

# Lab-Corps Pilot Training Program

**Laboratory Call for Lab-Corps Teams  
Fiscal Year 2016 and 2017  
Office of Strategic Programs  
Technology-to-Market**

Key Dates	
Laboratory Call Issue Date	March 31
POC Registration (See Section IV: Other Information)	3:00 p.m. (ET), April 7
Informational Webinar	3:00 p.m. (ET), April 12
Submission Deadline for Proposals	3:00 p.m. (ET), May 6
Expected Date for Team Selection Notifications	May 27

Summary information	
Means of Submission	Proposals must be submitted by email to <a href="mailto:Lab-Corps@NREL.gov">Lab-Corps@NREL.gov</a> . EERE will not review or consider proposals submitted through other means.
Total Amount to be Provided	Up to \$2,100,000
Max Amount of Funding Per Selected Team	EERE, NE, and FE anticipate providing funding in the following amounts: Up to \$75,000 per team, up to 14 teams per cohort
Period of Performance	7 weeks of training
Eligible Entity	U.S. Department of Energy national laboratories
Cost Share Requirement	Not required
Submission of Multiple Proposals	Laboratories may submit multiple proposals for each Technology Area
Proposal Forms	A team application document is provided in this call (See Appendix A)
Questions	Questions about the program rules and proposal process may be directed to <a href="mailto:Lab-Corps@NREL.gov">Lab-Corps@NREL.gov</a> .

## Section I: Description and Topic Areas

### A. SUMMARY



“DOE national laboratories are science and engineering powerhouses. The Lab-Corps program, supporting the President’s Lab-to-Market Initiative, will energize entrepreneurial spirit at our national labs and will bring new lab technologies to market that advance American leadership in clean energy.”

— Assistant Secretary for Energy Efficiency and Renewable Energy Dr. David Danielson

In support of the Department of Energy’s (DOE’s) mission to secure U.S. leadership in clean energy technology, the Office of Energy Efficiency and Renewable Energy (EERE) is committed to improving the DOE national laboratories’ commercial impact on clean energy industries. As a part of this effort, EERE’s Technology-to-Market team within the Office of Strategic Programs has created a pilot program called Lab-Corps, which will empower DOE national lab teams to identify market applications and private sector partners to commercialize high-impact technologies. We are excited to announce this call for applications to be a part of the third cohort of this innovative and impactful program.

Lab-Corps builds on the validated National Science Foundation Innovation Corps (I-Corps™) model, and has the potential to scale across additional DOE Program Offices in future years. Lab-Corps can benefit a wide variety of technology areas and the Office of Nuclear Energy and the Office of Fossil Energy joined EERE to expand the eligibility of this round. **This Lab Call is open to EERE, NE, and FE related researchers.** Please review section I-E, ‘Scope of Activities and Technology Areas’ for the specific technology-based areas which will be considered for funding.

### B. GOALS

Lab-Corps will train lab-based teams utilizing a customized entrepreneurial-focused curriculum to advance the following objectives:



- Increase the number of national laboratory-developed technologies that are transferred into commercial development or industry agreements;
- Train national laboratory researchers to better understand the commercialization process and private sector needs; and
- Transform national laboratory culture to value commercialization and entrepreneurial activities.

### C. BACKGROUND

Our national labs play a critical role in ensuring America’s security and prosperity by addressing key energy, environmental, and nuclear challenges. The innovations coming from the researchers in our

national labs have the potential to be transformative to the U.S. clean energy industry, but only if we learn to maximize the potential of those innovations. With roughly half of EERE's annual budget being deployed to the national labs, it is critical that mechanisms are in place to determine if the work being done is not only cutting edge, but addresses industry needs.

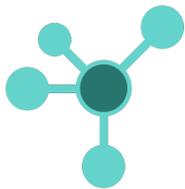
Traditionally, this has been done with analysis, workshops, and roadmapping exercises, among other things. The Lab-Corps model aims to more rapidly provide critical feedback to the technology development process using lessons learned from entrepreneurship, such as the Lean Launchpad methodology, and applies them to research.

