



LDES NATIONAL
CONSORTIUM

The National Consortium for the Advancement of LDES Technologies

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Principal Investigator



Sandia National Laboratories is a multimission laboratory managed and operated by National Technology and Engineering Solutions of Sandia, LLC., a wholly owned subsidiary of Honeywell International, Inc., for the U.S. Department of Energy's National Nuclear Security Administration under contract DE-NA0003525 SAND2024-00410PE.



OCED
Office of Clean Energy Demonstrations



OTT
Office of Technology Transitions

This project is funded by the Infrastructure Investment and Jobs Act, also known as the Bipartisan Infrastructure Law (BIL), as part of the DOE Technology Commercialization Fund (TCF), administered by the Office of Technology Transitions in collaboration with the Office of Clean Energy Demonstrations.



Sandia
National
Laboratories



Argonne
NATIONAL
LABORATORY



Idaho National Laboratory



NATIONAL RENEWABLE ENERGY LABORATORY



Oak Ridge
National Laboratory



Pacific Northwest
NATIONAL LABORATORY

Goals & Scope

PURPOSE: To create and maintain a centralized, independent forum through which stakeholders across the LDES ecosystem will convene to identify barriers, determine potential synergies, and collaboratively develop and implement recommended strategies necessary to achieve the commercialization of a diverse range of LDES technologies within the next decade.



Goal 1

Lead a collaborative effort to define a set of recommendations defining achievable commercialization pathways for LDES technologies



Goal 2

Create a Community of Knowledge of Best Practices that can endure beyond the scope of this funded initiative.

By End of Project: A comprehensive plan for LDES commercialization that can be offered to diverse regions, markets, communities, and end-use customers.



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**Period of
Performance:**

10/2023 - 9/2026

**\$7.5M Federal
Funds + Cost Share**

6 National Labs:

Sandia, ANL, INL,
NREL, ORNL, PNNL

Goals & Scope Cont.

A Leadership Team powered by the knowledge, expertise, and relationships possessed by six National Labs will guide a broad network of industry and community stakeholders (i.e., “**Teaming Partners**”) to collaboratively develop a set of actionable recommendations.

- ✓ Focus on addressing the adoption challenges facing the full range of LDES technologies.
- ✓ Emphasis placed on bringing stakeholders together, including off-takers, regulators, adopters, investors, communities, etc., to develop actionable recommendations in a consensus-based process.
- ✓ Focus on defining a full set of recommendations to accelerate demonstration and deployment of LDES technologies in this decade.
- ✓ The overarching goal is to identify and solve adoption challenges to enable technology commercial liftoff and deployment.



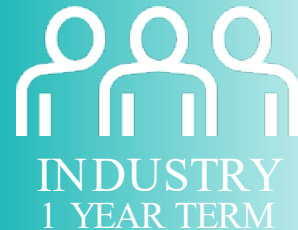
A Leadership Team powered by the knowledge, expertise, and relationships possessed by six National Labs will guide a broad network of industry and community stakeholders to collaboratively develop a set of actionable recommendations.

Leadership Team

15 Leadership Positions



- Sandia National Laboratories - Lead: Will McNamara
- Argonne National Laboratory: Patrick Balducci
- Idaho National Laboratory: Thomas Mosier
- National Renewable Energy Laboratory: Zhiwen Ma
- Oak Ridge National Laboratory: Hope Corsair
- Pacific Northwest National Laboratory: Jeremy Twitchell



- Cummins, Inc.: Gaurav Argade
- Form Energy: Rachel Wilson
- GTA, Inc.: Elias Greenbaum
- Holtec Government Services: Indresh Rampell
- Largo Clean Energy: Mike Perry
- NextGen Energy Partners: Kimberly Johnson
- Visibility Marketing, Inc.: Todd Q. Adams



BUSINESS DEVELOPMENT

- Sandia National Laboratories: Kailey Wulfert

DIVERSITY, EQUITY, INCLUSION, ACCESSIBILITY

- Idaho National Laboratory: Torrey Lyons



Organizational Structure

The National Consortium for the Advancement of LDES Technologies

130+ Teaming Partners

LEADERSHIP TEAM

Sandia (Lead): Will McNamara
ANL: Patrick Balducci
INL: Thomas Mosier
NREL: Zhiwen Ma
ORNL: Hope Corsair
PNNL: Jeremy Twitchell

