

Special Terms and Conditions

Sustainable Manufacturing Innovation Alliance Corp. (“Recipient”), which is identified in Block 5 of the Assistance Agreement, and the Office of Energy Efficiency and Renewable Energy (“EERE”), an office within the United States Department of Energy (“DOE”), enter into this Award, referenced above, to achieve the project objectives and the technical milestones and deliverables stated in Attachment 1 to this Award.

This Award consists of the following documents, including all terms and conditions, therein:

	Assistance Agreement
	Special Terms and Conditions
Attachment 1	Statement of Project Objectives and Milestone Summary Table
Attachment 2	Federal Assistance Reporting Checklist and Instructions
Attachment 3	Budget Information SF-424A
Attachment 4	Intellectual Property Provisions
Attachment 5	Data Management Plan
Attachment 6	Costs on Hold

The following are incorporated into this Award by reference:

- DOE Assistance Regulations, 2 CFR part 200 as amended by 2 CFR part 910 at <http://www.eCFR.gov>.
- National Policy Assurances, to be incorporated as Award Terms in effect on date of award at <http://www.nsf.gov/awards/managing/rtc.jsp>.
- The Recipient’s application/proposal as approved by EERE.

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Subpart A. General Provisions

Term 1. Introduction and Purpose

The objective of this Award is to establish a Clean Energy Manufacturing Innovation Institute for Reducing Embodied-energy And Decreasing Emissions (REMADE) in Materials Manufacturing that will support U.S. prosperity and security; significantly advance manufacturing within the U.S.; and contribute to the creation of the Manufacturing USA, national network of manufacturing innovation (NMMI). The vision for this Institute and other institutes within the network is to help revitalize American manufacturing and support domestic manufacturing competitiveness.

The Mission of the REMADE Institute is to enable the early stage applied research and development of key industrial platform technologies that could dramatically reduce the embodied energy and carbon emissions associated with industrial-scale materials production and processing. By focusing its efforts on the technologies that will eliminate and/or mitigate the technical and economic barriers that prevent greater material recycling, recovery, remanufacturing, and reuse, the REMADE Institute seeks to motivate the subsequent industry investments that will be required to complete technology development and deploy these technologies across the U.S. manufacturing eco-system. Examples of the types of technologies the REMADE Institute will address include the following:

- Information collection, standardization, and design tools that address material utilization;
- Rapid gathering, identification, and sorting platforms with high throughput that can be used to identify material composition and perform real-time analysis and sorting of waste streams;
- Separating mixed materials cost-effectively and energy-efficiently to facilitate widespread use of high-value secondary feedstocks;
- Removal of trace contaminants from separate components;
- Robust and cost-effective reprocessing and disposal methods to transform used material into cost-competitive alternatives to primary feedstocks.

The Institute will lead a national effort to research and develop innovative material reuse, recycling, remanufacturing and reprocessing technologies and solutions that reduce the embodied-energy and greenhouse gas (GHG) emissions and strengthen U.S. manufacturing competitiveness for energy intensive/dependent, clean energy, and energy efficient product and/or material manufacturing. This will enable step change improvements in energy efficiency, capital and operating cost factors, environmental emissions, commercial project execution and market penetration thus enhancing U.S. competitiveness and growth. The Institute will establish an infrastructure that enables access to resources, tools, expertise, and facilities that can be used to establish a business case, address technical challenges, and reduce the cost and risk of commercializing these solutions. The Institute will also establish a technical education and workforce development program that will leverage existing resources to develop the workforce who can then research, develop, and commercialize new material reuse,

recycling, remanufacturing and reprocessing solutions widely within U.S. industry.

Transforming and securing the nation’s energy systems and maintaining U.S. leadership in clean energy and high value technologies requires domestic manufacturing of technologies that produce, move, and use clean energy at a meaningful scale. Through a shared research and development (R&D) infrastructure that contains equipment and resources accessible to external parties for technology development that would otherwise be cost prohibitive, the Institute will enable demonstration of advanced manufacturing technologies at a scale significant enough to establish technical feasibility and enable business case development to attract further private investment. The Institute will be organized to foster an open exchange of pre-competitive manufacturing best-practices and know-how -- including design and processing tools, qualification and certification approaches, and fabrication costing methods -- while protecting company proprietary intellectual property. The Institute will include business models to allow manufacturers of all sizes access to and use of the shared R&D infrastructure, as well as guide and train participants. The Institute will also provide the opportunity for equipment suppliers and partners to improve their own technologies by learning from other users. The Institute will engage the manufacturing community at all levels of the supply chain, from large companies and potential end users, to researchers and small and medium-sized enterprises (SMEs) involved in critical development work who will support the transition to commercial applications to ensure the Institute is focused on industry relevant problems and increase likelihood of success.

The overall technical objectives of the Institute over the period of the five year award are to:

- Lead a national effort to research and develop innovative material reuse, recycling, remanufacturing and reprocessing technologies and solutions that reduce the embodied-energy and GHG emissions and strengthen U.S. manufacturing competitiveness for energy intensive/dependent, clean energy, and energy efficient product and/or material manufacturing
- Develop technologies that enable at a minimum cost parity of key secondary feedstocks with existing primary feedstocks
- Establish cost-effective pathways for improved recycling and reuse rates of energy intensive materials
- Lead early stage applied R&D efforts for technologies that significantly improve the efficiency of material use and reduce material waste in major manufacturing processes
- Drive cross-industry reuse of secondary feedstocks and end-of-life (EOL) materials
- Develop cost-effective approaches to reducing energy required to reprocess key secondary feedstocks
- Establish one or more R&D projects to assess the cost effectiveness of key REMADE technologies through multi-partner collaboration
- Establish and support a shared R&D infrastructure that enables ready and affordable access to cutting-edge physical and virtual tools - as well as expertise - to reduce the cost and risk of commercialization, address technical challenges that may arise from scale-up and production at a manufacturing relevant scale, and provide data to enable

business case development. This infrastructure leverages relevant existing private and public sector resources and facilities such as industry laboratories, university centers, National Laboratories, and other government investments

- Establish a robust R&D portfolio that supports the above elements through an Institute membership that includes initial members as well as new members not part of the Institute application
- Provide capabilities for and collaboration in open, pre-competitive work among multiple parties including collaboration around the development of open architecture, open standard, and open source software and design platforms and tools in an Intellectual Property (IP) protected environment, as well as proprietary activities as appropriate, to engage stakeholders as relevant to the technology areas in the REMADE Institute
- Be a financially self-sustaining, world-leading innovation hub that brings together private and public entities to co-invest in the research and development of innovative REMADE technologies
- Establish a technical education and workforce development (EWD) program to support technical and career education that will leverage relevant existing resources to develop the workforce needed to research, develop, and commercialize new REMADE technologies and solutions widely within U.S. industry
- Define, manage and implement clear operating structures and strategies for participation by a wide range of stakeholders in the Institute and, in particular, to engage small and medium-sized enterprises (SMEs), minority-owned businesses, and women-owned businesses through outreach and intermediaries, including programs like the National Institute of Standards and Technology (NIST) Manufacturing Extension Partnership (MEP) where appropriate, and provide sufficient financial and contractual mechanisms for collaboration with all stakeholders along the supply chain, including end-users, to allow them to benefit from the Institute resources.

At the end of the five-year award, the REMADE Institute will have developed technologies capable of reducing manufacturing energy consumption by 1.8 Quads and a decrease of GHG emissions by 69 million metric tons of CO₂e (a 29% improvement) following industry adoption and deployment.

Term 2. Legal Authority and Effect

A DOE financial assistance award is valid only if it is in writing and is signed, either in writing or electronically, by a DOE Contracting Officer.

The Recipient may accept or reject the Award. A request to draw down DOE funds or acknowledgement of award documents by the Recipient's authorized representative through electronic systems used by DOE, specifically FedConnect, constitutes the Recipient's acceptance of the terms and conditions of this Award. Acknowledgement via FedConnect by the Recipient's authorized representative constitutes the Recipient's electronic signature.

Term 3. Flow Down Requirement

The Recipient agrees to apply the terms and conditions of this Award, as applicable, including the Intellectual Property Provisions, to all subrecipients (and subcontractors, as appropriate), as required by 2 CFR 200.101, and to require their strict compliance therewith. Further, the Recipient must apply the Award terms as required by 2 CFR 200.327 to all subrecipients (and subcontractors, as appropriate), and to require their strict compliance therewith.

Term 4. 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.

Term 5. Inconsistency with Federal Law

Any apparent inconsistency between Federal statutes and regulations and the terms and conditions contained in this Award must be referred to the DOE Award Administrator for guidance.

Term 6. Federal Stewardship

EERE will exercise normal 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 address deficiencies that develop during the project; assuring compliance with terms and conditions; and reviewing technical performance after project completion to ensure that the project objectives have been accomplished.

Term 7. Substantial Involvement

a. Definitions.

For purposes of this award term: (1) "Project" is defined as the overall efforts under the Award to establish and operate the Institute, and (2) "Institute Activities" is defined as the individual activities (also referred to as projects) the Institute, through the Recipient and the Institute members, will carry out.

b. General Statement of Roles and Responsibilities.

The Recipient is responsible for the overall Project, including execution, technical and project management, reporting, financial and administrative matters in accordance with this Term. EERE shall be substantially involved in the Project, as more completely outlined in this Term. "Substantial Involvement" shall include EERE collaboration with the Recipient regarding the management, control, direction, and performance of the Project. EERE will be engaged in an advisory capacity for work performed under this Award to maximize the likelihood that the Project will positively impact domestic manufacturing by reducing life cycle energy consumption and carbon emissions associated with industrial-scale materials production and

processing by creating new technologies for reuse, recycling and remanufacturing of materials and further enhance U.S. competitiveness.

c. Statement of Substantial Involvement.

EERE has substantial involvement in work performed under this Award. EERE does not limit its involvement to the administrative requirements of this Award. Instead, EERE has substantial involvement in the direction and redirection of the technical aspects of the Project as a whole. Substantial involvement includes the following:

1. EERE shares responsibility with the Recipient for the management, control, direction, and performance of the Project.
2. EERE may intervene in the conduct or performance of work under this Award for programmatic reasons. Intervention includes the interruption or modification of the conduct or performance of the Project.
3. EERE may redirect or discontinue funding the Project based on the outcome of EERE's evaluation of the Project at the Go/No-Go decision points.
4. EERE may redirect or discontinue funding for individual Institute Activities based on the outcome of EERE's evaluation of those activities at the Go/No-Go decision points.
5. EERE participates in major project decision-making processes to include but not limited to:
 - a. Selection of Institute Activities;
 - b. Go/No-Go reviews for Institute Activities; and
 - c. Project redirection based on progress reviews.
 - d. Any decision explicitly marked level 2 or level 3 approval in the Statement of Project Objectives:
 - i. Level 1 - Approval is required by the REMADE CEO or member of the leadership team, depending on the plan (CTO, COO, Finance Director, or Legal Counsel).
 - ii. Level 2 - DOE positive recommendation is required and will be validated by email from DOE. The work product must have Level 1 approval before submission to DOE.
 - iii. Level 3 - Final approval required by vote of a member committee. Pre-read material/information will be supplied to the committee a minimum of three working days in advance of the scheduled meeting. At the meeting where the voting will take place, the committee will be afforded the opportunity to have discussion on the topic and have any questions answered prior to voting. The work product must have Level 2 approval before voting by the committee, unless otherwise agreed to by the associated committee and DOE.
6. Executive Advisory Committee. A three-member Executive Advisory Committee ("EAC") will be established to serve an advisory committee to the Governance Board ("GB") for the duration of the DOE Cooperative Agreement. The Department of Energy is

responsible for appointing three (3) Federal Government employees to serve on the EAC. Two (2) of the three (3) EAC seats may be filled by representatives from other Federal Agencies as deemed appropriate by DOE. The government representatives shall have no fiduciary duty to SMIA, the REMADE Institute, or its Members. The EAC will participate in a nonvoting capacity for all Governance Board meetings, executive sessions, discussions of important matters of the GB, and similar communications. The EAC will be included on all GB correspondence to the extent the parties mutually agree is necessary. In addition, the EERE Technology Manager may, at his or her discretion, observe GB activities to ensure compliance with the cooperative agreement and programmatic objectives. The EERE Technology Manager may participate in a non-voting capacity for all GB meetings, executive sessions, discussions of important matters, and similar communications. The EERE Technology Manager will be included on all GB correspondence. However, the EERE Technology Manager is not a member of the GB and is not afforded the rights and responsibilities of a GB member. Further, the EERE Technology Manager holds a fiduciary duty to the Federal government and shall hold no fiduciary duty to SMIA, REMADE, the Governance Board, or Institute members.

