1. **Order of Precedence.** Any inconsistencies in this Subaward shall be resolved by giving precedence in the following order:
   a. Award No. DE-EE0006521 Assistance Agreement Form, and the following components:
      - EERE Special Terms and Conditions annotated with Subrecipient Supplemental Implementation Instructions (SSII) (Appendix B)
      - Intellectual Property Provisions according to entity type (incorporated as Appendix C)
      - 10 CFR 600 Subpart D, Appendix B Contract Provisions (incorporated as Appendix D)
      - Statement of Project Objectives, those Tasks applicable by assignment to individual Subrecipients (Appendix E)
      - SF 424 Budget Document (applicable budget document incorporated as Appendix F)
      - Federal Assistance Reporting Checklist as Tailored (incorporated as Appendix G)
   b. These NCSU Special T&C For-Profit and Subrecipient-Specific Supplemental Terms if applicable (Subaward Block 17)
   c. PowerAmerica Membership Agreement, including Bylaws, Procedures and Policies on
      - Conflict of Interest
      - Confidential Proprietary Information
      - Export Control Procedures
      - Information Security

2. **Eligibility:**
   a. Subrecipients must maintain a current paid up Membership in the Next Generation Electronic Manufacturing Innovation Institute (PowerAmerica), to be eligible to receive and hold this Subaward under DOE Cooperative Agreement DE-EE0006521.
   b. A Subrecipient whose Membership is terminated or withdrawn will be out of compliance with this subaward and considered unable to continue performance. If a Subrecipient’s membership in PowerAmerica is withdrawn or terminated, Recipient will issue a notice of immediate complete Suspension of the subaward as provided under 10 CFR 600-24(b)(2). A suspension issued under this condition will not expire automatically. Recipient must issue a written Notice to lift the suspension.
   c. A Subrecipient may elect to continue working through the suspension period at their own risk when it is their intention to reinstate their membership and maintain uninterrupted eligibility. Subrecipient must notify Recipient in writing within 30 days of its intent to continue working and or contributing cost share without interruption while it takes action to reinstate its membership. If Recipient does not receive a notice they will consider any costs incurred during the suspension "Questioned Costs."
   d. Recipient may lift a Suspension issued under b. if the Subrecipient subsequently has their membership reinstated with no break in eligibility. Recipient will issue a written notice to lift subaward suspension, the effective date and whether it is subject to any conditions.
   e. If the Subrecipient does not re-establish current membership status in the Institute, the Recipient will issue a written notice of Termination of the subaward for cause in accordance with 10 CFR 600.24-25 and 66.350-352. The effective date of the termination will be no earlier than the effective date of the suspension. The Subrecipient must complete all closeout actions under the subaward within 90 days of the effective date of the termination.
   f. Costs incurred in advance of the suspension that would otherwise be allowable may be included in the final invoice or Cost Share Contribution report. Recipient will not refund any cash cost share contributions received from the Subrecipient.

3. **Subrecipient's Work.** Subrecipient shall supply all personnel, equipment, and materials necessary to accomplish the assigned Tasks and Milestones set forth "Subrecipient Assigned Tasks from Statement of Project Objectives" (SOPO), incorporated as Appendix E. If, at any time during the period of performance, the Subrecipient becomes aware that it will be delayed or otherwise unable to fulfill a Milestone or Milestones by due date(s) listed in the approved SOPO,
4. Payment.

a. All reimbursements to Subrecipients shall be considered provisional and subject to adjustment for Questioned Costs resulting from an adverse audit finding relating to the reimbursement. Recipient shall reimburse Subrecipient not more often than monthly for allowable costs requested by a proper invoice, all required supporting documentation and report of required cost share contribution, essentially equal to the reimbursement requested.

b. Payment terms will be Net 30 days of receiving a proper invoice.

c. Subrecipient shall include the following minimum information on each invoice: (1) the Subaward number, (2) invoicing period, (3) the current budgeted amount by category as shown on the Subrecipient's budget, Appendix F, (4) current and cumulative costs by those categories, and (5) the certification statement shown below, signed by an authorized Subrecipient official. Subrecipient must with each invoice, report their current and cumulative Cost Share contributions by type as committed by submitting an updated Appendix H.

d. Subrecipient must provide the Recipient a description of the basis for the value of the reimbursement requested or cost share contributed. For example, contributions of Labor must describe the type of employee (e.g. Engineer, Technician, or software developer), an individual or average fully burdened rate and number of hours contributed. Contributions of services and technical support must identify the rate used and volume or number of actions. If the Recipient or EERE request additional description/explanation or back-up documentation that Subrecipient considers proprietary, Subrecipient may elect to submit the information or documentation directly to the EERE Project Officer for review. Subrecipient must notify PowerAmerica Administrative POC whenever such information is submitted.

e. Invoices must be accompanied by the "PowerAmerica Subrecipient Monthly Cost Share Contribution Report.xls" (Appendix H) and the "For-Profit Subrecipient NON-PROPRIETARY Invoice Supporting Document" (Appendix I). Appendix H is subject to change only with PowerAmerica Administrative POC approval and Appendix I is subject to change only with DOE EERE approval.

f. Recipient will return any improper invoices, cost share contribution reports or both with a written explanation of the rejection within 15 days of receipt.

g. Certification required accompanying each invoice when adequate detail or backup documentation is not provided directly to the Recipient:

“By submitting invoice No.,____ on Date:_________ to the PowerAmerica HQ, I, the authorized Subrecipient official named above, do certify to the best of my knowledge and belief that it is true, complete, and accurate. I certify that the expenditures and or disbursements are for the purposes and objectives set forth in the terms and conditions of our Federally funded subaward; that charges are appropriately allocable to the project; that none of the charges are duplicated in the pre-approved or proposed indirect cost rates; that all charges are based upon rates that have been established in accordance with Generally Accepted Accounting Principles, and after the exclusion of profit or fee equal rates charged to other Government contracts or are equal to or lower than our most favorable commercial rates charged for the same work. I further certify that all work being charged on this invoice was conducted within the U.S.A. I am aware that NC State University, as the prime recipient of Federal Funding being flowed down to my organization, will rely on this certification in support of their financial reporting and accountability responsibilities under the DOE Cooperative Agreement DE-EE0006521; that any false, fictitious, or fraudulent information, or the omission of any material fact, may subject me to criminal, civil or administrative penalties for fraud, false statements, false claims or otherwise in accordance with U.S. Code Title 18, Section 1001; Title 31, Sections 3729–3730 and 3801–3812; NC False Claims Act: 51 NCGS 1 et seq.”
h. Certification required on or accompanying each invoice that Subrecipient supports with adequate detail or backup documentation is: "By submitting invoice No.____ on Date:_______ to the PowerAmerica HQ, I, the authorized Subrecipient official named above, do certify to the best of my knowledge and belief that it is true, complete, and accurate and that the expenditures and or disbursements are for the purposes and objectives set forth in the terms and conditions of our Federally funded subaward."

5. Budget Changes.

a. The Recipient has reviewed and approved the SF-424A in Appendix F to this Subaward. Any increase in the total project cost, which is stated as "Current Total" in Block 15 to the Assistance Subaward must be approved in advance and in writing by the Recipient.

b. Transfers of Funds Among Direct Cost Categories of the Federal Share or Cost Share Contributions. The Subrecipient is required to obtain the prior written approval of the Recipient Technical or Administrative POC for any transfer of funds involving Equipment, Travel, Contractual or Construction budget lines in accordance with Article 12. Such prior written approval is also required for transfers among the remaining direct cost categories, when the transfer(s) exceeds 10 percent of the "Current Total" Federal Funds Obligated in Block 15 of the Assistance Subaward. Any charges or cost share contributions reported in violation of this procedure will be treated as questioned costs.

c. Funding revisions of 10% or less should be summarized in routine progress reports and reflected on future invoices and cost share contribution reports. Requests for budget revisions exceeding the 10% limit above should be submitted via email. Recipient will reply in writing but not issue a Subaward modification solely for approved budget revisions.

d. Transfer of Funds Between Direct and Indirect Cost Categories. The Subrecipient is required to obtain the prior written approval of the Recipient Administrative POC for any transfer of funds between direct and indirect cost categories.

6. Closeout.

a. Along with any final reports or deliverables required by the Assistance Reporting Checklist (App. G), Subrecipient shall submit its Final Invoice, to the Recipient within sixty (60) calendar days following expiration of this Subaward's Period of Performance. Payment of the final invoice will be withheld pending completion, submission, and acceptance of all work performed under the SOPO Task(s). Subrecipient must show the words “Final Invoice” on that invoice.

b. Upon its payment by Recipient, the parties agree that Subrecipient's Final Invoice constitutes a release by which the Subrecipient does remit, release and discharge Recipient, its officers, agents and employees of and from all liabilities, obligations, claims and demands whatsoever under or arising from the performance of this Subaward.

7. Modifications

a. The Prime Recipient may issue the following type modifications on a unilateral basis: Changes to the Period of Performance/ no-cost extensions (based upon written (email preferred) request from Subrecipient), planned incremental funding increases, and administrative modifications. Unilateral modifications shall be considered valid 14 days after Subrecipient receipt unless Subrecipient returns the written modification with requested changes or an explanation. Except as expressly set forth in this section, any other modifications to this Subaward will be in writing and require bilateral signatures by authorized officials of the parties hereto.

b. Prior approval will be required and should be requested via email to the TPOC and Administrative POC for supplemental funding. Recipient will either deny such requests in writing or approve them by issuing a bilateral Subaward Modification.
8 Disputes and Questioned Costs:

a. Costs on Subrecipient invoices or Cost Share contribution reports that are identified during pre-payment review will be designated as "Questioned Costs" and the invoice, Cost Share Contribution Report or both will be returned to the Subrecipient within 15 business days as improper. Recipient will not make partial payments of invoices that contain questioned costs. Subrecipient will have the option to issue a revised invoice or Cost Share Contribution Report that excludes the Questioned Costs.

b. Costs that have been reimbursed that are subsequently found to be unallowable will be reported by the Recipient Financial POC to the Subrecipient Financial POC as "Questioned Costs" and request a refund of the dollar value of those questioned costs. If the Subrecipient elects to refute the finding, they must make written notification to the Recipient Financial POC within 72 hours.

c. The parties agree to resolve any Questioned Costs with the following procedures. To the extent possible, without disclosing proprietary information or cost detail, Subrecipient will upon request, through the use of a revised Cost Share Contribution Report (Appendix H) or a revised For-profit Invoice Support Document (Appendix I), provide additional description of the basis for the value of the reimbursement requested or cost share contributed. For example, contributions of Labor must describe the type of employee (e.g. Engineer, Technician, or software developer), an individual or average fully burdened labor rate and number of hours performed. Contributions of services and technical support must identify the burdened rate used and volume or number of actions. Subrecipient may at their choice submit additional description/explanation or back-up documentation considered proprietary, directly to the EERE Project Officer for review. Subrecipient must notify PowerAmerica Administrative POC whenever such information is submitted. Recipient will accept the decision of DOE when provided confirmation or record of the Government's decision.

d. The Recipient may elect to withhold current or future Subrecipient invoices to secure the obligation. The Recipient Financial POC will make the final determination regarding allowability of those questioned costs and notify the Subrecipient. The withheld funds will either be disbursed as allowable or if finally determined to be unallowable, retained by the Recipient.

e. Contractual Disputes: In the event of a dispute or claim regarding any matter under the Subaward, including a breach thereof, the parties agree to exhaust all opportunities to settle the dispute through negotiation, to reach a mutually acceptable resolution. In the event of a dispute that is not resolved by mutual agreement, the parties agree to enter into binding arbitration, subject to the following conditions:

     (1) Arbitration must occur in Wake County, North Carolina;
     (2) Arbitration costs must be divided evenly between the parties;
     (3) Neither party is entitled to payment of its attorney fees and other costs from the other party;
     (4) Arbitration is available only for matters where the amount in dispute exceeds $10,000
     (5) A single arbitrator shall be used; and
     (6) Except as provided above, arbitration will be conducted according to the Commercial Arbitration Rules of the American Arbitration Association as revised and effective at the time of contract/subaward execution. (www.adr.org/aaa/faces/home)
     (7) A judgment on the award rendered by the arbitrator may be entered in any court having jurisdiction thereof.

9. Limitation on Costs. Recipient is not liable for any cost in excess of the amount shown in Block 15 of the Assistance Subaward as "Federal Funds Obligated, Current Total" without prior written authorization from Recipient. The Subrecipient’s Budget is incorporated as Appendix F.
10. Stop-Work Notice.
   a. When the Government dictates substantial change in the SOPO, the Recipient may require the Subrecipient to stop all, or any part, of the work being performed under this Subaward for a period of up to 90 days by issuing a written “Stop Work Notice” to the Subrecipient. The period of the work stoppage may be extended by mutual agreement between the parties or as directed by the Government. Upon receipt of the Notice, the Subrecipient shall immediately comply with its terms and take all reasonable steps to minimize the incurrence of costs allocable to the work covered by the Notice during the period of work stoppage. Within a period of 90 days after a Stop Work Notice is delivered to the Subrecipient, or within any approved extension of that period, the Recipient shall either —
      (1) Cancel the Stop Work Notice; or
      (2) Initiate Termination action for the work covered by the Notice in accordance with 10 CFR 600.352.
   b. If a Stop Work Notice issued under this term is canceled or the full period of the Notice expires, the Subrecipient shall resume work. The Recipient and Subrecipient shall negotiate an equitable adjustment in the delivery schedule or total cost, or both, and the Recipient will issue a written modification to the subaward.

11. Limitation of Liability/Indemnity. To the extent permitted and in the manner prescribed under applicable law including, but not limited to, the 'North Carolina Tort Claims Act, GS § 143-291, et seq.', Sponsor and the Subrecipient will each be responsible for their own negligence and the negligence of their own employees and agents. Neither Sponsor nor the Subrecipient waive any rights or defenses under applicable law, nor do they waive any defense of sovereign immunity except to the extent provided in applicable law.

12. Prior Approvals. Prior approvals should be requested via email to the PowerAmerica TPOC and Administrative POC.
   a. Key Personnel: Subrecipient’s lead Technical Point of Contact (TPOC) is considered essential to proper performance of this Subaward. Subrecipient will submit written request for approval of any proposed replacement of their TPOC or a substantial reduction TPOC’s commitment to the work. Submit the request at least thirty (30) days prior to the effective date. Subrecipient shall identify a proposed substitute TPOC, and attach a copy of the substitute’s CV. Recipient shall reply with any question or requirement within thirty (30) days after receiving such notice. No reply within the 30 days will constitute Recipient Approval. This article is the implementation of Appendix B Subpart A, Term 9.D. Prior approval of Subrecipient’s Key Personnel does not flow down to Subrecipients.
   b. Foreign Travel: Not withstanding inclusion of any costs for foreign travel of any kind in the Subrecipient’s approved budget or budget justification, Subrecipient must obtain Prior written approval by requesting it through the PowerAmerica HQ before any budget revision or actual travel is performed. PowerAmerica will coordinate approval with DOE as required. Subrecipient must attach to any Invoices that include foreign travel charges, a copy of the written prior approval in order to be accepted for reimbursement.
   c. Domestic Travel to Conferences: Domestic travel to attend conferences must be identified in the Subrecipient’s approved Budget and Budget Justification prior to being performed.
   d. Changes in Scope and New Subawards: Prior written approval will be required for changes in scope of the project, further subcontracting the research effort to a separate entity not included in the original budget.
13. **Independent Contractor.** The Subrecipient is engaged as an "independent contractor." Nothing in the Subaward is intended to, or shall be deemed to, constitute a partnership or joint venture between the parties. No party has the authority to bind any other party in contract or to incur any debts or obligations on behalf of any other party, and no party (including any employee or other representative of a party with responsibility for program matters) shall take any action that attempts or purports to bind any other party in contract or to incur any debts or obligations on behalf of any other party, without the affected party’s prior written approval.

14. **Publicity/Use of Names and Logo.** Neither party shall use the name of the other party, or the name of any faculty member, employee, or student of the other party, in connection with any product, service, promotion, news release, or other publicity without the prior written permission of the other party.

15. **Assignment.** Neither party may assign this Subaward or any interest therein without the written consent of the other party.

16. **Severability.** If any provision of this Subaward or any provision of any document incorporated by reference shall be held invalid, such invalidity shall not affect the other provisions of this Subaward which can be given effect without the invalid provision, and to this end the provisions of this Subaward are declared to be severable.

17. **Waiver.** No waiver of any term or provision of this Subaward whether by conduct or otherwise in any one or more instances shall be deemed to be, or construed as, a further or continuing waiver of any such term or provision, or of any other term or provision, of this Subaward.

18. **Entire Agreement.** This Subaward constitutes the entire agreement between the Parties regarding the subject matter herein. Unless otherwise provided for in Attachment 2, any modification to this Subaward shall be by mutual written agreement.

End of Appendix A
APPENDIX B-2

DoE EERE Award Special Terms and Conditions
SPECIAL TERMS AND CONDITIONS

Supplemental Subrecipient Implementation Instructions (SSII): NC State as the Recipient will incorporate these Special Terms and Conditions into any resulting Subaward Agreement in full text. Except when otherwise indicated in subsequent SSII or when the context of the statement clearly indicates otherwise, these Special Terms and Conditions will be interpreted by making the following substitutions of party names. Read "DOE" "Contracting Officer" or "Government" to be "Recipient." Read "Recipient" to be "Subrecipient." Read "EERE" to be "EERE, with notice to Recipient." NC State will annotate any SSII and or limitations immediately before the existing language.

North Carolina State University ("Recipient"), which is identified in Block 5 of the Cover Page (Assistance Agreement Form), 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:

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The following are incorporated into this Award by reference:


b. If the Award is for research and the Award is to a university or non-profit, the Research Terms & Conditions and the DOE Agency Specific Requirements at [http://www.nsf.gov/bfa/dias/policy/rtc/index.jsp](http://www.nsf.gov/bfa/dias/policy/rtc/index.jsp) apply.

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SSII: Per Contracting Officer's written instructions, issued Feb 19, 2014, Subrecipients must submit requests in the form of detailed letters of justification to the Recipient for any requested pre-award costs. Such requests must be sent to the Prime Recipient's Administration POC as soon as Subrecipient becomes aware of pre-award costs may need to be incurred. Recipient will then be forward request to the DOE Contracting Officer. Pre-award costs will only be considered allowable upon approval by DOE Contracting Officer. ... 29

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If the Recipient earns Program income during the project period as a result of this Award, the Recipient may add the net Program income to the funds committed to the Award. Those funds must be used to further project objectives. ..........................30

Prior to utilizing net 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 incorporate program income expenses into the budget. .....................30

The revised budget will be approved by the Contracting Officer in a formal award modification. .....................30

The additional costs will be reflected in the budget as Recipient cost share, therefore increasing the Total Cost Share and Total Project Costs. The Federal Share of the award will remain unchanged. .....................30

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. ..................30

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. .....................30

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SSII: DOE CO has confirmed that this Term was added via Mod 8 in error. Term 43 does not apply to subrecipient. It will be removed in Mod 9 and reflected in the next modification to subrecipient. ..................46

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EERE Award No. DE-EE0006521.0017 With North Carolina State University (Special Terms and Conditions)
SUBPART A. GENERAL PROVISIONS

Term 1. EFFECTIVE DATE

SSII: Each individual Subaward will state the period of performance by Start and End Date for the current budget period and the overall Project period of performance. The effective date of this Award is stated in Block 3 of the Assistance Agreement Form.

Term 2. AWARD PROJECT PERIOD AND BUDGET PERIODS

The Project Period and Budget Periods for this Award are specified in the Assistance Agreement Form.

Term 3. ELECTRONIC AUTHORIZATION OF AWARD DOCUMENTS

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. Further, pursuant to 10 C.F.R. § 600.16, should the Recipient request to draw down Federal funds prior to acknowledging the award documents, the request to draw down funds constitutes the Recipient’s acceptance of the terms and conditions of this Award.

Term 4. FLOW DOWN REQUIREMENT

The Recipient agrees to apply the terms and conditions of this Award, as applicable, to all subrecipients (and subcontractors, as appropriate) and to require their strict compliance therewith. Further, the Recipient must apply the Award terms as required by 10 C.F.R. § 600.148; 10 C.F.R. § 600.236(i); 10 C.F.R. § 600.331(c), as applicable dependent on the Recipient’s entity type, and the Intellectual Property terms of this Award.

