

Embargoed Presentation

Overview of the ARPA-E Award Contracting Process for Selectees

SBIR/STTR

Thursday, July 26

Briefing Outline

Overview, Schedule, and Resources – *Bill Bierbower*

Award Documentation/Budget – *Ben Lardizabal*

Reporting Requirements/NEPA – *Kathryn Aleda*

Intellectual Property – *John Lucas*

Technical Milestones – *Dr. Cheryl Martin*

Technology to Market – *Dr. Cheryl Martin*

Summary and Q&A – *Bill Bierbower*



Today's welcome will familiarize you with the ARPA-E team and some award basics

- You will be working with a team to develop your cooperative agreement. Each team consists of the following ARPA-E and DOE personnel:
 - Program Director (lead)
 - Technical SETAs
 - Programmatic SETAs
 - Legal Counsel
 - ARPA-E Chief Counsel
 - DOE Intellectual Property (IP) Counsel
 - ARPA-E Contracting Officer
 - Contracting Specialist
 - ARPA-E Technology to Market (T2M) Team

- Discover how your projects will be funded, how progress is tracked, and what the reporting requirements are for ARPA-E

- We will provide an outline of your IP options and ARPA-E policy regarding your IP



ARPA-E Leadership, Program Director and Key Support for Energy Storage SBIR/STTR

Principal Deputy Director: Dr. Eric Toone

Deputy Director for Operations: Mr. Shane Kosinski

Deputy Director for Commercialization: Dr. Cheryl Martin

SBIR/STTR

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This is ARPA-E's fifth round of project selections

Over 182 cooperative agreements and \$514.8M in projects

	12 Programs Started
ARRA Funding	FOA 1 (Open)
	Electrofuels
	Batteries for Electrical Energy Storage in Transportation (BEEST)
	Innovative Materials & Processes for Advanced Carbon Capture Technologies (IMPACCT)
	Agile Delivery of Electrical Power Technology (ADEPT)
	Building Energy Efficiency Through Innovative Thermodevices (BEETIT)
FY '11 Funding	Grid-Scale Rampable Intermittent Dispatchable Storage (GRIDS)
	Plants Engineered To Replace Oil (PETRO)
	High Energy Advanced Thermal Storage (HEATS)
	Rare Earth Alternatives in Critical Technologies for Energy (REACT)
	Green Electricity Network Integration (GENI)
Solar Agile Delivery of Electrical Power Technology (Solar ADEPT)	



Cooperative Agreements

- ARPA-E is funding through cooperative agreements
- With a cooperative agreement...
 - “Substantial involvement is expected between the executive agency and the ...recipient when carrying out the activity contemplated in the agreement”
– 31 U.S.C. § 6305
- ARPA-E will be an active participant in your work:
 - Regular site visits, meetings, and conference calls
 - Annual program reviews (with all projects in a program)
 - Engagement on technical issues
 - Assisting, if needed, on commercialization efforts
 - ARPA-E has a vested interest in your success



Each agreement must be finalized by September 21, 2012

- As noted in your selection letter, agreement must be completed by September 21, 2012. Your project may be de-selected if you don't meet this deadline.
- We are committed to meeting this date and we expect your teams will be as well
- Model Cooperative Agreement for SBIR/STTR Awards is available on our website
 - <http://arpa-e.energy.gov/SBIRSTTR/Overview/Award.aspx#Cooperative>
 - Please begin your internal approval process immediately
- Resources Necessary:
 - Contracting/Budget Staff – You will need contracting/budget staff to review the award documentation, respond quickly to questions from ARPA-E, and finalize the budget for the project
 - Intellectual Property (IP) Counsel – You may need an IP attorney to identify and resolve any issues arising out of or relating to the project
 - Principal Investigator and Technical Personnel – You will need the Principal Investigator and technical personnel to negotiate an aggressive set of technical milestones and deliverables for the project