7 Industry Representatives

Advisors: Business Development Partner & DEIA Partner



Business Development

Business Development Partner

Kailey Wulfert (Sandia)

→ Stakeholder Engagement Group



Tiger Teams

Tiger Team Leads and Advisors

→ ~16 varying technical teams



Task Force

Diversity, Equity, Inclusion, & Accessibility Partner

Torrey Lyons (INL)

→ Community Outreach Task Force



WEBSITE: Community of Knowledge & Best Practices

TIGER TEAMS

- Customer Adoption
- Demonstrations & Deployments
- Economics & Valuation
- Equity
- Grid Infrastructure
- Interconnection, Standards & Permitting
- Investor Confidence / Finance
- Market Planning
- Policy & Regulations
- Reliability & Resilience
- Safety & Grid Security
- Supply Chain & Manufacturing Efficiencies
- Technology Development, Evaluation & Testing
- Use Case Development
- Utility Resource Planning
- Workforce Development

Tiger Teams will develop what ultimately will become the public stakeholder recommendations for these specific focus areas.



LDES NATIONAL CONSORTIUM

Each Tiger Team
will be given
assignments
that are
relevant to its
designated
focus area.

Tiger Teams

Tiger Teams, populated by Teaming Partners, are break-out groups assigned to identify and evaluate challenges in the specific focus areas impacting LDES and then develop public stakeholder recommendations.



LABORATORY
PARTNER LEAD
3 Year Term



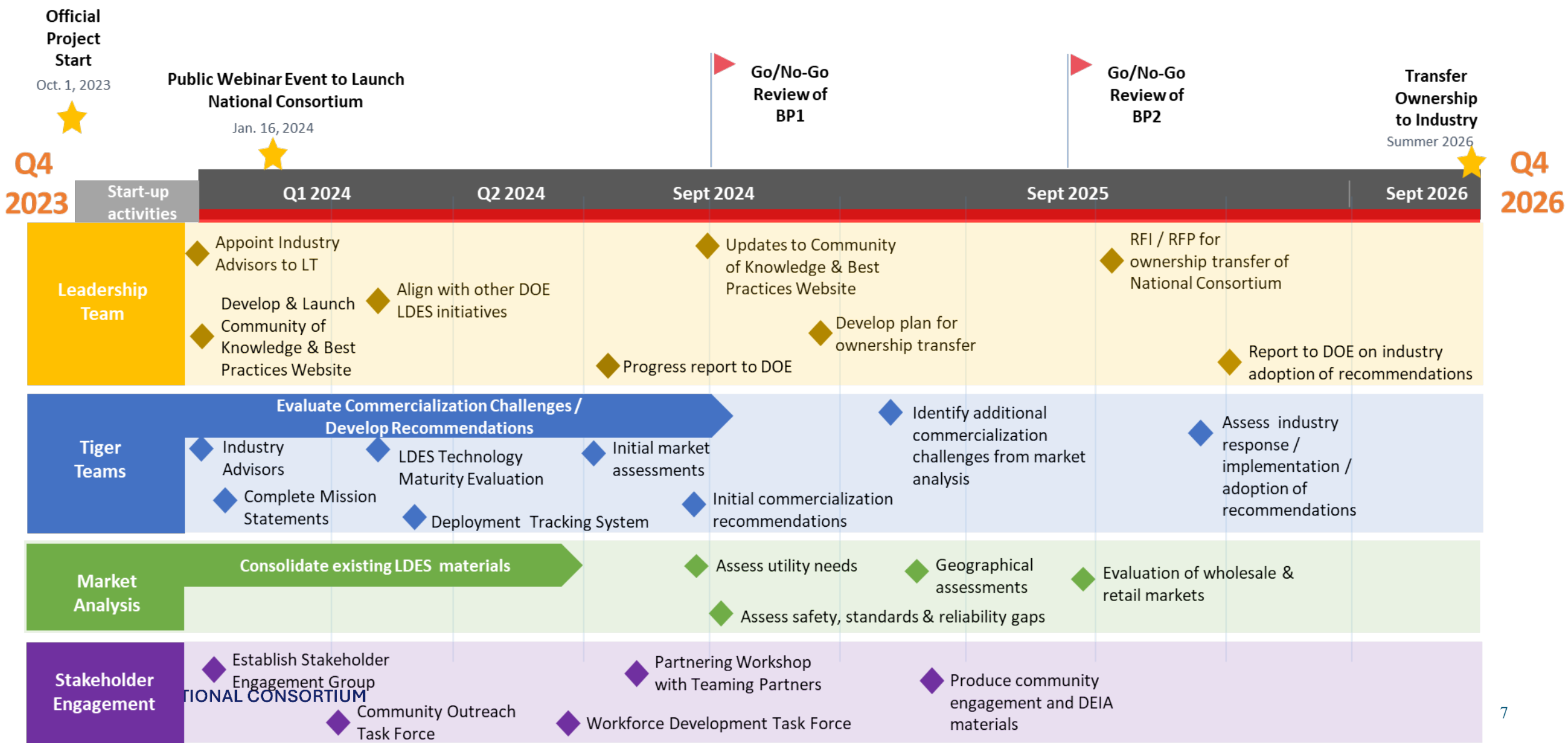
TEAMING PARTNER
INDUSTRY ADVISOR
1 Year Term