Term 5. 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 6. INCONSISTENCY WITH FEDERAL LAW**

If the Recipient believes that any term or condition of this Award is inconsistent with Federal statutes or regulations, the Recipient is required to send an immediate written notification to the DOE Award Administrator with a detailed description of the apparent inconsistency.

**Term 7. NONCOMPLIANCE**

Should the Recipient fail to comply with the requirements of this Award, EERE may take appropriate action consistent with 10 CFR §§ 600.24 and 600.25, including but not limited to, redirecting, suspending or terminating the Award. Further, EERE may deny reimbursement for costs incurred that relate to the failure to comply and such costs may not be recognized as allowable cost share.

**Term 8. 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 9. SUBSTANTIAL INVOLVEMENT**

SSII: The names of the parties used within this term are as written, not subject to interpretation. DOE Officials will have unrestricted access to Subrecipients through the implementation of Substantial Involvement. Subrecipients shall submit to the Institute Chief Technical Officer and Executive Director a written summary of any direct interaction between DOE Officials and the Subrecipient that does not directly involve a representative of NC State University. Subrecipient will forward within 48 hours, a copy of any document or correspondence received from a DOE Official that does not clearly reflect that an Official of NC State was copied.

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. EERE shall be substantially involved in the Project, as more completely outlined in this Term. “Substantial Involvement” shall include EERE input to 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 wide bandgap power electronics manufacturing and become self-sustaining.

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. EERE’s 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 termination, interruption or modification of the conduct or performance of the Project.

3. EERE may redirect or discontinue funding the Project in part or in whole based on the outcome of EERE’s evaluation of the Project at Go/No Go decision points.

4. 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.
5. EERE will establish and operate the Government Advisory Committee, and appoint all members of the Government Advisory Committee, including the Chair who will be an EERE employee.

6. EERE will hold one to three seats on the Executive Committee, which serves as an advisory committee to the Executive Director. In addition, the EERE Technology Manager will serve as an ex-officio member of the Executive Committee. The EERE Executive Committee members shall have no fiduciary duty to the Recipient or its members.

7. EERE will serve as an observer on the Proprietary Information Committee. The EERE observer shall have no fiduciary duty to the Recipient or its members.

8. EERE will review the membership applications for consistency with U.S. manufacturing objectives and to assess whether the potential member would further the purposes of the Award (e.g., increase domestic production capacity and strengthen domestic supply chain cost-reduction in Wide Band Gap-based power electronics, revitalize American manufacturing and support domestic manufacturing competitiveness, etc.). EERE will provide its recommendation to the Executive Director. The Executive Director will require a positive recommendation from EERE to approve membership admission.

9. Prior to approving any bylaw amendments, the Executive Director will provide EERE an opportunity to review the proposed amendment for compliance with the Award. The Executive Director will require a positive compliance recommendation from EERE as a requirement of approval.

10. EERE also has substantial involvement in work performed under this Award by subrecipients, Institute Members and contractors. Upon request by EERE, the Recipient may not unreasonably restrict EERE’s communications, interaction, or access to subrecipients, Institute Members and contractors.

11. As sustainability is a key element of the PowerAmerica Institute, the Recipient will provide EERE and its Membership Advisory Committee an opportunity to review and comment on the Recipient’s Sustainability Strategy.

D. **Government Approval.**

**SSII:** All notices and requests for Government Approval originating with the Subrecipients must be submitted directly to the Prime Recipient’s Administrative POC, to be forwarded to DOE. Likewise approvals by the Contracting Officer or any other empowered official must be made in writing and signed by the official. D.3. does not
flow down to Subrecipients.

"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, Recipient shall submit all necessary documentation to the DOE Contracting Officer, the EERE Technology Manager, and the EERE Project Officer such that they may reasonably request prior to Government Approval being granted. In addition to the Government Approval requirements stated elsewhere in this Award, the Recipient shall be required to 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;

2. NEPA-related documents and compliance activities;

3. Selection of Key Personnel. Key Personnel includes but is not limited to the following positions or positions with similar level of responsibility: Executive Director, Deputy Executive Director, Chief Technology Officer (CTO), Chief Operating Officer, Chief Financial Officer, Sales and Marketing Manager, Education and Workforce Development Director, and Compliance Manager.

Qualifications for the executive leadership positions (Executive Director, Deputy Executive Director, and CTO) should ideally include the following: management experience and recognition by industry as leaders in power electronics and/or power semiconductor devices. Management experience refers to experience leading a research and/or development group with multiple projects where progress is monitored using milestones, deliverables, or the equivalent, or comparable leadership experience where the individual’s qualifications support PowerAmerica’s sustainability strategy.

E. Government Insight.

"Government Insight" is defined as attendance at procurement, design, research efforts, on-site or other meetings, reviews, 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.
SSII: All requests for changes originating with the Subrecipients that require modification of the Subaward Agreement must be submitted directly to the Recipient Administration POC. The Recipient will forward any request that requires Government Prior Approval. Likewise, approvals by the Contracting Officer will be forwarded to all effected subrecipients and as required, used as the basis for modification the effected Subaward Agreement. Subaward modification procedures are contained in NC State Terms (Appendix A in Subaward package). Only modifications awarded under those terms will be valid, regardless of the source of the approval. NC State will select the manner and form of any subaward modification.

1. Modification Request. If, 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.

SSII: All notices initiated by Subrecipients as required by these or any other terms and conditions applicable to a Subaward will be submitted directly to the Institute Executive Director and Chief Technology Officer, with cc to the NC State Administration POC.

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 of any critical business issues or litigation concerning the Recipient, subrecipients, contractors or Institute Members that may have material adverse effect on the Project.

2. The Recipient shall notify DOE of any significant Conflict of Interest (COI) issues that arise within three business days.
3. The Recipient shall notify DOE of any significant Export Control issues that arise within three business days.

4. Notice of Inability to Provide Cost Share. Recipient shall provide the notice required by Term 27(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. 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.

Term 10. FEDERAL INVOLVEMENT

SSII: The Recipient Officials will send invitations to selected Subrecipients to participate in any review meetings when required.

a. 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:
• The Recipient’s technical progress compared to the milestones stated in Attachment 1 to this Award;

• The Recipient’s actual expenditures compared to the approved budget in Attachment 3 to this Award; and

• Other subject matter specified by the EERE Technology Office Director.

d. **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.

c. **Site Visits.**

EERE may conduct site visits to Recipient and sub-recipient locations to review the work performed under this Award, to inspect property and records relating to this Award, to assess the Recipient’s implementation of audit findings, and to review the Recipient’s compliance with the terms and conditions of this Award and applicable Federal laws and regulations. The Recipient must provide, and must require their sub-recipients, Institute Members and contractors provide reasonable access to government representative to conduct the site visits. EERE will provide reasonable advance notice of site visits and minimize interference with ongoing work, to the maximum extent practicable.

d. **Go/No Go Decisions.**

Attachment 1 to this Award establishes “Go/No Go” decision points. 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. As a result of a 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) place a hold on the Federal funding for the Project, pending further supporting data; or
(4) 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.
e. **Technical Milestones and Deliverables.**

Attachment 1 to this Award establishes technical milestones and deliverables. If the Recipient fails to achieve two or more technical milestones and deliverables, EERE may renegotiate the Statement of Project Objectives and/or milestones in Attachment 1 to this Award. In the alternative, EERE may deem the Recipient’s failure to achieve these technical milestones and deliverables to be material noncompliance with the terms and conditions of this Award and take action to suspend or terminate the Award.

f. **EERE Access.**

SSII: Subrecipients must report to responsible official for the Recipient any direct contact with DOE Officials not directly involving Recipient representatives and submit copies of all documents and any correspondence received from a DOE Official.

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 11. NEPA REQUIREMENTS**

a. **General.**

DOE must comply with the National Environmental Policy Act (NEPA) prior to authorizing the use of Federal funds.

DOE has made a conditional NEPA determination for this Award, and Federal funding for certain tasks under this Award is contingent upon the final NEPA determination.

b. **Authorized Activities.**

Subject to the conditions listed in paragraph (c), the Recipient is authorized to proceed with the Budget Period 1, 2, 3 and 4 tasks and subtasks listed in the SOPO approved by the Contracting Officer.

This authorization is only applicable to the Budget Period 1 through 4 tasks and subtasks and locations as described in the SOPO approved by the Contracting Officer and the DOE NEPA Determination.

c. **Conditions for Authorization.**
i. The authorization set forth in paragraph b. does not apply to activities that could result in a) construction of new facilities or other ground disturbing activities; b) modifications to existing facilities that increases the output or scale of current activities; c) changes the type of activities that occur at an existing facility; or d) tasks that do not otherwise align with the DOE NEPA Determination. For any activities that could result in the above listed circumstances, the Recipient must notify the Project Officer and the NEPA Compliance Officer, who will determine if further NEPA review is required. If DOE determines additional NEPA review is required, the Recipient must submit an EQ-1 for DOE consideration. If additional NEPA review is required, those activities that are subject to the review, are not authorized for Federal funding unless and until the Contracting Officer provides written authorization. Once the appropriate NEPA review is completed, the Contracting Office will provide the Recipient with written notification and if applicable, authorization to proceed.

ii. For each new subrecipient to the Award, the Recipient must consult with the DOE Project Officer and NEPA Compliance Officer to determine if the proposed activities require additional NEPA review. As part of the consultation, the Recipient must submit information to the DOE Project Officer and the NEPA Compliance Officer regarding the location of the facilities and a description of the proposed activities.

iii. This authorization excludes any Budget Period 1, 2, 3 or 4 activities that are otherwise subject to a restriction set forth elsewhere in this Award. For example, in the event the Recipient must receive a “Go” decision to proceed, this authorization does not override that requirement.

iv. 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 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.

v. Any work proposed to be conducted at a DOE laboratory may be subject to additional NEPA review by the cognizant DOE NEPA Compliance Officer for the specific DOE laboratory prior to initiating such work. Further, any work conducted at a DOE laboratory must meet the laboratory’s health and safety requirements.

vi. Questions about the permissibility of Federal cost sharing on activities prior to DOE’s issuance of a final NEPA determination shall be directed to the Contracting
Officer. The Recipient must receive written approval from the Contracting Officer before incurring costs for Federal cost sharing. After receiving approval from the Contracting Officer, if the Recipient chooses to incur costs eligible for Federal cost sharing for the approved activities, the Recipient agrees to abide by the conditions, limitations, mitigation measures, monitoring requirements, and reporting responsibilities specified in writing from the Contracting Officer and to undertake these activities in accordance with necessary landowner approvals, required permits, and any additional approvals and mitigation requirements of other Federal, state and local governmental agencies with jurisdiction by law.

d. **Prohibited Activities.**

DOE has not authorized Budget Period 5.

**Term 12. PERFORMANCE OF WORK IN UNITED STATES**

SSI: Any research work conducted by the Subrecipient must be performed in compliance with this requirement. Certification of compliance with this provision is part of the mandatory certification that must accompany all invoices and cost share contribution reports. Any request regarding this requirement or waiver of this requirement by the Subrecipient must be submitted in writing to the Recipient/Institute Executive Director.

a. **Requirement.**

All work performed under this Award must be performed in the United States. 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 subrecipient(s).

b. **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. The Recipient is responsible should any work under this Award be performed outside the United States, absent a waiver, regardless of if the work is performed by the Recipient, subrecipients, vendors or other project partners.

c. **Waiver.**
There may be limited circumstances where it is in the interest of the project to perform a portion of the work outside the United States. To seek a waiver of the Performance of Work in the United States requirement, the Recipient must submit a written waiver request to EERE, which includes the following information:

- The countries in which the work is proposed to be performed;
- A description of the work proposed to be performed outside the U.S.;
- Proposed budget of work to be performed; and
- The rationale for performing the work outside the U.S.

For the rationale, the Recipient must demonstrate to the satisfaction of EERE that a waiver would further the purposes of the FOA that the Award was selected under and is otherwise in the interests of EERE and the United States. EERE may require additional information before considering a waiver request.

**Term 13. 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 14. REPORTING REQUIREMENTS**

a. **Requirements.**

The reporting requirements for this Award are identified on the Federal Assistance Reporting Checklist, attached to this Award.

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.

SSII: Subrecipients must report per this term directly to the Recipient/Institute Executive Director.

For five years beyond the project period, the Recipient will continue to 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

SSII: Subrecipients must in addition, provide at least 10 copies of any publication resulting from work under this Project to the Recipient/Institute Executive Director.

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

• **Acknowledgment:** “The information, data, or work presented herein was funded in part by the Office of Energy Efficiency and Renewable Energy (EERE), U.S. Department of Energy, under Award Number DE-________.”

• **Disclaimer:** “The information, data, or work presented herein was funded in part 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."

Term 17. **NO-COST EXTENSION**

SSII: Subrecipients must submit a written request for prior approval of any requested changes, including but not limited to period of performance, change in scope or change in funding allotment.

As provided in 10 C.F.R. § 600.125, 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 Recipient must submit this notification in writing to the Contracting Officer and DOE Technology Manager/Program Manager 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. **REAL PROPERTY, EQUIPMENT, AND SUPPLIES**

a. **Definition.**

For purposes of this Term, “Property” is defined to include supplies, equipment and real property acquired whole or in part with Federal funds under the Award or accepted by the Contracting Officer as recipient cost share for this Award. “Intellectual Property” is not included in this definition.

b. **Applicability.**

The regulations as set forth in 10 C.F.R. Part 600 and this agreement shall apply to all 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.

c. **Applicable Regulatory Requirements.**

Recipients must comply with the relevant property regulations depending on their entity type and the type of property.
Recipients shall follow the use, management and disposition rules contained in the regulations referenced below.

Non-profits must comply with 10 C.F.R. § 600.132 for Real property, 10 C.F.R. § 600.134 for Equipment and 10 C.F.R. § 600.135 for supplies. State and Local Governments must comply with 10 C.F.R. § 600.231 for Real property, 10 C.F.R. § 600.232 for Equipment and 10 C.F.R. § 600.233 for supplies. For-Profit Entities must comply with 10 C.F.R. § 600.321 for Real property and Equipment and 10 C.F.R. § 600.324 for supplies.

Regardless of the Recipient’s entity type, the entity that actually acquires the property determines the governing regulation.

For all 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, the Recipient shall utilize such Property exclusively to work on tasks authorized under this Award unless the Recipient obtains prior approval of the Contracting Officer to utilize such Property on other projects or programs. Such other use cannot interfere with the work on the project or program for which the real property or equipment was originally acquired, and is subject to the regulatory citations noted above in this Term.

Recipients shall obtain prior approval from the Contracting Officer before purchasing real property or equipment or supplies with Federal funds or cost share funds.

Recipients may purchase real property or equipment in whole or in part with Federal funds under an award only with the prior approval of the Contracting Officer. Generally, requests for approval of purchases of Real property will be denied.

e. **Sale.**

**SSII:** Any request for approval under this term must be submitted to the Recipient Administration POC to be forwarded to the DOE Contracting Officer.

Any sale or transfer of Property must be approved by the Contracting Officer unless the recipient first compensates DOE for a share of the fair market value of the property equal to the percentage of Federal participation in the project. This includes any sales of property or sales or transfers of ownership of Recipient. For purposes of this provision, “sale or transfer of the Recipient” means a sale of more than 50 percent of the outstanding voting securities of the Recipient, sale of substantially all of the assets of the Recipient, or merger or similar transaction or series of transactions involving the Recipient. DOE’s interest in the Property survives any sale or transfer of the Recipient and/or the Property unless specifically approved in writing by DOE.

Real Property shall not be acquired under this Award without prior approval of the
Contracting Officer. Title, use, management and disposition of Real Property shall be governed by 10 C.F.R. §§ 600.132 (Nonprofits), 600.231 (State and Local Governments) or 600.321 (For-Profit Entities), as applicable by the Recipient’s entity type. Generally, requests for approval of purchases of Real property will be denied.

f. Encumbrance.

SSI: Any request from a Subrecipient for approval under this term must be submitted to the Recipient Administration POC to be forwarded to the DOE Contracting Officer.

At no time shall the Recipient encumber the Property without the prior written authorization by the Contracting Officer. The Recipient may request, however, that DOE permit an encumbrance on or subordination of DOE’s property interest hereunder. In response to such request, the Contracting Officer may require the Recipient to submit appropriate supporting documentation.

Term 19. RECORD RETENTION

SSI: Specific references for this term incorporated in this Subaward include 10 CFR 600.21, 600.153 and 600.342 depending on the type of Subrecipient. Those terms require access by DOE, the Inspector General, Comptroller General of the United States, or any of their duly authorized representatives, have the right of timely and unrestricted access to any books, documents, papers, or other records of recipients that are pertinent to the awards, in order to make audits, examinations, excerpts, transcripts and copies of such documents. For documents relating to Export Control Subrecipients shall follow records retention requirements in the Membership Agreement Export Control Procedures.

Consistent with 10 C.F.R. Part 600, the Recipient is required to retain records relating to this Award for three years after the end of the project period, unless one of the following exceptions applies:

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

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

This includes maintaining records of all project costs claimed as cost share, including in-
kind costs, as well as records of costs to be paid by EERE. Such records are subject to audit. Copies of records may be substituted for originals.

Term 20. AUDITS

SSII: In this Term, references to any Government Official is to be read as stated. References to "Recipient" is interpreted to read as "Subrecipient".


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 10 C.F.R. Part 600, 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.

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

b. Annual Compliance Audits.

SSII: Notwithstanding 10CFR 600.316 regarding allowability of cost for required annual compliance audit costs, DOE, EERE’s interpretation of 600.316 is that allowability of these costs is only applicable to for-profit entities who are direct recipients and not applicable to for-profit entities as subrecipients under this award.

The Recipient is required to comply with the annual compliance audit requirements in 10 C.F.R. Part 600 – specifically, 10 C.F.R. § 600.126 for institutions of higher education and nonprofit organizations, 10 C.F.R. § 600.226 for state and local governments, and 10 C.F.R. § 600.316 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 21. DISPUTES

SSII Exception: These dispute procedures do not flow down to Subrecipients. Dispute resolution is addressed in the NCSU Subaward (Appendix A in Subaward package).

The Recipient is required to resolve all disputes in accordance with the procedures set forth in 10 C.F.R. § 600.22.

Term 22. AT RISK REQUIREMENTS

SSII: Recipient will implement these requirements in the form of performance monitoring, invoicing and supporting documentation requirements based upon individual determinations for each Subrecipient that will be implemented through the NCSU Subaward terms (Appendix A in Subaward package). All subrecipient invoices and cost share contribution reports shall be submitted directly to the Recipient Finance POC.

The Contracting Officer determined that At Risk requirements shall be incorporated into this award based on: Inherent risk of project and budget based on high ratio of sub-awards, technical risk, and undefined scope and budget.

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 feels 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 provision, 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

SSII: The maximum funds obligated and the maximum cost share commitment dollar value will be stated on the individual NCSU Subaward and subsequent modifications.
Term 23.  MAXIMUM OBLIGATION

The maximum obligation of DOE for this Award is the total “Funds Obligated” as stated in Block 13 of the Assistance Agreement Form 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 24.  FUNDING OF BUDGET PERIODS

SSII: Budget Periods, cost share commitments and funding will be obligated through individual subawards and subsequent and modifications issued by the Recipient. Those periods and amounts are subject to the availability of funds and approval by DOE.

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; (5) EERE’s Go/No-Go decision; (6) the Recipient’s submission of a continuation application; and (7) 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 deobligate any remaining Federal funds.

Term 25.  CONTINUATION APPLICATION AND FUNDING

SSII: At least 120 days prior to the start of each subsequent budget period Subrecipients must submit a continuation application to the Recipient /Institute Chief Operating Officer or Chief Technical Officer, including the report in Term 25 a.1. below, an updated
proposal budget in the form of the EERE 335.1 Budget Justification Form, an updated detailed cost share commitment letter for the upcoming Budget Period, and any recommended revisions to the assigned Tasks/Statement of Work. The failure to submit any continuing application will not constitute a request for termination by the Subrecipient.