7. Strategic Advisory Committee (“SAC”). The EERE Technology Manager will appoint four (4) Federal Government representatives to serve on the SAC to include at least one DOE Federal Government employee. Three (3) of the four (4) SAC seats may be filled by government employees from other Federal Agencies as deemed appropriate by EERE Technology Manager.
8. Technical Advisory Committee (“TAC”). The EERE Technology Manager will appoint four (4) Federal Government employees to serve on the TAC to include at least one DOE Federal Government employee. Three (3) of the four (4) TAC seats may be filled by government employees from other Federal Agencies as deemed appropriate by EERE Technology Manager.
9. The EERE will review membership requests for consistency with U.S. manufacturing objectives and to assess whether the potential member would further the purposes of the Award (e.g., reducing life cycle energy consumption and carbon emissions associated with industrial-scale materials production and processing by creating new technologies for reuse, recycling and remanufacturing of materials). In the event the EERE determines additional information is needed to inform its review, at EERE’s request, the Recipient will provide such information. EERE will provide its recommendation to the Institute’s Chief Executive Officer or their designee. The Institute’s Governance Board will require a positive recommendation from the DOE to approve membership admission for foreign entities. The term “foreign entity” includes entities incorporated outside of the U.S.; entities whose primary place of business is outside the U.S.; and U.S. incorporated companies that are owned or substantially controlled (50 percent or greater) by foreign governments, firms, institutions, or individuals.

10. Prior to adopting the Institute governing documents and subsequent changes to such documents, the Institute's Chief Executive Officer will provide EERE a reasonable opportunity to review for compliance with the Award. The Institute governing documents include, but are not limited to, the REMADE bylaws, the Operational Plan, membership agreements, Institute-wide policies required under the Award, and associated documents. The Institute's Chief Executive Officer will require a positive compliance recommendation from EERE Technology Manager as a requirement of approval.
11. EERE also has substantial involvement in work performed under this Award by Node Leads, subrecipients, Institute Members and contractors. Upon request by EERE, the Recipient may not unreasonably restrict EERE's communications, interaction, or access to Node Leads, subrecipients, Institute Members and contractors.
12. The Recipient will provide EERE Technology Manager and designated DOE communications staff with timely notice of REMADE related publicity information regarding the Recipient's organization and the Institute, and a reasonable opportunity to review and offer input. Related publicity information includes materials developed by the Recipient or an Institute member, subrecipient, or other participant.
13. The Recipient will provide EERE Technology Manager and Contracting Officer a reasonable opportunity to review any Institute wide and project specific risk mitigation and corrective action plans.
14. The Recipient will provide the EERE a reasonable opportunity to participate in technical, strategic, and operations events.
15. Prior to adopting the following plans and subsequent changes to such plans, the Recipient must provide the EERE Technology Manager a reasonable opportunity to review planning documents such as Roadmaps, Strategic Plans, Communication Plans, and Sustainability Plan, and any other Institute wide and project specific planning documents requiring a Level 2 approval as indicated in the Statement of Project Objectives (SOPO) (see SOPO Milestone Summary Table). A reasonable opportunity is defined as at least seven (7) business days from the point of receiving a full, complete draft of the work product in its near final form, without missing elements or sections, for review.
16. At EERE's discretion, EERE may engage a private, independent consultant (IC) to assist in assessing the progress of the Project objectives and provide timely and accurate reports to EERE and/or to verify major facility modifications or equipment purchases under the scope of this Award. The Prime Recipient will ensure that the IC has access to any and all relevant documentation sufficient to allow the IC to provide independent evaluations to EERE on the progress of the Project and/or Institute Activities. The Prime Recipient may require the IC to sign a non-disclosure agreement, and will negotiate the agreement in good faith and in a timely manner. EERE will evaluate the quality and completeness of information and documentation provided by the Prime Recipient to EERE and its consultants (i.e., IC) in order to allow EERE to provide technical direction to

the Prime Recipient about how best to achieve the objectives of the Institute. Consultants to EERE may not provide technical direction to the Prime Recipient.

d. Government Approval.

“Government Approval” is defined as DOE providing authority to proceed and/or formal acceptance by DOE. For those circumstances in which Government Approval is required, the Recipient shall submit all necessary documentation to the DOE Contracting Officer, the EERE Technology Manager, and the DOE Project Officer such that they may have reasonable time to review. In addition to the Government Approval requirements stated elsewhere in this Award, the Recipient must obtain Government Approval in the following situations:

1. Scope changes, including but not limited to any change in plans that may result in a need for additional Federal funding require Contracting Officer approval;
2. NEPA-related documents and compliance activities require Contracting Officer approval in consultation with the DOE NEPA Compliance Officer;
3. Requests for Proposals for Project Activities funded under the Institute require EERE Technology Manager approval;
4. Selection of new Institute Activities require approval from the EERE Technology Manager and the Contracting Officer;
5. Selection of Key Personnel requires EERE Technology Manager approval. Key Personnel includes but is not limited to the following positions or positions with similar level of responsibility: Chief Executive Officer (CEO), Chief Operations Officer (COO), Chief Technology Officer (CTO), Sustainability and Development Manager, Chief Financial Officer (CFO), and Node Leads.

e. Government Insight.

“Government Insight” is defined as attendance at procurement, design, research efforts, on-site or other meetings, reviews, and tests; and reviewing documents from the Recipient, subrecipient(s), Institute members, and contractor(s). DOE may participate in these meetings, reviews, and tests, and may provide input and comment, but shall not have the right of approval except as set forth elsewhere in this Award. Recipient shall notify the EERE Technology Manager of meetings, reviews, or tests, and provide such documents to the EERE Technology Manager in sufficient time to permit Government Insight.

f. Modification.

1. **Modification Request.** If the Recipient concludes that a change in the Project Scope and/or Budget would be beneficial to program objectives, the Recipient may submit a written request to modify this Award or its Attachments to the DOE Contracting Officer, with a copy to the EERE Project Officer and EERE Technology Manager. The request must provide justifications to support any changes to the Project Scope and/or Budget, and detail the technical, environmental, chronological, and financial impact of the proposed changes to the Project.

2. Modification Approval. The DOE Contracting Officer is the only individual who may modify this Award or commit the Government to the expenditure of additional DOE funds. Any commitment by anyone other than the Contracting Officer, either explicit or implied, is invalid.

g. Notices to DOE.

In addition to the notice requirements stated elsewhere in this Award, the Recipient must provide DOE notice in the following situations:

1. As the Recipient becomes aware, the Recipient shall promptly notify DOE within five (5) days of any critical business issues or litigation concerning the Recipient, subrecipients, contractors or Institute Members that may have material adverse effect on the Project or Institute activities.
2. As the Recipient becomes aware, the Recipient shall promptly notify DOE within five (5) days of any significant Conflict of Interest (COI) issues concerning the Recipient, subrecipients, contractors or Institute Members.
3. As the Recipient becomes aware, the Recipient shall promptly notify DOE within five (5) days of any significant Export Control issues concerning the Recipient, subrecipients, contractors or Institute Members.
4. Notice of Inability to Provide Cost Share. Recipient shall provide the notice required by Term 30(d) of this Award.
5. Notice of Equipment Removal or use of Equipment for non-Project Purposes. The Recipient shall provide prompt notice to the DOE Contracting Officer of any removal or disposition of Equipment or other Property acquired in whole or in part with funds received under this Award or where DOE accepted such Property as recipient cost share under the Award. In addition, the Recipient shall provide prompt notice to the DOE Contracting Officer regarding any equipment acquired in whole or in part with funds received under this Award or where DOE accepted such Property as recipient cost share under the Award if the Recipient intends to use such equipment for purposes other than the authorized purposes of the Project.
6. The Recipient shall provide the EERE Technology Manager and EAC notice of all GB meetings, executive sessions, discussions of important matters, and similar communications.
7. The Recipient shall provide the EERE Technology Manager with timely notice of any proposed changes in the Strategic Advisory Committee members, seats, composition and removal and appointment of individuals to serve on the Governing Committee.
8. Notice of Environmental Changes. Recipient shall provide prompt notice to the DOE Contracting Officer of any action or information that does not conform to the current NEPA determination.
9. Notice of Changes in Key Technical/Project Personnel. Recipient shall provide prompt notice to the EERE Technology Manager of any changes to the Principal Investigator for all subrecipients.

Term 8. Statement of Project Objectives

The Statement of Project Objectives (SOPO) and Milestone Summary Table, which will be included as Attachment 1, provides a detailed description of the work to be accomplished. All changes to the SOPO attachment must be approved by the EERE Technology Manager and the Contracting Officer and must be included as a modification to this Award signed by the Contracting Officer. It is recognized that much of the effort to be performed is research and development and that changes to the SOPO may be necessary as the work progresses. However, failure to obtain required approvals for SOPO changes could result in the unallowability of costs and/or termination of the Award.

Term 9. Federal Involvement

A. Definitions

For purposes of this award term: (1) "Project" is defined as the overall efforts under the Award to establish and operate the Institute, and (2) "Institute Activities" is defined as the individual activities (also referred to as projects) the Institute, through the Recipient and the Institute members, will carry out.

B. 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 EERE. Review meetings enable EERE to assess the work performed under this Award and determine whether the Recipient has timely achieved the technical milestones and deliverables stated in Attachment 1 to this Award.

EERE shall determine the frequency of review meetings and select the day, time, and location of each review meeting and shall do so in a reasonable and good faith manner. EERE will provide the Recipient with reasonable notice of the review meetings.

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 Milestone Summary Table stated in Attachment 1 to this Award;
2. The Recipient's actual expenditures compared to the approved budget in Attachment 3 to this Award; and
3. Other subject matter specified by the DOE Technology Manager/Project Officer.

C. Project Meetings

The Recipient is required to notify EERE in advance of scheduled tests and internal project meetings that would entail discussion of topics that could result in major changes to the baseline project technical scope/approach, cost, or schedule. Upon request by EERE, the Recipient is required to provide EERE with reasonable access (by telephone, webinar, or otherwise) to the tests and project meetings. The

Recipient is not expected to delay any work under this Award for the purpose of government insight.

D. Site Visits

EERE's authorized representatives have the right to make site visits at reasonable times to review project accomplishments and management control systems and to provide technical assistance, if required. The Recipient must provide, and must require subrecipients to provide, reasonable access to facilities, office space, resources, and assistance for the safety and convenience of the government representatives in the performance of their duties. All site visits and evaluations must be performed in a manner that does not unduly interfere with or delay the work.

E. Go/No-Go Decisions

Attachment 1 to this Award establishes two types of Go/No-Go decision points: Project-Wide and Institute Activities. For each Go/No-Go decision point, EERE must determine whether the Recipient has fully and satisfactorily completed the work described in Attachment 1 to this Award. At the Go/No-Go decision points, EERE will evaluate performance, schedule adherence, meeting milestone objectives, compliance with reporting requirements, strategic plan execution and assessment processes and overall contribution to the program goals and objectives.

As a result of a Project-Wide Go/No-Go review, in its discretion, EERE may take one of the following actions:

- (1) authorize Federal funding for the next Budget Period for the Project;
- (2) recommend redirection of work under the Project;
- (3) discontinue providing Federal funding for the Project beyond the current Budget Period as the result of insufficient progress, change in strategic direction, or lack of available funding; or
- (4) place a hold on the Federal funding for the Project, pending further supporting data.

As a result of a Go/No-Go review for an individual Institute Activity, in its discretion, EERE may take one of the following actions:

- (1) authorize funding (Federal share and cost share) for the next Budget Period for the Institute Activity;
- (2) recommend redirection of work under the Institute Activity;
- (3) discontinue providing funding for the Institute Activity beyond the current Budget Period as the result of insufficient progress, change in strategic direction, or lack of available funding; or
- (4) place a hold on the funding (Federal share and cost share) for the Institute Activity, pending further supporting data.

