

SAMPLE REPORTING REQUIREMENTS (FOSSIL ENERGY AND CARBON MANAGEMENT AWARDS)

DOE F 4600.2
(NETL 08/2023)
All Other Editions Are Obsolete

**U.S. Department of Energy
FEDERAL ASSISTANCE REPORTING CHECKLIST
AND INSTRUCTIONS**

ATTACHMENT 3

<p>1. Award Number: DE-FE</p>	<p>2. Program/Project Title:</p>	
<p>3. Recipient:</p>		
<p>4. Reporting Requirements: (See attached "Federal Assistance Reporting Instructions" for additional guidance)</p> <p>I. PROJECT MANAGEMENT REPORTING</p> <p><input type="checkbox"/> A. Research Performance Progress Report (RPPR) (RD&D Projects)</p> <p><input type="checkbox"/> B. Progress Report (Non-RD&D Projects)</p> <p><input checked="" type="checkbox"/> C. Special Status Report</p> <p><input type="checkbox"/> D. Community Benefits Plan</p> <p><input checked="" type="checkbox"/> E. Current and Pending Support</p> <p><input type="checkbox"/> F. Other (see special instructions)</p> <p>II. SCIENTIFIC/TECHNICAL REPORTING</p> <p><input checked="" type="checkbox"/> A. Accepted Manuscript of Journal Article</p> <p><input checked="" type="checkbox"/> B. Scientific/Technical Conference Paper/Presentation/Proceeding</p> <p><input type="checkbox"/> C. Scientific/Technical Software & Manual</p> <p><input type="checkbox"/> D. Scientific/Technical Dataset</p> <p><input checked="" type="checkbox"/> E. Other STI (e.g., dissertation/thesis, see instructions)</p> <p><input checked="" type="checkbox"/> F. Final Scientific/Technical Report</p> <p><input type="checkbox"/> F.1. Final Scientific/Technical Report – Unlimited</p> <p><input type="checkbox"/> F.2. Final Scientific/Technical Report – Data Protection</p> <p>III. FINANCIAL REPORTING</p> <p><input checked="" type="checkbox"/> A. Federal Financial Report (SF-425)</p> <p><input checked="" type="checkbox"/> B. Financial Conflict of Interest Report</p> <p>IV. CLOSEOUT REPORTING</p> <p><input checked="" type="checkbox"/> A. Invention Certification (DOE F 2050.11)</p> <p><input checked="" type="checkbox"/> B. Tangible Personal Property Report – Final Report (SF-428 & 428B)</p> <p><input type="checkbox"/> C. Other (see special instructions)</p> <p>V. OTHER REPORTING</p> <p><input type="checkbox"/> A. Annual Incurred Cost Proposal</p> <p><input type="checkbox"/> B. DOE For-Profit Compliance Audit</p> <p><input checked="" type="checkbox"/> C. Tangible Personal Property Report Forms Family (SF-428)</p> <p><input checked="" type="checkbox"/> D. Intellectual Property Reporting</p> <p><input checked="" type="checkbox"/> E. Invention Utilization Report</p> <p><input checked="" type="checkbox"/> F. Federal Subaward Reporting System</p> <p><input type="checkbox"/> G. Uniform Commercial Code (UCC) Financing Statements</p> <p><input type="checkbox"/> H. Other (see special instructions)</p>	<p>Frequency</p>	<p>Addressees*</p> <p>*See attached "Federal Assistance Reporting Instructions" for complete submission instructions.</p>
	Q	FITS@NETL.DOE.GOV
	Q	FITS@NETL.DOE.GOV
	A	FITS@NETL.DOE.GOV
	A	FITS@NETL.DOE.GOV
	A	FITS@NETL.DOE.GOV
	A	FITS@NETL.DOE.GOV
	A, P	https://www.osti.gov/elink/2413-submission.jsp
	A, P	https://www.osti.gov/elink/2413-submission.jsp
	A, P	https://www.osti.gov/doecode/
	A, P	https://www.osti.gov/elink/2416-submission.jsp
	A, P	https://www.osti.gov/elink/2413-submission.jsp
	F	https://www.osti.gov/elink/2413-submission.jsp
	F	https://www.osti.gov/elink/2413-submission.jsp
	Q, F	FITS@NETL.DOE.GOV
	A, Y	FITS@NETL.DOE.GOV
	F	FITS@NETL.DOE.GOV
	F	FITS@NETL.DOE.GOV
	A	See block 5 below for special instructions.
	O/Y180	See block 5 below for special instructions.
	O	See block 5 below for special instructions.
	A	FITS@NETL.DOE.GOV
	A, P	https://www.nist.gov/iedison
	A, P	https://www.nist.gov/iedison
	A	https://www.fsrs.gov
	O	See block 5 below for special instructions.
	A	See block 5 below for special instructions.

VI. POST-PROJECT REPORTING		
<input checked="" type="checkbox"/> A. Scientific and Technical Reporting	O/Y180	See block 5 below for special instructions.
<input checked="" type="checkbox"/> B. Intellectual Property Reporting	O	See block 5 below for special instructions.

FREQUENCY CODES AND DUE DATES:

- A - Within 5 calendar days after the event or as specified.
- F - Final; 120 calendar days after the project period of performance ends or termination of the award.
- Y - Yearly; 90 calendar days after the reporting period ends or termination of the award.
- S - Semiannually; within 30 calendar days after end of the project year and project half-year.
- Q - Quarterly; within 30 days after end of the reporting period. (Deadline: January 30th, April 30th, July 30th, and October 30th)
- Y180 - Yearly; 180 days after the end of the Recipient's fiscal year
- O - Other; See special instructions for further details.
- P - Post-Project (after the period of performance); within five (5) calendar days after the event, or as specified

5. Special Instructions:

Recipient's fiscal year end date: [CS/GMS to insert date as Month/Day]

- No indirect costs proposed
- De minimis rate used

V. Other Reporting:

A. Annual Incurred Cost Proposal:

NETL is the Cognizant Federal Agency responsible for negotiating and approving the Recipient's indirect costs. See "Federal Assistance Reporting Instructions" for specific guidance.

B. DOE For-Profit Compliance Audit:

If the Recipient is a for-profit entity and expends \$750,000 or more in DOE awards during their fiscal year, the Recipient must have a compliance audit conducted for that year. See "Federal Assistance Reporting Instructions" for specific guidance.

G. Uniform Commercial Code (UCC) Financing Statements:

If a piece of equipment is planned to be purchased by a for-profit Recipient or a for-profit Subrecipient with either Federal and/or non-Federal funds, and when the DOE share of the award exceeds \$1M, the for-profit Recipient or the for-profit Subrecipient must record Uniform Commercial Code (UCC) financing statement(s) before being reimbursed for the DOE share of the equipment. See "Federal Assistance Reporting Instructions" for specific guidance.

Table of Contents

I. PROJECT MANAGEMENT REPORTING	5
A. Research Performance Progress Report (RPPR) (RD&D Projects)	5
B. Progress Report (Non-RD&D Projects).....	6
C. Special Status Report	8
D. Community Benefits Plan.....	9
E. Current and Pending Support	9
II. SCIENTIFIC/TECHNICAL REPORTS	10
A. Accepted Manuscript of Journal Article.....	11
B. Scientific/Technical Conference Paper/Presentation/Proceeding	12
C. Scientific/Technical Software & Manual.....	13
D. Scientific/Technical Datasets	13
E. Other STI	14
F. Final Scientific/Technical Report.....	14
III. FINANCIAL REPORTING	17
A. Federal Financial Report (SF-425)	17
B. Financial Conflict of Interest Report	17
IV. CLOSEOUT REPORTS	17
A. Invention Certification (DOE F 2050.11)	17
B. Tangible Personal Property Report – Final Report (SF-428 & SF-428B).....	18
V. OTHER REPORTING	18
A. Annual Incurred Cost Proposal	18
B. DOE For-Profit Compliance Audit	18
C. Tangible Personal Property Report Forms Family (SF-428)	19
D. Intellectual Property Reporting	19
E. Invention Utilization Report.....	20
F. Federal Subaward Reporting System (FSRS).....	20
G. Uniform Commercial Code (UCC) Financing Statements.....	21
VI. POST-PROJECT REPORTING	21
A. Scientific and Technical Reporting	21
B. Intellectual Property Reporting	22

ATTACHMENT 1	23
RESEARCH PERFORMANCE PROGRESS REPORT	23
APPENDIX FOR RPPR	34

Federal Assistance Reporting Instructions (08/2023)

GUIDELINES FOR ELECTRONIC SUBMISSION AND FILE FORMAT OF NON-SCIENTIFIC/TECHNICAL REPORTS (includes project management, financial, closeout and other reporting).

