

# Welcome to the ITV- Industrial Technology Validation Program Office Hours 2

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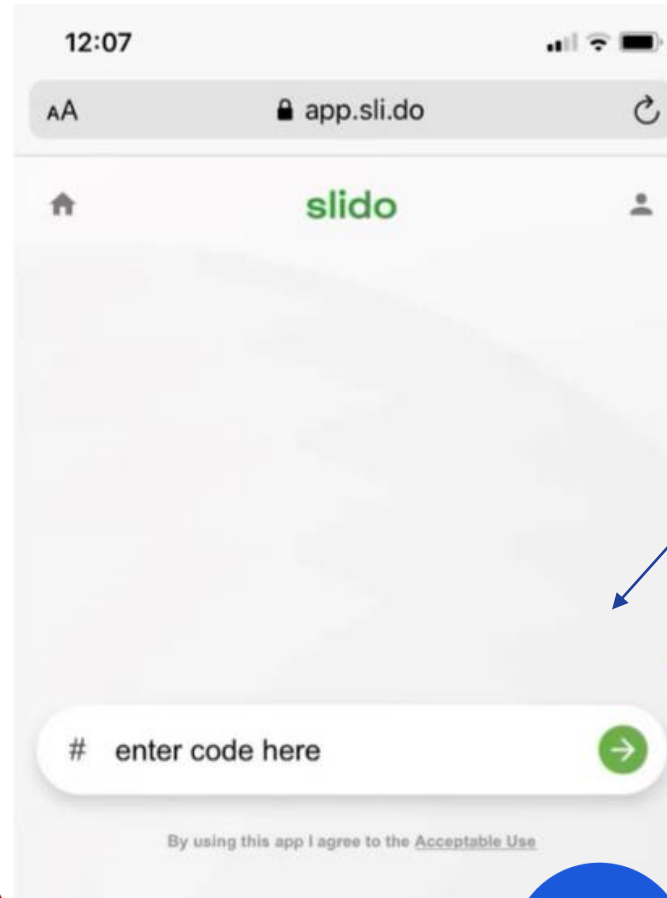
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U.S. DEPARTMENT  
*of* **ENERGY**

Office of Critical Minerals  
and Energy Innovation

# Industrial Technology Validation Program

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December 11, 2025

Office Hours 2

# Agenda

- Industrial Technology Validation (ITV) Program
- Funding Opportunity
- Q&A

# DOE's Industrial Technology Validation (ITV) Program

## How ITV Works:

- **Technology developers & host sites** apply jointly to test emerging technologies
- **Experts from DOE's National Labs** lead on-site testing & conduct M&V analysis validating field performance
- **M&V analysis** projects industry-wide impacts of broader technology adoption
- **Results shared broadly** to help American industry understand the benefits of emerging techs



Reports shared broadly across DOE networks and published on **DOE's ITV Validation Report Library**



# ITV Program Benefits

## Technology Developers

- ✓ **Improve market credibility** with unbiased performance results
- ✓ **Gain insights** to drive product development and commercialization
- ✓ **Mitigate risk** for future partners

## Host Sites

- ✓ **Reduce risks** of adopting emerging technology
- ✓ Gain a competitive edge and **optimize operations**
- ✓ **Offset the cost** of operational improvements

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***“DOE’s ITV program demonstrated how quickly thermovoltaic technology like ours can be integrated into real-world operations to generate power from industrial waste heat. It proved that converting waste heat to power can rapidly cut costs for American manufacturers and improve U.S. energy security.”***

- Jonathan Candee, Chief Revenue Officer, ATS Energy

# Measurement and Verification (M&V)

## M&V Objectives

- ✓ **Ensure rigor** in verifying resource savings
- ✓ **Reduce uncertainty** to a reasonable level
- ✓ **Account** for varying operating conditions
- ✓ **Facilitate adjustments** as conditions change

## Success Factors

- ✓ **Good communication** between all parties
- ✓ **Access** to information
- ✓ **Data quality** - Results are only as good what you put in!



