U.S. DEPARTMENT OF ENERGY

American-Made Perovskite Startup Prize

VOUCHER GUIDELINES

1. INTRODUCTION

The U.S. Department of Energy (DOE), Solar Energy Technologies Office (SETO) launched the American-Made Perovskite Startup Prize, a part of the American-Made Challenges, to accelerate the growth of the domestic perovskite industry and support the rapid development of solar cells and modules that use perovskite materials through two prize competitions, coupled with entrepreneurial empowerment by the American-Made Network (Network), a network of national laboratories and private organizations such as incubators, investors, and industry partners across the United States. The Perovskite Startup Prize is a two contest (Countdown and Liftoff), $3 million cash prize competition designed to accelerate efforts to develop new, innovative perovskite solar companies with the potential to manufacture commercially viable products in the United States.

This new, scalable approach to rapid product development not only provides innovators with cash prizes, but also activates incubators, investors, universities, 17 national laboratories, and others to help accelerate commercialization of American energy innovation. In addition to cash prizes and support from the Network, the program offers contest winners non-cash prize awards[1] in the form of vouchers. These vouchers will allow winners to access tools, equipment, and expertise at national labs and private organizations.

This document provides details about how winners can use the vouchers. The intent of this voucher system is to allow prize winners from the Liftoff Contest to leverage the capabilities of the national labs, approved organizations, and facilities to further develop the winners' concepts. NREL, as the Prize Administrator, will manage administrative activities related to vouchers.

2. VOUCHER OVERVIEW

The vouchers will allow winners from the Liftoff Contests to access tools, equipment, and expertise at national labs and approved organizations and facilities so that they may develop, test, and validate their innovative solutions.

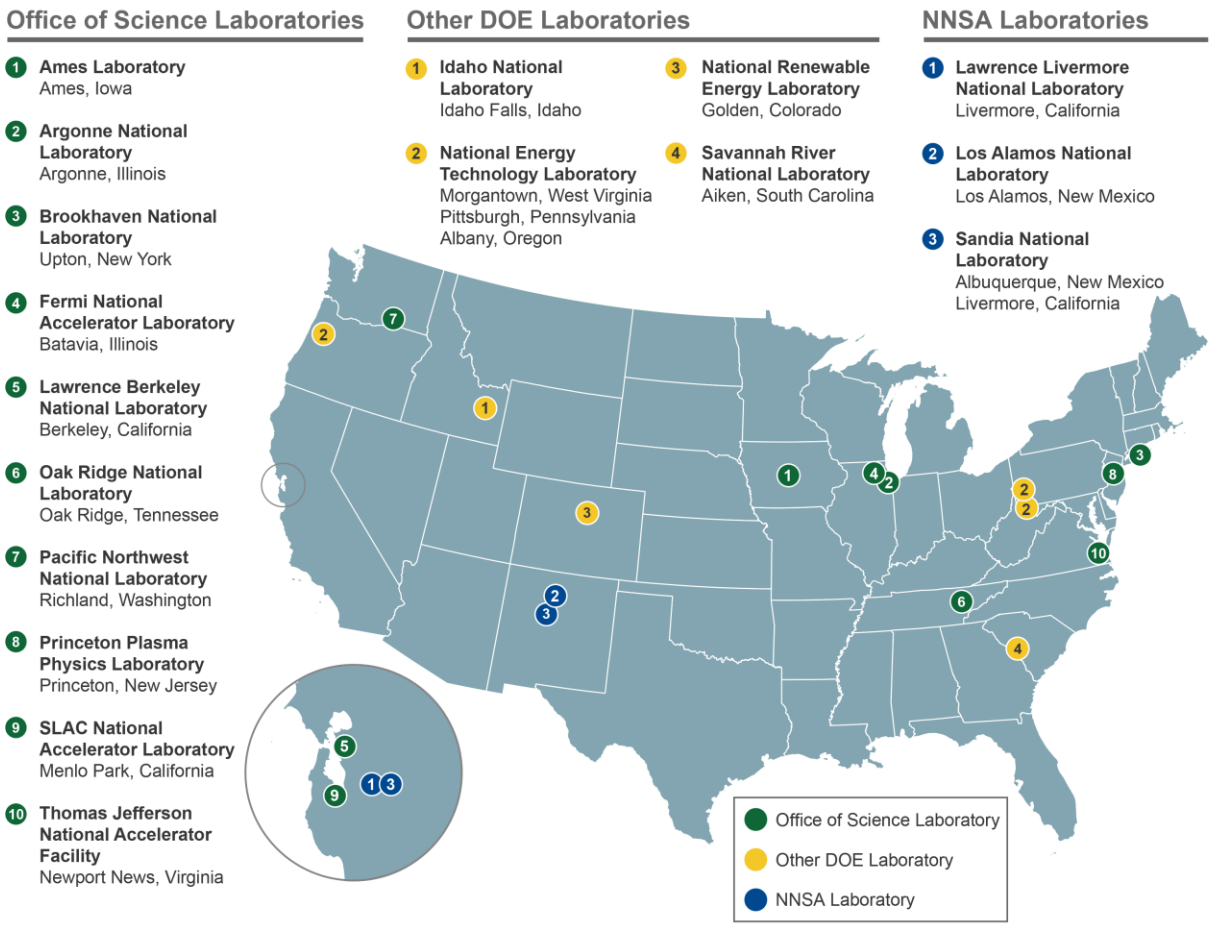
The 2-3 winners of the Liftoff Contest will win a voucher. Each winner of the Liftoff Contest will receive at least a $100,000 voucher. The DOE national labs, together with the approved organizations and facilities, are referred to as Voucher Service Providers (VSPs).

