



Advanced Research Projects Agency • ENERGY

SBIR/STTR Applicants' Guide to Award Negotiations with ARPA-E

July 2012

Table of Contents

1	Overview	1
1.1	Schedule	1
1.2	Changes to Your Project	3
2	Personnel	4
2.1	Personnel – Your Team	4
2.2	Personnel – ARPA-E’s Team	4
2.2.1	ARPA-E Program Director	4
2.2.2	DOE Contracting Team.....	5
2.2.3	ARPA-E Legal Team	6
2.2.4	DOE Patent Counsel	6
2.2.5	ARPA-E Technology-to-Market Team	6
3	ARPA-E Model Cooperative Agreement	7
3.1	Overview	7
3.2	Cover Page (Assistance Agreement Form).....	8
3.3	Attachment 1 (Special Terms and Conditions).....	8
3.4	Attachment 2 (Intellectual Property Provisions)	8
3.5	Attachment 3 (Technical Milestones and Deliverables)	10
3.6	Attachment 4 (Reporting Checklist and Instructions).....	12
3.7	Attachment 5 (Budget Information)	12
3.8	Attachment 6 (National Policy Assurances).....	12
4	Required Forms.....	12
4.1	Budget Forms	12
4.2	Environmental Impact Questionnaire.....	13
5	Required Submissions.....	14
5.1	Technology-to-Market Plan.....	14
6	Required Registrations.....	14
6.1	FedConnect	15
6.2	Dun and Bradstreet Data Universal Numbering System (DUNS) Number.....	15
6.3	Central Contractor Registry (CCR).....	15

6.4	Federal Funding Accountability and Transparency Act Subaward Reporting System (FSRS).....	16
7	DOE Contracting Officer Determinations	16
7.1	Financial Management Assessment.....	16
7.2	Determination of Responsibility	16
7.3	Cost Share Allowability.....	17
8	ARPA-E Project Management	18
8.1.1	Invoice Review	18
8.1.2	Cost Share Reporting	18
8.1.3	Other Reporting Requirements	19
9	Internet Resources.....	19
10	How to Expedite Your Award Negotiations	20
	APPENDIX 1	23
	APPENDIX 2	26

1 Overview

Congratulations on being selected for award negotiations! This guide will help you navigate the award negotiation process, from the critical first few days after selection until the signing of the award.

Upon selection, the Advanced Research Projects Agency – Energy (ARPA-E) will set an aggressive deadline for the completion of award negotiations, typically 60-70 days after selection. It is essential for you to identify the persons within your organization who will be participating in the award negotiations, and mobilize your resources to meet this important deadline. Having the key resources and people on hand will help you complete the award negotiation process in a timely manner.

Throughout the award negotiations and the performance of the project, it is critically important that you 1) respond to ARPA-E personnel in a prompt manner, 2) fill out documentation completely and accurately, and 3) ensure that you mark confidential information and documents as described in Appendix 1. In addition, you should not submit Protected Personally Identifiable Information (Protected PII) to ARPA-E. See Appendix 1 for guidance on Protected PII.

1.1 Schedule

Below is an approximation of the award negotiation process for both standard awards and awards involving a “refinement” of the draft Statement of Project Objectives (SOPO) based on a 60-70 day schedule. Specific dates for actual deadlines will be provided to you in a separate document at the start of negotiations.

NEGOTIATION MILESTONE	Expected Completion
ARPA-E notifies Applicant of its selection for award negotiations and requests the Applicant to review the ARPA-E Model Cooperative Agreement for SBIR/STTR Awards and forms at http://arpa-e.energy.gov/SBIRSTTR/Overview.aspx .	Day 1
ARPA-E hosts a webinar for Selectees (i.e., Applicants selected for award negotiations) to review the contracting process.	Day 6
ARPA-E Program Director negotiates Statement of Project Objectives (SOPO) and aggressive schedule of technical milestones and deliverables with Selectees. Upon request, Selectees revise milestones and deliverables in accordance with ARPA-E technical direction.	Days 2-36
Selectee submits the Environmental Impact Questionnaire	Day 21
Selectee drafts Technology-to-Market Plan and appropriate milestones.	Days 2-34

DOE Contracting Team works with Selectee to finalize budget for project. Upon request, Selectees complete ARPA-E Budget Review Questionnaires and provide revised budgets within 3 business days.	Days 8-39
Deadline for finalizing SOPO and schedule of technical milestones and deliverables with ARPA-E Program Director.	Day 36
Deadline for submitting draft Technology-to-Market Plan to ARPA-E Program Director.	Day 34
Deadline for submitting request for changes to Attachment 1 to ARPA-E Legal Team. (Changes will be made only in exceptional circumstances.)	Day 36
Deadline for submitting request for changes to Attachment 2 to DOE Patent Counsel. (Changes will be made only in exceptional circumstances.)	Day 36
Deadline for providing DOE Patent Counsel with final list of unlimited data rights.	Day 36
Deadline for finalizing budget for the project with the DOE Contracting Team.	Day 39
ARPA-E sends final award package and SBIR/STTR eligibility certification form to Selectee.	Day 54
Deadline for Selectee to return signed award package and SBIR/STTR eligibility certification form to ARPA-E.	Day 56
Selectees acknowledge receipt of award in FedConnect.	Day 61

Some award negotiations may require a refinement of the draft SOPO that was submitted with a Selectee’s Full Application. You will be notified by ARPA-E if your draft SOPO will be refined. An adjusted schedule will apply for these negotiations:

REFINEMENT NEGOTIATION MILESTONE	DEADLINE
ARPA-E notifies Applicant of its selection for award negotiations, the need for a refinement of the SOPO, and requests the Applicant to review the ARPA-E Model Cooperative Agreement for SBIR/STTR Awards and forms at http://arpa-e.energy.gov/SBIRSTTR/Overview.aspx .	Day 1
ARPA-E hosts a webinar for Selectees (i.e., Applicants selected for award negotiations) to review the contracting process.	Day 6
Selectee submits the Environmental Impact Questionnaire	Day 21
ARPA-E and Selectee agree upon negotiated high-level milestones and a framework for SOPO.	Day 22
ARPA-E Program Director negotiates final SOPO and aggressive schedule of technical milestones and deliverables with Selectees. Upon request, Selectees refine milestones	Days 22-50

and deliverables in accordance with ARPA-E technical direction.

