award and be subject to all requirements and obligations attaching to any subject invention made under the Award.

_____ _____

Rod Baltzer Date:
Chief Executive Officer
Deep Isolation, Inc.

ATTACHMENT 3:

TECHNICAL MILESTONES AND DELIVERABLES

Recipient	Deep Isolation US LLC
Award No.	DE-AR0002176
Type of Funding Agreement	Cooperative Agreement
Competitive or Noncompetitive Award	Competitive
Notice of Funding Opportunity (NOFO) (if applicable)	DE-FOA-0003467, Seeding Critical Advances for Leading Energy technologies with Untapped Potential (SCALEUP) Ready

A. STATEMENT OF PROJECT OBJECTIVES

This project will experimentally show an integrated system for the storage, transportation, and disposal of spent fuel from nuclear reactors using Deep Isolation's Universal Canister System (UCS) and deep borehole disposal technology. Existing approaches rely on multiple handling and repackaging steps across storage, transport, and disposal, increasing cost, complexity, and long-term risk. The UCS enables a single, triple-purpose canister approach that can be used across storage, transportation, and disposal without repackaging, supporting a more streamlined and potentially lower-cost waste management pathway.

The goal of this project is to transition the UCS and deep borehole system from proven prototype capability toward first-of-a-kind deployment by experimentally showing the technical feasibility, establishing a viable regulatory pathway, and validating commercial readiness. This includes confirming compatibility of TRISO spent nuclear fuel with the UCS, advancing licensing under 10 CFR Part 71, Packaging and Transportation of Radioactive Material, and 10 CFR Part 72, Licensing Requirements for the Independent Storage of Spent Nuclear Fuel, High-Level Radioactive Waste, and Reactor-Related Greater Than Class C Waste, and executing integrated system testing in a representative repository environment to confirm end-to-end operational performance.

The project is structured across three coordinated workstreams:

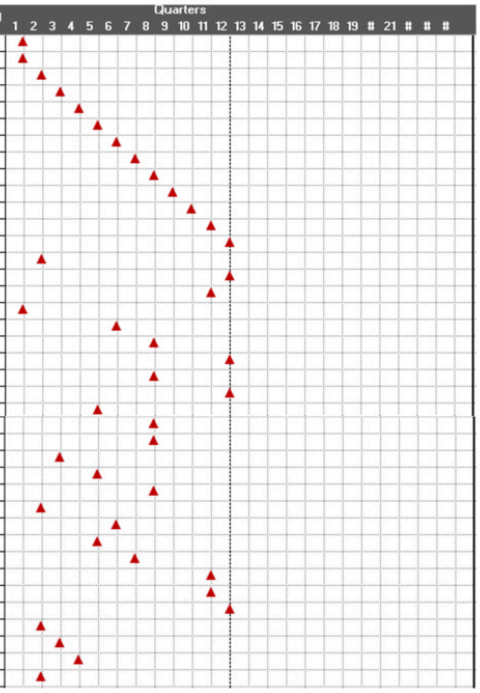
- **FIRST**: ***First Implementation of Repository-Ready Storage Technology***, focused on designing and preparing the first real-world UCS deployment, which may include future co-location with Westinghouse's eVinci™ microreactor refurbishment facility and SNF storage facility.

- **FILE**: ***Formal Issuance of Licensing for eVinci***, covering the application for Nuclear Regulatory Commission (NRC) certification of the UCS for storage and transport of Westinghouse's eVinci™ SNF.
- **FUTURE**: ***Full Underground Testing of the UCS in a Repository Environment***, delivering a prototypic-scale, non-radioactive borehole commercial pilot to confirm long-term disposal readiness, at the Deep Borehole Demonstration Center's test site in Cameron, Texas.

The expected outcome is an experimentally validated, integrated, end-to-end system for management of spent nuclear fuel (SNF) and high-level radioactive waste (HLW) that reduces handling complexity, enables compatibility with existing transportation and storage systems, and supports a scalable pathway to disposal using deep borehole technology.

B. SCHEDULE OF TECHNICAL TASKS, MILESTONES, AND DELIVERABLES

WBS	Milestone Title	G/N	Start	End
M1.1	Go/No-Go: Refine tasks and milestones (if applicable)		1	1
M1.2	Implement Risk Register		1	1
M1.3.01	Update Risk Register Quarterly		2	2
M1.3.02	Update Risk Register Quarterly		3	3
M1.3.03	Update Risk Register Quarterly		4	4
M1.3.04	Update Risk Register Quarterly		5	5
M1.3.05	Update Risk Register Quarterly		6	6
M1.3.06	Update Risk Register Quarterly		7	7
M1.3.07	Update Risk Register Quarterly		8	8
M1.3.08	Update Risk Register Quarterly		9	9
M1.3.09	Update Risk Register Quarterly		10	10
M1.3.10	Update Risk Register Quarterly		11	11
M1.4.1	Local Community Engagement Execution and Report		12	12
M1.4.2	Stakeholder Outreach Plan		2	2
M1.4.3	Stakeholder Outreach Execution and Report		12	12
M1.5	Intellectual Property Consolidation		11	11
M1.6.1	Develop Initial Technoeconomic Analysis (TEA) Framework		1	1
M1.6.2	Complete Initial TEA		6	6
M1.6.3	Update TEA		8	8
M1.6.4	Final TEA		12	12
M1.6.5	Develop 5-Year Commercial Plan		8	8
M1.7	Final Project Presentation & Report		12	12
M2.1.1	Concentual Design for Integrated Facility		5	5
M2.1.2	Preliminary Design for UCS Storage		8	8
M2.1.3	Conceptual Design for Borehole Repository Interface		8	8
M2.2.1	Waste Validation		3	3
M2.2.2	UCS System Selection		5	5
M2.2.3	Tier 2 Supply Chain Optimization		8	8
M3.1.1	Integrated eVinci SNF Licensing Plan		2	2
M3.1.2	Go/No-Go: FSAR Completion		6	6
M4.3.2(i)	Permits Notification and Certification		5	5
M3.1.3	NRC Submittal of FSAR		7	7
M3.1.4	NRC Storage and Transport License Engagement		11	11
M3.2.1	Government and Regulatory Engagement		11	11
M3.2.2	Regulatory Roadmap		12	12
M4.1.1	Go/No-Go: Borehole Architecture Design		2	2
M4.1.2	Functional Safety Basis		3	3
M4.1.3	Surface Handling Design		4	4
M4.2.1	UCS Procurement		2	2



C. DESCRIPTION OF TECHNICAL TASKS, MILESTONES, AND DELIVERABLES

C.1 Project's Risk Assessment

Technical Risk:	
Major Risks	**Prioritized Milestones for Mitigation**
a. **Project complexity:** If coordination across multiple organizations, workstreams, and system interfaces is not properly managed, then integration risks may lead to failure to deliver the intended scope given schedule and budget.	M1.1 → M1.2 → M1.3 → M4.5.1 **Possible mitigation:** Reduce project execution uncertainty by establishing and progressively validating a structured project management and integration framework across all delivery partners: • **M1.1:** Reduce *scope definition and alignment risk* by refining tasks, deliverables, and interfaces across all workstreams at project outset, ensuring that responsibilities, dependencies, and success criteria are clearly defined and agreed. • **M1.2:** Reduce *coordination risk* by establishing a shared Project Management Office (PMO) across all Team Members, accountable for: - Ensuring that risks, issues, and interdependencies are systematically identified, tracked, and managed across all team members - Supporting this with a common digital environment for task, risk and issue management - Deployment of Project Management Body of Knowledge (PMBOK) best practices - Establishing clear risk and issue escalation processes to top management. • **M1.3** (Quarterly risk updates): Reduce *emerging issue and drift risk* by maintaining continuous monitoring and updating of technical and commercial risks, enabling early identification of deviations from plan and timely corrective action as project complexity evolves. • **M4.5.1**: Reduce *integration risk* by incorporating lessons learned from subsurface and surface testing into an integrated Commercial Pilot plan, ensuring that coordination across organizations, systems, and workflows has been validated prior to full end-to-end execution. Residual risk relates to the inherent complexity of coordinating multiple organizations and workstreams in a first-of-a-kind project. This is mitigated through continuous risk tracking, defined escalation pathways, and progressive validation of integrated execution during pilot planning and demonstration.
b. **Tier 2 supplier risks:** Project expenditures with	M4.1.1 → M4.1.3 → M4.2.1 → M4.2.2 → M4.2.3 → M4.3.2

organizations outside the core Delivery Team (for borehole casing, drilling costs, surface handling equipment, etc.) are significant. If supplier performance, availability, or costs deviate from assumptions, then there may be insufficient funds or delays in executing project scope.	**Possible mitigation:** Reduce supply chain and cost uncertainty by progressively aligning design, procurement, and execution with proven suppliers, validated specifications, and market-tested pricing: • **M4.1.1 → M4.1.3:** Reduce *specification and scope uncertainty risk* by defining borehole architecture and surface handling system requirements based on mature technologies and standard industry practices, ensuring that procurement is anchored in well-understood and deliverable specifications. • **M4.2.1 → M4.2.2 → M4.2.3:** Reduce *supplier availability and cost uncertainty risk* by engaging suppliers early, placing orders for critical components, and validating fabrication and delivery pathways for UCS canisters, borehole systems, and surface handling equipment. These milestones will provide direct evidence of supplier capability, lead times, and pricing under real project conditions, and the resulting data will be used to: - Inform future risk mitigation plans - Progressively validate and refine cost assumptions in the evolving TEA (M1.7x). • **M4.3.2:** Reduce *execution and performance risk* by utilizing procured components in borehole construction, confirming that suppliers can deliver equipment and services that meet required specifications in field conditions. • **M4.3.3:** Reduce *system-level supply chain integration risk* by demonstrating that procured components (UCS, drilling systems, handling equipment) function together as intended during emplacement and retrieval operations, validating compatibility across multiple suppliers. Residual risk relates to market fluctuations, supplier capacity constraints, and scaling to future deployments. These are mitigated through use of established supply chains, competitive procurement and benchmarking where appropriate, and documentation of supplier performance, cost, and delivery data during pilot execution to inform future deployments.
c. **Project schedule risk:** If preparation for and execution of the FUTURE scope is delayed — particularly for long-lead procurement, borehole construction, and integrated testing — then the project may not complete all	M1.1 → M1.2 → M4.2.1 → M4.2.2 → M4.2.3 → M4.3.3 → M4.5.2 **Possible mitigation:** Planning and supplier engagement for long lead materials has commenced prior to the SCALEUP

deliverables within the schedule.	application, enabling rapid procurement at start of the project. Schedule uncertainty will be further reduced by identifying and progressively de-risking critical path activities (particularly procurement, construction, and integrated testing) through early action, staged validation, and iterative integration: • **M1.1 → M1.2:** Reduce *planning and critical path definition risk* by refining task sequencing, dependencies, and milestone alignment at project outset, and establishing a risk management framework that explicitly tracks schedule-critical activities and potential delays. • **M4.2.1 → M4.2.2 → M4.2.3:** Reduce *long-lead procurement risk* by initiating procurement of UCS canisters, borehole system components, and surface handling equipment early in the project, securing delivery timelines and reducing exposure to supply chain delays. • **M4.3.2:** Reduce *construction schedule risk* by completing borehole drilling and preparation in advance of integrated testing, ensuring that the most schedule-critical field activity is executed with sufficient contingency for downstream activities. • **M4.3.3 → M4.5.2:** Reduce *integration and rework risk* by staging testing from initial subsurface operations through to integrated dry runs, allowing identification and resolution of issues prior to final Commercial Pilot execution, thereby avoiding late-stage delays. • **M4.5.1:** Reduce *final execution risk* by incorporating lessons learned from earlier testing phases into a refined Commercial Pilot plan, ensuring that the final demonstration is based on validated processes and minimizing the likelihood of schedule impacts during end-to-end execution. Residual risk relates to unforeseen delays in field operations, supplier performance, or integration activities. These are mitigated through early procurement, staged testing, and continuous monitoring of schedule-critical risks within the project risk management framework.
d. **Borehole Construction Performance Risk:** If the borehole cannot be constructed to required specifications (diameter, trajectory control, casing integrity), then emplacement and retrieval operations may not be feasible or repeatable.	M4.1.1 → M4.2.2 → M4.3.2 → M4.3.3 → M4.3.3 **Possible mitigation:** Reduce borehole construction uncertainty by anchoring design in proven directional drilling practices and progressively validating constructability under representative conditions:

	• **M4.1.1:** Reduce design feasibility risk by defining a borehole architecture that is explicitly constrained by available drilling technologies, equipment capabilities, and site geology, avoiding reliance on unproven construction methods. • **M4.2.2:** Reduce procurement and execution risk by securing long-lead drilling components and aligning suppliers with the defined design, ensuring that planned construction methods are practically deliverable. • **M4.3.2:** Reduce construction performance risk by executing full-scale borehole drilling and casing installation under known geological conditions, providing direct evidence that required tolerances (diameter, curvature, sealing) can be achieved in the field. • **M4.3.3**: Reduce operational compatibility risk by demonstrating that the constructed borehole supports successful emplacement and retrieval operations, confirming that construction outcomes are sufficient for system functionality. Residual risk relates to variability in subsurface conditions and scalability to other sites, which will be partially addressed through documentation of construction parameters and tolerances during pilot execution.
e. **Emplacement and Retrieval Reliability Risk:** If UCS emplacement and retrieval operations are not reliable, controllable, and repeatable, then the system may not be operationally viable for commercial deployment.	M4.3.1 → M4.3.3 → M4.5.2 **Possible mitigation:** Reduce operational uncertainty through staged testing that progresses from defined procedures to integrated system validation: • **M4.3.1:** Reduce procedural and control risk by defining detailed test protocols, operational sequences, and success criteria, ensuring that emplacement and retrieval are governed by engineered processes rather than ad hoc execution. • **M4.3.3:** Reduce single-operation performance risk by demonstrating successful emplacement and retrieval under representative conditions, confirming basic functional feasibility of the system. • **M4.5.2:** Reduce repeatability and integration risk by executing an end-to-end dry run of integrated operations, identifying and resolving failure modes, inefficiencies, or control issues across multiple system interfaces.