As part of a Project-Wide Go/No-Go review, EERE may consider the outcome of a Go/No-Go review for an individual Institute Activity. However, except where the individual Institute Activity has a detrimental or significant impact on the Project as whole, the decision to discontinue Federal funding for an individual Institute Activity will not in itself result in a decision to discontinue Federal funding for the Project as whole.

F. Milestones and Deliverables

Attachment 1 to this Award establishes milestones and deliverables. If the Recipient fails to achieve one or more milestones or deliverables, EERE may renegotiate the Statement of Project Objectives and/or Milestone Summary Table in Attachment 1 to this Award. If the failure to achieve one or more milestone(s) or deliverable(s) could have a material adverse effect on achieving the objectives of the Award, DOE could find the failure to be material noncompliance and, consequently, take action to suspend or terminate the Award.

G. EERE Access

The Recipient must provide any information, documents, site access, or other assistance requested by EERE for the purpose of its Federal stewardship or substantial involvement. The Recipient will not unreasonably restrict EERE's site access to subrecipient sites and will require that all subrecipients, Institute Members and contractors conducting work under the Institute provide the same access to EERE.

Term 10. NEPA Requirements

DOE must comply with the National Environmental Policy Act (NEPA) prior to authorizing the use of federal funds. Based on all information provided by the Recipient, EERE has made a NEPA determination by issuing a categorical exclusion (CX) for all activities listed in the Statement of Project Objectives (SOPO) approved by the Contracting Officer and the DOE NEPA Determination. The Recipient is thereby authorized to use federal funds for the defined project activities, subject the Recipient's compliance with the conditions stated below and except where such activity is subject to a restriction set forth elsewhere in this Award.

Condition(s):

The recipient is required to consult with the DOE Project Officer and NEPA Specialist regarding any project that would result in:

- changes in function, use, or operation of existing facilities, and/or
- modifications to existing facilities other than minor modifications (e.g. electrical and duct work rerouting) required for equipment installation, and/or
- ground disturbing or new construction activities

prior to initiating any of these activities in order to determine whether additional NEPA review is required.

This authorization is specific to the project activities and locations as described in the SOPO approved by the Contracting Officer and the DOE NEPA Determination.

If the Recipient later intends to add to or modify the activities or locations as described in the approved SOPO and the DOE NEPA Determination, those new activities/locations or modified activities/locations are subject to additional NEPA review and are not authorized for federal funding until the Contracting Officer provides written authorization on those additions or modifications. Should the Recipient elect to undertake activities or change locations prior to written authorization from the Contracting 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.

Term 11. Performance of Work in United States

A. Definitions

For the purposes of this Term, EERE uses contractor synonymously with vendor.

B. Requirement

All work performed under this Award must be performed in the United States unless the Contracting Officer provides a waiver. This requirement does not apply to the purchase of supplies and equipment; however, the Recipient should make every effort to purchase supplies and equipment within the United States. The Recipient must flow down this requirement to its subrecipients.

C. Failure to Comply

If the Recipient fails to comply with the Performance of Work in the United States requirement, the Contracting Officer may deny reimbursement for the work conducted outside the United States and such costs may not be recognized as allowable Recipient cost share regardless if the work is performed by the Recipient, subrecipients, contractors or other project partners.

D. Waiver for Work Outside the U.S.

All work performed under this Award must be performed in the United States. However, the Contracting Officer may approve the Recipient to perform a portion of the work outside the United States under limited circumstances. Recipient must obtain a waiver from the Contracting Officer prior to conducting any work outside the U.S. To request a waiver, the Recipient must submit a written waiver request to the Contracting Officer, which includes the following information:

1. The rationale for performing the work outside the U.S.;
2. A description of the work proposed to be performed outside the U.S.;
3. A description of the anticipated benefits to be realized by the proposed work and the anticipated contributions to the US economy;
4. A description of the likelihood of Intellectual Property (IP) being created from

- the work and the treatment of any such IP;
5. The total estimated cost (DOE and Recipient cost share) proposed for the work to be performed; and
 6. The countries in which the work is proposed to be performed.

For the rationale, the Recipient must demonstrate to the satisfaction of the Contracting Officer that the performance of work outside the United States would further the purposes of the FOA that the Award was selected under and is in the economic interests of the United States. The Contracting Officer may require additional information before considering such request.

E. Approval of Recipient's Waiver Request - Caterpillar (CAT) Mexico Facility

Based on the waiver request and justification submitted by the Recipient via email dated June 17, 2019, DOE has waived the requirements set forth in Term 11(a), "Performance of Work in the U.S." for the following work to be performed at Caterpillar (CAT) facility located in Neuvo Laredo, Tamaulipas, Mexico:

Conduct a baseline assessment to capture current practices associated with visual inspections and functional testing of printed circuit boards (PCB), to inform functional testing development that will be conducted at Rochester Institute of Technology (RIT).

These activities are within Task 7.5 Condition Assessment of Used Electronics of the Statement of Project Objectives (SOPO). The proposed total budget for the work to take place outside the U.S. is \$64,000 (\$32,000 Federal funds and \$32,000 Recipient Cost Share).

This approval allows for the above described foreign work during Task 7.5. Any extension of this work period will require prior approval from DOE, and the Recipient must provide additional justification to demonstrate the work would further the purposes of the FOA and is otherwise in the economic interests of the U.S. The Recipient must ensure the work complies with the applicable export control laws and that the appropriate Non-Disclosure Agreements are executed.

This waiver is specific to the project activities and locations as described above. If the Recipient later intends to add to or modify the activities or locations as described above, those new activities/locations or modified activities/locations are not covered under this waiver approval unless and until the Contracting Officer provides written authorization on those additions or modifications. If the scope of work to be performed outside the United States, as described above substantially changes or increases, an additional waiver must be submitted by the Recipient and approved by the Contracting Officer. Should the Recipient elect to undertake activities or change locations prior to authorization from the Contracting 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.

F. Approval of Recipient's Waiver Request - Caterpillar (CAT) Canada Facility

Based on the waiver request and justification submitted by the Recipient via email dated June 17, 2019, DOE has waived the requirements set forth in Term 11(a), "Performance of Work in the U.S." for the following work to be performed at National Optics Institute (INO) facility located in Quebec City, Quebec, Canada:

Determine the suitability of terahertz imaging to reliably detect critical solder joint and interconnect failure modes of printed circuit boards (PCB) as practical inspection methods for remanufacturing operations.

These activities are within Task 7.5 Condition Assessment of Used Electronics of the Statement of Project Objectives (SOPO). The proposed total budget for the work to take place outside the U.S. is \$4,400 (all Recipient Cost Share).

This approval allows for the above described foreign work during Task 7.5. Any extension of this work period will require prior approval from DOE, and the Recipient must provide additional justification to demonstrate the work would further the purposes of the FOA and is otherwise in the economic interests of the U.S. The Recipient must ensure the work complies with the applicable export control laws and that the appropriate Non-Disclosure Agreements are executed.

This waiver is specific to the project activities and locations as described above. If the Recipient later intends to add to or modify the activities or locations as described above, those new activities/locations or modified activities/locations are not covered under this waiver approval unless and until the Contracting Officer provides written authorization on those additions or modifications. If the scope of work to be performed outside the United States, as described above substantially changes or increases, an additional waiver must be submitted by the Recipient and approved by the Contracting Officer. Should the Recipient elect to undertake activities or change locations prior to authorization from the Contracting 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.

G. Approval of Recipient's Waiver Request – CHZ Technologies, Germany

Based on the waiver request and justification submitted by the Recipient via email on April 27, 2020, DOE has waived the requirements set forth in Term 11(a), "Performance of Work in the U.S." for the following work to be performed at CHZ Technologies located in Germany:

Process the boards and convert the boards into only a "clean renewable fuel gas" and a "clean char." Because all FR-4 circuit boards contain brominated flame retardants, the recovered synthesis gas and a sample of the "char" will be

sent to the Fresenius Institute to confirm that there are no dioxins or furans from the flame retardants in them. The remaining solid mixture of metals, platinum group metals, fiberglass, carbon and rare earth elements will be sent to Penn State to conduct the proposed metal separation work.

These activities are within Task 6.15 titled “Development and Validation of Metal Separation Technology for Complex Metal Streams” of the Statement of Project Objectives (SOPO). The proposed total budget for the work to take place outside the U.S. is \$4,400 (all Recipient Cost Share). The proposed total budget for the work to take place outside the U.S. is \$33,625 of which \$9,525 will be recipient cost share.

This approval allows for the above described foreign work during Task 6.15. Any extension of this work period will require prior approval from DOE, and the Recipient must provide additional justification to demonstrate the work would further the purposes of the FOA and is otherwise in the economic interests of the U.S. The Recipient must ensure the work complies with the applicable export control laws and that the appropriate Non-Disclosure Agreements are executed.

This waiver is specific to the project activities and locations as described above. If the Recipient later intends to add to or modify the activities or locations as described above, those new activities/locations or modified activities/locations are not covered under this waiver approval unless and until the Contracting Officer provides written authorization on those additions or modifications. If the scope of work to be performed outside the United States, as described above substantially changes or increases, an additional waiver must be submitted by the Recipient and approved by the Contracting Officer. Should the Recipient elect to undertake activities or change locations prior to authorization from the Contracting 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.

H. Approval of Recipient’s Waiver Request – CG Belle Industries, Canada

Based on the waiver request and justification submitted by the Recipient via email on March 26, 2021, DOE has waived the requirements set forth in Term 11(a), “Performance of Work in the U.S.” for the following work to be performed at CG Belle Industries located in Canada:

The project team was unable through its research, to identify any US companies with the correct optic and overall configuration that will work for ablation in this exploratory project on potting material removal from circuit boards. During the testing, the recipient will provide samples and test parameters to CG Belle (Canada). CG Belle will complete the testing and return the samples for analysis.

This approval allows for the above described foreign work during Task 7.5. Any extension of this work period will require prior approval from DOE, and the

Recipient must provide additional justification to demonstrate the work would further the purposes of the FOA and is otherwise in the economic interests of the U.S. The Recipient must ensure the work complies with the applicable export control laws and that the appropriate Non-Disclosure Agreements are executed.

This waiver is specific to the project activities and locations as described above. If the Recipient later intends to add to or modify the activities or locations as described above, those new activities/locations or modified activities/locations are not covered under this waiver approval unless and until the Contracting Officer provides written authorization on those additions or modifications. If the scope of work to be performed outside the United States, as described above substantially changes or increases, an additional waiver must be submitted by the Recipient and approved by the Contracting Officer. Should the Recipient elect to undertake activities or change locations prior to authorization from the Contracting 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.

This approval allows for the above described foreign work during Task 7.3. Any extension of this work period will require prior approval from DOE, and the Recipient must provide additional justification to demonstrate the work would further the purposes of the FOA and is otherwise in the economic interests of the U.S. The Recipient must ensure the work complies with the applicable export control laws and that the appropriate Non-Disclosure Agreements are executed.

This waiver is specific to the project activities and locations as described above. If the Recipient later intends to add to or modify the activities or locations as described above, those new activities/locations or modified activities/locations are not covered under this waiver approval unless and until the Contracting Officer provides written authorization on those additions or modifications. If the scope of work to be performed outside the United States, as described above substantially changes or increases, an additional waiver must be submitted by the Recipient and approved by the Contracting Officer. Should the Recipient elect to undertake activities or change locations prior to authorization from the Contracting 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.

I. Approval of Recipient's Waiver Request - Kingston Process Metallurgy (KPM), Ontario, Canada

Based on the waiver request and justification submitted by the Recipient via email on July 7, 2021, EERE waived the requirements set forth in Term 11.A. "Performance of Work in the United States" for the following work to be performed at Kingston Process Metallurgy (KPM) located in Ontario, Canada:

KPM is needed to perform experimental validation of the removal of various elements from an aluminum melt. No facility in the U.S. can provide this service, which is critical to the success of this project. KPM will also perform and supplement thermodynamic modeling at WPI to assist in the selection of the most promising compounds for experimental validation.

Individual tasks include:

- a. Background research into suitable impurity removal materials.
- b. Thermodynamic and assessment of real-world viability of each impurity removal process.
- c. Small scale testing and evaluation of each impurity removal process.