VSPs may provide competitors with:

- Access to hardware and development tools
- Access to national laboratories, universities, and private laboratories
- Specialized facilities with additive, reductive, and digital manufacturing support
- Testing and validation capabilities
- Other expert services that may be negotiated between the winners and the lab, organization, or facility.

Winners may have the opportunity to utilize vouchers at DOE's 17 national laboratories. See the map below for the list of all 17 national labs.

1 15 U.S. Code § 3719 - Prize Competitions



Winners may also use vouchers at approved organizations and/or facilities (e.g., fabrication, prototyping, manufacturing) provided that such organizations are on the approved list on the American- Made Challenges website. Any interested organization can apply to be added to the list of approved organizations at https://americanmadechallenges.org/connect.html. Details on how applications will be reviewed and approved are discussed below.

3. LIFTOFF CONTEST VOUCHER PROCESS

The process for vouchers issued under the Liftoff Contest consists of the following steps designed to pair competitors with the VSPs that are capable of providing valuable assistance for their specific projects. This process starts with competitors' submission packages for the Ready! Contest and progresses through the following steps:

1. **Initiate**—Competitors, as part of their submission package for the Countdown Contests, submit descriptions of their technical challenges in a two-page Technical Assistance Request (TAR).[2]

2 Per the Official Prize Rules, TAR is created by a competitor as part of their submission and consists of a two-page description of the unique challenges and needs that a national lab, private facility, and/or member of the American-Made Network could potentially help resolve. The Prize Administrator will make this request broadly available so members of the American-Made Network can understand competitor needs and assist them through the voucher program.

2. **Publish**—After winners of the Countdown Contest are selected, the Prize Administrator will release the TARs of the winners to national labs, other VSPs, and the public.
3. **Match**—VSPs and Countdown Contest winners contact each other, exchange ideas, and discuss scope and outcomes for using voucher funds.
4. **Propose & Initiate**—Competitors, based on discussions with VSPs, submit voucher work slides as part of the Liftoff Contest submission package. Proposed work with VSPs will be evaluated as part of the Liftoff Contest submission package. Winners of the Liftoff Contest will receive vouchers.
5. **Win & Perform**—Winners of the Liftoff Contest negotiate the required Voucher Statements of Work (SOW) with the lab, organization, or facility they would like to work with. Winners finalize the SOW, and once completed, forward the SOW to the Prize Administrator for review. The Prize Administrator will provide feedback on whether the SOW contains activities that qualify for voucher work. Qualified activities relate to work that is directly in alignment with progressing the solution or product and must adhere to the policies described in this document. Competitors and VSPs can renegotiate the SOW and resubmit if they so choose, as competitor needs may change over time. The VSPs will then perform the work and receive compensation in accordance with the payment process described below.

4. VOUCHER SERVICE PROVIDERS

VSPs are any of DOE's 17 national laboratories, as well as approved private organizations and facilities. Private organizations and facilities that would like to provide services to winners of the Liftoff competition can apply to be a VSP on the website (https://americanmadechallenges.org/connect.html). The following must be described:

- Description of services offered
- Website
- Location of business
- History of business
- Examples of success with previous customers in the area of services that the organization is offering here.