Key Deadlines for Award Negotiation

Award Negotiation Milestones	Deadline	Deadline
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/Award.aspx	Day 1	7/20
ARPA-E hosts webinar for selectees (i.e., applicants selected for award negotiations) to review contracting process.	Day 6	7/26
Deadline for submitting request for changes to Attachment 1 to ARPA-E Legal Counsel. (Changes will be made only in exceptional circumstances.)	Day 14	8/3
Deadline for submitting request for changes to Attachment 2 to DOE Patent Counsel. (Changes will be made only in exceptional circumstances.)	Day 14	8/3
ARPA-E Program Director negotiates high level milestones with selectees.	Days 2-21	8/10
Deadline for selectee to return Environment Impact Questionnaire	Day 21	8/10
Selectee drafts Technology-to-Market Plan with assistance of ARPA-E Commercialization Advisor/Program Director	Days 2-44	9/2
Deadline for finalizing SOPO and schedule of technical milestones and deliverables with ARPA-E Program Director.	Day 44	9/2
Deadline for providing DOE Patent Counsel with final list of unlimited data rights.	Days 2-48	9/6
DOE Contracting Officer works with selectee to finalize budget for project once high level milestones have been negotiated. Upon request, selectees complete ARPA-E Budget Review Questionnaires and provide revised budgets within 3 business days.	Days 22-51	9/9
Deadline for finalizing budget for the project with the DOE Contracting Officer.	Day 55	9/13
Deadline for selectee to return final, signed SF-424 (to be completed once budget is finalized).	Day 59	9/15
ARPA-E sends final award package to selectee.	Day 62	9/20
Deadline for selectee to return signed award package to ARPA-E.	Day 63	9/21
Selectees acknowledge receipt of award in FedConnect.	Day 65	9/23

Key Deadlines (cont'd)

DAY 21: Deadline for Program Director and selectee to negotiate High Level Milestones. (8/10)

DAY 44: Deadline for selectee to submit draft Technology-to-Market Plan to ARPA-E Program Director. (9/2)

DAY 44: Deadline for Program Director and selectee to negotiate final SOPO. (9/2)

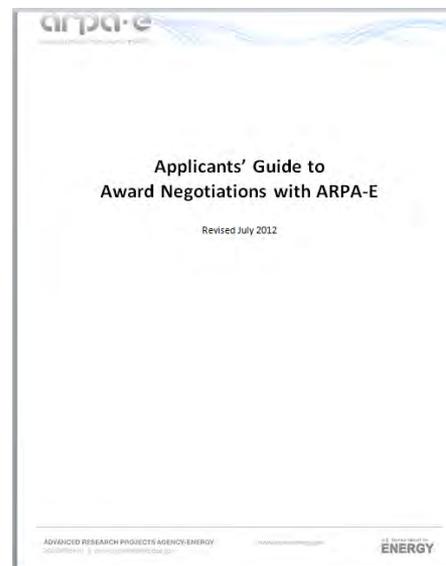
DAY 51: Deadline for DOE Contracting Officer to approve final budget for the project. (9/9)

DAY 65: Deadline for selectee to acknowledge award documents in FedConnect. (9/23)

Award Negotiation Resources

- ARPA-E has created an “Applicant’s Guide to Award Negotiations with ARPA-E,” which is posted at <http://arpa-e.energy.gov/SBIRSTTR/Overview/PreAward.aspx#awardNegotiations>
- ARPA-E’s “Funding Agreements” webpage provides a wide range of useful information to selectees and performers. This information is organized chronologically: Pre-Award, Award, Post-Award, Closeout, and Termination.

The screenshot shows the ARPA-E website header with the logo and navigation menu. The main content area is titled "SBIR/STTR OVERVIEW" and includes a search bar, a green banner with the text "Investing in High Risk/High Reward Energy Research", and a list of navigation links: Home, About, Funding Opportunity, Events & Workshops, Programs & Projects, Recruitment, and Media. The "SBIR/STTR OVERVIEW" section contains the following text: "The Advanced Research Projects Agency – Energy (ARPA-E) has prepared the following guidance to facilitate the negotiation of SBIR/STTR funding agreements and the management and closeout of projects." Below this is a link to "Download Microsoft Office Viewer" and a list of project cycle stages: Pre-Award, Award, Post-Award, Closeout, and Termination. There are also links to view the ARPA-E Technology to Market Guide and information on funding agreements.



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Award Documentation

<http://arpa-e.energy.gov/SBIRSTTR/Overview/Award.aspx#Cooperative>

Funding Agreements

Cooperative Agreements

ARPA-E uses cooperative agreements to provide financial and other support to Prime Recipients. Cooperative agreements involve the provision of financial or other support to accomplish a public purpose of support or stimulation authorized by Federal statute. Under cooperative agreements, the Government and Prime Recipients share responsibility for the direction of projects.