# Roles and Responsibilities

## ALL PARTICIPANTS

- ✓ **Active Engagement** – Dedicate POC throughout project (up to 24 months)
- ✓ **Data management** – Provide DOE with necessary data to perform validation
- ✓ **Financial commitment** - Share costs and uphold financial responsibilities
- ✓ **Project support** – Provide assistance & resources as needed
- ✓ **Publication** – Grant permission to publish project data and results



## Technology Developers

- ✓ **Technology Installation** - Ensure proper install and configuration
- ✓ **Technical Support** – Support and troubleshoot as needed
- ✓ **Monitoring and Feedback** - Report technical challenges promptly
- ✓ **Data Management** – Collaborate with team & ensure data integrity

## Host Sites

- ✓ **Installation** – Ensure access to space & adhere to project timelines
- ✓ **Activity Reporting** – Regular updates on activities
- ✓ **Technical Challenges:** Prompt reporting of any technical issues
- ✓ **Coordination** – Support schedules and resource allocation



# Solicitation Details and Eligibility

## Joint Application

Technology developer + host site submit together

## Technology Requirements

- ✓ Ready for **installation & evaluation** in industrial setting
- ✓ Must fit one of the following categories:
  - **Pre-commercial** – not yet fully market-ready
  - **Early commercial** – partially established supply chain
  - **New applications** – deployed in different sector/use case
  - **Underutilized** – commercialized but low industry adoption
- ✓ **Scale:** No specific size requirement; can be full-scale permanent or partial-scale temporary installation

### Technology Developers

Innovators, small businesses  
incubators, labs, equipment  
manufacturers, OEMs (DOE national  
labs not eligible)

### Host Sites

Industrial site (e.g., manufacturing,  
water/wastewater plant, data center)

# Funding/Award Structure

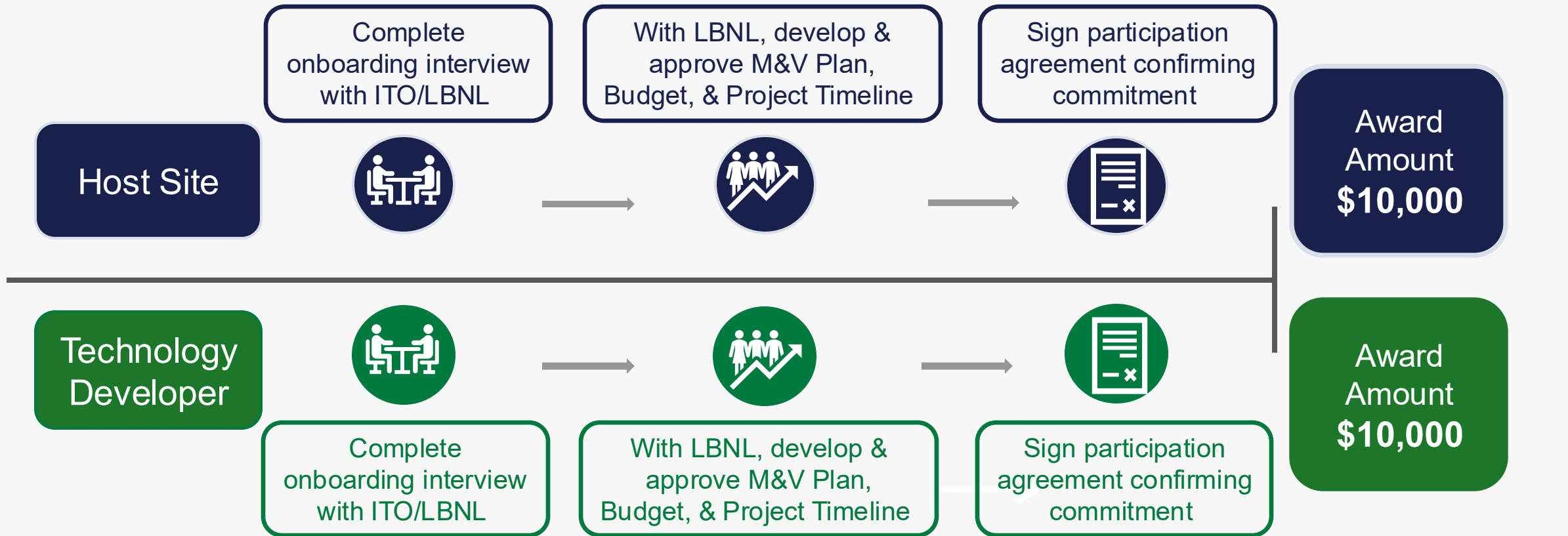
Project Phase	Key Milestones	Award Host Site	Award Technology Developer
Planning	Onboarding, M&V plan, sign agreement	\$10K	\$10K
Installation	Baseline data, install, post-retrofit data	Up to \$300K (+50% cost share)	Up to \$10K (+50% cost share)
Analysis	Review & approve final report	\$40K	\$30K