Selectee drafts Technology-to-Market Plan and appropriate milestones.	Days 22-50
DOE Contracting Team works with Selectee to finalize budget for project. Upon request, Selectee completes ARPA-E Budget Review Questionnaires and provides revised budget within 3 business days.	Days 29-57
Deadline for finalizing SOPO and schedule of technical milestones and deliverables with ARPA-E Program Director.	Day 50
Deadline for submitting draft Technology-to-Market Plan to ARPA-E Program Director.	Day 50
Deadline for submitting request for changes to Attachment 1 to ARPA-E Legal Team. (Changes will be made only in exceptional circumstances.)	Day 54
Deadline for submitting request for changes to Attachment 2 to DOE Patent Counsel. (Changes will be made only in exceptional circumstances.)	Day 54
Deadline for providing DOE Patent Counsel with final list of unlimited data rights.	Day 54
Deadline for finalizing budget for the project with the DOE Contracting Team.	Day 57
ARPA-E sends final award package and SBIR/STTR eligibility certification form to Selectee.	Day 68
Deadline for Selectee to return signed award package and SBIR/STTR eligibility certification form to ARPA-E.	Day 69
Selectees acknowledge receipt of award in FedConnect.	Day 71

1.2 Changes to Your Project

We appreciate the time, effort, and energy you invested in preparing your Full Application. During the award negotiations, you should expect a number of changes to be made to the project described in your Full Application.

- The ARPA-E Program Director may wish to fund only a portion of the work you proposed in your Full Application. He or she may request changes to your team (adding new team members or dropping others). In addition, the ARPA-E Program Director will push for aggressive technical milestones and deliverables.
- The DOE Contracting Team will require changes to your budget and supporting documentation for all proposed expenditures. It may impose conditions on your award, and require you to complete certain actions within short timeframes.
- The DOE Patent Counsel will negotiate strict limitations on technical data and information that is withheld from the public.

You are free to propose changes during the award negotiation process, but it is essential that you keep the ARPA-E Program Director and DOE Contracting Team apprised of any proposed changes. All changes must be approved in advance by the DOE Contracting Team.

2 Personnel

2.1 Personnel – Your Team

It is essential for you to identify the persons within your organization who will be responsible for negotiating and finalizing each aspect of the award.

- Contracting/Budget Personnel – You will need contracting/budget personnel to review the ARPA-E Model Cooperative Agreement for SBIR/STTR awards, respond quickly to ARPA-E Budget Review Questionnaires, and finalize the budget for the project.
- Legal Personnel – You may need a general attorney to resolve any transactional legal issues. You may also need a patent attorney to identify and resolve any intellectual property issues.
- Technical Personnel – You will need technical personnel, including the Principal Investigator, to negotiate a SOPO and an aggressive schedule of technical milestones and deliverables for the project.
- Environmental Health & Safety Personnel – If your organization employs dedicated Environmental Health & Safety personnel, they will need to assist you in completing mandatory due diligence under the National Environmental Policy Act (NEPA).

2.2 Personnel – ARPA-E’s Team

Upon selection, ARPA-E will assign a team of technical, contracting, and legal personnel to negotiate your award. It is critical to the negotiations process for you to respond to requests from ARPA-E personnel as promptly as possible.

2.2.1 ARPA-E Program Director

The ARPA-E Program Director coordinates and manages the award negotiation. He or she works with the Selectee to negotiate a SOPO and an aggressive schedule of technical milestones and deliverables.

The ARPA-E Program Director is assisted by one or more support contractors, commonly referred to as Science and Engineering Technical Assistants (SETAs).

PROGRAM DIRECTOR	TOPIC AREAS
Dr. Mark Johnson	Energy Storage for Stationary Applications
Dr. John Lemmon	Energy Storage for Stationary Applications
Dr. Dane Boysen	Energy Storage for Transportation Applications

2.2.2 DOE Contracting Team

The DOE Contracting Team is responsible for reviewing and approving the award terms and conditions. When appropriate, he may approve or require the inclusion of special terms and conditions in the award. The DOE Contracting Officer is the only person who has authority to execute and modify the award.

The DOE Contracting Team is responsible for reviewing the proposed budget for the project. During the budget review, he verifies cost data, evaluates specific parts of the budget, and ensures that proposed costs are consistently treated in accordance with applicable cost principles. The DOE Contracting Team also determines the allowability, allocability, and reasonableness of proposed expenditures. The DOE Contracting Team may send you questions or requests for clarification in the form of Budget Review Questionnaires. In addition, the DOE Contracting Team may seek technical and cost input from the ARPA-E Program Director.

The DOE Contracting Team will review your financial management system to determine if it is in compliance with Federal requirements and make a responsibility determination.

The DOE Contracting Team consists of the DOE Contracting Officer and Contract Specialists.

NAME	TITLE	TELEPHONE	EMAIL
Ben Lardizabal	DOE Contracting Officer	202-287-1014	Benjamin.Lardizabal@hq.doe.gov , ARPA-E-CO@hq.doe.gov
Barry Ross	DOE Contract Specialist	202-287-5484	Barry.Ross@Hq.Doe.Gov , ARPA-E-CO@hq.doe.gov
Jemal Williams	DOE Contract Specialist	202-287-1020	Jemal.Williams@hq.doe.gov , ARPA-E-CO@hq.doe.gov

2.2.3 ARPA-E Legal Team

The ARPA-E Legal Team is responsible for resolving legal issues relating to proposed awards. The ARPA-E Legal Team works with the DOE Contracting Team to modify and finalize awards, as appropriate. In addition, the ARPA-E Legal Team works with Selectees to resolve a wide range of legal and contracting issues.

The ARPA-E Legal Team consists of the ARPA-E Chief Counsel, Deputy Chief Counsel, and a team of Program Analysts.

NAME	TITLE	TELEPHONE	EMAIL
Bill Bierbower	ARPA-E Chief Counsel	202-287-6585	William.Bierbower@hq.doe.gov
Kathryn Aleda	ARPA-E Acting Deputy Chief Counsel	202-287-5431	Kathryn.Aleda@hq.doe.gov

2.2.4 DOE Patent Counsel

Department of Energy (DOE) Patent Counsel are responsible for resolving intellectual property issues relating to proposed awards. DOE Patent Counsel work with Selectees to define the scope of unlimited data rights and to resolve issues relating to Government patent rights (e.g., march-in rights, government purpose license).

