Energy I-Corps Lab Call Informational Webinar
Wednesday, October 24, 2018
Everyone is currently muted.
For any questions, please use the chat function.
This webinar will be recorded and distributed.

Agenda

- **Introduction – Jennifer Ramsey, NREL**

- **Focus for Cohort 9 – Zack Baize, DOE**

- **Program Background & Structure – Jennifer Ramsey, NREL**

- **Cohort 9 Details – Team Responsibilities & Expectations – Kristin Clary, NREL**

- **Q&A – enter questions in the chat during the webinar**

Focus for Cohort 9

- **DOE's Office of Technology Transitions now serves as program administrator**. (See Section I C: Background)
- In an effort to meet the demand for this training across new and blended technology areas, **we are no longer restricting applications to those with participating offices listed in the call**. Any team with a technology that otherwise adheres to the program requirements and eligibility will be shared with interested offices, and alternative funding mechanisms may be considered. (See Section II D: Eligibility)
- **The Energy I-Corps team is requesting national labs submit a brief Intent to Apply form for teams prior to submitting full proposals**.
- To ensure the spirit of the training as an educational endeavor that teaches a repeatable process for industry engagement, **we are restricting applications to national lab researchers who have not already gone through the program**. Repeat successful applicants will only be considered if they are applying with both a different technology and a different team role than previously held. (See Section II D: Eligibility).
- While teams may request up to $75,000 in their proposals**, requests for lower amounts of funding will be strictly adhered to and potentially taken into consideration by interested partners**.
- While teams and their supporting DOE office have always been encouraged to communicate during and after the program, **structured debriefs and communication of training deliverables from teams to supporting offices is now a requirement of the program**.

Program Background

- **Entrepreneurial Training Program**
- **Launched in 2015 – Currently in 9th round of training**
- **Program Goals:**
  - Commercialize lab-developed technologies
  - Train lab researchers
  - Change culture

Structure

Curriculum
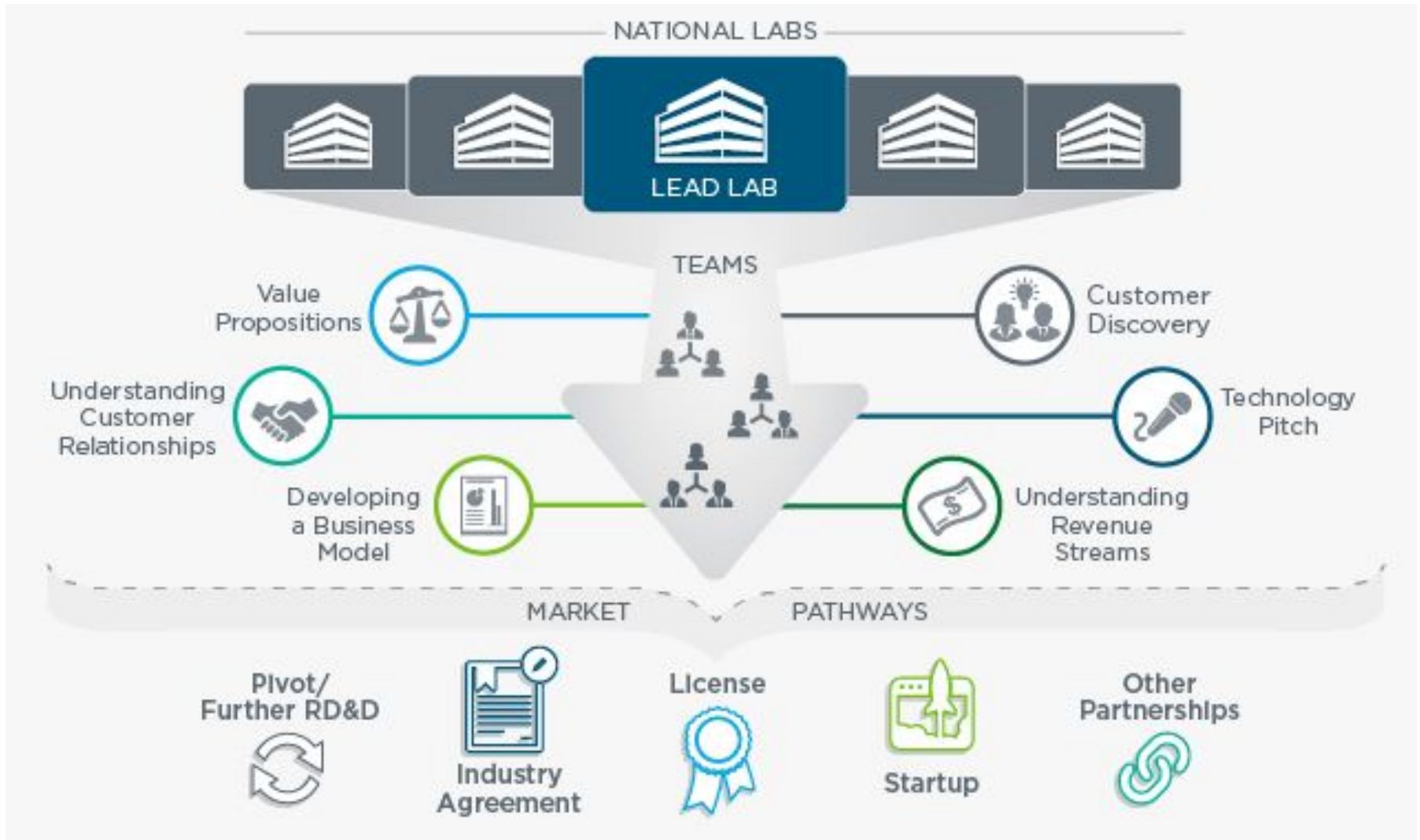
- **Business Model Canvas**
- **Customer Discovery Process**
- **Customer Segments**
- **Value Propositions**
- **Direct Market Feedback**