Phase I of Combined Phase I/II awards and Combined Phase I/IIIS awards will be made on a fixed-obligation basis. Phase II and Phase IIS of Combined Phase I/II awards and Combined Phase I/IIIS awards will be made on a reimbursement basis.

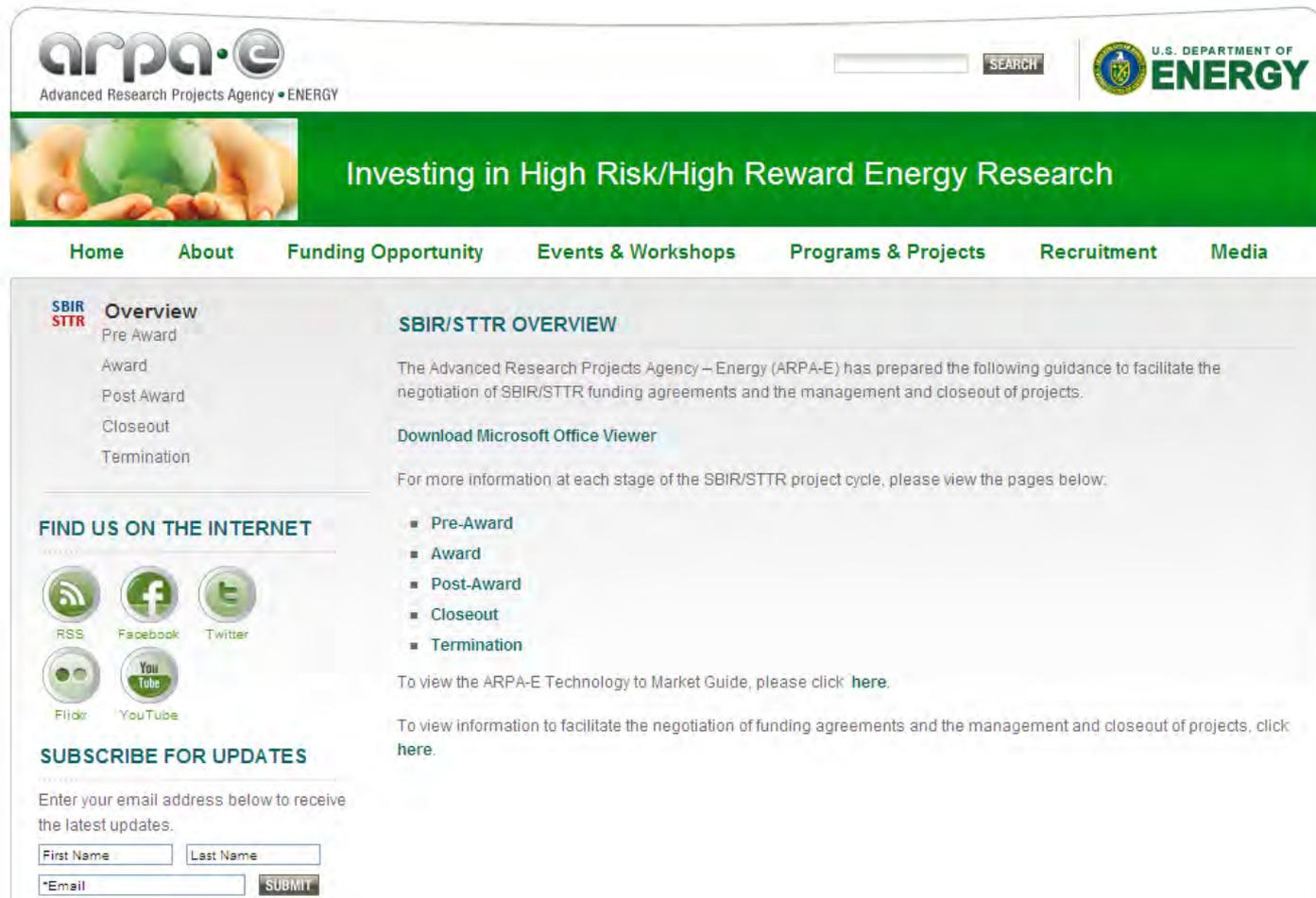
ARPA-E created an "ARPA-E Model Cooperative Agreement for SBIR/STTR Awards" to facilitate and expedite award negotiations. ARPA-E generally does not modify the terms and conditions of the "ARPA-E Model Cooperative Agreement for SBIR/STTR Awards" unless changes are specifically requested in the Business Assurances Form submitted with the Full Application.