The DOE Patent Team consists of the DOE Assistant General Counsel for Technology Transfer and Intellectual Property and his team of Patent Counsel.

NAME	TITLE	TELEPHONE	EMAIL
John Lucas	DOE Asst. General Counsel for Tech. Trans. and Intellectual Property	202-586-2939	John.T.Lucas@hq.doe.gov
Michael Badagliacca	DOE Patent Counsel	202-586-4792	Michael.Badagliacca@hq.doe.gov

2.2.5 ARPA-E Technology-to-Market Team

The ARPA-E Technology-to-Market Team works with Selectees and the ARPA-E Program Director to ensure that Technology-to-Market requirements are appropriately

integrated into the schedule of technical milestones and deliverables. The ARPA-E Technology-to-Market Team is your principal point of contact for questions and issues relating to Technology-to-Market Plan requirements and ARPA-E commercialization assistance.

The ARPA-E Technology-to-Market Team consists of the ARPA-E Deputy Director for Commercialization and her team.

NAME	TITLE	TELEPHONE	EMAIL
Dr. Cheryl Martin	ARPA-E Deputy Director for Commercialization	202-287-1046	Cheryl.Martin@hq.doe.gov
Dr. Ilan Gur	ARPA-E Senior Commercialization Advisor	301-938-9464	Ilan.Gur@hq.doe.gov

3 ARPA-E Model Cooperative Agreement

3.1 Overview

ARPA-E has established a Model Cooperative Agreement for SBIR/STTR Awards as the default award for all Prime Recipients. Use of a standard agreement expedites the award negotiation process and reduces the administrative burden associated with ARPA-E’s active project management.

The Model Cooperative Agreement for SBIR/STTR Awards explains the Prime Recipient’s duties and responsibilities concisely and in plain English, which facilitates their compliance with reporting and other obligations. The Model Cooperative Agreement for SBIR/STTR Awards consists of the following attachments, which are available on ARPA-E’s website at <http://arpa-e.energy.gov/SBIRSTTR/Overview/Award.aspx#Cooperative>.

AWARD DOCUMENT	BRIEF DESCRIPTION
Cover Page	Assistance Agreement Form
Attachment 1	Special Terms and Conditions
Attachment 2	Intellectual Property Provisions
Attachment 3	Statement of Project Objectives (SOPO) and Technical Milestones and Deliverables

Attachment 4	Reporting Checklist and Instructions
Attachment 5	Budget
Attachment 6	National Policy Assurances

ARPA-E will make changes to Attachment 1 and Attachment 2 only in exceptional circumstances. To request a change to either of these attachments, please contact the appropriate Legal Counsel referenced above. ARPA-E will not make any changes to Attachments 4 or 6.

3.2 Cover Page (Assistance Agreement Form)

The Assistance Agreement Form includes key information regarding the project, including the award number, the name of the Prime Recipient (e.g., ABC Company, XYZ University), the name of the principal investigator, the period of performance, the total project cost, and the Prime Recipient’s cost share.

An authorized representative of the Prime Recipient is required to sign Blocks 22 to 24 of the Assistance Agreement Form. By signing, the Prime Recipient agrees to the terms and conditions in Attachments 1, 2, 3, 4, 5, and 6 of the award, and affirms that it has fully disclosed other prior, current, and pending sources of funding for the project described in the award.

After the DOE Contracting Officer uploads the final award documentation into FedConnect, you are required to view and acknowledge receipt of the award in FedConnect. Instructions for acknowledging awards are provided in Section 6 below.

3.3 Attachment 1 (Special Terms and Conditions)

ARPA-E has established a standard set of terms and conditions for cooperative agreements. Most of the principal terms and conditions are found in Attachment 1.

You may request changes to Attachment 1, but changes will only be approved by the DOE Contracting Officer in exceptional circumstances.

If you have questions concerning Attachment 1, please contact the ARPA-E Legal Team. Contact information for the ARPA-E Legal Team is provided in Section 2.2.3 above.

3.4 Attachment 2 (Intellectual Property Provisions)

ARPA-E has established a standard set of intellectual property provisions for SBIR/STTR awards, but it has tailored these provisions for different types of Prime Recipients and Subrecipients. As a result, you will find three versions of Attachment 2: one for small businesses (Prime Recipients and Subrecipients), one for large businesses (Subrecipients), and one for universities and nonprofits (Subrecipients).

In general, you may take title to intellectual property (IP) developed under the award upon compliance with procedures specified in the award, but the Federal Government retains certain rights in IP, including:

- **Government Use License:** The Federal Government may practice, or have it practiced on behalf of the Government, without paying royalties to the IP owner. See Section VIII.G.1 of the Funding Opportunity Announcement (FOA) for more information.
- **March-In Rights:** If the IP owner fails to commercialize the IP developed under the award, the Federal Government may “march in” and require the IP owner to license the technology. See Section VIII.G.2 of the FOA for more information.
- **U.S. Manufacturing Requirements:** Small businesses and their exclusive and nonexclusive licensees are required to substantially manufacture any products embodying (or produced through the use of) subject inventions in the United States for products being used or sold in the United States. Universities’ and nonprofits’ exclusive licensees are required to substantially manufacture any products embodying (or produced through the use of) subject inventions in the United States for products being used or sold in the United States. Large businesses and their exclusive and nonexclusive licensees are required to substantially manufacture any products embodying (or produced through the use of) subject inventions in the United States for products being used or sold anywhere in the world. See Section VI.B.9 of the FOA for more information.