The Business Model Canvas

The Business Model Canvas

Designed for: Designed by: On: Iteration:

Key Partners
Who are our Key Partners?
Who are our key suppliers?
Which Key Resources are we acquiring from partners?
Which Key Activities do partners perform?

MOTIVATIONS FOR PARTNERSHIPS
Optimization and economy
Reduction of risk and uncertainty
Acquisition of particular resources and activities

Key Activities
What Key Activities do our Value Propositions require?
Our Distribution Channels?
Customer Relationships?
Revenue streams?

CATEGORIES
Production
Problem Solving
Platform/Network

Key Resources
What Key Resources do our Value Propositions require?
Our Distribution Channels? Customer Relationships?
Revenue Streams?

TYPES OF RESOURCES
Physical
Intellectual (brand patents, copyrights, data)
Human
Financial

Value Propositions
What value do we deliver to the customer?
Which one of our customer's problems are we helping to solve?
What bundles of products and services are we offering to each Customer Segment?
Which customer needs are we satisfying?

CHARACTERISTICS
Newness
Performance
Customization
"Getting the Job Done"
Design
Brand/Status
Price
Cost Reduction
Risk Reduction
Accessibility
Convenience/Usability

Customer Relationships
What type of relationship does each of our Customer Segments expect us to establish and maintain with them?
Which ones have we established?
How are they integrated with the rest of our business model?
How costly are they?

EXAMPLES
Personal assistance
Dedicated Personal Assistance
Self-Service
Automated Services
Communities
Co-creation

Channels
Through which Channels do our Customer Segments want to be reached?
How are we reaching them now?
How are our Channels integrated?
Which ones work best?
Which ones are most cost-efficient?
How are we integrating them with customer routines?

CHANNEL PHASES
1. Awareness
2. Evaluation
3. Purchase
4. Delivery
5. After sales

Customer Segments
For whom are we creating value?
Who are our most important customers?

Mass Market
Niche Market
Segmented
Diversified
Multi-sided Platform

Cost Structure
What are the most important costs inherent in our business model?
Which Key Resources are most expensive?
Which Key Activities are most expensive?