Data Requirements	Cost Share Requirements	Participation Requirements
<ul style="list-style-type: none"> <li>Host &amp; developer must supply <b>raw data files</b> (equipment/system performance) <ul style="list-style-type: none"> <li>Performance improvement evaluated comparing <b>baseline vs. post-retrofit data</b></li> </ul> </li> <li><b>Agree to share data</b> in final report</li> </ul>	<ul style="list-style-type: none"> <li><b>Phase 1 &amp; 3:</b> No cost share</li> <li><b>Phase 2:</b> 50% cost share <ul style="list-style-type: none"> <li>Documentation required for cost share</li> </ul> </li> </ul>	<p>To ensure effective, accurate, and timely completion of the validation, awardees are expected to <b>participate in regular check-in calls</b> with ITO and LBNL and <b>be responsive to questions</b> throughout the project</p>

# Phase 1 - Planning

## Anticipated Milestones

- ✓ Tech and site review
- ✓ Develop M&V plan

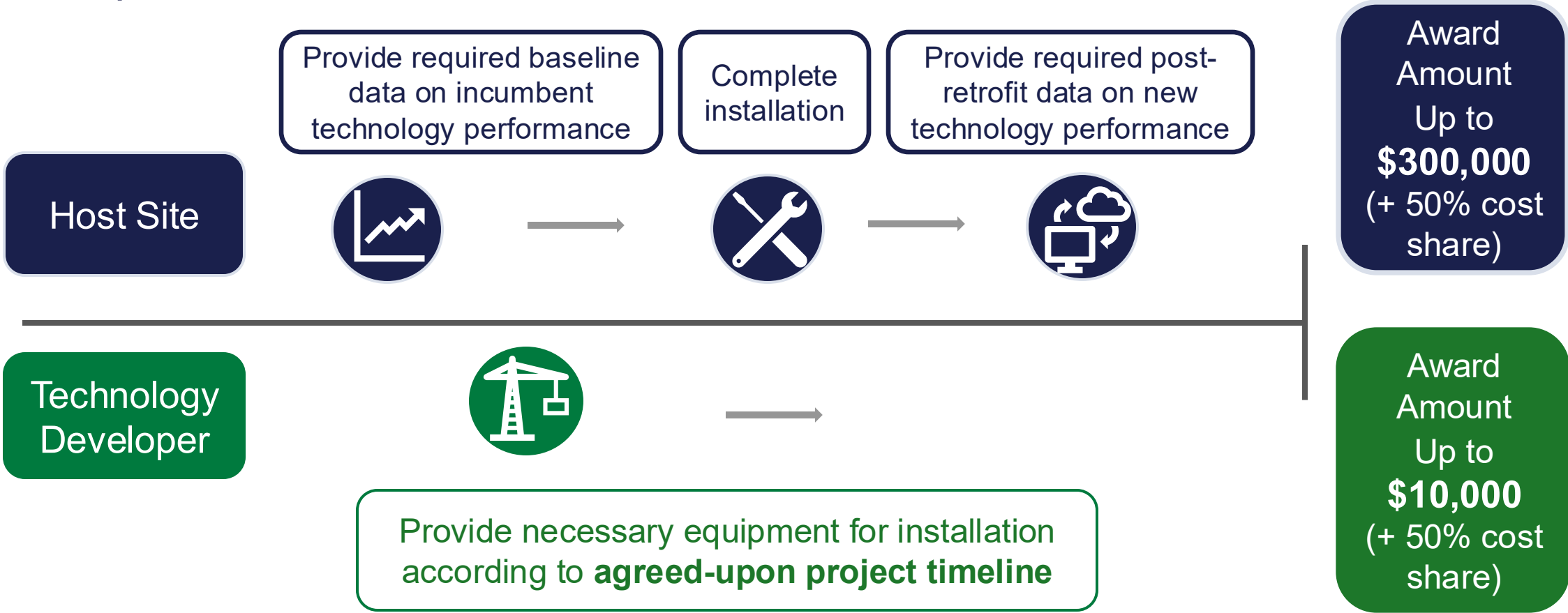


(Estimated duration: 1-3 months)