ARPA-E recognizes that you will want to protect IP you develop under award, and you may have IP that was developed at private expense before you received this award. You will need to organize your IP into three categories:

- **Limited Rights Data** is proprietary data that was developed at private expense before you received this award. The Federal Government normally does not have any rights to this data, unless it deems it necessary for you to provide it to us for specified limited purposes. To protect Limited Rights Data, you should not disclose it to ARPA-E, unless it is necessary for us to evaluate your work under the award. When Limited Rights Data is delivered to ARPA-E, it must be marked with appropriate restrictive markings.
- **Unlimited Rights Data** is data produced under the award that is suitable for immediate public release. Data produced under government sponsorship is generally classified as public information.
- **SBIR/STTR Data** is data produced under the award that is protected from public release for a limited period of time. You may designate data first produced

under the conduct of your ARPA-E award as SBIR/STTR Data; such data will be protected from public release for a period of 4 years after the Federal Government's acceptance of all deliverables under the project. However, certain data will be required to be delivered to ARPA-E with unlimited rights.

In the award, you will be required to identify the data that falls into the Unlimited Data Rights category. Upon approval by ARPA-E, other data produced under the award will be considered SBIR/STTR Data. The ARPA-E Program Director and DOE Patent Counsel will review your proposed list of Unlimited Data Rights and request modifications, as appropriate.

If you have questions concerning Attachment 2, please contact the DOE Assistant General Counsel for Technology Transfer and Intellectual Property. Contact information for him is provided in Section 2.2.4 above.

3.5 Attachment 3 (Technical Milestones and Deliverables)

Attachment 3 is composed of two parts. Section A contains the SOPO, a non-technical description of the project objectives that is intended for public release. Section B is an aggressive schedule of technical milestones and deliverables for each Phase that is negotiated by the Selectee and ARPA-E Program Director. Technical milestones and deliverables can be defined as follows:

- A deliverable is a tangible result or output that occurs in a project.
- A milestone is a point in time at the completion of a deliverable.

ARPA-E uses the technical milestones and deliverables to measure your progress over the life of the project. There is a specific deadline for the completion of every technical milestone and deliverable. The first few quarters often focus on test results that determine whether the project should continue.

A typical schedule includes the following components:

- **Project Management** – This section details what portions are allocated to general project management and resource planning, including preparations of all required interim reports and the final report.
- **System Design** – This process details simulations of the specific subject that will be further developed with considerably more detail.
- **Development and Modification** – This section should list the objects to develop the required level of capabilities and techniques.
- **Supporting Information** – Any tasks or information that will support the matrix of information according to milestone timeline.

- Benefits Assessment – This section details process models and specific information related to accessing the benefits as stated in Gantt chart.
- Technology-to-Market Plan Milestones – Completion of the Technology-to-Market Plan and progress reports against that plan will be integrated as technical milestones and deliverables. Additional Technology-to-Market milestones may be negotiated.

Failure to achieve the technical milestones and deliverables by the specified dates may result in the renegotiation of the technical milestone and deliverable schedule or the termination of the award. The technical milestone and deliverable schedule will incorporate go/no-go assessments, including between Phase I and Phase II (and, if applicable between Phase II and Phase IIS), during which the ARPA-E Program Director reviews the project in its entirety and determines whether to continue or terminate funding.

An excerpt of a sample schedule is provided below.

Organization Name: Energy Inc
Project Name: Make a Better Battery

Control Number: 0123-4567
Start Date: 1/1/2013

Level1	Level2	Level3	Title/Summary	Task Description	Milestone Description	G/NG (Y)	Start	End	Start Date	End Date
1			TASK 1: Fabricate XYZ material with higher charge capacity	The goal of this task is to demonstrate that the novel XYZ material is capable of attaining a charge capacity of at least 4 mAh/cm2 at the 100 cm2 scale			Month 0	Month 24	1/1/2013	1/1/2015
1	1.1		Prepare XYZ material at the 10 cm2 scale	Demonstrate the ability to construct XYZ material with a high number of active sites per unit area and corresponding high charge capacity characteristics			Month 0	Month 6	1/1/2013	7/1/2013
1	1.1	1.1.1			Demonstrate the ability to produce XYZ material with a microstructure corresponding to a 20-40 micron depth and 50-100 micron spacing (~2:1 aspect ratio) on a 10 cm2 sample with at most 2 defects per cm2		Month 0	Month 3	1/1/2013	4/1/2013
1	1.1	1.1.2			Demonstrate the ability to produce XYZ material with 1:1 spacing:depth aspect ratio with at most 1 defect per cm2		Month 3	Month 6	4/1/2013	7/1/2013
1	1.2		Prepare XYZ material at the 100 cm2 scale	Demonstrate the ability to construct XYZ material with the high surface area and charge capacity characteristics on a larger scale			Month 9	Month 18	10/1/2013	7/1/2014
1	1.2	1.2.1			Demonstrate a 100 % increase in active sites in prepared XYZ material compared to ZYX material correlating to a 80% % increase in energy density		Month 9	Month 14	10/1/2013	3/1/2014
1	1.2	1.2.2			Demonstrate production of a 100 cm2 area of XYZ material with at least 3 mAh/cm2 charge capacity with a max voltage of 5 V or greater at C/3 discharge rate for ≥ 80 cycles with <20% decrease in energy/charge capacity relative to initial values	Y	Month 9	Month 18	10/1/2013	7/1/2014
2			TASK 2: Integrate XYZ material into 3D battery architecture	The goal of this task is to incorporate the XYZ material developed into an optimized three dimensional structure to maximize energy density of the produced batteries			Month 5	Month 12	6/1/2013	1/1/2014

If you have questions concerning Attachment 3, please contact the ARPA-E Program Director.

3.6 Attachment 4 (Reporting Checklist and Instructions)

ARPA-E has established a standard set of reporting requirements for all Prime Recipients and Subrecipients. Prime Recipients are required to provide ARPA-E with quarterly progress reports, quarterly financial reports, certain annual reports, and periodic reports and submissions. ARPA-E program staff will provide further details regarding these reports at a later time. In addition, Prime Recipients are required to complete certain reports upon the closeout or termination of the award. Reporting instructions are provided in Attachment 4.

If you have questions concerning Attachment 4, please contact the ARPA-E Legal Team. Contact information for the ARPA-E Legal Team is provided in Section 2.2.3 above.

3.7 Attachment 5 (Budget Information)

Applicants are required to submit a Budget Justification, SF-424, and SF-424A with their Full Applications. Upon selection, the DOE Contracting Team will review your budget documents, and identify the information and documents that it needs to complete its analysis and approve the proposed budget. Any missing information and documents are requested through ARPA-E Budget Review Questionnaires. An excerpt of a sample ARPA-E Budget Review Questionnaire is attached at Appendix 2.