This authorization is specific to the project activities and locations described above. If the Recipient later intends to add to or modify the activities or locations as described above, those new activities/locations or modified activities/locations are not covered under this waiver approval unless and until the Contracting Officer provides written authorization on those additions or modifications. If the scope of work to be performed outside the United States, as described above substantially changes or increases, an additional waiver must be submitted by the Recipient and approved by the Contracting Officer. Should the Recipient elect to undertake activities or change locations prior to authorization from the Contracting 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.

J. Approval of Recipient's Waiver Request - Braskem S.A., a Brazilian company

Based on the waiver request and justification submitted by the Recipient via email dated *September 22, 2021* EERE waived the requirements set forth in Term 11.A. "Performance of Work in the United States" for the following work to be performed at *Braskem S.A.* located in Brazil:

Co-Principal Investigator will remotely oversee the laboratory work from his worksite in Brazil; however, all work will be physically conducted at Braskem America, Inc.'s laboratories in Pittsburgh. This is related to work proposed under Task 8.6.

The efforts led by Braskem America, Inc. are threefold: 1) production of ISCA's at commercially relevant scale, 2) melt blending of the ISCA's with MPO recycle streams, and 3) integration of the interfacially reinforced recycle stream with the applications value-chain.

This authorization is specific to the project activities and locations described above. If the Recipient later intends to add to or modify the activities or locations as described above, those new activities/locations or modified activities/locations are not covered under this waiver approval unless and until the Contracting Officer provides written authorization on those additions or modifications. If the scope of work to be performed outside the United States, as described above substantially

changes or increases, an additional waiver must be submitted by the Recipient and approved by the Contracting Officer. Should the Recipient elect to undertake activities or change locations prior to authorization from the Contracting 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.

K. Approval of Recipient's Waiver Request - C Change Labs, a British Columbia, Canada company

Based on the waiver request and justification dated February 23, 2022, and June 16, 2022 NREL response to DOE comments as part of one of the Institute's competitively selected technical projects, EERE waived the requirements set forth in Term 11.A. "Performance of Work in the United States" for the following work to be performed at C Change Labs located in Canada and Ukraine:

Work associated with this project includes the continued development, hosting and maintenance of the free, open-access EC3 tool and related EPD database. These platforms and their code and data are the basis for the work of this project, in terms of code structure and data hosting. Work specific to this project in REMADE SOPO Task 9.8 includes the development of the EC3 user interface to include end of life impact stages in both the digital EPD platform as well as the project level user interface, including the input function of end-of-life impact data estimates for key building materials and the ability for this data to be pulled into Building Information Modeling (BIM) software via Building Transparency's application programming interface (API). Development work for both is led by C Change Labs out of British Columbia, Canada with support of the C Change development team (full time FTEs) located in Ukraine. C Change Labs is a service provider to Building Transparency to code and implement existing questions, forms, or workflows for use in an online format to NREL/Building Transparency's instruction.

This project and work will enable further accounting and accountability of the full life cycle of building materials and set a path and framework for others to use to increase the number of materials covered with End of Life (EOL) data. This supports work and directives currently in process at various levels of US government, including whole life carbon and whole building life cycle assessment and procurement policies. Inclusion of EOL data for building materials like wood and concrete will incentivize increased Recycling and reuse of building materials in use and allow for upfront reduction in product emissions. The NREL data and Building Transparency enhanced tool will be available for use by REMADE members and the public inside and outside the U.S. without charge under open access terms.

This authorization is specific to the project activities and locations described above. If the Recipient later intends to add to or modify the activities or locations as described

above, those new activities/locations or modified activities/locations are not covered under this waiver approval unless and until the Contracting Officer provides written authorization on those additions or modifications. If the scope of work to be performed outside the United States, as described above substantially changes or increases, an additional waiver must be submitted by the Recipient and approved by the Contracting Officer. Should the Recipient elect to undertake activities or change locations prior to authorization from the Contracting 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.

L. Approval of Recipient’s Waiver Request - EXCO Technologies Limited (EXCO) through their unincorporated Castool Division (Castool), a Uxbridge, Ontario, Canadian company

Based on the waiver request and justification submitted by the Recipient via email dated June 16, 2021, EERE waived the requirements set forth in Term 11.A. “Performance of Work in the United States” for the following work to be performed at Castool in Uxbridge, Ontario, Canada.

Castool will manufacture the dies and containers for subscale validation of the U.S. developed models using Castool’s laboratory scale extrusion press, which is located at their facility in Uxbridge, Ontario, Canada.

The success of the project is dependent on the abilities of the research team to develop and transfer technology to commercial extrusion enterprises within the U.S. Developing and transferring this knowledge to manufacturers of thick-walled extrusions will lead to significant savings in scrap, which in-turn will result in reduced energy consumption and emissions. The reductions in scrap will also increase productivity for U.S. extruders, making them more competitive compared to foreign extruders.

This authorization is specific to the project activities and locations described above. If the Recipient later intends to add to or modify the activities or locations as described above, those new activities/locations or modified activities/locations are not covered under this waiver approval unless and until the Contracting Officer provides written authorization on those additions or modifications. If the scope of work to be performed outside the United States, as described above substantially changes or increases, an additional waiver must be submitted by the Recipient and approved by the Contracting Officer. Should the Recipient elect to undertake activities or change locations prior to authorization from the Contracting 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.

M. Approval of Recipient’s Waiver Request – AMC Bridge, US Company with employees located in Ukraine

Based on the waiver request and justification submitted by the Recipient via email dated October 4th, 2023, EERE waived the requirements set forth in Term 11.A. “Performance of Work in the United States” for the following work to be performed at AMC Bridge in Ukraine:

AMC Bridge, a Delaware corporation, was selected as the vendor for software development services, because they are able to develop a CAD application for both Autodesk and CREO, major CAD software developers with requirements included in the REMADE Institute project “Development of a Novel Design for Remanufacturing Software Plugin for CAD”. Although AMC Bridge is a US company, some of their employees are located in Ukraine.

The proposed work supports the larger project which has goals to 1) develop a Design for Remanufacturing software tool that enables product designers to evaluate whether a part or product is re-manufacturable and 2) develop CAD plugins to make the software tool accessible to product designers. An increase in remanufactured products reduces the volume of virgin product that needs to be produced and in turn the associated materials and embedded energy used in their production, and the associated greenhouse gas (GHG) emissions. In addition to environmental benefits, remanufactured products are lower cost, comparable products available to consumers, which provides an overall economic benefit. The proposed total budget for the work to take place outside the U.S. is \$150,000.

This authorization is specific to the project activities and locations described above. If the Recipient later intends to add to or modify the activities or locations as described above, those new activities/locations or modified activities/locations are not covered under this waiver approval unless and until the Contracting Officer provides written authorization on those additions or modifications. If the scope of work to be performed outside the United States, as described above substantially changes or increases, an additional waiver must be submitted by the Recipient and approved by the Contracting Officer. Should the Recipient elect to undertake activities or change locations prior to authorization from the Contracting 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.

Term 12. Notice Regarding the Purchase of American-Made Equipment and Products – 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 American-made.

Term 13. Foreign Involvement

The Recipient of the Award shall be registered as a U.S. organization.

To ensure the Institute's focus on U.S. manufacturing is not obscured by foreign involvement, to be eligible members and sub-recipients of Federal support, foreign entities must demonstrate to the satisfaction of the Recipient and DOE that: 1) their participation is in the best interest of the Institute, U.S. industry, and U.S. economic development; 2) adequate intellectual property (IP) and data protection protocols exist between the U.S. subsidiary and its foreign parent organization; 3) the work is conducted within the U.S. and the entity acknowledges the U.S. Manufacturing Plan; and 4) it will satisfy other conditions that may be deemed necessary by the Institute and DOE to protect U.S. government interests.

Prior approval from DOE for foreign participation in the Institute is required as specified in Term 7(c)9 of the Award. Some projects within the SMIA REMADE Institute may be subject to export control laws and regulations. Under no circumstances may foreign entities (organizations, companies or persons) receive access to export controlled information unless proper export procedures have been satisfied. The Recipient will address participation by foreign entities (organizations, companies or persons) on a case-by-case basis, and will ensure measures that properly protect export controlled information are in place.

Term 14. Reporting Requirements

A. Requirements

The reporting requirements for this Award are identified on the Federal Assistance Reporting Checklist, attached to this Award. Failure to comply with these reporting requirements is considered a material noncompliance with the terms of the Award. Noncompliance may result in withholding of future payments, suspension, or termination of the current award, and withholding of future awards. A willful failure to perform, a history of failure to perform, or unsatisfactory performance of this and/or other financial assistance awards, may also result in a debarment action to preclude future awards by Federal agencies.

B. Dissemination of scientific/technical reports

Scientific/technical reports submitted under this Award will be disseminated on the Internet via the DOE Information Bridge (www.osti.gov/bridge), unless the report contains patentable material, protected data or SBIR/STTR data. Citations for journal articles produced under the Award will appear on the DOE Energy Citations Database (www.osti.gov/energycitations).

C. Restrictions

Reports submitted to the DOE Information Bridge must not contain any Protected Personal Identifiable Information (PII), limited rights data (proprietary data), classified information, information subject to export control classification, or other information not subject to release.

D. Continued Reporting

For five years beyond the project period, the Recipient will submit an annual report

on the utilization and impact of the Institute and technical progress in implementing and deploying the technologies on the Institute's roadmap.

Term 15. Lobbying

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.

Term 16. Publications

The Recipient is required to include the following acknowledgement in publications arising out of, or relating to, work performed under this Award, whether copyrighted or not:

- **Acknowledgment:** "This material is based upon work supported by the U.S. Department of Energy's Office of Energy Efficiency and Renewable Energy (EERE) under the Advanced Materials & Manufacturing Technologies Office (AMMTO), Award Number DE-EE0007897" awarded to the REMADE Institute, a division of Sustainable Manufacturing Innovation Alliance Corp".
- **Full Legal Disclaimer:** "This report was prepared as an account of work sponsored by an agency of the United States Government. Neither the United States Government nor any agency thereof, nor any of their employees, makes any warranty, express or implied, or assumes any legal liability or responsibility for the accuracy, completeness, or usefulness of any information, apparatus, product, or process disclosed, or represents that its use would not infringe privately owned rights. Reference herein to any specific commercial product, process, or service by trade name, trademark, manufacturer, or otherwise does not necessarily constitute or imply its endorsement, recommendation, or favoring by the United States Government or any agency thereof. The views and opinions of authors expressed herein do not necessarily state or reflect those of the United States Government or any agency thereof."
- **Abridged Legal Disclaimer:** "The views expressed herein do not necessarily represent the views of the U.S. Department of Energy or the United States Government" Recipients should make every effort to include the full Legal Disclaimer. However, in the event recipients are constrained by formatting and/or page limitations set by the publisher, the abridged Legal Disclaimer is an acceptable alternative.

The Award may include a Data Management Plan, Attachment 5, submitted by the Recipient that explains how data generated in the course of the work performed under this Award will be shared or preserved or, when justified, explains why data sharing or preservation is not possible or scientifically appropriate. In the event of a conflict between the Data Rights outlined in the

Intellectual Property Provisions, Attachment 4, and the Data Management Plan, the Data Rights outlined in the Intellectual Property Provisions take precedence.

Term 17. No-Cost Extension

As provided in 2 CFR 200.308, the Recipient must provide the Contracting Officer with notice in advance if it intends to utilize a one-time, no-cost extension of this Award. The notification must include the supporting reasons and the revised period of performance. The Recipient must submit this notification in writing to the Contracting Officer and DOE Technology Manager/ Project Officer at least 30 days before the end of the current budget period.

Any no-cost extension will not alter the project scope, milestones, deliverables, or budget of this Award.

Term 18. Property Standards

The complete text of the Property Standards can be found at 2 CFR 200.310 through 200.316. Also see 2 CFR 910.360 for additional requirements for real property and equipment for For-Profit recipients.

Term 19. Insurance Coverage

See 2 CFR 200.310 for insurance requirements for real property and equipment acquired or improved with Federal funds. Also see 2 CFR 910.360(d) for additional requirements for real property and equipment for For-Profit recipients.

Term 20. Real Property

Subject to the conditions set forth in 2 CFR 200.311, title to real property acquired or improved under a Federal award will conditionally vest upon acquisition in the non-Federal entity. The non-Federal entity cannot encumber this property and must follow the requirements of 2 CFR 200.311 before disposing of the property.