# Phase 2 - Installation

## Anticipated Milestones

- ✓ Tech integration/retrofit
- ✓ Data collection monitoring

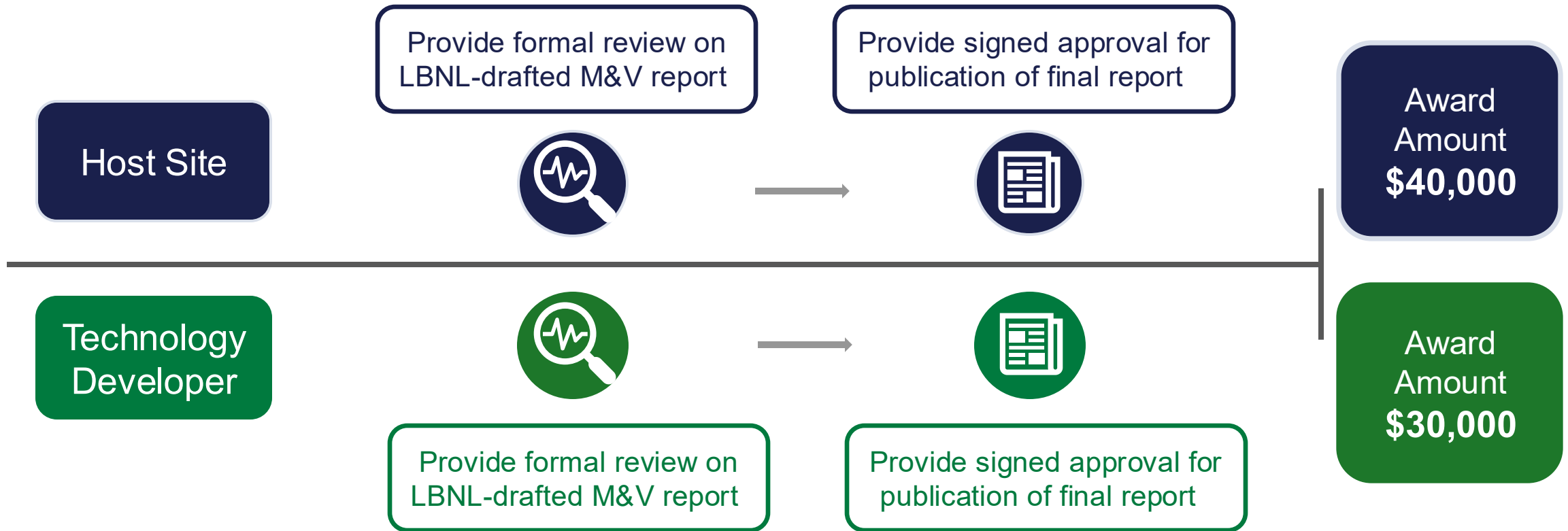


(Estimated duration: Not to exceed 24 months)

# Phase 3 - Analysis

- ✓ Data processing
- ✓ Analysis development
- ✓ Report delivery

## Anticipated Milestones



(Estimated duration: 1-3 months)



# Application Scoring Criteria

## Suitability for Validation (35%)

- Clear technology description
- Installation feasibility
- Site suitability
- M&V approach

## Technology Impact (25%)

- Innovativeness
- Performance improvement
- Expected host site improvements

## Technology Replicability (25%)

- Potential for broad adoption
- Scale of impact

## Importance of Program Participation (15%)

- Value for commercialization
- Host site insights
- New technical information
- ITO funding impact

# Key Dates

SEP 16, 2025

- Solicitation opened

~~OCT 23, 2025~~

- Office hours - **CANCELED**

~~DEC 11, 2025~~

- 2nd Office hour at 3PM ET

JAN 8, 2026

- 3rd Office hour at 2PM ET

JAN 29, 2026

- Solicitation closes at 3PM ET

Early 2026

- Selected participants notified

Opportunity Page



For questions contact  
[info@energywerx.org](mailto:info@energywerx.org)

