

Public Law 99-502, the Federal Technology Transfer Act of 1986, as amended.

**COOPERATIVE RESEARCH AND DEVELOPMENT AGREEMENT (hereinafter "CRADA")
NETL AGMT-insert number**

between

**U.S. DEPARTMENT OF ENERGY
NATIONAL ENERGY TECHNOLOGY LABORATORY (hereinafter "NETL")**

and

INSERT FULL NAME OF PARTICIPANT (hereinafter "Participant")

both being hereinafter referred to singly as "Party" and jointly as "Parties"

The Parties agree to enter into this CRADA as authorized by law and in accordance with the following terms and conditions:

ARTICLE I. DEFINITIONS

- A. "Government" means the United States of America and agencies thereof.
- B. "DOE" means the Department of Energy, an agency of the United States of America (U.S.).
- C. "NETL" is a Government-owned and Government-operated facility engaged in the conduct of energy research and development.
- D. "Generated Information" means information produced in the performance of this CRADA.
- E. "Proprietary Information" means information which is developed at private expense outside of this CRADA, is marked as Proprietary Information, and embodies (i) trade secrets or (ii) commercial or financial information which is considered privileged or confidential under the Freedom of Information Act (5 USC 552 (b)(4)).
- F. "Protected CRADA Information" means Generated Information that is marked as being Protected CRADA Information by a Party to this CRADA and which would have been Proprietary Information had it been obtained from a non-Federal entity.

- G. "Subject Invention" means any invention of the Parties conceived or first actually reduced to practice in the performance of work under this CRADA.
- H. "Intellectual Property" means patents, trademarks, copyrights, Protected CRADA Information, and other forms of comparable property rights protected by Federal law and its foreign counterparts, except trade secrets.
- I. "Background Intellectual Property" means the Intellectual Property identified by the Parties in Annex B, Background Intellectual Property, which was in existence prior to or is first produced outside of this CRADA, except that in the case of inventions in those identified items, the inventions must have been conceived outside of this CRADA and not first actually reduced to practice under this CRADA to qualify as Background Intellectual Property.

ARTICLE II. STATEMENT OF WORK, TERM, FUNDING, AND COSTS

- A. Annex A is the Statement of Work.
- B. The effective date of this CRADA shall be the date on which it was signed by the last of the Parties. The work to be performed under this CRADA shall be completed within insert timeframe from the effective date.
- C. The total estimated contributions of the Parties is \$_____.

The Participant's total estimated contribution is \$_____, of which \$_____ is funds-in to NETL and \$_____ is in kind.

NETL's total estimated in-kind contribution is \$_____, subject to available funding.

The Participant shall provide to NETL, prior to any work being performed under this CRADA, a budgetary resource sufficient to cover anticipated work that will be performed for the Participant's directly funded share for the first billing cycle. In addition, the Participant shall provide 60 days of additional funding to ensure that funds remain available for the Participant's directly funded share for subsequent billing cycles. Failure of the Participant to provide the necessary advance funding is cause for termination of this CRADA in accordance with the Termination article.

The Participant shall provide to NETL all funding for its directly funded share prior to NETL beginning work paid for by that funding.

- D. Notices: The names, postal addresses, telephone numbers, and email addresses for the Parties are provided in the Statement of Work. Any communications required by this CRADA, if given by postage prepaid first-class U.S. Mail or other verifiable

means addressed to the Party to receive the communication, shall be deemed made as of the day of receipt of such communication by the addressee, or on the date given if by email. Address changes shall be made by written notice and shall be effective thereafter. All such communications, to be considered effective, shall include the number of this CRADA.

ARTICLE III. PERSONAL PROPERTY

Any tangible personal property produced or acquired in conducting work under this CRADA shall be owned by the Party paying for it. There will be no jointly funded property. Personal property shall be disposed of as directed by its owner at the owner's expense.

ARTICLE IV. DISCLAIMER

THE GOVERNMENT AND THE PARTICIPANT MAKE NO EXPRESS OR IMPLIED WARRANTY AS TO THE CONDITIONS OF THE RESEARCH OR ANY INTELLECTUAL PROPERTY, GENERATED INFORMATION, OR PRODUCT MADE OR DEVELOPED UNDER THIS CRADA, OR THE OWNERSHIP, MERCHANTABILITY, OR FITNESS FOR A PARTICULAR PURPOSE OF THE RESEARCH OR RESULTING PRODUCT. NEITHER THE GOVERNMENT NOR THE PARTICIPANT SHALL BE LIABLE FOR SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES.