Award Document	Description
Cover Page	Assistance Agreement Form (Coming Soon)
Attachment 1	Special Terms and Conditions (Coming Soon)
Attachment 2	Intellectual Property Provisions (Small Business) (Coming Soon)
Attachment 2	Intellectual Property Provisions (Large Business) (Coming Soon)
Attachment 2	Intellectual Property Provisions (University) (Coming Soon)
Attachment 3	Statement of Project Objectives (Technical Milestones and Deliverables) (Coming Soon)
Attachment 4	Federal Financial Assistance Reporting Checklist and Instructions (Coming Soon)
Attachment 5	Budget Information (SF-424A) (Coming Soon)
Attachment 6	National Policy Assurances (Coming Soon)

Resources for Recipient

<http://arpa-e.energy.gov/SBIRSTTR/Overview/Award.aspx#FundingAgreements>

Additional information on award documentation is available on ARPA-E's website



The screenshot displays the ARPA-E website interface. At the top left is the ARPA-E logo with the text "Advanced Research Projects Agency • ENERGY". To the right is a search bar with a "SEARCH" button and the U.S. Department of Energy logo. Below the header is a green banner with the text "Investing in High Risk/High Reward Energy Research" and an image of hands holding a globe. A navigation menu includes links for Home, About, Funding Opportunity, Events & Workshops, Programs & Projects, Recruitment, and Media.

The main content area is titled "SBIR/STTR OVERVIEW" and contains the following information:

- Overview** (with sub-links: Pre Award, Award, Post Award, Closeout, Termination)
- Download Microsoft Office Viewer**
- Text: "For more information at each stage of the SBIR/STTR project cycle, please view the pages below:"
- Navigation List:**
 - Pre-Award
 - Award
 - Post-Award
 - Closeout
 - Termination
- Text: "To view the ARPA-E Technology to Market Guide, please click [here](#)."
- Text: "To view information to facilitate the negotiation of funding agreements and the management and closeout of projects, click [here](#)."

On the left side of the main content area, there are sections for "FIND US ON THE INTERNET" (with icons for RSS, Facebook, Twitter, Flickr, and YouTube) and "SUBSCRIBE FOR UPDATES" (with a form for First Name, Last Name, and Email, and a "SUBMIT" button).

Review of Special Award Terms and Conditions (1 of 4)

Award Project Period

- The effective start date of award is the date on which the award is signed by the ARPA-E Contracting Officer unless another date was specified in the full application and approved. (See Model Cooperative Agreement for SBIR/STTR Awards Cover Page, Block 3)

Maximum Obligations

- The maximum funding for the project is limited to the amount shown on Agreement Cover Page. (Block 13)

Acknowledgment of Award Documents

- See Award Negotiations Guide Section 6 and Model Cooperative Agreement for SBIR/STTR Awards Attachment 1.

Payment Procedures

- See Model Cooperative Agreement for SBIR/STTR Awards Attachment 1.



Review of Special Award Terms and Conditions (2 of 4)

- **Cost Share (See Model Cooperative Agreement for SBIR/STTR Awards Attachment 1 and/or Award Negotiations Guide, Section 7)**

Cost Share Requirement	Phase I	None
	Phase II	≥ 20% of the Total Project Cost for Phase II
	Phase IIS	≥ 20% of the Total Project Cost for Phase IIS



Review of Special Award Terms and Conditions (3 of 4)

Pre-Award Costs

- The Prime Recipient may incur pre-award costs up to ninety (90) days prior to the effective date of this Award and in an amount up to \$20,000.
 - Pre-award costs for periods preceding 90 days prior to the effective date of this Award or in excess of \$20,000 are allowable only if approved in writing, prior to incurrence, by the DOE Contracting Officer.
 - Any pre-award expenditures (including those made after DOE approval) are made at the Prime Recipient's risk and do not impose any obligation on ARPA-E.
 - Pre-award costs claimed by the Prime Recipient will be applied against the maximum obligation for Phase I detailed in Attachment 1 of the Cooperative Agreement.