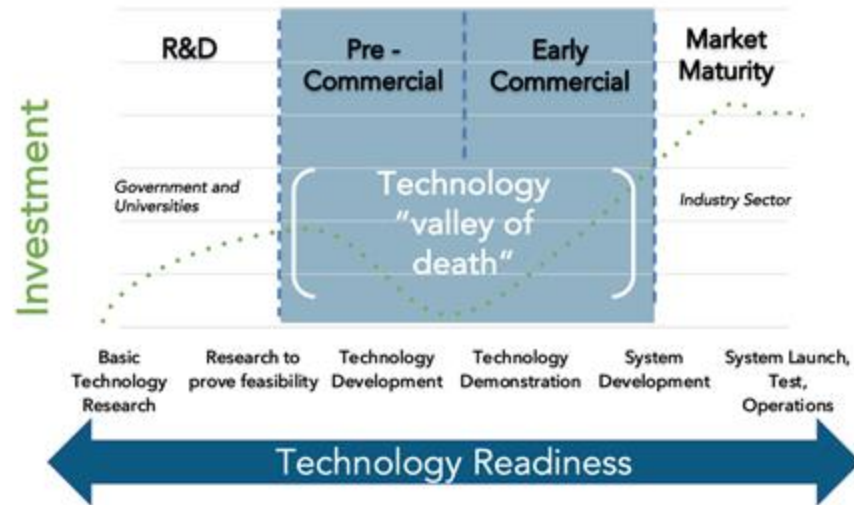
Awards up to \$400K  
**Apply today!**

# Field Validation

## Driving Informed Decisions to Strengthen U.S. Manufacturer Competitiveness

### Why Field Validation of Emerging Technologies?

Field validation provides research and data to prove out technology claims and help bring innovative technologies out of R&D and into the market.



### Key Benefits of Field Validation



Accelerates commercialization

Mitigates technology adoption risks



Enhances industry confidence

# ITV has supported a wide variety of promising industrial technologies and partnerships.

Project	Electrochemical Water Filtration System on an Open Loop Cooling Tower	Pilot-scale Black Liquor Membrane for Water Removal	Electrocoagulation Treatment for Oily Wastewater	Electric Motor for use in Packaged Rooftop Units	Thermoelectric Generator (TEG) Demonstration Unit for Waste Heat Reclamation
Technology Developer					
Industrial Host Site	 <b>NISSAN</b> TOYOTA	 <b>AHLSTROM MUNKSJÖ</b>	 <b>CLIFFS</b>	<b>stryker</b>	 <b>AMRIZE</b>