EERE has found substantial support for creating a commercialization training program based on a customer discovery process, including enhanced market pull mechanisms and private sector engagement. EERE identified the National Science Foundation's (NSF's) I-Corps program as one of the key validated models in this area, specifically focused on increasing the commercial impact of federally funded research and enhancing scientists' entrepreneurial education. Started in 2011, I-Corps trains university-based teams to commercialize technology developed from NSF-funded research, delivering training through a network of five regional nodes. Lab-Corps builds upon the I-Corps model while adapting it to the unique features of the national labs and EERE's mission space.

EERE collaborated with the I-corps team to leverage best practices and create a similar training program tailored to the challenges faced by national lab researchers commercializing laboratory-developed technology. Now in its 2nd Cohort, the program has proven extremely valuable and enlightening to the first participants. This Lab Call seeks to identify teams for the summer and fall cohorts for the next two iterations of the program.

## D. PROGRAM STRUCTURE

Lab-Corps consists of four key elements summarized below:



**Lab-Corps Node:** The National Renewable Energy Laboratory (NREL) will serve as the Node for this program. The Node is responsible for developing and delivering the curriculum, as well as providing program guidance to participating labs. All in-person sessions will likely take place in Golden, CO.

**Participating Labs (aka Sites):** Lab-Corps Sites will recruit, assemble, and send teams to the Node for training, and support teams both during and after the training program. This might include assistance in identifying ELs and IMs, as well as Technology Transfer/Technology Deployment support for commercialization plans identified by the team during training. Each site will also collect metrics and contribute to assessing the pilot program.

**Lab-Corps Teams:** Applicants will apply to Lab-Corps as a team, composed of a Principal Investigator (PI) with a commercially relevant technology, an Entrepreneurial Lead (EL), and an Industry Mentor

(IM). (See section 1-E for team member descriptions.) Over the course of the training, teams will identify potential commercialization pathways for their selected technology, as well as identify opportunities where further development could lead to commercial value.

**Lab-Corps Training Program:** The training program will span seven weeks and will utilize a custom-designed curriculum built on the Lean LaunchPad methodology, the customer discovery process, and faculty engagement, to help teams systematically identify the most appropriate market application and commercialization pathway for their technology. Participation in the program will require attendance at in-person sessions, webinars, and a considerable amount of time spent outside of the classroom.

## E. SCOPE OF ACTIVITIES AND TECHNOLOGY AREAS

Funding will be provided to cover time and expenses for teams to participate in the seven-week training program. A sample syllabus for this training is provided at **Appendix B**. Selected teams will be expected to engage in the following activities, at a minimum:

1. Team presentations
2. Faculty lectures
3. Workshop activities
4. Customer discovery interviews
5. Travel to opening and closing sessions
6. Participation in weekly webinars
7. Completion of pre- and post-training surveys

### Team Requirements



The team is the core unit of the Lab-Corps pilot program. Each team should consist of a Principal Investigator, an Entrepreneurial Lead, and at least one Industry Mentor. Each team member is expected to fully participate in the training program—including the opening in-person session, online sessions, and in-person lessons learned closing session—and together they are expected to meet the requirements set by the Lab-Corps node. Over the course of the training, teams will explore potential commercialization pathways for a selected technology and present a plan that includes next steps for that pathway at the closing session.

### Recommended Team Structure

- **Principal Investigator (PI):** The technical lead and project manager based at the DOE national lab, responsible for overall team management. The PI should have a laboratory technology or other form of intellectual property identified that the team believes has a potential commercial application. At least 50% of the PI's time should be committed to this project during the seven-week core training period. Previous commercialization experience is not required; however, the PI should be committed to pursuing potential commercialization activity.