For additional guidance on drafting budget documents, you may wish to review the budget information available under “Pre-Award,” “Award,” and “Post-Award” at <http://arpa-e.energy.gov/SBIRSTTR/Overview.aspx>.

If you have questions concerning Attachment 5, please contact the DOE Contracting Team. Contact information for the DOE Contracting Team is provided in Section 2.2.2 above.

3.8 Attachment 6 (National Policy Assurances)

All Prime Recipients and Subrecipients are required to comply with the non-discrimination, environmental, and other requirements set forth in Attachment 6.

If you have questions concerning Attachment 6, please contact the ARPA-E Legal Team. Contact information for the ARPA-E Legal Team is provided in Section 2.2.3 above.

4 Required Forms

4.1 Budget Forms

Applicants are required to submit a Budget Justification, SF-424, and SF-424A Spreadsheet with their Full Applications. Upon selection, the DOE Contracting Officer will review your budget documents, and identify the information and documents that he needs to complete his analysis and approve the proposed budget. Any missing information and documents are requested through ARPA-E Budget Review

Questionnaires. A sample ARPA-E Budget Review Questionnaire is attached at Appendix 2.

When you are sent the Budget Review Questionnaire, you will also be provided a new file containing a blank Budget Justification and SF-424A. This new file combines both documents and auto populates several fields to save the Selectee time. You are required to complete this document, taking into account any questions posed in a Budget Review Questionnaire. You may also be required to submit a revised SF-424. Please refer to the Budget Justification Guidance (<http://arpa-e.energy.gov/SBIRSTTR/Overview/PreAward.aspx#requiredforms>) for detailed instructions on completing the budget forms.

You may also be required to submit an Indirect Rate Proposal to ARPA-E if you do not have a Federally approved indirect rate. A form for proposing an indirect rate is available at <http://arpa-e.energy.gov/SBIRSTTR/Overview/PreAward.aspx#requiredforms>.

4.2 Environmental Impact Questionnaire

You are required to submit an Environmental Impact Questionnaire within 21 calendar days of the selection announcement.

Pursuant to the DOE's National Environmental Policy Act (NEPA) Implementing Procedures (10 C.F.R. Part 1021), ARPA-E is required to evaluate the potential environmental impact of any projects that it is considering for funding.

ARPA-E uses the Environmental Impact Questionnaire to obtain information regarding the potential environmental impact of particular projects and to determine the appropriate level of environmental review. Projects may qualify for a categorical exclusion under 10 C.F.R. § 1021.410 or may require further environmental review (e.g., environmental assessment or environmental impact statement).

You are required to answer the questionnaire for the entire project, including all work to be performed by other participants (Subrecipients, contractors, etc.). You may not limit your responses to work performed by the Prime Recipient.

Additional information on NEPA compliance is available at <http://nepa.energy.gov/>. ARPA-E's NEPA Categorical Exclusion Determinations are available at <http://arpa-e.energy.gov/nepacompliance.aspx>. If you have questions concerning NEPA compliance, please contact ARPA-E's NEPA Compliance Officer.

NAME	TITLE	TELEPHONE	EMAIL
William Bierbower	ARPA-E NEPA Compliance Officer	202-287-6585	William.Bierbower@hq.doe.gov

5 Required Submissions

5.1 Technology-to-Market Plan

ARPA-E seeks to support high-risk energy technology RD&D projects for a finite period of time at a critical point in the technology development cycle. Beyond supporting technical progress, ARPA-E works to ensure that funded technologies are well positioned and prepared to take the necessary steps toward eventual market adoption. ARPA-E requires that at the start of each project the Prime Recipient prepare a Technology-to-Market Plan identifying the key steps for this advancement.

A draft plan must be submitted and approved by the ARPA-E Program Director *before the award is executed*. A final version of the plan will be due at the end of the first quarter of the project. Prime Recipients will thereafter be required to present to the ARPA-E Program Director, on a semi-annual basis, updates on their progress against the plan. These requirements will be incorporated as contracted project milestones in Attachment 3 of the award.

The required content and form of the Technology-to-Market Plan is described in Attachment 4 of ARPA-E's Model Cooperative Agreement, which is available at <http://arpa-e.energy.gov/SBIRSTTR/Overview/Award.aspx#Cooperative>.

If you have questions concerning the Technology-to-Market Plan, please contact the ARPA-E Senior Commercialization Advisor. Contact information for the ARPA-E Senior Commercialization Advisor is provided in Section 2.2.5 above.

5.2 Certification of Eligibility and Compliance

During award negotiations, ARPA-E will provide Prime Recipients with a certification form that addresses compliance with Size Eligibility rules issued by the U.S. Small Business Administration (SBA) for the SBIR/STTR programs (*see* 13 C.F.R. §§ 121.101-121.108 and 121.701-121.705), as well as with SBIR/STTR program requirements contained in SBA's SBIR and STTR Policy Directives.

Prime Recipients are required to complete the certification form at the time of award execution and submit the signed form to ARPA-E with the signed award package. Failure to submit a signed certification form may result in delays in award execution or de-selection for award.

6 Required Registrations

6.1 FedConnect

Prime Recipients are required to acknowledge receipt of the award in FedConnect. If you are not already registered in FedConnect, please register immediately. To register in FedConnect, please refer to <https://www.fedconnect.net/FedConnect/>.

To learn how to use FedConnect, please refer to the FedConnect “Ready, Set, Go” User Guide at https://www.fedconnect.net/FedConnect/PublicPages/FedConnect_Ready_Set_Go.pdf. For technical assistance with FedConnect either e-mail support@fedconnect.net or call 1-800-899-6665.

Once the award has been signed by both parties, you will receive notification via FedConnect. At that point, you will need to login to FedConnect and acknowledge receipt of the award.

6.2 Dun and Bradstreet Data Universal Numbering System (DUNS) Number

Prime Recipients and Subrecipients are required to obtain a DUNS number. ARPA-E cannot execute a funding agreement with a Prime Recipient until it has obtained a DUNS number. In addition, a Prime Recipient cannot execute a subaward with a Subrecipient until the Subrecipient obtains a DUNS number.