Except as otherwise provided by Federal statutes or by the Federal awarding agency, real property will be used for the originally authorized purpose as long as needed for that purpose. When real property is no longer needed for the originally authorized purpose, the non-Federal entity must obtain disposition instructions from DOE or pass-through entity. The instructions must provide for one of the following alternatives: (1) retain title after compensating DOE as described in 2 CFR 200.311(c)(1); (2) Sell the property and compensate DOE as specified in 2 CFR 200.311(c)(2); or (3) transfer title to DOE or to a third party designated/approved by DOE as specified in 2 CFR 200.311(c)(3).

See 2 CFR 200.311 for additional requirements pertaining to real property acquired or improved under a Federal award. Also see 2 CFR 910.360 for additional requirements for real property for For-Profit recipients.

Term 21. Equipment

Subject to the conditions provided in 2 CFR 200.313, title to equipment (property) acquired under a Federal award will conditionally vest upon acquisition with the non-Federal entity. The non-Federal entity cannot encumber this property and must follow the requirements of 2 CFR 200.313 before disposing of the property.

A state must use equipment acquired under a Federal award by the state in accordance with state laws and procedures.

Equipment must be used by the non-Federal entity in the program or project for which it was acquired as long as it is needed, whether or not the project or program continues to be supported by the Federal award. When no longer needed for the originally authorized purpose, the equipment may be used by programs supported by DOE in the priority order specified in 2 CFR 200.313(c)(1)(i) and (ii).

Management requirements, including inventory and control systems, for equipment are provided in 2 CFR 200.313(d).

When equipment acquired under a Federal award is no longer needed, the non-Federal entity must obtain disposition instructions from DOE or pass-through entity.

Disposition will be made as follows: (1) items of equipment with a current fair market value of \$5,000 or less may be retained, sold, or otherwise disposed of with no further obligation to DOE; (2) Non-Federal entity may retain title or sell the equipment after compensating DOE as described in 2 CFR 200.313(e)(2); or (3) transfer title to DOE or to an eligible third party as specified in 2 CFR 200.313(e)(3).

See 2 CFR 200.313 for additional requirements pertaining to equipment acquired under a Federal award. Also see 2 CFR 910.360 for additional requirements for equipment for For-Profit recipients. See also 2 CFR 200.439 Equipment and other capital expenditures.

Term 22. Supplies

See 2 CFR 200.314 for requirements pertaining to supplies acquired under a Federal award. See also 2 CFR 200.453 Materials and supplies costs, including costs of computing devices.

Term 23. Property Trust Relationship

Real property, equipment, and intangible property, that are acquired or improved with a Federal award must be held in trust by the non-Federal entity as trustee for the beneficiaries of the project or program under which the property was acquired or improved. See 2 CFR 200.316 for additional requirements pertaining to real property, equipment, and intangible property acquired or improved under a Federal award.

Term 24. Record Retention

Consistent with 2 CFR 200.334 through 200.338, the Recipient is required to retain records relating to this Award.

Term 25. Audits

A. Government-Initiated Audits

The Recipient is required to provide any information, documents, site access, or other assistance requested by EERE, DOE 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.

Consistent with 2 CFR part 200 as amended by 2 CFR part 910, DOE may audit the Recipient's financial records or administrative records relating to this Award at any time. Government-initiated audits are generally paid for by DOE.

DOE may conduct a final audit at the end of the project period (or the termination of the Award, if applicable). Upon completion of the audit, the Recipient is required to refund to DOE any payments for costs that were determined to be unallowable. If the audit has not been performed or completed prior to the closeout of the award, DOE retains the right to recover an appropriate amount after fully considering the recommendations on disallowed costs resulting from the final audit.

DOE will provide reasonable advance notice of audits and will minimize interference with ongoing work, to the maximum extent practicable.

B. Annual Compliance Audits

The Recipient is required to comply with the annual compliance audit requirements in 2 CFR 200.500 through 521 for institutions of higher education, nonprofit organizations and state and local governments, and 2 CFR 910.500 through 521 for for-profit entities. The annual compliance audits are independent from Government-initiated audits discussed in paragraph A of this Term, and must be paid for by the Recipient. To minimize expense, the Recipient may have a compliance audit in conjunction with its annual audit of financial statements.

Term 26. At Risk Requirements

The Contracting Officer determined the Recipient is high risk based on:

- *Inherent risk of project or budget. These risks include: the budget contains a high ratio of sub-awards, and the project has high technical risk.*

Based on this determination, the Contracting Officer has incorporated the following requirements into this Award.

- *The Recipient will be placed on ACH payment method and required to submit invoice supporting documentation as specified by the Payment Procedures Term of the Award.*

The Recipient may report any change in circumstances that impact the Contracting Officer's determination that it is At Risk. If the Recipient believes that its circumstances have changed to this degree, the Recipient may request a re-evaluation at any time after 6 months from the initial determination. Please provide a written request and support to the DOE Award Administrator.

EERE will remove this Term, in part or in its entirety, by modification to the Award if the conditions that prompted it have been corrected, subject to approval by the Contracting Officer.

Subpart B. Financial Provisions

Term 27. Maximum Obligation

The maximum obligation of DOE for this Award is the total "Funds Obligated" as stated in Block 13 of the Assistance Agreement to this Award. Additional Federal funding is contingent upon (1) Recipient's demonstrated substantial progress towards meeting the objectives of the Award; (2) availability of Federal funds appropriated by Congress for the purpose of this program; and (3) the availability of future-year budget authority.

Term 28. Funding of Budget Periods

EERE has obligated funding as shown in Block 13 of the Assistance Agreement for completion of the Project. However, only the Federal share of costs associated with the current Period of Performance is available for work performed by the Recipient. The Federal share of costs is shown on Attachment 3. The current Period of Performance is shown in Block 7 of the Assistance Agreement.

The remainder of funding is contingent upon: (1) availability of Federal funds appropriated by Congress for the purpose of this program; (2) the availability of future-year budget authority; (3) Recipient's technical progress compared to the Milestone Summary Table stated in Attachment 1 to this Award; (4) Recipient's submittal of required reports; (5) Recipient's compliance with the terms and conditions of the Award; (6) EERE's Go/No-Go decision; (7) the Recipient's submission of a continuation application; and (8) written approval of the continuation application by the Contracting Officer.

In the event that the Recipient does not submit a continuation application for subsequent Budget Periods, or EERE disapproves a continuation application for subsequent Budget Periods, the maximum EERE liability to the Recipient is the funds that are available for the current approved Budget Period(s). In such event, EERE reserves the right to de-obligate any remaining Federal funds.

Term 29. Continuation Application and Funding

A. Continuation Application

A continuation application is a non-competitive application for an additional budget period within a previously approved project period. At least ninety days before the end of each budget period, the Recipient must submit to the DOE Technology Manager/Project Officer and the DOE Award Administrator its continuation application, which includes the following information:

- i. A report on the Recipient's progress towards meeting the objectives of the project, including any significant findings, conclusions, or developments, and an estimate of any unobligated balances remaining at the end of the budget period. If the remaining unobligated balance is estimated to exceed 20 percent of the funds available for the budget period, explain why the excess funds have not been obligated and how they will be used in the next budget period.
- ii. A detailed budget and supporting justification if there are changes to the negotiated budget, or a budget for the upcoming budget period was not approved at the time of award.
- iii. A description of any planned changes from the negotiated Statement of Project Objectives and/or Milestone Summary Table.

B. Continuation Funding

Continuation funding is contingent on (1) the availability of funds appropriated by Congress for the purpose of this program; (2) the availability of future-year budget authority; (3) Recipient's technical progress compared to the Milestone Summary Table stated in Attachment 1 to this Award; (4) Recipient's submittal of required reports; (5) Recipient's compliance with the terms and conditions of the Award; (6) EERE's Go/No-Go decision; (7) the Recipient's submission of a continuation application; and (8) written approval of the continuation application by the Contracting Officer.

- C. EERE waives prior written approval requirements to carry forward unobligated balances to subsequent periods of performance.

Term 30. Cost Sharing**A. Cost Sharing Obligations**

Total Estimated Project Cost is the sum of the Federal Government share, including Federally Funded Research and Development Center (FFRDC) costs, and Recipient share of the estimated project costs. The DOE FFRDC cost is not included in the total approved budget for this Award, because EERE will pay the DOE FFRDC portion of the effort under an existing DOE contract. The Recipient is not responsible for reporting on that portion of the total estimated cost that is paid directly to the DOE FFRDC.

The Recipient must provide the Cost Share amount stated in Block 12 of the Assistance Agreement to this Award. EERE and the Recipient’s cost share for the total estimated project costs are listed below.

Budget Period	EERE Cost Share, including FFRDC Costs		Recipient Cost Share \$ / %	Total Estimated Costs
	EERE \$ / %	FFRDC \$ / %		
1	\$1,081,699 / 44%	\$222,500 / 9%	\$1,141,399 / 47%	\$2,445,598
2	\$2,560,597 / 42%	\$407,466 / 7%	\$3,173,415 / 51%	\$6,141,478
3	\$5,156,517 / 45%	\$509,121 / 5%	\$5,667,529 / 50%	\$11,333,167
4	\$34,111,379 / 47%	\$2,550,121 / 3%	\$36,661,500 / 50%	\$73,323,000
5	\$23,074,687 / 49%	\$705,914 / 1%	\$23,736,157 / 50%	\$47,516,758
Total Project	\$65,984,877 / 47%	\$4,395,122 / 3%	\$70,380,000 / 50%	\$140,760,000

The Recipient must provide its required Cost Share amount as a percentage of the total project costs. EERE authorized the Recipient to provide the Budget Period 1 cost share on a Budget Period basis. For the subsequent Budget Periods, the Recipient must provide cost share by the end of each calendar year quarter and the required cost share must be reported as met on each SF 425 Quarterly Financial Report. DOE may re-examine cost share requirements for subsequent budget periods beyond Budget Period 2, as the DOE Contracting Officer deems necessary. The Recipient may also request that the DOE Contracting Officer review the cost share requirements where there are significant and unforeseen events that may warrant a revision.

B. Cost Share Obligation If Award Terminated or Discontinued

If the Award is terminated or is otherwise not funded to completion, the Recipient is not required to provide the entire “Cost Share” amount stated in Block 12 of the Assistance Agreement to this Award; however, the Recipient must provide its share (i.e., percentage as shown in the Table above) of the total project cost reimbursed as of the date of the termination or discontinuation.

C. Source of Cost Share

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

D. Inability to Comply with Cost Sharing Obligations

If the Recipient determines that it is unable to meet its cost sharing obligations, the Recipient must notify the DOE Award Administrator in writing immediately. The notification must include the following information: (1) whether the Recipient intends to continue or phase out the project, and (2) 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, EERE may recover some or all of the financial assistance provided under this Award. The amount EERE would seek to recover under this Term would be predicated on EERE's analysis of the Recipient's compliance with their cost sharing obligation under the Award.

Term 31. Indirect Costs

A. Fringe Benefit Costs

The budget for this Award includes fringe benefits, but does not include indirect charges. Therefore, indirect charges shall not be charged to nor shall reimbursement be requested for this project nor shall any indirect charges for this project be allocated to any other Federally sponsored project. In addition, indirect charges shall not be counted as cost share unless approved by the Contracting Officer. This restriction does not apply to subrecipients' indirect costs.

B. Subrecipient Indirect Costs

Recipient must ensure its subrecipient's indirect costs are appropriately managed, allowable and otherwise comply with the requirements of this Award and 2 CFR part 200 as amended by 2 CFR part 910.

Term 32. Refund Obligation

The Recipient must refund any excess payments received from EERE, including any costs determined unallowable by the Contracting Officer. Upon the end of the project period (or the termination of the Award, if applicable), the Recipient must refund to EERE the difference between (1) the total payments received from EERE, and (2) the Federal share of the costs incurred.