CURRENT TIGER TEAMS

- Customer Adoption
- Demonstrations & Deployments
- Economics & Valuation
- Equity
- Grid Infrastructure
- Interconnection, Standards & Permitting
- Investor Confidence / Finance
- Market Planning
- Policy & Regulations
- Reliability & Resilience
- Safety & Grid Security
- Supply Chain & Manufacturing Efficiencies
- Technology Development, Evaluation & Testing
- Use Case Development
- Utility Resource Planning
- Workforce Development



Project Timeline



Project Deliverables

PHASE 1

3 Years | Federally Funded | Laboratory-led

The main project deliverables will include, but are not limited or bound to:

- Community of Knowledge and Best Practices Website
- Comprehensive set of commercialization recommendations addressing challenges facing LDES technologies that can be submitted to appropriate governing entities for implementation
- LDES Demonstrations & Deployments Tracking System
- LDES Technology Maturity Evaluation Framework (Technology-specific)
- Yearly workshops and outreach activities
- Plan for transfer of ownership of the LDES National Consortium to private industry partners

PHASE 2

Extending beyond the federally-funded period, at which point ownership will be transferred to a private entity that will continue to operate the LDES National Consortium.

All findings of the LDES National Consortium will be publicly available to enhance the public's understanding of LDES and the role it will play in the energy future of the US.



Website Information

The Community of Knowledge & Best Practices Website is the official name for the LDES National Consortium's public facing Website.

- The Website will be the primary repository for the output of the LDES National Consortium, along with knowledge-sharing information that seeks to enhance the public's understanding of LDES and the role it will play in the energy future of the US.
- It is anticipated that the Website will include, but is not limited to:
 - A list of participating Teaming Partners that includes organization name, URL, primary point of contact name and title, and contact information (after approval from the Teaming Partner organization).
 - Commercialization recommendations developed by Tiger Teams.
 - A glossary of "LDES common terminology" with suggestions on how key terms should be defined.
 - A library of previously published LDES materials developed by our national Lab Partners and DOE offices.

ldesconsortium.sandia.gov





TEAMING PARTNERS

HOW YOU CAN GET INVOLVED!

Industry and
Community
Stakeholders
=
Teaming
Partners

Teaming Partners

Any U.S. organization that has a stakeholder interest in the commercialization of LDES technologies in the US are welcome to join the LDES National Consortium as a “Teaming Partner.”

DIRECT PARTICIPATION IN TIGER TEAMS AND WORKING GROUPS

Will have an opportunity to share perspectives and insights that will influence project deliverables.

COLLABORATIVELY DEVELOP RECOMMENDATIONS

Will work together to create consensus-based recommendations to address commercialization challenges of LDES technologies.

ENHANCED NETWORKING & EVENTS

Will be invited to attend annual workshops and events aimed to foster knowledge sharing and networking with peers.

Currently,
160+
Teaming
Partners!



Responsible for
facilitating key
relationships and
partnerships that
will build a strong
community of
Teaming Partners

Working Groups

STAKEHOLDER ENGAGEMENT GROUP

Led by the Business Development Partner

- Outreach to potential teaming partners/develop outreach plan
- Assist in the dissemination of information through the Community of Knowledge and Best Practices Website
- Aid in networking/event organization

COMMUNITY OUTREACH TASK FORCE

Led by the DEIA Partner

- Outreach for DEIA specific recruitment/engagement with communities
- Conduct regionally focused community discussions
- Dissemination of findings with communities, student organizations, etc.