To obtain a DUNS number, please refer to <http://fedgov.dnb.com/webform>. It may take several weeks to obtain a DUNS number; therefore, Prime Recipients and Subrecipients should begin this process as soon as possible to avoid delays in the execution of a funding agreement.

The DUNS number for the award must comport with the DUNS number identified in the CCR Registry.

6.3 Central Contractor Registry (CCR)

Prime Recipients and Subrecipients are required to register with CCR. ARPA-E cannot execute a funding agreement with a Prime Recipient until it has completed its CCR registration. In addition, a Prime Recipient cannot execute a subaward with a Subrecipient until the Subrecipient completes its CCR registration.

To register with CCR, please refer to <https://www.bpn.gov/ccr/default.aspx>. It may take several weeks to complete your registration with CCR; therefore, Prime Recipients and Subrecipients should begin this process as soon as possible to avoid delays in the execution of a funding agreement.

Please note that Prime Recipients and Subrecipients are required to maintain and update their information within CCR throughout the duration of the project.

6.4 Federal Funding Accountability and Transparency Act Subaward Reporting System (FSRS)

Prime Recipients are required to register with FSRS. ARPA-E cannot execute a funding agreement with a Prime Recipient until it has completed its FSRS Registration. To register with FSRS, please refer to <https://www.fsrs.gov/>.

In addition to registration, Prime Recipients are required to report to FSRS the names and total compensation of each of the Prime Recipient's five most highly compensated executives and the names and total compensation of each Subrecipient's five most highly compensated executives. Please refer to <https://www.fsrs.gov/> for guidance on reporting requirements.

Please note that Prime Recipients are required to maintain and update their information within FSRS throughout the duration of the project.

7 DOE Contracting Officer Determinations

The DOE Contracting Officer is required to make certain determinations before executing the award. He is required to assess your financial management and project management capabilities. In addition, he is required to review the proposed cost share for the project. Contact information for the DOE Contracting Officer is provided in Section 2.2.2 above.

7.1 Financial Management Assessment

The DOE Contracting Officer is required to perform a financial management assessment to evaluate your ability to manage the financial aspects of an award and your plans to accomplish project activities with reasonable economy and efficiency. The standards for acceptable financial management systems are found at in the Code of Federal Regulations, 10 CFR 600.121 for universities and nonprofits and at 10 CFR 600.311 for for-profit organizations.

7.2 Determination of Responsibility

The DOE Contracting Officer is required to make an affirmative determination of responsibility. The responsibility determination includes the financial management assessment and business review, reviews of audits, and review of activities under previous awards, especially submission of reports. The responsibility determination considers if the contractor has the administrative and programmatic capabilities to perform.

The term "administrative capability" means the capability of a Prime Recipient or Subrecipient to develop and implement administrative systems, including systems related to financial management, property management, procurement standards, financial reporting, record-keeping, and submission of administrative reports/certifications for award closeout.

The term “programmatic capability” means the technical capability of a Prime Recipient or Subrecipient to successfully carry out a project taking into account such factors as:

- The Prime Recipient’s performance in successfully completing Federally and/or non-Federally funded projects similar in size, scope, and relevance to the proposed project;
- The Prime Recipient’s history of meeting reporting requirements on prior or current assistance agreements with Federal and/or non-Federal organizations and submitting acceptable final technical reports;
- The Prime Recipient’s organizational experience and plans for timely and successful achievement of the objectives, technical milestones and deliverables in Attachment 3; and
- The Prime Recipient’s staff expertise/qualifications and resources or ability to obtain them, to successfully achieve the goals of the project.

Consistent with ARPA-E’s mandate to exercise good Federal stewardship, the DOE Contracting Officer may request the insertion of one or more conditions into your award if he deems the project to be high risk. In such instances, the DOE Contracting Officer will work with you to minimize the administrative burden while maximizing your prospects for success.

7.3 Cost Share Allowability

The Prime Recipient is required to provide cost share commitment letters from Subrecipients or third parties that are providing cost share for Phase II and Phase IIS (if applicable), whether cash or in-kind. Each Subrecipient or third party that is contributing cost share must provide a letter on appropriate letterhead that is signed by an authorized corporate representative. The letter must state, in unconditional and unequivocal terms, its commitment to provide cost share. The letter may not include any conditions for receipt of the cost share contributions. The letter must state the amount and form of cost share, the source and precise nature of the contribution, and the duration and timing of the commitment (e.g., two years beginning in Fall 2012).

The DOE Contracting Officer will review this information and confirm that the cost share contributions are allowable under the applicable Federal cost principles, specified in the project budget, verifiable from the Prime Recipient’s records, and necessary and reasonable for proper and efficient accomplishment of the project. Every cost share contribution must be reviewed and approved in advance by the DOE Contracting Officer and incorporated into the project budget before the expenditures are incurred. Please refer to Sections III.B and VI.B.4-5 of the FOA for guidance on ARPA-E’s cost share policy.

8 ARPA-E Project Management

Prime Recipients and Subrecipients should provide sufficient resources in their proposed budgets to accommodate ARPA-E's active project management.

ARPA-E generally has substantial involvement in the management and direction of its projects from inception to completion.

- ARPA-E shares responsibility with Prime Recipients for the management, control, direction, and performance of projects.
- Prime Recipients must adhere to ARPA-E technical direction and comply with agency-specific and programmatic requirements.
- ARPA-E may intervene at any time in the conduct or performance of project activities.
- ARPA-E does not limit its involvement to the administrative requirements of the ARPA-E funding agreement. Instead, ARPA-E has substantial involvement in the project as a whole.

8.1.1 Invoice Review

During Phase II and Phase IIS (if applicable), Prime Recipients are paid on a cost-reimbursement basis. To request reimbursement, Prime Recipients must submit: (1) an SF-270 (<http://www.whitehouse.gov/sites/default/files/omb/grants/sf270.pdf>); (2) a reimbursement request form showing cumulative expenditures for the invoice period and cumulative expenditures to date (whether paid by ARPA-E or the Project Team) for the following SF-424A categories: Personnel (i.e., salaries and wages), Fringe Benefits, Travel, Equipment, Supplies, Contractual, Construction, Other, and Indirect Charges; and, (3) supporting documentation for the claimed expenditures, which may consist of summary information (e.g., printouts from internal financial systems) or detailed documentation (e.g., invoices on appropriate letterhead, equipment purchase acquisitions, and travel vouchers).