Term 33. Allowable Costs

EERE determines the allowability of costs through reference to 2 CFR part 200 as amended by 2 CFR part 910. All project costs must be allowable, allocable, and reasonable. The Recipient must document and maintain records of all project costs, including, but not limited to, the costs paid by Federal funds, costs claimed by its subrecipients and project costs that the Recipient claims as cost sharing, including in-kind contributions. The Recipient is responsible for maintaining records adequate to demonstrate that costs claimed have been incurred, are reasonable, allowable and allocable, and comply with the cost principles. Upon request, the Recipient is required to provide such records to EERE. Such records are subject to audit. Failure to provide EERE adequate supporting documentation may result in a determination by the Contracting Officer that those costs are unallowable.

The Recipient is required to obtain the prior written approval of the Contracting Officer for any foreign travel costs.

Term 34. Limitation on Compensation Costs

- A.** The annual compensation costs allowable for an individual proposed as a direct cost under this Award are limited to \$250,000 (i.e., \$250,000 is the maximum amount that EERE will reimburse a Recipient for any one individual's annual compensation and EERE will not recognize such costs above \$250,000 as Recipient cost share). This limitation does not restrict the Recipient or its subrecipients from providing annual compensation to an individual that exceeds \$250,000. However, any amount above \$250,000 cannot be included as a direct cost in the total project costs (i.e., Federal share or Recipient cost share).

For purposes of this Award term only, the term "annual compensation costs" is defined to include the total amount of wages and salary paid to the employee, which have been approved by the Contracting Officer.

- B.** The Contracting Officer may approve a waiver to this requirement. The Recipient must obtain the approval from the Contracting Officer prior to requesting reimbursement for annual compensation costs in excess of \$250,000. To request a waiver, the Recipient must submit a written waiver request to the Contracting Officer, which includes the following information:
- a. The position description of the employee for which the waiver requests applies;
 - b. The proposed annual compensation, including the estimated hours to be performed on the Award and the rate at which the employee is paid;
 - c. A rationale for the need of the employee on the Award and how their participation is necessary for the success of the project objectives.

The Contracting Officer will review the request and will provide a response via email. Please note, the Contracting Officer may require additional information prior to providing a response to the waiver request.

Term 35. Pre-Award Costs

As stated in the Contracting Officer's Pre-Award Costs Letter dated March 23, 2017, the Recipient is authorized to request reimbursement for costs incurred on or after December 5, 2016, if: (1) such costs are allowable in accordance with 2 CFR part 200 as amended by 2 CFR part 910, (2) such costs are not otherwise restricted by Term titled "National Environmental Policy Act (NEPA) Requirements," and (3) such costs are not otherwise restricted by any other Term. If the Recipient elects to undertake activities that are not authorized for Federal funding by the Contracting Officer in advance of DOE completing the NEPA review, the Recipient is doing so at risk of not receiving Federal funding and such costs may not be recognized as allowable cost share. Nothing contained in the pre-award cost reimbursement regulations or any pre-award costs approval letter from the Contracting Officer override these NEPA requirements to obtain the written authorization from the Contracting Officer prior to taking

any action that may have an adverse effect on the environment or limit the choice of reasonable alternatives.

Term 36. Use of Program Income

If the Recipient earns program income from Membership dues during the project period as described in Attachment 1 SOPO and the Operational Plan, the Recipient may use this type of program income to meet its cost sharing requirement.

If the Recipient earns program income other than Membership dues during the project period, the Recipient may add the program income to the funds committed to the Award and use it to further eligible project objectives. Per 2 CFR 200.307, "Program Income.", the Recipient is authorized to deduct the costs incidental to the generation of program income from gross income to determine program income. This deduction may be counted as Recipient cost share on the Federal award. Therefore, if registration fees are charged for an Institute event, the Recipient may use the generated registration fees to pay for the costs of that specific event. The expenses for the event may be counted as Recipient cost share, as long as those costs were included in the approved budget and are otherwise allowable. If the Recipient charges its members for Recipient sponsored conference attendance, the members that are considered subrecipients may count the conference fees as cost share. In this instance, the Recipient cannot count those conference fees as cost share. Any residual registration fees will be considered Program Income and will be subject to the Addition method described in this paragraph.

Prior to utilizing program income, the Recipient will provide prompt notice to the EERE Project Officer, EERE Technology Manager and the Contracting Officer of the specific activities to be supported by the program income in question and how the additional costs are to be incorporated into the Budget. The revised budget will be approved by the Contracting Officer in a formal award modification. The additional costs will be reflected in the Recipient cost share, therefore increasing the Total Cost Share and Total Project Costs. The Federal Share of the award will remain unchanged. If the Recipient intends to apply the program income to Institute activities outside the approved Statement of Project Objectives, the Recipient must first request prior approval from the Contracting Officer. If the Recipient intends to use program income earned during the project period after the project period has ended, the Recipient must first request prior approval from the Contracting Officer. Post-project use is limited to furthering the project objectives, reporting to DOE on post-project activities, and similar activities.

Per 2 CFR 200.1, "Program income includes but is not limited to income from fees for services performed, the use of rental or real or personal property acquired under the Federal awards, the sale of commodities or items fabricated under a Federal award, license fees and royalties on patents and copyrights, and principal and interest on loans made with Federal award funds. Interest earned on advances of Federal funds is not program income. Except as otherwise provided in Federal statutes, regulations, or the terms and conditions of the Federal award,

program income does not include rebates, credits, discounts, and interest earned on any of them.”

Term 37. Payment Procedures

A. Method of Payment

Payment will be made by reimbursement through ACH.

B. Requesting Reimbursement

Requests for reimbursements must be made electronically through Department of Energy’s Oak Ridge Financial Service Center (ORFSC) VIPERS. To access and use VIPERS, the Recipient must enroll at <https://vipers.doe.gov>. Detailed instructions on how to enroll are provided on the web site.

C. Timing of Submittals

Submittal of the SF-270 or SF-271 should coincide with the Recipient’s normal billing pattern, but not more frequently than every two weeks. Requests for reimbursement must be limited to the amount of disbursements made during the billing period for the Federal share of direct project costs and the proportionate share of any allowable indirect costs incurred during that billing period.

D. Adjusting Payment Requests for Available Cash

The Recipient must disburse any funds that are available from repayments to and interest earned on a revolving fund, program income, rebates, refunds, contract settlements, audit recoveries, credits, discounts, and interest earned on any of those funds before requesting additional cash payments from EERE.

E. Payments

The EERE approving official will approve the invoice as soon as practical, but not later than 30 days after the Recipient’s request is received, unless the billing is improper. Upon receipt of an invoice payment authorization from the EERE approving official, the ORFSC will disburse payment to the Recipient. The Recipient may check the status of payments at the VIPERS web site. All payments are made by electronic funds transfer to the bank account specified on the Bank Information Form that the Recipient filed with the U.S. Department of Treasury.

F. Supporting Documents for Agency Approval of Payments

For non-construction awards, the Recipient must submit a Standard Form SF-270, “Request for Advance or Reimbursement,” at <https://vipers.doe.gov> and attach a file containing appropriate supporting documentation. The file attachment must show the total Federal share claimed on the SF-270, the non-Federal share claimed for the billing period if cost sharing is required, and cumulative expenditures to date (both Federal and non-Federal) for each of the following categories: personnel; fringe benefits; equipment; travel; supplies; contractual; other direct costs; and indirect

costs. For construction awards, the Recipient must submit a SF-271, "Outlay Report and Request for Reimbursement for Construction Programs," through VIPERS.

The following additional items are required:

1. Summary cost data, for the billing period and cumulative, showing all categories listed in the SF-424a for the Recipient and any Subrecipient with over \$250,000 total project costs or >25% of total project costs;
2. UCC filing proof for all equipment reimbursements to for-profit recipients and subrecipients;
3. Explanation of cost share for invoicing period for each cost share provider, including cost category (if applicable) and rationale if the cumulative cost share exceeds or is below award requirements. If the cumulative cost share is below the award required amount, a recovery plan to restore cost share to the required amount must be submitted to the DOE Contracting Officer with the invoice;
4. The following back up documentation is required for the Recipient and all Subrecipients over \$250,000 total project costs or >25% of total project costs for both Federal and Cost Share costs included in the invoice:
 - i. Personnel hours report or a listing of all personnel and personnel costs including hours and hourly rate, if applicable;
 - ii. Travel report or listing of all trips including a breakdown of travel costs in each trip, e.g. airfare, rental car, hotel, per diem...etc.;
 - iii. Equipment report or a listing of all equipment purchased and invoices/receipts for any Equipment over \$50,000;
 - iv. Supplies report or listing of types of supplies included in the supplies total;
 - v. Invoices for all Vendors; and
 - vi. Other direct costs report or a listing of all other direct costs purchased and invoices/receipts for any cost over \$50,000.
5. The following back up documentation is required for all Subrecipients under \$250,000 total project costs or <25% of total project costs:
 - i. A report or listing of all equipment purchased and invoices/receipts for any Equipment over \$50,000.

The EERE payment authorizing official may request additional information from the Recipient to support the payment requests prior to release of funds, as deemed necessary. Recipient is required to comply with these requests. Supporting documents include invoices, copies of contracts, vendor quotes, and other expenditure explanations that justify the reimbursement requests.

G. Unauthorized Drawdown of Federal Funds

For each budget period, the Recipient may not spend more than the Federal share authorized to that particular budget period, without specific written approval from

the Contracting Officer. The Recipient must immediately refund EERE any amounts spent or drawn down in excess of the authorized amount for a budget period. The Recipient and subrecipients shall promptly, but at least quarterly, remit to DOE interest earned on advances drawn in excess of disbursement needs, and shall comply with the procedure for remitting interest earned to the Federal government per 2 CFR 200.305, as applicable.

Term 38. Budget Changes

A. Budget Changes Generally

The Contracting Officer has reviewed and approved the SF-424A in Attachment 3 to this Award.

Any increase in the total project cost, whether DOE share or Cost Share, which is stated as "Total" in Block 12 to the Assistance Agreement of this Award, must be approved in advance and in writing by the Contracting Officer.

Any budget change that alters the project scope, milestones or deliverables requires prior written approval of the Contracting Officer. EERE may deny reimbursement for any failure to comply with the requirements in this term.

B. Transfers of Funds Among Direct Cost Categories

The Recipient is required to obtain the prior written approval of the Contracting Officer for any transfer of funds among direct cost categories where the cumulative amount of such transfers exceeds or is expected to exceed 10 percent of the total project cost, which is stated as "Total" in Block 12 to the Assistance Agreement of this Award.

The Recipient is required to notify the DOE Technology Manager/Project Officer of any transfer of funds among direct cost categories where the cumulative amount of such transfers is equal to or below 10 percent of the total project cost, which is stated as "Total" in Block 12 to the Assistance Agreement of this Award.

C. Transfer of Funds Between Direct and Indirect Cost Categories

The Recipient is required to obtain the prior written approval of the Contracting Officer for any transfer of funds between direct and indirect cost categories.

Subpart C. Miscellaneous Provisions

Term 39. Environmental, Safety and Health Performance of Work at DOE Facilities

With respect to the performance of any portion of the work under this Award which is performed at a DOE -owned or controlled site, the Recipient agrees to comply with all State and

Federal Environmental, Safety and Health (ES&H) regulations and with all other ES&H requirements of the operator of such site.

Prior to the performance on any work at a DOE-owned or controlled site, the Recipient shall contact the site facility manager for information on DOE and site specific ES&H requirements.

The Recipient is required apply this provision to its subrecipients and contractors.

Term 40. Corporate Felony Conviction and Federal Tax Liability Assurances

This term applies to Recipients that are organized as corporations. 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.

The Recipient 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.

Term 41. Insolvency, Bankruptcy or Receivership

- A.** The Recipient shall immediately, but no later than five days, notify EERE of the occurrence of any of the following events: (1) the Recipient or the Recipient's parent's filing of a voluntary case seeking liquidation or reorganization under the Bankruptcy Act; (2) the Recipient's consent to the institution of an involuntary case under the Bankruptcy Act against the Recipient or the Recipient's parent; (3) the filing of any similar proceeding for or against the Recipient or the Recipient's parent, or the Recipient's consent to the dissolution, winding-up or readjustment of its debts, appointment of a receiver, conservator, trustee, or other officer with similar powers over the Recipient, under any other applicable state or Federal law; or (4) the Recipient's insolvency due to its inability to pay debts generally as they become due.
- B.** Such notification shall be in writing and shall: (1) specifically set out the details of the occurrence of an event referenced in paragraph A; (2) provide the facts surrounding that event; and (3) provide the impact such event will have on the project being funded by this Award.
- C.** Upon the occurrence of any of the four events described in paragraph A. of this term, EERE reserves the right to conduct a review of the Recipient's Award to determine the Recipient's compliance with the required elements of the Award (including such items as cost share, progress towards technical project objectives, and submission of required reports). If the EERE review determines that there are

significant deficiencies or concerns with the Recipient's performance under the Award, EERE reserves the right to impose additional requirements, as needed, including (1) change of payment method; or (2) institute payment controls.