The Prize Administrator, at its sole discretion, determines whether non-national lab organizations may become an approved VSP. The Prize Administrator will review applications to become an approved VSP, which must establish, at a minimum, that:

- The entity is an incorporated U.S. business that has been in existence for at least 12 months at the time the application is submitted.
- The entity has an active website that describes the organization's capabilities.
- The entity offers capabilities, facilities, and services that are broadly available to interested parties.
- The business entity has a history of success in producing, developing, testing, validating, prototyping, and manufacturing products and solutions.

5. VOUCHER USE POLICIES

The following terms specify the voucher use policy for the Liftoff Contest:

- **Voucher Recipients—**Only Liftoff Contest winners will receive vouchers.

- **Maximum one-third with non-lab VSP—**A competitor may use a maximum of one-third of their voucher value at a non-national laboratory VSP and must use at least two-thirds of voucher funding at one or more national labs. Voucher funds cannot be split between more than two entities for each voucher.
- **Approved VSP—**Competitors may use a voucher only at a DOE national lab or a VSP that is approved by the Prize Administrator and listed on the American-Made Challenge website.
- **Allowable work—**All work conducted by the VSPs and funded through vouchers must be exclusively dedicated to advancing the competitor's innovation selected in the Liftoff Contest. Additionally, funds must be used for prototyping, developing, testing, or validating the innovation. When considering whether work will advance a particular innovation, the Prize Administrator will look to tangible and measurable outcomes related to advancing the innovation. Costs of the work must be reasonable. No alcohol, food, travel, or other personal expenses will be allowed.
- **Best Value Due Diligence—**Competitors are solely responsible for engaging national labs and approved VSPs and negotiating scopes of work under the voucher system. Competitors must determine which VSPs they will work with and conduct their own due diligence to determine the best value of the technical assistance covered by the voucher. Competitors may rely on Connectors in the American Made Network[3] to help facilitate relationships and agreements. The Prize Administrator staff will not intervene, mediate, or negotiate on behalf of competitors for the use of vouchers at any point in this program.
- **Responsibility—**It's the competitor's sole responsibility to ensure that a facility selected is on the approved facility list on https://americanmadechallenges.org and that the Voucher SOW is in accordance with the guidelines herein. The competitor shall pay any upfront payments required by the non-lab VSPs at its own risk. The competitor is also solely responsible for managing the process and the work products including any changes, delays, risks, conflicts, or disputes. The Prize Administrator will not be part of the contract or agreement between the competitor and a non-national lab VSP nor will it be a guarantor of the technical outcomes, work products, or quality of the services offered by a non-national lab VSP. If, for whatever reason, the work is not completed, or a dispute arises between the competitor and a VSP, resolution is entirely the responsibility of the competitor. The Prize Administrator will not intervene or mediate in such cases and will not bear any costs for dispute resolution among the parties.
- **Protecting Innovation Intellectual Property (IP)—**When a competitor is working with a non-national lab VSP, they are solely responsible for ensuring that the facility signs any relevant non-disclosure agreements to protect IP. The competitor is also responsible for the payment associated with protecting IP, including any relevant patents.
- **IP-Related Restrictions—**There are some IP restrictions and controls if the voucher payments are processed through Memorandum Purchase Order (MPO) options. Review the full details in Section 7.
- **Arms-Length Transactions—**The relationship between a competitor and a VSP should avoid actual conflicts of interest or the appearance of conflicts of interest. A competitor and a VSP should act independently and should not have any relationship to each other beyond providing services. All parties must be acting in their own self-interest and not be subject to any pressure or duress from the other party.

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3 As part of the overall American Made Challenges: Perovskite Startup Prize, Solar Energy Technologies Office in conjunction with NREL is bringing parties interested in supporting competitors in this competition together under the American Made Network. Included in the Network are entities that want to connect competitors to the support they need to succeed. To learn more about the American Made Network and Connector Organizations please visit https://americanmadechallenges.org/connect.html.

- **Process Compliance—**All competitors agree to adhere to the requirements contained in this document. Failure to follow these requirements may limit competitors' ability to acquire voucher funds.
- **Use or Lose—**Competitors must submit Voucher Statements of Work for Prize Administrator review within 30 calendar days of the relevant contest announcement of winners. Failure to do so may result in forfeiture of voucher funds. Vouchers will expire 1 year after the winners of the Liftoff Contests are announced. Vouchers cannot be redeemed for cash and may not be transferred to other parties.