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 (90) days before the end of each budget period, the Recipient must submit to the EERE Technology Manager, EERE Project Officer and the DOE Award Administrator its continuation application, which includes the following information:

1. 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.

2. 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.

3. A description of any planned changes from the negotiated Statement of Project Objectives and/or milestones.

b. **Continuation Funding.**

Continuation funding is contingent on (1) the availability of funds appropriated by Congress for the purpose of this program and the availability of future-year budget authority; (2) Recipient’s technical progress compared to the milestones stated in Attachment 1 to this Award; (3) EERE’s Go/No Go decision; (4) Recipient’s submittal of required reports; and (5) Recipient’s compliance with the terms and conditions of the Award.

**Term 26. COST SHARING**

SSII: Federal Share and Cost Share obligations will be expressed directly in NCSU Subawards and modifications. Applicable Cost Share reporting and certification forms
will be established in the Subaward.

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 Form to this Award. EERE and the Recipient’s cost share for the total estimated project costs are listed below.

<table>
<thead>
<tr>
<th>Budget Period</th>
<th>EERE Cost Share, including FFRDC Costs</th>
<th>Recipient Cost Share $ / %</th>
<th>Total Estimated Costs</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>EERE $ / %</td>
<td>FFRDC $ / %</td>
<td>EERE $ / %</td>
</tr>
<tr>
<td>1</td>
<td>$15,771,511/48.3%</td>
<td>$350,000/1.1%</td>
<td>$16,549,389/50.6%</td>
</tr>
<tr>
<td>2</td>
<td>$13,045,820/39.7%</td>
<td>$519,976/1.6%</td>
<td>$19,301,855/58.7%</td>
</tr>
<tr>
<td>3</td>
<td>$10,391,983/43.3%</td>
<td>$500,000/2.1%</td>
<td>$13,133,607/54.7%</td>
</tr>
<tr>
<td>4</td>
<td>$12,178,173/44.4%</td>
<td>$700,000/2.5%</td>
<td>$14,572,816/53.1%</td>
</tr>
<tr>
<td>5</td>
<td>$15,842,537/52.6%</td>
<td>$700,000/2.3%</td>
<td>$13,549,811/45.1%</td>
</tr>
<tr>
<td>Total Project</td>
<td>$67,230,024/45.7%</td>
<td>$2,769,976/1.9%</td>
<td>$77,107,478/52.4%</td>
</tr>
</tbody>
</table>

The Recipient must provide its required “Cost Share” amount as a percentage of the
total project costs in each invoice period for the duration of the project period. Specifically, the cumulative cost share percentage provided to date on each invoice received must reflect, at a minimum, the cost sharing percentage specified in the Award.

b. **Cost Share Obligation If Award Terminated or Discontinued.**

SSII: Subrecipients' required Cost Share commitment will be stated on the NCSU Subaward and will be adjusted in accordance with these instructions if required.

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 Form to this Award; however, the Recipient must provide its share (i.e., total project percentage) 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: (i) whether the Recipient intends to continue or phase out the project, and (ii) if the Recipient intends to continue the project, how the Recipient will pay (or secure replacement funding for) the Recipient’s share of the total project cost.

If the Recipient fails to meet its cost sharing obligations, 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 27. REFUND OBLIGATION**

SSII: Allowability of costs by Subrecipients will be governed by the applicable Cost Principles as interpreted by the Recipient with guidance from DOE. Any refund from a Subrecipient will be paid directly to NC State University in accordance with the Subaward Special Terms and Conditions (Appendix A in Subaward package).
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 (i) the total payments received from EERE, and (ii) the Federal share of the costs incurred.

**Term 28. ALLOWABLE COSTS**

a. **Allowable Costs for For-Profit Entities and Certain Non-Profit Organizations.**

For for-profit entities and nonprofit organizations listed in Attachment C to OMB Circular A-122 (codified at 2 C.F.R. Part 230), EERE determines the allowability of costs through reference to the for-profit cost principles in the Federal Acquisition Regulations (48 C.F.R. Part 31).

b. **Allowable Costs for Nonprofits.**


c. **Allowable Costs for Institutions of Higher Education.**

For institutions of higher education, EERE determines the allowability of costs through reference to OMB Circular A-21, “Cost Principles of Educational Institutions” (codified at 2 C.F.R. Part 220).

d. **Allowable Costs for States and Local Governments.**


e. **Unallowable Direct Costs in Addition to Those in OMB Circulars A-21 & A-122.**

Interest penalties for late payments to the Recipient and subrecipients are not allowable costs under this Award.

f. **Project Costs.**

**SSII: In this Term, "Recipient" shall be interpreted to be "Subrecipient." **EERE shall be
read as EERE. Subrecipients will submit copies of the records and supporting documentation required herein in accordance with NCSU Special Terms and Conditions (Appendix A in Subaward package). Failure to provide the adequate supporting documentation may result in a determination by the Recipient that those costs are unallowable.

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 applicable 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.

**Term 29. INDIRECT COSTS**

a. **Lower-than-Expected Indirect Costs.**

If the Recipient’s actual allowable indirect costs are less than those budgeted in Attachment 3 to this Award, the Recipient may use the difference to pay additional allowable direct costs during the project period. If at the completion of the award the Government share of total allowable costs (i.e., direct and indirect) is less than the cost reimbursed, the Recipient must refund the difference.

b. **Higher-than-Expected Indirect Costs.**

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

EERE recognizes that the Recipient may not be fully reimbursed for increases in its indirect cost rate, which may result in under-recovery. In the event that the Recipient is not fully reimbursed for increases in its indirect cost rate, the Recipient may use any under-recovery to meet its cost sharing obligations under this Award.

c. **Subrecipient Indirect Costs.**

SSII: The parties identified in this term shall be read as written.
The Recipient must ensure its subrecipient’s indirect costs are appropriately managed, allowable and otherwise comply with the requirements of this Award and 10 CFR Part 600.

**Term 30. LIMITATIONS ON COMPENSATION COSTS**

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.

**Term 31. PRE-AWARD COSTS**

SSI: Per Contracting Officer’s written instructions, issued Feb 19, 2014, Subrecipients must submit requests in the form of detailed letters of justification to the Recipient for any requested pre-award costs. Such requests must be sent to the Prime Recipient’s Administration POC as soon as Subreciient becomes aware pre-award costs may need to be incurred. Recipient will then be forward request to the DOE Contracting Officer. Pre-award costs will only be considered allowable upon approval by DOE Contracting Officer.

As stated in the Contracting Officer’s Pre-Award Costs Letter dated April 4, 2014, the Recipient is authorized to request reimbursement for costs incurred on or after January 15, 2014, if: (1) such costs are allowable in accordance with the applicable Federal cost principles referenced in Term titled, “Allowable Costs” above and as referenced in 10 C.F.R. Part 600, (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 32. USE OF PROGRAM INCOME**

**SSII:** Subrecipients must report any program income earned by them during the prior period and cumulatively since the project start date in every invoice and must forward all program income to the Institute within 30 days of receipt or on other recurring basis as negotiated with Institute.

If the Recipient earns program income during the project period as a result of this Award, the Recipient may add the net program income to the funds committed to the Award. Those funds must be used to further project objectives.

Prior to utilizing net 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 incorporate program income expenses 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 Budget as 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.

**Term 33. PAYMENT PROCEDURES**

**SSII:** Payment terms and procedures specific to subrecipients will be established in the
individual NCSU Subaward Special Terms and Conditions (Appendix A in Subaward package) awarded to a given subrecipient. However, please note that NCSU Subaward Special Terms and Conditions will flow down to subrecipients the required supporting documents described below in item f.

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.**
EERE will review and provide specific questions regarding the invoice, typically within 10 business days after receipt of the request, and 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 determined to be 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.

SSII: Note required supporting information to be included in supporting documents for all subrecipients as described below.

The following additional items are required:

i. 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 greater than 25% of total project costs;

ii. 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;

iii. The following supporting documentation is required for the Recipient and all Subrecipients over $250,000 total project costs or greater than 25% of total project costs for both Federal and Cost Share costs included in the invoice:

1) Personnel report or a listing of all personnel and personnel costs to include at a minimum total costs for the billing period by individual, and if available, the individual’s hours charged to the project and hourly rate;

2) Travel report or listing of all trips including at a minimum the individual(s) who travelled, travel location(s), number of days, and total costs incurred for each trip. If available, include a complete breakdown of travel costs in each trip, e.g. airfare, rental car, hotel, per diem, etc.;
3) Equipment report or a listing of all equipment purchased and invoices/receipts for any single Equipment item over $50,000;

4) Supplies report or listing of types of supplies included in the supplies total. This list does not have to be exhaustive of all items purchased but should provide adequate information as to what was purchased similar to the approved budget; no receipts or invoices are required;

5) Invoices from all contractors (vendors) and all Subrecipients less than $250,000 showing their invoiced costs (including reimbursement and cost share, if applicable) unless waived by the DOE Approving Official (e.g. for recurring monthly expenses, etc.); and

6) Other direct costs report including a listing of all other direct costs incurred and invoices/receipts for any single cost 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, details of travel expenditures, 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 34. BUDGET CHANGES

a. Budget Changes Generally.

SSI: Procedures for subrecipients will be established in the individual NCSU Subaward terms and conditions (Appendix A in Subaward package) awarded to a given Subrecipient.
The Contracting Officer has reviewed and approved the SF-424A in Attachment 3 to this Award.

Any increase in the total project cost, which is stated as “Total” in Block 12 to the Assistance Agreement Form of this Award, must be approved in advance and in writing by the Contracting Officer.

EERE may deny reimbursement for any failure to comply with the requirements in this clause.

b. Transfers of Funds Among Direct Cost Categories.

SSI: This requirement does not flow down to Subrecipients as written. NCSU Subaward Special Terms and Conditions (Appendix A in Subaward package) will establish reporting requirements for these transfers.

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 Form of this Award.

The Recipient is required to notify the EERE Technology Manager/Program Manager 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 Form 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 35. 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 Term to its subrecipients, Institute Members, and contractors.

**Term 36. INSOLVENCY, BANKRUPTCY OR RECEIVERSHIP**

**SSII:** Subrecipients must submit notifications directly to Recipient in accordance with the following:

a. The Recipient shall immediately, but no later than five (5) days, notify EERE of the occurrence of any of the following events: (i) the Recipient or the Recipient’s parent’s filing of a voluntary case seeking liquidation or reorganization under the Bankruptcy Act; (ii) the Recipient’s consent to the institution of an involuntary case under the Bankruptcy Act against the Recipient or the Recipient’s parent; (iii) 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 (iv) 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: (i) specifically set out the details of the occurrence of an event referenced in paragraph (a); (ii) provide the facts surrounding that event; and (iii) 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 (i) change of payment method; or (ii) 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 37. REPORTING SUBAWARDS AND EXECUTIVE COMPENSATION

SSII: Prior to execution of any Subaward, Subrecipients will receive an online questionnaire from the email address subsmonitor@ncsu.edu. The questionnaire will ask for the information described below. If Subrecipient completes this form, and there have not been any substantial changes since completion of the form, Subrecipient will have met the initial requirement for reporting to NCSU as a first-tier Subrecipient. Subrecipient will make any future updates through SAM.gov as prescribed in Term 38..

a. Reporting of first-tier subawards.

1. 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).

2. Where and when to report.

   i. The Recipient must report each obligating action described in paragraph a.1. of this award term to https://www.fsrs.gov.

   ii. 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.)

3. 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.

1. 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

   i. The total Federal funding authorized to date under this Award is $25,000 or more;

   ii. 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

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

2. Where and when to report. The Recipient must report executive total compensation described in paragraph b.1. of this award term:

   i. As part of the Recipient’s registration profile at https://www.sam.gov.

   ii. 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.

   1. 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:

      i. 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

ii. 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).

2. Where and when to report. The Recipient must report subrecipient executive total compensation described in paragraph c.1. of this award term:

   i. To the recipient.

   ii. 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:

   1. Entity means all of the following, as defined in 2 CFR Part 25:

      i. A Governmental organization, which is a State, local government, or Indian tribe;

      ii. A foreign public entity;

      iii. A domestic or foreign nonprofit organization;

      iv. A domestic or foreign for-profit organization;
v. A Federal agency, but only as a subrecipient under an award or subaward to a non-Federal entity.

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

3. Subaward:
   
i. 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.

   ii. 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).

   iii. A subaward may be provided through any legal agreement, including an agreement that the Recipient or a subrecipient considers a contract.

4. Subrecipient means an entity that:
   
i. Receives a subaward from the Recipient under this award; and

   ii. Is accountable to the Recipient for the use of the Federal funds provided by the subaward.

5. 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)):
   
i. Salary and bonus.

   ii. 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.

   iii. 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.

iv. Change in pension value. This is the change in present value of defined benefit and actuarial pension plans.

v. Above-market earnings on deferred compensation which is not tax-qualified.

vi. 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 38. 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. Requirement for Data Universal Numbering System (DUNS) Numbers

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

1. 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 DUNS number to the Recipient.

2. May not make a subaward to an entity unless the entity has provided its DUNS number to the Recipient.

c. Definitions
For purposes of this award term:

1. 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).

2. Data Universal Numbering System (DUNS) number means the nine-digit number established and assigned by Dun and Bradstreet, Inc. (D&B) to uniquely identify business entities. A DUNS number may be obtained from D&B by telephone (currently 866-705-5711) or the Internet (currently at http://fedgov.dnb.com/webform).

3. Entity, as it is used in this award term, means all of the following, as defined at 2 CFR Part 25, subpart C:
   
   i. A Governmental organization, which is a State, local government, or Indian Tribe;

   ii. A foreign public entity;

   iii. A domestic or foreign nonprofit organization;

   iv. A domestic or foreign for-profit organization; and

   v. A Federal agency, but only as a subrecipient under an award or subaward to a non-Federal entity.

4. Subaward:

   i. This term means a legal instrument to provide support for the performance of any part of the substantive project or program for which the Recipient received this Award and that the Recipient awards to an eligible subrecipient.

   ii. 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).

   iii. A subaward may be provided through any legal agreement, including an agreement that the Recipient considers a contract.
5. Subrecipient means an entity that:
   i. Receives a subaward from the Recipient under this Award; and
   ii. Is accountable to the Recipient for the use of the Federal funds provided by the subaward.

Term 39. 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:

1. Notify the EERE Technology Manager/Program Manager and the DOE Award Administrator;

2. 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.

3. 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:
1. Notify the EERE Technology Manager/ Program Manager and the DOE Award Administrator;

2. 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

3. 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 by mutual agreement in accordance with 10 C.F.R. 600.25(d). All material deemed to be classified must be forwarded to EERE, in a manner specified by EERE.

b. If EERE does not respond within the specified time periods, the Recipient is under no further obligation to restrict access to the information.

**Term 40. BUDGET HOLDS AND REQUIRED APPROVALS**

a. **At Risk Notice:** The Recipient must obtain written approval by the Contracting Officer for reimbursement of costs associated with the activities listed in paragraph b. below. At a minimum, the Contracting Officer will require an updated Recipient EERE 335 Budget Justification in order to consider the costs listed in paragraph b. below for approval. The Recipient is restricted from expending project funds (i.e. Federal share and Recipient share) on the activities 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:

<table>
<thead>
<tr>
<th>Task #</th>
<th>Proposed Cost</th>
<th>Budget Period Amounts($)</th>
</tr>
</thead>
<tbody>
<tr>
<td>TBD</td>
<td>Contractual - Open Innovation Fund BP4 - NCSU</td>
<td>$1,000,000</td>
</tr>
</tbody>
</table>

**SSII:** These limitations will be flowed down with specific instructions in the NCSU Subaward Special Terms and Conditions (Appendix A in the Subaward package).
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 costs 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 41. **SUBAWARD/SUBCONTRACT CHANGE NOTIFICATION**

Except for subawards and/or subcontracts specifically proposed as part of the Recipient’s Application for award, the Recipient must notify the DOE Contracting Officer and Project Manager in writing 30 days prior to the execution of new or modified subawards/subcontracts. This notification does not constitute a waiver of the prior approval requirements outlined in 10 CFR Part 600, 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:

1. A description of the research to be performed, the service to be provided, or the equipment to be purchased;
2. Cost share commitment letter if the subawardee is providing cost share to the Award;
3. An assurance that the process undertaken by the Recipient to solicit the subaward/subcontract complies with their written procurement procedures as outlined in 10 CFR § 600.144, 10 CFR § 600.236, and 10 CFR § 600.331.
4. An assurance that no planned, actual or apparent conflict of interest exists between the Recipient and the selected subawardee/subcontractor and that the Recipient’s written standards of conduct were followed;
5. A completed Environmental Questionnaire, if applicable;
6. An assurance that the subawardee/subcontractor is not a debarred or suspended entity; and
7. An assurance that all required award provisions will be flowed down in the resulting subaward/subcontract.

The Recipient is responsible for making a final determination to award or modify
subawards/subcontracts under this Award, but the Recipient may not proceed with the subaward/subcontract until the DOE 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 DOE Contracting Officer within 30 days of the submission of the subaward/subcontract documentation stipulated above, Recipient may proceed to award or modify the proposed subaward/subcontract.

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1 It is DOE’s position that the existence of a “covered relationship” as defined in 5 C.F.R. § 2635.502(a)&(b) between a member of the Recipient’s owners or senior management and a member of a subawardee’s/subcontractor’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 subaward or subcontract does not create an actual conflict of interest. The Recipient must also notify the Contracting Officer of any new subcontract or subaward to: (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 situations also create at a minimum an apparent conflict of interest.

**Term 42. EXPORT CONTROL**

SSII: Subrecipient compliance with these provisions will be fulfilled by following the Membership Export Control Procedures incorporated into the Membership Agreement. These procedures include specific requirements for certifications, employee training notifications and reporting.

The Recipient must comply with U.S. export control laws and regulations in the performance of work under the Institute.

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.

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 regulations as a condition of membership.

EERE may deny reimbursement for any failure to comply with the requirements in this
Term. In the alternative, EERE may deem any failure to comply with the requirements in this Term to be material noncompliance with the terms and conditions of this Award and suspend or terminate the Award.

**Term 43. RECIPIENT INTEGRITY AND PERFORMANCE MATTERS**

SSII: DOE CO has confirmed that this Term was added via Mod 8 in error. Term 43 does not apply to subrecipient. It will be removed in Mod 9 and reflected in the next modification to subrecipient.

**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:

1. Is in connection with the award or performance of a Financial Assistance, cooperative agreement, or procurement contract from the Federal Government;
2. Reached its final disposition during the most recent five year period; and
3. 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 semianually 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

The value of all expected funding increments under a Federal award and options, even if not yet exercised.

**Term 44. CONFERENCE SPENDING**

SSI: Attendance at any conference not already listed in Subrecipient’s approved budget requires prior written approval by the Contracting Officer. Subrecipients must submit their requests for approval to the Prime Recipient Administrative POC.

The Recipient shall not expend funds for the purpose of defraying the cost to the United States Government of a conference [described in subsection (c) of the Consolidated and Further Continuing Appropriations Act, 2013] that was more than $20,000, or 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 that is not directly and programmatically related to the purpose for which the grant or cooperative agreement was awarded.

**Term 45. PARTICIPATION BY DOE NATIONAL LABORATORIES**

For work conducted by a DOE National Laboratory (LAB), DOE will directly fund the LAB under an existing DOE contract with the LAB. Recipient must monitor and verify the work performed by the LAB.
APPENDIX C

IP Provisions
CDSB-1003
Intellectual Property Provisions (CDSB-1003)
Cooperative Agreement - Special Data Statute
Research, Development, or Demonstration

01. FAR 52.227-1 Authorization and Consent (JUL 1995)-Alternate I
(APR 1984)

02. FAR 52.227-2 Notice and Assistance Regarding Patent and Copyright
Infringement (AUG 1996)

03. 10 CFR 600.325 Rights in Data - Programs Covered Under Special Data
Appendix A Statutes (OCT 2003)
(See Page 5)

04. FAR 52.227-23 Rights to Proposal Data (Technical) (JUN 1987)

05. 10 CFR 600.325 Patent Rights (Small Business Firms and Nonprofit
Appendix A (Modified) Organizations) (OCT 2003) (Modified to incorporate EERE Class
Patent Waiver for FY2013)

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

NOTE: This revised version dated 1-8-15 contains additional language in item 03. on page 5,
marked with a Red line. The remainder of the document is unchanged by this modification.
01. FAR 52.227-1 Authorization and Consent (JUL 1995)-Alternate I (APR 1984)

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

(b) The Contractor agrees to include, and require inclusion of, this clause, suitably modified to identify the parties, in all subcontracts at any tier for research and development expected to exceed the simplified acquisition threshold; however, omission of this clause from any subcontract, including those at or below the simplified acquisition threshold, does not affect this authorization and consent.