Reporting Requirements

- See Model Cooperative Agreement for SBIR/STTR Awards Attachment 4 & Model Cooperative Agreement for SBIR/STTR Awards Attachment 1

Review of Special Award Terms and Conditions (4 of 4)

Monitoring Process

- See Model Cooperative Agreement for SBIR/STTR Awards Attachment 1 & Model Cooperative Agreement for SBIR/STTR Awards Attachment 4



Financial Management Assessment and Determination of Responsibility

- The ARPA-E Contracting Officer is required to perform a financial management assessment to assess 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 10 CFR 600.121 for universities and non-profits and at 10 CFR 600.311 for-profit organizations.
- The ARPA-E Contracting Officer is required to make an affirmative determination of responsibility. The determination considers if the contractor has the administrative and programmatic capabilities to perform.
- See Award Negotiations Guide Pages 16-17

Budget Documents

(See Award Negotiations Guide Page 15)

- The ARPA-E Contracting Officer will review the budget documents submitted with your Full Application, and identify the information/documents needed to complete his analysis and approve the proposed budget.
- Any missing information is requested in the form of a Budget Review Questionnaire, which includes questions to be answered and identifies information and documents to be provided (sample Questionnaire — see Award Guide Appendix 2).
- The following budget documents are available on ARPA-E's website (<http://arpa-e.energy.gov/SBIRSTTR/Overview/PreAward.aspx>).

Required Forms

(See Award Negotiations Guide Page 12)

Upon selection for award negotiations you are required to complete and submit the following forms:

- Indirect Rate Proposal
 - Or copy of an Independent Audit Report or Indirect Rate Approval Letter from a federal agency
- Environmental Impact Questionnaire

If your project is revised (during award negotiations or at a later time), you may be required to submit new budget documents

- SF-424
- SF-424A and Budget Justification Spreadsheet
 - Budget Justification Guidelines

<http://arpa-e.energy.gov/SBIRSTTR/Overview/PreAward.aspx>

Put Your Award Negotiations in High Gear—Part I (Budget)

- Prepare and submit supporting documentation for your proposed budget to the ARPA-E Contracting Officer. Refer to the Budget Justification Guidance for detailed instructions.
- Respond quickly (1-2 days) to Budget Review Questionnaires.
- Modify your SF-424 to include a reasonable and realistic period of performance.
- Be sure to provide signed cost share letters of commitment from any third party contributing cost share.
- Be sure to provide a separate budget justification and SF-424A for any sub-recipients that are expected to perform 10% or more of the total project costs.
- Budget Justification Spreadsheet—see additional tips for each budget category in the Award Negotiations Guide (pages 22-23)
- Submit copy of independent audit report or approved indirect rate letter, or indirect rate proposal (if required)



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COOPERATIVE AGREEMENTS

- ARPA-E has established a Model Cooperative Agreement for SBIR/STTR Awards as the default award for all Prime Recipients. The 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/PreAward.aspx>.

COOPERATIVE AGREEMENTS

- ARPA-E will make changes to Attachment 1 and Attachment 2 only in exceptional circumstances. ARPA-E will not accept any proposed changes to Attachments 4 or 6.

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



ARPA-E has redesigned the Funding Agreement Overview Page to allow more information at each stage of the project cycle

- Pre-Award
 - Award Negotiations
 - Required Forms
 - DUNS Number and CCR and FSRS and FedConnect Registrations
 - Proof of Cost Share and Cost Share Commitment Letters
- Award
 - Funding Agreements
 - Cooperative Agreements
 - Projects involving FFRDCs and GOCOs
 - Subawards and Other Agreements
 - Intellectual Property Rights and Requirements
 - Intellectual Property Reporting
 - Intellectual Property and Commercialization Rights Agreement
 - Utilization Reporting
 - Domestic Manufacturing Requirement
 - Rights in Technical Data
- Post-Award
 - Applicable Federal Regulations
 - Reporting
 - Requesting Reimbursement
- Closeout
 - Closeout Process
- Discontinuance of Funding
 - Enforcement Process
 - Suspension
 - Noncompliance (Termination)