6. VOUCHER PAYMENTS

Non-National Lab Voucher Reimbursement Process

The non-national lab voucher reimbursement process requirements include that:

- Competitors hoping to expend voucher funds with a non-lab VSP first negotiate a Voucher SOW and an itemized budget with a VSP. Then the competitor must provide documentation of the agreed-upon SOW and the budget to the Prize Administrator. The Prize Administrator will review the application against the standards for work described in this document and may provide feedback and suggested changes to ensure that the SOW describes work that may be reimbursable. Prize Administrator feedback is not a guarantee that work performed by a non-lab VSP will be reimbursed. Once the work is completed, the Prize Administrator will conduct a review of the work and reimburse the competitor in accordance with these guidelines.

- The work is then be funded by the competitor. The competitor is also responsible for signing any relevant contracts or agreements with the non-national lab VSP. Once the work is complete, and the competitor has paid the VSP, the competitor may request reimbursement from the Prize Administrator. The Prize Administrator will review the work against the allowability requirements, evidence of the completed work, and evidence of payment and compare the invoice for expenses incurred against the planned budget and SOW. Submitting photos, videos, and other documentation is encouraged to help facilitate rapid review and reimbursement. The Prize Administrator will make a determination of whether the funds were expended in compliance with the voucher requirements. Reimbursement of funds will be made at the sole discretion of the Prize Administrator. The Prize Administrator will make only a single payment per non-lab VSP engaged by the competitor. Each competitor may receive reimbursement only for work with up to two VSPs (labs and non-labs included).

National Lab Voucher Reimbursement Process

The items below are relevant to using Voucher funds at a national lab:

- Mandatory for all lab voucher funds:
    - **Statement of work**—All projects must have a statement of work (SOW) describing the proposed project scope to be covered with the voucher funds. A statement of work template is included in Appendix A. SOWs can be developed collaboratively by the teams and the lab staff who will be conducting work for them, but lab staff will finalize the SOW and submit the final product to the NREL Prize Administrator via perovskite.prize@nrel.gov.

    - **Budget**—When constructing an SOW, all teams should work with the lab to also define a draft budget and clearly describe how the voucher funds will cover the proposed SOW.

- Requirements for working with NREL specifically:
    - NREL, as the Prize Administrator, already has funding allocated to assist with TARs. Teams can simply negotiate an SOW with NREL technical experts and proceed with the work if they are awarded a voucher. Depending on timing and what is required by the teams, there may be a delay in getting access to specific equipment or researchers. NREL will do its best to try to expedite requests from Perovskite Startup Prize teams as much as possible.

- Additional requirement for work with labs other then NREL:
    - Voucher projects at national labs other then NREL will require an additional step:
        - After completing and signing an SOW with the competitor, a DOE national lab completes an MPO utilizing the provided SOW and budget paperwork (see statement of work template in Appendix A). If a competitor wants to work with a lab other than NREL, the Prize Administrator will directly transfer the allocated voucher funds to the selected lab to perform the work as specified in the MPO. Once the transfer occurs, the selected national lab must accept the funds to complete the transfer and set up the funding structure for the researchers. The actual timing for each lab funds transfer will depend on the individual labs, but the Prize Administrator will work closely with all selected labs to ensure a smooth and quick funds transfer process. If work under this MPO is not completed within 1 year of the time the competitor wins the prize, the funds will be returned to NREL.

        - Once competitors identify work at a lab other than NREL, they should contact the prize administrator for further guidance on how to process their voucher funds through the other lab.

Optional Documentation for Voucher Work at All Labs

To use their voucher funds at NREL, a competitor has the option of entering into a more formal and structured relationship with the lab through a Cooperative Research & Development Agreement (CRADA). A signed CRADA gives a competitor maximum collaborative flexibility with a national lab and allows additional private funds to be used to expand the SOW. It also defines ownership of any intellectual property developed during voucher-funded work as well as other specifics of the collaboration. At any point, competitors may request a consultation with a national lab to explore CRADA options, discuss an SOW, and negotiate a budget prior to confirming voucher eligibility. Even if competitors do not win a Liftoff Prize, they may still enter into a CRADA using private funds. When a signed CRADA between a competitor and a national lab exists, the Prize Administrator will directly transfer the required voucher funds to the lab covering the work outlined in the voucher SOW. Please contact the prize administrator for additional details and benefits of a CRADA. A draft CRADA is included in Appendix B.