(End of clause)

02. FAR 52.227-2 Notice and Assistance Regarding Patent and Copyright Infringement (AUG 1996)

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

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

(c) The Contractor agrees to include, and require inclusion of, this clause in all subcontracts at any tier for supplies or services (including construction and architect-engineer subcontracts and those for material, supplies, models, samples, or design or testing services) expected to exceed the simplified acquisition threshold at FAR 2.101.

(End of clause)

03. 10 CFR 600.325 Appendix A, Rights in Data - Programs Covered Under Special Data Statutes (OCT 2003)

(a) Definitions

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

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

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

Form, fit, and function data, as used in this clause, means data relating to items, components, or processes that are sufficient to enable physical and functional interchangeability as well as data identifying source, size, configuration, mating and attachment characteristics, functional characteristics, and performance requirements except that for computer software it means data identifying source, functional characteristics, and performance requirements but specifically excludes the source code, algorithm, process, formulae, and flow charts of the software.

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

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

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

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

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

(b) Allocation of Rights

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

(i) Data specifically identified in this agreement as data to be delivered without restriction;
(ii) Form, fit, and function data delivered under this agreement;
(iii) Data delivered under this agreement (except for restricted computer software) that constitute manuals or instructional and training material for installation, operation, or routine maintenance and repair of items, components, or processes delivered or furnished for use under this agreement; and
(iv) All other data delivered under this agreement unless provided otherwise for protected data in accordance with paragraph (g) of this clause or for limited rights data or restricted computer software in accordance with paragraph (h) of this clause.

(2) The Recipient shall have the right to--

(i) Protect rights in protected data delivered under this agreement in the manner and to the extent provided in paragraph (g) of this clause;
(ii) Withhold from delivery those data which are limited rights data or restricted computer software to the extent provided in paragraph (h) of this clause;
(iii) Substantiate use of, add, or correct protected rights or copyrights notices and to take other appropriate action, in accordance with paragraph (e) of this clause; and
(iv) Establish claim to copyright subsisting in data first produced in the performance of this agreement to the extent provided in subparagraph (c)(1) of this clause.

(c) Copyright

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

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

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

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

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

(e) Unauthorized Marking of Data

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

(i) The Contracting Officer shall make written inquiry to the Recipient affording the Recipient 30 days from receipt of the inquiry to provide written justification to substantiate the propriety of the markings;

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

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

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

(f) Omitted or Incorrect Markings

(1) Data delivered to the Government, without any restrictive or limiting markings or notices authorized by this agreement, shall be deemed to have been furnished with unlimited rights, and the Government assumes no liability for the disclosure, use, or reproduction of such data. However, to the extent the data has not been disclosed without restriction outside the Government, the Recipient may request, within 6 months (or a longer time approved by the Contracting Officer for good cause shown) after delivery of such data, permission to have notices placed on qualifying data at the Recipient's expense, and the Contracting Officer may agree to do so if the Recipient--

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

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

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

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

(2) The Contracting Officer may also

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

(ii) Correct any incorrect notices.
(g) Rights to Protected Data

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

PROTECTED RIGHTS NOTICE
These protected data were produced under agreement no. DE-EE0006521 with the U.S. Department of Energy and may not be published, disseminated, or disclosed to others outside the Government until five (5) years after the date the data were first produced, unless express written authorization is obtained from the recipient. Upon expiration of the period of protection set forth in this Notice, the Government shall have unlimited rights in this data. This Notice shall be marked on any reproduction of this data, in whole or in part.

(End of notice).

(2) Any such marked Protected Data may be disclosed under obligations of confidentiality for the following purposes:
   (a) For evaluation purposes under the restriction that the "Protected Data" be retained in confidence and not be further disclosed; or
   (b) To subcontractors or other team members performing work under the Government's program.

(3) The obligations of confidentiality and restrictions on publication and dissemination shall end for any Protected Data:
   (a) At the end of the protected period;
   (b) If the data becomes publicly known or available from other sources without a breach of the obligation of confidentiality with respect to the Protected Data;
   (c) If the same data is independently developed by someone who did not have access to the Protected Data and such data is made available without obligations of confidentiality; or
   (d) If the Recipient disseminates or authorizes another to disseminate such data without obligations of confidentiality.

(4) However, the Recipient agrees that the following types of data are not considered to be protected and shall be provided to the Government when required by this award without any claim that the data are Protected Data. The parties agree that notwithstanding the following lists of types of data, nothing precludes the Government from seeking delivery of additional data in accordance with this award, or from making publicly available additional nonprotected data, nor does the following list constitute any admission by the Government that technical data not on the list is Protected Data:
   (a) Power converter electrical characteristics of the power converter utilizing wide bandgap semiconductor device(s), including input and output voltage, current, total output power, efficiency, including switching frequency, switching and conduction losses, test conditions. Examples of test conditions include applied biases and temperatures during parameter testing
   (b) Power converter physical dimensions size, weight, and rated power density.
   (c) Operating and performance characteristics of the power converter utilizing wide bandgap semiconductor device(s), including soft and hard switching, leakage currents, electromagnetic interference compliance, external case temperature, cooling medium temperature and results of final demonstration.
   (d) General (non-enabling) illustrations and photographs of the finished power converter and its applications.
   (e) Semiconductor devices parameters from intermediate and final stages of development and product datasheet: including measured device parameters, parameter ranges (typical and/or minimum and maximum values) and measurement test conditions used to characterize datasheet parameters. Measured parameters include drain-source on-resistance, dynamic on-resistance, blocking voltage, threshold voltage, maximum gate voltage, continuous drain current, thermal resistance, capacitances, gate charge, switching rise and fall times, reverse recovery charge, reverse recovery time and peak current, forward voltage, switching losses. Examples of measurement test conditions include applied biases and temperatures during parameter testing and gate resistance used to characterize switching losses.
   (f) Semiconductor device die physical dimensions and bonding pad dimensions.
   (g) Operating and performance characteristics of the power converter utilizing wide bandgap semiconductor device(s), including switching frequency, switching and conduction losses, efficiency, total power output, and results of final demonstration.
   (h) General (non-enabling) illustrations and photographs of the finished semiconductor die and packaged components.
(5) The Government's sole obligation with respect to any protected data shall be as set forth in this paragraph (g).

(h) Protection of Limited Rights Data

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

(2) Notwithstanding subparagraph (h)(1) of this clause, the agreement may identify and specify the delivery of limited rights data, or the Contracting Officer may require by written request the delivery of limited rights data that has been withheld or would otherwise be withholdable. If delivery of such data is so required, the Recipient may affix the following "Limited Rights Notice" to the data and the Government will thereafter treat the data, in accordance with such Notice:

LIMITED RIGHTS NOTICE

(a) These data are submitted with limited rights under Government agreement No. DE-EE0006521 (and subaward/contract No. , if appropriate). These data may be reproduced and used by the Government with the express limitation that they will not, without written permission of the Recipient, be used for purposes of manufacture nor disclosed outside the Government; except that the Government may disclose these data outside the Government for the following purposes, if any, provided that the Government makes such disclosure subject to prohibition against further use and disclosure:

(1) Use (except for manufacture) by Federal support services contractors within the scope of their contracts;

(2) This "limited rights data" may be disclosed for evaluation purposes under the restriction that the "limited rights data" be retained in confidence and not be further disclosed;

(3) This "limited rights data" may be disclosed to other contractors participating in the Government's program of which this Recipient is a part for information or use (except for manufacture) in connection with the work performed under their awards and under the restriction that the "limited rights data" be retained in confidence and not be further disclosed;

(4) This "limited rights data" may be used by the Government or others on its behalf for emergency repair or overhaul work under the restriction that the "limited rights data" be retained in confidence and not be further disclosed; and

(5) Release to a foreign government, or instrumentality thereof, as the interests of the United States Government may require, for information or evaluation, or for emergency repair or overhaul work by such government. This Notice shall be marked on any reproduction of this data in whole or in part.

(b) This Notice shall be marked on any reproduction of these data, in whole or in part.

(End of notice)

(i) Subaward/Contract

The Recipient has the responsibility to obtain from its subrecipients/contractors all data and rights therein necessary to fulfill the Recipient's obligations to the Government under this agreement. If a subrecipient/contractor refuses to accept terms affording the Government such rights, the Recipient shall promptly bring such refusal to the attention of the Contracting Officer and not proceed with subaward/contract award without further authorization.
(j) Additional Data Requirements

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

(k) The Recipient agrees, except as may be otherwise specified in this agreement for specific data items listed as not subject to this paragraph, that the Contracting Officer or an authorized representative may, up to 3 years after acceptance of all items to be delivered under this contract, inspect at the Recipient's facility any data withheld pursuant to paragraph (h) of this clause, for purposes of verifying the Recipient's assertion pertaining to the limited rights or restricted rights status of the data or for evaluating work performance. Where the Recipient whose data are to be inspected demonstrates to the Contracting Officer that there would be a possible conflict of interest if the inspection were made by a particular representative, the Contracting Officer shall designate an alternate inspector.

(End of clause)

04. FAR 52.227-23 Rights to Proposal Data (Technical) (JUN 1987)

It is agreed that as a condition of award of this contract, and notwithstanding the conditions of any notice appearing thereon, the Government shall have unlimited rights (as defined in the "Rights in Data--General" clause contained in this contract) in and to the technical data contained in the proposal upon which this contract is based.

(End of clause)

05. 10 CFR 600.325 Appendix A, Patent Rights (Small Business Firms and Nonprofit Organizations) (OCT 2003) (Modified to incorporate EEER Class Patent Waiver for FY2013)

(a) Definitions

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

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

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

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

Small business firm means a small business concern as defined at section 2 of Public Law 85-536 (16 U.S.C. 632) and implementing regulations of the Administrator of the Small Business Administration. For the purpose of this clause, the size standards for small business concerns involved in Government procurement and subcontracting at 13 CFR 121.3 through 121.8 and 13 CFR 121.3 through 121.12, respectively, will be used.

Subject invention means any invention of the Recipient conceived or first actually reduced to practice in the performance of work under this award, provided that in the case of a variety of plant, the date of determination (as defined in section 41(d) of the Plant Variety Protection Act, 7 U.S.C. 2401(d) must also occur during the period of award performance.
(b) Allocation of Principal Rights

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

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

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

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

(3) The Recipient will file its initial patent application on an invention to which it elects to retain title within one year after election of title or, if earlier, prior to the end of any statutory period wherein valid patent protection can be obtained in the U.S. after a publication, on sale, or public use. The Recipient will file patent applications in additional countries or international patent offices within either ten months of the corresponding initial patent application, or six months from the date when permission is granted by the Commissioner of Patents and Trademarks to file foreign patent applications when such filing has been prohibited by a Secrecy Order.

(4) Requests for extension of the time for disclosure to DOE, election, and filing under subparagraphs (c)(1), (2), and (3) of this clause may, at the discretion of DOE, be granted.

(d) Conditions When the Government May Obtain Title

The Recipient will convey to DOE, upon written request, title to any subject invention:

(1) If the Recipient fails to disclose or elect the subject invention within the times specified in paragraph (c) of this patent rights clause, or elects not to retain title, provided that DOE may only request title within 60 days after learning of the failure of the Recipient to disclose or elect within the specified times;

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

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

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

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

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

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

(f) Recipient Action to Protect Government’s Interest

(1) The Recipient agrees to execute or to have executed and promptly deliver to DOE all instruments necessary to:

(i) Establish or confirm the rights the Government has throughout the world in those subject inventions for which the Recipient retains title; and

(ii) Convey title to DOE when requested under paragraph (d) of this Patent Rights clause, and to enable the government to obtain patent protection throughout the world in that subject invention.

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

(3) The Recipient will notify DOE of any decision not to continue prosecution of a patent application, pay maintenance fees, or defend in a reexamination or opposition proceeding on a patent, in any country, not less than 30 days before the expiration of the response period required by the relevant patent office.

(4) The Recipient agrees to include, within the specification of any U.S. patent application and any patent issuing thereon covering a subject invention, the following statement: "'This invention was made with Government support under (identify the award) awarded by (identify DOE). The Government has certain rights in this invention.'"

(g) Subaward/Contract

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

(2) The Recipient will include the Patent Rights clause of the CLASS WAIVER OF PATENT RIGHTS TO INVENTIONS MADE UNDER THE OFFICE OF ENERGY EFFICIENCY AND RENEWABLE ENERGY (EERE) FUNDING OPPORTUNITY ANNOUNCEMENTS RELEASED IN FISCAL YEAR 2013, W(C) 2013-001 ("CLASS WAIVER") in subawards/contracts, regardless of tier, for experimental, developmental or research work to any domestic large business, as defined by the CLASS WAIVER, that agrees to the terms and conditions of the CLASS WAIVER.

(3) The Recipient will include in all subawards/contracts, regardless of tier, for experimental, developmental or research work, the patent rights clause required by 10 CFR 600.325(c).

(4) In the case of subawards/contracts at any tier, DOE, the Recipient, and the subrecipient/contractor agree that the mutual obligations of the parties created by the applicable Patent Rights clause constitute a contract between the subrecipient/contractor and DOE with respect to those matters covered by the clause.

(h) Reporting on Utilization of Subject Inventions

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

(j) Preference for United States Industry.

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

(j) March-in-Rights

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

1. Such action is necessary because the Recipient or assignee has not taken or is not expected to take within a reasonable time, effective steps to achieve practical application of the subject invention in such field of use;
2. Such action is necessary to alleviate health or safety needs which are not reasonably satisfied by the Recipient, assignee, or their licensees;
3. Such action is necessary to meet requirements for public use specified by Federal regulations and such requirements are not reasonably satisfied by the Recipient, assignee, or licensee; or
4. Such action is necessary because the agreement required by paragraph (j) of this Patent Rights clause has not been obtained or waived or because a licensee of the exclusive right to use or sell any subject invention in the U.S. is in breach of such agreement.

(k) Special Provisions for Awards with Nonprofit Organizations

If the Recipient is a nonprofit organization, it agrees that:
1. Rights to a subject invention in the U.S. may not be assigned without the approval of DOE, except where such assignment is made to an organization which has as one of its primary functions the management of inventions, provided that such assignee will be subject to the same provisions as the Recipient;
2. The Recipient will share royalties collected on a subject invention with the inventor, including Federal employee co-inventors (when DOE deems it appropriate) when the subject invention is assigned in accordance with 35 U.S.C. 202(e) and 37 CFR 401.10;
3. The balance of any royalties or income earned by the Recipient with respect to subject inventions, after payment of expenses (including payments to inventors) incidental to the administration of subject inventions, will be utilized for the support of scientific or engineering research or education; and
4. It will make efforts that are reasonable under the circumstances to attract licensees of subject inventions that are small businesses and that it will give preference to a small business firm if the Recipient determines that the small business firm has a plan or proposal for marketing the invention which, if executed, is equally likely to bring the invention to practical application as any plans or proposals from applicants that are not small business firms; provided that the Recipient is also satisfied that the small business firm has the capability and resources to carry out its plan or proposal. The decision whether to give a preference in any specific case will be at the discretion of the Recipient. However, the Recipient agrees that the Secretary of Commerce may review the Recipient's licensing program and decisions regarding small business applicants, and the Recipient will negotiate changes to its licensing policies, procedures or practices with the Secretary when the Secretary's review discloses that the Recipient could take reasonable steps to implement more effectively the requirements of this paragraph (k)(4).
(l) Communications

All communications required by this Patent Rights clause should be sent to the DOE Patent Counsel address listed in the Award Document.

(m) Electronic Filing

Unless otherwise specified in the award, the information identified in paragraphs (f)(2) and (f)(3) may be electronically filed.

(End of clause)

Attachment: Statement of Considerations
STATEMENT OF CONSIDERATIONS

CLASS WAIVER OF PATENT RIGHTS TO INVENTIONS MADE UNDER THE OFFICE OF ENERGY EFFICIENCY AND RENEWABLE ENERGY (EERE) FUNDING OPPORTUNITY ANNOUNCEMENTS RELEASED IN FISCAL YEAR 2013 W(C) 2013-001

This is a class patent waiver of the Government’s right to title in inventions conceived or made by a domestic large business in the course of or under an EERE funding agreement. The waiver is limited to funding agreements selected through a funding opportunity announcement ("FOA") released by EERE during the 2013 fiscal year. The waiver is subject to a Government license, march-in rights, and preference for U.S. industry provisions set out in 35 U.S.C. 202-204. The waiver is further subject to a U.S. competitiveness provision that requires products embodying any waived invention or produced through the use of any waived invention be manufactured substantially in the United States or a U.S. manufacturing plan that provides measurable commitments by the domestic large business to support U.S. manufacturing of the technologies related to the EERE funding agreement.

DOE takes title to inventions conceived or made by a domestic large business, unless DOE waives its right to title. A patent waiver is warranted when it is determined that the interests of the United States and the general public will best be served with the patent waiver. When making such a determination, DOE should have the following objectives: (1) make the benefits of the energy research, development and demonstration program funded by EERE widely available to the public in the shortest time; (2) promote the commercialization of the EERE-funded inventions; (3) encourage participation in the programs funded by EERE; and (4) encourage competition.

DOE may grant an advance patent waiver for a particular contractor or a class patent waiver for a class of contractors. A class patent waiver is appropriate when all members of a particular class would likely qualify for an advance patent waiver. As demonstrated below, domestic large businesses performing work under an EERE funding agreement constitute a class of contractors in which all of the members would likely qualify for an advance patent waiver.

The DOE patent waiver regulations provide a list of considerations that must be used when determining whether an advance patent waiver will best serve the interests of the United States and the general public. The following is a list of those considerations along with an analysis on how each consideration applies to a domestic large business performing work under an EERE funding agreement:

(a) The extent to which the participation of the contractor (referred to as "recipient" in EERE awards) will expedite the attainment of the purposes of the program

EERE offices/programs include buildings, advanced manufacturing, vehicles, biomass, geothermal, hydrogen, solar, and wind and water. Each program issues
FOAs for work in areas that the program has determined will lower the cost associated with its respective technology so that the technology will be more broadly adopted and used across the U.S.

The funding program selects the recipients through a competitive process based on the merit criteria set forth in the FOA. Specifically, the program selects each recipient based on the determination that the recipient is most likely to achieve the purpose of the FOA compared to the other organizations that applied for funding. Therefore the participation of a particular domestic large business was determined by the funding program to be the best means of attaining the program’s purposes.

(b) The extent to which a waiver of all or any part of such rights in any or all fields of technology is needed to secure the participation of the particular contractor.

Waiving patent rights encourages participation in EERE funded research, development and demonstration projects. With patent rights, an organization is more likely to invest (e.g., cost share) in research, development and demonstration projects that may lead to valuable inventions.

Congress recognized the value of patent rights with the passage of the Bayh-Dole Act, 35 U.S.C. §§ 200-212 (“Bayh-Dole”). One of the objectives of Bayh-Dole was to encourage participation in federally funded research, development and demonstration projects. Congress understood that more organizations would participate in federally funded research, development and demonstration projects when the organizations can own the rights to the inventions conceived or first actually reduced to practice in performance of the work under a funding agreement (referred to as “subject inventions”). Therefore, Bayh-Dole requires that funding agencies generally allow domestic small businesses and non-profit organizations the right to retain title to their subject inventions. Bayh-Dole was extended to all types of contractors, including domestic large businesses, under Executive Order 12591, to the extent permitted by law. However, Section 9 of the Federal Non-nuclear Research and Development Act of 1974 (42 U.S.C. § 5908) provides that title to subject inventions vests with DOE unless title is waived. Because of this provision, the Executive Order does not extend Bayh-Dole to domestic large businesses under EERE funding agreements and the right for large businesses to retain title to subject inventions must be granted through the patent waiver process. But the same policy reasoning behind Bayh-Dole and the Executive Order applies here to domestic large businesses (i.e., allowing large businesses to take title to their subject inventions will encourage their participation) under EERE funding agreements. Therefore granting a patent waiver encourages the participation of domestic large businesses.