The electronic file(s) must be submitted via email at: FITS@NETL.DOE.GOV. Reports submitted are limited to a combined file size of 25 megabytes per e-mail. If submissions are greater than 25 megabytes, it will require multiple e-mails. If multiple e-mails are required, the subject line should indicate the total number of e-mails to be submitted and the sequence of the e-mail number (i.e. 1 of 3).

The e-mail message sent in conjunction with the file **must** contain the following information:

DOE Award Number
Type of Report(s)
Frequency of Report(s)
Reporting Period (if applicable)
Name of Submitting Organization
Name, Phone Number and Fax Number of Preparer

I. PROJECT MANAGEMENT REPORTING

For awards involving Research Development and Deployment (RD&D) a Research Performance Progress Report is required to be submitted. For all other awards a Progress Report is required to be submitted.

MANAGEMENT REPORTS SHOULD ONLY INCLUDE LIMITED RIGHTS DATA (SUCH AS TRADE SECRET, PROPRIETARY OR BUSINESS SENSITIVE INFORMATION) IN VERY LIMITED INSTANCES AND ONLY IF REQUESTED BY THE DOE PROJECT OFFICER.

Either the Research Performance Progress Report (RPPR) or the Progress Report must be checked, but not both.

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

See the attachment entitled "Research Performance Progress Report" for instructions on what the Recipient is to include in the RPPR.

B. Progress Report (Non-RD&D Projects)

The Recipient must provide a concise narrative assessment of the status of work and include the following information and any other information identified under Special Instructions on the Federal Assistance Reporting Checklist:

1. The DOE award and report information:
 - a. Federal Agency and Organization Element to Which Report is Submitted
 - b. Federal Grant or Other Identifying Number Assigned by Agency
 - c. Project Title
 - d. PD/PI Name, Title and Contact Information (e-mail address and phone number)
 - e. Business Contact Name, Title and Contact Information (e-mail address and phone number)
 - f. Name of Submitting Official, Title, and Contact Information (e-mail address and phone number), if other than PD/PI
 - g. Submission Date
 - h. Unique Entity Identifier (UEI)
 - i. Recipient Organization (Name and Address)
 - j. Project/Grant Period of Performance (Start Date, End Date)
 - k. Reporting Period End Date
 - l. Current Report Term or Frequency (annual, semi-annual, quarterly, final, other)
 - m. Certification by the Submitting Official that includes: Signature of Submitting Official (electronic signatures (i.e., Adobe Acrobat) are acceptable); date of signature; and the following certification statement:

By signing this report, I certify to the best of my knowledge and belief that the report is true, complete, and accurate. I am aware that any false, fictitious, or fraudulent information, misrepresentations, half-truths, 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, Section 287 and Title 31, Sections 3729-3730). I further understand and agree that the information contained in this report are material to Federal agency's funding decisions and I have an ongoing responsibility to promptly update the report within the time frames stated in the terms and conditions of the above referenced Award, to ensure that my responses remain accurate and complete.

2. A written comparison of the actual project accomplishments with the project goals and objectives established for the reporting period; if goals and/or objectives for the reporting period were not met, a detailed description of the variance shall be provided.
3. A discussion of what was accomplished under these goals and objectives established for this reporting period, including major activities, significant results, major findings or conclusions, key outcomes or other achievements. This section should not contain any proprietary data or other information not subject to public release. If such information is important to reporting progress, do not include the information, but include a note in the report advising the reader to contact the Principal Investigator or the Project Director for further information.

A suggested format is:

Approach - this should describe, or reference all experimental, analytical and fabrication methods being used for the research and development efforts. It should also provide detail about materials and equipment being used. Standard methods can be referenced to the appropriate literature, where details can be obtained. Equipment should be described only if it is not standard, or if information is not available through the literature or other reference publications.

Results and Discussion - It is extremely important that this section includes enough relevant data, especially statistical data, to allow the project manager to justify the conclusions. With the relevant data, explain how the data was interpreted and how it relates to the original purpose of the research. Be concise in the discussion on how this research effort solved or contributed to solving the original problem. When investigation methods and/or procedures are being utilized for the first time, they must be described in detail. This description must contain detailed information on equipment and procedures utilized, as well as providing a rationale for their use and the accuracy of the method.

Conclusion - The conclusion should not simply reiterate what was already included in the "Results and Discussion" section. It should, however, summarize what has already been presented, and include any logical implications of how the successes are relevant to technology development in the future. This is extremely important, since "relevancy" continues to be a criterion of the program.

4. Cost Status. A comparison of the approved budget by budget period and the actual costs incurred during the reporting period shall be provided. If cost sharing is required, the cost breakdown shall show the DOE share, Recipient share, and total costs.
5. Schedule Status. List milestones, anticipated completion dates and actual completion dates. If you submitted a project management plan with your application, you must use this plan to report schedule and budget variances. You may use your own project management system to provide this information.
6. Describe any changes during the reporting period in project approach and the reasons for these changes. Remember, significant changes to the project objectives and scope require prior approval by the Contracting Officer.
7. Describe any actual or anticipated problems or delays and any actions taken or planned to resolve them.
8. Describe any absence or changes of key personnel or changes in consortium/teaming arrangement during the reporting period.
9. List and describe any product produced or technology transfer activities accomplished during this reporting period, such as:
 - A. Publications (list journal name, volume, issue); conference papers; or other public releases of results. Attach or send copies of public releases to the DOE Program Manager identified in Block 15 of the Assistance Agreement Cover Page.
 - B. Web site or other Internet sites (list the URL) that reflect the results of this project.

- C. Networks or collaborations fostered.
- D. Technologies/Techniques (Identify and Describe).
- E. Inventions/Patent Applications (Identify and Describe with date of application)
- F. Other products, such as data or databases, physical collections, audio or video, software or NetWare, models, educational aid or curricula, instruments or equipment (Identify and Describe).

C. Special Status Report

The Recipient must report to DOE any of the following types of events by e-mail as soon as possible after they occur. Incidents must include the anticipated impact and remedial action to be taken to correct or resolve the problem/condition.

1. Developments that have a significant favorable impact on the project.
2. Problems, delays, or adverse conditions which materially impair the Recipient's ability to meet the objectives of the award or which may require DOE to respond to questions relating to such events from the public.
3. Any fatality or injuries requiring hospitalization arising out of or relating to work under the award.
4. Any significant environmental permit violation.
5. Any verbal or written notice of potential or actual violation of any environmental, safety, or health laws and regulations.
6. Any incident which causes a significant process or hazard control system failure.
7. Any event which is anticipated to cause a significant schedule slippage or cost increase.
8. Any damage to Government-owned equipment in excess of \$50,000.
9. Any incident arising out of or relating to work under the award that has the potential for high visibility in the media.
10. Any notices or claims of patent or copyright infringement arising out of or relating to the performance of the DOE award.
11. Refusal of a subrecipient to accept flow down requirements in the Special Terms and Conditions and/or any attachment to the DOE award.
12. Potential or actual violations of federal, state, and municipal laws arising out of or relating to work under the award.
13. Any improper claims or excess payments arising out of or relating to work under the award.

14. Potential or actual violations of the cost share requirements under the award.
15. Potential or actual noncompliance with DOE reporting requirements under the award.
16. Potential or actual violations of the lobbying restrictions in the award.
17. Potential or actual bankruptcy/insolvency of the prime recipient or subrecipient.
18. Potential or actual violation of U.S. export control laws and regulations arising out of or relating to the work under the award.

D. Community Benefits Plan

The Recipient must meet the stated objectives and milestones set forth in its Community Benefits Plan, which is incorporated into the Award as Attachment 6. A report on the Recipient's progress towards meeting the objectives and milestones set forth in the Community Benefits Plan must be included in the continuation application.