ARTICLE V. PRODUCT LIABILITY

Except for any liability resulting from any negligent acts, willful misconduct or omissions of NETL, the Participant agrees to hold harmless the Government for all damages, costs, and expenses, including attorney's fees, arising from personal injury or property damage occurring as a result of the making, using, or selling of a product, process, or service by or on behalf of the Participant, its assignees, or licensees, which was derived from the work performed under this CRADA.

ARTICLE VI. RIGHTS TO SUBJECT INVENTIONS

- A. The Parties agree to promptly disclose in writing to each other every Subject Invention in sufficient detail to comply with the provisions of 35 USC § 112 well before any statutory bars may arise under 35 USC § 102. Each Party shall have the first option to elect to retain title to any of its Subject Inventions. If a Party elects not to retain title to any of its Subject Inventions, then the other Party shall have the option of electing to obtain title to such Subject Inventions under this CRADA. The Participant has the option to choose an exclusive license, for reasonable compensation, in a pre-negotiated field of use for any of DOE's Subject Inventions for a period of twelve months after DOE reports the invention to the Participant or such longer time as may be approved by DOE.

NETL discloses to the Participant that NETL may utilize one or more site-support contractors (“SSC”), some of which may be a small business or non-profit entity (including educational institutions), in performance of NETL’s work under this CRADA. The Participant acknowledges that, under 35 USC 202, if a Subject Invention is solely or jointly created under this CRADA by a small business or nonprofit SSC, that SSC may elect to retain title to its rights to the Subject Invention. NETL represents to the Participant that if NETL engages any small business or nonprofit SSC to perform work under this CRADA, such SSC will have either: 1) agreed to negotiate in good faith an agreement with the Participant, prior to that SSC’s performing research under the CRADA or with the Government’s permission upon identification of a Subject Invention, regarding the allocation of rights to any Subject Invention that SSC makes, solely or jointly, under the CRADA; or 2) in the absence of such an agreement with the Participant, agreed to grant the Participant an option for a license in its Subject Inventions of the same scope and terms set in this Article VI. for inventions made by the Government.

- B. The Participant acknowledges that DOE may obtain title to each Subject Invention reported under this CRADA for which a patent application is not filed, a patent application is not prosecuted to issuance, or any issued patent is not maintained by the Participant. The Government shall retain a non-exclusive, non-transferable, irrevocable, paid-up license to practice or to have practiced, for or on its behalf all Subject Inventions throughout the world.
- C. For Subject Inventions conceived or first actually reduced to practice under this CRADA which are joint Subject Inventions, title to such Subject Inventions shall be jointly owned by DOE and the Participant.
- D. The Participant acknowledges that DOE has certain march-in rights to any Subject Inventions in accordance with 48 C.F.R. 27.304-1(g) and 15 USC 3710a(b)(1)(B) and (C).
- E. The Participant agrees to disclose Subject Inventions to the DOE by completing an entry for each Subject Invention in the Government’s iEdison system and to NETL via an email sent to TIInnovations@netl.doe.gov. The iEdison entry must include NETL’s Organization Code, 10042281, in the field titled Organization Code for Other Organizations to View Invention and Related Patents.

The Participant agrees to update, in a timely manner, each Subject Invention record in the iEdison system from disclosure to patent expiration or other disposition, including a non-proprietary invention utilization report no more frequently than annually.

NETL agrees to disclose Subject Inventions to the Participant through the Participant's Administrative Contact listed in Annex A.