(c) The extent to which the work to be performed under the contract is useful in the production or utilization of special nuclear material or atomic energy.
EERE programs are focused on clean energy technologies. It is highly unlikely that the work under an EERE funding agreement would be useful in the production or utilization of special nuclear material or atomic energy.

(d) The extent to which the contractor's commercial position may expedite utilization of the research, development, and demonstration results.

The utilization of the research, development, and demonstration results is more likely expedited with a domestic large business having patent rights instead of the Government retaining the patent rights. With the patent rights, the domestic large business is more likely to be able and willing to make the necessary investment to commercialize the results.

In order to progress the technology beyond research, development and demonstration to commercialization, a business must make a significant investment in time, equipment and other resources. The investment is not guaranteed due to the risk associated with being the first one to introduce a new technology to the market place. A business is less likely to make the investment and accept the risks, if it does not have the patent protection to prevent its competitors from copying the technology if and once the business establishes a market for the new technology.

Congress recognized that federally funded technology was more likely to be utilized and commercialized when the organizations that made the inventions had the patent rights to the inventions with the passage of Bayh-Dole. Congress passed Bayh-Dole, in part, to promote the utilization of federally funded inventions by domestic small businesses and non-profit organizations. Executive Order 12591 implicitly recognized that the same policy considerations behind Bayh-Dole also apply to large business contractors. This same reasoning also applies to domestic large businesses under EERE funding agreements.

(e) The extent to which the Government has contributed to the field of technology to be funded under the contract.

The Government has made significant and strategic contributions to clean energy technologies. Although the Government's contributions have been important, the contributions by private industry have been significant as well. In addition to cost share provided under a particular funding agreement, it is typical that the work of the funding agreement relies significantly on past investments made by a domestic large business and will rely on future investments from the domestic large business in order to commercialize the technology.

(f) The purpose and nature of the contract, including the intended use of the results developed thereunder.
EERE funding agreements selected through an EERE FOA are financial assistance instruments. The principal purpose of financial assistance is to transfer a thing of value to a recipient to carry out a public purpose of support or stimulation authorized by law rather than acquiring property or services for the direct benefit or use of the U.S. government. The purpose of the EERE funding agreements is to lower the cost associated with clean energy technologies so that the technologies are more broadly adopted and used across the U.S. Granting a waiver encourages participation and supports commercialization of the technologies. Therefore, granting a waiver is consistent with the purpose of the EERE funding agreements.

(g) The extent to which the contractor has made or will make substantial investment of financial resources or technology developed at the contractor’s private expense which will directly benefit the work to be performed under the contract.

Under EERE funding agreements, domestic large businesses are usually required to meet certain cost share requirements. Specifically, under Section 988 of the Energy Policy Act of 2005, a large business is usually required to provide at least a 20% cost share for research and development activities and at least a 50% cost share for demonstration activities.

In addition to cost share, a domestic large business will typically have made a past investment and intend to make a future investment beyond the funding agreement related to the technology subject to an EERE funding agreement. The past and anticipated future investment varies from domestic large business to domestic large business. However, based on past patent waiver requests, it is typical that the work to be done under a funding agreement by a large business is built upon and benefits from a past investment by the large business (e.g., use of equipment and facilities and background intellectual property). It is also typical that a large business has the intent and capability of making future investments in promising technologies resulting from work under the funding agreement. In any event, patent waivers are subject to march-in rights that would require licensing the technologies to others if the large business fails to make reasonable efforts to utilize the technologies.

(h) The extent to which the field of technology to be funded under the contract has been developed at the contractor’s private expense.

The extent to which a large business has developed a particular technology at private expense will vary. It is typical, however, for a large business to rely on its past investments to perform the work under an award.

(i) The extent to which the Government intends to further develop to the point of commercial utilization the results of the contract effort.
A particular large business may receive additional federal funding related to the technology subject to an EERE funding agreement. However, it would be unusual for the Government to conduct any development work on clean energy technologies by itself related to an EERE funding agreement. Any additional federal funding to a large business is likely to be made through a competitive process, in support of other EERE program objectives, and subject to the required terms and conditions for receiving federal funding (e.g., 50% cost share for demonstration activities).

(j) The extent to which the contract objectives are concerned with the public health, public safety, or public welfare.

The purpose of the EERE funding agreements is to lower the cost associated with clean energy technologies so that the technologies are broadly adopted and used across the U.S. The adoption of clean energy technologies would indirectly benefit the public health, safety and welfare through the use of more environmentally friendly sources of energy. Granting a waiver should expedite the adoption of clean energy technologies. Therefore, granting a waiver is in the interest of public health, safety and welfare.

(k) The likely effect of the waiver on competition and market concentration.

Energy is a globally competitive market. In order to be commercially viable, clean energy must compete with more conventional sources of energy. Within clean energy, the different types of technologies (e.g., wind, water, solar, biomass, and geothermal) compete among themselves. Moreover, even within a particular type of technology, there are typically several different approaches and systems competing among themselves (e.g., silicon based solar cells versus non-silicon based solar cells).

Typically, a patent waiver encourages a large business to make the necessary investments needed to bring its particular technology solution to the market. A patent waiver should not have an impact of the other technology solutions in the market. By encouraging the large business to bring another technology solution to the market and not impacting the other solutions already in the market, a patent waiver supports competition in energy.

(l) In the case of a domestic nonprofit educational institution under an agreement not governed by Chapter 18 of Title 35, United States Code, the extent to which such institution has a technology transfer capability and program approved by the Secretary or designee as being consistent with the applicable policies of this section.

This consideration is not applicable to a domestic large business.
(m) The small business status of the contractor under an agreement not governed by Chapter 18 of Title 35, United States Code.

This consideration is not applicable to a domestic large business.

(n) Such other considerations, such as benefit to the U.S. economy, that the Secretary or designee may deem appropriate.

Most patent waivers include a U.S. competitiveness provision that requires products embodying any waived invention or produced through the use of any waived invention be manufactured substantially in the United States. In the past, DOE has agreed to other commitments to the U.S. economy in lieu of the U.S. competitiveness provision. This class waiver will be subject to the standard U.S. competitiveness provision or a U.S. manufacturing plan that provides for measurable commitments to U.S. manufacturing.

As shown above, a domestic large business performing work in an EERE funding agreement is likely to qualify for an advance patent waiver because, based on the requisite considerations of the DOE patent waiver regulations, it best serves the interests of the U.S. and the general public. This analysis is consistent with Bayh-Dole.

Historically DOE has agreed to the proposition that domestic large businesses qualify for advance patent waivers under EERE funding agreements because the objectives and considerations set forth in the DOE patent waiver regulations are usually met by domestic large business. For example, DOE has granted advance patent waivers for 58 domestic large businesses under EERE funding agreements in 2010, 2011 and 2012. It did not reject any request for a patent waiver during that time. DOE also has used class patent waivers for EERE FOAs during the American Recovery Act and for all ARPA-E awards under several FOAs. DOE’s past practice is consistent with the above analysis that domestic large businesses working under a funding agreement made through a FY 2013 EERE FOA would likely qualify for an advance patent waiver.

This class patent waiver shall apply for each EERE FOA released in FY2013. This class patent waiver is available to any domestic large business that is a recipient, or subrecipient at any tier, to a funding agreement issued under an EERE FOA released in FY2013 and is providing at least the statutory minimum cost share for the work assigned to it under the funding agreement (i.e., at least 20% for research and development activities and at least 50% for demonstration activities, even when a domestic large business would have otherwise qualified for a cost share waiver). A domestic large business, as used in this class patent waiver, is any for-profit entity that does not qualify as a “small business” under Bayh-Dole and is incorporated (or otherwise formed) under the laws of a particular State or territory of the United States. This advance class waiver shall apply to each of the recipients, including subrecipients, upon the Contracting Officer’s written notice to DOE Patent Counsel that the recipient is obligated to provide at least 20% cost share for research and development activities and at least 50% cost share for demonstration activities, and shall remain in effect for so long as the cost share
requirements are maintained over the term of the agreement. Except as otherwise specifically approved by DOE Patent Counsel, a recipient’s acceptance of a funding agreement, or a subcontract to a funding agreement, selected through a FOA released by EERE during the 2013 fiscal year shall constitute that recipient’s notice to DOE of its acceptance of the terms and conditions of this class waiver.

This class patent waiver shall be subject to the terms and conditions that follow this statement of considerations. The terms and conditions include the usual Government license, march-in rights, and preference for U.S. industry provisions set out in 35 U.S.C. 202-204. The class waiver also includes the following U.S. Competitiveness clause:

The Contractor agrees that any products embodying any waived invention or produced through the use of any waived invention will be manufactured substantially in the United States unless the Contractor can show to the satisfaction of the DOE that it is not commercially feasible to do so. In the event the DOE agrees to foreign manufacture, there will be a requirement that the Government’s support of the technology be recognized in some appropriate manner, e.g., recoupment of the Government’s investment, etc. The Contractor agrees that it will not license, assign or otherwise transfer any waived invention to any entity unless that entity agrees to these same requirements. Should the Contractor or other such entity receiving rights in the invention undergo a change in ownership amounting to a controlling interest, then the waiver, assignment, license, or other transfer of rights in the waived invention is suspended until approved in writing by the DOE.

The terms and conditions are the standard terms and conditions used in DOE advance patent waivers except that the contractor does not retain any rights to an invention in the event that the above U.S. Competitiveness clause or the utilization reporting requirement is breached.

EERE intends to require applicants to its EERE funding agreements to submit U.S. manufacturing plans as part of their proposals. A U.S. Manufacturing Plan represents the applicant’s measurable commitment to support U.S. manufacturing of the technologies related to their EERE funding agreement. The nature and specificity of the applicants’ U.S. Manufacturing Plans will vary based on the FOA and the program issuing the FOA. The weight given to the U.S. Manufacturing Plans during the review and selection process will also vary based on the particular FOA and may be part of the evaluation or merit criteria. The DOE Patent Counsel supporting the FOA, in consultation with the responsible program/office official for the FOA, may agree to use the U.S. manufacturing plan in lieu of the U.S. competitiveness provision for a particular domestic large business when the DOE Patent Counsel determines that the U.S. manufacturing plan provides adequate and enforceable support to the U.S. manufacturing of the technology related to the EERE funding agreement.
Considering the foregoing, and in view of the statutory objectives to be obtained and the factors to be considered under DOE's statutory waiver policy, all of which have been considered, it has been determined that this class waiver as set forth above will best serve the interest of the United States and the general public. It is recommended that the waiver be granted.

Glen R. Drysdale
DOE Patent Counsel

Date: 7/3/13
Based upon the foregoing Statement of Considerations, it is determined that the interests of the United States and the general public will best be served by a waiver of the United States and foreign patent rights as set forth herein, and, therefore, the waiver is granted. This waiver shall not affect any waiver previously granted.

CONCURRENCE:

David Danielson
Assistant Secretary
Office of Energy Efficiency and Renewable Energy
Date: 7/26/13

APPROVAL:

John T. Lucas
Assistant General Counsel for Technology, Transfer, and Intellectual Property, GC-62
Date: 7/29/13
Attachment A – Terms and Conditions of Class Patent Waiver W(C) 2013-001

FAR 52.227-12  Patent Rights - Waiver (JUL 1996), as modified by 10 C.F.R. 784,
DOE Patent Waiver Regulations

PATENT RIGHTS - WAIVER (JUL 1996)

(a) Definitions.
As used in this clause:

  Background patent means a domestic patent covering an invention or discovery
which is not a Subject Invention and which is owned or controlled by the Contractor at
any time through the completion of this contract:
  (i) Which the Contractor, but not the Government, has the right to license to
others without obligation to pay royalties thereon, and
  (ii) Infringement of which cannot reasonably be avoided upon the practice of any
specific process, method, machine, manufacture or composition of matter
(including relatively minor modifications thereof) which is a subject of the
research, development, or demonstration work performed under this
contract.

  Contract means any contract, grant, agreement, understanding, or other arrangement,
which includes research, development, or demonstration work, and includes any
assignment or substitution of parties.

  DOE patent waiver regulations means the Department of Energy patent waiver
regulations at 10 CFR Part 784.

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

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

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

  Patent Counsel means the Department of Energy Patent Counsel assisting the
procuring activity.

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

Secretary means the Secretary of Energy.

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

Subject invention means any invention of the Contractor conceived or first actually reduced to practice in the course of or under this contract, provided that in the case of a variety of plant, the date of determination (as defined in section 41(d) of the Plant Variety Protection Act (7 U.S.C. 2401(d)) must also occur during the period of contract performance.

(b) Allocation of principal rights.

Whereas DOE has granted a waiver of rights to subject inventions to the Contractor, the Contractor may elect to retain the entire right, title, and interest throughout the world to each subject invention subject to the provisions of this clause and 35 U.S.C. 202 and 203. With respect to any subject invention in which the Contractor elects to retain title, the Federal Government shall have a nonexclusive, nontransferable, irrevocable, paid-up license to practice or have practiced for or on behalf of the United States the subject invention throughout the world.

(c) Invention disclosure, election of title, and filing of patent applications by Contractor.

(1) The Contractor shall disclose each subject invention to the Patent Counsel within six months after conception or first actual reduction to practice, whichever occurs first in the course of or under this contract, but in any event, prior to any sale, public use, or public disclosure of such invention known to the Contractor. The disclosure to the Patent Counsel shall be in the form of a written report and shall identify the inventors and the contract under which the invention was made. It shall be sufficiently complete in technical detail to convey a clear understanding, to the extent known at the time of the disclosure, of the nature, purpose, operation, and physical, chemical, biological, or electrical characteristics of the invention. The disclosure shall also identify any publication, on sale, or public use of the invention and whether a manuscript describing the invention has been submitted for publication and, if so, whether it has been accepted for publication at the time of disclosure. In addition, after disclosure to the Patent Counsel, the Contractor shall promptly notify the Patent Counsel of the acceptance of any
manuscript describing the invention for publication or of any on sale or public use planned by the Contractor.

(2) The Contractor shall elect in writing whether or not to retain title to any such invention by notifying the Patent Counsel at the time of disclosure or within 8 months of disclosure, as to those countries (including the United States) in which the Contractor will retain title; provided, that in any case where publication, on sale, or public use has initiated the 1-year statutory period wherein valid patent protection can still be obtained in the United States, the period of election of title may be shortened by the Agency to a date that is no more than 60 days prior to the end of the statutory period. The Contractor shall notify the Patent Counsel as to those countries (including the United States) in which the Contractor will retain title not later than 60 days prior to the end of the statutory period.

(3) The Contractor shall file its United States patent application on an elected invention within 1 year after election, but not later than at least 60 days prior to the end of any statutory period wherein valid patent protection can be obtained in the United States after a publication, on sale, or public use. The Contractor shall file patent applications in additional countries (including the European Patent Office and under the Patent Cooperation Treaty) within either 10 months of the corresponding initial patent application or 6 months from the date permission is granted by the Commissioner of Patents and Trademarks to file foreign patent applications where foreign filing has been prohibited by a Secrecy Order.

(4) Requests for extension of the time for disclosure to the Patent Counsel, election, and filing may, at the discretion of DOE, be granted, and will normally be granted unless the Patent Counsel has reason to believe that a particular extension would prejudice the Government’s interest.

(d) Conditions when the Government may obtain title notwithstanding an existing waiver.

The Contractor shall assign and hereby assigns to DOE, upon written request from DOE, title to any subject invention--

(1) If the Contractor elects not to retain title to a subject invention;

(2) If the Contractor fails to disclose or elect the subject invention within the times specified in paragraph (c) of this clause (provided that DOE may only request title within 60 days after learning of the Contractor’s failure to report or elect within the specified times);

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

(4) In any country in which the Contractor decides not to continue the prosecution of any application for, to pay the maintenance fees on, or defend in reexamination or opposition proceeding on, a patent on a subject invention;

(5) If the waiver authorizing the use of this clause is terminated as provided in paragraph (p) of this clause; or

(6) Upon a breach of paragraph (h) or paragraph (t) of this clause.

(e) Minimum rights to Contractor when the Government retains title.

(1) The Contractor shall retain a nonexclusive, royalty-free license throughout the world in each subject invention to which the Government obtains title under paragraph (d) of this clause except if the Contractor fails to disclose the subject invention within the times specified in paragraph (c) of this clause or breaches paragraph (h) or (t). The Contractor's license extends to its domestic subsidiaries and affiliates, if any, within the corporate structure of which the Contractor is a part and includes the right to grant sublicenses of the same scope to the extent the Contractor was legally obligated to do so at the time the contract was awarded. The license is transferable only with the approval of DOE except when transferred to the successor of that part of the Contractor's business to which the invention pertains.

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

(3) Before revocation or modification of the license, DOE shall furnish the Contractor a written notice of its intention to revoke or modify the license, and the Contractor shall be allowed 30 days (or such other time as may be authorized by DOE for good cause shown by the Contractor) after the notice to show cause why the license should not be revoked or modified. The Contractor has the right to appeal, in accordance with applicable agency licensing regulations and 37 CFR part 404 concerning the licensing of Government-owned inventions, any decision concerning the revocation or modification of its license.

(f) Contractor action to protect the Government's interest.
(1) The Contractor agrees to execute or to have executed and promptly deliver to DOE all instruments necessary to:

(i) establish or confirm the rights the Government has throughout the world in those subject inventions to which the Contractor elects to retain title, and

(ii) convey title to DOE when requested under paragraphs (d) and (p)(2) of this clause, and to enable the Government to obtain patent protection throughout the world in that subject invention.

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

(3) The Contractor shall notify DOE of any decision not to continue the prosecution of a patent application, pay maintenance fees, or defend in a reexamination or opposition proceeding on a patent, in any country, not less than 30 days before the expiration of the response period required by the relevant patent office.

(4) The Contractor agrees to include, within the specification of any United States patent application and any patent issuing thereon covering a subject invention, the following statement: "This invention was made with Government support under (identify the contract) awarded by DOE. The Government has certain rights in this invention."

(5) The Contractor shall establish and maintain active and effective procedures to assure that subject inventions are promptly identified and disclosed to Contractor personnel responsible for patent matters within 6 months of conception and/or first actual reduction to practice, whichever occurs first in the course of or under this contract. These procedures shall include the maintenance of laboratory notebooks or equivalent records and other records as are reasonably necessary to document the conception and/or the first actual reduction to practice of subject inventions, and records that show that the procedures for identifying and disclosing the inventions are followed. Upon request, the Contractor shall furnish the Patent Counsel a description of such procedures for evaluation and for determination as to their effectiveness.

(6) The Contractor agrees, when licensing a subject invention, to arrange to avoid royalty charges on acquisitions involving Government funds, including funds derived
through Military Assistance Program of the Government or otherwise derived through the Government; to refund any amounts received as royalty charges on the subject invention in acquisitions for, or on behalf of, the Government; and to provide for such refund in any instrument transferring rights in the invention to any party.

(7) The Contractor shall furnish the Patent Counsel the following:

(i) Interim reports every 12 months (or such longer period as may be specified by the Patent Counsel) from the date of the contract, listing subject inventions during that period and certifying that all subject inventions have been disclosed or that there are no such inventions.

(ii) A final report, within 3 months after completion of the contracted work, listing all subject inventions or certifying that there were no such inventions, and listing all subcontracts at any tier containing a patent rights clause or certifying that there were no such subcontracts.

(8) The Contractor shall promptly notify the Patent Counsel in writing upon the award of any subcontract at any tier containing a patent rights clause by identifying the subcontractor, the applicable patent rights clause, the work to be performed under the subcontract, and the dates of award and estimated completion. Upon request of the Patent Counsel, the Contractor shall furnish a copy of such subcontract, and no more frequently than annually, a listing of the subcontracts that have been awarded.

(9) The Contractor shall provide, upon request, the filing date, serial number and title, a copy of the patent application (including an English-language version if filed in a language other than English), and patent number and issue date for any subject invention for which the Contractor has retained title.