IS YOUR BUSINESS MODEL:
Cost Driven (leanest cost structure, low price value proposition, maximum automation, extensive outsourcing)
Value Driven (focused on value creation, premium value proposition)

SAMPLE CHARACTERISTICS:
Fixed Costs (salaries, rents, utilities)
Variable costs
Economies of scale
Economies of scope

Revenue Streams
For what value are our customers really willing to pay?
For what do they currently pay?
How are they currently paying?
How would they prefer to pay?
How much does each Revenue Stream contribute to overall revenues?

TYPES:
Asset sale
Usage fee
Subscription Fees
Lending/Renting/Leasing
Licensing
Brokerage fees
Advertising

FIXED PRICING
List Price
Product feature dependent
Customer segment dependent
Volume dependent

DYNAMIC PRICING
Negotiation (bargaining)
Yield Management
Real-time-Market

Energy I-Corps Curriculum Example

NOTE: All sessions are mandatory for team members

Kick-off Webinar #1 (Pre-Course) - Track 1		
12:00 - 12:15 pm	Program Introduction	Introductions and Welcome to Energy I-Corps! Program Goals & Expectations - What does Energy I-Corps "Success" look like? What Commercialization Pathways are available to my team upon completion of the program? Introduction to instructors and program staff.
12:15 - 1:00 pm	Info Session	Voices of Experience - Experiences from Energy I-Corps Cohort #8. Q&A Session will follow.
1:00 - 1:30 pm	Program Overview	Introduction to Program Concepts and Tools - LeanLaunch Methodology, Customer Discovery, Business Model Canvas. Discussion will include guidance on preparing for customer discovery interviews during the opening session. BMC Worksheet Workshop assignment given out.
1:30 - 2:00 pm	Software Demo	**Innovation Within demonstration**
Kick-off Webinar #2 (Pre-Course) - Track 1		
12:00 - 12:30 pm	Lecture	Commercialization in the DOE Laboratory Environment - How do we commercialize DOE lab technologies and why? How does Energy I-Corps fit within that framework and how can this experience impact your research? What unique channels exist for DOE lab technologies? Who are DOE stakeholders and what channels are available?
12:30 - 1:00 pm	Lecture	Pre-BMC - Worksheet Workshop - Discuss responses to worksheet questions and explore how this tool will help develop your Business Model Canvas. Teams will be called on by instructor for participation during discussion
1:00 - 1:30 pm	Info Session	Wrap-up / Q&A - Looking Ahead to Day One. Expectations for arrival in Golden.

Energy I-Corps Curriculum Example

NOTE: All sessions are mandatory for team members

Monday, October 1st	
3:30 - 4:30 pm	Team Presentation #1 (5 Teams - 5 minutes each, 7 minutes Q&A) - Presentation on technology and team introductions - Where are you in your technology readiness?
8:00 - 8:30 pm	Small Group Meetings - EL (led by Max Green), PI (led by Tom Teynor & Kristin Gray), IM (led by Sally Hatcher) Breakout Session