	Residual risk includes long-term operational variability and scaling effects, which are mitigated through repeat testing and procedural refinement captured during pilot activities.
f. **Surface Handling System Integration Risk:** If transfer of UCS canisters from storage through surface handling to borehole staging is inefficient, unsafe, or poorly integrated, then overall system performance and deployability may be compromised.	M4.1.3 → M4.2.3 → M4.4.2 → M4.4.3 → M4.5.2 → M4.5.3 **Possible mitigation:** reduce integration risk by validating system interfaces and operational workflows in a staged manner prior to full system demonstration: • **M4.1.3:** Reduce design integration risk by defining system architecture, interfaces, and functional requirements across all surface handling components, ensuring compatibility between equipment and operations from the outset. • **M4.2.3:** Reduce fabrication and specification risk by procuring equipment aligned with defined requirements, ensuring that physical systems reflect intended design and performance criteria. • **M4.4.2**: Reduce equipment readiness and interface risk through shakedown testing, validating that individual components and control systems function correctly and integrate as expected prior to operational testing. • **M4.4.3:** Reduce operational workflow risk by executing full surface handling sequences, confirming that canisters can be transferred safely and efficiently from storage to borehole staging and back. • **M4.5.2 → M4.5.3:** Reduce system-level integration risk by demonstrating seamless interaction between surface handling and subsurface operations, validating timing, coordination, and overall process performance in an end-to-end context. Residual risk relates to optimization of throughput and site-specific adaptations, which are addressed through iterative refinement during pilot execution.
Adoption Risk:	
Major Risks	**Prioritized Milestones for Mitigation**
g. **Licensing risk:** As the world's first commercial triple-purpose canister for advanced reactor waste, the UCS faces an uncertain regulatory path. This is exacerbated because Deep Isolation has not previously taken any products through an NRC storage or transport licensing process.	M2.2.1 → M2.2.2 → M3.1.1 → M3.1.2 → M3.1.3 → M3.2.1 → M3.2.2 **Possible mitigation:** Reduce licensing uncertainty by structuring the UCS approval pathway as an amendment to existing NAC Certificates of Compliance (CoCs) for MAGNASTOR® (10 CFR Part 72) and MAGNATRAN® (10 CFR

	Part 71), rather than pursuing a de novo certification. NAC's prior approvals establish precedent for system-level safety cases (structural, thermal, shielding, and criticality), allowing this project to focus on residual risks specific to UCS geometry and materials and to eVinci TRISO fuel characteristics. Risk reduction is achieved through a staged process that progressively resolves key uncertainties: • **M2.2.1 → M2.2.2:** Reduce input uncertainty risk by establishing defensible, bounded fuel characteristics and aligning the UCS design configuration to those bounds. This ensures that subsequent safety analyses are based on stable, regulator-credible inputs rather than evolving assumptions. • **M3.1.1:** Reduce regulatory pathway risk by securing early NRC alignment on the proposed amendment-based approach, including confirmation that the scope of analysis and use of precedent are acceptable before significant resources are committed to detailed safety case development. • **M3.1.2:** Reduce analysis adequacy risk by developing a complete, internally consistent safety case using conservative assumptions and bounding analyses, minimizing the likelihood of fundamental challenges during NRC review. • **M3.1.3:** Reduce regulatory acceptance risk by achieving docketing of the application, demonstrating that the NRC considers the submission sufficiently complete and technically grounded to proceed through formal review. • **M3.2.1:** Reduce integration and downstream licensing risk by incorporating ongoing regulator and stakeholder feedback, ensuring that assumptions made for storage and transport licensing remain consistent with anticipated requirements for disposal and broader deployment scenarios. • **M3.2.2:** Reduce replicability risk for future licensing processes by codifying the licensing pathway, including key decision points, data requirements, and regulatory interfaces, into a repeatable, fuel-agnostic framework that reduces time, cost, and uncertainty for future UCS deployments.
h. **Supply chain risk:** Without cost-effective fabrication pathways and resilient sourcing, the UCS may face adoption barriers in cost-sensitive markets or constraints on scalability.	M2.2.3 → M4.2.1 → M1.7.2 → M1.7.3 → M1.7.4 **Possible mitigation:** Reduce supply chain and cost uncertainty by progressively validating manufacturability, supplier capability, and cost performance under

	representative deployment conditions:
	
	• **M2.2.3:** Reduce *supplier capability risk* by:
	  - Implementing lessons learned from the UCS manufacturability review undertaken by the UK's Advanced Manufacturing Research Centre and leveraging our existing experience of UCS prototypic fabrication in Honey Brook, PA with NAC and R-V Industries.
	  - Evaluating fabrication options and engaging suppliers to identify design, material, and process optimizations, ensuring that UCS production can be achieved using existing industrial capabilities rather than bespoke approaches.
	• **M4.2.1:** Reduce *fabrication execution risk* by procuring additional UCS canisters, providing direct evidence of supplier performance, manufacturability, quality control, and delivery timelines under project conditions.
	• **M1.7.2:** Reduce *initial cost uncertainty risk* by developing a preliminary technoeconomic assessment (TEA), incorporating early supplier data and identifying key cost drivers, sensitivities, and areas requiring further refinement.
	• **M1.7.3:** Reduce *cost optimization and scalability risk* by updating the TEA using data generated from procurement, design refinement, and supply chain engagement, improving confidence in unit cost, supply chain structure, and deployment scenarios.
	• **M1.7.4:** Reduce *commercial competitiveness risk* by producing a final TEA incorporating validated cost data, demonstrating that UCS fabrication and deployment can be achieved at costs consistent with market adoption and competitive with alternative waste management approaches.
	
	Residual risk relates to market variability, supplier capacity constraints, and scaling to higher production volumes. These are mitigated through use of established manufacturing partners, incorporation of supply chain learnings into design optimization, and development of a scalable fabrication model informed by project data.

i. **Incentivization risk:** The UCS enables large lifecycle savings across storage, transport, and eventual disposal – but current market framework may disincentivize waste owners from investing in the UCS for storage because the	M1.6.2 → M1.6.3 → M1.6.4 → M1.6.5 → M3.2.1 → M4.5.3 **Possible mitigation:** Reduce market adoption uncertainty by progressively identifying, quantifying, and aligning incentives across stakeholders through integrated technoeconomic

benefits of cheaper disposal fall to DOE.	analysis, stakeholder engagement, and commercial model development: • **M1.6.2:** Reduce *business case uncertainty risk* by developing an initial technoeconomic assessment (TEA) that quantifies lifecycle costs and benefits of the UCS across storage, transport, and disposal. Include explicit evaluation of how key waste characteristics (e.g., fuel type, burn-up, enrichment, and form) influence system costs, addressing limitations in current DOE contracting frameworks that do not differentiate between these factors. • **M1.6.3:** Reduce *pricing and allocation risk* by refining the TEA using project-generated data to improve cost accuracy and to explore pricing structures and commercial arrangements that better align costs and benefits across participants in the value chain. • **M1.6.4 → M1.6.5:** Reduce *commercial viability risk* by producing a final TEA that demonstrates a credible pathway to cost-competitive deployment (including clear articulation of value propositions for each stakeholder and identification of key sensitivities affecting adoption), then underpinning that pathway with a 5-year commercial plan that translates TEA insights into actionable commercial structures (including proposed contractual frameworks and deployment strategies that align incentives across market participants). • **M3.2.1:** Reduce *policy and institutional alignment risk* by engaging with DOE and other stakeholders to test assumptions and explore how UCS deployment could be integrated within, or inform evolution of, existing frameworks (e.g., the Amended Standard Contract), including in relation to treatment of different waste types and associated costs. • **M4.5.3:** Reduce *market acceptance risk* by demonstrating the integrated system in a real-world setting, providing stakeholders with direct evidence of system performance and enabling validation of the UCS value proposition in the context of observed operations. Residual risk relates to the need for policy evolution or contractual innovation to fully align incentives across stakeholders. This is mitigated through early and ongoing engagement with DOE and industry, and by developing commercially actionable models that can accommodate differentiated waste characteristics and associated costs.

j. **Scalability risk:** As a small business, Deep Isolation may face challenges in scaling delivery capacity, supply chain, and commercial reach to maximize export opportunities enabled by a successful Commercial Pilot.	M2.2.3 → M4.2.1 → M4.2.2 → M4.2.3 → M1.5 → M1.6.3 → M1.6.4 → M1.6.5 → M4.5.3 **Possible mitigation:** Reduce scalability uncertainty by progressively validating a delivery model that combines supply chain capability, partner-based execution, and commercially viable deployment structures: • **M2.2.3 → M4.2.1 → M4.2.2 → M4.2.3:** Reduce *supply chain scalability risk* by working with our existing supply chain collaborators (e.g. Amentum, NAC, and Halliburton) to identify and engage fabrication and service providers, and to validate their ability to deliver UCS canisters, borehole systems, and surface handling equipment under project conditions. This provides evidence that deployment can be supported by existing industrial capacity rather than bespoke infrastructure. • **M4.3.2 → M4.3.3:** Reduce *execution scalability risk* by demonstrating that key operational activities (borehole construction, emplacement, retrieval) can be performed using established industry practices and partners, confirming that deployment does not depend on unique, non-replicable capabilities. • **M1.6.3 → M1.6.4:** Reduce *economic scalability risk* by refining cost models and deployment scenarios to reflect scalable supply chain configurations and partner-based delivery; use "first client" engagement with Westinghouse to develop the full contractual framework needed to support turnkey delivery, ensuring that expansion beyond initial projects remains economically viable. • **M1.5:** Reduce *intellectual property and replication risk* by consolidating project-developed IP into licensable and transferable packages, enabling deployment through trusted partners without requiring Deep Isolation to directly execute all aspects of each project. • **M1.6.5:** Reduce *organizational and commercial scaling risk* by developing a 5-year commercial plan that defines target markets, partnership structures, delivery models (e.g., EPC, licensing, hybrid), and resource requirements for scaling deployment, and that leverages U.S. government advocacy in overseas markets. • **M4.5.3:** Reduce *market and partner confidence risk* by demonstrating the integrated system in a real-world setting, providing a reference project that enables partners, customers, and investors to support broader deployment.

	Residual risk relates to the pace of market adoption, partner alignment, and scaling across different regulatory and geographic contexts. These are mitigated through a partner-based delivery model, development of transferable IP and processes, and use of initial deployments to establish reference cases for broader rollout.

C.2 Milestone Description Table

WBS	Milestone Title	Milestone Description	Due Q	Date Due
Cross-Cutting				
M1.1	**Go/No-Go: Refine tasks and milestones (if applicable)**	**Refine tasks and milestones for the work plan (if applicable).**	**1**	02/17/27
M1.2	Implement Risk Register	Implement ARPA-E provided risk management framework (including identification of schedule-critical activities, cross-organizational dependencies, and defined escalation pathways for risks and issues affecting cost, schedule, and technical performance) and populate with initial risks and mitigation plans identified in finalized SOPO. Provide to ARPA-E Program Director for review and approval.	1	02/17/27
M1.3.01	Update Risk Register Quarterly	Update technical and business/market risks as well as mitigation plans. Provide to ARPA-E Program Director for review and approval on a quarterly basis.	2	05/17/27
M1.3.02	Update Risk Register Quarterly	Update technical and business/market risks as well as mitigation plans. Provide to ARPA-E Program Director for review and approval on a quarterly basis.	3	08/17/27
M1.3.03	Update Risk Register Quarterly	Update technical and business/market risks as well as mitigation plans. Provide to ARPA-E Program Director for review and approval on a quarterly basis.	4	11/17/27
M1.3.04	Update Risk Register Quarterly	Update technical and business/market risks as well as mitigation plans. Provide to ARPA-E Program Director for review and approval on a quarterly basis.	5	02/17/28
M1.3.05	Update Risk Register Quarterly	Update technical and business/market risks as well as mitigation plans. Provide to ARPA-E Program Director for review and approval on a quarterly basis.	6	05/17/28
M1.3.06	Update Risk Register Quarterly	Update technical and business/market risks as well as mitigation plans. Provide to ARPA-E Program Director for review and approval on a quarterly basis.	7	08/17/28
M1.3.07	Update Risk Register Quarterly	Update technical and business/market risks as well as mitigation plans. Provide to ARPA-E Program Director for review and approval on a quarterly basis.	8	11/17/28
M1.3.08	Update Risk Register Quarterly	Update technical and business/market risks as well as mitigation plans. Provide to ARPA-E Program Director for review and approval on a quarterly basis.	9	02/17/29
M1.3.09	Update Risk Register Quarterly	Update technical and business/market risks as well as mitigation plans. Provide to ARPA-E Program Director for review and approval on a quarterly basis.	10	05/17/29