E. Current and Pending Support

Prior to award, the Recipient was required to provide current and pending support disclosure statements and a Curriculum Vitae (CV) or Biosketch for each principal investigator (PI) and senior/key personnel, at the recipient and subrecipient level, regardless of funding source. Throughout the life of the award, the Recipient must submit current and pending support disclosure statements and a CV or Biosketch for any new PI and senior/key personnel at the recipient and subrecipient level, added to the project funded under this Award within thirty (30) days of the individual joining the project. In addition, if there are any changes to current and pending support disclosure statements previously submitted to DOE, the Recipient must submit updated current and pending disclosure statements within thirty (30) days of the change. The Recipient must ensure all PIs and senior/key personnel at the recipient and subrecipient level, are aware of the requirement to submit updated current and pending support disclosure statements to DOE.

If there has been a change that would prompt the submission of a new or updated current and pending support disclosure, the instructions to complete the new or updated disclosure is listed below.

Current and pending support is intended to allow the identification of potential duplication, overcommitment, potential conflicts of interest or commitment, and all other sources of support. All PIs and senior/key personnel at the recipient and subrecipient level must provide a list of all sponsored activities, awards, and appointments, whether paid or unpaid; provided as a gift with terms or conditions or provided as a gift without terms or conditions; full-time, part-time, or voluntary; faculty, visiting, adjunct, or honorary; cash or in-kind; foreign or domestic; governmental or private-sector; directly supporting the individual's research or indirectly supporting the individual by supporting students, research staff, space, equipment, or other research expenses. All foreign government-sponsored talent recruitment programs must be identified in current and pending support.

For every activity, list the following items:

- The sponsor of the activity or the source of funding.
- The award or other identifying number.
- The title of the award or activity. If the title of the award or activity is not descriptive, add a brief description of the research being performed that would identify any overlaps or synergies with the proposed research.
- The total cost or value of the award or activity, including direct and indirect costs and cost share. For pending proposals, provide the total amount of requested funding.
- The award period (start date – end date).
- The person-months of effort per year being dedicated to the award or activity.
- Identify any overlap, duplication of effort, or synergistic efforts, with a description of the other award or activity to the current and pending support.
- Details of any obligations, contractual or otherwise, to any program, entity, or organization sponsored by a foreign government must be provided to DOE.

All PIs and senior/key personnel must provide a separate disclosure statement listing the required information above regarding current and pending support. The individual must sign and date their respective disclosure statement and include the following certification statement:

I, [Full Name and Title], certify to the best of my knowledge and belief that the information contained in this Current and Pending Support Disclosure Statement is true, complete and accurate. I understand that any false, fictitious, or fraudulent information, misrepresentations, half-truths, or omissions of any material fact, may subject me to criminal, civil or administrative penalties for fraud, false statements, false claims or otherwise. (18 U.S.C. §§ 1001 and 287, and 31 U.S.C. 3729-3730 and 3801-3812). I further understand and agree that (1) the statements and representations made herein are material to DOE's funding decision, and (2) I have a responsibility to update the disclosures during the period of performance of the award should circumstances change which impact the responses provided above.

The information may be provided in the format approved by the National Science Foundation (NSF), which may be generated by the Science Experts Network Curriculum Vita (SciENcv), a cooperative venture maintained at <https://www.ncbi.nlm.nih.gov/sciencv/>, and is also available at <https://www.nsf.gov/bfa/dias/policy/nsfapprovedformats/cps.pdf>. The use of a format required by another agency is intended to reduce the administrative burden to researchers by promoting the use of common formats. If the NSF format is used, the individual must still include a signature, date, and a certification statement using the language included in the paragraph above.

II. SCIENTIFIC/TECHNICAL REPORTS

The dissemination of scientific and technical information (STI) ensures public access to the results of federally funded research. STI refers to information products in any medium or format used to convey results, findings, or technical innovations from research and development or other scientific and technological work that are prepared with the intention of being preserved and disseminated in the broadest sense applicable (i.e., to the public or, in

the case of controlled unclassified information or classified information, disseminated among authorized individuals). By properly submitting STI to DOE Energy Link System (E-Link), the information will be made available to the public through OSTI.gov. Access to and archival of DOE-funded STI are managed by the DOE Office of Scientific and Technical Information (OSTI). For information about OSTI see <https://www.osti.gov>.

For more information on STI submittals, see <https://www.osti.gov/submit-sti>.

NOTE: SCIENTIFIC/TECHNICAL PRODUCTS INTENDED FOR PUBLIC RELEASE MUST NOT CONTAIN PROTECTED PERSONALLY IDENTIFIABLE INFORMATION (PII). PII is defined as any information about an individual which can be used to distinguish or trace an individual's identity. Some information that is considered to be PII is available in *public* sources such as telephone books, public websites, university listings, etc. This type of information is considered to be Public PII and includes, for example, first and last name, address, work telephone number, e-mail address, home telephone number, and general educational credentials. In contrast, *Protected* PII is defined as an individual's first name or first initial and last name in combination with any one or more of the following types of information: social security number, passport number, credit card numbers, clearances, bank numbers, biometrics, date and place of birth, mother's maiden name, criminal, medical and financial records, educational transcripts, etc., which could be mis-used if made publicly available.

A. Accepted Manuscript of Journal Article

Recipients are encouraged to publish their work in scholarly journals. When/if a recipient has an article accepted for publication in a peer-reviewed journal they are required to announce the publication to OSTI as detailed below.

Public access to scholarly publications is enabled by providing the Accepted Manuscript (AM) of the Journal Article 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 which contains information/data produced under the award, then the Recipient must submit an Announcement Notice (AN) 241.3 for the author's full-text version of the accepted manuscript, as described below, no later than the published online date of the article. The Federal Government's right to use the data produced under a Federal award is established in 2 CFR 200.315(d), U.S. Government's retained license to published results of federally funded research.

Content. The Recipient is to provide to DOE the final peer-reviewed AM, i.e., the version of the journal article content that has been peer reviewed and accepted for publication in a journal, by providing a persistent link to the accepted manuscript on the Recipient's publicly accessible institutional repository or submitting the full text (see Electronic Submission Process below). The Recipient should NOT submit the journal's published version of the article, i.e., the Recipient should NOT submit a copyrighted reprint. The Recipient should not submit the content of peer reviews or a commitment to publish. The Recipient should provide only the accepted manuscript content intended to be the published article.

DOE will make no additional review of the content of an AM because the AM is a version of the journal article with the content to be published (i.e., publicly released) by the journal publisher. The Recipient is responsible for ensuring the suitability of the content for public release. The terms and conditions of award provide that PII, proprietary, export control or

classified information shall be protected. DOE may choose to defer providing public access until an administrative interval period has passed.

The Recipient must self-certify at the time of submission to DOE via E-Link that the content is appropriate and that it is not a copyrighted reprint, i.e., the final version of the published article. Recipients are reminded that the article is to include an acknowledgement of Federal support and a disclaimer.

The recipient is also reminded that all data produced under the award should comply with the award's data management plan (DMP). The DMP provides a plan for making all research data displayed in publications resulting from the proposed work digitally accessible at the time of publication. At a minimum, the DMP (1) describes how data sharing and preservation will enable validation of the results from the proposed work, how the results could be validated if data are not shared or preserved and (2) has a plan for making all research data displayed in publications resulting from the proposed work digitally accessible at the time of publications.

Electronic Submission Process. The Accepted Manuscript of Journal Article must be announced via the DOE Energy Link System (E-Link) by submitting a completed DOE Announcement Notice (AN) 241.3 (<https://www.osti.gov/mlink/2413-submission.jsp>).

Within the AN 241.3, provide relevant journal information (article title, journal name, volume, issue, and any other pertinent publication information). Also provide a persistent link to the repository location of the accepted manuscript. An example of an acceptable persistent link is a URL to the specific location of the Accepted Manuscript of Journal Article hosted on a public, openly accessible university research publications website. If a persistent link is not available or if the website has access restrictions (preventing public access), then the Recipient must upload the full-text of the Accepted Manuscript using the AN 241.3 and E-Link instructions.

Full-text of the accepted manuscript must be in Adobe Portable Document Format (PDF) and be one integrated PDF file that contains all text, tables, diagrams, photographs, schematics, graphs, and charts. Please refer to <https://www.osti.gov/stip/about/faqs/what-type-of-pdf-for-submission> for PDF document creation.

B. Scientific/Technical Conference Paper/Presentation/Proceeding

Recipients are encouraged to announce scientific/technical conference papers/presentations/proceedings. The Recipient must submit a copy of any scientific/technical conference papers/presentations or proceedings to the DOE Energy Link System (E-Link). In addition, scientific/technical conference papers/presentations or proceedings must be accompanied by a completed DOE Form 241.3. The form and instructions are available on DOE E-Link at <https://www.osti.gov/mlink/2413-submission.jsp>.