- D. Failure of the Recipient to comply with this term may be considered a material noncompliance of this Award by the Contracting Officer.

Term 42. Reporting Subawards and Executive Compensation

A. Reporting of first-tier subawards

- i. *Applicability.* Unless the Recipient is exempt as provided in paragraph D. of this award term, the Recipient must report each action that obligates \$25,000 or more in Federal funds that does not include Recovery funds (as defined in section 1512(a)(2) of the American Recovery and Reinvestment Act of 2009, Pub. L. 111-5) for a subaward to an entity (see definitions in paragraph E. of this award term).
- ii. *Where and when to report.*
 1. The Recipient must report each obligating action described in paragraph A.i. of this award term to <https://www.fsrs.gov>.
 2. For subaward information, 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, 2010, the obligation must be reported by no later than December 31, 2010.)
- iii. *What to report.* The Recipient must report the information about each obligating action that the submission instructions posted at <https://www.fsrs.gov> specify.

B. Reporting Total Compensation of Recipient Executives

- i. *Applicability and what to report.* The Recipient must report 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 is \$25,000 or more;
 2. In the preceding fiscal year, the Recipient received;
 - a. 80 percent or more of the Recipient's 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 (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 (and subawards); and

3. 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>).
- ii. *Where and when to report.* The Recipient must report executive total compensation described in paragraph B.i. of this award term:
 1. As part of the Recipient's registration profile at <https://www.sam.gov>.
 2. By the end of the month following the month in which this award is made, and annually thereafter.

C. Reporting of Total Compensation of Subrecipient Executives

- i. *Applicability and what to report.* Unless the Recipient is exempt as provided in paragraph D. of this award term, for each first-tier subrecipient under this award, the Recipient shall report the names and total compensation of each of the subrecipient's five most highly compensated executives for the subrecipient's preceding completed fiscal year, if:
 1. In the subrecipient's preceding fiscal year, the subrecipient received:
 - a. 80 percent or more of its 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 (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 (and subawards); and
 2. 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>).
- ii. *Where and when to report.* The Recipient must report subrecipient executive

total compensation described in paragraph C.i. of this award term:

1. To the recipient.
2. By the end of the month following the month during which the Recipient makes the subaward. For example, if a subaward is obligated 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.

D. Exemptions

If, in the previous tax year, the Recipient had gross income, from all sources, under \$300,000, it is exempt from the requirements to report:

- i. Subawards and;
- ii. The total compensation of the five most highly compensated executives of any subrecipient.

E. Definitions

For purposes of this Award term:

- i. Entity means all of the following, as defined in 2 CFR Part 25:
 1. A Governmental organization, which is a State, local government, or Indian tribe;
 2. A foreign public entity;
 3. A domestic or foreign nonprofit organization;
 4. A domestic or foreign for-profit organization;
 5. A Federal agency, but only as a subrecipient under an award or subaward to a non-Federal entity.
- ii. Executive means officers, managing partners, or any other employees in management positions.
- iii. Subaward:
 1. This term means a legal instrument to provide support for the performance of any portion of the substantive project or program for which the Recipient received this award and that the recipient awards to an eligible subrecipient.
 2. The term does not include the Recipient's procurement of property and services needed to carry out the project or program (for further explanation, see Sec. __ .210 of the attachment to OMB Circular A-133, Audits of States, Local Governments, and Non-Profit Organizations).

3. A subaward may be provided through any legal agreement, including an agreement that the Recipient or a subrecipient considers a contract.
- iv. Subrecipient means an entity that:
 1. Receives a subaward from the Recipient under this award; and
 2. Is accountable to the Recipient for the use of the Federal funds provided by the subaward.
 - v. 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)):
 1. Salary and bonus.
 2. Awards of stock, stock options, and stock appreciation rights. Use the dollar amount recognized for financial statement reporting purposes with respect to the fiscal year in accordance with the Statement of Financial Accounting Standards No. 123 (Revised 2004) (FAS 123R), Shared Based Payments.
 3. Earnings for services under non-equity incentive plans. This does not include group life, health, hospitalization or medical reimbursement plans that do not discriminate in favor of executives, and are available generally to all salaried employees.
 4. Change in pension value. This is the change in present value of defined benefit and actuarial pension plans.
 5. Above-market earnings on deferred compensation which is not tax-qualified.
 6. Other compensation, if the aggregate value of all such other compensation (*e.g.* severance, termination payments, value of life insurance paid on behalf of the employee, perquisites or property) for the executive exceeds \$10,000.

Term 43. System for Award Management and Universal Identifier Requirements

A. Requirement for Registration in the System for Award Management (SAM)

Unless the Recipient is exempted from this requirement under 2 CFR 25.110, the Recipient must maintain the currency of its information in SAM until the Recipient submits the final financial report required under this Award or receive the final payment, whichever is later. This requires that the Recipient reviews and updates the information at least annually after the initial registration, and more frequently if required by changes in its information or another award term.

If the Recipient had an active registration in the CCR, it has an active registration in SAM.

B. Unique Entity Identifier (UEI)

SAM automatically assigns a UEI to all active SAM.gov registered entities. Entities no longer have to go to a third-party website to obtain their identifier. This information is displayed on SAM.gov.

If the Recipient is authorized to make subawards under this Award, the Recipient:

- i. Must notify potential subrecipients that no entity (see definition in paragraph C of this award term) may receive a subaward from the Recipient unless the entity has provided its UEI number to the Recipient.
- ii. May not make a subaward to an entity unless the entity has provided its UEI number to the Recipient.

C. Definitions

For purposes of this award term:

- i. System for Award Management (SAM) means the Federal repository into which an entity 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 <https://www.sam.gov>).
- ii. Unique Entity Identifier (UEI) is the 12-character, alpha-numeric identifier that will be assigned by SAM.gov upon registration.
- iii. Entity, as it is used in this award term, means all of the following, as defined at 2 CFR Part 25, subpart C:
 1. A Governmental organization, which is a State, local government, or Indian Tribe.
 2. A foreign public entity.
 3. A domestic or foreign nonprofit organization.
 4. A domestic or foreign for-profit organization.
 5. A Federal agency, but only as a subrecipient under an award or subaward to a non-Federal entity.
- iv. Subaward:
 1. This term means a legal instrument to provide support for the performance of any portion of the substantive project or program for which the Recipient received this Award and that the Recipient awards to an eligible subrecipient.

2. The term does not include the Recipient's procurement of property and services needed to carry out the project or program (for further explanation, see 2 CFR 200.501 Audit requirements, (f) *Subrecipients and Contractors* and/or 2 CFR 910.501 Audit requirements, (f) *Subrecipients and Contractors*).
 3. A subaward may be provided through any legal agreement, including an agreement that the Recipient considers a contract.
- v. Subrecipient means an entity that:
1. Receives a subaward from the Recipient under this Award; and
 2. Is accountable to the Recipient for the use of the Federal funds provided by the subaward.

Term 44. Nondisclosure and Confidentiality Agreements Assurances

- A.** By entering into this agreement, the Recipient attests that it **does not and will not** require its employees or contractors to sign internal nondisclosure or confidentiality agreements or statements prohibiting or otherwise restricting its employees or contractors from lawfully reporting waste, fraud, or abuse to a designated investigative or law enforcement representative of a Federal department or agency authorized to receive such information.
- B.** The Recipient further attests that it **does not and will not** use any Federal funds to implement or enforce any nondisclosure and/or confidentiality policy, form, or agreement it uses unless it contains the following provisions:
- i. *“These provisions are consistent with and do not supersede, conflict with, or otherwise alter the employee obligations, rights, or liabilities created by existing statute or Executive order relating to (1) classified information, (2) communications to Congress, (3) the reporting to an Inspector General of a violation of any law, rule, or regulation, or mismanagement, a gross waste of funds, an abuse of authority, or a substantial and specific danger to public health or safety, or (4) any other whistleblower protection. The definitions, requirements, obligations, rights, sanctions, and liabilities created by controlling Executive orders and statutory provisions are incorporated into this agreement and are controlling.”*
 - ii. The limitation above shall not contravene requirements applicable to Standard Form 312, Form 4414, or any other form issued by a Federal department or agency governing the nondisclosure of classified information.
 - iii. Notwithstanding provision listed in paragraph (a), a nondisclosure or confidentiality policy form or agreement that is to be executed by a person connected with the conduct of an intelligence or intelligence-related activity, other than an employee or officer of the United States Government, may contain provisions appropriate to the particular activity for which such

document is to be used. Such form or agreement shall, at a minimum, require that the person will not disclose any classified information received in the course of such activity unless specifically authorized to do so by the United States Government. Such nondisclosure or confidentiality forms shall also make it clear that they do not bar disclosures to Congress, or to an authorized official of an executive agency or the Department of Justice, that are essential to reporting a substantial violation of law.

Term 45. National Security: Classifiable Results Originating Under an Award

- A.** This Award is intended for unclassified, publicly releasable research. The Recipient will not be granted access to classified information. EERE does not expect that the results of the research project will involve classified information. Under certain circumstances, however, a classification review of information originated under the award may be required. DOE may review research work generated under this Award at any time to determine if it requires classification.
- B.** Executive Order 12958 (60 Fed. Reg. 19,825 (1995)) states that basic scientific research information not clearly related to the national security shall not be classified. Nevertheless, some information concerning (among other things) scientific, technological, or economic matters relating to national security or cryptology may require classification. If the Recipient originates information during the course of this Award that the Recipient believes requires classification, the Recipient must promptly:
- i. Notify the DOE Technology Manager/Project Officer and the DOE Award Administrator;
 - ii. Submit the information by registered mail directly to the Director, Office of Classification and Information Control, SO-10.2; U.S. Department of Energy; P.O. Box A; Germantown, MD 20875-0963, for classification review.
 - iii. Restrict access to the information to the maximum extent possible until the Recipient is informed that the information is not classified, but no longer than 30 days after receipt by the Director, Office of Classification and Information Control
- C.** If the Recipient originates information concerning the production or utilization of special nuclear material (*i.e.*, plutonium, uranium enriched in the isotope 233 or 235, and any other material so determined under section 51 of the Atomic Energy Act) or nuclear energy, the Recipient must:
- i. Notify the DOE Technology Manager/Project Officer and the DOE Award Administrator;
 - ii. Submit the information by registered mail directly to the Director, Office of Classification and Information Control, SO-10.2; U.S. Department of Energy;

- P. O. Box A; Germantown, MD 20875-0963 for classification review within 180 days of the date the Recipient first discovers or first has reason to believe that the information is useful in such production or utilization; and
- iii. Restrict access to the information to the maximum extent possible until the Recipient is informed that the information is not classified, but no longer than 90 days after receipt by the Director, Office of Classification and Information Control.

- D. If EERE determines any of the information requires classification, the Recipient agrees that the Government may terminate the Award with consent of the Recipient in accordance with 2 CFR 200.340(a)(3). All material deemed to be classified must be forwarded to EERE, in a manner specified by EERE.
- If EERE does not respond within the specified time periods, the Recipient is under no further obligation to restrict access to the information.

Term 46. Subrecipient Change Notification

Except for subrecipients specifically proposed as part of the Recipient's Application for award, the Recipient must notify the Contracting Officer and Project Manager in writing 30 days prior to the execution of new or modified subrecipient agreements, including naming any To Be Determined subrecipients. This notification does not constitute a waiver of the prior approval requirements outlined in 2 CFR part 200 as amended by 2 CFR part 910, nor does it relieve the Recipient from its obligation to comply with applicable Federal statutes, regulations, and executive orders.