WBS	Milestone Title	Milestone Description	Due Q	Date Due
M1.3.10	Update Risk Register Quarterly	Update technical and business/market risks as well as mitigation plans. Provide to ARPA-E Program Director for review and approval on a quarterly basis.	11	08/17/29
M1.4.1	Local Community Engagement Execution and Report	Develop a report documenting local community engagement activities conducted at the Cameron, Texas site throughout the project. The report summarizes engagement approaches, outreach activities, and feedback received from the community, including engagement activities associated with key project milestones such as the Commercial Pilot public showcase (M4.5.3). The report evaluates how engagement activities addressed risks to project execution, including management of community perceptions related to project scope, federal involvement, and potential future use of the site. The report also captures lessons learned, effective practices, and areas for improvement, and translates these into a structured, reusable community engagement framework. This framework is intended to support future UCS and deep borehole deployments in other locations, including projects involving radioactive materials, by providing a tested and adaptable approach to community engagement. The report is provided to the ARPA-E Program Director for review and comment.	12	11/17/29
M1.4.2	Stakeholder Outreach Plan	Develop a plan for engagement with national and international stakeholders, including, but not limited to, U.S. state and federal agencies, reactor developers and operators, and international waste management and regulatory organizations. The plan defines engagement objectives, key stakeholders, planned engagement approaches (e.g., briefings, technical exchanges), and an initial strategy for participation in technical forums and dissemination of non-proprietary results. The plan is structured to allow for adaptation and expansion of engagement activities as the project progresses and is provided to ARPA-E Program Director for review and comment.	2	05/17/27
M1.4.3	Stakeholder Outreach Execution and Report	Develop a report to document execution of stakeholder outreach activities. The report summarizes engagement activities, technical exchanges, participation in relevant technical forums, and dissemination of non-proprietary project outcomes, as appropriate. The report includes, as appropriate, engagement activities associated with key project milestones, including the Commercial Pilot public showcase (M4.5.3), and provides a record of stakeholder engagement conducted throughout the project to support regulatory alignment and future deployment. The report is provided to the ARPA-E Program Director for review and comment.	12	11/17/29
M1.5	Intellectual Property Consolidation	Develop a final report summarizing actions taken throughout the project to generate and consolidate intellectual property. This includes identification of new patent opportunities arising from Commercial Pilot activities and documentation of processes, methods, and systems into licensable and copyrighted materials to support future commercialization and deployment. The report is provided to the ARPA-E Program Director for review and comment.	11	08/17/29
M1.6.1	Develop Initial Technoeconomic Analysis (TEA)	Develop an initial TEA framework, defining the overall analytical approach, key assumptions, and structure for evaluating the Universal Canister System (UCS) and deep borehole disposal. The framework identifies priority areas for analysis and	1	02/17/27

WBS	Milestone Title	Milestone Description	Due Q	Date Due
	Framework	refinement over the course of the project and establishes the basis for subsequent TEA development. The framework is provided to ARPA-E Program Director for review and approval.		
M1.6.2	Complete Initial TEA	Using the framework established in M1.6.1, develop an initial TEA providing a preliminary assessment of economic viability. The analysis includes development of a preliminary lifecycle cost perspective for UCS storage, transportation, and disposal (including evaluation of how key waste characteristics such as fuel type, burn-up, enrichment, and fuel form, influence system costs), comparison to alternative waste management approaches, and initial characterization of value to DOE (e.g., avoided repackaging) and broader stakeholders. The TEA also begins to incorporate considerations such as waste profiles, system utilization, and potential economic impacts, with key sensitivities and priority areas for further refinement identified. Results are provided to ARPA-E Program Director for review and approval.	6	05/17/28
M1.6.3	Update TEA	Update the TEA using data generated from design, licensing, and validation activities across WBS 2.x–4.x. The updated analysis refines cost models, pricing assumptions, and deployment scenarios, incorporating improved technical inputs, supply chain insights, and regulatory considerations. This phase includes development of an updated pricing approach for UCS deployment, further definition of commercial relationships and contractual interfaces among project participants, and incorporation of lessons learned into the evolving commercial and deployment framework. Updated results and assumptions are provided to ARPA-E Program Director for review and approval.	8	11/17/28
M1.6.4	Final TEA	Complete a final TEA incorporating all project results, market data, and validated system performance. The analysis provides a comprehensive economic assessment of UCS deployment, including mature cost estimates, pricing strategy, scalability considerations, and integration with applicable federal waste management frameworks. This phase incorporates results of engagement with DOE and evaluates pathways for aligning UCS deployment with existing and evolving contractual and regulatory structures, including potential impacts on lifecycle costs and value to taxpayers. The final TEA supports decision-making for post-project deployment and is provided to ARPA-E Program Director for review and approval.	12	11/17/29
M1.6.5	Develop 5-Year Commercial Plan	Develop a 5-year commercial plan outlining the pathway for commercialization and deployment of the Universal Canister System (UCS) and deep borehole disposal. The plan defines target markets, competitive positioning, supply chain considerations, and the regulatory approach, including how other cargoes (e.g., PWR SNF) will be qualified for storage and transport, as well as disposal via deep boreholes. The plan includes high-level projections for revenue, costs, and funding needs, and defines key partnerships, commercialization strategy, and priorities for scaling. It also describes the approach to leveraging project-developed intellectual property to support deployment. The commercial plan is provided to ARPA-E Program Director for review and approval and will be further refined as additional project results become available.	8	11/17/28

WBS	Milestone Title	Milestone Description	Due Q	Date Due
M1.7	Final Project Presentation & Report	Detailed presentation in final Quarterly Review and written report with results and lessons learned from all project phases and future commercialization plans. This should include updates to the 5-year plan detailing how the team will move forward after SCALEUP, with Q12 risk register update, sales/revenue projections, marketing plans, hiring plans, fundraising plans, updated competitive assessment, and other strategic objectives/activities, as appropriate. Project Summary & Report to be approved by ARPA-E Program Director.	12	11/17/29
		FIRST: First Implementation of Repository-Ready Storage Technology		
M2.1.1	Conceptual Design for Integrated Facility	Develop functional requirements and general layout for an integrated system configuration encompassing eVinci refurbishment, UCS storage, and deep borehole repository operations. This milestone coordinates design requirements across systems to evaluate common safety, security, and handling requirements, and assesses integration approaches, including co-location alternative deployment configurations, providing the basis for subsequent engineering and cost estimation. The conceptual design includes consideration of applicable regulatory frameworks (e.g., 10 CFR Part 72) at a conceptual level to inform system architecture and future licensing activities. The documented conceptual design is provided to ARPA-E Program Director for review and approval.	5	02/17/28
M2.1.2	Preliminary Design for UCS Storage	Develop a preliminary design for the SNF handling and storage facility, refining the general layout and functional requirements established in M2.1.1. This includes definition of system layout and interfaces with both the refurbishment facility and the deep borehole repository. The design advances integration across systems and provides the basis for subsequent engineering and cost estimation. The preliminary design includes consideration of applicable regulatory frameworks (e.g., 10 CFR Parts 71, 72, 73, 74, and 75, as appropriate) to inform system architecture and future licensing activities. The documented preliminary design is provided to ARPA-E Program Director for review and approval.	8	11/17/28
M2.1.3	Conceptual Design for Borehole Repository Interface	Identify the borehole repository interface points and develop a conceptual design for a deep borehole disposal repository in relation to the refurbishment site, including evaluation of interface requirements for potential co-location and alternative deployment configurations. This includes definition of key interface requirements for future integration with surface handling and emplacement systems and establishes the basis for subsequent detailed repository development. The conceptual design includes consideration of regulatory interface requirements associated with transition from storage (e.g., ISFSI under 10 CFR Part 72) to disposal, to inform system integration and support subsequent regulatory engagement activities (M3.2.1 and M3.2.2). The documented design is provided to ARPA-E Program Director for review and approval.	8	11/17/28

WBS	Milestone Title	Milestone Description	Due Q	Date Due
M2.2.1	Waste Validation	Perform characterization of the physical, radiological, and thermal properties of eVinci SNF to assess compliance with UCS Waste Acceptance Criteria for storage, transportation, and disposal. The characterization is based on defined fuel design and operating parameters and includes evaluation of physical (dimensions and weights), radiological (radionuclide inventory), and thermal (decay heat profile) data necessary to confirm compatibility with the UCS. The assessment includes consideration of applicable regulatory requirements and assumptions underlying UCS design and Waste Acceptance Criteria to inform compatibility and identify potential gaps or considerations for future licensing. A summary of the characterization data is provided to ARPA-E Program Director for review and approval.	3	08/17/27
M2.2.2	UCS System Selection	Documentation of UCS system selection, analyzing alternative UCS class options using data from M2.2.1 as inputs to identify the optimal UCS canister type and configuration for eVinci fuel. The analysis considers existing UCS classes (e.g., Class 1, 2, and 3) and their respective design configurations, evaluates suitability across these classes, and identifies the optimal selection based on techno-economic considerations. The documentation also identifies potential opportunities for further optimization of the UCS for storage and disposal of eVinci spent nuclear fuel at a co-located refurbishment and disposal facility. The documented UCS system selection is provided to ARPA-E Program Director for review and approval.	5	02/17/28
M2.2.3	Tier 2 Supply Chain Optimization	Evaluate UCS fabrication options, including identification of U.S.-based regional supply chain capacity near potential deployment sites. Informed by the results of M2.2.1 and M2.2.2, supply chain partners are engaged to identify opportunities for reducing UCS unit cost through design and material changes optimized for eVinci spent nuclear fuel and deep borehole disposal deployment. A report documenting potential supply chain optimization is provided to ARPA-E Program Director for review and approval.	8	11/17/28
FILE: Formal Issuance of Licensing for eVinci				
M3.1.1	Integrated eVinci SNF Licensing Plan	Documentation of an integrated licensing plan to secure NRC approval for storage and transportation of eVinci spent nuclear fuel in the UCS under 10 CFR Part 71 and 10 CFR Part 72. This document establishes the work plan by which detailed safety analyses and supporting documentation will be prepared and submitted to the U.S. Nuclear Regulatory Commission (NRC) to enable storage and transport of spent TRISO fuel in the UCS within NAC's existing MAGNASTOR® and MAGNATRAN® systems, respectively. The licensing plan defines the regulatory strategy, anticipated interactions, and technical workstreams needed to support subsequent safety analysis development, documentation, and NRC submittals, and will be executed in coordination with relevant design, characterization, and system selection activities across the project. The integrated licensing plan is provided to ARPA-E Program Director for review and comment.	2	05/17/27

WBS	Milestone Title	Milestone Description	Due Q	Date Due
M3.1.2	**Go/No-Go: FSAR Completion**	**Develop a Final Safety Analysis Report (FSAR) to support approval for storage and transportation of eVinci™ spent nuclear fuel in the UCS within MAGNASTOR® and MAGNATRAN® systems. The FSAR includes detailed design documentation, licensing calculations, and supporting analyses (e.g., structural, thermal, shielding, and criticality) necessary to support regulatory approval. The completed FSAR is provided to ARPA-E Program Director for review.**	**6**	05/17/28
M4.3.2(i)	Permits Notification and Certification	Provide certification to ARPA-E regarding the acquisition of all necessary permits, authorizations, and approvals. Your ARPA-E PM SETA or other primary POC can provide the form of certification.	**5**	02/17/28
M3.1.3	NRC Submittal of FSAR	Formally submit the completed FSAR and associated documentation to the NRC to support approval for storage and transportation of eVinci™ spent nuclear fuel in the UCS within MAGNASTOR® and MAGNATRAN® systems. The submittal includes required documentation to support amendment of Certificates of Compliance. Successful completion is validation by confirmation of formal receipt of the submittal by the NRC (e.g., docketing or equivalent acknowledgment).	7	08/17/28
M3.1.4	NRC Storage and Transport License Engagement	Develop a report summarizing the progress and status of NRC licensing activities for storage and transportation of eVinci™ spent nuclear fuel in the UCS within MAGNASTOR® and MAGNATRAN® systems. The report includes a summary of interactions with the NRC, including Requests for Additional Information (RAIs) and responses provided, as well as the current status of the review process. The report captures key technical, regulatory, and programmatic insights gained during the licensing process, including challenges encountered, resolution approaches, and implications for future licensing activities. The report also identifies lessons learned and best practices to inform future licensing efforts for UCS deployments. The report is provided to the ARPA-E Program Director for review and comment.	11	08/17/29
M3.2.1	Government and Regulatory Engagement	Develop a report documenting engagement with key regulatory and government stakeholders (including at a minimum the NRC and U.S. Department of Energy) conducted throughout the project in support of long-term disposal readiness for UCS and deep borehole disposal. The report summarizes engagement strategy and activities, stakeholder interactions, and key topics discussed, and captures stakeholder feedback, identified regulatory considerations, and key risks relevant to development of an acceptable licensing pathway. The report also documents lessons learned, effective engagement approaches, and areas for improvement, and translates these into a structured, reusable framework to support future regulatory engagement for UCS deployments. The summary includes considerations for co-located deployment with an eVinci™ refurbishment site as well as applicability to broader deployment scenarios. The report is provided to ARPA-E Program Director for review and comment.	11	08/17/29
M3.2.2	Regulatory Roadmap	Develop a regulatory roadmap, setting out preferred licensing pathways, key regulatory milestones, and open questions to inform future borehole disposal licensing efforts and support progression toward regulatory approval and deployment. The regulatory roadmap is submitted to ARPA-E Program Director for review and approval.	12	11/17/29

