

**2023 Cohort Launch Program Information and Media Kit**

**Introduction**

The Incubatenergy® Labs 2023 cohort launched on Monday, Nov. 21, 2022, with the opening of its call for startup applications.

Included in this document: key program information, program schedule, 2023 challenge categories, and examples of social media content to cut and paste into your social outreach efforts.

Please contact Amardeep Mehat (amehat@epri.com or 650-855-2046) with program questions or comments. Members of the media with interview requests should contact Aimee Mills with EPRI’s Corporate Communications team at amills@epri.com.

 **About the Program**

Incubatenergy® Labs was created by EPRI for startups to engage energy providers in paid demonstration projects. An energy provider summit and collaborative demonstrations program in one, the program links startup companies leading the advancement of electrification, decarbonization, and grid modernization with energy providers from around the world that have the capacity and desire to demonstrate and scale those innovations. We structured the program to give startups maximum exposure to energy providers and ensure that the results of a successful demonstration with one provider turns into opportunities with many.

**How it Works**

Through Incubatenergy Labs, EPRI subject matter experts and a group of leading global energy providers engage early-stage companies to demonstrate and deploy innovative solutions in targeted areas in an accelerated fashion.

First, startups apply on the Incubatenergy Labs [website](https://labs.incubatenergy.org/en/). A collaborative team of EPRI and energy provider personnel evaluates and selects several companies to engage in paid demonstrations. There’s no set number of slots, and there’s no demonstration “cost”. The key is flexibility to encourage innovation. In 2022, we chose 15 startups from an applicant pool of 115 startups.

Once the final startups are determined, we work together to scope and execute the demonstration projects. We’ll spend four to six weeks scoping projects, sixteen weeks executing them, and then showcase the results at a public Demo Day event in the Fall of 2023.

**KEY DATES: 2023 Incubatenergy Labs Challenge**

* November 21, 2022 Application site live at: <https://labs.incubatenergy.org/en/>
* January 7 Application window closes
* January 2023 Down-select to Top 40
* February 2023 Team makes top selections for Pitch Day; intros and prep
* February 28-March 1st Pitch Days: Top 25 Invited to Pitch
* March-May Final project selection, scoping, and contracting begins
* June-September Demonstration project execution
* October25, 2023: Demo Day, final reports, and videos due

**CHALLENGE AREA NARRATIVES**

The following describes the challenge areas in which we’re seeking startup applications for the Incubatenergy Labs 2023 cohort.

**DECARBONIZATION AND SUSTAINABILITY**

The world is on a path to decarbonize and the electric power industry is leading the charge. Since 2005, the US reduced its carbon footprint one gigaton, primarily by switching to cleaner fuels, expanding renewables, and driving efficiencies. To continue making progress, solutions are needed to integrate and manage more low-carbon energy generation, from distributed to energy provider-scale solutions covering wind, solar, hydro, nuclear, and low-carbon fuels, as well as systems that may help optimize their output. Circularity in our operations and materials also are critical. Controls, financing, accounting systems, and materials technology options may help society better track environmental impacts and support a shift to zero carbon. The path to decarbonization also may include low-carbon hydrogen technologies. Specific decarbonization and sustainability examples include:

* Sector-coupling clean energy fuel programs
* Environmental, Social, and Governance (ESG) reporting solutions
* Green energy finance
* Circularity and low-carbon materials (vegetation waste, plastics, concrete, SF6 replacement, etc.)
* Satellite imagery for environmental resource monitoring (water, air, habitat, vegetation, etc.)
* Identification of aquatic and terrestrial species of concern for planning, compliance monitoring, and reduction of impacts in real time
* Offshore wind solutions
* Green hydrogen solutions
* Hydrogen storage systems
* Renewables integration
* Low-carbon fuels generation, distribution, and storage
* CO2 value chain solutions

**PREDICTIVE & PRESCRIPTIVE OPERATIONS**

With the growth in renewables, distributed energy systems, and electrification, modeling, and managing the grid is more important than ever. Digital overlays and AI/ML are fundamentally transforming the electric power system and potentially providing more intelligent and autonomous power plants. Other outcomes may include automated, data-driven, and optimized operations, maintenance, and planning technologies for building a safer, more efficient, equitable, decentralized, secure, and decarbonized grid that better serves customers. Examples may include:

* Predictive asset monitoring, maintenance, prognostics, planning, and management
* Grid flexibility and automated management for distributed energy resources and baseload generation
* Dynamic degradation and failure prediction on renewable generation assets
* Unmanned systems and digital imagery capture and analytics
* Advanced atmospheric and weather modeling
* AI-enhanced IT/OT hardening and cyber threat mitigation
* Resilient, secure communications to support ubiquitous connectivity
* Internet of things (IoT) for grid monitoring
* Digital twins