In order to satisfy this notification requirement, the Recipient documentation must, as a minimum, include the following:

- A description of the research to be performed, the service to be provided, or the equipment to be purchased;
- Cost share commitment letter if the subrecipient is providing cost share to the Award;
- An assurance that the process undertaken by the Recipient to solicit the subrecipient complies with their written procurement procedures as outlined in 2 CFR 200.317 through 200.327;
- An assurance that no planned, actual or apparent conflict of interest exists between the Recipient and the selected subrecipient and that the Recipient's written standards of conduct were followed¹;

¹ It is DOE's position that the existence of a "covered relationship" as defined in 5 CFR 2635.502(a)&(b) between a member of the Recipient's owners or senior management and a member of a subrecipient's owners or senior management creates at a minimum an apparent conflict of interest that would require the Recipient to notify the Contracting Officer and provide detailed information and justification (including, for example, mitigation measures) as to why the subrecipient agreement does not create an actual conflict of interest. The Recipient must also notify the Contracting Officer of any new subrecipient agreement with: (1) an entity that is owned or otherwise controlled by the Recipient; or (2) an entity that is owned or otherwise controlled by another entity that also owns or otherwise controls the Recipient, as it is DOE's position that these

- A completed Environmental Questionnaire, if applicable;
- An assurance that the subrecipient is not a debarred or suspended entity; and
- An assurance that all required award provisions will be flowed down in the resulting subrecipient agreement.

The Recipient is responsible for making a final determination to award or modify subrecipient agreements under this agreement, but the Recipient may not proceed with the subrecipient agreement until the Contracting Officer determines, and provides the Recipient written notification, that the information provided is adequate.

Should the Recipient not receive a written notification of adequacy from the Contracting Officer within 30 days of the submission of the subrecipient documentation stipulated above, Recipient may proceed to award or modify the proposed subrecipient agreement.

Term 47. Export Control

- A. The Recipient must comply with U.S. export control laws and regulations in the performance of work under the Institute. Access to the technology developed under this Award by foreign firms, institutions or individuals shall be controlled by the Recipient under applicable U.S. export control laws and regulations. The Recipient's responsibility to comply with all applicable laws and regulations regarding export-controlled items exists independent of, and is not established or limited by, this term.
- B. The Recipient must have adequate oversight measures in place to ensure the subrecipients, contractors, and Institute Members comply with U.S. export control laws and regulations in the performance of work under the Institute.
- C. The Recipient must apply the requirements of this Term to its subrecipients, contractors, and Institute Members. Further, the Recipient must require that all Institute Members comply with U.S. export control laws and regulation as a condition of membership.

Term 48. Conference Spending

The Recipient shall not expend any funds on a conference not directly and programmatically related to the purpose for which the grant or cooperative agreement was awarded that would defray the cost to the United States Government of a conference held by any Executive branch department, agency, board, commission, or office for which the cost to the United States Government would otherwise exceed \$20,000, thereby circumventing 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 conference.

Term 49. Recipient Integrity and Performance Matters

A. General Reporting Requirement

If the total value of your currently active Financial Assistance awards, 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 you as the recipient during that period of time must maintain the currency of information reported to the System for Award Management (SAM) that is made available in the designated integrity and performance system (currently the Federal Awardee Performance and Integrity Information System (FAPIIS)) about civil, criminal, or administrative proceedings described in paragraph 2 of this term. 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 the designated integrity and performance system on or after April 15, 2011, except past performance reviews required for Federal procurement contracts, will be publicly available.

B. Proceedings About Which You Must Report

Submit the information required about each proceeding that:

- i. Is in connection with the award or performance of a Financial Assistance, cooperative agreement, or procurement contract from the Federal Government;
- ii. Reached its final disposition during the most recent five year period; and
- iii. Is one of the following:
 1. A criminal proceeding that resulted in a conviction, as defined in paragraph E of this award term and condition;
 2. 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;
 3. An administrative proceeding, as defined in paragraph E of this term, 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
 4. Any other criminal, civil, or administrative proceeding if:
 - a. It could have led to an outcome described in paragraph B.iii.1, 2, or 3 of this term;
 - b. It had a different disposition arrived at by consent or compromise with an acknowledgment of fault on your part; and
 - c. The requirement in this term to disclose information about the proceeding does not conflict with applicable laws and regulations.

C. Reporting Procedures

Enter in the SAM Entity Management area the information that SAM requires about each proceeding described in paragraph B of this term. You do not need to submit the information a second time under assistance awards that you received if you already provided the information through SAM because you were required to do so under Federal procurement contracts that you were awarded.

D. Reporting Frequency

During any period of time when you are subject to the requirement in paragraph A of this term, you must report proceedings information through SAM for the most recent five year period, either to report new information about any proceeding(s) that you have not reported previously or affirm that there is no new information to report. Recipients that have Federal contract, Financial Assistance awards, (including cooperative agreement awards) with a cumulative total value greater than \$10,000,000, must disclose semiannually any information about the criminal, civil, and administrative proceedings.

E. Definitions

For purposes of this term:

- i. 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 Financial Assistance awards. It does not include audits, site visits, corrective plans, or inspection of deliverables.
- ii. 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*.
- iii. Total value of currently active Financial Assistance awards, cooperative agreements and procurement contracts includes—
 1. Only the Federal share of the funding under any Federal award with a recipient cost share or match; and
 2. The value of all expected funding increments under a Federal award and options, even if not yet exercised.

Term 50. Subrecipient and Vendor Approvals

- A. *At Risk Notice*. The Recipient must obtain written approval by the Contracting Officer for reimbursement of costs associated with subrecipients/activities/vendors listed in paragraph B. below. If the subaward is under \$250,000, the Recipient must submit a Statement of Project Objectives, and basis of cost estimate. If the subaward is for \$250,000 or more, the Recipient must submit a Statement of Project Objectives, and EERE 335 Budget Justification. If the vendor cost is for \$250,000 or

more, the Recipient must submit quote and purpose/need. Recipient is restricted from expending project funds (i.e., Federal share and Recipient share) on the subrecipients' and/or vendors' supporting the tasks identified in paragraph B. below unless and until the Contracting Officer provides written approval. At its discretion, EERE may not reimburse costs incurred prior to the date of any such written approval by the Contracting Officer.

- B.** Contracting Officer approval as set out above is required for the following:

<u>Task #</u>	<u>Activity and Subrecipients /Vendor</u>	<u>Total Amount (\$)</u>
2.0	RFP6 Projects	\$19,834,029
	Supplemental Funding for project demonstration	\$2,393,704
	Remade round tables	\$50,000
	Total:	\$22,277,733

The Contracting Officer may require additional information concerning these tasks prior to providing written approval.

- C.** Upon written approval by the Contracting Officer, the Recipient may then receive payment for the tasks identified in paragraph B. above for allowable costs incurred, or EERE will recognize costs incurred toward cost share requirements, if any, in accordance with the payment provisions contained in the Special Terms and Conditions of this agreement.

Term 51. Foreign National Access

The Recipient may be required to provide information to DOE in order to satisfy requirements for foreign nationals' access to DOE sites, information, technologies, equipment, programs or personnel. A foreign national is defined as any person who was born outside the jurisdiction of the United States, is a citizen of a foreign government, and has not been naturalized under U.S. law. If the Recipient (including any of its subrecipients, contractors or vendors) anticipates involving foreign nationals in the performance of its award, the Recipient may be required to provide DOE with specific information about each foreign national to ensure compliance with the requirements for access approval.

Term 52. RESERVED

Term 53. Prohibition on Certain Telecommunications and Video Surveillance Services or Equipment

As set forth in 2 CFR 200.216, recipients and subrecipients are prohibited from obligating or expending project funds (federal funds and recipient cost share) to:

- (1) Procure or obtain;
- (2) Extend or renew a contract to procure or obtain; or

(3) Enter into a contract (or extend or renew a contract) to procure or obtain equipment, services, or systems that uses covered telecommunications equipment or services as a substantial or essential component of any system, or as critical technology as part of any system. As described in Public Law 115-232, section 889, covered telecommunications equipment is telecommunications equipment produced by Huawei Technologies Company or ZTE Corporation (or any subsidiary or affiliate of such entities).

(i) For the purpose of public safety, security of government facilities, physical security surveillance of critical infrastructure, and other national security purposes, video surveillance and telecommunications equipment produced by Hytera Communications Corporation, Hangzhou Hikvision Digital Technology Company, or Dahua Technology Company (or any subsidiary or affiliate of such entities).

(ii) Telecommunications or video surveillance services provided by such entities or using such equipment.

(iii) Telecommunications or video surveillance equipment or services produced or provided by an entity that the Secretary of Defense, in consultation with the Director of the National Intelligence or the Director of the Federal Bureau of Investigation, reasonably believes to be an entity owned or controlled by, or otherwise connected to, the government of a covered foreign country.

See Public Law 115-232, section 889 for additional information.

Term 54. Subawards to DOE National Laboratories

For the purposes of the subaward(s) to a DOE National Laboratory, the Recipient shall use an agreement consistent with 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.

Term 55. Human Subjects Research

Research involving human subjects, biospecimens, or identifiable private information conducted with Department of Energy (DOE) funding is subject to the requirements of DOE Order 443.1C, *Protection of Human Research Subjects*, 45 CFR Part 46, *Protection of Human Subjects (subpart A which is referred to as the "Common Rule")*, and 10 CFR Part 745, *Protection of Human Subjects*.

Federal regulation and the DOE Order require review by an Institutional Review Board (IRB) of all proposed human subjects research projects. The IRB is an interdisciplinary ethics board responsible for ensuring that the proposed research is sound and justifies the use of human subjects or their data; the potential risks to human subjects have been minimized; participation is voluntary; and clear and accurate information about the study, the benefits and risks of participating, and how individuals' data/specimens will be protected/used, is provided to potential participants for their use in determining whether or not to participate.

The Recipient shall provide the Federal Wide Assurance number identified in item 1 below and the certification identified in item 2 below to DOE prior to initiation of any project that will involve interactions with humans in some way (e.g., through surveys); analysis of their identifiable data (e.g., demographic data and energy use over time); asking individuals to test devices, products, or materials developed through research; and/or testing of commercially available devices in buildings/homes in which humans will be present. *Note:* This list of examples is illustrative and not all inclusive.

No DOE funded research activity involving human subjects, biospecimens, or identifiable private information shall be conducted without:

- 1) A registration and a Federal Wide Assurance of compliance accepted by the Office of Human Research Protection (OHRP) in the Department of Health and Human Services; and
- 2) Certification that the research has been reviewed and approved by an Institutional Review Board (IRB) provided for in the assurance. IRB review may be accomplished by the awardee's institutional IRB; by the Central DOE IRB; or if collaborating with one of the DOE national laboratories, by the DOE national laboratory IRB.

The Recipient is responsible for ensuring all subrecipients comply and for reporting information on the project annually to the DOE Human Subjects Research Database (HSRD) at <https://science.osti.gov/HumanSubjects/Human-Subjects-Database/home>. *Note:* If a DOE IRB is used, no end of year reporting will be needed.

Additional information on the DOE Human Subjects Research Program can be found at: [HUMAN SUBJECTS Human Subjects Pr... | U.S. DOE Office of Science \(SC\) \(osti.gov\)](#).

Term 56. Fraud, Waste and Abuse

The mission of the DOE Office of Inspector General (OIG) is to strengthen the integrity, economy and efficiency of DOE's programs and operations including deterring and detecting fraud, waste, abuse and mismanagement. The OIG accomplishes this mission primarily through investigations, audits, and inspections of Department of Energy activities to include grants, cooperative agreements, loans, and contracts. The OIG maintains a Hotline for reporting allegations of fraud, waste, abuse, or mismanagement. To report such allegations, please visit <https://www.energy.gov/ig/ig-hotline>.

Additionally, the Recipient must be cognizant of the requirements of 2 CFR § 200.113 Mandatory disclosures, which states:

The non-Federal entity or applicant for a Federal award must disclose, in a timely manner, in writing to the Federal awarding agency or pass-through

entity all violations of Federal criminal law involving fraud, bribery, or gratuity violations potentially affecting the Federal award. Non-Federal entities that have received a Federal award including the term and condition outlined in appendix XII of 2 CFR Part 200 are required to report certain civil, criminal, or administrative proceedings to SAM (currently FAPIIS). Failure to make required disclosures can result in any of the remedies described in § 200.339. (See also 2 CFR part 180, 31 U.S.C. 3321, and 41 U.S.C. 2313.)