# CHyTAC: Clean Hydrogen Technologies Alignment Cooperative

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## CHyTAC Overview

### Purpose

To create and maintain an independent forum through which stakeholders across the hydrogen ecosystem will convene to **address barriers**, **determine potential synergies**, **and collaboratively develop & implement solution strategies** necessary to achieve the commercialization of a diverse range of hydrogen technologies within the next decade.

**Goal 1**
Create a collaborative effort to develop a set of recommendations defining achievable commercialization pathways for the interconnectivity of hydrogen technologies and market lift off.

**Goal 2**
Create a community of practice that can endure beyond the scope of this funded initiative.

### Mission

1. Coalesce relevant **stakeholders across industries, communities, financiers, off-takers, regions, and academia,** leveraging the convening capability and unbiased expertise of the DOE National Laboratories
2. Facilitate discussion about **safety, community engagement, technology gap identification and solutions,** and **best practices**
3. **Achieve market liftoff** that is supply-chain cognizant to accelerate deployments and decarbonize our economy

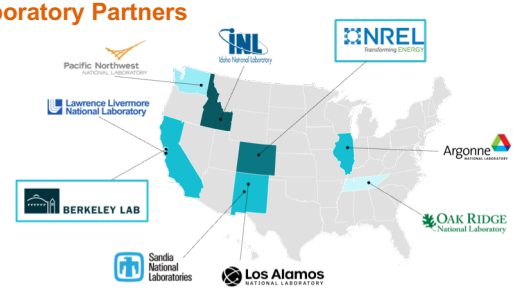
### Challenges

CHyTAC is working towards address the challenges in the DOE Hydrogen Liftoff Report and working with the hydrogen community to determine best practices and solutions for the hydrogen economy.

| Challenges | Solutions |
|---|---|
| Hesitancy to commit to long-term, scaled offtake | Invest in the development of midstream infrastructure |
| Limited cost-effective midstream infrastructure | |
| Limited availability of specialized hydrogen workforce | Secure supply chain investments |
| Capacity-spike required for U.S. electrolyzer production | Expand and accelerate the capital base |
| Development of regional CO2 transport & storage | |
| Credit risk constraining widespread debt financing | Develop regulations for a scaled industry |
| Competition for clean electricity | |
| Raw materials constraints | Standardize processes and systems across the clean hydrogen economy |
| Conversion and scale-up challenges for specific end uses | Accelerate technical innovation through R&D |
| Long-term cost competitiveness upon credit expiration | Expand the clean hydrogen workforce |

## Organization

### Laboratory Partners




### CHyTAC Structure

CHyTAC is focused on identifying bottlenecks & adoption barriers, while including various stakeholders of the hydrogen economy, including community members, policy makers, industry members, among others.

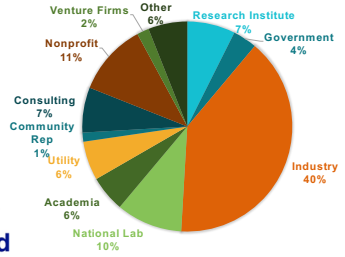
**Executive Committee**
Help guide the cooperative and deliver milestones.
Comprises of:
- Co-PIs
- National Lab POCs
- Industry Members
- Community Representatives
- Technology Transfer & Outreach Committee Chair

**Topic Areas**
Topic Areas are focused on:
- Hydrogen Production: Electrolysis
- Hydrogen Production: Non-electrolysis
- Hydrogen Distribution & Storage
- Hydrogen in Transportation
- Hydrogen in Derivatives & Transformations
- Heating, Power and other Industrial Applications

**Crosscutting Councils**
Challenges hindering adoption and deployment:
- Community acceptance
- Technology acceptance
- Market acceptance
- Resource acceptance
- Safety

### Current Participants & Cost-share Partners

Cost-Share Partners




To date, CHyTAC comprises of **216 participants** from various sectors or organizations

## CHyTAC Goals and Aims

### Major Milestones

Here are examples of milestones CHyTACs is completing over the course of the project

- Develop a Community engagement strategy
- At least four communities in different regions agree to participate as partners in CHyTAC.
- Show consensus of Topic Area adoption recommendations and document areas of dissent.
- Develop action plans based on recommendations in each of the Topic areas
- Develop final recommendation reports from Topic Area leads
- Complete community outreach activities around hydrogen deployments
- Report on CHyTAC process and replicability.
- Transition CHyTAC stewardship to hydrogen industry stakeholders.
- Pathways between disadvantaged communities, industry stakeholders and local authorities established to continue conversation.

### How to Contribute

- Participate in one of the six Topic Areas by offering your expertise and insights on barriers and solutions
- Participate in one of five cross-cutting councils to contribute your expertise in financing, community perspective, technology development and/or safety standards and practices.

- **Provide your input on the CHyTAC industry landscape analysis for industry/stakeholder feedback**
- **Respond to the CHyTAC industry survey**
- **Subscribe to our newsletter**
- **Share these resources with anyone who would be interested**

### How to Participate in CHyTAC

Fill out the interest form on the website and the CHyTAC team will reach out to you with opportunities to get involved.

CleanH2alignment.lbl.gov

**Benefits to participating:**
- Engage with the broader community
- Gain industry insight
- Contribute to solutions for system integration issues
- Align stakeholders with resources to advance technology readiness

CHyTAC

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