WBS	Milestone Title	Milestone Description	Due Q	Date Due
FUTURE: Full Underground Testing of the UCS in a Repository Environment				
M4.1.1	**Go/No-Go: Borehole Architecture Design**	**Develop a report for the design of the deep borehole repository, including specifications for casing, diameter, depth (minimum depth of 3,280 ft (1 km), and overall architecture based on UCS dimensions and site geology at Cameron, TX. This includes definition of borehole construction approach, identification of required equipment and materials, design of well pad surface infrastructure, identification of long-lead items, and coordination of handoff points between project team members to support execution of borehole construction and integration with repository operations. The design explicitly reflects constraints imposed by available drilling technologies, supplier capabilities, and site conditions, ensuring constructability using established industry methods. Summary report of borehole architecture design submitted to ARPA-E Program Director for review and approval.**	**2**	05/17/27
M4.1.2	Functional Safety Basis	Develop an updated, site-specific Operational Safety Case for the Commercial Pilot at Cameron, TX, building on Deep Isolation's existing generic safety case and forming the foundation for the operational pre-closure safety case. The update reflects site-specific conditions, a simulated repository configuration, and the planned operational envelope for the pilot, and is developed independently of specific co-location assumptions with external facilities. The safety basis defines hazards and initiating events associated with repository operations, develops representative operational and accident scenarios, and establishes the functional safety case for safe handling, emplacement, and retrieval of UCS canisters. The document focuses on identifying key safety functions and high-level controls necessary to manage risk, and documents assumptions, scope boundaries, and areas requiring further refinement as the project progresses. It is intended to provide a clear, structured foundation that can be iteratively updated and expanded to support validation activities and future licensing. Functional safety basis submitted to ARPA-E Program Director for review and approval.	3	08/17/27
M4.1.3	Surface Handling Design	Develop a report on the design of surface handling infrastructure and UCS-specific handling systems to support borehole repository operations. This includes definition of system architecture and operational workflows based on NAC's Universal Canister System handling concepts, identification and specification of required equipment (e.g., dry transfer system, shielded indexer, shielded lubricator, canister grapple, and repository shielded overpack), and definition of performance and functional requirements for safe handling of loaded UCS canisters. The report will identify regulatory (e.g., federal or state) interactions needed to support implementation of this equipment. The design also includes identification of required modifications to existing handling tools and equipment, development of fabrication specifications and quality classifications where applicable, and integration of surface handling systems with borehole operations and site infrastructure to support non-radioactive validation testing and future deployment while meeting applicable regulatory requirements, as appropriate.	4	11/17/27

WBS	Milestone Title	Milestone Description	Due Q	Date Due
		Surface handling equipment summary design report submitted to ARPA-E Program Director for review and approval.		
M4.2.1	UCS Procurement	Procurement of two additional Class 1 UCS canisters to support subsequent subsurface and surface validation test programs. An appropriate U.S.-based fabrication vendor is identified and engaged, required design updates based on prior testing and the Cameron pilot configuration are incorporated, and purchase orders are placed for canisters and associated components. The selected canister configuration reflects a representative baseline design to enable early testing, with any refinements from ongoing system selection activities incorporated where feasible. The procurement scope also includes any ancillary equipment, tooling, or modifications necessary to support handling, emplacement, retrieval, and testing activities across both subsurface and surface programs. This effort ensures sufficient hardware availability to enable planned testing and support progression toward integrated Commercial Pilots.	2	05/17/27
M4.2.2	Borehole System Procurement	Procurement planning and execution for borehole system components required to support construction of the borehole design defined in M4.1.1. This includes development of procurement strategies and schedules for long-lead and critical-path items (e.g., casing strings, drill bits, and specialized drilling equipment), followed by placement of purchase orders for identified critical components sufficient to support planned borehole construction activities. The effort ensures alignment between design outputs and supply chain execution, enabling borehole construction activities to proceed on schedule and reducing risk to overall project timelines.	3	08/17/27
M4.2.3	Surface Handling Procurement	Procurement of SNF surface handling equipment (e.g., dry transfer systems, shielded indexers, grapples) for nonradioactive validation use, as defined in M4.1.3. This includes development of procurement strategies and schedules, identification of fabrication pathways, and placement of purchase orders for required equipment and components. The effort ensures timely delivery and readiness of surface handling systems to support execution of both subsurface and surface test programs, aligning equipment availability with planned testing schedules and reducing risk to overall project timelines.	7	08/17/28
M4.3.1	**Go/No Go: Subsurface Test Program Development**	**Develop a report of the subsurface test program, defining functional requirements, test objectives, and procedures for emplacement and retrieval of at least one UCS canister within a deep borehole repository. The program defines a phased scope of testing beginning with a single-canister test and progressing to multiple-canister emplacement and retrieval operations. Monitoring and post-retrieval inspection plans will be incorporated, including NDE of the canister at a minimum. The test program integrates borehole design (M4.1.1) and procurement activities (M4.2.1 and M4.2.2) and establishes the framework for subsequent execution of subsurface testing (M4.3.3). The documentation defines test configurations, operational sequences, success criteria, and expected test duration necessary to validate the technical feasibility of deep borehole disposal**	**3**	08/17/27

WBS	Milestone Title	Milestone Description	Due Q	Date Due
		and support progression toward larger-scale and repeatable testing (M4.5). The documented subsurface test program will be submitted to ARPA-E Program Director for review and approval.		
M4.3.2	Drill and Prepare the Pilot Borehole	Construction of the pilot borehole is completed in accordance with the design defined in M4.1.1, using equipment and materials procured under M4.2.2. This includes site preparation and development of the well pad area, drilling to a depth below the aquifer, installing casing to seal off the aquifer, then resuming drilling and casing installation to construct a horizontal deep borehole repository such that the disposal zone is in the horizontal orientation - all using commercial directional drilling technology. This will be followed by preparation of the wellhead area to support emplacement and retrieval operations. The constructed borehole and associated surface infrastructure shall meet the design specifications and acceptance criteria established in M4.1.1, sufficient to support execution of the subsurface test program defined in M4.3.1, including emplacement and retrieval of multiple UCS canisters.	5	02/17/28
M4.3.3	**Go/No-Go: Execute Initial Subsurface Test Program**	**Execution of initial subsurface test program validating emplacement and retrieval of UCS canisters within a deep borehole repository, beginning with a UCS staged above the borehole and proceeding through full emplacement and retrieval operations. The test program includes a phased approach with an initial single-canister test followed by multiple-canister emplacement and retrieval testing to assess repeatability and operational scalability. Monitoring and post-retrieval inspection activities are conducted in accordance with the subsurface test program defined in M4.3.1. This milestone integrates the initial subsurface test program defined in M4.3.1 and is executed using the borehole constructed in M4.3.2, along with borehole design (M4.1.1), UCS procurement (M4.2.1), borehole system procurement (M4.2.2), and supporting systems to validate the technical feasibility of deep borehole disposal under representative conditions. The results establish a critical foundation for validation of the disposal concept and progression toward integrated Commercial Pilots (M4.5).**	**5**	02/17/28
M4.3.4	Execute Extended Subsurface Test Program	Execution of an extended subsurface test involving emplacement of a single UCS canister within a deep borehole repository for a prolonged duration, followed by retrieval and post-retrieval evaluation. The duration of emplacement and test conditions are defined in the subsurface test program (M4.3.1). Following retrieval, non-destructive evaluation (NDE) and inspection activities are conducted on UCS canister and relevant borehole components (e.g., casing) to assess the effects of prolonged emplacement under representative subsurface conditions. Evaluation methods may include, but are not limited to, liquid dye penetrant testing (PT), dimensional measurements (e.g., caliper), and wear or surface condition assessments. This milestone builds on initial subsurface testing (M4.3.3) and provides additional validation of system performance and material integrity under extended downhole conditions, supporting confidence in long-term operational feasibility and informing future deployment and design considerations.	7	08/17/28

WBS	Milestone Title	Milestone Description	Due Q	Date Due
		Results are documented and provided to the ARPA-E Program Director for review and approval.		
M4.4.1	Surface Handling Operations Test Program Development	Develop a report of the surface handling operations test program, defining functional requirements, test objectives, and procedures for transfer of multiple UCS canisters from a dry storage configuration through borehole emplacement staging. The program defines the scope of testing beginning with UCS canisters in storage and proceeding through extraction, transfer, and staging above the borehole. The test program integrates surface handling system design (M4.1.3) and procurement activities (M4.2.3) and establishes the framework for subsequent execution of surface handling testing (M4.4.3) following initial subsurface testing activities. The documentation defines test configurations, operational sequences, and success criteria necessary to validate safe and efficient surface handling operations and support progression toward integrated Commercial Pilots (M4.5). The documented surface handling operations test program will be submitted to ARPA-E Program Director for review and approval.	5	02/17/28
M4.4.2	Equipment Receipt and Shakedown Testing	Receipt, staging, and quality assurance of surface handling equipment procured in M4.2.3 are completed, including verification of fabrication specifications, inspection of delivered components, and confirmation of system completeness. Equipment is installed and integrated at the test site in accordance with design requirements defined in M4.1.3. Shakedown testing of surface handling and conveyance systems is conducted to validate operational readiness, system functionality, and interface performance. This includes verification of handling sequences, equipment alignment, control systems, and operational procedures against the requirements defined in M4.4.1. Successful completion is validated by confirmation that all systems perform as intended and are ready to support execution of the surface handling operations test program (M4.4.3) without significant deficiencies.	7	05/17/27
M4.4.3	Execution of Surface Handling Operations Test Program	Execution of surface handling operations test program validating transfer of at least one UCS canister from a dry storage configuration through borehole emplacement staging. Operations begin with UCS canister(s) in storage and proceed through extraction, transfer to the well area, staging above the borehole, and validation of retrieval back to dry storage. This milestone integrates the surface handling test program defined in M4.4.1 and is executed using equipment procured in M4.2.3 and validated in M4.4.2. Testing may include multiple UCS canisters to validate repeatability, system integration, and operational scalability of surface handling processes. The results establish a critical foundation for validation of integrated handling operations and support progression toward integrated Commercial Pilots (M4.5).	8	08/17/27
M4.5.1	Commercial Pilot – Planning of Integrated Repository Test Program	Develop an integrated Commercial Pilot test program, incorporating lessons learned from subsurface testing (M4.3.3) and surface handling testing (M4.4.3). This includes identification of what performed as expected, what did not, and definition of required updates to system design, operating procedures, and test	8	11/17/27

WBS	Milestone Title	Milestone Description	Due Q	Date Due
		approach. The document specifies updated requirements, objectives, and procedures for a whole-system Commercial Pilot of deep borehole disposal, including integration of subsurface and surface handling operations. Where necessary, targeted adjustments to equipment, configurations, or procedures are identified to address gaps or deficiencies observed during prior testing, within a timeframe compatible with Commercial Pilot execution. This milestone establishes a refined, execution-ready plan for integrated validation of the full disposal system and provides the basis for subsequent Commercial Pilot activities (M4.5.2–M4.5.4). The Commercial Pilot test program will be submitted to ARPA-E Program Director for review and approval.		
M4.5.2	**Go/No-Go: Commercial Pilot – Dry Run and Process Optimization**	**Execution of an integrated end-to-end operational test of borehole repository operations as defined in M4.5.1, combining surface handling operations (M4.4.3) and subsurface emplacement and retrieval operations (M4.3.3) in sequence to validate the full cycle of repository operations. This activity serves as the primary risk retirement step for integrated system performance, enabling identification and resolution of residual issues prior to final demonstration. The dry run is intended to validate system integration, operational sequencing, and overall process performance prior to external showcase. The test includes transfer of UCS canisters from dry storage through surface handling, staging, emplacement into the borehole, retrieval, and return to storage. Results from the dry run are used to identify any remaining gaps, inefficiencies, or integration issues, and to update system configurations, procedures, and the Commercial Pilot test plan as needed to ensure readiness for public showcase and stakeholder engagement (M4.5.3).**	**9**	05/17/27
M4.5.3	Commercial Pilot – Public Showcase	Execution of an integrated end-to-end Commercial Pilot of deep borehole repository operations in the presence of an invited audience of key stakeholders, including regulatory agencies (e.g., NRC), government representatives (e.g., U.S. Department of Energy), potential customers, and investors. The Pilot follows the validated process established in M4.5.2 and includes transfer of UCS canisters from dry storage through surface handling, staging, emplacement into the borehole, retrieval, and return to storage, showcasing the full operational cycle of deep borehole disposal under representative conditions. This milestone validates the technical viability, operational readiness, and integration of the full disposal system, providing stakeholders with direct observation of system performance. Successful execution establishes confidence in the technology and supports regulatory engagement, customer adoption, and future commercial deployment.	10	08/17/27
M4.5.4	Commercial Pilot – Documentation, Validation, and Dissemination of Results	Documentation, validation, and dissemination of results from subsurface testing (M4.3.3), surface handling testing (M4.4.3), and the integrated Commercial Pilot (M4.5.3) are completed. This activity begins following completion of initial subsurface testing and continues through the end of the project. The effort includes compilation and validation of technical data, operational results, and performance metrics to support confirmation of system feasibility and identification of key insights. Documentation includes technical reports and	12	08/17/28

WBS	Milestone Title	Milestone Description	Due Q	Date Due
		summary materials that capture lessons learned, system performance, and areas for future improvement. Dissemination activities include communication of results to key stakeholders, including regulatory agencies, government representatives, potential customers, and the broader technical community, as appropriate. This milestone supports broader understanding, acceptance, and adoption of deep borehole disposal technology and informs future deployment and licensing efforts. A summary report of the Commercial Pilot final results will be submitted to ARPA-E Program Director for review and approval.		