Tuesday, October 2	
8:00 - 8:30 am	Developing your Business Model Canvas (BMC) - What is a BMC and how is it used in the Lean Launchpad Methodology? What are the 9 parts of the BMC? Setting the stage for using this process over the course of the program. Using your BMC worksheet to develop your value proposition.
8:30 - 9:00 am	BMC - Value Proposition - What is your product or service? What value do you deliver to the customer and how is it better/different than what is already in the market? Why will people want what you're offering? Who is the competition and how does your customer view these competitive offerings? Is your VP quantifiable, relevant, specific and testable? What makes your offering unique? Building and testing your hypotheses.
9:00 - 9:45 am	**BMC Workshop/VP Workshop - (2 Stages)**
10:00 - 10:30 am	BMC - Customer Segments - Who is the customer? Why do they buy? What problems are we solving? What gains are we providing the customer? What is your customer archetype or persona? How can you reach them? How do you decide which customer segments to pursue? Start w a series of hypotheses...guessing who your customer is. Experiments help define your customer persona.
10:30 - 11:00 am	Customer Segments Workshop - How to Talk to Different Potential Customers
11:00 - 11:30 am	BMC - Customer Channels - What is a channel? Physical versus virtual channels. Direct channels, indirect channels, OEM. Business to Business (B2B) versus Business to Consumer (B2C) channels.
11:30 - 12:00 pm	**Workshop Customer Channels**
1:00 - 1:30 pm	Metrics that Matter - What does your customer care about? Savings? Speed? Reliability? Safety? Does your Value Proposition include the right metrics?
1:30 - 2:00 pm	**Workshop Metrics that Matter - what are the problem areas that teams find themselves in?**
2:00 - 2:30 pm	Ecosystem - How do you determine the ecosystem for your product/service? What/who drives decision making in your industry? How do you identify potential customers within your ecosystem?
2:30 - 3:00 pm	**Ecosystem Workshop**
3:30 - 5:30 pm	Interviewing 1.0 - Customer Discovery Discussion and Workshop - You're headed "out of the building" tomorrow. What are you trying to find out? How will you call on people you don't know. How can you get the most out of people you do. Expectations, speed, tempo, logistics, commitments. How do I interview? How is an interview different than a sales call? Includes mock interviews and Q&A session. Be prepared to for active participation to a) prioritize discovery targets (who, what, and why), b) obtain the meetings, c) design strong hypotheses & related experiments / questions, and d) analyzing findings & iteration.
	Mom test workshop - What do you have to do in order to get interviews?
5:30 - 7:00 pm	**Storytelling - Tom Teynor - Coolerado's Story**
7:00 - 8:30 pm	**Meet one-on-one with instructors (assigned office hours) During office hours team should review lectures from the day, ask specific questions from the day, and clarify any questions for the next day's presentation. Review new topics that will be covered in Presentation #2.**

Energy I-Corps Curriculum Example

NOTE: All sessions are mandatory for team members

Wednesday, October 3	
8:00 - 9:50 am	Team Presentation #2 (10 Teams/2 Tracks - 10 minutes each, 10 minutes instructors) Clear Creek Ballroom and Golden Vista Rooms
10:15 - 11:00 am	Interview Prep: Final Customer Discovery Prep - Questions?
11:00 am - 5:30 pm	Customer Discovery - Get out of the building!
6:00 - 6:30pm	Interviewing 2.0 - So you were out of the building...how did it go? Lessons Learned. Which interview strategies worked and which didn't? How will you make changes for tomorrow's interviews?
6:30 - 8:00 pm	**Tell your story, pitch practice, presentation skills - Demonstration and explanation what a "good" presentation looks like and why.**
8:00 - 9:30 pm	**Meet one-on-one with instructors (assigned office hours)During office hours team should review lectures from the day, ask specific questions from the day, and clarify any questions for the next day's presentation. Review new topics that will be covered in Presentation #3.**
9:30 PM	**Work on presentations and interview prep**
Thursday, October 4	
8:00 - 9:50 am	Team Presentation #3 (10 Teams/2 Tracks - 10 minutes each, 10 minutes instructors) - Clear Creek Ballroom and Golden Vista Rooms
10:15 - 10:45 am	BMC Revenue Streams - What is a revenue model? What types of revenue streams are there for the energy industry?
10:45 - 11:15 am	Cost - What are the most important costs inherent in an energy business model? Which key resources are most expensive? Which key activities are most expensive? Is your business more Cost Driven (leanest cost structure, low price value proposition, maximum automation, extensive outsourcing) or Value Driven (focused on value creation, premium value proposition).
11:15 - 11:45 am	Customer Relationships - How do you create end user demand? How does it differ on the web versus other channels? Evangelism vs. existing need or category? General Marketing, Sales Funnel, etc. How does demand creation differ in a multi- sided market? Get, keep, grow.
11:45 am - 4:45 pm	Customer Discovery - Get out of the building!
4:45 PM	***Reconvene at Indulge (1299 Washington Ave, Golden, CO 80401) (PROMPTLY @ 4:45)***
5:00 - 7:30 pm	Industry Night - Energy community one-on-ones. Teams will be paired with industry executives who can provide business and technology specific feedback. Each team will receive a schedule of meetings for this session.
8:00 - 9:30 pm	Meet one-on-one with instructors (Review new topics that will be covered in Presentation #4)
Friday, October 5	
8:00 - 10:00 am	Team Presentation #4 (10 Teams/2 Tracks - 10 minutes each, 10 minutes instructors) Clear Creek Ballroom and Golden Vista Rooms
10:15 - 11:00 am	BMC - Industry Partners - Who are your potential partners? Why have partners? What types of relationships do you want or need to have with your partners? This is a two-way street...what's in it for your partner? What makes a good partner? How do you establish that relationship and turn it into a valuable partnership? Homework for 10/17 assigned.
11:00 - 11:30 pm	**Industry Partners Workshop**
1:00 PM	**Closing Remarks and Send-off**