ARTICLE VII. RIGHTS IN DATA

- A. The Parties shall have unlimited rights in and each of them shall have a right to use all Generated Information produced by, or information provided to, the Parties under this CRADA that is not marked as being Protected CRADA Information or as Proprietary Information.
- B. **PROPRIETARY INFORMATION**: Each Party agrees not to disclose properly marked Proprietary Information provided by the other Party to anyone other than the Participant, NETL and its subcontractors (if any) without written approval of the providing Party, except to Government employees who are subject to 18 USC1905.
- C. **PROTECTED CRADA INFORMATION**: Each Party may designate and mark as Protected CRADA Information any qualifying Generated Information produced by its employees. For a period of insert timeframe, not to exceed 5 years from the date it is produced, the Parties agree not to further disclose Protected CRADA Information except as necessary to perform this CRADA or as requested by DOE to be provided to other DOE facilities for use only at those DOE facilities with the same protections in place and marked accordingly. Government employees who are subject to 18 USC 1905 may have access to Protected CRADA Information.
- D. **CESSATION OF OBLIGATIONS REGARDING PROTECTED CRADA INFORMATION AND PROPRIETARY INFORMATION**: The obligations relating to the disclosure or dissemination of Protected CRADA Information and Proprietary Information shall end if any such information becomes known without fault of either Party, or if such information is developed independently by a Party's employees who had no access to the Protected CRADA Information or Proprietary Information.
- E. **COPYRIGHT**: The Participant may assert copyright in any of their Generated Information. The Parties hereby acknowledge that the Government or others acting on its behalf shall retain a non-exclusive, royalty-free, worldwide, irrevocable, non-transferable license to reproduce, prepare derivative works, distribute copies to the public, and perform publicly and display publicly, by or on behalf of the Government, all copyrightable works produced in the performance of this CRADA, subject to the restrictions this CRADA places on publication of Proprietary Information and Protected CRADA Information.

The Parties agree that any work created by a U.S. Government employee constitutes a "work of the U.S. Government" under 17 USC 105 (prepared by an officer/employee of the U.S. Government as part of their official duties). Therefore,

their contribution is not subject to U.S. copyright under Section 105 of the United States Copyright Act.

This paragraph can be deleted if no software is produced. If the Participant copyrights computer software produced in the performance of this CRADA, the Participant will provide the source code, object code, and expanded abstract, and the minimum support documentation needed by a competent user to understand and use the software to DOE's Energy Science and Technology Software Center (ESTSC) via www.osti.gov/estsc. The Participant shall inform ESTSC when it abandons or no longer commercializes the computer software. Narrow license: Until such notice to ESTSC, the Government has for itself and others acting on its behalf, a royalty-free, non-transferable, non-exclusive, irrevocable, worldwide copyright license to reproduce, prepare derivative works, and perform publicly and display publicly, by or on behalf of the Government. Broad license: After the Participant owning the computer software abandons or no longer commercializes the computer software, the Government has for itself and others acting on its behalf, a royalty-free, nontransferable, nonexclusive, irrevocable worldwide copyright license to reproduce, prepare derivative works, distribute copies to the public, and perform publicly and display publicly, by or on behalf of the Government.

ARTICLE VIII. U.S. COMPETITIVENESS

The Parties agree that a purpose of this CRADA is to provide substantial benefit to the U.S. economy.

In exchange for benefits received under this CRADA, the Participant therefore agrees to the following:

- A. Products embodying Intellectual Property developed under this CRADA shall be substantially manufactured in the U.S.; and
- B. Processes, services, and improvements thereof which are covered by Intellectual Property developed under this CRADA shall be incorporated into the Participant's manufacturing facilities in the U.S. either prior to or simultaneously with implementation outside the U.S. Such processes, services, and improvements, when implemented outside the U.S., shall not result in reduction of the use of the same processes, services, or improvements in the U.S.

ARTICLE IX. EXPORT CONTROL

EACH PARTY IS RESPONSIBLE FOR ITS OWN COMPLIANCE WITH EXPORT CONTROL LAWS AND REGULATIONS. EXPORT LICENSES OR OTHER AUTHORIZATIONS FROM THE U.S. GOVERNMENT

MAY BE REQUIRED FOR THE EXPORT OF GOODS, TECHNICAL DATA, OR SERVICES UNDER THIS AGREEMENT. THE PARTIES ACKNOWLEDGE THAT EXPORT CONTROL REQUIREMENTS MAY CHANGE AND THAT THE EXPORT OF GOODS, TECHNICAL DATA, OR SERVICES FROM THE U.S. WITHOUT AN EXPORT LICENSE OR OTHER APPROPRIATE GOVERNMENTAL AUTHORIZATION MAY RESULT IN CRIMINAL LIABILITY.

ARTICLE X. REPORTS AND ABSTRACTS

The Parties agree to produce the following deliverables: an initial abstract suitable for public release; and a final report, to include a list of Subject Inventions. The Participant acknowledges that NETL has the responsibility to timely provide the information to DOE's Office of Scientific and Technical Information. The Participant agrees to provide the above information to NETL to enable NETL's full compliance with this Article.

Use of the name of a Party, or its employees in any promotional activity, including, but not limited to press releases regarding the Agreement or products or services resulting from this CRADA, requires written approval of the named Party.