ATTACHMENT 4:
ARPA-E REPORTING CHECKLIST AND INSTRUCTIONS

1. Identification Number: DE-AR0002176	2. Program/Project Title: SCALEUP/ Scaling up the Universal Canister System (UCS)
3. Recipient: Deep Isolation US LLC	

4. Reporting Requirements (see attached "ARPA-E Reporting Instructions"):	Frequency	No. of Copies	Addressees
I. PROJECT MANAGEMENT REPORTING (DURING AWARD)			
☒ A. Research Performance Progress Reports	QR	1	https://arpa-e-epic.energy.gov
☒ B. Financial Reports	QR	1	https://arpa-e-epic.energy.gov
☒ C. Scientific/Technical Conference Papers/Proceedings	Y	1	http://www.osti.gov/elink-2413
☒ D. Intellectual Property Reporting	Y	1	See block 5 for instructions
☒ E. Intellectual Property & Data Management Plan	X	1	https://arpa-e-epic.energy.gov
☒ F. Utilization/U.S. Manufacturing Reporting			
☒ i. Subject Invention Utilization Reporting	A	1	https://s-edison.info.nih.gov/iEdison/
☒ ii. Software and Data Utilization Reporting	A	1	https://arpa-e-epic.energy.gov
☒ G. Lobbying Activities Reporting	Y	1	https://arpa-e-epic.energy.gov
☒ H. Special Status Reports	Y	1	https://arpa-e-epic.energy.gov
☒ I. Annual Indirect Cost Proposals	FY	1	See block 5 for instructions
☒ J. Annual Audit of For-Profit Recipients	RFY	1	See block 5 for instructions
☒ K. Annual Property Inventories	A	1	https://arpa-e-epic.energy.gov
☒ L. Subaward/Subcontract Reports	Y	1	See block 5 for instructions
☒ M. Annual Conflict of Interest Reporting	Y, A	1	See block 5 for instructions
☒ N. Subawards and Executive Compensation	Y, A	1	See block 5 for instructions
☒ O. Mandatory Disclosures	Y	1	See block 5 for instructions
☒ P. Matters Related to Recipient Integrity and Performance	Y	1	See block 5 for instructions
☒ Q. Changes in Participation	Y, A	1	http://www.osti.gov/elink-2413
☒ R. Trafficking in Persons	Y, A	1	See block 5 for instructions
II. CLOSEOUT REPORTING (AFTER END OF PERIOD OF PERFORMANCE)			
☒ A. Final Scientific/Technical Report	F	1	https://arpa-e-epic.energy.gov
☒ B. Final Invention and Patent Report	F	1	https://www.nist.gov/iedison
☒ C. Final Property Report	F	1	https://arpa-e-epic.energy.gov
III. POST-AWARD REPORTING (FOLLOWING CLOSEOUT OF AWARD)			
☒ A. Subject Invention Utilization Reporting (see Section I.F.a above)			
☒ B. Software and Data Utilization Reporting (see Section I.F.b above)			

FREQUENCY CODES AND DUE DATES:

A – Annually; within 90 calendar days after the end of the annual reporting period.

F – Final; within 120 calendar days after end of period of performance.

FY – Annually; within 180 calendar days after the close of the fiscal year.

QR – Quarterly; within 30 calendar days after end of the quarterly reporting period.

RFY – Recipient's Fiscal Year; within the earlier of 30 days after receipt of the auditor's report or 9 months after end of the audit period.

X – Within six (6) weeks of the effective date of ARPA-E Award.

Y – Within five (5) calendar days after the event or as specified.

5. ARPA-E Special Instructions:

For Annual Indirect Cost Proposals: If ARPA-E is the Cognizant Federal Agency, submit to https://arpa-e-epic.energy.gov. Otherwise, send to the Cognizant Federal Agency.

For Annual Audits of For-Profit Recipients: Send to DOE-Audit-Submission@hq.doe.gov and https://arpa-e-epic.energy.gov.

For Subaward/Subcontract Reports: Send to GC-62@hq.doe.gov and https://arpa-e-epic.energy.gov.

For Intellectual Property Reporting: Send mandatory intellectual property reports for subject inventions specified in Section D.1 of this Attachment to iEdison https://www.nist.gov/iedision. Report software and data reports specified in Section D.2 of this Attachment in ePIC, https://arpa-e-epic.energy.gov. Send special intellectual property reports specified in Section D.3 of this Attachment to DOE Patent Counsel via email at GC-62@hq.doe.gov. Send all questions concerning the Patent Rights Clause in Attachment 2 of this Award to DOE Patent Counsel via email at GC-62@hq.doe.gov.

For Final Invention and Patent Reports: Send to arpa-e-t2m@hq.doe.gov and https://arpa-e-epic.energy.gov.

For Conflict of Interest Reports: Upload to ePIC at https://arpa-e-epic.energy.gov.

For Subawards and Executive Compensation: Report to http://www.fsrs.gov (subawards) and http://www.sam.gov (compensation).

For Mandatory Disclosures: Report to https://arpa-e-epic.energy.gov and DOE Inspector General

For Matters Related to Recipient Integrity and Performance: Report to https://www.sam.gov.

For Trafficking in Persons: Report to https://arpa-e-epic.energy.gov.

ARPA-E Reporting Instructions

*** ***Throughout award negotiations and the performance of the project, it is important that you mark confidential information and documents as described in Appendix A. It is equally important that you not submit Protected Personally Identifiable Information (Protected PII) to ARPA-E. See Appendix A for guidance on Protected PII.*** ***

I. PROJECT MANAGEMENT REPORTING

A. Research Performance Progress Reports

Submit via:	ARPA-E's Energy Program Information Center (ePIC): https://arpa-e-epic.energy.gov
Submission deadline:	Within 30 calendar days of every quarter (January 31, April 30, July 31, October 31)

Every quarter, the Recipient is required to submit a Research Performance Progress Report for the project – i.e., the entirety of work performed by the Recipient, Subrecipients, and contractors – to ARPA-E through ARPA-E's Energy Program Information Center (ePIC). For general guidance on submitting Research Performance Progress Reports through ePIC, see the instructions provided below. For detailed guidance on the use of ePIC, please refer to the ePIC User Guide (https://arpa-e-epic.energy.gov/FileContent.aspx?FileID=1c5ede2c-ef5f-42ea-919f-4127ee085eb8). You must be registered in ePIC and log in to access the ePIC User Guide.

To submit a Research Performance Progress Report, the Recipient must log in to the ePIC system, navigate to the reporting module on the project dashboard, and complete the following fields.

i. Technical Progress

Section I. Accomplishments & Milestone Update: Provide a comparison of the actual accomplishments against the technical milestones and deliverables for the period. The ePIC system allows the Recipient to submit a narrative in Adobe PDF format, as well as individual summaries of milestone progress. In addition, the Recipient must enter the actual start and completion dates of milestones and deliverables and provide an estimated percentage of completion for each milestone and deliverable in the ePIC system.

If technical milestones and deliverables were not met, explain why they were not met in this section. This section should contain sufficient information to allow the ARPA-E Program Director to verify the achievement of the technical milestones and deliverables. If desired, the Recipient may also provide updates on milestones not scheduled for the current quarter in this section.

ii. Additional Performance Updates

Section II. Issues, Risks, and Mitigation: Discuss any actual or anticipated problems, risks, or issues, along with the actions planned or taken to resolve them.

Section III. Changes in Approach: Discuss any changes in approach or aims and the reasons for change. Any changes to the technical milestones and deliverables must be approved in advance by the ARPA-E Grants Officer.

Section IV. Project Personnel: Document any changes in project personnel or teaming arrangements during the quarter. Such changes must be approved in advance by the ARPA-E Grants Officer.

iii. Technology to Market Updates

Section V. Project Output:

a. Publications: Identify any project-related articles, papers, or presentations that are authored or prepared by the Project Team and published or distributed (at a conference or otherwise). The entry must include author name; title; publication or conference; volume, issue, and pages (if applicable); and year of publication. The Recipient is required to send a copy of each publication to the program support designated by the ARPA-E Program Director. Scientific/technical conference papers/proceedings must also be reported in accordance with Section I.C of "ARPA-E Reporting Instructions."

b. Other Products: Provide information on any additional project output, such as high-visibility media articles, data or databases, physical collections, audio or video, software or netware, models, educational aid or curricula, instruments, or equipment. Provide a brief description of additional project output, date of release, and entity to which output was provided.

c. Follow-On Funding: The Recipient is required to disclose any funding currently received or any anticipated commitment or obligations of funding that may be received by the Recipient, Subrecipient(s), Principal Investigator(s) (including Co-Principal Investigators), or Key Participants to support the ARPA-E funded project or work that is directly or indirectly related to the ARPA-E funded project. List the source of funding, amount of funding, the beginning and end dates of funding, and point of contact (name, title, employer, telephone number, and e-mail address), regarding the current or anticipated funding.

iv. Administrative and Legal Updates

Section VI. Recipient and Principal Investigator Disclosures: The Recipient is required to disclose if any of the following conditions exist:

a. The Recipient, Subrecipient, or Principal Investor(s) (including Co-Principal Investigators) is under investigation for or has been convicted of fraud or similar acts, violations of U.S. export control laws and regulations, or violations of the Drug-Free Workplace Act of 1988 (Pub. L. 100-690, Title V, Subtitle D; 41 U.S.C. 701, et seq.);

b. The Recipient, Subrecipient, or Principal Investigator(s) (including Co-Principal Investigators) is debarred, suspended, proposed for debarment, or otherwise declared ineligible from receiving Federal contracts, subcontracts, and financial assistance and benefits; or

c. The Recipient or its parent: (i) is insolvent; (ii) has filed a voluntary case under the Bankruptcy Act or has consented to an involuntary case under the Bankruptcy Act; or (iii) has had a proceeding filed against it to, or consented to, the dissolution, winding-up or readjustment of debts, appointment of a receiver, conservator, trustee or other officer under any applicable state or federal law.

Section VII. Conflicts of Interests: The Recipient is required to disclose any managed and unmanaged conflicts of interest within the Project Team, per the requirements of the DOE interim Conflict of Interest Policy for Financial Assistance, which can be found at https://www.energy.gov/management/financial-assistance-letter-no-fal-2022-02. This includes not only the PI, but also any person who participates in the purpose, design, conduct, or reporting of the project for the Recipient or any other project team member (for example: collaborators, consultants, postdoctoral researchers, and graduate [Master's or PhD] students).

Section VIII. Performance of Work in the United States: The Recipient is required to disclose if any work under the Award is being performed outside of the United States/U.S. Territories. ARPA-E requires 100% of the Total Project Cost to be expended in the United States/U.S. Territories. The Recipient may perform certain work overseas if authorized in advance by the ARPA-E Grants Officer (e.g., by approval of a Foreign Work Waiver Request).

v. Cost Updates

Section IX. Budget Status - Recipient: The Recipient is required verify that budget amounts submitted for reimbursement to ARPA-E during the quarter are accurate and complete, and provide an explanation for any discrepancies, cost overruns, or high unit costs. In addition, as prompted in the ePIC system, enter TT&O costs, if applicable.

Section X. Submit Page: The Recipient is required to certify that the information provided in the Research Performance Progress Report is accurate and complete as of the date shown.

B. Financial Reports

Submit via email to:	ARPA-E's Energy Program Information Center (ePIC): https://arpa-e-epic.energy.gov
Submission deadline:	Within 30 calendar days of every quarter (January 31, April 30, July 31, October 31)

Every quarter, the Recipient is required to submit a completed SF-425 for the project – i.e., the entirety of work performed by the Recipient, Subrecipients, and contractors – to ARPA-E via ePIC. A fillable version of the SF-425 is available at https://www.energy.gov/management/office-management/operational-management/financial-assistance/financial-assistance-forms.

To submit a SF-425, the Recipient must log in to the ePIC system and navigate to the reporting module on the project dashboard. Click "add" to upload a new SF-425. For detailed guidance on the use of ePIC, please refer to the ePIC User Guide (https://arpa-e-epic.energy.gov/FileContent.aspx?FileID=1c5ede2c-ef5f-42ea-919f-4127ee085eb8). You must be registered in ePIC and log in to access the ePIC User Guide.

C. Scientific/Technical Conference Papers/Proceedings

Submit to:	DOE Energy Link System (E-Link) available at

	http://www.osti.gov/elink-2413
Submission deadline:	Within five (5) calendar days after the occurrence of the event

The Recipient must submit a copy of any scientific/technical conference papers/proceedings, with the following information: (1) name of conference; (2) location of conference; (3) date of conference; and (4) conference sponsor. Scientific/technical conference papers/proceedings must be submitted in the Adobe PDF format as one integrated PDF file containing all text, tables, diagrams, photographs, schematic, graphs, and charts. In addition, scientific/technical conference papers/proceedings must be accompanied by a completed DOE Form 241.3. The form and instructions are available on DOE Energy Link System (E-Link) at http://www.osti.gov/elink-2413.

D. Intellectual Property Reporting

i. **Mandatory Intellectual Property Reports for Subject Inventions**

Submit via:	NIST's iEdison System (https://www.nist.gov/iedison)
Required Reports:	See the Patent Rights Clause in Attachment 2 of this Award for the specific details of reporting requirements. The Recipient is required to report the following to DOE Patent Counsel: Disclose subject inventions, including anticipated uses and sales – Under Attachment 2 (Small Business) and Attachment 2 (Universities): within 2 months after disclosure of the subject invention to personnel charged with patent administration matters. Under Attachment 2 (Large Business): within 6 months of conception or first actual reduction to practice whichever occurs first under the award, and before sale, public use, or public disclosure of the invention. Elect (or decline) to retain title to a subject invention – Under Attachment 2 (Small Business) and Attachment 2 (Universities): no later than 2 years after disclosing the subject invention to ARPA-E/DOE through iEdison or 60 days prior to any statutory deadline, whichever is earlier. Under Attachment 2 (Large Business): no later than 8 months after disclosing the subject invention to ARPA-E/DOE through iEdison or 60 days prior to any statutory deadline, whichever is earlier. Disclose the filing of any U.S. or foreign patent applications for a subject invention including the filing date, patent application number, and title.