ARPA-E will not reimburse unallowable or unauthorized expenses.

During Phase I, Prime Recipients are paid on a fixed-obligation basis. ARPA-E will not perform invoice review during Phase I.

8.1.2 Cost Share Reporting

All reimbursement requests submitted to ARPA-E during Phase II and Phase IIS (if applicable) must be accompanied by written documentation showing that the Prime Recipient (or Project Team, as appropriate) paid at least the cost share percentage of total expenditures incurred during the relevant billing period.

If authorized by ARPA-E to provide the requisite cost share on a quarterly or biannual basis, Prime Recipients are required to submit the cost share report for the relevant quarter or half-year with the reimbursement request for that period. Such reports must be accompanied by written documentation showing that the Prime Recipient (or Project Team, as appropriate) paid at least the cost share percentage of total expenditures incurred during the relevant quarter or half-year.

ARPA-E may deny reimbursement requests, in whole or in part, or modify or terminate funding agreements where Prime Recipients (or Project Teams) fails to comply with ARPA-E’s cost share reporting requirements.

8.1.3 Other Reporting Requirements

ARPA-E requires Prime Recipients to submit detailed technical reports and other documents on a periodic basis. Please refer to Attachment 4 of ARPA-E’s Model Cooperative Agreement for guidance on these reporting requirements (<http://arpa-e.energy.gov/SBIRSTTR/Overview/Award.aspx#Cooperative>).

9 Internet Resources

You may wish to consult the following websites for additional information.

WEBSITE	HYPERLINK
Model Cooperative Agreement	http://arpa-e.energy.gov/SBIRSTTR/Overview/Award.aspx#Cooperative
Required Forms	http://arpa-e.energy.gov/SBIRSTTR/Overview/PreAward.aspx#requiredforms
DOE Guide to Financial Assistance	http://energy.gov/management/downloads/doe-guide-financial-assistance
DOE Financial Assistance Regulations (10 CFR Part 600)	http://www.gpo.gov/fdsys/
NEPA Compliance	http://nepa.energy.gov/
SF-424A	http://arpa-e.energy.gov/FundingAgreements/Overview/PreAward.aspx#RequiredForms
SF-425	http://www.whitehouse.gov/omb/grants_forms
FedConnect	https://www.fedconnect.net/FedConnect/
FedConnect User Guide	https://www.fedconnect.net/FedConnect/PublicPages/FedConnectReadySetGo.pdf

Dun and Bradstreet Universal Numbering System	http://fedgov.dnb.com/webform
Central Contractor Registry	https://www.bpn.gov/ccr/default.aspx
Federal Funding Accountability and Transparency Act Subaward Reporting System	https://www.fsrs.gov/

10 How to Expedite Your Award Negotiations

ARPA-E has compiled the following list of tips to help Prime Recipients and Subrecipients expedite the award negotiation process and meet contracting deadlines.

- GENERAL:
 - Identify the persons within your organization who will be participating in the award negotiations. Make sure they will have sufficient time and resources to participate in the award negotiation process during the next 60-70 days. (If any of the persons will be on vacation during this period, you should designate a backup person.)
 - Participate in the ARPA-E webinar for Selectees (i.e., Applicants selected for award negotiations), which is usually held within 3 days of notification of selection for award negotiations.
 - Prime Recipients and Subrecipients should register immediately with the following organizations (see Section 6 above for registration information):
 - FedConnect,
 - Dun and Bradstreet Universal Numbering System (DUNS),
 - Central Contractor Registry (CCR), and
 - Federal Funding Accountability and Transparency Act Subaward Reporting System (FSRS)
- LEGAL:
 - Review ARPA-E's Model Cooperative Agreement at <http://arpa-e.energy.gov/SBIRSTTR/Overview/Award.aspx#Cooperative>.
 - Notify the ARPA-E Legal Team immediately if you intend to request any changes to Attachment 1 (Terms and Conditions). See Section 2.2.2 above for contact information.
- INTELLECTUAL PROPERTY:
 - Notify the DOE Assistant General Counsel for Intellectual Property and Technology Transfer immediately if you intend to request any changes to Attachment 2 (Intellectual Property Provisions). See Section 2.2.4 above for contact information.

- Provide a final list of your Unlimited Data Rights to the DOE Assistant General Counsel for Intellectual Property and Technology Transfer. See Section 2.2.4 above for contact information.
- Research your intellectual property and how it was funded. If your intellectual property was developed with prior Government funding, that will affect your negotiations with the DOE Patent Counsel.
- TECHNICAL:
 - Work with the ARPA-E Program Director to quickly negotiate an aggressive schedule of technical milestones and deliverables.
 - Differentiate between tasks and milestones.
 - Milestones should be concrete, aggressive, and quantifiable.
 - Include metrics so that milestones are measurable.
- TECHNOLOGY-TO-MARKET:
 - Review the Technology-to-Market Plan template and requirements immediately.
 - Ensure that your project budget allocates 5 percent of Federal funding for Technology Transfer and Outreach activities and that these funds are appropriately linked to specific activities outlined in the Technology-to-Market Plan.
 - Designate a principal point of contact for Technology-to-Market activities.
 - Work with the ARPA-E Program Director and Senior Commercialization Advisor to integrate Technology-to-Market Plan milestones into the schedule of technical milestones and deliverables.
- BUDGET:
 - Submit supporting documentation for your proposed budget to the DOE Contracting Team. Refer to the Budget Justification Guidance at <http://arpa-e.energy.gov/SBIRSTTR/Overview/PreAward.aspx#requiredforms> for detailed instructions on supporting documentation.
 - Respond quickly (within 2-3 days) to Budget Review Questionnaires.
 - SF-424:
 - Modify your SF-424 to include a reasonable and realistic period of performance.
 - Budget Justification Spreadsheet:
 - The Budget Justification Spreadsheet is linked to the SF-424A through Microsoft Excel, such that the SF-424A's fields auto-populate when the Budget Justification Spreadsheet is completed. Prior to submission, please review both the Budget Justification Spreadsheet and SF-424A to ensure that the information contained in both documents is accurate.
 - For all budget categories, provide a rationale for reasonableness.
 - Personnel – Be sure to provide documentation that the proposed wage rates are actually being paid to the proposed employees

(e.g., payroll records, pay stubs). For new hires, provide hire letters (or contingent hire letter) that state the wage rate or explain the basis of how the proposed rate was developed and provide supporting documentation.