**ELECTRIC MOBILITY**

Electrification is a key component of decarbonization strategy, particularly for the transportation industry/sector. New solutions are needed to enable low-cost, ubiquitous, and manageable charging, comprehensive fleet-as-a-service solutions, and charging infrastructure availability for electric vehicles (EV). As EV adoption scales, there is growing awareness of the potential need to more efficientlymanage charging and the ability to call on vehicles to switch from energy consumer to supplier and back depending on the need. Examples of potential electric mobility solutions include:

* Charging balance-of-system cost reduction
* Low-cost charging for multi-family, underground, and public parking
* Reduced grid impact for home and fast charging
* EV charger detection, grid planning, and charge management
* EV fleet and fleet-as-a-service
* V2G and V2X

**RESILIENCE AND ADAPTATION**

Extreme weather, flooding, and other related events continue to present challenges to society. Preparing for such events and keeping energy customers and communities safe, informed, and with access to power through them is a top priority for energy providers. There is a need for potential solutions than may help better prepare for such events, predict localized events, prevent outages where possible, and, when they happen, communicate with customers and restore power quickly. Examples include:

* Extreme weather events mitigation, risk analytics, and dynamic response systems
* Anti-icing, anti-corrosion, self-healing, and undergrounding
* Resilience planning, situational awareness, communications, and dispatch automation
* Automated and responsive event and restoration effort information systems
* Utility-scale, long-duration storage (LDS)
* Mobile/Transportable LDS
* Off-grid, isolated energy solutions
* “Plug-and-play” or “as-a-Service” customer energy storage systems, microgrids, and energy management platforms
* Distributed analytics and controls for balancing and operation of islanded microgrids
* DER/DERMS control
* Disadvantaged & LMI community resilience
* Wildfire preparedness and response, including drought detection and advanced weather prediction
* Climate solutions
* Water solutions for regions at risk for flooding, storm surges, etc.
* Seismic/geological solutions for mitigating hazards in areas at risk for earthquakes, landslides, avalanches, and other geological events

**CUSTOMER AND COMMUNITY ENGAGEMENT**

Customers and customer satisfaction is the core of any business. Energy providers want to better serve customers, particularly those who are vulnerable or disadvantaged, provide more personalized communications and information, and offer services and solutions targeted to individual needs. Potential solutions are needed to create grid-interactive smart communities, enable broad community benefits, and support economic development. These solutions may help customers become more proactive and informed participants in a cleaner, more integrated, and resilient energy system, and create new lines of business for energy providers. Examples of potential solutions include:

* Virtual Assistants, automated dispatch, rapid response, and assistance for vulnerable customers
* Seamless integration and management of connected energy devices
* Price signaling or transactive energy platforms
* Advanced customization/targeted customer engagement
* Predictive behavioral and adoption analysis
* Connected communities
* Public benefit use of rights-of-way under power lines and other infrastructure
* Customer carbon footprint

**WORKFORCE OF THE FUTURE**

Technology may help workers perform their jobs more safely, efficiently, and effectively. Wearables, augmented reality, the convergence of information and operational technologies, the internet of things (IoT), and big data solutions are being combined in creative new ways to potentially help workforces thrive. Examples of technology that drives smarter operations through asset monitoring tools, equipment, analytics, and AI to improve operational safety and customer experience include:

* Wearables for personnel and/or environmental monitoring and safety
* Robotics, exoskeletons, and unmanned systems for the completion of hazardous tasks
* XR for immersive, remote training, information accessibility, and task efficiency
* Digital worker enhancements and remote, real-time assistance on complicated jobs

**FIXED PREMISE ELECTRIFICATION**

Building systems and commercial/industrial processes may represent significant opportunities for decarbonization. Energy providers have been innovators in building envelope, device efficiencies, and demand response programs. As intelligence, load disaggregation, and flexible load solutions are added, there may be a need to match energy consumption to grid availability without sacrificing comfort or performance. As these solutions become more integrated and complex, there also may be a need for comprehensive Electrification-as-a-Service solutions that guide customers through the design, deployment, and operation of solutions. Examples may include:

* Advanced HVAC systems
* Load disaggregation, monitoring, and control
* Flexible load control solutions
* VPP and virtual battery solutions
* Standards and solutions for behind-the-meter interoperability
* Comprehensive Electrification-as-a-Service
* Low-and-moderate-income (LMI) & disadvantaged communities (DAC) targeted programs
* Industrial heat pumps