	An initial patent application must be filed with the U.S. Patent and Trademark Office (USPTO) within one year after electing to retain title, but prior to any statutory deadline. Disclose the patent number and issue date for any patent issued for a subject invention.

ii. **Software and Data Reports (if Recipient is required to submit a Software and Data Reporting Plan)**

Submit to:	ARPA-E's Energy Program Information Center (ePIC): https://arpa-e-epic.energy.gov
Required Reports:	The Recipient is required to report in ePIC: (a) any of the software and data sets specified in the Software and Data Reporting Plan; and (b) any associated trademarks for commercializing the specified software and data sets. To submit a Software and Data Report, the Recipient must log in to the ePIC system and navigate to the reporting module on the project dashboard. For detailed guidance on the use of ePIC, please refer to the ePIC User Guide (https://arpa-e-epic.energy.gov/FileContent.aspx?FileID=1c5ede2c-ef5f-42ea-919f-4127ee085eb8). You must be registered in ePIC and log in to access the ePIC User Guide.

iii. **Special Intellectual Property Reports**

Submit to:	DOE Patent Counsel at GC-62@hq.doe.gov
Required Reports:	The Recipient is required to report the following to DOE Patent Counsel: Request for extensions of time. Discontinue prosecution of a patent application, maintenance of a patent, or defense in a patent reexamination or opposition proceeding, regardless of jurisdiction. Must be submitted at least 30 days before the expiration of the response period required by a relevant domestic or foreign patent office.

E. Intellectual Property & Data Management Plan

Submit via email to:	ARPA-E's Energy Program Information Center (ePIC): https://arpa-e-epic.energy.gov

Submission deadline:	Within six (6) weeks of the effective date of the ARPA-E Award

ARPA-E requires every Project Team in which more than one team member will perform research and development work or share technical data, to negotiate and establish an Intellectual Property Management Plan for the management and disposition of intellectual property arising from the project. In addition, ARPA-E requires each Recipient, regardless of whether there are other team members, to submit a Data Management Plan (DMP) that addresses how data generated in the course of the work performed under an ARPA-E Award will be preserved and, as appropriate, shared publicly. A DMP should be submitted by the Recipient as part of the Project Team's Intellectual Property Management Plan.

All Intellectual Property Management Plans and DMPs are subject to the terms and conditions of the ARPA-E funding agreement and its intellectual property provisions, and applicable Federal laws, regulations, and policies, all of which take precedence over the terms of Intellectual Property Management Plans and DMPs. DMPs will be reviewed by ARPA-E as part of the overall review process for Intellectual Property Management Plans in ARPA-E's ePIC System, as well as part of the ARPA-E Program Director's overall project management review processes.

ARPA-E has developed a template Intellectual Property & Data Management Plan (https://arpa-e.energy.gov/technologies/project-guidance/pre-award-guidance/required-forms-and-templates) to facilitate and expedite negotiations between Project Team members. ARPA-E does not mandate the use of this template. ARPA-E and DOE do not make any warranty (express or implied) or assume any liability or responsibility for the accuracy, completeness, or usefulness of the template. ARPA-E strongly encourages Project Teams to consult their own legal counsel before using the template.

To submit an Intellectual Property & Data Management Plan, the Recipient must log in to the ePIC system and navigate to the reporting module on the project dashboard. For detailed guidance on the use of ePIC, please refer to the ePIC User Guide (https://arpa-e-epic.energy.gov/FileContent.aspx?FileID=1c5ede2c-ef5f-42ea-919f-4127ee085eb8). You must be registered in ePIC and log in to access the ePIC User Guide.

F. Utilization/U.S. Manufacturing Reporting

i. **Subject Invention Utilization Reporting**

Submit via:	iEdison: https://www.nist.gov/iedison
Submission deadline:	Within 90 calendar days after the end of the annual reporting period and for ten (10) years after the end of the Project Period.

As authorized in paragraph (h) of the "Patent Rights Clause" in Attachment 2, entitled "Reporting on Utilization of Subject Inventions" and in accordance with 2 CFR 910.364, ARPA-E requires Recipients to submit annual reports, throughout the project period and for at least ten (10) years after the end of the project period, on the utilization of subject inventions and efforts made by Recipients or their licensees or assignees to stimulate such utilization. ARPA-E agrees that, to the extent permitted by law, it shall not disclose data or information supplied under this paragraph to persons outside the Government to the extent the data or information is considered by the Recipient, its licensees, or assignees to be privileged and confidential and is so marked, in accordance with 35 U.S.C. § 202(c)(5).

For detailed guidance on the use of iEdison for submitting Utilization Reports, please refer to https://www.energy.gov/eere/funding/invention-utilization-reports. You must have an iEdison account and have created an Invention Record for your subject invention to submit a utilization report.

ii. **Software and Data Utilization Reporting (if Recipient is required to submit a Software and Data Reporting Plan)**

Submit via:	ARPA-E's Energy Program Information Center (ePIC), https://arpa-e-epic.energy.gov
Submission deadline:	Within 90 calendar days after the end of the annual reporting period and for five (5) years after the end of the Project Period.

As authorized in paragraph (e) of the "Rights in Data" section or, if a University or Nonprofit, paragraph (e) of the "Intangible Property" section, in Attachment 2, and in accordance with the approved Software and Data Reporting Plan, ARPA-E requires Recipients to submit annual reports, throughout the project period and for five (5) years after the end of the project period, on the utilization of the software and data sets identified in the Software and Data Reporting Plan and efforts made by Recipients or their licensees or assignees to stimulate such utilization. ARPA-E agrees that, to the extent permitted by law, it shall not disclose data or information supplied under this paragraph to persons outside the Government to the extent the data or information is considered by the Recipient, its licensees, or assignees to be privileged and confidential and is so marked, in accordance with 35 U.S.C. § 202(c)(5).

To submit a Software and Data Utilization Report, the Recipient must log in to

the ARPA-E ePIC system and navigate to the reporting module on the project dashboard. For detailed guidance on the use of ePIC, please refer to the ePIC User Guide (https://arpa-e-epic.energy.gov/FileContent.aspx?FileID=1c5ede2c-ef5f-42ea-919f-4127ee085eb8). You must be registered in ePIC and log in to access the ePIC User Guide.

G. Lobbying Activities Reporting

Submit via email to:	ARPA-E's Energy Program Information Center (ePIC): https://arpa-e-epic.energy.gov
Submission deadline:	Within five (5) calendar days after the event

The Recipient and Subrecipients are required to complete SF-LLL, "Disclosure of Lobbying Activities" (http://www.whitehouse.gov/sites/default/files/omb/grants/sflllin.pdf), if any non-Federal funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, and officer or employee of Congress, or an employee of a Member of Congress in connection with the Award.

H. Special Status Reports

Submit via email to:	ARPA-E's Energy Program Information Center (ePIC): https://arpa-e-epic.energy.gov
Submission deadline:	Within five (5) calendar days after the event

The Recipient is required to report the following events to ARPA-E:

i. Any notices or claims of patent or copyright infringement arising out of or relating to the performance of the ARPA-E Award;

ii. Refusal of a Subrecipient to accept flowdown requirements in Attachment 1 or Attachment 2 to the ARPA-E Award;

iii. Violations of federal, state, and municipal laws arising out of or relating to work under the Award;

iv. Any improper claims or excess payments arising out of or relating to work under the Award;

v. Potential or actual violations of the cost share requirements under the Award;

vi. Potential or actual bankruptcy/insolvency of the Recipient or Subrecipient;

vii. Under investigation for, or convicted of, violation of U.S. export control laws and/or regulations arising out of or relating to the work under the Award;

viii. Any fatality or injuries requiring hospitalization arising out of or relating to work under the Award;

ix. Any verbal or written notice of violation of any environmental, health, or safety laws and regulations arising out of or relating to the work under the Award;

x. Any event which is anticipated to cause a significant schedule slippage or cost increase;

xi. Any damage to Government furnished property, or property acquired with, project funding by the Recipient or Subrecipient, valued in excess of $25,000;

xii. Any incident arising out of or relating to work under the Award that has the potential for high visibility in the media.

I. Annual Indirect Cost Proposals

Submit to:	If ARPA-E is the Cognizant Federal Agency, send it to ARPA-E's Energy Program Information Center (ePIC): https://arpa-e-epic.energy.gov. Otherwise, submit it to the Cognizant Federal Agency (as defined by 2 C.F.R. § 200.19).
Submission deadline:	Within 180 calendar days of the close of the fiscal year

The Recipient must submit an Annual Indirect Cost Proposal, reconciled to its financial statements unless the award is based on a predetermined or fixed indirect rate(s), a fixed amount for indirect or facilities and administration (F&A) costs, or a de minimis rate is charged as described at 2 C.F.R. § 200.414(f). The Recipient must submit its annual indirect cost proposal directly to the Cognizant Federal Agency for negotiating and approving indirect costs in the form required by that agency.

J. Annual Audits of For-Profit Recipients

Submit to:	DOE-Audit-Submission@hq.doe.gov and ARPA-E's Energy Program Information Center (ePIC): https://arpa-e-

	epic.energy.gov
Submission deadline:	Within the earlier of 30 days after receipt of the auditor's report(s) or 9 months after the end of the audit period (Recipient's fiscal year-end)

Any Recipient that is a for-profit entity that expends $750,000 or more during the for-profit entity's fiscal year in DOE/ARPA-E funds must submit an annual compliance audit and, if available, its financial statements as required by 2 C.F.R. § 910.510(a). See 2 C.F.R. 910 Subpart F (Audit Requirements for For-Profit Entities).

K. Annual Property Inventories

Submit to:	ARPA-E's Energy Program Information Center (ePIC): https://arpa-e-epic.energy.gov
Submission deadline:	Within 90 calendar days of the close of the annual reporting period

The Recipient must submit an annual inventory of Government-furnished property and property acquired with project funding, whether held by the Recipient or Subrecipients. The Recipient must complete SF-428A, available at http://www.whitehouse.gov/omb/grants_forms and https://www.energy.gov/management/office-management/operational-management/financial-assistance/financial-assistance-forms. The inventory must include a description of the property, tag number, acquisition date, and acquisition cost, if purchased with project funds. The location of property should be listed under the Comments section. Any property with a fair market value of $10,000 or less (per item) may be omitted from the inventory.

L. Subaward/Subcontract Reports

Submit to:	GC-62@hq.doe.gov and ARPA-E's Energy Program Information Center (ePIC): https://arpa-e-epic.energy.gov
Submission deadline:	Within five (5) calendar days after the event

Under Attachment 2 (Large Business), the Recipient is required to report the conclusion of any subawards or subcontracts at any tier containing a patent rights clause. The Recipient must identify the Subrecipient or Subcontractor, provide a copy of the patent rights clause, briefly describe the work to be performed under subaward or subcontract, and state the dates of award and estimated completion.

The Recipient is not required to provide these reports if Attachment 2 (Small Business) or Attachment 2 (Universities) was included with its ARPA-E Award.

M. Conflict of Interest Reports

Submit to:	ARPA-E's Energy Program Information Center (ePIC): https://arpa-e-epic.energy.gov
Submission deadline:	Annually, and within thirty (30) days of identifying a new conflict of interest for any person who participates in the purpose, design, conduct, or reporting of the project for the Recipient or any other project team member (including, but not limited to, the PI, senior/key personnel, collaborators, consultants, postdoctoral researchers, and graduate -- Master's or PhD -- students)

The Recipient, in accordance with DOE Interim Conflict of Interest (COI) Policy requirements in Section IV.e.2 (https://www.energy.gov/management/financial-assistance-letter-no-fal-2022-02), must submit an annual report disclosing managed and unmanaged conflicts of interest within the Project Team. This annual report must include any new disclosures of conflicts of interest that were not disclosed initially or in a previous annual report and include updates to any previously disclosed significant financial interest. This reporting requirement is applicable to the Recipient and all subrecipients, with the Recipient submitting one annual report that includes all applicable disclosures from the project team.

This requirement applies to any person who participates in the purpose, design, conduct, or reporting of the project for the Recipient or any other project team member (including, but not limited to, the PI, other senior personnel, collaborators, consultants, postdoctoral researchers, and graduate -- Master's or PhD -- students).

N. Reporting Subawards and Executive Compensation

Submit to:	http://www.fsrs.gov (subawards and subrecipient compensation) http://www.sam.gov (recipient compensation)
Submission deadline:	Subawards: no later than the end of the month following the month in which the subaward was issued Executive Compensation: by the end of the month following the month in which the award (either the award to the Recipient, or any subawards) is made, and annually thereafter

i. Reporting of First-tier Subawards:

a. Applicability. Unless exempt as described in "Exemptions" below, the Recipient must report each action that obligates $30,000 or more in Federal funds for a subaward. The Recipient must also report a subaward if a modification increases the Federal funding to an amount that equals or exceeds $30,000.

b. Where and when to report. The Recipient must report information about each obligating action described herein to http://www.fsrs.gov, and report no later than the end of the month following the month in which the obligation was made. (For example, if the obligation was made on November 7, 2025, the obligation must be reported by no later than December 31, 2025.)

ii. Reporting Total Compensation of Recipient Executives.

a. Applicability and what to report. The Recipient and each subrecipient must report total compensation for each organization's five most highly compensated executives for the preceding completed fiscal year, if:

I) The total Federal funding authorized to date under this award or applicable subaward is $30,000 or more;

II) In the preceding fiscal year, the organization received;

A) 80 percent or more of annual gross revenues from Federal procurement contracts (and subcontracts) and Federal financial assistance subject to the Transparency Act, as defined at 2 CFR 170.320 (including awards and subawards); and

B) $25,000,000 or more in annual gross revenues from Federal procurement contracts (and subcontracts) and Federal financial assistance subject to the Transparency Act, as defined at 2 CFR 170.320 (including awards and subawards); and

III) The public does not have access to information about the compensation of the executives through periodic reports filed under section 13(a) or 15(d) of the Securities Exchange Act of 1934 (15 U.S.C. 78m(a), 78o(d)) or section 6104 of the Internal Revenue Code of 1986. (To determine if the public has access to the compensation information, see the U.S. Security and Exchange Commission total compensation filings at http://www.sec.gov/answers/execomp.htm.)

iii. Where and when to report.

a. The Recipient must report its own executive total compensation described herein:

I) As part of the Recipient's registration profile at http://www.sam.gov.