- Travel – Do not include additional travel that has not already been approved. Ensure that you have historical data justifying travel prior to negotiations.
- Cost share – Be sure to provide signed cost share letters of commitment from any third party contributing cost share. Remember you may not use Federal funding, including contributions by Federally Funded Research and Development Centers (e.g., Argonne National Laboratory), to cover your cost share obligation. Any party providing cost share must confirm to ARPA-E that the proposed cost share is allowable. The letter may not include any contingent terms, conditions, or language.
- Subrecipients – Be sure to provide a separate budget justification and SF-424A for any Subrecipients that are expected to perform 10% or more of the total project costs. For any Subrecipients that are expected to perform less than 10% of the total project costs, only a budget justification form is required.
- Vendors – Be sure to provide support justifying vendor costs (including contracts and consultants).
- “Other” budget category – Do not list other costs without supporting documentation and justification. Be sure to provide documentation regarding basis of cost and justification of need.

APPENDIX 1

Notice to Prime Recipients and Subrecipients Regarding Confidential Information and Data and Protected Personally Identifiable Information

I. CONFIDENTIAL INFORMATION AND DATA

Recipients are required to mark confidential information and data in accordance with this guidance. Failure to properly mark confidential information and data may result in its public disclosure under the Freedom of Information Act (FOIA, 5 U.S.C. § 552) or otherwise.

A. Protected Data

Recipients must properly mark any documents containing Protected Data. “Protected Data” is defined in Attachment 2 to the ARPA-E award as information and data produced under the award that, if developed at private expense, would qualify as trade secret, privileged, or confidential information or data. Protected Data is protected from public disclosure for five (5) years from the time it is first produced. The cover page must be marked with the following wording and identify the specific pages containing Protected Data:

PROTECTED RIGHTS NOTICE

Pages [__] of this document contain protected data that was produced under Agreement No. ____ with the U.S. Department of Energy. This data may not be published, disseminated, or disclosed to others outside the Government until 5 years after development of information under this Agreement, 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.

B. Other Confidential Information and Data

Recipients must properly mark any documents containing trade secrets or commercial/financial information that is privileged or confidential.

- The cover page must be marked with the following wording and identify the specific pages containing such information:

NOTICE OF RESTRICTION ON DISCLOSURE AND USE OF DATA

Pages [__] of this document may contain trade secrets or commercial or financial information that is privileged or confidential and exempt from public disclosure. Such information shall be used or disclosed only for evaluation purposes or in accordance with a financial assistance or loan agreement between the submitter and the Government. The Government may use or disclose any information that is not appropriately marked or otherwise restricted, regardless of source.

- The header and footer of each page containing such information must be marked with the following wording: *“May contain trade secrets or commercial or financial information that is privileged or confidential and exempt from public disclosure.”*
- Each line and paragraph containing such information must be marked with double brackets or other clear identification, such as highlighting.

II. PROTECTED PERSONALLY IDENTIFIABLE INFORMATION

Recipients should not include any Protected Personally Identifiable Information (Protected PII) in their submission to ARPA-E. 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 2

Sample ARPA-E Budget Review Questionnaire

Company X

SF-424A Budget Category Questions

1. Personnel \$XXXXXX

Senior managements positions/qualifications have been identified however all other positions listed on your budget justification have not been identified. Please provide the following:

- Position title, job description, employee name, qualifications or resume
- Offer letters for future hires
- Payroll justification to include (snap shot of check stubs, offer letters, or certified payroll print out) for all employee supporting this program

2. Travel \$XXXXXX

- Please provide a print out of the company historical data used to justify each trip to total \$XXXXXX. Please provide specific trips that are planned by recipient staff for execution of this work. Please provide the work locations and tentative frequency of this travel, as well as the identity of proposed travelers. Please provide costing for airfare, hotel, car rental and other associated expenses of travel for each proposed trip. Currently, trips are described on a trip-by-trip basis, but these costs are not broken out by airfare, lodging, ground transportation, etc. More detail is necessary on a trip-by-trip basis.

3. Equipment \$XXXXXX

- Please provide copies of vendor quotes, catalog pricing or prior invoices etc. to justify each items cost. Please provide greater detail regarding the equipment purchases to be made. Figures are given for equipment in the proposal, but appear to be rough estimates without quotations from vendors. More information is needed on the equipment to be purchased and its use on this project. If there are additional pieces of equipment that will need to be purchased that were not originally envisioned in the proposal, please include them. Note that the total amount of the award may not increase.

4. Supplies \$XXXXXX

- An estimated number was provided based on "Estimate/Historical" data. Please provide copies of vendor quotes, catalog pricing or prior invoices etc. to justify each items cost. Technical supplies are listed however no information is listed for non-technical supplies, such as office supplies. If these supplies are not covered by overhead costs, please clarify.

5. Contractual \$XXXXXX

- Vendor X - Please provide support to justify vendor costs which may include written quotes made, or past invoices.
- Subrecipient 1 - Please provide a copy of the latest rate agreement and identify the full calculations used to derive the total fringe and indirect costs.
- Subrecipient 2 - Please include your negotiated indirect rate in the "Indirect (Subrecipient 2)" tab of your budget justification document to reflect the total amount.
- Subrecipient 3 – Please provide travel detail including purpose of trip and the basis for the estimated costs. This may include items such as past trips, current quotations, Federal Travel Regulations, etc.
- Federally Funded Research and Development Center Z - Please complete and submit a copy of the budget justification file.

6. Other \$XXXXXX

- Please provide documented proof of the \$190/sf cost for the Facility charge for Laboratory Space.

Additional Items:

- Please provide a revised SF-424 to reflect a suggested period of performance date of XX/XX/2010. Also please include a month, day, and year in both start and end of performance dates.
- Please provide a signed cost share letter from Company X confirming its cost share commitment.
- Please provide a signed cost share letter from Subrecipient 2 confirming its cost share commitment.