The content of any scientific/technical conference papers/presentations or proceedings should include the following information: (1) name of conference; (2) location of conference; (3) date of conference; and (4) conference sponsor. Also include an acknowledgement of Federal support and a disclaimer as set forth in the award terms and conditions. Scientific/technical conference papers/presentations or proceedings must be submitted in the Adobe PDF format as one integrated PDF file containing all text, tables, diagrams, photographs, schematic, graphs, and charts.

DOE will not review conference papers/presentations or proceedings prior to making the document publicly available via OSTI since the document was already presented in a public setting. The Recipient is responsible for ensuring the suitability of the content for public release. The terms and conditions of award provide that PII, proprietary, export control or classified information shall be protected. The Recipient must self-certify at the time of submission to DOE E-Link that the content is appropriate for and has been publicly released.

C. Scientific/Technical Software & Manual

When a Recipient submits software to OSTI for dissemination, the following must be delivered: source code, the executable object code and the minimum support documentation needed by a competent user to understand and use the software and to be able to modify the software in subsequent development efforts, unless otherwise specified in the award.

DOE CODE is DOE's software services platform for submitting and searching for software resulting from DOE-funded research. Through submission to DOE CODE, users have the option to obtain a Digital Object Identifier (DOI) for the code, making it more easily discoverable, citable, and shared.

Content. When a Recipient submits software to OSTI through DOE CODE, a set of required metadata elements and a link to the software repository must be provided.

Electronic Submission Process. Recipients will submit software by going to <https://www.osti.gov/doecode/>. Before submissions can be made, the Recipient will be required to create an account. The Recipient may create an account by visiting the top right of the DOE CODE homepage. Once the account is created, submissions may be made through the submit software/code link on the homepage. For more information about DOE CODE please visit <https://www.osti.gov/doecode/faq>.

D. Scientific/Technical Datasets

Scientific/technical datasets (data-streams, data files, etc.) support the technical reports and published literature resulting from DOE-funded research. They are also recognized as valuable information entities in their own right that, now and in the future, need to be available for citation, discovery, retrieval, and reuse. The assignment and registration of a Digital Object Identifier (DOI) is a free service for DOE-funded researchers which is provided by OSTI to enhance access to this important resource. In order to obtain a DOI, provide to OSTI the specific data elements relevant to the dataset, as specified in DOE AN 241.6.

Content. If the Recipient generates publicly available datasets resulting from work funded by DOE, they may announce these datasets to OSTI and have them registered with DataCite to obtain a DOI, which ensures long-term linkage between the DOI and the dataset's location. To register and publicly announce a dataset, the Recipient must provide AN 241.6, including the required data elements needed for describing the dataset. Note: Do NOT submit the dataset itself, only the metadata for registering the dataset, obtaining a DOI, and announcing its availability.

Electronic Submission Process. Notification of scientific datasets must be submitted electronically via the DOE Energy Link System (E-Link) and must be accompanied by a completed DOE Announcement Notice (AN) 241.6 (<https://www.osti.gov/elink/2416-submission.jsp>). Within the AN 241.6, provide relevant information about the dataset as well as the URL where the dataset can be accessed.

E. Other STI

Recipients are encouraged to announce other forms of STI especially if they are the primary means by which certain research results are disseminated or if they contain research results not already announced to DOE by the Recipient in technical reports, accepted journal articles, conference products, software, datasets, or other STI.

Other types of STI produced which may be used for public dissemination of project results include: dissertation/thesis, patent, book, or other similar products. These types of STI may also be announced using DOE AN 241.3 by following instructions on the E-Link website (<https://www.osti.gov/elink/2413-submission.jsp>).

F. Final Scientific/Technical Report

For R&D type awards where a Final Scientific/Technical Report is required, Recipients are required to create and submit a final technical report.

The scientific/technical report is intended to increase the diffusion of knowledge gained by DOE-funded research, and all requirements shall be interpreted in that light.

Content. Research findings and other significant scientific and technical information (STI) resulting from the DOE-sponsored R&D project shall be included in the final scientific/technical report, subject to the following provisions:

1. The scientific/technical report is to cover the entire period of performance. For Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) awards, a final scientific/technical report must be submitted after the completion of each phase, e.g., Phase I, Phase II, and sequential Phase II, as described in the Special Instructions.
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, <https://www.osti.gov/pages/>) are accessible to the public.
3. Provide identifying information: the DOE award number; sponsoring program office; name of Recipient; project title; name of project director/principal investigator; and consortium/team members.
4. Include the DOE acknowledgment of Federal support and a legal disclaimer, which must appear in the publication of any material, as noted in the award terms and conditions.
5. Include any limitations on public release of the report, if authorized by the award terms and conditions. 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 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 <https://www.osti.gov/stip/about/statutory-authorities> 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.
8. For guidance offered by the National Information Standards Organization on typical attributes and content of a technical report, if needed, refer to ANSI/NISO Z39.18-2005 (R2010), Scientific and Technical Reports – Preparation, Presentation, and Preservation (see <https://www.osti.gov/stip/about/statutory-authorities> f).

Electronic Submission Process. The final scientific/technical report must be submitted via the DOE Energy Link System (E-Link) with a completed electronic version of DOE Announcement Notice (AN) 241.3, “U.S. Department of Energy (DOE), Announcement of Scientific and Technical Information (STI).” The Recipient can complete, upload, and submit the DOE AN 241.3 online via E-Link (<https://www.osti.gov/elink/2413-submission.jsp>).

Text documents must be submitted in Adobe Portable Document Format (PDF) and be one integrated PDF file that contains all text, tables, diagrams, photographs, schematics, graphs, and charts. Please refer to <https://www.osti.gov/stip/about/faqs/what-type-of-pdf-for-submission> for PDF document creation.

The recipient must mark the appropriate block in the “Intellectual Property/Distribution Limitations” Section of the DOE AN 241.3. Reports that are electronically uploaded must not contain any limited rights data (proprietary data), classified information, protected PII, information subject to export control classification, or other information not subject to release. During the upload process, the recipient must self-certify that no content of this nature is being submitted. For assistance with reports containing such content, contact the Contracting Officer.

Company Names and Logos – Except as indicated elsewhere, company names, logos, or similar material should not be incorporated into reports.

Copyrighted Material – Copyrighted material should not be submitted as part of a report unless written authorization to use such material is received from the copyright owner and is submitted to DOE with the report.

1. Final Technical Report – Unlimited:

If the award does **NOT** authorize the recipient, under the provisions of the Energy Policy Act of 2005, to protect the data produced during the award, where public release of the technical report is protected for a limited period-of-time, the technical report must be submitted to E-Link as a “Final Technical Report” (covering the entire project period of performance) and must not have any data protection markings on the cover page. The “STI Product Type” of “Technical Report” with the “Report Sub Type” of “Final Technical Report” must be selected. When submitting the final technical report to E-Link, the recipient must select “unlimited” from the Intellectual Property/Distribution Limitation selections. The final technical report will be released without any protections and may become publicly available immediately.

2. Final Technical Report – Protected Data:

If the award authorizes the recipient, under the provisions of the Energy Policy Act of 2005, to protect the data produced during the course of the award, where public release of the final technical report is protected for a limited period-of-time, and the recipient elects to protect the report, the recipient will be required to 1) submit a final technical report with the protected data (which will be protected during the identified data protection period) and 2) a version of the technical report that can be publicly disseminated immediately.

For the protected data version of the final technical report, the report must cover the entire project period of performance, include the proper data protection marking (included in the terms of the award), and place that marking on the cover page of the final technical report before submitting it to E-Link. The “STI Product Type” of “Technical Report” with the “Report Sub Type” of “Final Technical Report” must be selected. The recipient must also select the block in the Intellectual Property/Distribution Limitation section of the DOE AN 241.3 as “Protected Data” and provide a release date for the technical report when submitting the final technical report.

The release date is the date the technical report will become publicly available. The release date must be based on the data protection period authorized by the award. The data protection period is calculated beginning from the date the data was produced. The release date must coincide with the data marking on the technical report.

