EERE National Laboratory Impact Initiative: Small Business Vouchers Pilot

As of July, 2015
DOE Labs: A Reservoir of Talent for Science and Technology

- 17 National Laboratories
  - 10 in Office of Science
  - 3 in NNSA
  - 1 in Nuclear Energy
  - 1 in Fossil Energy
  - 1 in Energy Efficiency and Renewable Energy
  - 1 in Environmental Management

- ~ 66,000 Total Employees
- Over 50 Nobel laureates affiliated with DOE National Laboratories

Graphic courtesy of “A Decade of Discovery” DOE. 2008
EERE Lab Impact Initiative

Mission: significantly increase the industrial impact of DOE national labs on the U.S. clean energy sector!

- Increase and **enhance lab-private sector relationships**
- Increase and **streamline access to national lab capabilities**
- **Demonstrate the value** of lab-developed **science and technology**
Small Businesses Are Innovation Engines

**FACTS ABOUT U.S. SMALL BUSINESSES***
- 46% of nonfarm GDP
- 64% of net new job creation
- 16 times more patents per employee

*Data from Small Business & Entrepreneurship Council

**TECHNICAL NEEDS OF U.S. CLEAN-TECH SMALL BUSINESSES***
- Unique Materials
- Prototyping
- Technology Testing / Validation
- Modeling and Analyses
- Engineering Designs
- Scale-up of Samples/Processes

*State Energy Advisory Board suggestions (unpublished personal communications)
Assistance and Funding Gaps

Net Capital Requirements

Time (in Years)*

$ (loss)

Technology Creation

Product and Process Development

Commercialization

Even

Basic R&D

Applied R&D

Integration / Scale Up

Plant Construction

Assistance GAP

• Design/Test Prototypes
• Generate Product Samples
• Validate Technology
• Information for Regulations

Operations and Sales

Technology Gap

Funding GAP

Existing Tech Assistance Program ($10-$40K)

Joint Applications to FOAs (> $1M)

Small Business Voucher ($50-$300K)

*Adapted from the NRC Report “An Assessment of SBIR”, 2008
# Key Drivers

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<th>Description</th>
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<tbody>
<tr>
<td>1</td>
<td>Relevance of Capabilities</td>
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<td>2</td>
<td>Industry Awareness of Capabilities</td>
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<td>3</td>
<td>Strong, Trusting Long-Term Relationships</td>
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<td>4</td>
<td>Ease and Affordability of Access to Capabilities</td>
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<td>5</td>
<td>Lab Culture, Policies Related to Commercial Impact</td>
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<td></td>
<td>• Entrepreneurial/commercial impact culture &amp; policies</td>
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<td></td>
<td>• Vectors for taking ideas into commercialization (postdocs, entrepreneur leave)</td>
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<td>• Sense of urgency</td>
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Goals:
- Increase small business accessibility to lab capabilities
- Broaden lab awareness of small business needs and technologies
- Encourage labs to develop outreach strategies to showcase capabilities
- Make lab business practices more compatible with private sector timelines

Funds: $20M = ~100 small businesses served at ~$175,000/entity

Successful precedents: PNNL, NREL and INL Technology and Commercialization Assistance Programs, NM Small Biz Assistance

Program Design:
- DOE lab call used to select 3-5 pilot labs to complete outreach, merit reviews, and to execute voucher work scopes
- Single one-stop shop IT platform with clear lab capabilities explained, uniform IP terms, and application process
- High Impact small businesses selected through lab announcements of voucher opportunities to fill assistance gap

Major Components:
- Lab Call
- IT Platform
- Outreach and Communications
- Lab Infrastructure
- Voucher Work
- Third Party Evaluation
Model Overview

DOE Issues Lab Call

Best Lab Proposals Awarded

Labs Conduct Outreach

Labs & EERE Issue Voucher Call

Best Small Business Proposals Chosen

Voucher Credit Spent at Labs

- DOE establishes the criteria for the lab competition
- Pilot Funding from FY15 Holdback: $20M
- Best 3-5 lab proposals chosen by EERE Tech Offices and Lab Impact Team
- Funding Per Lab: $2.5-7.5M
- Labs create outreach materials
- Develop strategic partnerships (e.g. states, investors)
- Labs & EERE announce voucher availability
- SB send in proposals to a single IT platform
- IT presort for mission
- Best SB’s proposals chosen by merit review
- 2 or 3 rounds
- Funding Per SB: $50-300K
- Lab and SB reach agreement on scope
- DOE approves scope of work

Third Party Impact Evaluation
The IT Platform “Central Assistance Platform”:

• Posts critical information (Pilot description, outreach materials, links to labs and DOE, due dates, agreement templates)
• Accepts small business requests
• Automates initial mission-relevance screening
• Routes applications to the appropriate labs
• Communicates application status to small businesses

Who Will Do This: NREL

Purpose:

• Uniform application process;
• Exchange information

Why do we need it?