# Measurement and Verification (M&V)

## M&V Approach

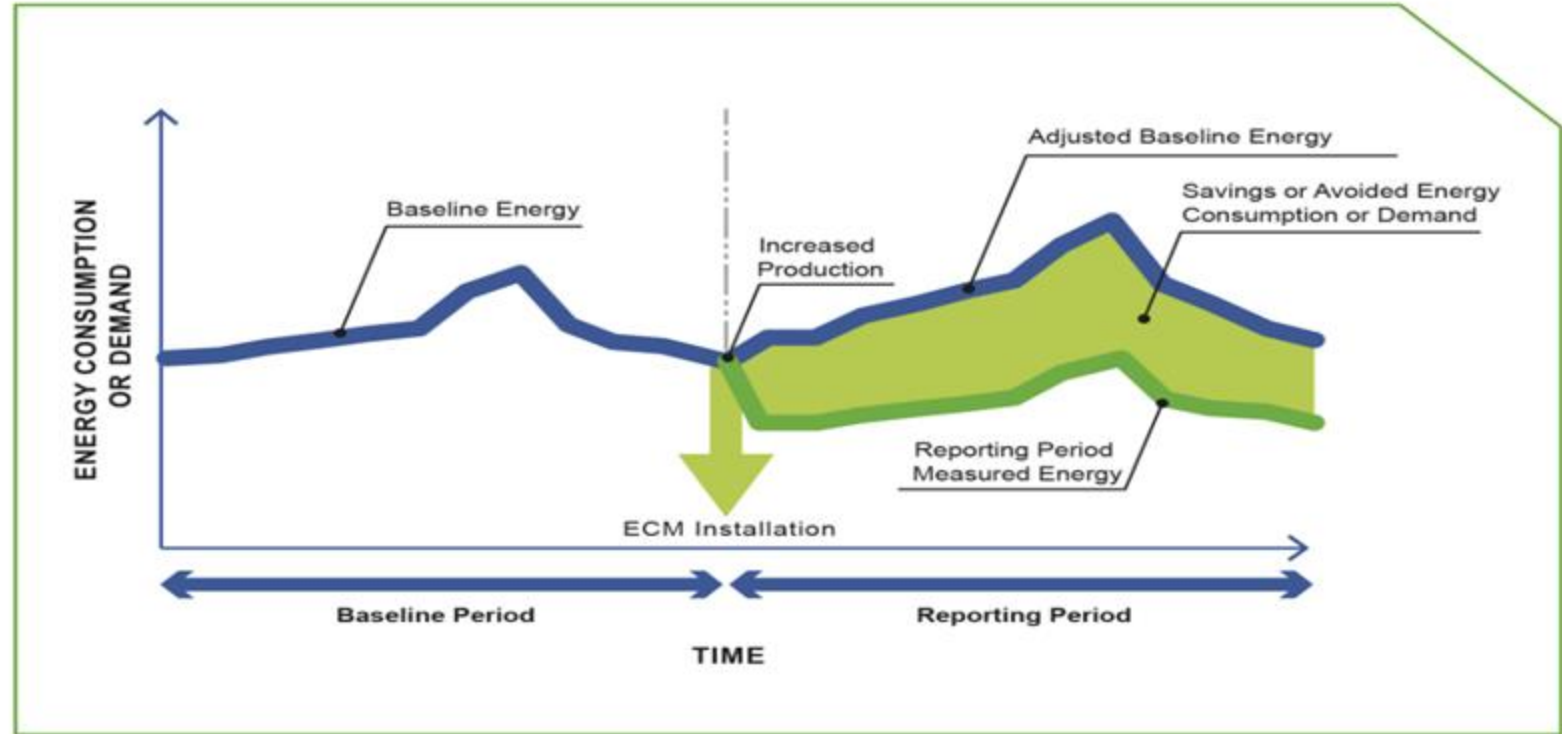
- Comprises a systematic set of activities to verify savings

## Savings Measurement

- Savings cannot be measured directly, the goal is to measure the absence of something

## Factors Influencing Resource Use

- Weather, production, internal loads, hours of operation, etc.