ARTICLE XI. FORCE MAJEURE

Neither Party will be liable for unforeseeable events beyond its reasonable control.

ARTICLE XII. DISPUTES

The Parties shall attempt to jointly resolve all disputes arising under this CRADA. In the event a dispute arises under this CRADA, the Participant is encouraged to contact the NETL Technology Transfer Ombudsman in order to further resolve such dispute before pursuing third-party mediation or other remedies. If the Parties are unable to jointly resolve a dispute within a reasonable period of time, they agree to submit the dispute to a third-party mediation process that is mutually agreed upon by the Parties. This CRADA and performance thereunder shall be governed by U.S. Federal law.

ARTICLE XIII. ENTIRE CRADA, MODIFICATIONS, AND TERMINATION

This CRADA with its annexes contains the entire agreement between the Parties in performing the research described in the Statement of Work (Annex A). Any agreement to materially change any terms or conditions of this CRADA or the Annexes shall be valid only if the change is made in writing and executed by the Parties hereto.

This CRADA may be terminated by either Party with 30 days written notice to the other Party. If Article II provides for advance funding, this CRADA may also be terminated by NETL in the event of failure by the Participant to provide the necessary advance funding. Each Party shall be responsible for its costs arising out of or as a result of this termination. The obligations of any

clause of this CRADA that were intended to survive the expiration of the period of performance, for example, confidentiality, use and/or non-disclosure obligations, shall also survive any termination of this CRADA.

ARTICLE XIV. ASSIGNMENT OF PERSONNEL

- A. Each Party may assign personnel to the other Party's facility to participate in or observe the research to be performed under this CRADA. Such personnel assigned by the assigning Party shall not during the period of such assignments be considered employees of the receiving Party for any purpose, including but not limited to any requirements to provide workers' compensation, liability insurance coverage, payment of salary or other benefits, or withholding of taxes.

The Participant may be required to provide information to NETL in order to facilitate its responsibilities associated with foreign national access to DOE sites, information, technologies, and equipment. If the Participant, including its contractors, anticipates utilizing a foreign national in the performance of this CRADA, either on-site or off-site, the Participant may be responsible for providing to NETL specific information regarding the foreign national to satisfy compliance with all of the NETL requirements for access approval. See Annex C for additional information regarding this requirement.

- B. Notwithstanding the foregoing, the receiving Party shall have the right to exercise routine administrative and technical oversight of the occupational activities of such personnel during the assignment period and shall have the right to approve the assignment of personnel or request their removal. The assigning Party's employees and agents shall observe the working hours, security and safety rules, and holiday schedule of the receiving Party while working on the receiving Party's premises.
- C. Unless otherwise agreed to by the Parties, the assigning Party shall bear any and all costs and expenses with regard to its personnel assigned to the receiving Party's facilities under this CRADA. The receiving Party shall bear facility costs of such assignments.
- D. The Parties agree to abide by the conditions set forth in Annex D, Access to DOE-Owned or Leased Facilities.

ARTICLE XV. BACKGROUND INTELLECTUAL PROPERTY

- A. Each Party may use the other Party's Background Intellectual Property identified in Annex B of this CRADA solely in performance of research under the Statement of Work. This CRADA does not grant to either Party any option, grant, or license to commercialize, or otherwise use the other Party's Background Intellectual Property.

Licensing of Background Intellectual Property, if agreed to by the Parties, shall be the subject of separate licensing agreements between the Parties.

- B. Each Party has used reasonable efforts to list all relevant Background Intellectual Property, but Background Intellectual Property may exist that is not identified. Neither Party shall be liable to the other Party because of failure to list Background Intellectual Property.
- C. The Parties agree to maintain the other Party's Background Intellectual Property as confidential.

FOR National Energy Technology Laboratory:

FOR insert full name of Participant:

BY: _____
Sean I. Plasynski, Ph.D.
Director (Acting)

BY: _____
insert signatory's name
insert signatory's title

DATE: _____

DATE: _____

ANNEX A

Statement of Work

insert Statement of Work

MODEL

ANNEX B

Background Intellectual Property

The Parties declare the following Background Intellectual Property:

NETL:

NETL Ref insert N-number
U.S. Patent Application, if applicable Number insert number
Filed or Submitted, as applicable insert date
Titled "insert title"

Participant:

Participant Ref insert number
U.S. Patent Application, if applicable Number insert number
Filed or Submitted, as applicable insert date
Titled "insert title"

ANNEX C

Foreign National Access Approval

A. Introduction:

It is in the interest of both the U.S. Government and the Participant to be aware of DOE approval requirements for foreign nationals assigned work under this CRADA and how they relate to export controls, access to DOE sites, and access to DOE information, technologies, and equipment regardless of whether the work is performed at a DOE site or an off-site location/facility.