APPENDIX A

STATEMENT OF WORK
"*(Title of the Project)"

NATIONAL LABORATORY:

PEROVSKITE STARTUP PRIZE TEAM NAME:

***(Date of the Statement of Work)**

1.0 BACKGROUND

This work is to be conducted in support of the American Made Challenges Perovskite Startup Prize. The intent is to connect competitor teams with national laboratories that can help accelerate the development of innovative solutions and products. Teams who have won the Liftoff Contest are eligible to utilize vouchers at national laboratories to advance their ideas.

2.0 OBJECTIVE (provide the specific objective)

*

3.0 SCOPE OF WORK (describe the scope of work)

*

4.0 TASKS (high level description of the tasks to be performed)

4.1 *

5.0 REVIEW MEETINGS AND TRAVEL REQUIREMENTS (if required)

*

6.0 DELIVERABLES (describe the agreed upon deliverables)

*

7.0 SOLE SOURCE JUSTIFICATION (explain why the lab is uniquely qualified)

8.0 BUDGET (provide a high-level budget in support of the work mentioned above)

Note – for the Liftoff Contest, winning teams can utilize up to $100K worth of vouchers at a national laboratory. They may also choose to split the funding between various laboratories. The budget submission must not exceed $100K.

9.0 SCHEDULE (provide a project schedule)

APPENDIX B

I. AMERICAN-MADE CHALLENGES VOUCHER PROGRAM
COOPERATIVE RESEARCH AND DEVELOPMENT AGREEMENT
(hereinafter "CRADA") NO.

BETWEEN
_____, Operator of
_____Laboratory
under its U.S. Department of Energy Contract No.
Address
City, State ZIP

II. (hereinafter "Contractor") AND

Company Name
Address
City, State ZIP

III.(hereinafter "Participant")

both being hereinafter jointly referred to as the "Parties."

Task Title:

Field of Use:

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.

C. "Contracting Officer" means the DOE employee administering the Contractor's DOE contract.

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 which 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 Contractor or Participant conceived of or first actually reduced to practice in the performance of work under this CRADA.

H. "Intellectual Property" means patents, trademarks, copyrights, mask works, Protected

CRADA Information and other forms of comparable property rights protected by Federal law and other foreign counterparts.

I. "Background Intellectual Property" means the Intellectual Property, if any, identified by the Parties in an Appendix titled "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.

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

A. Annex A is the Statement of Work.

B. Notices: The names, postal addresses, telephone 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.

C. The effective date of this CRADA shall be the latter date of (1) the date on which it is signed by the last of the Parties or (2) the date on which it is approved by DOE. The work to be performed under this CRADA shall be completed within months/years from the effective date.

D. The Participant's estimated contribution is $_____, which includes $_____funds-in. The Government's estimated contribution, which is provided through Contractor's contract with DOE, is $_____, subject to available funding.

E. [Reserve paragraph if Participant is not providing funding to Contractor.] For CRADAs that include (non-Federal) funding on a funds-in basis, the Participant shall provide Contractor, prior to any work from being performed, a budgetary resource sufficient to cover the anticipated work that will be performed during the first billing cycle. In addition, the Participant shall provide sixty (60) days of additional funding to ensure that funds remain available for project during subsequent billing cycles. Failure of Participant to provide the necessary advance funding is cause for termination of this CRADA in accordance with the Termination article of this CRADA. A billing cycle is the period of time between billings, usually thirty (30) days. The billing cycle is complete when the customer is billed for services rendered.

V. ARTICLE III: PERSONAL PROPERTY

All tangible personal property produced or acquired under this CRADA shall become the property of the Participant or the Government, depending upon whose funds were used to obtain it unless identified in the Statement of Work as being owned by the other Party. Personal property shall be disposed of as directed by the owner at the owner's expense.

All jointly funded property shall be owned by the Government. The Participant shall maintain records of receipts, expenditures, and the disposition of all Government property in its custody related to the CRADA.

VI. ARTICLE IV: DISCLAIMER

THE GOVERNMENT, THE PARTICIPANT, AND THE CONTRACTOR 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, THE PARTICIPANT, NOR THE CONTRACTOR SHALL BE LIABLE FOR SPECIAL, CONSEQUENTIAL OR INCIDENTAL DAMAGES ATTRIBUTED TO SUCH RESEARCH OR RESULTING PRODUCT, INTELLECTUAL PROPERTY, GENERATED INFORMATION, OR PRODUCT MADE OR DEVELOPED UNDER THIS CRADA.