<http://arpa-e.energy.gov/SBIRSTTR/Overview.aspx>

Reporting Requirements

- ARPA-E Specific
- All reporting is electronic
- Federal Financial Assistance Reporting Checklist and Instructions are on our website as Attachment 4:

<http://arpa-e.energy.gov/SBIRSTTR/Overview/Award.aspx>



National Environmental Policy Act (NEPA)

- 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 (EIQ) 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 CFR Part 1021, or may require further environmental review
- 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 lead recipient.
- See Section 4.2 of the Award Negotiation Guide for additional information
- Questions?
 - Michael Saretsky: Michael.Saretsky@hq.doe.gov

Put Your Award Negotiations in High Gear—Part II (General/Technical)

- 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.
- Technical: Work with the ARPA-E Program Director to quickly negotiate an aggressive set of technical milestones and deliverables.
 - Differentiate between tasks and milestones.
 - Milestones should be concrete, aggressive, and quantifiable.
 - Include metrics so that milestones are measurable.



Put Your Award Negotiations in High Gear—Part III (Legal/IP)

- Legal: Review the model award documentation and forms available on ARPA-E's website
 - Notify the ARPA-E Chief Counsel immediately if you intend to request any changes to Attachment 1 (Terms and Conditions)
- Intellectual Property:
 - Notify the DOE Patent Counsel immediately if you intend to request any changes to Attachment 2 (Intellectual Property Provisions)
 - Identify your Unlimited Data Rights immediately
 - Research your intellectual property and how it was funded. If there was past government funding that contributed to developing certain IP, it will affect your negotiations with the DOE Patent Counsel



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Overview of Patent Rights in ARPA-E Cooperative Agreements

- DOE OGC Patent Counsel will work directly with ARPA-E and each Recipient.
- The goals of DOE/ARPA-E patent provisions are:
 - Strengthen U.S. energy and economic security
 - Maintain or establish U.S. scientific and engineering leadership in key energy fields
 - Encourage development and deployment of new inventions in the U.S.
 - Establish new industries
 - Strengthen the U.S. manufacturing base
 - Create new sources of employment
 - Retention of limited government rights for use of inventions and data by the US government.
- Certain patent requirements and rights are mandated by law, regulation, or policy as the quid pro quo for the recipient receiving financial assistance.



Technical Data Types

- **Limited Rights Data** is proprietary data that was developed at private expense before you received this award. The Federal Government does not have any rights to this data, unless you provide it to us. 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.
- **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 this 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 items to be delivered under the agreement.



ARPA-E IP: Data Rights Clause

- First produced technical data that is delivered to ARPA-E may be protected from public release for 4 years after the Federal Government's acceptance of all items to be delivered under the agreement. We call this "SBIR/STTR Data."
- ARPA-E and the awardee will mutually agree on a list of data that may be marked as SBIR/STTR Data and a list of what will be released to the public.
- Subrecipients, including universities and nonprofits, as well as national labs operated by universities and nonprofits, also receive this right.
- "Patent Hold" restricts any release of data for enough time to file a patent application, provided that the subject invention has first been disclosed to DOE.

ARPA-E IP: Patent Rights Clause

- Apply only to “subject inventions” made under the award. “Made” means invention conceived **or** first **actually** reduced to practice. No government rights in any other inventions; e.g. background inventions.
- All subject inventions must be reported to DOE. ARPA-E will provide a fact sheet on reporting subject inventions.
- Per Bayh-Dole Act, small businesses, universities, and nonprofits, as well as national laboratories operated by universities and nonprofits, have the automatic right to elect to retain title to their own subject inventions.
- Per Patent Class Waiver, large businesses, including national laboratories operated by large businesses, will have an automatic right to elect to retain title to their own subject inventions, subject to meeting certain cost share requirements.



ARPA-E IP: Patent Rights Clause

- If you elect to retain title to an invention, you must file a patent application.
- **Government Patent Rights:**
 - **Government license:** Government & others acting on behalf of the Government may practice invention royalty free for a Government Purpose.
 - **March-in Rights:** Insurance Policy that you will commercialize the invention
 - **U.S. Preference in licensing:** Grant of exclusive right to use or sell invention in U.S. must be to party who agrees to substantially manufacture in the U.S.