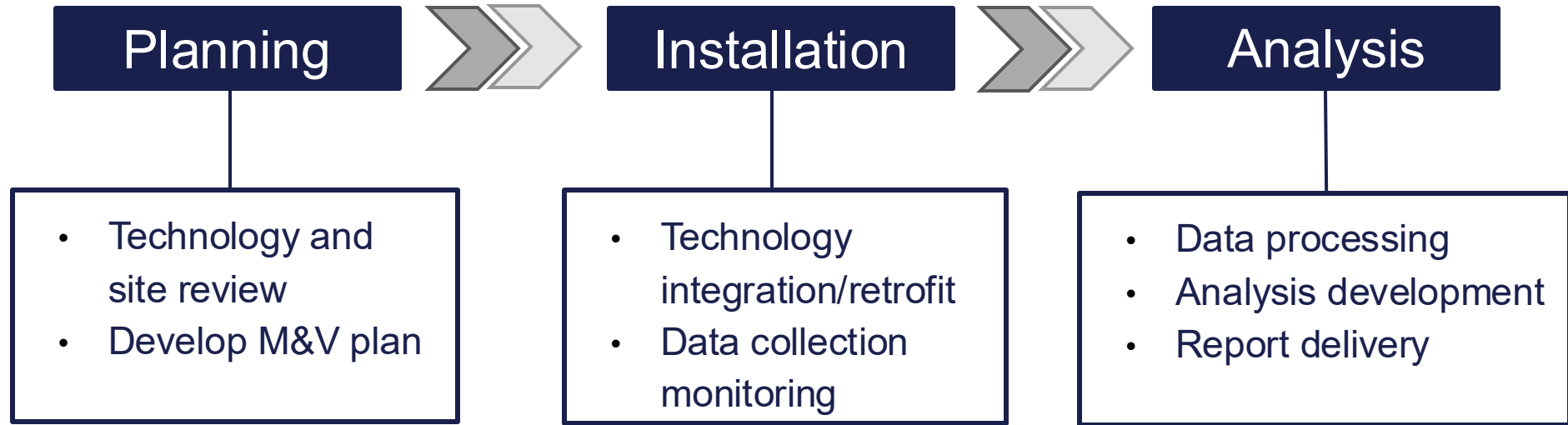


**SAVINGS** = Baseline Period Energy - Reporting Period Energy + Routine Adjustments + Non-Routine Adjustments

Maximizing the signal (true savings) while minimizing the noise (unaccounted variables) is crucial for accurate savings evaluation.

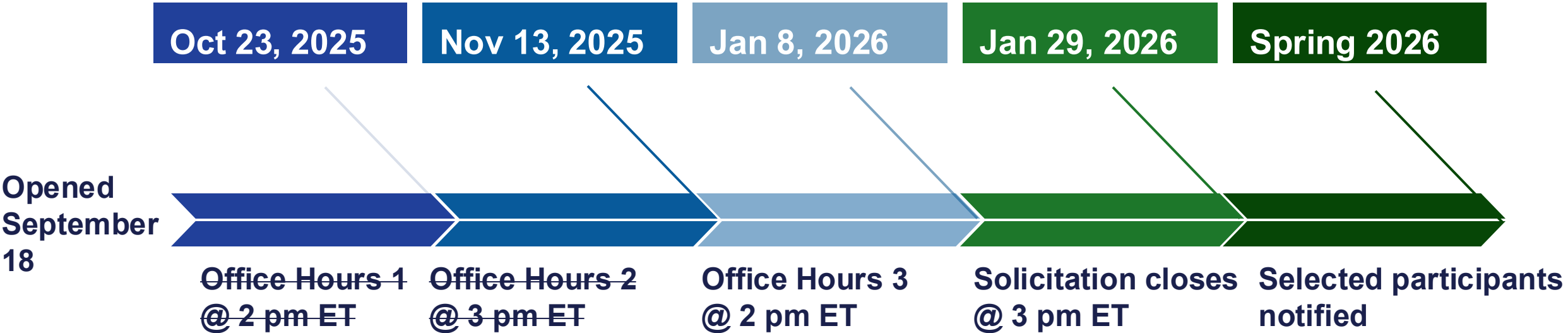


# ITV Program Phases



**Awards of up to \$400K total, distributed after completion of milestones**

# Solicitation Timeline



# ITV Team

Meet some of our technical experts who will help support partners and vendors throughout this field validation pilot.



John O'Neill  
**DOE**  
Program Lead



Crystal N. Bell  
**DOE**  
Technical  
Partnership Lead



Sheel Sanghvi  
**DOE**  
Commercialization  
Specialist



Prakash Rao  
**LBNL**  
Sr. Program Lead



Amy Pevzner  
**LBNL**  
Operations Lead



Shankar Earni  
**LBNL**  
Sr. Technical Lead



Paul Sheaffer  
**LBNL**  
Sr. Technical  
Program Advisor



Bunmi Adelsola  
**LBNL**  
Subcontract  
Specialist



Peter Therkelsen  
**LBNL**  
Sr. Technical  
Program Advisor



Alexander  
Hubbard  
**LBNL**  
Technical Project  
Manager



Juzel  
Lloyd  
**LBNL**  
Operations Project  
Manager

# Thank you for attending the ITV- Industrial Technology Validation Office Hours 2

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- This recording, transcript and FAQ will be uploaded to the ENERGYWERX website
- To sign up for the Teaming Partner List:  
<https://energywerx.wufoo.com/forms/itv-teaming-partner-list/>
- If you have any additional questions, please email [info@energywerx.org](mailto:info@energywerx.org)
- RSVP for the ITV Office Hours 3 on January 8, 2026:  
<https://energywerx.wufoo.com/forms/m14pun0j00y90eo/>



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