II) By the end of the month following the month in which this award is made, and annually thereafter.

b. The Recipient must report to the Federal Funding Accountability and Transparency Act Subaward Reporting Systems at http://www.fsrs.gov, first-tier subrecipient executive total compensation described herein by the end of the month following the month of subaward execution. For example, if a subaward is executed on any date during the month of October of a given year (i.e., between October 1 and 31), the Recipient must report any required compensation information of the subrecipient by November 30 of that year.

iv. Exemptions.

If, in the previous tax year, the Recipient/subrecipient had gross income, from all sources, under $300,000, the Recipient/subrecipient is exempt from the requirements to report subawards, and the total compensation of the five most highly compensated executives of any subrecipient.

v. Definitions (applicable only in this section).

a. Executive: means officers, managing partners, or any other employees in management positions.

b. Total Compensation: means the cash and noncash dollar value earned by the executive during the recipient's or subrecipient's preceding fiscal year and includes the following (for more information see 17 CFR 229.402(c)(2)).

O. Mandatory Disclosures

i. The Recipient and Subrecipients must promptly disclose whenever in connection with this Award it has credible evidence of the commission of a violation of Federal criminal law involving fraud, conflict of interest, bribery, or gratuity violations found in Title 18 of the United States Code or a violation of the civil False Claims Act (31 U.S.C. 3729-3733). The disclosure must be made in writing to ARPA-E, the DOE Inspector General, and the pass-

through entity (if applicable). Failure to make required disclosures can result in any of the remedies described in 2 C.F.R. §200.339. (See also 2 C.F.R. part 180, 31 U.S.C. 3321, and 41 U.S.C. 2313.)

ii. The Recipient and Subrecipients must immediately report to ARPA-E any export control violations (or investigations of potential violations) related to the project funded under this Award and provide the corrective action(s) to prevent future violations.

P. Recipient Integrity and Performance Matters

Submit to:	http://www.sam.gov
Submission deadline:	Report any relevant matters in the previous 5 years upon award; thereafter, report semi-annually any new items.

i. General Reporting Requirement.

If the total value of the Recipient's currently active grants, cooperative agreements, and procurement contracts from all Federal awarding agencies exceeds $10,000,000 for any period of time during the period of performance of this Federal award, then the Recipient must ensure the information available in the responsibility/qualification records through the System for Award Management (SAM) about civil, criminal, or administrative proceedings described below is current and complete. This is a statutory requirement under section 872 of Public Law 110-417, as amended (41 U.S.C. 2313). As required by section 3010 of Public Law 111-212, all information posted in responsibility/qualification records in SAM.gov on or after April 15, 2011 (except past performance reviews required for Federal procurement contracts) will be publicly available.

ii. Proceedings About Which You Must Report.

Submit the information required about each proceeding that:

a. Is in connection with the award or performance of a grant, cooperative agreement, or procurement contract from the Federal Government;

b. Reached its final disposition during the most recent five year period; and

c. Is one of the following:

d. A criminal proceeding that resulted in a conviction, as defined below;

e. A civil proceeding that resulted in a finding of fault and liability and

payment of a monetary fine, penalty, reimbursement, restitution, or damages of $5,000 or more;

f. An administrative proceeding, as defined below, that resulted in a finding of fault and liability and your payment of either a monetary fine or penalty of $5,000 or more or reimbursement, restitution, or damages in excess of $100,000; or

g. Any other criminal, civil, or administrative proceeding if:

I) It could have led to an outcome described above;

II) It had a different disposition arrived at by consent or compromise with an acknowledgment of fault by the Recipient; and

III) The requirement in this award term to disclose information about the proceeding does not conflict with applicable laws and regulations.

iii. Reporting Procedures.

Enter in the SAM Entity Management area the information that SAM requires about each proceeding described above.

iv. Reporting Frequency.

During any period of time when the Recipient is subject to the requirement above, proceedings for the most recent five-year period must be reported in SAM.gov, either to report new information about a proceeding that has not been reported previously or affirm that there is no new information to report. Recipients with Federal contract, grant, and cooperative agreement awards with a cumulative value of $10,000,000 must disclose semiannually any information about the criminal, civil, and administrative proceedings.

v. Definitions (applicable only in this section).

a. Administrative Proceeding: means a non-judicial process that is adjudicatory in nature in order to make a determination of fault or liability (e.g., Securities and Exchange Commission Administrative proceedings, Civilian Board of Contract Appeals proceedings, and Armed Services Board of Contract Appeals proceedings). This includes proceedings at the Federal and State level but only in connection with performance of a Federal contract or grant. It does not include audits, site visits, corrective plans, or inspection of deliverables.

b. Conviction: means a judgment or conviction of a criminal offense by any court of competent jurisdiction, whether entered upon a verdict or a plea, and includes a conviction entered upon a plea of nolo contendere.

c. Total value of currently active grants, cooperative agreements, and procurement contracts includes: Only the Federal share of the funding under any Federal award with a recipient cost share; and the value of all expected funding increments under a Federal award, such as continuation funding.

Q. Changes in Project Participation

i. Covered Individuals

Throughout the life of the award, the Recipient has an ongoing responsibility to notify ARPA-E of changes to the Covered Individuals and collaborating organizations involved in the award, within 30 days of such change, and to submit 1) current and pending support disclosure statements and resumes for any new Covered Individuals; and 2) updated disclosures if there are changes to the current and pending support previously submitted to ARPA-E for existing Covered Individuals. The Recipient must certify on an annual basis that no such changes have occurred since their most recent certification. "Covered Individual" is defined in Attachment 1.

ii. Foreign Participation

Throughout the life of the award, the Recipient has an ongoing responsibility to report new foreign participation in the project and may be required to obtain a waiver before new foreign participation can occur.

R. Trafficking in Persons

If the estimated value of services required to be performed under the Award outside the United States exceeds $500,000, the Recipient must submit an annual certification for each year the award is in effect that:

a. The Recipient has implemented a plan to prevent the activities described in 2 C.F.R. 175.105(a), and is in compliance with this plan;

b. The Recipient has implemented procedures to prevent any activities described in 2 C.F.R. 175.105(a) and to monitor, detect, and terminate any subrecipient, contractor, subcontractor, or employee of the Recipient engaging in any of the described activities;

c. To the best of the Recipient's knowledge, neither the Recipient , nor any subrecipient, contractor, or subcontractor of the Recipient or any agent of the Recipient or of such a subrecipient, contractor, or subcontractor, is engaged in any of the described activities.

The minimum requirements of the compliance plan can be found at 2 C.F.R. 200.175.105(b)(5). The Recipient must provide a copy of the plan to the Grants Officer upon request, and, as appropriate, must post the useful and relevant contents of the plan or related materials on its website and at the workplace.

The Recipient must immediately inform ARPA-E and the DOE Inspector General of any information it receives from any source that alleges credible information that the Recipient, any subrecipient, contractor, or subcontractor, has engaged in conduct described in 2 C.F.R. 175.105(a) and must fully cooperate with any Federal agencies responsible for audits, investigations, or corrective actions relating to trafficking in persons.

II. CLOSEOUT REPORTING (AFTER END OF PERIOD OF PERFORMANCE)

A. Final Scientific/Technical Report

Submit to:	DOE Energy Link System (E-Link) available at http://www.osti.gov/elink-2413
Submission deadline:	Within 120 calendar days after end of period of performance

The Recipient must submit a Final Scientific/Technical Report to DOE. The Report must be submitted in Adobe PDF Format as one integrated PDF file that contains all text, tables, diagrams, photographs, schematic, graphs, and charts. The Report must be accompanied by a completed electronic version of DOE Form 241.3, "U.S. Department of Energy (DOE), Announcement of Scientific and Technical Information (STI)," available via DOE Energy Link System (E-Link) at http://www.osti.gov/elink-2413. Guidance on the Final Technical Report can be found at https://arpa-e.energy.gov/?q=site-page/close-out-reporting. The Report must contain the following information:

i. Identify the ARPA-E award number; name of Recipient; project title; name of project director/principal investigator; and Project Team members.

ii. Provide an executive summary, which includes a discussion of (1) how the research adds to the understanding of the area investigated; (2) the technical effectiveness and economic feasibility of the methods or techniques investigated or demonstrated; or (3) how the project is otherwise of benefit to the public. The discussion should be a minimum of one paragraph and written in terms understandable by an educated layman.

iii. Provide a comparison of the actual accomplishments with the goals and objectives of the project.

iv. Summarize project activities for the entire period of funding, including original hypotheses, approaches used, problems encountered and departure from planned methodology, and an assessment of their impact on the project results. Include, if applicable, facts, figures, analyses, and assumptions used during the life of the project to support the conclusions.

v. Identify products developed under the Award and technology transfer activities, such as:

   a. Publications (list journal name, volume, issue), conference papers, or other public releases of results. If not provided previously, attach, or send copies of any public releases to the DOE Program Manager identified in

Block 15 of the Assistance Agreement Cover Page;

b. Invention Disclosures; Patent Applications; Licensed Technologies

c. Web site or other Internet sites that reflect the results of this project;

d. Networks or collaborations fostered;

e. Other products, such as data or databases, physical collections, audio or video, software or netware, models, educational aids or curricula, instruments, or equipment.

vi. For projects involving computer modeling, provide a brief description of the model, key assumptions, how the model was validated, and whether or not the model and results were presented in peer-reviewed publications.

B. Final Invention and Patent Report

Submit to:	arpa-e-t2m@hq.doe.gov and ARPA-E's Energy Program Information Center (ePIC): https://arpa-e-epic.energy.gov
Submission deadline:	Under Attachment 2 (Small Business) and Attachment 2 (Universities): within 120 days after the end of the period of performance. Under Attachment 2 (Large Business): within 120 days after end of period of performance.

The Recipient is required to submit a DOE Form 2050.11, "Patent Certification," available at https://arpa-e.energy.gov/technologies/project-guidance/post-award-guidance/close-out-reporting

Under Attachment 2 (Large Business), the Final Invention and Patent Report must include a list of all subcontracts at any tier containing a patent rights clause (or state that there were none).

C. Final Property Report

Submit to:	ARPA-E's Energy Program Information Center (ePIC): https://arpa-e-epic.energy.gov
Submission deadline:	Within 120 calendar days after end of period of performance.

The Recipient must submit a final inventory of Government-furnished property, and property acquired with project funds, whether the property is in the possession of the Recipient or Subrecipients. The Recipient must submit a

completed SF-428B, available at https://www.energy.gov/management/office-management/operational-management/financial-assistance/financial-assistance-forms. The inventory must include a description of the property, tag number, acquisition date, and acquisition cost, if purchased with project funds. The location of property should be listed under the Comments section. Any property with a fair market value below $10,000 may be omitted from the inventory.

The Recipient may submit a disposition plan or request by submitting a completed SF-428C, available at https://www.energy.gov/management/office-management/operational-management/financial-assistance/financial-assistance-forms to ePIC. The ARPA-E Grants Officer has sole and exclusive authority to approve disposition plans and requests.

III. POST-AWARD REPORTING (FOLLOWING CLOSEOUT OF AWARD)

A. Subject Invention Utilization Reporting

Submit to:	iEdison: https://www.nist.gov/iedison
Submission deadline:	Within 90 calendar days of annual reporting period

See Section I.F above.

B. Software and Data Utilization Reporting (if Recipient is required to submit a Software and Data Reporting Plan)

Submit to:	ARPA-E's Energy Program Information Center (ePIC): https://arpa-e-epic.energy.gov
Submission deadline:	Within 90 calendar days of annual reporting period

See Section I.F above.

APPENDIX A

NOTICE TO RECIPIENTS REGARDING CONFIDENTIAL INFORMATION AND DATA AND PROTECTED PERSONALLY IDENTIFIABLE INFORMATION

I. CONFIDENTIAL INFORMATION AND DATA

The Recipient is required to mark confidential information and data in accordance with this guidance. Failure to properly mark confidential information and data may result in its public disclosure under the Freedom of Information Act (FOIA, 5 U.S.C. § 552) or otherwise.

Note: Please be aware that documents related to your award – including the Cooperative Agreement – may be requested under the FOIA. However, ARPA-E notifies Recipient of such FOIA requests, and consistent with DOE regulation, ARPA-E provides Recipients an opportunity to submit their views regarding the release of commercial and proprietary information contained in the requested documents. ARPA-E is diligent in protecting commercially sensitive information that is properly marked as described below or as otherwise provided in the Award. Note: ARPA-E's Energy Program Information Center (ePIC) has its own mechanisms to allow the Recipient to mark confidential information.

A. Protected Data

If the Award includes a "Rights in Data - Programs Covered Under Special Data Statutes" clause in Attachment 2, the Recipient may mark data that qualifies as "Protected Data" with the legend set forth in that clause.

B. Other Confidential Information and Data

The Recipient must properly mark any documents containing trade secrets or commercial/financial information that is privileged or confidential other than technical data or computer software. Marking of technical data and computer software is addressed in the "Rights in Data" Clause of Attachment 2.