VII. ARTICLE V: PRODUCT LIABILITY

Except for any liability resulting from any negligent acts, or willful misconduct or omissions of Contractor or Government, Participant agrees to hold harmless the Government and the Contractor for all damages, cost and expenses, including attorney's fees, arising from personal injury or property damage 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.

VIII. ARTICLE VI: RIGHTS TO SUBJECT INVENTIONS

Wherein DOE has granted the Participant and the Contractor the right to elect to retain title to their respective Subject Inventions.

A. Each Party shall have the first option to elect to retain title to any of its Subject Inventions and that election shall be made: (1) for the Participant, within 12 months of disclosure of the Subject Invention to DOE or (2) for the Contractor, within the time period specified in its prime contract for electing to retain title to Subject Inventions. However, such election shall occur not later than 60 days prior to the time when any statutory bar might foreclose filing of a U.S. Patent application. The electing Party has one year to file a patent application after such election unless any statutory bar exists. If a Party elects not to retain title to any of its Subject Inventions or fails to timely file a patent application, the other Party shall have the second option to elect to obtain title to such Subject Invention within the time period specified in paragraph B below. For Subject Inventions that are joint Subject Inventions of the Contractor and the Participant, title to such Subject Inventions shall be jointly owned by the Contractor and the Participant.

B. The Parties agree to assign to DOE, as requested by DOE, the entire right, title and interest in any country to each Subject Invention where the Parties (1) do not elect pursuant to this article to retain/obtain such rights, or (2) elect to retain/obtain title to a Subject Invention but

fail to have a patent application filed in that country on the Subject Invention or decide not to continue prosecution or not to pay any maintenance fees covering the Subject Invention. If DOE is granted a patent on Participant's Subject Invention, the Participant may request a non-exclusive license and DOE will determine whether to grant such license pursuant to statutory authority.

C. The Parties acknowledge that the Government retains a nonexclusive, nontransferable, irrevocable, paid-up license to practice or to have practiced for or on behalf of the United States every Subject Invention under this CRADA throughout the world. The Parties agree to execute a Confirmatory License to affirm the Government's retained license.

D. The Parties agree to disclose to each other each Subject Invention which may be patentable or otherwise protectable under U.S. patent law. The Parties agree that the Contractor and the Participant will disclose their respective Subject Inventions to DOE and each other within two (2) months after the inventor first discloses the Subject Invention in writing to the person(s) responsible for patent matters of the disclosing Party.

These disclosures should be in sufficiently complete technical detail to convey a clear understanding, to the extent known at the time of the disclosure, of the nature, purpose, and operation of the Subject Invention. The disclosure shall also identify any known actual or potential statutory bars, e.g., printed publications describing the Subject Invention or the public use or "on sale" of the Subject Invention. The Parties further agree to disclose to each other any subsequently known actual or potential statutory bar that occurs for a Subject Invention disclosed but for which a patent application has not been filed. All Subject Invention disclosures shall be marked as confidential under 35 U.S.C. 205.

E. The Parties agree to include within the beginning of the specification of any U.S. patent applications and any patent issuing thereon (including non-U.S. patents) covering a Subject Invention, the following statement: "This invention was made under a CRADA (identify CRADA number) between (name the Participant) and (name the laboratory) operated for the United States Department of Energy. The Government has certain rights in this invention."

F. The Parties acknowledge that DOE has certain march-in rights to any Subject Inventions in accordance with 48 CFR 27.304-1(g) and 15 U.S.C. 3710a(b)(1)(B) and (C).

G. The Participant shall, at a minimum, retain a paid-up, royalty-free, nonexclusive, non-transferable, license without the right to sublicense, in a limited Field of Use as specified on the first page of this CRADA for any Subject Invention in which the Contractor retains title.

After four (4) years from the end of this CRADA, the Participant license may be revoked or modified by the Contractor to extent necessary to achieve expeditious practical application of the Subject Invention pursuant to an application for an exclusive license by a third party. The Participant license will not be revoked in any field of use or the geographical areas in which the Participant has achieved practical application and continues to make the benefits of the Subject Invention reasonably accessible to the public.

Before revocation or modification of the license, the Contractor will furnish the Participant a written notice of its intention to revoke or modify the license, and the Participant will be allowed thirty (30) days after the notice to show cause why the license should not be revoked or modified. The Participant has the right to appeal to DOE any decision concerning the revocation or modification of its license.