Additionally, the Department’s policy is to ensure timely public access to unrestricted scientific and technical research results. To make these results publicly accessible, even when the award authorizes the recipient to protect the data for a period-of-time, the recipient must also submit an “unlimited” version of the technical report. This version should not include any data subject to data protections. The “unlimited” version of the technical report must be uploaded to E-Link without any markings. The “STI Product Type” of “Technical Report” with the “Report Sub Type” of “Technical Report Other” must be selected. The recipient must select “unlimited” from the Intellectual Property/Distribution Limitation selections. The “unlimited” version of the technical report is submitted with unlimited data rights, and the Government assumes no liability for the disclosure, use or reproduction of such report.

III. FINANCIAL REPORTING

A. Federal Financial Report (SF-425)

Recipients must complete the SF-425 as identified on the Reporting Checklist in accordance with the report instructions. A fillable version of the form is available at <https://www.grants.gov/web/grants/forms/post-award-reporting-forms.html> or <https://www.netl.doe.gov/business/business-forms/financial-assistance> under Financial Forms.

B. Financial Conflict of Interest Report

Prior to award, the Recipient was required to: 1) ensure all Investigators on this Award completed their significant financial disclosures; 2) review the disclosures; 3) determine whether a FCOI exists; 4) develop and implement a management plan for FCOIs; and 5) provide DOE with an initial FCOI report that includes all FCOIs (i.e., managed and unmanaged/unmanageable). Within 180 days of the date of the Award, the Recipient must be in full compliance with the other requirements set forth in DOE's interim COI Policy <https://www.energy.gov/management/department-energy-interim-conflict-interest-policy-requirements-financial-assistance>. Further, the recipient must submit updated reports within 30 days of a change.

The DOE interim Conflict of Interest Policy for Financial Assistance (COI Policy) is applicable to all non-Federal entities applying for, or that receive, DOE funding by means of a financial assistance award (e.g., a grant, cooperative agreement, or technology investment agreement) and, through the implementation of this policy by the entity, to each Investigator who is planning to participate in, or is participating in, the project funded wholly or in part under this Award. The term "Investigator" means the PI and any other person, regardless of title or position, who is responsible for the purpose, design, conduct, or reporting of a project funded by DOE or proposed for funding by DOE. The Recipient must flow down the requirements of the interim COI Policy to any subrecipient non-Federal entities, with the exception of DOE National Laboratories. Further, the Recipient must identify all financial conflicts of interests (FCOI), i.e., managed and unmanaged/unmanageable, in its initial and ongoing FCOI reports.

IV. CLOSEOUT REPORTS

A. Invention Certification (DOE F 2050.11)

The Recipient must provide a DOE Form 2050.11 "Invention Certification" form. This form is available at <https://www.netl.doe.gov/business/business-forms/financial-assistance> under Closeout Forms.

The Invention Certification must include a list of all subrecipients at any tier containing a patent rights clause (or state that there were none).

B. Tangible Personal Property Report – Final Report (SF-428 & SF-428B)

See Instructions under **Tangible Personal Property Report Forms Family (SF-428)** below.

V. OTHER REPORTING

A. Annual Incurred Cost Proposal

Requirement. In accordance with the applicable cost principles, the Recipient must submit a certified annual incurred cost proposal (ICP) directly to the cognizant agency responsible for negotiating and approving its indirect costs. Recipients are strongly encouraged to self-assess their ICP using the Defense Contract Audit Agency's (DCAA) ICP Adequacy Checklist to ensure an adequate submission. The end of the period of the performance, or closure of an award, does not dismiss this reporting requirement.

Submission. The ICP must be reconciled to the Recipient's financial statements, within 180 calendar days after the close of the Recipient's fiscal year, unless one of the following conditions apply to the DOE award:

- Recipient elected to apply the 10% de minimis rate as allowed under 2 CFR 200.414(f); or
- Recipient has a pre-determined Negotiated Indirect Cost Rate Agreement (NICRA).

The Contracting Officer for Indirect Cost Rates may grant, in writing, reasonable extensions for exceptional circumstances only. The written request for extension should be sent to PricingGroup@netl.doe.gov. The format and content of the incurred cost proposal should follow the DCAA ICE (Incurred Cost Electronically) Model in order to be considered an adequate proposal. DCAA's ICE Model and Adequacy Checklist can be found on the DCAA website at: <https://www.dcaa.mil/Home/ICEmodel> and <https://www.dcaa.mil/Home/ICSubmissionAdequacy>. If NETL is the Cognizant Agency responsible for negotiating and approving the Recipient's indirect costs, the ICP should be sent to FITS@NETL.DOE.GOV and PricingGroup@netl.doe.gov.

B. DOE For-Profit Compliance Audit

Requirement. As required by 2 CFR parts 910.500 through 910.521, a For-Profit entity which expends \$750,000 or more during their fiscal year in DOE awards must have a compliance audit conducted for that year.

Submission. The compliance audit report(s) must be submitted to DOE within the earlier of 30 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 appropriate DOE Contracting Officer at FITS@NETL.DOE.GOV and PricingGroup@netl.doe.gov as well as to the DOE Office of the Chief Financial Officer (CFO) at DOE-Audit-Submission@hq.doe.gov.

C. Tangible Personal Property Report Forms Family (SF-428)

Requirement. The SF-428 is a forms family consisting of 5 forms: the SF-428, SF-428-A, SF-428-B, SF-428-C, and SF-428S. Fillable versions of the SF-428 forms are available at <https://www.netl.doe.gov/business/business-forms/financial-assistance> under Property Forms. The SF-428 is the cover page and the submitter attaches the appropriate form or forms as listed on the SF-428.

- The SF-428A is the Annual Report, due Oct 30th of each calendar year.
- The SF-428B is the Final Report, due 120 calendar days after completion or termination of the award.
- The SF-428C is the Disposition Request/Report.
- The SF-428S is the Supplemental Sheet form for the SF-428-A, SF-428-B, and SF-428-C.

If at any time during the award the Recipient is provided Government-furnished property or acquires property with project funds and the award specifies that the property vests in the Federal Government (i.e. federally owned property), the Recipient must submit an annual inventory of this property to the DOE Administrator using the SF-428 and SF-428-A forms at the address on page 1 of this checklist **no later than October 30th of each calendar year**, to cover an annual reporting period ending on the preceding September 30th. The SF-428 and SF-428-B reports are required 120 calendar days after completion or termination of award to complete the closeout process.

Content of Inventory. As required on the SF-428-A and SF-428-S 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. The report must list all federally owned property, including property located at subcontractor's facilities or other locations.

D. Intellectual Property Reporting

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:

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

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

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");

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.

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); and,

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.

Subject inventions are to be reported in iEdison. The iEdison website 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://iedison.nist.gov/profile/agreement.xhtml>.

E. Invention Utilization Report

The Recipient and Subrecipient(s), if any, must provide Invention Utilization Reports in iEdison 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.

F. Federal Subaward Reporting System (FSRS)

The Federal Subaward Reporting System (FSRS) is the reporting tool prime Recipients use to capture and report subaward and executive compensation data regarding their first-tier Subrecipients to meet the Federal Funding Accountability and Transparency Act (FFATA) reporting requirements. Prime Recipients will report against Subrecipients' awards. The Subrecipient information entered in FSRS will then be displayed on <https://www.USASpending.gov> associated with the prime Recipient's award furthering Federal spending transparency.

The prime Recipient is required to file a FFATA sub-award report by the end of the month following the month in which the prime Recipient awards any sub-award greater than or equal to \$30,000.

G. Uniform Commercial Code (UCC) Financing Statements

If a for-profit Recipient or Subrecipient desires to purchase a piece of equipment for their project, and the per-unit dollar value of said equipment is \$5,000 or more, and the Federal share of the financial assistance agreement is more than \$1M, the Recipient or Subrecipient must file a UCC financing statement. These financing statement(s) must be approved in writing by the contracting officer prior to the recording.

A UCC financing statement provides public notice that the Federal government has an undivided reversionary interest in the equipment, and as such the equipment cannot be sold or used as collateral for a loan (encumbered).

The for-profit Recipient or Subrecipient must file the UCC financing statement(s) (for the relevant state or territory in which the equipment is located) and pay any associated costs for such filings.

The initial UCC financing statement may also be referred to as a UCC1. For additional pieces of equipment not specified in the award budget, TBD equipment, or equipment needed in future budget periods, the Recipient can file an amendment to the original UCC1 financing statement, by submitting the UCC3 financing statement amendment.

Each UCC financing statement or amendment is to be filed with the applicable state or territorial UCC office, where the equipment will be physically located.

Note: All costs associated with filing UCC financing statements, UCC financing statement amendments, and UCC financing statement terminations, are allowable and allocable costs to be charged to the Federal award.