Merit Review Process

Areas of consideration during this review may include, but are not limited to, the following (areas are not weighted or ranked):

- o Potential for market viability and impact
- o Team capabilities and availability
- o Quality of application
- o Fit with technology office priorities

Use of Team Funds

$75,000 (or less)

Primary Use:

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

Secondary use (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**
- **Specialized industry engagement 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.

Team Structure

- **Roles:**
  - Entrepreneurial Lead (EL)
  - Principle Investigator (PI)
  - Industry Mentor (IM)

- **Significant time commitment**
  - 50-75% for PI & EL
  - ~15% for IM

Team Structure

Principal Investigator (PI): The technical lead and project manager based at the DOE national lab is 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 market application. At least 50% of the PI's time should be committed to this project during the two-month core training period. Prior experience is not required; however, the PI should be committed to pursuing potential market pathways.

Entrepreneurial Lead (EL): The Entrepreneurial Lead may come from inside or outside of the lab. 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% of their time during the core training period and should expect to contribute the most to coordinating customer interviews, delivering team presentations, and developing the business model.

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 is 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.

Application Process

- **Internal selection process at the Lab**
- **All intent to apply/applications must be submitted using the templates provided in the Call**
- **All intent to apply/applications must be submitted through laboratory POC (if you do not know your lab POC contact energyicorps@nrel.gov)**
- **Intent to Apply - Accepted through Friday 5:00 p.m. (ET), November 9, 2018**
- **Submission deadline for full team proposals NO LATER THAN 5:00 pm ET, Friday, December 21st**

Timeline

Key Dates	
General Informational Webinar	*Wednesday 3:00 p.m. (ET), October 24, 2018*
Submission Deadline for Intent to Apply	*Accepted through Friday 5:00 p.m. (ET), November 9, 2018*
Expected Date for Proposal Request Notifications	*Through Tuesday 5:00 p.m. (ET), November 27, 2018*
Submission Deadline for Full Team Proposals*	*Accepted through Friday 5:00 p.m. (ET), December 21, 2018*
Expected Date for Team Selection Notifications	*Through Friday 5:00 p.m. (ET), February 1, 2019*
Funding Transfers	*Through February, 2019*
Team Members Identified	February 6, 2019
Kickoff Webinar	February 27, 2019
Program Preparation Webinar	March 6, 2019
Opening Session	March 11-15, 2019
Webinar Sessions	Wednesdays March 20 – April 24, 2019
Closing Session	April 30 – May 2, 2019

Reminders

Teams are expected to attend ALL sessions

Mentors are not expected to be paid

Selling points in attracting mentors:

- Mentors get an early look at lab technologies

- Mentors get a touchpoint and "in" to the lab

- They also get a resume booster via our **Energy I-Corps Mentor page**

- This is also look great as experience on a resume for mentors

- Some companies offer philanthropy or volunteer time as growth strategies so they may have hours they can charge to their company

Questions?
View the Lab Call:
https://energyicorps.energy.gov/apply
Or Email:
Energy.Icorps@nrel.gov
Email Applications & Intent to Apply:
EnergyICorps@hq.doe.gov