ARPA-E: U.S. Manufacturing Requirement

■ **Small business:**

- Recipient and exclusive and nonexclusive licensees must substantially manufacture in the United States any products embodying subject inventions (or produced through the use of subject inventions) if such products are intended for use or sale in the United States.

■ **University and nonprofits:**

- Exclusive licensees must substantially manufacture in the United States any products embodying subject inventions (or produced through the use of subject inventions) if such products are intended for use or sale in the United States.

■ **Large Business:**

- Recipient and exclusive and nonexclusive licensees must substantially manufacture in the United States any products embodying subject inventions (or produced through the use of subject inventions), whether such products are intended for use or sale in the United States or overseas.

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Milestones and reporting are used by ARPA-E to assess project performance

- Quarterly, annual, and end of project technical milestones will be negotiated before award
 - Annual/end of project: clearly-defined quantitative technical milestones subject to independent measurement or validation
 - Aggressive milestones are required for all projects
- Quarterly, annual, and end of project reports and reviews
 - Technical: teleconferences, presentations at ARPA-E, site visits
 - Programmatic: quarterly reports to assess progress in terms of cost and schedule
- To proceed to a subsequent Phase, the Prime Recipient will be required to submit a written Continuation Request to the DOE Contracting Officer which will be used by ARPA-E to make a Go/No-Go decision on the project.“



Technical Milestones

- ARPA-E funds projects through cooperative agreements, which require substantial involvement by the Federal Government
- ARPA-E evaluates progress of a program by comparing actual progress to Technical Milestones
- Technical Milestones are a critical component of ARPA-E awards and are negotiated prior to award
 - Milestones describe specific, objective quantitative deliverables due at specific intervals (e.g. production of xx g/L of fuel; energy density of yy W h kg⁻¹)
 - Milestones are *not* aspirational, nor do they describe simple effort (e.g. examine 10 strains; complete report)
 - Annual/End of Project may be subject to independent measurement or verification



Technical Milestones (con't)

- Review of technical milestones
 - Progress against milestones will be evaluated on a regular basis (e.g. during teleconferences, presentations at ARPA-E, and site visits)
- Importance of meeting milestones
 - Aggressive milestones are required for all projects
 - Milestones help focus effort and resources on critical path technology components
 - Failure to meet technical milestones could be the basis for termination of funding



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Moving Technology to Market is an ARPA-E Essential

- Beyond supporting technical progress, ARPA-E ensures that funded technologies are well positioned to impact agency goals through market deployment
- These activities are specifically called for in ARPA-E's statutory mandate from Congress

ARPA-E Technology to Market Related Award Elements

Technology-to-Market Plan



The roadmap you develop for activities to assess and advance your technology's commercial viability

Technology-to-Market Milestones

2	
Example activity	Examples of appropriate milestones
Commercialization Readiness	
Cost-performance model	<ul style="list-style-type: none"> • Bill of materials estimated and presented to program director • Cost-performance model presented to program director

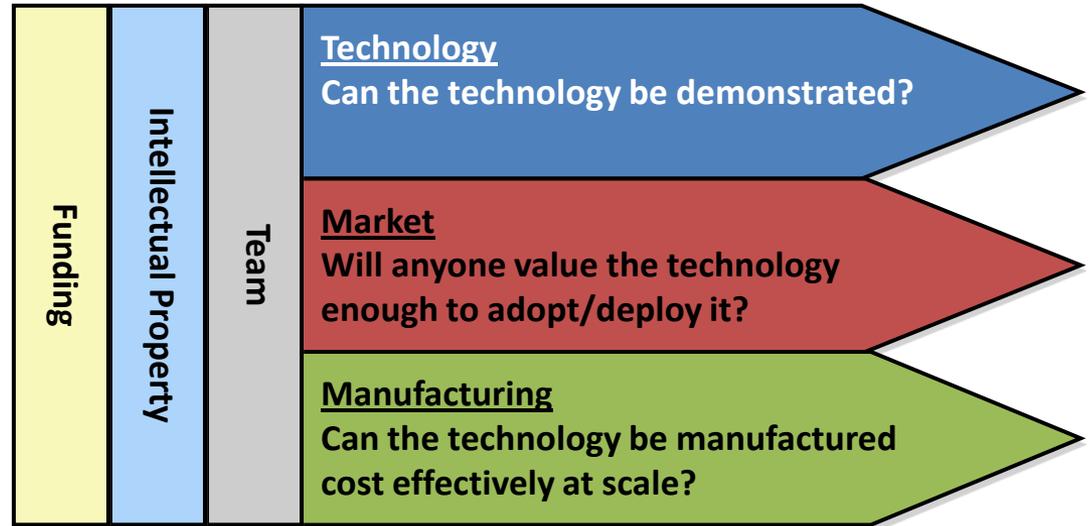
Milestones to track progress over course of project