At a minimum, the Recipient must have stated in their UCC financing statement in block 4. (collateral) the following:

1) *“Title to all equipment (not real property) purchased with Federal funds under this financial assistance agreement is conditional pursuant to the terms of 2 CFR 910.360, and the Federal government retains an undivided reversionary interest in the equipment at the Federal cost-share proportion specified in the award terms and conditions.”*

2) *Federal Award Identification Number (e.g., DE-FE00XXXXX)*

VI. POST-PROJECT REPORTING

A. Scientific and Technical Reporting

Scientific and Technical Reporting requirements as outlined above in, “**Scientific and Technical Reporting**” remain applicable after the award ends. If the recipient has created Scientific and Technical Information (STI) such as publications, conference products, technical reports, book chapters, etc. which include information/data produced under the award, they are required to submit this document to <https://www.osti.gov/elink/forms.jsp>. Recipients must continue to include proper DOE

Acknowledgement and Legal Disclaimer language in all STI. Please see the “**Scientific and Technical Reporting**” section for additional information on submissions.

Note that after the project ends, recipients are no longer required to submit notification of STI directly to DOE.

B. Intellectual Property Reporting

Intellectual Property Reporting requirements as outlined above in, “Intellectual Property Reporting” remain applicable after the award ends.

Recipients are required to continue submitted intellectual property reports, as applicable to iEdison (<https://www.nist.gov/iedison>).

Note that after the project ends, recipients are no longer required to submit notification of intellectual property directly to DOE.

ATTACHMENT 1

RESEARCH PERFORMANCE PROGRESS REPORT

Standard Cover Page Data Elements and Reporting Categories

The standard cover page data elements shown below, as well as mandatory and optional components comprise the complete research performance progress report format. Each category in the RPPR is a separate reporting component. Each component is marked to indicate if it is optional or mandatory. Mandatory components must be addressed in each report, optional are at your discretion. For Optional components, if you have nothing significant to report during the reporting period on a question or item, state "Nothing to Report." If there are reportable items, please submit according to the instructions for each section.

1. COVER PAGE DATA ELEMENTS:

- a. Federal Agency and Organization Element to Which Report is Submitted
- b. Federal Grant or Other Identifying Number Assigned by Agency
- c. Project Title
- d. Program Director (PD)/Principal Investigator (PI) Name, Title and Contact Information (e-mail address and phone number)
- e. Business Contact Name, Title and Contact Information (e-mail address and phone number)
- f. Name of Submitting Official, Title, and Contact Information (e-mail address and phone number), if other than PD/PI
- g. Submission Date
- h. Unique Entity Identifier (UEI)
- i. Recipient Organization (Name and Address)
- j. Project/Grant Period of Performance (Start Date, End Date)
- k. Reporting Period End Date
- l. Current Report Term or Frequency (annual, semi-annual, quarterly, final, other)
- m. Certification by the Submitting Official that includes: Signature of Submitting Official (electronic signatures (i.e., Adobe Acrobat) are acceptable); date of signature; and the following certification statement:

By signing this report, I certify to the best of my knowledge and belief that the report is true, complete, and accurate. I am aware that any false, fictitious, or fraudulent information, misrepresentations, half-truths, 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, Section 287 and Title 31, Sections 3729-3730). I further understand and agree that the information contained in this report are material to Federal agency's funding decisions and I have an ongoing responsibility to promptly update the report within the time frames stated in the terms and conditions of the above referenced Award, to ensure that my responses remain accurate and complete.

2. ACCOMPLISHMENTS:

What was done? What was learned?

The information provided in this section allows the agency to assess whether satisfactory progress has been made during the reporting period. The PI is reminded that the grantee is required to obtain prior written approval from the Contracting Officer whenever there are significant changes in the project or its direction. Requests for prior written approval must be submitted to the Contracting Officer

a. What are the major goals of the project?

List the major goals of the project as stated in the approved application or as approved by the agency. Describe the proposed technical approach to obtain those goals. If the application lists milestones/target dates for important activities or phases of the project, identify these dates and show actual completion dates or the percentage of completion. Generally, the goals will not change from one reporting period to the next. However, if the awarding agency approved changes to the goals during the reporting period, list the revised goals and objectives. Also explain any significant changes in approach or methods from the agency approved application or plan.

A suggested format for the Milestone Status Report is included herein as Exhibit 1.

b. What was accomplished under these goals?

For this reporting period describe: 1) major activities; 2) specific objectives; 3) significant results or key outcomes, including major findings, developments, or conclusions (both positive and negative); and/or 4) other achievements. Include a discussion of stated goals not met. As the project progresses, the emphasis in reporting in this section should shift from reporting activities to reporting accomplishments.

c. What opportunities for training and professional development has the project provided?

Describe opportunities for training and professional development provided to anyone who worked on the project or anyone who was involved in the activities supported by the project.

“Training” activities are those in which individuals with advanced professional skills and experience assist others in attaining greater proficiency. Training activities may include, for example, courses or one-on-one work with a mentor.

“Professional development” activities result in increased knowledge or skill in one’s area of expertise and may include workshops, conferences, seminars, study groups, and individual study. Include participation in conferences, workshops, and seminars not listed under major activities.

If the project was not intended to provide training and professional development opportunities or there is nothing significant to report during this reporting period, state “Nothing to Report.”

d. How have the results been disseminated to communities of interest?

Describe how the results have been disseminated to communities of interest. Include any outreach activities that have been undertaken to reach members of communities who are not usually aware of these research activities, for the purpose of enhancing public understanding and increasing interest in learning and careers in science, technology, and the humanities.

If there is nothing significant to report during this reporting period, state "Nothing to Report."

e. What do you plan to do during the next reporting period to accomplish the goals?

Describe briefly what you plan to do during the next reporting period to accomplish the goals and objectives.

If there are no changes to the agency-approved application or plan for this project or if this is the final report, state "Nothing to Report."

3. PRODUCTS:

What has the project produced?

Publications are the characteristic product of research. Agencies evaluate what the publications demonstrate about the excellence and significance of the research and the efficacy with which the results are being communicated to colleagues, potential users, and the public, not the number of publications. Many projects (though not all) develop significant products other than publications. Agencies assess and report both publications and other products to Congress, communities of interest, and the public.

List any products resulting from the project during the reporting period. Examples of products include: publications, conference papers, and presentations; website(s) or other Internet site(s); technologies or techniques; inventions, patent applications, and/or licenses; and other products, such as data or databases, physical collections, audio or video products, software or NetWare, models, educational aids or curricula, instruments, or equipment, research material, interventions (e.g., clinical or educational), new business creation, or any other public release of information related to the project.

If there is nothing significant to report during this reporting period, state "Nothing to Report."

a. Publications, conference papers, and presentations

Report only the major publication(s) resulting from the work under this award. There is no restriction on the number. However, Agencies are interested in only those publications that most reflect the work under this award in the following categories:

- i. Accepted Manuscript(s) of Journal Article.** List peer-reviewed articles or papers that have been submitted for publication in scientific, technical, or professional journals. Include any peer-reviewed publication in the periodically published proceedings of a scientific society, a conference, or the like. A publication in the proceedings of a one-time conference, not part of a series, should be reported under "Books or other non-periodical, one-time publications."

Identify for each publication: Author(s); title; journal; volume: year; page numbers; status of publication (published; accepted, awaiting publication; submitted, under review; other); acknowledgement of federal support (yes/no). Also see instructions under “B. Scientific/Technical Reporting” regarding the submission of accepted manuscripts and other STI as appropriate.

- ii. Books or other non-periodical, one-time publications.** Report any book, monograph, dissertation, abstract, or the like published as or in a separate publication, rather than a periodical or series. Include any significant publication in the proceedings of a one-time conference or in the report of a one-time study, commission, or the like.

Identify for each one-time publication: author(s); title; editor; title of collection, if applicable; bibliographic information; year; type of publication (book, thesis or dissertation, other); status of publication (published; accepted, awaiting publication; submitted, under review; other); acknowledgement of federal support (yes/no).

- iii. Other publications, conference papers and presentations.** Identify any other publications, conference papers and/or presentations not reported above. Specify the status of the publication as noted above.