• Stakeholders, including small businesses, have identified a centralized application and “access” point as key to successful engagement.
1. Labs implement outreach program
   - Federal agency networks
   - States or regional networks
   - Investors, incubators networks
   - Technical networks

2. Small businesses learn of lab capabilities and SBV Pilot

3. Labs develop internal infrastructure
   - Application routing and merit reviewers
   - Technical specialist and specialized equipment/facilities identification once problem statements are received
   - Agreements specialists <-> DOE Site Office
SBV Pilot Announcements

• Labs and DOE jointly announce the selection of lead labs
  • Target Date: July, 2015

• Labs and DOE jointly announce the opportunity to apply for the first round of Small Business Assistance Vouchers
  • Target Date: September, 2015

• Potential Federal Agency Partners For Announcements
  – Small Business Administration (SBA)
  – National Institute of Science and Technology Manufacturing Extention Partnership (NIST-MEP)
## Small Business Vouchers Pilot Lead Labs

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Voucher Pilot Competition Cycle

ROUND 1

1. Receive applications
2. Convene reviewers
3. Obtain DOE approval
4. Finalize agreement
5. Start voucher work

ROUND 2

1. Receive applications
2. Convene reviewers
3. Obtain DOE approval
4. Finalize agreement
5. Start voucher work

ROUND 3

1. Receive applications
2. Convene reviewers
3. Obtain DOE approval
4. Finalize agreement
5. Start voucher work

Three rounds
Three-month cycles target
Avoid COI
Standard agreements

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How will we know that SBV has been successful?

1. SBV recipients are as successful as SBIR/STTR Phase II awardees in terms of key commercialization impact metrics

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<th>Metric</th>
<th>SBIR Phase II Recipient after 5 years*</th>
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<tr>
<td>DOE Investment Per Phase II Project</td>
<td>$700,000</td>
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<td>Average Follow-on Private Sector Investments in 5 Years</td>
<td>$386,000</td>
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<tr>
<td>Average No. Jobs Created or Retained</td>
<td>1.5</td>
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<td>Likelihood of having sales/licensing revenue from Phase II</td>
<td>20 – 25 %</td>
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* Data taken from the National Research Council’s 2008 Report “An Assessment of the SBIR Program at the Department of Energy”

2. Labs significantly increase small business partnerships compared to FY2014.

3. Labs have implemented streamlined agreements that take no more than 2 months* to execute (*less time for agreements that do not involve IP)
Stay in Touch...

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Back Up Slides
Definition for an Eligible Small Business

An eligible small business (1) is organized for-profit; (2) is majority owned by US citizens, US owned small businesses, or US based venture capital, hedge fund or private equity companies; and (3) has less than 500 employees.

- Simple verification of small business
- Does not eliminate majority VC/HF/PE owned businesses. Many small businesses doing early stage research in clean energy may have substantial investor involvement/ownership, but could advance EERE’s mission.
Standardized Agreements

Two standard agreements:
(1) SBV CRADA
(2) SBV Technology Assistance Program Agreement (TAPA)

IP Language in both agreements is the same: The small business is granted a paid-up, royalty-free, nonexclusive license, without the right to sublicense, in a limited Field of Use.

Why standardized agreements?: Both labs and small businesses have expressed a desire to streamline the SBV pilot agreement process by establishing pre-negotiated terms and conditions, especially on IP.

Why 2 agreements?: To allow for as much flexibility in small business engagement as possible, the SBV pilot will offer a Technical Assistance Agreement (for non-IP generating work) and a CRADA (for IP generating work).

EERE GC has concurred on both agreements.
A minimum of 20% cost-share from small businesses

Allowable Cost Share Categories:

- Cash
- Personnel
- In-Kind
- Indirect costs or facilities and administrative costs