- Entrepreneurial Lead (EL): The Entrepreneurial Lead may come from inside or outside of the laboratory. Eligible candidates include, but are not limited to, laboratory staff (beyond the PI), serial entrepreneurs, postdoctoral scholars, or graduate students. The EL is expected to commit at least 75% time during the core training period and should expect to contribute the most to conducting customer interviews and developing the commercialization plan.
- Industry Mentor (IM): Ideally, the Industry Mentor should be an experienced industry representative or entrepreneur with substantial expertise in a relevant sector. He or she will be responsible for providing mentorship to the EL and PI through the learning experience. IMs are expected to be present during the in-person opening and closing sessions, and to meet with the team on a weekly basis during the mid-session, as available. Over the course of the program, the IM can expect to contribute up to 15% of their time. To ensure unbiased mentorship, the IM should not have a direct interest in the team's technology or intellectual property.

## Use of Team Funds

Each team will be provided up to \$75,000 in funding, which may be used for the following:

### Primary uses

- Principal Investigator's salary (via a charge code) and compensation for the Entrepreneurial Lead, as appropriate; and
- Travel costs to cover training program participation, meetings with potential customers, and industry conferences and events.

### Secondary uses (as budget allows)

- Training materials and educational resources;
- Techno-economic analysis;
- Supply chain and/or value chain analysis;
- Market survey reports;
- Technology maturation activities, such as testing and validation; and
- Specialized commercialization support services from the laboratory or another relevant organization, beyond existing support from the lab site support team.

**Note:** Funds may not be used for basic or early-stage research.

## Technology Areas



Teams within the following technology areas will be considered for selection under this call:

- Advanced Manufacturing
- Bioenergy
- Building Energy Technology related to:
  - HVAC
  - Water heating & appliance

*\*Eligibility for BTO-related PIs participation in this program is restricted to individuals who currently have an award through the Building Technologies Office (AOP, FOA, etc.). Selection will be contingent on whether participation would benefit the original project that was funded and need to be done without significant impact to the existing project scope.*

- Fossil Energy Technology related to:
  - Supercritical CO2
  - Rare earth elements
  - Industrial carbon capture
- Fuel Cells
- Geothermal (FY17/Fall cohort only)
- Nuclear Energy (FY17/Fall cohort only)
- Solar Energy Technology

*\*Eligibility for solar-related PIs participation in this program is restricted to individuals who currently have an award through the Solar Energy Technologies Office (SuNLaMP, FOA, etc). Selection will be contingent on whether participation would benefit the original project that was funded and need to be done without significant impact to the existing project scope*

- Vehicle Technologies (FY17/Fall cohort only)
- Wind and Water Power (FY17/Fall cohort only)

Funding for FY17 fall cohorts are subject to the availability of appropriations and congressional direction.

**Note:** Technologies submitted for consideration may be any TRL (technology readiness level), but should be at a stage in development that allows the team to identify potential customers within a target market.

## Section II: Funding Information and Eligibility

### A. TYPE OF FUNDING INSTRUMENT

EERE anticipates funding the laboratory work through FY 2016/2017 Annual Operating Plans with the national laboratories, through the Technology Office budgets.

### B. ESTIMATED FUNDING

EERE anticipates that approximately \$2,100,000 for Cohort 3 and Cohort 4 (subject to the availability of appropriated funds and congressional direction) will be available for this program in FY 2016/2017.

Max amount of funding to be provided per team: \$75,000

EERE is under no obligation to pay for any costs associated with preparation or submission of proposals. EERE reserves the right to fund, in whole or in part, any, all, or none of the proposals submitted in response to this Lab Call.

### C. PERIOD OF PERFORMANCE

7-week training program

### D. ELIGIBILITY

Only Department of Energy national laboratories are eligible to apply under this Lab Call.

### E. COST SHARING

Cost sharing is not required; however, labs may supplement team budgets with internal funding resources.

### F. SELECTION NOTICES

**Selected Applicants Notification:** The Technology Office providing funding will notify applicants selected for funding under this Lab Call. Notice of selection will represent that the process for funding actions has begun and depending on lab policies may be considered an authorization to begin performance.