Please note: The recipient is reminded that all data produced under the award should comply with the award’s data management plan (DMP). The DMP provides a plan for making all research data displayed in publications resulting from the proposed work digitally accessible at the time of publication. At a minimum, the DMP (1) describes how data sharing and preservation will enable validation of the results from the proposed work, how the results could be validated if data are not shared or preserved and (2) has a plan for making all research data displayed in publications resulting from the proposed work digitally accessible at the time of publications.

b. Website(s) or other Internet site(s)

List the URL for any Internet site(s) that disseminates the results of the research activities. A short description of each site should be provided. It is not necessary to include the publications already specified above in this section.

c. Technologies or techniques

Identify technologies or techniques that have resulted from the research activities. Describe the technologies or techniques and how they are being shared.

d. Inventions, patent applications, and/or licenses

Identify inventions, patent applications with date, and/or licenses that have resulted from the research. Submission of this information as part of an interim research performance progress report is not a substitute for any other invention reporting required under the terms and conditions of an award.

e. Other products

Identify any other significant products that were developed under this project. Describe the product and how it is being shared. Examples of other products are: data or databases; physical collections; audio or video products; software or

NetWare; models; educational aids or curricula; instruments or equipment; research material (e.g., germplasm, cell lines, DNA probes, animal models); and other.

4. PARTICIPANTS & OTHER COLLABORATING ORGANIZATIONS:

Who has been involved?

Agencies need to know who has worked on the project to gauge and report performance in promoting partnerships and collaborations. The following information on participants and other collaborating organizations during this reporting period must be provided:

a. What individuals have worked on the project?

Provide the following information for: (1) all senior and key personnel, including principal investigator(s)/project director(s) (PDs/PIs); and (2) each person who has worked, and was funded by the project, at least one person month per year on the project during the reporting period, regardless of the source of compensation (a person month equals approximately 160 hours of effort). Please note that such reporting does not constitute a formal institutional report of effort on the project, but rather is used by agency program staff to evaluate the progress of the project during a given reporting period.

i. Provide the name and identify the role the person played in the project.

Indicate the total number of months, including partial months, (Calendar, Academic, Summer) that the individual worked on the project. Using the project roles identified below, select the most senior role in which the person worked on the project for any significant length of time. For example, if an undergraduate student graduated, enter graduate school, and continues to work on the project, show that person as a graduate student, preferably explaining the change in involvement.

ii. Project Roles

PD/PI
Co PD/PI
Faculty
Community College Faculty
Technical School Faculty
K-12 Teacher
Postdoctoral (scholar, fellow or other postdoctoral position)
Other Professional
Technician
Staff Scientist (doctoral level)
Statistician
Graduate Student (research assistant)
Non-Student Research Assistant
Undergraduate Student
Technical School Student
High School Student
Consultant
Research Experience for Undergraduates (REU) Participant
Other (specify)

iii. Describe how this person contributed to the project.

If information is unchanged from a previous progress report, provide the name only and indicate “no change”.

iv. Identify the person’s state, U.S. territory, and/or country of residence. State whether this person has collaborating internationally.

If the participant was U.S.-based, state whether this person collaborated internationally with an individual located in a foreign country, and specify whether the person traveled to the foreign country as part of that collaboration, and, if so, what the duration of stay was. The foreign country(ies) should be identified.

If the participant was not U.S.-based, state whether this person traveled to the U.S. or another country as part of a collaboration, and, if so, what the duration of stay was. The destination country should be identified.

Example:

1. **Name:** Mary Smith
2. **Total Number of Months:** 5.5
3. **Project Role:** Graduate Student
4. **Research Identifier:** 1234567
5. **Contribution to Project:** Ms. Smith has performed work in the area of combined error-control and constrained coding.
6. **State, U.S. territory, and/or country of residence:** Michigan, U.S.A.
7. **Funding Support:** The Ford Foundation (Complete only if the funding provided from other than this award.)
8. **Collaborated with individual in foreign country:** Yes
9. **Country(ies) of foreign collaborator:** China
10. **Travelled to foreign country:** Yes
11. **If traveled to foreign country(ies), duration of stay:** 5 months

b. Has there been a change in the active other support of the PD/PI(s) or senior/key personnel since the last reporting period?

Describe active other support for the PD/PI(s) or senior/key personnel whose support has changed and what the change has been (e.g., a previously active grant that has closed, a previously pending grant that is now active). Active other support includes all financial resources, whether Federal, non-Federal, commercial or organizational, available in direct support of an individual’s research endeavors, including, but not limited to, research grants, cooperative agreements, contracts, or organizational awards, (e.g., Federal, State, local or foreign government agencies, public or private foundations, industrial or other commercial organizations). Annotate this information so it is clear what has changed from the previous submission. Other support does not include prizes or gifts.

Submission of active other support information is not necessary for pending changes or for changes in the level of effort for active support reported previously. DOE requires prior written approval if a change in active other support significantly impacts the effort on this award.

If there is nothing significant to report during this reporting period or no change from the previous reporting period, state “Nothing to Report.”

c. What other organizations have been involved as partners?

Describe partner organizations – academic institutions, other nonprofits, industrial or commercial firms, state or local governments, schools or school systems, or other organizations (foreign or domestic) – that have been involved with the project. Partner organizations may provide financial or in-kind support, supply facilities or equipment, collaborate in the research, exchange personnel, or otherwise contribute.

Provide the following information for each partnership:

1. Organization Name;
2. Location of Organization (if foreign location list country);
3. Partner's contribution to the project (identify one or more);
 - i. Financial support;
 - ii. In-kind support (e.g., partner makes software, computers, equipment, etc., available to project staff);
 - iii. Facilities (e.g., project staff use the partner's facilities for project activities);
 - iv. Collaborative research (e.g., partner's staff work with project staff on the project);
 - v. Personnel exchanges (e.g., project staff and/or partner's staff use each other's facilities, work at each other's site);
 - vi. Other
4. More detail on partner and contribution (foreign or domestic).

If there is nothing significant to report during this reporting period, state "Nothing to Report."

d. Have other collaborators or contacts been involved?

Some significant collaborators or contacts within the recipient's organization may not be covered by "What people have worked on the project?" Likewise, some significant collaborators or contacts outside the recipient's organization may not be covered under "What other organizations have been involved as partners?"

For example, describe any significant:

1. collaborations with others within the recipient's organization, especially interdepartmental or interdisciplinary collaborations;
2. collaborations or contact with others outside the organization; and
3. collaborations or contacts with others outside the United States or with an international organization. country(ies) of collaborations or contacts.

Identify the state(s), U.S. territory(ies), or country(ies) of collaboration or contacts.

It is likely that many recipients will have no other collaborators or contacts to report.

If there is nothing significant to report during this reporting period, state "Nothing to Report."

5. IMPACT:

What is the impact of the project? How has it contributed?

Over the years, this base of knowledge, techniques, people, and infrastructure is drawn upon again and again for application to commercial technology and the economy, to health and safety, to cost-efficient environmental protection, to the solution of social problems, to numerous other aspects of the public welfare, and to other fields of endeavor.

The taxpaying public and its representatives deserve a periodic assessment to show them how the investments they make benefit the nation. Through this reporting format, and especially this section, recipients provide that assessment and make the case for Federal funding of research and education.

Agencies use this information to assess how their research programs: increase the body of knowledge and techniques; enlarge the pool of people trained to develop that knowledge and techniques or put it to use; and improve the physical, institutional, and information resources that enable those people to get their training and perform their functions.

This component will be used to describe ways in which the work, findings, and specific products of the project have had an impact during this reporting period. Describe distinctive contributions, major accomplishments, innovations, successes, or any change in practice or behavior that has come about as a result of the project relative to: the development of the principal discipline(s) of the project; other disciplines; the development of human resources; teaching and educational experiences; physical, institutional, and information resources that form infrastructure; technology transfer (include transfer of results to entities in government or industry, adoption of new practices, or instances where research has led to the initiation of a startup company); society beyond science and technology; or foreign countries.

a. What is the impact on the development of the principal discipline(s) of the project?

Describe how findings, results, and techniques that were developed or extended, or other products from the project made an impact or are likely to make an impact on the base of knowledge, theory, and research and/or pedagogical methods in the principal disciplinary field(s) of the project. Summarize using language that an intelligent lay audience can understand (*Scientific American* style). How the field or discipline is defined is not as important as covering the impact the work has had on knowledge and technique. Make the best distinction possible, for example, by using a “field” or “discipline”, if appropriate, that corresponds with a single academic department (i.e., physics rather than nuclear physics).

If there is nothing significant to report during this reporting period, state “Nothing to Report.”

b. What is the impact on other disciplines?