- The cover page must be marked with the following wording and identify the specific pages containing such information:

  > *NOTICE OF RESTRICTION ON DISCLOSURE AND USE OF DATA*
  > *Pages [__] of this document may contain trade secrets or commercial or financial information that is privileged or confidential and exempt from public disclosure. Such information shall be used or disclosed only for evaluation purposes or in accordance with a financial assistance or loan agreement between the submitter and the Government. The Government may use or disclose any information that is not appropriately marked or otherwise restricted, regardless of source.*

- The header and footer of each page containing such information must be marked with the following wording: "*May contain trade secrets or commercial or*

financial information that is privileged or confidential and exempt from public disclosure."

- Each line and paragraph containing such information must be marked with double brackets or other clear identification, such as highlighting.

- Ensure that all e-mails containing protected information are categorized as "confidential." (Learn how to mark a message confidential in Outlook: http://office.microsoft.com/en-us/outlook-help/mark-a-message-as-private-personal-or-confidential-HP005242880.aspx).

II. PROTECTED PERSONALLY IDENTIFIABLE INFORMATION

The Recipient should not include any Protected Personally Identifiable Information (Protected PII) in their submissions to ARPA-E. Protected PII is defined as any data that, if compromised, could cause harm to an individual such as identify theft. Protected PII includes:

- Social Security Numbers in any form;
- Place of Birth associated with an individual;
- Date of Birth associated with an individual;
- Mother's maiden name associated with an individual;
- Biometric record associated with an individual;
- Fingerprint;
- Iris Scan;
- DNA;
- Medical history information associated with an individual;
- Medical conditions, including history of disease;
- Metric information, e.g., weight, height, blood pressure;
- Criminal history associated with an individual;
- Ratings;
- Disciplinary actions;
- Financial information associated with an individual;
- Credit card numbers; and
- Security clearance history or related information (not including actual clearances held).

ATTACHMENT 5:

BUDGET INFORMATION

Attachment 5 (Budget Information) consists of the following documents:

SF-424A	Form available at http://arpa-e.energy.gov/?q=project-guidance/pre-award

An ARPA-E Grants Officer has reviewed and approved this SF-424A and the supporting Budget Justification.

Applicant Name: Deep Isolation US LLC Award Number: DE-AR0002176

Budget Information - Non Construction Programs

OMB Number: 4040-0006
Expiration Date: 02/28/2025

Section A - Budget Summary

Grant Program Function or Activity (a)	Catalog of Federal Domestic Assistance Number (b)	Estimated Unobligated Funds Federal (c)	Estimated Unobligated Funds Non-Federal (d)	New or Revised Budget Federal (e)	New or Revised Budget Non-Federal (f)	New or Revised Budget Total (g)
1. Budget period 1	81.135			$17,076,613.00	$11,566,816.00	$28,643,429.00
2. Budget period 2	81.135			$2,866,400.00	$10,744,374.00	$13,610,774.00
3. Budget period 3	81.135			$56,987.00	$5,159,639.00	$5,216,626.00
4.						
5. Totals		$0.00	$0.00	$20,000,000.00	$27,470,829.00	$47,470,829.00

Section B - Budget Categories

6. Object Class Categories	Grant Program, Function or Activity Year 1	Year 2	Year 3	(4)	Total (5)
a. Personnel	$594,331.00	$663,677.00	$714,709.00		$1,972,717.00
b. Fringe Benefits	$302,871.00	$338,210.00	$364,216.00		$1,005,297.00
c. Travel	$203,632.00	$217,886.00	$233,138.00		$654,656.00
d. Equipment	$0.00	$0.00	$0.00		$0.00
e. Supplies	$15,000.00	$0.00	$0.00		$15,000.00
f. Contractual	$22,983,849.00	$10,186,486.00	$2,784,233.00		$35,954,568.00
g. Construction	$0.00	$0.00	$0.00		$0.00
h. Other	$433,788.00	$380,661.00	$516,797.00		$1,331,246.00
i. Total Direct Charges (sum of 6a-6h)	$24,533,471.00	$11,786,920.00	$4,613,093.00		$40,933,484.00
j. Indirect Charges	$4,109,958.00	$1,823,854.00	$603,533.00		$6,537,345.00
k. **Totals** (sum of 6i-6j)	$28,643,429.00	$13,610,774.00	$5,216,626.00		$47,470,829.00
7. Program Income					$0.00

Previous Edition Usable

SF-424A (Rev. 7-97)
Prescribed by OMB Circular A-102

Authorized for Local Reproduction

Exhibit 99.1

Nuclear Waste Innovator Deep Isolation Finalizes Cooperative Agreement with DOE ARPA-E for up to $20 Million in Federal Funding

SCALEUP is intended to advance the Universal Canister System toward commercial deployment and supports the deep borehole Commercialization Pilot in Texas

PLANO, TX, November 23, 2026 — Deep Isolation Nuclear, Inc. (OTCQX: DBHL) ("Deep Isolation" or the "Company"), a leading innovator in nuclear waste disposal technology, today announced its' subsidiary has entered into a cooperative agreement with the U.S. Department of Energy's Advanced Research Projects Agency-Energy (ARPA-E) under its SCALEUP Ready program providing for up to $20 million in federal funding to advance commercialization of Deep Isolation's Universal Canister System (UCS) and deep borehole disposal technology over a three-year project.

The agreement follows Deep Isolation's April 2026 announcement that the Company had been selected for ARPA-E SCALEUP funding. The project is designed to advance the UCS from a validated prototype toward commercial deployment through regulatory, engineering and full-scale field activities. The project is expected to include work with Westinghouse to advance the UCS for storage and transportation of spent fuel from its eVinci™ microreactor, including activities supporting a potential Nuclear Regulatory Commission licensing pathway.

"This agreement marks an important transition from technology development toward commercial-scale implementation," said Jesse Sloane, Executive Vice President of Engineering at Deep Isolation and principal investigator for the SCALEUP project. "We are excited to work with ARPA-E and our project collaborators to demonstrate the UCS at full-scale, non-radioactive Commercial Pilot, advance the regulatory pathway and build the technical foundation needed for future commercial deployment."



“ARPA-E backed this technology for its potential to transform the back-end of our nuclear fuel cycle”, said Conner Prochaska, Director of ARPA-E. “This is President Trump’s nuclear renaissance in action – advancing American energy dominance and keeping U.S. nuclear technology at the forefront of global innovation.”

The SCALEUP project builds on a series of DOE- and ARPA-E-funded projects that have progressively advanced Deep Isolation’s technology. Earlier projects supported the development, fabrication and physical testing of the UCS, evaluated its performance under conditions representative of a deep borehole environment and demonstrated its potential applicability to spent fuel from advanced reactors and high-level waste from advanced fuel recycling.

The project also plans to advance Deep Isolation’s Commercialization Pilot in Cameron, Texas, where the Company and its collaborators are developing a full-scale, at-depth demonstration of deep borehole disposal using nonradioactive materials. The Commercialization Pilot officially launched with a groundbreaking ceremony on January 28, 2026 and is being conducted in collaboration with the Deep Borehole Demonstration Center (“DBDC”), Halliburton (NYSE: HAL), Amentum (NYSE: AMTM), NAC International (TYO: 7004), and Occlusion Nuclear Solutions, to test Deep Isolation’s deep borehole technology for the safe, permanent disposal of nuclear waste.

SCALEUP Federal funding is provided on a cost-reimbursement basis and is subject to the agreement’s terms and conditions, including Deep Isolation’s funding of its cost share, satisfaction of technical milestones, environmental and permitting requirements. and ARPA-E’s rights to redirect, reduce, suspend or terminate the project, including at go/no-go decision points. The total approved project cost is approximately $47.5 million, with ARPA-E contributing $20 million and Deep Isolation contributing approximately $27.5 million over the three-year period of performance. Deep Isolation expects to fund its cost share through existing cash on hand and supplemented, if needed, by future financing.

Additional information about the agreement, including specific conditions imposed by ARPA-E, is set forth in the Company’s Current Report on Form 8-K filed with the SEC on November 23, 2026.



About the SCALEUP Ready Program

SCALEUP Ready competitively selects and supports the next step to commercial scale-up of promising technologies from the ARPA-E portfolio of projects, past and present. The program extends ARPA-E's support beyond research and development to provide a path to commercial deployment. Since 2019, SCALEUP programs have lent tailored assistance to bring lab-scale technology to pilot-scale applications.

About Deep Isolation

Deep Isolation (OTCQX: DBHL) is the first company to undertake development of technologies for nuclear waste disposal in deep boreholes. Deep Isolation's solution is designed to offer a unique approach to help countries identify, plan for and complete the necessary steps to dispose of their nuclear waste inventories. With over 100 patents issued to date, Deep Isolation's technology is designed to leverage proven drilling practices to allow safe isolation of waste deep underground in horizontal, vertical, or slanted borehole repositories. Deep Isolation's Universal Canister System is engineered to support integrated management of spent fuel and high-level radioactive waste from legacy and advanced reactors across storage, transportation, and eventual disposal. In January 2026, Deep Isolation launched a full-scale, at-depth deep borehole Commercialization Pilot for its solution at Cameron, Texas, in collaboration with the Deep Borehole Demonstration Center, Halliburton (NYSE: HAL), Amentum (NYSE: AMTM), NAC International (TYO: 7004), and Occlusion Nuclear Solutions.

For more information, visit: https://www.deepisolation.com

Media Contact

Sophie McCallum
media@deepisolation.com

Investor Contact

Caldwell Bailey
InvestorRelations@deepisolation.com

Forward-Looking Statements

Statements contained in this news release that are not historical facts are "forward-looking information" or "forward-looking statements" (collectively, "forward-looking statements") within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended. Forward-looking statements include, but are not limited to, statements regarding the ARPA-E agreement and the anticipated funding, timing and results of the project, our plans, objectives and expectations for our business, the future growth of our business and the nuclear energy and nuclear waste disposal industries as a whole, and future benefits expected to arise from our strategic partnerships. In certain cases, forward-looking statements can be identified by the use of words and phrases or variations of words and phrases or statements such as "may," "should," "expect," "intend," "plan," "anticipate," "believe," "estimate," "predict," "will," "could," "project," "target," "potential," "continue" and similar expressions. Forward-looking statements are based on management's belief and assumptions, including current expectations and projections about future events and trends, and on information currently available to management.

Forward-looking statements in this or any other news release are subject to a number of risks, uncertainties, and assumptions that could cause actual results to be materially different from those expressed or implied by such forward-looking statements. Such risks, uncertainties, and assumptions are subject to a number of factors, including, among others: our ability to raise sufficient capital to fund our cost share under the ARPA-E agreement; ARPA-E's rights to redirect, reduce, suspend or terminate the award, including if it no longer effectuates program goals or agency priorities; the achievement of technical milestones and go/no-go determinations under that agreement; our ability to comply with the specific conditions imposed by ARPA-E and with NEPA and permitting requirements; the failure of a market to develop for our deep borehole disposal solutions as quickly as we expect or at all; a failure of demand for our solution to develop sufficiently; regulatory and legal developments, including issues relating to obtaining regulatory approvals or permissions on the timelines we expect or at all; our lack of profitability; delays or failure in our initiative to complete a full-scale, at-depth demonstration of our Universal Canister System and our deep borehole solution; our failure to enter into contracts with customers or, once we do enter into contracts, to continue such contractual relationships or to receive new contract awards; our dependency on governmental contracts and awards; our failure to manage our growth effectively or to execute our business plan; a failure to sustain and expand relationships with governmental entities and strategic partners; failure in the assumptions or analyses we have used in supporting forecasts or plans; our inability to commercialize our products at scale; the development or deployment of other technologies or solutions supplanting or competing with our technologies; challenges to our intellectual property; failures to protect, maintain, enforce, and enhance our intellectual property, and claims by others of intellectual property infringement; political and public perceptions of nuclear energy, including perceptions as to accidents or other high-profile events involving nuclear power facilities or radioactive materials; our liquidity and ability to raise capital; risks relating to the trading market for our common stock, including limited liquidity and volatility; our ability to maintain the qualifications for quotation on the OTCQX; any inability to control operating and project costs and project delays or other project-related problems; security (including cybersecurity) breaches or disruptions; geopolitical, macroeconomic, domestic events or crises, including supply chain disruptions and other risks and uncertainties outside of our control; weather and effects of climate change; and litigation or legal proceedings that may be brought against us.

The foregoing is not an exhaustive list of all the factors that may cause any forward-looking statements to prove inaccurate or our actual results to differ materially from our expectations and forecasts. Moreover, we operate in a highly regulated environment. New risks emerge from time to time. It is not possible for our management to predict all risks, nor can we assess the impact of all factors on our business or the extent to which any factor, or combination of factors, may cause actual results to differ materially from those contained in any forward-looking statements we may make. In light of these risks, uncertainties, and assumptions, the future events and trends discussed in this release may not occur and actual results could differ materially and adversely from those anticipated or implied in the forward-looking statements, and we cannot guarantee future results, performance, or achievements. Accordingly, readers should not place undue reliance on forward-looking statements. We undertake no obligation to update any forward-looking statements for any reason after the date of this release or to conform these statements to actual results or revised expectations, except as required by law.

Additional information concerning the factors above and other factors can be found in the Company's public filings with the Securities and Exchange Commission (the "SEC"), including the sections titled "Forward-Looking Statements" and "Risk Factors" in the Company's Annual Report on Form 10-K for the year ended December 31, 2025 filed with the SEC on March 30, 2026, our subsequent quarterly reports on Form 10-Q filed with the SEC, our subsequent Current Reports on Form 8-K filed with the SEC, our Form S-1, originally filed August 18, 2025 and subsequently amended, our Proxy Statement for our 2026 Annual Meeting as filed on April 29, 2026, and in filings with the SEC that will be made in the future. The Company's SEC filings are available free of charge at www.sec.gov or upon written request to Deep Isolation Nuclear at InvestorRelations@deepisolation.com.