**Non-selected Notification:** Organizations whose proposals have not been selected will be advised as promptly as possible.

## Section III: Application Review Information

### A. CRITERIA

#### 1. Initial Eligibility Review

Proposals submitted after the full proposal deadline of **3:00 p.m. (ET) on May 6, 2016** will be declined without review. Prior to a full merit evaluation, the Lab-Corps Node will perform an initial eligibility review to determine that (1) the applicant is an eligible entity under this Lab Call; (2) the information required by the Lab Call has been submitted; (3) all mandatory requirements are satisfied; and (4) the proposed project is responsive to the objectives of the Lab Call. Proposals that fail to pass the initial eligibility review will not be forwarded for merit review and will be eliminated from further consideration.

#### 2. Merit Review Process and Criteria



Applications which have passed the eligibility review by the Node will be provided to the relevant Technology Program Offices for further review and selection. The areas of consideration during this review may include, but are not limited to, the following: (areas are not weighted or ranked)

1. Potential for commercialization and market impact
2. Team capabilities and availability
3. Quality of application
4. Fit with technology office priorities

## Section IV: Other Information

### A. LABORATORY POC REGISTRATION

The laboratory Point of Contact (POC) for this Lab Call should be a person with responsibility for Technology Transfer/Technology Deployment (or other relevant area) within the laboratory. To register as a POC for this Call, please send an email with the subject line “Lab-Corps Site POC Registration” with your name, job title, email, and phone contact information no later than 3:00p.m. (ET) on **April 7, 2016**, to [Lab-Corps@NREL.gov](mailto:Lab-Corps@NREL.gov).

Laboratory POCs are the primary conduit through which information regarding this Laboratory Call will be sent to and received from the Lab-Corps Node. It will be the responsibility of these individuals to make certain that each proposal and supporting materials responsive to this Call are submitted to the Node on behalf of their laboratory on time. It is also the responsibility of the POC to communicate programmatic decisions and actions to the PI named on the application from their laboratory faithfully and accurately as a result of the selection. Laboratories are welcome to name multiple POC(s) if they so desire.

### B. MODIFICATIONS

Notices of any modifications and other correspondences related to this Lab Call will be sent to all registered laboratory POCs.

### C. TRAINING DATES



#### Summer Cohort

Kickoff Webinar: July 6, 2016

In-Person Opening Session (held at Golden, CO): July 12-15, 2016

Weekly Webinars: Wednesdays, July 20 - August 17, 2016

In-Person Closing Session (held at Golden, CO): August 23-25, 2016

#### Fall Cohort

Fall cohort dates are tentatively set for October 17 - December 9, 2016. There will be one off-week around Thanksgiving holiday.

## Section V: Proposal Submission Instructions and Template



Proposals must be submitted by email to [Lab-Corps@NREL.gov](mailto:Lab-Corps@NREL.gov) by **3:00 p.m. (ET) on May 6, 2016**. The PI should receive an email acknowledging receipt of the proposal within 24 hours. Please contact [Jennifer.Ramsey@NREL.gov](mailto:Jennifer.Ramsey@NREL.gov) if a receipt is not received. The proposal should utilize the template below, and be submitted PDF format. Proposals should include an appendix of team members' bios (1-page max each) and may include up to 3 ppt slides; no additional documentation will be reviewed.

### Instructions

1. All applications must be submitted through a registered laboratory POC. Applications submitted outside of this process will not be considered. (See section IV-A for details and instructions - deadline to request POC status is **3:00 p.m. (ET) April 7, 2016**.)
2. Applicants must utilize the template provided below and submit applications as a single PDF through their laboratory POC to the submission email address provided.

### Team Member Identification

At a minimum, the PI for the team must be identified at the time of submission. The EL and IM should also be identified at this time, when available. If the EL and IM are not identified at the time of submission, the PI should indicate their plan for identifying remaining team members (source, timeline, etc.). **If you intend to participate in the summer cohort, all remaining team members must be identified no later than June 21, 2016** (deadline for fall cohort applicants TBA).