1 Technology-to-Market Plan

Technology-to-Market Plan



Technology-to-Market Plan Elements



- Technology-to-Market Plan will serve as a roadmap of activities to assess and advance technology-to-market viability
- Given the aggressive award negotiation schedule, you are only required to submit a **draft** plan prior to award → this should require 2-3 hours of PI time
- Template and instructions will be sent to you.

Technology-to-Market – Milestones

Example activity Examples of appropriate milestones		
Commercialization Readiness		
Cost-performance model	Q6	<ul style="list-style-type: none"> • Bill of materials estimated and presented to program director • Cost-performance model presented to program director

Additional milestones may relate to areas such as Market/Value Chain Analysis, Intellectual Property, Manufacturing and Scalability, Next Stage Funding, or Team Development

- Technology-to-Market milestones will be included in Attachment 3 as project technical milestones negotiated before award
- Default milestones:
 - Present and finalize Technology-to-Market Plan (end of Q1)
 - Present Technology-to-Market progress (every other Quarter)
 - Project-specific Technology-to-Market milestones (linked to Tech-to-Market Plan)

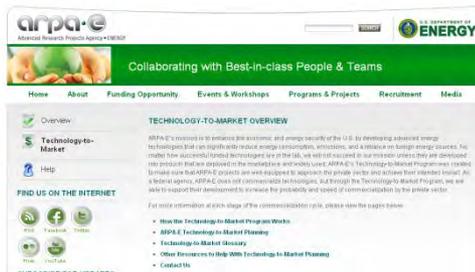


Technology-to-Market – Milestones

- Examples of appropriate milestones can be found at: <http://arpa-e.energy.gov/FundingAgreements/TechnologytoMarket/Planning.aspx>

Examples of appropriate activities	Considerations that may be relevant	Examples of appropriate milestones
<p>Intellectual property</p> <p>Secure IP on inventions</p>	<ul style="list-style-type: none"> • Are you working with a qualified lawyer, patent agent, or other IP expert? • Have you reviewed the IP landscape and prior art in the field? • What is novel about your innovation, and how are your inventions best protected? • Do you have a plan in place to secure IP before disclosing new discoveries? 	<ul style="list-style-type: none"> • Plan for securing intellectual property presented to program director • Invention disclosure(s) documented • Patent application(s) submitted

Technology to Market - Resources



ARPA-E's online Technology-to-Market Guide provides additional info

- Technology-to-Market Guide available via ARPA-E website:
 - Info on the Technology-to-Market Program and how we work
 - Guidance and examples of appropriate Technology to Market activities, considerations, and milestones
 - A Technology to Market glossary
 - Regional Resource Guide
 - Links to other resources to help with Technology to Market planning
 - How to contact us with questions and concerns

<http://arpa-e.energy.gov/FundingAgreements/TechnologytoMarket.aspx>

Briefing Outline

Overview, Schedule, and Resources – *Bill Bierbower*

Award Documentation/Budget – *Ben Lardizabal*

Reporting Requirements/NEPA – *Kathryn Aleda*

Intellectual Property – *John Lucas*

Technical Milestones – *Dr. Cheryl Martin*

Technology to Market – *Dr. Cheryl Martin*

Summary and Q&A – *Bill Bierbower*



Summary: ARPA-E funding has high expectations

- Review the award documentation
- Don't miss your deadlines—September 21st is the final deadline for award, or project may be de-selected
- ARPA-E negotiation teams will support you throughout the process.
 - You will be expected to negotiate quickly and fairly (September 21st deadline)
 - When issues arise, evaluate quickly within your organization, ARPA-E will do the same
- Reporting is critical (and required!)
 - ARPA-E reporting requirements