Describe how the findings, results, or techniques that were developed or improved, or other products from the project made an impact or are likely to make an impact on other disciplines.

If there is nothing significant to report during this reporting period, state “Nothing to Report.”

c. What is the impact on the development of human resources?

Describe how the project made an impact or is likely to make an impact on human resource development in science, engineering, and technology. For example, how has the project: provided opportunities for research and teaching in the relevant fields; improved the performance, skills, or attitudes of members of underrepresented groups that will improve their access to or retention in research, teaching, or other related professions; developed and disseminated new educational materials or provided scholarships; or provided exposure to science and technology for practitioners, teachers, young people, or other members of the public?

If there is nothing significant to report during this reporting period, state “Nothing to Report.”

d. What was the impact on teaching and educational experiences?

Describe how the project made an impact or is likely to make an impact on teaching and educational experiences. For example, has the project: developed and disseminated new educational materials; led to ideas for new approaches to course design or pedagogical methods; or developed online resources that will be useful for teachers and students and other school staff?

If there is nothing significant to report during this reporting period, state “Nothing to Report.”

e. What is the impact on physical, institutional, and information resources that form infrastructure?

Describe ways, if any, in which the project made an impact, or is likely to make an impact, on physical, institutional, and information resources that form infrastructure, including: physical resources such as facilities, laboratories, or instruments; institutional resources (such as establishment or sustenance of societies or organizations); or information resources, electronic means for accessing such resources or for scientific communication, or the like.

If there is nothing significant to report during this reporting period, state “Nothing to Report.”

f. What is the impact on technology transfer?

Describe ways in which the project made an impact, or is likely to make an impact, on commercial technology or public use, including: transfer of results to entities in government or industry; instances where the research has led to the initiation of a start-up company; or adoption of new practices.

If there is nothing significant to report during this reporting period, state “Nothing to Report.”

g. What is the impact on society beyond science and technology?

Describe how results from the project made an impact, or are likely to make an impact, beyond the bounds of science, engineering, and the academic world on areas such as: improving public knowledge, attitudes, skills, and abilities; changing behavior, practices, decision making, policies (including regulatory policies), or social actions; or improving social, economic, civic, or environmental conditions.

If there is nothing significant to report during this reporting period, state “Nothing to Report.”

h. What percentage of the award’s budget was spent in foreign country(ies)?

Describe what percentage of the award’s budget is being spent in foreign country(ies). If more than one foreign country is involved, identify the distribution between the foreign countries.

U.S.-based recipients should provide the percentage of the budget spent in the foreign country(ies) and/or, if applicable, the percentage of the budget obligated to foreign entities as first-tier subawards.

Recipients that are not U.S.-based should provide the percentage of the direct award received, excluding all first-tier subawards to U.S. entities. If applicable, provide separately the percentage of the budget obligated to non-U.S. entities as first-tier subawards.

6. CHANGES/PROBLEMS:

The PD/PI is reminded that the grantee is required to obtain prior written approval from the Contracting Officer whenever there are significant changes in the project or its direction. Requests for prior written approval must be submitted to the Contracting Officer. If not previously reported in writing, provide the following additional information, if applicable: Changes in approach and reasons for change; Actual or anticipated problems or delays and actions or plans to resolve them; Changes that have a significant impact on expenditures; Significant changes in use or care of animals, human subjects, and/or biohazards.

a. Changes in approach and reasons for change

Describe any changes in approach during the reporting period and reasons for these changes. Remember that significant changes in objectives and scope require prior approval of the Contracting Officer.

b. Actual or anticipated problems or delays and actions or plans to resolve them

Describe problems or delays encountered during the reporting period and actions or plans to resolve them.

c. Changes that have a significant impact on expenditures

Describe changes during the reporting period that may have a significant impact on expenditures, for example, delays in hiring staff or favorable developments that enable meeting objectives at less cost than anticipated.

d. Significant changes in use or care of human subjects, vertebrate animals, and/or Biohazards

Describe significant deviations, unexpected outcomes, or changes in approved protocols for the use or care of human subjects, vertebrate animals, and/or biohazards during the reporting period. If required, were these changes approved by the applicable institution committee and reported to the agency? Also specify the applicable Institutional Review Board/Institutional Animal Care and Use Committee approval dates.

e. Change of primary performance site location from that originally proposed

Identify any change to the primary performance site location identified in the proposal, as originally submitted.

7. SPECIAL REPORTING REQUIREMENTS:

Respond to any special reporting requirements specified in the award terms and conditions, as well as any award specific reporting requirements.

8. BUDGETARY INFORMATION:

This component will be used to collect budgetary data from the recipient organization. The information will be used in conducting periodic administrative/budgetary reviews. Budgetary data identified and required by the Contracting Officer should be submitted in an Excel spreadsheet format.

9. PROJECT OUTCOMES:

What were the outcomes of the award?

This information is used at the completion of the award to ascertain the cumulative outcomes or findings of a project. Describe project outcomes specifically for the public to provide insight into the outcomes of Federally-funded research, education, and other activities. Agencies may make this information available to the public in an electronic format.

Project Outcomes

The recipient is to provide information regarding the cumulative outcomes or findings of the project. For the final RPPR for the project, provide a concise summary of the outcomes or findings of the award (no more than 8,000 characters) that:

- a. is written for the general public (non-technical audiences) in clear, concise, and comprehensible language;
- b. is suitable for dissemination to the general public, as the information may be available electronically;
- c. does not include proprietary, confidential information or trade secrets; and
- d. includes up to six images (images are optional).

Please note that this reporting of project outcomes does not constitute a formal dissemination of scientific and technical information (STI) but rather is used by agency program staff to publicize project results, outcomes or findings.

To ensure the public access to the results of federally funded research notify DOE Office of Scientific and Technical Information about the published results so the information will be made publicly accessible and discoverable through DOE web-based products. Access to and archival of DOE-funded STI are managed by the (OSTI). For information about OSTI see <https://www.osti.gov>.

For more information on STI submittals, see <https://www.osti.gov/stip/submittal>.

APPENDIX FOR RPPR

DEMOGRAPHIC INFORMATION FOR SIGNIFICANT CONTRIBUTORS

Agencies may require that Recipients provide demographic data about significant contributors for a variety of purposes, including the following:

- to gauge whether our programs and other opportunities are fairly reaching and benefiting everyone regardless of demographic category;
- to ensure that those in under-represented groups have the same knowledge of and access to programs, meetings, vacancies, and other research and educational opportunities as everyone else;
- to gauge and report performance in promoting partnerships and collaborations;
- to assess involvement of international investigators or students in work we support;
- to track the evolution of changing science, technology, engineering and mathematics (STEM) fields at different points in the pipeline (e.g., medicine and law demographics have recently changed dramatically);
- to raise investigator and agency staff awareness of the involvement of under-represented groups in research;
- to encourage the development of creative approaches for tapping into the full spectrum of talent of the STEM workforce;
- to respond to external requests for data of this nature from a variety of sources, including the National Academies, Congress, etc.; and
- to respond to legislatively-required analysis of workforce dynamics. Legislation requires at least one agency to routinely estimate scientific workforce needs. This analysis is accomplished through reviewing demographic data submitted for the existing workforce.

Demographic data (i.e., gender, ethnicity, race, and disability status) should be provided directly by significant contributors, with the understanding that submission of such data is voluntary. There are no adverse consequences if the data are not provided. Confidentiality of demographic data will be in accordance with agency's policy and practices for complying with the requirements of the Privacy Act.

Gender: Male
Female
Do not wish to provide

Ethnicity: Hispanic or Latina/o
Not-Hispanic or not-Latina/o
Do not wish to provide

Race (select one or more): American Indian or Alaska Native
Asian
Black or African American
Native Hawaiian or other Pacific Islander
White
Do not wish to provide

Disability Status:

Yes (check yes if any of the following apply to you)

- Deaf or serious difficulty hearing
- Blind or serious difficulty seeing even when wearing glasses
- Serious difficulty walking or climbing stairs
- Other serious disability related to a physical, mental, or emotional condition.

No

Do not wish to provide

This measure is designed as a binary measure; it encompasses all self-reported disabilities. Please do not use it to report the number of individuals who have different types of disabilities (e.g., hearing impairments).

Note: This construct is not designed to be used at an individual-level (i.e., it should not be used for determining accommodation needs or disability status for particular individuals associated with the project).