**ROBOTICS**

Technological advances have led to the rapid growth of opportunities in the robotics industry. As energy providers manage the aging of existing assets and develop new advanced power plants, the industry may turn to robotic platforms and integrated data analysis tools that could safely and reliably reduce the cost of operations, inspections, and maintenance of power generation assets. The next generation of these platforms is expected to operate autonomously in difficult land, sea, and air environments while sharing space safely with human workers and high-value assets. Examples of how robotics may be used include:

* Physical security of critical assets
* Solutions for operating in inaccessible areas, such as ladders and heavy doors
* Operating robotic emergency response in difficult weather conditions
* Collaborative robots (“cobots”) for assisting human workers
* Onboard machine vision, automated analysis, and decision-making to facilitate handoffs from human-controlled to autonomous
* Advanced sensor payloads for radiation, audio, visual, and chemical detection
* Payloads and systems for monitoring equipment condition
* Advanced submersibles for maintenance diving tasks

**NUCLEAR ASSISTS**

Nuclear power can play a critical role in the decarbonization of the electric generation sector. Many models show the need for both existing nuclear power plants, as well as new advanced reactors, to help meet climate goals. Innovative, ancillary technologies may be needed to assist existing nuclear plants in potentially operating more efficiently and to help with the cost-effectiveness of advanced nuclear reactor designs. Examples include:

* Automated plant operations
* Plant digitization and modernization
* Advanced radiation protection technologies
* Nuclear fuel cycle
* Digital twins, online monitoring, and automated analysis
* Sensors and robotics for high temperatures

**OPEN**

Innovation and creativity are encouraged and welcomed! Please contact us if you have a relevant technology that doesn’t fit into one of the Challenge Areas above that you would like to be considered for the Incubatenergy Labs program.

**# # #**

**SUGGESTED SOCIAL MEDIA CONTENT**

**Phase 1: Program Application**

**TWITTER**

**Startups**

@XSTARTUPCOMPANYHANDLE is proud to be collaborating in the Incubatenergy Labs 2023 innovation challenge alongside a cohort of #electric #energyproviders and @EPRINews – follow our progress at COMPANYWEBSITE. Proud to be part of the @Incubatenergy Network.

**Utilities**

@ENERGYPROVIDERCOMPANYHANDLE is proud to collaborate with @EPRINews in the Incubatenergy Labs challenge for #energy #startups to accelerate #decarbonization and #innovation! Learn more at labs.incubatenergy.org. Proud to be part of the @Incubatenergy Network.

**LINKEDIN**

**Startups**

@XSTARTUPCOMPANYHANDLE is thrilled to be applying for the @Incubatenergy Network 2023 cohort and can’t wait to collaborate with an awesome group of #electric #energyproviders and @EPRINews SMEs for Pitch Day hosted by @APS in Phoeniz, Arizona. Learn more at Labs.Incubatenergy.org. Proud to be part of the @Incubatenergy Network.

**Energy Providers**

@ENERGYPROVIDERCOMPANYHANDLE is thrilled to be part of the 2023 @Incubatenergy Network challenge where we’ll work together with a group of leading #startups and @EPRINews SMEs, to accelerate #decarbonization and #innovation. Learn more at Labs.Incubatenergy.org. Proud to be part of the @Incubatenergy Network.

**Phase 2: Project Kickoff**

**TWITTER**

**Startups**

@XSTARTUPCOMPANYHANDLE has been selected to run an accelerated demonstration project with @ENERGYPROVIDERCOMPANYHANDLE and @EPRINews! Following our appearance at Incubatenergy® Labs’ 2023 Pitch Day, our project team plans to test and deploy XTECHNOLOGY for 16 weeks with goals around XYZ.

**Energy Providers**

We are happy to be a part of Incubatenergy® Labs’ 2023 cohort! This year, we plan to kick off a demonstration project with @XSTARTUPCOMPANYHANDLE and @EPRINews to test innovation priorities around XYZ.

**LINKEDIN**

**Startups**

@XSTARTUPCOMPANYHANDLE presented a technology demonstration at @EPRI’s Incubatenergy® Labs’ 2023 Pitch Day hosted by @APS in Pheonix, Arizona. We are proud to announce that this is resulting in a project collaboration with @ENERGYPROVIDERCOMPANYHANDLE and @EPRINews.

**Energy Providers**

@ENERGYPROVIDERCOMPANYHANDLE attended @EPRINews Incubatenergy® Labs’ 2023 Pitch Day hosted by @APS in Pheonix, Arizona to learn about disruptive technologies in the clean energy space. We now plan to kick off a project with @XSTARTUPCOMPANYHANDLE to collaboratively test and deploy their innovation.

**Phase 3: Midpoint Review**

**TWITTER**

**Startups**

**IMAGES FOR SOCIAL MEDIA/DIGITAL USE**