(10) Upon request, the Contractor shall furnish the Government an irrevocable power to inspect and make copies of the patent application file.

(g) Subcontracts.

(1) Unless otherwise directed by the Contracting Officer, the Contractor shall include the clause at 48 CFR 952.227-11, suitably modified to identify the parties, in all subcontracts, regardless of tier, for experimental, developmental, or research work to be performed by a small business firm or nonprofit organization, except where the work of the subcontract is subject to an Exceptional Circumstances Determination by DOE. In all other subcontracts, regardless of tier, for experimental, developmental, demonstration, or research work, the Contractor shall include the patent rights clause at 48 CFR 952.227-13 (suitably modified to identify the parties).

(2) The Contractor shall not, as part of the consideration for awarding the subcontract, obtain rights in the subcontractor's subject inventions.
(3) In the case of subcontractors at any tier, the Department, the subcontractor, and Contractor agree that the mutual obligations of the parties created by this clause constitute a contract between the subcontractor and the Department with respect to those matters covered by this clause.

(4) The Contractor shall promptly notify the Contracting Officer in writing upon the award of any subcontract at any tier containing a patent rights clause by identifying the subcontractor, the applicable patent rights clause, the work to be performed under the subcontract, and the dates of award and estimated completion. Upon request of the Contracting Officer, the Contracting Officer shall furnish a copy of such subcontract, and, no more frequently than annually, a listing of the subcontracts that have been awarded.

(h) Reporting on utilization of subject inventions.

(1) The Contractor agrees to submit on request periodic reports no more frequently than annually on the utilization of each waived subject invention or on efforts at obtaining such utilization that are being made by the Contractor and any of its licensees or assignees including compliance with paragraph (f) of this clause. Each report shall include information regarding the status of development, date of first commercial sale or use, products that embody or are made through the use of the waived such invention, manufacturing locations of such products and such other data and information as DOE may reasonably specify. The report shall further include a certification from the Contractor that the Contractor, including its licensees, is in compliance with the requirements of this clause.

(2) The Contractor also agrees to provide additional reports as may be requested by DOE in connection with any march-in proceedings undertaken by DOE in accordance with paragraph (j) of this clause.

(3) To the extent data or information supplied under this paragraph is considered by the Contractor, its licensee or assignee to be privileged and confidential and is so marked, DOE agrees that, to the extent permitted by law, it shall not disclose such information to persons outside the Government.

(i) Preference for United States industry.

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

The Contractor agrees that with respect to any subject invention in which it has acquired title, DOE has the right in accordance with the procedures in 48 CFR 27.304-1(g) to require the Contractor, an assignee, or exclusive licensee of a subject invention to grant a nonexclusive, partially exclusive, or exclusive license in any field of use to a responsible applicant or applicants, upon terms that are reasonable under the circumstances, and if the Contractor, assignee, or exclusive licensee refuses such a request, DOE has the right to grant such a license itself if DOE determines that--

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

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

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

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

(k) Background Patents [reserved]

(l) Communications.

All reports and notifications required by this clause shall be submitted to the Patent Counsel unless otherwise instructed.

(m) Other inventions.

Nothing contained in this clause shall be deemed to grant to the Government any rights with respect to any invention other than a subject invention, except with respect to Background Patents, above.

(n) Examination of records relating to inventions.

(1) The Contracting Officer or any authorized representative shall, until 3 years after final payment under this contract, have the right to examine any books (including laboratory notebooks), records, and documents of the Contractor relating to the conception or first actual reduction to practice of inventions in the same field of technology as the work under this contract to determine whether--

(i) Any such inventions are subject inventions;
(ii) The Contractor has established and maintains the procedures required by paragraphs (f)(2) and (f)(5) of this clause; and

(iii) The Contractor and its inventors have complied with the procedures.

(2) If the Contracting Officer determines that an inventor has not disclosed a subject invention to the Contractor in accordance with the procedures required by paragraph (f)(5) of this clause, the Contracting Officer may, within 60 days after the determination, request title in accordance with paragraphs (d)(2) and (d)(3) of this clause. However, if the Contractor establishes that the failure to disclose did not result from the Contractor's fault or negligence, the Contracting Officer shall not request title.

(3) If the Contracting Officer learns of an unreported Contractor invention which the Contracting Officer believes may be a subject invention, the Contractor may be required to disclose the invention to DOE for a determination of ownership rights.

(4) Any examination of records under this paragraph shall be conducted in such a manner as to protect the confidentiality of the information involved.

(o) Withholding of payment.

NOTE: This paragraph does not apply to subcontracts or grants.

(1) Any time before final payment under this contract, the Contracting Officer may, in the Government's interest, withhold payment until a reserve not exceeding $50,000 or 5 percent of the amount of the contract, whichever is less, shall have been set aside if, in the Contracting Officer's opinion, the Contractor fails to--

(i) Establish, maintain, and follow effective procedures for identifying and disclosing subject inventions pursuant to paragraph (f)(5) of this clause;

(ii) Disclose any subject invention pursuant to paragraph (c)(1) of this clause;

(iii) Deliver acceptable interim reports pursuant to paragraph (f)(7)(i) of this clause;

(iv) Provide the information regarding subcontracts pursuant to paragraph (f)(6) of this clause; or

(v) Convey to the Government, using a DOE-approved form, the title and/or rights of the Government in each subject invention as required by this clause.

(2) Such reserve or balance shall be withheld until the Contracting Officer has determined that the Contractor has rectified whatever deficiencies exist and has delivered all reports, disclosures, and other information required by this clause.

(3) Final payment under this contract shall not be made before the Contractor delivers to the Patent Counsel all disclosures of subject inventions required by paragraph (c)(1) of this clause, an acceptable final report pursuant to paragraph (f)(7)(ii) of this clause, and all past due confirmatory instruments, and the Patent Counsel has issued a patent clearance certification to the Contracting Officer.
(4) The Contracting Officer may decrease or increase the sums withheld up to the maximum authorized above. If the maximum amount authorized above is already being withheld under other provisions of the contract, no additional amount shall be withheld under this paragraph. The withholding of any amount or the subsequent payment thereof shall not be construed as a waiver of any Government right.

(p) Waiver Terminations.

Any waiver granted to the Contractor authorizing the use of this clause (including any retention of rights pursuant thereto by the Contractor under paragraph (b) of this clause) may be terminated at the discretion of the Secretary or his designee in whole or in part, if the request for waiver by the Contractor is found to contain false material statements or nondisclosure of material facts, and such were specifically relied upon by DOE in reaching the waiver determination or the cost share requirement as set forth in the applicable statement of considerations is not met. Prior to any such termination, the Contractor will be given written notice stating the extent of such proposed termination and the reasons therefor, and a period of 30 days, or such longer period as the Secretary or his designee shall determine for good cause shown in writing, to show cause why the waiver of rights should not be so terminated. Any waiver termination shall be subject to the Contractor's minimum license as provided in paragraph (e) of this clause.

(q) Atomic Energy.

No claim for pecuniary award or compensation under the provisions of the Atomic Energy Act of 1954, as amended, shall be asserted by the Contractor or its employees with respect to any invention or discovery made or conceived in the course of or under this contract.

(r) Publication.

It is recognized that during the course of work under this contract, the contractor or its employees may from time to time desire to release or publish information regarding scientific or technical developments conceived or first actually reduced to practice in the course of or under this contract. In order that public disclosure of such information will not adversely affect the patent interests of DOE or the contractor, approval for release of publication shall be secured from Patent Counsel prior to any such release or publication. In appropriate circumstances, and after consultation with the contractor, Patent Counsel may waive the right of prepublication review.

(s) Forfeiture of rights in unreported subject inventions.

(1) The contractor shall forfeit and assign to the Government, at the request of the Secretary of Energy or designee, all rights in any subject invention which the contractor fails to report to Patent Counsel within six months after the time the contractor:

(i) Files or causes to be filed a United States or foreign patent application thereon; or
(ii) Submits the final report required by paragraph (f)(7)(ii) of this clause, whichever is later.

(2) However, the Contractor shall not forfeit rights in a subject invention if, within the time specified in paragraph (n)(1) of this clause, the contractor:
   (i) Prepares a written decision based upon a review of the record that the invention was neither conceived nor first actually reduced to practice in the course of or under the contract and delivers the decision to Patent Counsel, with a copy to the Contracting Officer; or
   (ii) Contending that the subject invention is not a subject invention, the contractor nevertheless discloses the subject invention and all facts pertinent to this contention to the Patent Counsel, with a copy to the Contracting Officer, or
   (iii) Establishes that the failure to disclose did not result from the contractor's fault or negligence.

(3) Pending written assignment of the patent application and patents on a subject invention determined by the Contracting Officer to be forfeited (such determination to be a Final Decision under the Disputes clause of this contract), the contractor shall be deemed to hold the invention and the patent applications and patents pertaining thereto in trust for the Government. The forfeiture provision of this paragraph shall be in addition to and shall not supersede any other rights and remedies which the Government may have with respect to subject inventions.

(t) U. S. Competitiveness

The Contractor agrees that any products embodying any waived invention or produced through the use of any waived invention will be manufactured substantially in the United States, unless the Contractor can show to the satisfaction of DOE that it is not commercially feasible to do so. In the event DOE agrees to foreign manufacture, there will be a requirement that the Government's support of the technology be recognized in some appropriate manner, e.g., recoupment of the Government's investment, etc. The Contractor further agrees to make the above condition binding on any assignee or licensee or any entity otherwise acquiring rights to any waived invention, including subsequent assignees or licensees. Should the Contractor or other such entity receiving rights in any waived invention undergo a change in ownership amounting to a controlling interest, then the waiver, assignment, license, or other transfer of rights in any waived invention is suspended until approved in writing by DOE.

(End of clause)
APPENDIX D

Contract Provisions
Appendix B to Subpart D (For-profit entities) of 10 CFR Part 600—Contract Provisions

All contracts awarded by a recipient, including those for amounts less than the simplified acquisition threshold, must contain the following provisions as applicable:


2. Copeland “Anti-Kickback” Act (18 U.S.C. 874 and 40 U.S.C. 276c)—All contracts and subawards in excess of $2,000 for construction or repair awarded by recipients and subrecipients must include a provision for compliance with the Copeland “Anti-Kickback” Act (18 U.S.C. 874), as supplemented by Department of Labor regulations (29 CFR part 3, “Contractors and Subcontractors on Public Building or Public Work Financed in Whole or in Part by Loans or Grants from the United States”). The Act provides that each contractor or subrecipient must be prohibited from inducing, by any means, any person employed in the construction, completion, or repair of public work, to give up any part of the compensation to which he is otherwise entitled. The recipient must report all suspected or reported violations to the responsible DOE contracting officer.

3. Contact Work Hours and Safety Standards Act (40 U.S.C. 327-333)—Where applicable, all contracts awarded by recipients in excess of $100,000 for construction and other purposes that involve the employment of mechanics or laborers must include a provision for compliance with Sections 102 and 107 of the Contact Work Hours and Safety Standards Act (40 U.S.C. 327-333), as supplemented by Department of Labor regulations (29 CFR part 5). Under Section 102 of the Act, each contractor is required to compute the wages of every mechanic and laborer on the basis of a standard work week of 40 hours. Work in excess of the standard work week is permissible provided that the worker is compensated at a rate of not less than 11/2 times the basic rate of pay for all hours worked in excess of 40 hours in the work week. Section 107 of the Act is applicable to construction work and provides that no laborer or mechanic is required to work in surroundings or under working conditions which are unsanitary, hazardous or dangerous. These requirements do not apply to the purchases of supplies or materials or articles ordinarily available on the open market, or contracts for transportation or transmission of intelligence.

4. Rights to Inventions and Data Made Under a Contract or Agreement—Contracts or agreements for the performance of experimental, development, or research work must provide for the rights of the Federal Government and the recipient in any resulting invention in accordance with applicable Class Patent Waiver, or 10 CFR 600.325 and Appendix A—Patent and Data Rights to Subpart D, Part 600.

5. Clean Air Act (42 U.S.C. 7401 et seq.) and the Federal Water Pollution Control Act (33 U.S.C. 1251 et seq.), as amended—Contracts and subawards of amounts in excess of $100,000 must contain a provision that requires the recipient to agree to comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act (41 U.S.C. 7401 et seq.) and the Federal Water Pollution control act as amended (33 U.S.C. 1251 et seq.). Violations must be reported to the responsible DOE contracting officer and the Regional Office of the Environmental Protection Agency (EPA).

6. Byrd Anti-Lobbying Amendment (31 U.S.C. 1352)—Contractors who apply or bid for an award of $100,000 or more must file the required certification. Each tier certifies to the tier above that it will not

7. **Debarment and Suspension** (E.O.s 12549 and 12689)—Contract awards that exceed the simplified acquisition threshold and certain other contract awards must not be made to parties listed on nonprocurement portion of the General Services Administration’s Lists of Parties Excluded from Federal Procurement and Nonprocurement Programs in accordance with E.O.s 12549 (3 CFR, 1986 Comp., p. 189) and 12689 (3 CFR, 1989 Comp., p. 235), “Debarment and Suspension.” This list contains the names of parties debarred, suspended, or otherwise excluded by agencies, and contractors declared ineligible under statutory or regulatory authority other than E.O. 12549. Contractors with awards that exceed the small purchase threshold must provide the required certification regarding its exclusion status and that of its principals.

8. **Davis-Bacon Act** (40 U.S.C. 276a)—As a general rule, it is unlikely that the Davis-Bacon Act, which among other things requires payment of prevailing wages on projects for the construction of public works, would apply to financial assistance awards. However, the presence of certain factors (e.g., requirement of particular program statutes; title to a construction facility resting in the Government) might necessitate a closer analysis of the award, to determine if the Davis-Bacon Act would apply in the particular factual situation presented.
APPENDIX G

Federal Assistance Reporting Checklist

Data Item Reports
### NCSU PowerAmerica Subaward Appendix G

1. Federal Award Id. No.: DE-EE0006521.0014
2. Program/Project Title: PowerAmerica: The Next Generation Power Electronics Manufacturing Innovation Institute.

3. Recipient: North Carolina State University/PoweAmerica and flows down to all Subrecipients as noted.

4. Reporting Requirements (see attached "EERE Reporting Instructions"):

<table>
<thead>
<tr>
<th>I. PROJECT MANAGEMENT REPORTING</th>
</tr>
</thead>
<tbody>
<tr>
<td>✗ A. Research Performance Progress Report (RPPR) (RD&amp;D Projects)</td>
</tr>
<tr>
<td>✗ B. Progress Report (Non-RD&amp;D Projects)</td>
</tr>
<tr>
<td>✗ C. Financial Report (Not required for subrecipients)</td>
</tr>
<tr>
<td>✗ D. Special Status Report</td>
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<tr>
<td>✗ E. Other (see Special instructions)</td>
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</tbody>
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<tr>
<th>II. SCIENTIFIC / TECHNICAL REPORTING</th>
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<tbody>
<tr>
<td>✗ A. Journal Article-Accepted Manuscript</td>
</tr>
<tr>
<td>✗ B. Scientific / Technical Conference Paper / Presentation / Proceeding</td>
</tr>
<tr>
<td>✗ D. Scientific / Technical Dataset</td>
</tr>
<tr>
<td>✗ E. Other (Dissertation / Thesis, see Special instructions)</td>
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<tr>
<th>III. CLOSEOUT REPORTING</th>
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<tbody>
<tr>
<td>✗ A. Final Scientific / Technical Report (DOE F 241.3)</td>
</tr>
<tr>
<td>✗ B. Final Invention and Patent Report (DOE F 2050.11)</td>
</tr>
<tr>
<td>✗ C. Final Property Report (SF-428 &amp; SF-428B)</td>
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<tr>
<td>✗ D. Software-Deliverable Submission</td>
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<td>✗ E. Other (see Special instructions)</td>
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<tr>
<th>IV. OTHER REPORTING</th>
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<tbody>
<tr>
<td>✗ A. Intellectual Property Reporting Form (EERE 176)</td>
</tr>
<tr>
<td>✗ B. Invention Utilization Report (EERE 177)</td>
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<tr>
<td>✗ C. U.S. Manufacturing Report (EERE 178)</td>
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<tr>
<td>✗ D. Project Management Plan (PMP) (EERE185)</td>
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<tr>
<td>✗ E. Annual Incurred Cost Proposal</td>
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<tr>
<td>✗ F. Annual Audit of For-Profit Recipients</td>
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<tr>
<td>✗ G. Single Audit: States, Locals, Tribal Governments, and Non-Profits</td>
</tr>
<tr>
<td>✗ H. Annual Property Inventory (SF-428A)</td>
</tr>
<tr>
<td>✗ I. Reporting Addendum (EERE 179)</td>
</tr>
<tr>
<td>✗ J. Uniform Commercial Code (UCC) financial statements</td>
</tr>
<tr>
<td>✗ K. Federal Subaward Reporting System (FSRS)</td>
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<td>✗ L. Other (per Special Instructions) For five years beyond the project period, the Recipient will continue to 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.</td>
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<th>Frequency</th>
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Subrecipients will report to the addresses specified with individual report instructions.
**EERE Reporting Instructions**

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

***

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### I. PROJECT MANAGEMENT REPORTING

#### A. Research Performance Progress Report (RPPR) (RD&D Projects)

**Subrecipients:**
Submission to: PowerAmerica Program Manager (rasulliv@ncsu.edu)
Deadline: Two (2) weeks after the end of each quarter -- Program Manager will provide specific dates
Template: PowerPoint template for this report will be provided to Subrecipient by Program Manager

Every quarter, the Prime Recipient is required to submit a Research Performance Progress Report for the project – i.e., the entirety of work performed by the Prime Recipient, Subrecipients, and contractors – to EERE. The Research Performance Progress Report must include the following information.

---

**FREQUENCY CODES AND DUE DATES:** Subrecipient instructions shown with each report format

Y – Yearly; within 90 calendar days after the end of the annual reporting period.
F – Final; within 90 calendar days after expiration or termination of the award.
Y180 – Yearly; within 180 calendar days after the close of the recipient’s fiscal year.
Q – Quarterly; within 30 calendar days after the end of the quarterly reporting period.
A – Within five (5) calendar days after the event, or as specified.
O – Other; See instructions for further details.

---

5. **EERE Special Instructions:** Additional Reports

For five years beyond the project period, the Recipient will continue to 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.

Due 30 days after one year anniversary of the award performance end date and annually thereafter for 5 years total. Specific format to be specified by the EERE Technology Management and Technical Project Officer.

<table>
<thead>
<tr>
<th>Subrecipients Submit to:</th>
<th>PowerAmerica Program Manager (<a href="mailto:rasulliv@ncsu.edu">rasulliv@ncsu.edu</a>)</th>
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<tbody>
<tr>
<td>Submission deadline:</td>
<td>Within thirty (30) calendar days after the anniversary date, or as specified in future instructions.</td>
</tr>
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</table>
Title Page: The title page should identify, in chart form, the Federal Agency to which the report is submitted; the FOA name and number; the nature of the report (i.e., Research Performance Progress Report); the award number; the award type (e.g., grant, CRADA); the name, title, email address, and phone number for the Prime Recipient; the Prime Recipient type (National Lab, University, Private Company, Non-Profit, or Government); the project title; the Principal Investigator(s); the Prime Recipient’s DUNS number; the date of the report; and the period covered by the report, including the quarter and year (e.g., Q1: Jan. 1 – Mar. 31, 2010).

Section I. Accomplishments & Milestone Update: A comparison of the actual accomplishments with the technical milestones and deliverables for the period. Explain why the technical milestones and deliverables were not met, if they were not. Describe the pre-commercialization status (e.g., cost, efficiency, durability) of technologies developed or being developed through EERE-sponsored efforts. Discuss what was accomplished during this reporting period, including major activities, significant results, major findings or conclusions, key outcomes, or other achievements. Clearly denote the recipient’s unique and distinguished contribution to the project. This section should contain sufficient information to allow the EERE director to verify the achievement of the technical milestones and deliverables.

Section II. Issues, Risks, and Mitigation: Actual or anticipated problems or delays and actions taken or planned to resolve them.