Ensuring the
benefits of LDES
technology
deployment are
realized by
underserved
communities

Diversity, Equity, Inclusion, and Accessibility (DEIA) Strategy

THREE KEY DEIA STRATEGIES:

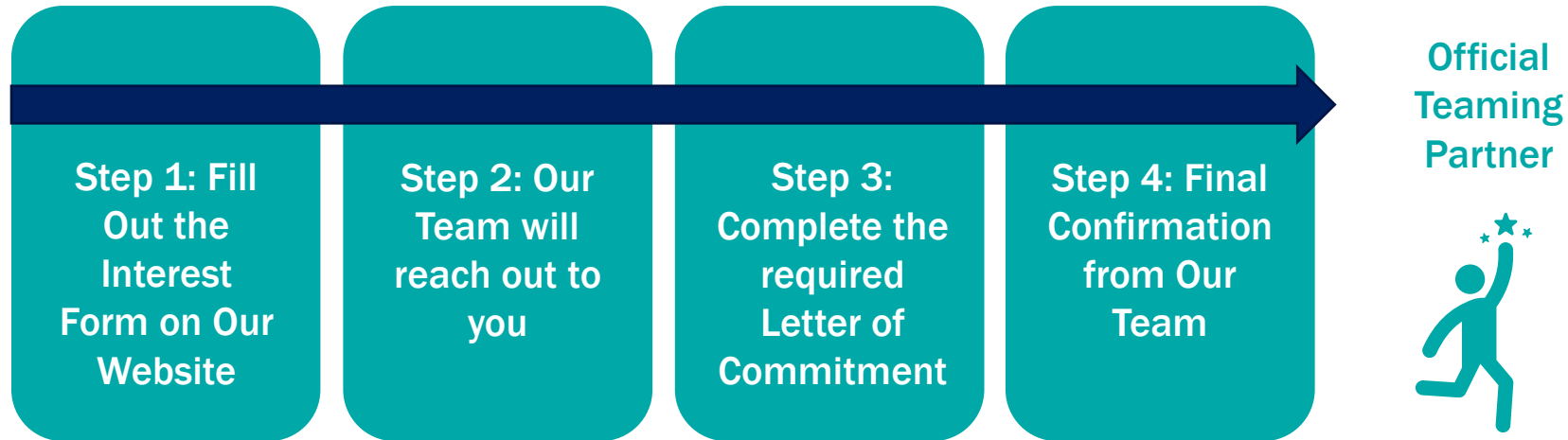
- Promoting DEIA across the Consortium and Community of Knowledge & Best Practices by fostering an inclusive environment and including underrepresented staff;
- Emphasizing DEIA with our research and implementation partners; and
- Leveraging community engagement to ensure that LDES technology deployment offers real and tangible benefits to underserved communities.

DEIA STRATEGIES WILL BE ACCOMPLISHED BY:

- Incorporating DOE Justice40 Principles
- Establishing a robust and accessible process of community engagement that includes accountability, reciprocity, and DEIA
- Ensuring a diversity of viewpoints within each Working Group
- Providing deliverables that include practical pathways to equitable workforce development, diverse supply chains and contracting practices, and other near-term benefits of LDES deployment to underserved communities.




How to Join



- There will be no funding provided to Teaming Partners for their participation. Participation by Teaming Partners will be on a Cost Share/In-Kind basis.
- All information provided by Teaming Partners must be non-proprietary/open source.



 **THE NATIONAL CONSORTIUM FOR THE
ADVANCEMENT OF LONG DURATION
ENERGY STORAGE TECHNOLOGIES**

Join the LDES Consortium

If your organization has an interest in LDES, we invite you to join the LDES National Consortium!

Teaming Partners will play a critical role in this LDES National Consortium by helping to define the key questions, issues, and outcomes that the LDES National Consortium must address to support the commercialization of LDES technologies. By joining the consortium, you will have the opportunity to share your perspective and expertise to inform the activities of the LDES National Consortium. Additionally, you will be invited to attend events to network with others in the LDES ecosystem.

Organizations must be a US organization or have an existing US incorporated entity/domestic subsidiary in order to be eligible to participate as a Teaming Partner.

Organization Name: *(Required)*

Become a Teaming Partner Today!

[ldesconsortium.
sandia.gov](https://ldesconsortium.sandia.gov)



THANK YOU!

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