Notwithstanding the license above, the Contractor has sole discretion on whether to exercise any of its rights under this Article including the right to elect to retain title to any of its Subject Inventions and whether and where to pursue patent protection for any of its Subject Inventions.

In addition to the above nonexclusive license, for each Subject Invention of the Contractor, the Participant has the option for six (6) months from the date that the Subject Invention was disclosed to the Participant to choose an exclusive license, for reasonable compensation, in the limited Field of Use as specified on the first page of this CRADA to the Subject Invention.

IX. ARTICLE VII: RIGHTS IN DATA

A. The Parties agree that they shall have no obligations of nondisclosure or limitations on their use of, and the Government shall have unlimited rights in, all Generated Information produced and information provided by the Parties under this CRADA, except for restrictions and copyright on data provided for in this Article or data disclosed in a Subject Invention disclosure being considered for Patent protection.

B. PROPRIETARY INFORMATION: Each Party agrees to not disclose Proprietary Information provided by the other Party to anyone other than the Participant, Contractor and its subcontractors (if any) performing work under this CRADA without written approval of the providing Party, except to Government employees who are subject to the statutory provisions against disclosure of confidential information set forth in the Trade Secrets Act (18 U.S.C. 1905). Government employees shall not be required to sign non-disclosure agreements due to the provisions of the above-cited statute.

If Proprietary Information is orally disclosed to a Party, it shall be identified as such, orally, at the time of disclosure and confirmed in a written summary thereof, appropriately marked by the disclosing Party, within ten (10) days as being Proprietary Information.

All Proprietary Information shall be protected for a period of five (5) years from the effective date of this CRADA, unless such Proprietary Information becomes publicly known without the fault of the recipient, shall come into recipient's possession without breach by the recipient of any of the obligations set forth herein, can be demonstrated by the recipient by written record that it is known prior to receipt from disclosing party, is disclosed by operation of law, or is independently developed by recipient's employees who did not have access to such Proprietary Information.

Proprietary Information in tangible form shall be returned to the disclosing Party or

destroyed with a certificate of destruction submitted to the disclosing Party upon termination or expiration of this CRADA, or during the term of this CRADA upon request by the disclosing Party. Notwithstanding the foregoing destruction of copies shall not extend to archival copies maintained in computer system backup files, permanent business records, or as may otherwise be required by receiving Party's internal document retention policies.

C. PROTECTED CRADA INFORMATION: Each Party may designate and mark as Protected CRADA Information any Generated Information produced by its employees, which meets the definition in Article I and, with the agreement of the other Party, so designate any Generated Information produced by the other Party's employees which meets the definition in Article I. All such designated Protected CRADA Information shall be appropriately marked.

For a period of five (5) years from the date Protected CRADA Information is produced, the Parties agree not to further disclose such information and to use the same degree of care and discretion, but no less than reasonable care and discretion, to avoid disclosure, publication or dissemination of such information to a third party, as the Party employs for similar protection of its own information which it does not desire to disclose, publish, or disseminate except:

(1) as necessary to perform this CRADA;

(2) as published in a patent application or an issued patent before the protection period expires;

(3) as provided in Article X [REPORTS AND ABSTRACTS];

(4) as requested by the DOE Contracting Officer to be provided to other DOE facilities for use only at those DOE facilities solely for Government use only with the same protection in place and marked accordingly.

(5) to existing or potential licensees, affiliates, customers, or suppliers of the Parties in support of commercialization of the technology with the same protection in place. Disclosure of the Participant's Protected CRADA Information under this subparagraph shall only be done with the Participant's consent; or

(6) as mutually agreed to by the Parties in advance.

The obligations of this paragraph shall end sooner for any Protected CRADA Information which shall become publicly known without fault of either Party, shall come into a Party's possession without breach by that Party of the obligations of paragraph above, or shall be independently developed by a Party's employees who did not have access to the Protected CRADA Information. Federal Government employees who are subject to 18 USC 1905 may have access to Protected CRADA Information and shall not be required to sign non-disclosure agreements due to the provisions of the statute.

COPYRIGHT: The Parties may assert copyright in any of their respective Generated Information.

The Parties hereby acknowledge that the Government or others acting on its behalf shall retain a nonexclusive, 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.

When a Party writes computer software produced in the performance of this CRADA, the Party 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 Party shall inform ESTSC when it abandons or no longer commercializes the computer software. Until such notice to ESTSC, 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, and perform publicly and display publicly, by or on behalf of the Government (narrow license) After the Party 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. (broad license)

The Participant shall, at a minimum, retain a paid-up, royalty-free, nonexclusive, non-transferable, license without the right to sublicense, in a limited Field of Use as specified on the first page of this CRADA to reproduce, prepare derivative works, distribute copies to the public, and perform and display publicly any computer software produced in the performance of this CRADA by the Contractor. This license may be revoked or modified under the same conditions and process as the license for Contractor's Subject Inventions in Article VI(G) of this CRADA.

The Parties agree to place Copyright and other notices, as appropriate for the protection of Copyright, in human-readable form onto all physical media, and in digitally encoded form in the header of machine-readable information recorded on such media such that the notice will appear in human-readable form when the digital data are off loaded or the data are accessed for display or printout.

X. ARTICLE VIII: U.S. COMPETITIVENESS

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

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

    1. Products embodying Intellectual Property developed under this CRADA shall be

substantially manufactured in the United States, and

2. 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 United States either prior to or simultaneously with implementation outside the United States. Such processes, services, and improvements, when implemented outside the United States, shall not result in reduction of the use of the same processes, services, or improvements in the United States.

B. The Contractor agrees to a U.S. Industrial Competitiveness clause in accordance with its prime contract with respect to any licensing and assignments of its Intellectual Property arising from this CRADA, except that any licensing or assignment of its intellectual property rights to the Participant shall be in accordance with the terms of paragraph A of this Article.

XI. 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.

XII. 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. It is understood that the Contractor has the responsibility to provide this information at the time of its completion to the DOE Office of Scientific and Technical Information. The Participant agrees to provide the above information to the Contractor to enable full compliance with this Article.

The Parties agree to submit, for a period of five years from the expiration of this CRADA and, upon request of DOE, a non-proprietary report no more frequently than annually on the efforts to utilize any Intellectual Property arising under the CRADA.

The Parties agree that neither will use the name of the other Party or its employees in any promotional activity, such as advertisements, with reference to any product or service resulting from this CRADA, without prior written approval of the other Party..

XIII. ARTICLE XI: FORCE MAJEURE

No failure or omission by the Contractor or the Participant in the performance of any obligation under this CRADA shall be deemed a breach of this CRADA or create any liability if the same shall arise from any cause or causes beyond the control of the Contractor or the Participant, including but not limited to the following, which, for the

purpose of this CRADA, shall be regarded as beyond the control of the Party in question: Acts of God, acts or omissions of any government or agency thereof, compliance with requirements, rules, regulations, or orders of any governmental authority or any office, department, agency, or instrumentality thereof, fire, storm, flood, earthquake, accident, acts of the public enemy, war, rebellion, insurrection, riot, sabotage, invasion, quarantine, restriction, transportation embargoes, or failures or delays in transportation.

XIV. ARTICLE XII: DISPUTES

The Parties shall attempt to jointly resolve all disputes arising from this CRADA. In the event a dispute arises under this CRADA, the Participant is encouraged to contact Contractor's Technology Partnership 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. To the extent that there is no applicable U.S. Federal law, this CRADA and performance thereunder shall be governed by the laws of the State of Colorado, without reference to that state's conflict of laws provisions.

XV. 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) and becomes effective on the later date of either the date the last Party signs the document or receipt of advance funding, if any. Any agreement to materially change any terms or conditions of the CRADA and annexes shall be valid only if the change is made in writing, executed by the Parties hereto, and approved by DOE.

The Contractor enters into this CRADA under the authority of its prime contract with DOE. The Contractor is authorized to and will administer this CRADA in all respects unless otherwise specifically provided for herein. Administration of this CRADA may be transferred from the Contractor to DOE or its designee with notice of such transfer to the Participant, and the Contractor shall have no further responsibilities except for the confidentiality, use and/or nondisclosure obligations of this CRADA.

This CRADA may be terminated by either Party with thirty (30) days written notice to the other Party. If Article II provides for advance funding, this CRADA may also be terminated by the Contractor in the event of failure by the Participant to provide the necessary advance funding. Each Party will be responsible for its own 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.

XVI. ARTICLE XIV: BACKGROUND INTELLECTUAL PROPERTY

Each Party may use the other Party's Background Intellectual Property identified in an Annex to 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. 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.

FOR CONTRACTOR:	**FOR PARTICIPANT:**
BY_____	**BY** _____
TITLE_____	**TITLE**_____
DATE_____	**DATE**_____