Section III. Changes in Approach: Any changes in approach or aims and reasons for change. Any changes to the technical milestones and deliverables must be approved in advance by the EERE Contracting Officer.

Section IV. Key Personnel: Any changes in key personnel or teaming arrangements. Such changes must be approved in advance by the EERE Contracting Officer.

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

B. Technologies/Techniques: Any new technologies or techniques developed under the Award. Briefly describe the new technologies or techniques (specific capabilities and performance improvements enabled by EERE-sponsored efforts), the pre-commercialization history of the technologies and their potential application to current and future projects.

C. Status Reports: Progress reports and updates submitted to EERE during this quarter. List name of report and date of submission to EERE.
D. Media Reports: Any media articles (e.g., newspapers, magazines, online media). List author, title, publication or website, page number (if applicable), and date of publication. The Prime Recipient is required to send a copy of any media report that discusses project results to the program support staff designated by the EERE Program Director.

E. Invention Disclosures: Subject inventions disclosed to EERE and the U.S. Department of Energy (DOE) under this Award. List title, date submitted, and name of inventor.

F. Patent Applications: Domestic and foreign patent applications arising out of subject inventions disclosed to EERE and the DOE under this Award. List patent number, name of inventors, assignee, patent application number, date of filing, and title of patent application.

G. Licensed Technologies: Subject inventions licensed to third parties. List name of licensee, domestic or foreign patent or patent application number, title, and expiration date of agreement.

H. Networks/Collaborations Fostered: Partnerships and other arrangements concluded with respect to the project or technology area. List name of network/collaboration (if any), name of entities involved, date of agreement (if any), brief description of network/collaboration, and technology area. Clearly denote the partner organizations’ unique and distinguished contribution to the project.

I. Websites Featuring Project Work or Results: Web site or other Internet sites that reflect the work or results of this project. List name of website, specific webpage(s) on which project work or results featured, and brief description of project work or results featured.

J. Other Products: Additional project output, such as data or databases, physical collections, audio or video, software or netware, models, educational aid or curricula, instruments or equipment. Provide a brief description of additional project output, date of release, and entity to which output was provided.

K. Awards, Prizes, and Recognition: Any awards, prizes, or other recognition for project work or results, subjection inventions, patents or patent applications, etc. List name of award/recognition/prize, name of sponsoring organization, date of receipt, and subject of award/prize/recognition.

Section VI. Follow-On Funding: The Prime Recipient is required to disclose any received or anticipated commitment or obligations of funding that is being received or may be received by the Prime Recipient, Subrecipient, Principal Investigator(s) (including Co-Principal Investigators), or Key Participants to support the EERE funded project or work that relates directly or indirectly to the EERE funded project. List source of funding, amount of funding, the beginning and end dates of funding, and point of contact (name, title, employer, telephone number, and e-mail address), regarding the current or anticipated funding. Include any pending application for funding to governmental or other entities.

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

A. The Prime Recipient, Subrecipient, or Principal Investigator(s) (including Co-Principal Investigators) is under investigation for or has been convicted of fraud or similar acts, violations of U.S. export control laws and regulations, or violations of the Drug-Free Workplace Act of 1988 (Pub. L. 100-690, Title V, Subtitle D; 41 U.S.C. 701, et seq.).
B. The Prime Recipient, Subrecipient, or Principal Investigator(s) (including Co-Principal Investigators) is debarred, suspended, proposed for debarment, or otherwise declared ineligible from receiving Federal contracts, subcontracts, and financial assistance and benefits; and

C. The Prime Recipient, Subrecipient, or Principal Investigator(s) (including Co-Principal Investigators) is insolvent.

Section VIII. Conflicts of Interests Within Project Team: The Prime Recipient is required to disclose any actual or apparent personal, organizational, financial, and other conflicts of interest within the Project Team. Examples of potential conflicts of interest may include, but are not limited to: the Principal Investigator for the Prime recipient may have an equity stake in a Subrecipient; the Principal Investigator for a Subrecipient may have a consulting arrangement with the Prime Recipient; or a Subrecipient may be a subsidiary or otherwise affiliated with the Prime Recipient.

Section IX. Performance of Work in the United States: The Prime Recipient is required to disclose if any work under the Award is being performed overseas. EERE requires 100% of the Total Project Cost to be expended in the United States. The Prime Recipient may perform certain work overseas if a authorized in advance by the EERE Contracting Officer (e.g., by approval of a Foreign Work Waiver Request).

Section X. Project Schedule Status: The Prime Recipient is required to report on the status of the technical milestones and deliverables identified in their award. List milestones and deliverables, anticipated start and completion dates, and actual start and completion dates. The Prime Recipient must estimate the percentage complete for each milestone/deliverable.

Section XI.

A. Budget Status - Prime Recipient: Show approved budget (EERE share vs. the Prime Recipient’s cost share), actual costs incurred during the quarter (EERE share vs. the Prime Recipient’s cost share), cumulative cost to date (EERE share vs. the Prime Recipient’s cost share), and remaining balance. In addition, show Technology Transfer & Outreach (TT&O) costs on a separate worksheet.

B. Budget Status – FFRDC/GOGO: Show approved budget (EERE share vs. FFRDC/GOGO cost share, if any), actual costs incurred during the quarter (EERE share vs. FFRDC/GOGO cost share, if any), cumulative cost to date (EERE share vs. FFRDC/GOGO cost share, if any), and remaining balance. In addition, show TT&O costs on a separate worksheet.

Section XII. Certification of Compliance: The Prime Recipient is required to certify that the information provided in the Research Performance Progress Report is accurate and complete as of the date shown.

C. Progress Report (Non-RD&D Projects): Deleted Not Required
E. Special Status Reports

<table>
<thead>
<tr>
<th>Subrecipient submit to:</th>
<th>PowerAmerica Program Manager (<a href="mailto:rasulliv@ncsu.edu">rasulliv@ncsu.edu</a>)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subrecipient submission deadline:</td>
<td>Within five (5) calendar days after the event, or as specified</td>
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</table>

The Prime Recipient is required to report the following events to EERE. Subrecipient is required to report on these events if they impact the subrecipient’s award/project.

1. Any notices or claims of patent or copyright infringement arising out of or relating to the performance of the EERE Award;
2. Refusal of a Subrecipient to accept flow-down requirements in Attachment 1 or Attachment 2 to the EERE Award;
3. Potential or actual violations of federal, state, and municipal laws arising out of or relating to work under the Award;
4. Any improper claims or excess payments arising out of or relating to work under the Award;
5. Potential or actual violations of the cost share requirements under the Award;
6. Potential or actual noncompliance with EERE or DOE reporting requirements under the Award;
7. Potential or actual violations of the lobbying restrictions in the Award;
8. Potential or actual bankruptcy/insolvency of the Prime Recipient or Subrecipient;
9. Potential or actual violation of U.S. export control laws and regulations arising out of or relating to the work under the Award;
10. Any fatality or injuries requiring hospitalization arising out of or relating to work under the Award;
11. Potential or actual violations of environmental, health, or safety laws and regulations;
12. Any event which is anticipated to cause a significant schedule slippage or cost increase;
13. Any damage to Government-owned equipment in excess of $25,000;
14. Any incident arising out of or relating to work under the Award that has the potential for high visibility in the media;
15. As the Recipient becomes aware, any critical business issues or litigation concerning the Recipient, subrecipients, contractors or Institute Members that may have material adverse effect on the Project.

F. Other (see Special Instructions) None

II. SCIENTIFIC / TECHNICAL REPORTING

A. Journal Article-Accepted Manuscript

| Subrecipient submit 1 copy | PowerAmerica Subawards Manager (randy_bickford@ncsu.edu) |
Access to scholarly publications is enabled by providing the Journal Article-Accepted Manuscript to DOE OSTI and is consistent with the U.S. Government’s retained license to published results of federally funded research. If the Recipient has a journal article accepted for publication, then the Recipient must submit an AN 241.3, as described below, at the time the article meets the status of being "accepted" for publication.

Content. The Recipient is to provide the final peer-reviewed accepted manuscript, i.e., the version of a journal article that has been peer reviewed and accepted for publication in a journal. Do NOT submit the journal’s published version of the article, i.e., do NOT submit a copyrighted reprint.

Full-text of accepted manuscripts must be in the ADOBE PORTABLE DOCUMENT FORMAT (PDF) and be one integrated PDF file that contains all text, tables, diagrams, photographs, schematic, graphs, and charts.

**B. Scientific / Technical Conference Papers / Presentation /Proceeding**

<table>
<thead>
<tr>
<th>Subrecipient submit 1 copy to</th>
<th>PowerAmerica Subawards Manager (<a href="mailto:randy_bickford@ncsu.edu">randy_bickford@ncsu.edu</a>) with cc to Program Manager (<a href="mailto:rasulliv@ncsu.edu">rasulliv@ncsu.edu</a>)</th>
</tr>
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<tbody>
<tr>
<td>Subrecipient submission deadline:</td>
<td>Within five (5) calendar days after the event, or as specified</td>
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The Prime Recipient must submit a copy of any scientific/technical conference papers/proceedings, with the following information: (1) name of conference; (2) location of conference; (3) date of conference; and (4) conference sponsor. Scientific/technical conference papers/proceedings must be submitted in the Adobe PDF format as one integrated PDF file containing all text, tables, diagrams, photographs, schematic, graphs, and charts. In addition, scientific/technical conference papers/proceedings must be accompanied by a completed DOE Form 241.3. The form and instructions are available on DOE Energy Link System (E-Link) at http://www.osti.gov/elink-2413.

C. Scientific / Technical Software & Manual (Deleted, Not Required)

D. Scientific / Technical Datasets (Deleted, Not Required)

E. Other (Dissertation / Thesis, see Special Instructions) (Deleted, Not Required)

**III. CLOSEOUT REPORTING**

**A. Final Scientific/Technical Report (DOE F 241.3)**

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<tr>
<th>Subrecipient submit to:</th>
<th>Program Manager (<a href="mailto:rasulliv@ncsu.edu">rasulliv@ncsu.edu</a>)</th>
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<tr>
<td>Subrecipient submission deadline:</td>
<td>Within 30 calendar days after expiration or termination of the award</td>
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The Prime Recipient must submit a Final Scientific/Technical Report to DOE for all research, development, demonstration and commercialization projects and a Progress Report for any other type of project. The Report must be submitted in Adobe PDF Format as one integrated PDF file that contains all text, tables, diagrams, photographs, schematic, graphs, and charts. The Report must be accompanied by a completed electronic version of DOE Form 241.3, "U.S. Department of Energy (DOE), Announcement of Scientific and Technical Information (STI)," available via DOE Energy Link System (E-Link) at http://www.osti.gov/elink-2413. The Report must contain the following information:

1. The scientific/technical report is to cover the entire project period.
2. STI that is publicly accessible need not be duplicated in the report if a citation with a link to where the information may be found is included in the report. For example, articles found in PAGES (i.e., DOE’s Public Access Gateway for Energy and Science, http://www.osti.gov/pages/) are accessible to the public.
3. Provide identifying information: the EERE award number; sponsoring program office; name of recipient; project title; name of project director/principal investigator; and consortium/team members.
4. Include an acknowledgment of Federal support and a disclaimer, which must appear in the publication of any material as required by the Special Terms and Conditions.
5. Include any limitations on public release of the report, if authorized by the award agreement. If the document being submitted contains patentable material or protected data (i.e., data first produced in the performance of the award that is protected from public release for a period of time by terms of the award agreement) as set forth in the award agreement, then (1) prominently display on the cover of the report any authorized distribution limitation notices, such as patentable material or protected data and (2) clearly identify patentable or protected data on each page of the report. Reports delivered without such notices or with restrictive notices not authorized by the award agreement may be deemed to have been furnished with unlimited rights, and the Government assumes no liability for the disclosure, use or reproduction of such reports. Any restrictive markings must also be noted in the distribution limitation section of the Announcement Notice (AN) 241.3. No protected PII should be included.
6. Provide an abstract or executive summary, which should be a minimum of one paragraph and written in terms understandable by an educated layperson. (Refer to http://www.osti.gov/stip/stancards for ANSI/NISO guidance as needed.) The abstract included in an application may serve as a model for this.
7. Summarize project activities for the entire period of funding, including original hypotheses, approaches used, and findings. Include, if applicable, facts, figures, analyses, and assumptions used during the life of the project to support the results in a manner that conveys to the scientific community the STI created during the project. To minimize duplication, the report may reference STI, including journal articles, that is publicly accessible. See also #2.

For guidance offered by the National Information Standards Organization on typical attributes.

A. Final Invention and Patent Report

<table>
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<tr>
<th>Subrecipient submit to:</th>
<th>N.C. State Office of Technology Transfer (<a href="mailto:techtransfer@ncsu.edu">techtransfer@ncsu.edu</a>) &amp; PowerAmerica Subawards Manager (<a href="mailto:randy_bickford@ncsu.edu">randy_bickford@ncsu.edu</a>) with cc to Program Manager (<a href="mailto:rasulliv@ncsu.edu">rasulliv@ncsu.edu</a>)</th>
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<td>Subrecipient submission deadline:</td>
<td>Within 60 calendar days after expiration or termination of the award</td>
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For Large Businesses, the Final Invention and Patent Report must include a list of all subcontracts at any tier containing a patent rights clause (or state that there were none).

B. Final Property Report SF-428 & 428B

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<tr>
<th>Subrecipient submit to:</th>
<th>PowerAmerica Subawards Manager (<a href="mailto:randy_bickford@ncsu.edu">randy_bickford@ncsu.edu</a>) with cc to Finance Director (<a href="mailto:ajday@ncsu.edu">ajday@ncsu.edu</a>)</th>
</tr>
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<tbody>
<tr>
<td>Subrecipient submission deadline:</td>
<td>Within 60 calendar days after expiration or termination of the award</td>
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</table>

The Prime Recipient must submit a final inventory of Government-furnished property, and property acquired with project funds, whether the property is in the possession of the Prime Recipient or Subrecipients. The Prime Recipient must submit a completed SF-428B, available at http://www.whitehouse.gov/omb/grants_forms. The inventory must include a description of the property, tag number, acquisition date, and acquisition cost, if purchased with project funds. The location of property should be listed under the Comments section. Any property with a fair market value below $5,000 may be omitted from the inventory.


The EERE Contracting Officer has sole and exclusive authority to approve disposition plans and requests.

C. Software Deliverable Submission (Deleted, Not Required)

E. Other (see Special Instructions) (Deleted, Not Required)

IV. OTHER REPORTING

14-0654-### Appendix G Federal Assistance Reporting Checklist Mod 14 9
### A. EERE 176: Intellectual Property Reporting Form

<table>
<thead>
<tr>
<th>Subrecipient submit to:</th>
<th>NC State Office of Technology Transfer (<a href="mailto:techtransfer@ncsu.edu">techtransfer@ncsu.edu</a>) &amp; PowerAmerica Subawards Manager (<a href="mailto:randy_bickford@ncsu.edu">randy_bickford@ncsu.edu</a>) with cc to Program Manager (<a href="mailto:rasulliv@ncsu.edu">rasulliv@ncsu.edu</a>)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Submission deadline:</td>
<td>Within five (5) calendar days after the event, or as specified</td>
</tr>
<tr>
<td>Confidentiality</td>
<td>All Intellectual Property reports and any related information regarding an invention, including information on new, improved or background IP will be treated as CONFIDENTIAL by all parties. As such may only be shared with the disclosing entity, NCSU Officials, PowerAmerica Officials and DOE Officials without the prior approval of the disclosing entity. See Appendix A</td>
</tr>
</tbody>
</table>

The iEdison requires a login and password. If the Recipient’s organization does not already have an iEdison administrator account, the Recipient may register for one at:
https://public.era.nih.gov/iedison/public/institution/registration/RegistrationRequestForm.jsp

In accordance with the patent rights clause of the award, the recipient and subrecipient(s), if any, must complete the following intellectual property reports in iEdison when applicable:

1. Disclosing a subject invention, including anticipated uses and sales (use iEdison’s Invention Report);

2. Reporting publications, manuscript submissions, or other public disclosures concerning a subject invention (add documents to the Invention Report);

3. If authorized by the award agreement, electing (or declining) to retain title to a subject invention (modify the Invention Report and input “Title Election Date” or “Not Elect Title Reason”);

4. Disclosing the filing or termination of patent applications on a subject invention (i.e., patent applications disclosing or claiming a subject invention). Patent disclosures must be made (using iEdison's Patent Report) for filing the following patent applications:
   - An initial domestic patent application (including provisional or non-provisional);
   - A domestic divisional or continuation patent application;
   - A domestic continuation-in-part application; and
   - A foreign patent application.

5. Discontinuing prosecution of a patent application, maintenance of a patent, or defense in a patent reexamination or opposition proceeding, regardless of jurisdiction (modify the Patent Report);

6. Requesting an extension of time to:
   - Elect (or decline) to retain title to a subject invention (modify the Invention Report); and
   - File an initial domestic or foreign patent application (modify the Invention Report).
Failure to submit Intellectual Property Reporting Forms in a timely manner may result in forfeiture of the recipient’s or subrecipient’s rights in the subject inventions and related patent applications.

B. EERE 177: Invention Utilization Report

<table>
<thead>
<tr>
<th>Subrecipient submit to:</th>
<th>NC State Office of Technology Transfer [<a href="mailto:techtransfer@ncsu.edu">techtransfer@ncsu.edu</a>] &amp; PowerAmerica Subawards Manager [<a href="mailto:randy_bickford@ncsu.edu">randy_bickford@ncsu.edu</a>] with cc to Program Manager [<a href="mailto:rasulliv@ncsu.edu">rasulliv@ncsu.edu</a>]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Submission deadline:</td>
<td>Within 60 calendar days after the end of the annual reporting period (Reports are due one year after the disclosure date of each subject invention and must continue to be provided for 10 years after the date of disclosure)</td>
</tr>
</tbody>
</table>

The recipient and subrecipient(s), if any, must provide Invention Utilization Reports for any subject inventions made under the award. Reports are due one year after the disclosure date of each subject invention and must continue to be provided for 10 years after the date of disclosure. Failure to submit Invention Utilization Reports in a timely manner may result in forfeiture of the recipient’s or subrecipient’s rights in the subject inventions.

C. EERF 178: U.S. Manufacturing Report (Deleted, Not Required)

D. EERE 185: Project Management Plan (PMP) (Deleted, Not Required)

E. Annual Incurred Cost Proposals

| Subrecipient submission guidance: | If subrecipient has a federally approved rate, submit to subrecipient’s cognizant agency within 180 days of subrecipient’s Fiscal Year. If subrecipient does not have an approved rate, or has elected to take the 10% de minimis rate, then no submission is required. |

The Prime Recipient and Subrecipient must submit an Annual Incurred Cost Proposal, reconciled to its financial statements unless the award is based on a predetermined or fixed indirect rate(s) or a fixed amount for indirect or facilities and administration (F&A) costs. The Prime Recipient must submit its Annual Incurred cost proposal directly to the Cognizant Federal Agency for negotiating and approving indirect costs.

F. Annual Audits of For-Profit Recipients (Deleted, Not Required)

G. Single Audit: States, Locals, Tribal Governments, and Non-Profits

<table>
<thead>
<tr>
<th>Subrecipient submit to:</th>
<th>Federal Auditor Clearinghouse - <a href="https://harvester.census.gov/facweb/Default.aspx">https://harvester.census.gov/facweb/Default.aspx</a></th>
</tr>
</thead>
<tbody>
<tr>
<td>Submission deadline:</td>
<td>Within the earlier of 30 days after receipt of the auditor’s report(s) or 9 months after the end of the audit period (Recipient’s fiscal year-end)</td>
</tr>
</tbody>
</table>
As required by 2 CFR 200 Subpart F, non-federal entities that expend $750,000 or more during the recipient entity’s fiscal year in federal awards must have a single or program-specific audit conducted. The single audit must be conducted in accordance with §200.514 Scope of audit, except when it elects to have a program-specific audit conducted.

For most single audits, the requirement is for annual single audits. However, there are occasions where a single audit is not required annually. Per 2 CFR 200.504 - Frequency of audits, a state, local government, or Indian tribe that is required by constitution or statute to undergo its audits less frequently than annually, is permitted to undergo its audits biennially. Also, any nonprofit organization that had biennial audits for all biennial periods ending between July 1, 1992, and January 1, 1995, is permitted to undergo its single audits biennially.