B. Definitions:

Foreign national, as used in this clause, is defined in DOE Order 142.3, Unclassified Foreign Visits and Assignments Program.

Fundamental research, as used in this clause, is defined in National Security Decision Directive (NSDD) 189, National Policy on the Transfer of Scientific, Technical, and Engineering Information.

On-site, as used in this clause, is defined as a DOE site.

Off-site, as used in this clause, is defined as a location or facility not located on a DOE site, including the Participant's facilities/site.

C. Requirements:

DOE Order 142.3 requires processing for all foreign nationals seeking access to DOE sites, and access to DOE information, technologies, and equipment regardless of whether the work is performed on-site or off-site. Requests for access must be approved by DOE on an individual basis.

The Participant is required to complete form NETL F 142.1-1 Request for Unclassified Foreign National Visit, Assignment, or Access for any foreign national identified to perform unclassified work under this CRADA (refer to DOE Order 142.3 for requirements related to classified work) at least 45 days prior to site access. The NETL form is required for all individuals who will have access to DOE information, technologies, and equipment regardless of whether the work is performed on-site or off-site and all individuals who require access to DOE sites.

In accordance with 15 CFR 734.8(b) (Note 3 to paragraph (b)), if fundamental research is funded by the U.S. Government, compliance with DOE Order 142.3 will result in preservation of any

application of the exception to Export Administration Regulations (EAR) found at 15 CFR. Violation of the control requirements set forth in this award, and subsequently required in flow-down requirements, may result in non-application of the available EAR exception.

The Iran Threat Reduction and Syria Human Rights Act of 2012, H.R. 1905, excludes citizens of Iran from entering the U.S. and seeking education relating to the nuclear and energy sectors of Iran.

D. References:

DOE Order 142.3, Unclassified Foreign Visits and Assignments Program

15 CFR 730-780, Export Administration Regulations (EAR)

National Security Decision Directive (NSDD) 189, National Policy on the Transfer of Scientific, Technical, and Engineering Information

H.R. 1905, Iran Threat Reduction and Syria Human Rights Act of 2012

ANNEX D

Access to DOE–Owned or Leased Facilities

- A. The performance of this CRADA requires that employees of the Participant have physical access to DOE-owned or leased facilities; however, this clause does not control requirements for employees obtaining a security clearance. The Participant understands and agrees that DOE has a prescribed process with which the Participant and its employees must comply in order to receive a security badge that allows such physical access.
- B. The Participant shall assure:
1. In initiating the process for gaining physical access, (i) compliance with procedures established by DOE in providing its employee(s) with any forms directed by DOE, (ii) that the employee(s) properly completes any forms, and (iii) that the employee(s) submits the forms to the DOE officials responsible for granting access to DOE-owned or leased facilities.
 2. In completing the process for gaining physical access, that its employee (i) cooperates with DOE officials responsible for granting access to DOE-owned or leased facilities and (ii) provides additional information, requested by those DOE officials.
- C. The Participant understands and agrees that DOE may unilaterally deny a security badge to an employee and that the denial remains effective for that employee unless DOE subsequently determines that access may be granted. Upon notice from DOE that an employee's application for a security badge is or will be denied, the Participant shall promptly identify and submit the forms referred to in subparagraph (B)(1) of this clause for the substitute employee. The denial of a security badge to individual employees by DOE shall not be cause for extension of the period of performance of this CRADA or any Participant claim against DOE.
- D. The Participant shall return to the DOE officials responsible for granting access to DOE–owned or leased facilities the badge(s) or other credential(s) provided by DOE pursuant to this clause, granting physical access to DOE-owned or leased facilities by the Participant's employee(s), upon (1) the termination of this CRADA; (2) the expiration of this CRADA; (3) the termination of employment on this CRADA by an individual employee; or (4) demand by DOE for return of the badge.
- E. All questions and compliance issues should be directed to the NETL Security Officer.

- F. All personnel working at NETL will be required to wear identification badges at all times. Identification badges will be assigned to a Participant official for issuance to the personnel employed for work under this CRADA.

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