For a program-specific audit, when a recipient expends federal awards under only one Federal program (excluding R&D) and the Federal program's statutes, regulations, or the terms and conditions of the Federal award do not require a financial statement audit of the auditee, the auditee may elect to have a program-specific audit conducted. A program-specific audit may not be elected for R&D unless all of the Federal awards expended were received from the same Federal agency, or the same Federal agency and the same pass-through entity, and that Federal agency, or pass-through entity in the case of a subrecipient, approves in advance a program-specific audit.

The single audit report(s) must be submitted to DOE within the earlier of thirty days after receipt of the auditor’s report(s) or nine months after the end of the audit period (recipient’s fiscal year-end). The compliance audit report must be submitted, along with audited financial statements (if applicable), to the Federal Audit Clearinghouse website.

H. Annual Property Inventory (Deleted, Not Required)
I. EEER 179: Reporting Addendum (Deleted, Not Required)
J. Uniform Commercial Code (UCC) Financing Statements (Deleted, Not Required)
K. Federal Subaward Reporting System (FSRS) (Deleted, Not Required)
L. Other (see Special Instructions) (Deleted, Not Required)

Reporting Checklist APPENDIX A

NOTICE TO RECIPIENTS (PRIME RECIPIENTS AND SUBRECIPIENTS) REGARDING CONFIDENTIAL INFORMATION AND DATA AND PROTECTED PERSONALLY IDENTIFIABLE INFORMATION
I. PROTECTED DATA AND LIMITED RIGHTS DATA

The Recipient is required to mark protected data and limited rights data in accordance with the IP clause set of the award agreement. Failure to properly mark data may result in its public disclosure under the Freedom of Information Act (FOIA, 5 U.S.C. § 552) or otherwise.

A. Protected Data - Technical Data or Commercial or Financial Data First Produced in the Performance of the Award

The U.S. Government normally retains unlimited rights in any technical data or commercial or financial data produced in performance of Government financial assistance awards, including the right to distribute to the public.

However, under certain EERE awards, the Recipient may mark certain categories of data produced under the award as protected from public disclosure for up to five years after the data is produced ("Protected Data"). If the award agreement provides for protected data and the Recipient wants the data to be protected, the Recipient must properly mark any documents containing Protected Data as set forth in the IP clause set of the award agreement.

B. Limited Rights Data - Data Produced Outside of the Award at Private Expense

Limited Rights Data is data (other than computer software) developed at private expense outside any Government financial assistance award or contract that embody trade secrets or are commercial or financial and confidential or privileged. Prior to including any Limited Rights Data in any documents to EERE, the Recipient should review the award agreement. In most EERE awards, the Recipient should not deliver any limited rights data to EERE if the Recipient wants to protect the Limited Rights Data. If the EERE award does allow and require the delivery of limited rights data, then the Recipient must properly mark any documents containing Limited Rights Data as set forth in the IP clause of the award agreement.

II. PROTECTED PERSONALLY IDENTIFIABLE INFORMATION

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

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

Cost Share Contribution Report
| Personnel     | $ | $ | $ | $ | $ | $ | $ | $ | $ | $ | $ | $ | $ |
| Fringe Benefits | $ | $ | $ | $ | $ | $ | $ | $ | $ | $ | $ | $ | $ |
| Travel        | $ | $ | $ | $ | $ | $ | $ | $ | $ | $ | $ | $ | $ |
| Equipment     | $ | $ | $ | $ | $ | $ | $ | $ | $ | $ | $ | $ | $ |
| Supplies      | $ | $ | $ | $ | $ | $ | $ | $ | $ | $ | $ | $ | $ |
| Contractual   | $ | $ | $ | $ | $ | $ | $ | $ | $ | $ | $ | $ | $ |
| Construction  | $ | $ | $ | $ | $ | $ | $ | $ | $ | $ | $ | $ | $ |
| Other         | $ | $ | $ | $ | $ | $ | $ | $ | $ | $ | $ | $ | $ |
| **Total Direct Charges** | $ | $ | $ | $ | $ | $ | $ | $ | $ | $ | $ | $ | $ |
| **Indirect Charges** | $ | $ | $ | $ | $ | $ | $ | $ | $ | $ | $ | $ | $ |
| **Totals**    | $ | $ | $ | $ | $ | $ | $ | $ | $ | $ | $ | $ | $ |
## PowerAmerica Subrecipient Monthly Cost Share Contribution Report

<table>
<thead>
<tr>
<th>Subrecipient Name:</th>
<th>Subaward No.:</th>
<th>Report Prepared By:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2014-0654-##</td>
<td></td>
</tr>
</tbody>
</table>

### Budget Period 4 Contributions by Month

<table>
<thead>
<tr>
<th>Source or Type</th>
<th>BP 1-4 Committed Total</th>
<th>BP To Date Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>BP1-3 C/S</td>
<td></td>
</tr>
<tr>
<td></td>
<td>July 2018</td>
<td></td>
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<tr>
<td></td>
<td>Aug 2018</td>
<td></td>
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<td></td>
<td>Sept 2018</td>
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<td></td>
<td>Oct 2018</td>
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<td></td>
<td>Nov 2018</td>
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<td></td>
<td>Dec 2018</td>
<td></td>
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<tr>
<td></td>
<td>Jan 2019</td>
<td></td>
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<tr>
<td></td>
<td>Feb 2019</td>
<td></td>
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<tr>
<td></td>
<td>Mar 2019</td>
<td></td>
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<tr>
<td></td>
<td>Apr 2019</td>
<td></td>
</tr>
<tr>
<td></td>
<td>May 2019</td>
<td></td>
</tr>
<tr>
<td></td>
<td>June 2019</td>
<td></td>
</tr>
</tbody>
</table>

| Personnel          | $ -                    |                  |
| Fringe Benefits    | $ -                    |                  |
| Travel             | $ -                    |                  |
| Equipment          | $ -                    |                  |
| Supplies           | $ -                    |                  |
| Contractual        | $ -                    |                  |
| Other              | $ -                    |                  |
| Total Direct Charges | $ -                  |                  |
| Indirect Charges   | $ -                    |                  |

| Total Contributions| $ -                    |                  |

| Reimbursement/Invoice Total for the Month | $ - |
| Current Total Project Cost (Cost Share Contribution + Reimbursements) | $ - |
| Cost Share as a % of Total Project Cost | % | % | % | % | % | % | % | % | % | % | % | % |

### Monthly Report Status:
- Pending
- Pending
- Pending
- Pending
- Pending
- Pending
- Pending
- Pending
- Pending
- Pending
- Pending
- Pending

Certified as of: 5/6/2019

### Subrecipient Certifying Official:

"By submitting this Cost Share Contribution report to the PowerAmerica HQ, I, the authorized Subrecipient official named above, do certify to the best of my knowledge and belief that it is true, complete, and accurate; that the expenditures, disbursements and cash receipts are for the purposes and objectives set forth in the terms and conditions of our Federally funded subaward; that charges and cost share contributions are appropriately allocable to the project; that none of the charges or contributions claimed are duplicated in the pre-approved or proposed indirect cost rates; that all charges and contributions are exclusive of any profit or fee and that all work being claimed for reimbursement or as cost share contribution has been conducted within the U.S.A. I am aware that NC State University, as the prime recipient of Federal Funding being flowed down to my organization, will rely on this certification in support of their financial reporting and accountability responsibilities under the DOE Cooperative Agreement DE-EE0006521; that any false, fictitious, or fraudulent information, or the omission of any material fact, may subject me to criminal, civil or administrative penalties for fraud, false statements, false claims or otherwise. (U.S. Code Title 18, Section 1001, Title 31, Sections 3729–3730 and 3801–3812; NC False Claims Act: S1 NCGS 1 et seq.)."
APPENDIX I

Disclosure of Lobbying Activities
<table>
<thead>
<tr>
<th>1. Type of Federal Action:</th>
<th>2. Status of Federal Action:</th>
<th>3. Report Type:</th>
</tr>
</thead>
<tbody>
<tr>
<td>c contract</td>
<td>b a. bid/offer/application</td>
<td>☐ a. initial filing</td>
</tr>
<tr>
<td></td>
<td></td>
<td>b. initial award</td>
</tr>
<tr>
<td></td>
<td></td>
<td>c. post-award</td>
</tr>
<tr>
<td>d. loan</td>
<td></td>
<td></td>
</tr>
<tr>
<td>e. loan guarantee</td>
<td></td>
<td></td>
</tr>
<tr>
<td>f. loan insurance</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

For Material Change Only:
year __________ quarter __________
date of last report __________

4. Name and Address of Reporting Entity:  
☐ Prime  ☐ Subawardee  
Tier ______, if known:

Congressional District, if known:  

5. If Reporting Entity in No. 4 is a Subawardee, Enter Name and Address of Prime:
North Carolina State University  
2701 Sullivan Dr. Suite 240  
Campus Box 7514  
Raleigh, NC 27695-7514  

Congressional District, if known:  

6. Federal Department/Agency:  
U.S. Department of Energy

7. Federal Program Name/Description:  
Clean Energy Manufacturing Innovation Institute
CFDA Number, if applicable: 81.086

8. Federal Action Number, if known:  
DE-EERE0006521

9. Award Amount, if known:  
$16,083,476

10. a. Name and Address of Lobbying Registrant (if individual, last name, first name, MI):  

b. Individuals Performing Services (including address if different from No. 10a) (last name, first name, MI):  

11. Information requested through this form is authorized by title 31 U.S.C. section 1352. This disclosure of lobbying activities is a material representation of fact upon which reliance was placed by the tier above when this transaction was made or entered into. This disclosure is required pursuant to 31 U.S.C. 1352. Any person who fails to file the required disclosure shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

Signature: ___________________________  
Print Name: ___________________________  
Title: ___________________________  
Telephone No.: ___________________________  
Date: ___________________________

Authorized for Local Reproduction  
Standard Form LLL (Rev. 7-97)
INSTRUCTIONS FOR COMPLETION OF SF-LLL, DISCLOSURE OF LOBBYING ACTIVITIES

This disclosure form shall be completed by the reporting entity, whether subawardee or prime Federal recipient, at the initiation or receipt of a covered Federal action, or a material change to a previous filing, pursuant to title 31 U.S.C. section 1352. The filing of a form is required for each payment or agreement to make payment to any lobbying entity for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with a covered Federal action. Complete all items that apply for both the initial filing and material change report. Refer to the implementing guidance published by the Office of Management and Budget for additional information.

1. Identify the type of covered Federal action for which lobbying activity is and/or has been secured to influence the outcome of a covered Federal action.

2. Identify the status of the covered Federal action.

3. Identify the appropriate classification of this report. If this is a followup report caused by a material change to the information previously reported, enter the year and quarter in which the change occurred. Enter the date of the last previously submitted report by this reporting entity for this covered Federal action.

4. Enter the full name, address, city, State and zip code of the reporting entity. Include Congressional District, if known. Check the appropriate classification of the reporting entity that designates it is, or expects to be, a prime or subaward recipient. Identify the tier of the subawardee, e.g., the first subawardee of the prime is the 1st tier. Subawards include but are not limited to subcontracts, subgrants and contract awards under grants.

5. If the organization filing the report in item 4 checks "Subawardee," then enter the full name, address, city, State and zip code of the prime Federal recipient. Include Congressional District, if known.

6. Enter the name of the Federal agency making the award or loan commitment. Include at least one organizational level below agency name, if known. For example, Department of Transportation, United States Coast Guard.

7. Enter the Federal program name or description for the covered Federal action (Item 1). If known, enter the full Catalog of Federal Domestic Assistance (CFDA) number for grants, cooperative agreements, loans, and loan commitments.

8. Enter the most appropriate Federal identifying number available for the Federal action identified in item 1 (e.g., Request for Proposal (RFP) number; Invitation for Bid (IFB) number; grant announcement number; the contract, grant, or loan award number; the application/proposal control number assigned by the Federal agency). Include prefixes, e.g., "RFP-DE-90-001."

9. For a covered Federal action where there has been an award or loan commitment by the Federal agency, enter the Federal amount of the award/loan commitment for the prime entity identified in item 4 or 5.

10. (a) Enter the full name, address, city, State and zip code of the lobbying registrant under the Lobbying Disclosure Act of 1995 engaged by the reporting entity identified in item 4 to influence the covered Federal action.

(b) Enter the full names of the individual(s) performing services, and include full address if different from 10 (a). Enter Last Name, First Name, and Middle Initial (M).

11. The certifying official shall sign and date the form, print his/her name, title, and telephone number.
APPENDIX J

Invoice Supporting Document
Subrecipient Non-Proprietary Invoice Supporting Document

Subrecipient Name:


This form is mandatory for all subrecipients. This form must accompany a standard business invoice submitted to NCSU/Power America under the Subaward identified above. Use this form only for non-proprietary information. It must sufficiently describe the costs incurred to be reimbursed by Federal funds and costs incurred as Cost Share Contribution. This document should present a Non-disclosing level of detail to Prime Recipient to support payment. Recipient will pass this document on to the EERE representative as required to support its invoices and cost share contribution reports.

In the event that EERE/DOE requires information to supplement this form that the Subrecipient considers proprietary, Subrecipient will be instructed to submit that information directly to the DOE EERE Contracting Officer for review.

<table>
<thead>
<tr>
<th>Invoice Number:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Budget Period:</td>
</tr>
<tr>
<td>Start:</td>
</tr>
<tr>
<td>End:</td>
</tr>
<tr>
<td>Current Period Covered</td>
</tr>
<tr>
<td>Start:</td>
</tr>
<tr>
<td>End:</td>
</tr>
<tr>
<td>SOPO Task Number</td>
</tr>
<tr>
<td>Date Submitted:</td>
</tr>
</tbody>
</table>

1. Summary Cost Breakout: This table must be submitted as an Excel spreadsheet. A worksheet is embedded here or you may attach a separate native Excel file with this report. Double click to enter amounts here, round Totals to the nearest dollar.

<table>
<thead>
<tr>
<th>Expenditures</th>
<th>Approved Budget Period Amounts*</th>
<th>Current Fed Share</th>
<th>Current Cost Share</th>
<th>Cumulative Fed Share**</th>
<th>Cumulative Cost Share**</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personnel</td>
<td>$0.00</td>
<td>$0.00</td>
<td>$0.00</td>
<td>$0.00</td>
<td>$0.00</td>
</tr>
<tr>
<td>Fringe Benefits</td>
<td>$0.00</td>
<td>$0.00</td>
<td>$0.00</td>
<td>$0.00</td>
<td>$0.00</td>
</tr>
<tr>
<td>Travel</td>
<td>$0.00</td>
<td>$0.00</td>
<td>$0.00</td>
<td>$0.00</td>
<td>$0.00</td>
</tr>
<tr>
<td>Equipment</td>
<td>$0.00</td>
<td>$0.00</td>
<td>$0.00</td>
<td>$0.00</td>
<td>$0.00</td>
</tr>
<tr>
<td>Supplies</td>
<td>$0.00</td>
<td>$0.00</td>
<td>$0.00</td>
<td>$0.00</td>
<td>$0.00</td>
</tr>
<tr>
<td>Contractual</td>
<td>$0.00</td>
<td>$0.00</td>
<td>$0.00</td>
<td>$0.00</td>
<td>$0.00</td>
</tr>
<tr>
<td>Other Direct Cost</td>
<td>$0.00</td>
<td>$0.00</td>
<td>$0.00</td>
<td>$0.00</td>
<td>$0.00</td>
</tr>
<tr>
<td>Indirect Charges</td>
<td>$0.00</td>
<td>$0.00</td>
<td>$0.00</td>
<td>$0.00</td>
<td>$0.00</td>
</tr>
<tr>
<td><strong>Total Costs</strong></td>
<td><strong>$0.00</strong></td>
<td><strong>$0.00</strong></td>
<td><strong>$0.00</strong></td>
<td><strong>$0.00</strong></td>
<td><strong>$0.00</strong></td>
</tr>
</tbody>
</table>

Payment Requested This Period: $0
Percent Cost Share for This Invoice: #DIV/0!
Total Cost Share Percentage To Date: #DIV/0!

*Approved Budget Period Amounts found on NCSU/Power America Assistance Subaward form, Block 15.
**Cumulative amounts should include the amounts from this invoice; all costs to date are included.

If your cost share percentage is below the award’s requirement, please provide an explanation and your plan to correct this situation.
2. Research Subcontracts Breakdown: List each sub-recipient/vendor that is included in the contractual cost total from the table above.

<table>
<thead>
<tr>
<th>Name of Sub-recipient/ Vendor</th>
<th>Federal Share</th>
<th>Cost Share</th>
<th>Total Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Total:

3. Narrative Discussion of Costs

(In items 4 – 9) Please provide an explanation of how the direct costs listed above were expended for the period reimbursement is being requested. Please reference specific SOPO tasks in your explanation. Include specific details as described below. Your project costs should be consistent with the current SF 424A form, Appendix F of your Subaward. If costs in a given category exceed 10% of the estimated costs in the SF 424A form for the current approved budget period, an explanation is required.

4. Personnel & Fringe: Subrecipient must provide the Recipient a description of the basis for the value of the reimbursement requested or cost share contributed. For example, contributions of Labor must describe the type of employee (e.g. Engineer, Technician, or software developer), an individual or average fully burdened rate and number of hours contributed. Contributions of services and technical support must identify the rate used and volume or number of actions. If the Recipient or EERE request additional description/explanation or back-up documentation that Subrecipient considers proprietary, Subrecipient may elect to submit the information or documentation directly to the EERE Project Officer for review. Subrecipient must notify PowerAmerica Administrative POC whenever such information is submitted.

5. Travel: Explain the purpose of each travel, # of travelers and a breakdown of costs (airfare, hotel, etc.) associated with the travel. A separate breakdown of travel costs may be attached. Note that applicable principles for allowable costs for travel are identified 10CFR600.127. Note Foreign travel must be pre-approved by DOE prior to incurring the costs.
6. **Equipment**: List equipment purchased below, and which task(s) it supports. Attach receipts for any equipment exceeding $50K. If it is existing equipment, and the value of its contribution to the project budget is being shown as cost share, provide support for the value being incurred. Note equipment purchased from foreign sources.

7. **Supplies**: Provide a description of the supply items purchased, and the task(s) for which the supplies will be utilized. Note supplies purchased from foreign sources.

8. **Contractual (Other than Equipment and Supplies)**: Backup information for contractual items should contain the same level of detail as for the prime recipient as described above. The backup also needs to include the invoice from the subawardee or vendor showing that the invoice has been paid. A separate backup document may be needed for this information.

9. **Other Direct Costs**: Backup information for other direct costs should include a description of the costs incurred, and the task(s) for which the costs were incurred.

10. **List Attachments**: When requested, attach any receipts, invoices, and any other documents needed to support the incurred costs and requested reimbursement of the DOE share.

   a.

   b.
11. Certification:

"By submitting this report in support of invoice No.____ on Date: _________ to the PowerAmerica HQ, I, the authorized Subrecipient official named above, do certify to the best of my knowledge and belief that it is true, complete, and accurate. I certify that the expenditures and or disbursements are for the purposes and objectives set forth in the terms and conditions of our Federally funded subaward; that charges are appropriately allocable to the project; that none of the charges are duplicated in the pre-approved or proposed indirect cost rates; that all charges are based upon rates that have been established in accordance with Generally Accepted Accounting Principles, and after the exclusion of profit or fee equal rates charged to other Government contracts or are equal to or lower than our most favorable commercial rates charged for the same work. I further certify that all work being charged on this invoice was conducted within the U.S.A. I am aware that NC State University, as the prime recipient of Federal Funding being flowed down to my organization, will rely on this certification in support of their financial reporting and accountability responsibilities under the DOE Cooperative Agreement DE-EE0006521; that any false, fictitious, or fraudulent information, or the omission of any material fact, may subject me to criminal, civil or administrative penalties for fraud, false statements, false claims or otherwise in accordance with U.S. Code Title 18, Section 1001; Title 31, Sections 3729–3730 and 3801–3812; NC False Claims Act: 51 NCGS 1 et seq."

Signed: ____________________________________________ Date: ____________________

Name, 
Title: