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## **2025 CLEAN TECH ECONOMY COALITION REQUEST FOR PROPOSALS: CLUTER ANALYSIS AND NARRATIVE DEVELOPMENT**

### **BACKGROUND ON mHUB**

mHUB was launched in March of 2017 by World Business Chicago in coordination with the Illinois Science and Technology Coalition and UI LABS, and under the guidance of the Chicagoland Manufacturing Advisory Council. The mission of the organization was to develop an entrepreneurial ecosystem around physical products and hardtech innovation and accelerate industry growth by cultivating a community of collaboration and connectivity between innovator, entrepreneurs, and manufacturers.

mHUB focused on removing structural barriers of entry for innovators, entrepreneurs, and manufacturers by providing access to capital intensive equipment; building networks of suppliers, mentors, and investors; and fostering a learning and community environment. In 4.5 years, the organization has supported over 450 startups and small businesses to launch 1,200 products, generate \$430 million in revenue, awarded 412 patents, raise over \$1B of investment, and created over 2,100 jobs. mHUB has also trained over 2,000 of people, provided 16,000 hours of training, and hosted over 350 community events.

The 501c3 nonprofit public charity was initially funded through industry commitments from Marmon Holding Group, GE Ventures, The Chamberlain Group, Bank of America, Molex, Underwriters Laboratories, Comcast, Arrow Electronics, Wintrust Financial, Chase Foundation and Technology and Manufacturing Association. Additional financial support was provided by the Illinois Facility Fund to finance the tenant improvements and initial equipment purchases. Over the last 4.5 years, mHUB has grown from a world-class hardtech incubator to include an engineering and design consultancy; accelerator program in Advanced Manufacturing, Med Tech and Climate, and Energy Tech; and a pre-seed impact venture fund. It has expanded industry partnerships and community partnerships to over 100 organizations.

In addition, mHUB has been awarded the following federal grants to continue to expand resources and impact:

#### U.S. Economic Development Administration:

- November 2016 – i6 Challenge – “Manufacturing Innovation Hub” - \$500,000 Grant
- July 2019 – Seed Grant Challenge – “Product Impact Fund and Accelerator” - \$300,000 Grant
- September 2020 – Venture Challenge Scale – “Scaling Hardtech Development Services” \$1.3 million Grant
- May 2021 – CARES Economic Adjustment Assistance – “Chicago Proactive Response: COVID 19 Economic Recovery with 1871 and MATTER” \$2.8 million Grant

#### Department of Energy:

- June 2018 – American Inventions Made OnShore Prize – “Build4Scale Energy Commercialization Training” - \$150,000 Prize
- October 2020 - Energy Program for Innovation Clusters #1 – “mHUB Innovation Center & Accelerator” - \$50,000 Prize 4
- June 2021 – Energy Program for Innovation Cluster #2 – “Midwest Regional Innovation Partnership with Evergreen Climate Innovations (formerly Clean Energy Trust), Argonne National Lab, Oak Ridge National Lab, University of Tennessee and Lawrence Technical University” - \$1 million Grant

In October 2020, mHUB was acknowledged by the U.S. Department of Energy as one of the 20 most innovative and impactful incubators focused on developing strong regional innovation clusters for energy-related technology and entrepreneurship. This designation and partnership was expanded in early 2021 with program relationships with Argonne National Laboratory, Chain Reaction Innovations, Evergreen Climate Innovations (formerly Clean



Energy Trust), Oak Ridge National Laboratory, and University of Tennessee and Lawrence Technical University. mHUB seeks to leverage this national leadership in energy entrepreneurship and economic development to accelerate the growth of the regional clean energy economy.

## **BACKGROUND ON THE UNIVERSITY OF CHICAGO**

The University of Chicago was established in 1892 in the South Side of Chicago. Throughout its history, UChicago research has led to breakthroughs that have benefitted humankind and transformed thinking in a wide range of domains, ranging from medicine, to economics, to anthropology. UChicago demonstrated the first controlled, self-sustained nuclear chain reaction, which formed the basis for the development of the first form of clean energy - nuclear energy - and led to the foundation of Argonne National Laboratory. Seventy-five years later, the University of Chicago through the UChicago Argonne, LLC continues to manage and operate Argonne National Laboratory and the Fermi Research Alliance, LLC manages the Fermi National Accelerator Laboratory on behalf of the Department of Energy. Importantly, UChicago research has been critical in bringing about social justice, excellence in urban schooling, and the concept of inclusive innovation, which seeks to educate and train an inclusive and diverse workforce in parallel to the development of new technologies and emerging companies and the creation of jobs.

The UChicago is home to the Booth School of Business and the Polsky Center for Entrepreneurship and Innovation. Established in 1998, the Polsky Center has provided over two decades of venture support for individuals interested in entrepreneurship, and robust training for students interested in pursuing a career in venture capital and private equity. It is also the home of the New Venture Challenge, one of the top accelerator programs in the nation. Over 500 companies have launched out of the Polsky Center and make up an active and thriving ecosystem today, including household names such as Grubhub, Simple Mills, and Braintree/Venmo. They have raised more than \$1.2 billion, achieved \$8.5 billion in mergers and exits, and created more than 13,300 jobs. Through its COMPASS and Duality accelerators, and through a vibrant collaboration with Argonne's Chain Reactions Innovations program – one of the nation's leading accelerators for clean energy technologies – the Polsky Center has enabled and accelerated the growth of countless companies in a wide range of sectors, including clean energy.

The University of Chicago is enriched by the city it calls home. In partnership with its neighbors, UChicago invests in Chicago's mid-South Side across such areas as health, education, economic growth, and the arts. Together with its medical center, UChicago is the largest private employer on the South 5 Side. Over the course of the COVID-19 pandemic, UChicago launched its Community Support Initiative, which provided many tens of thousands of free meals, grants to small businesses and nonprofits, rent relief to University tenants, and support for health care workers and patients at UChicago Medicine.

Through the Build Back Better Regional Challenge, UChicago will leverage its research, innovation, and its physical presence on the South Side to support the Chicago region's transition to clean energy, increase the mitigation of climate change, and apply an Inclusive Innovation framework to ensure that direct investment leads to greater equity and economic opportunity for disadvantaged communities on the city's South Side.

## **2025 ILLINOIS CLEAN TECH ECONOMY COALITION BACKGROUND**

The Clean Tech Economy industry cluster was identified as a priority growth sector through three emerging independent efforts and in coordination with the State of Illinois, City of Chicago, Cook County Government, and Chicago Metropolitan Agency for Planning:

- Regional Innovation Centers – Collaboration between 1871, P33, World Business Chicago, Discovery Partners Institute, MATTER, and mHUB that explored over a dozen potential growth sectors and prioritized two clusters – Clean Tech and AI in Life Sciences – based on the region's competitive advantages, industry leaders, innovation and entrepreneurship capacity, market size and growth opportunity, and past and future potential for creation of jobs and wealth.

- Cook County Government – Exploration of industry clusters in partnership with the University of Illinois at Chicago Voorhees Center for Neighborhood and Community Improvement that analyzed industries based on their impact on equity, job creation, and manufacturing strength.
- University of Chicago, Polsky Center – Comprehensive planning efforts to leverage their global leadership in basic and applied energy research, education, entrepreneurship, and civic engagement into technologies, companies, and civic partners including City Colleges of Chicago, Chicago Cook Workforce Partnership, and Emerald South Economic Development Collaborative, that maximize economic impact on the South Side of Chicago, the city of Chicago, and the state of Illinois

In 2021, the EDA launched the Build Back Better Regional Challenge (BBBRC). The goal of the challenge is to help regional economies recover from the pandemic and build economic diversity and resiliency to mitigate impacts of future economic disasters as well as benefit regional workforces and residents through creation of high-quality jobs, increased wages, and revitalized communities. Clean Tech is a potential cluster for focus in the challenge.

The challenge requires a lead organization to bring together a coalition of organizations that together will implement 3-8 tightly aligned projects that together accelerate equitable economic development through the target industry cluster, in this case, clean tech. There are two award stages in the BBBRC:

Phase 1:

- Goal: Help regions develop transformational economic development strategies
- Awardees: 50-60 regional coalitions
- Award: Up to \$500K total for planning and strategy development
- Application: Due October 19<sup>th</sup>

Phase 2:

- Fund the implementation of those strategies that will create & grow regional economic growth clusters
- Awardees: 20-30 coalitions that were finalists in Phase 1
- Award: \$25-\$75M and up to \$100M to implement 3-8 tightly aligned projects
- Application: Due March 15<sup>th</sup>, 2022

mHUB has led the emerging regional cluster to define a coalition and advance to Phase 1, having been selected as one of 60 finalists from among 529 applications. In order to arrive at this point, mHUB led the cluster through a rigorous process to develop a competitive proposal. In addition to research and assessment of the landscape, and engaging a broad group of advisors to guide the overarching strategy, mHUB put out an open call for proposals for component projects to a broad swath of potential regional partners.

36 eligible proposals were submitted and evaluated by 5-9 independent evaluators on a rubric closely tied to the EDA's selection criteria. The most successful individual proposals were paired together into meaningful groupings considering project focus areas and content, geographic reach, and an intentional pairing of community-based organizations with lead institutions. The resulting project portfolio consists of 6 overarching projects, each with multiple organizations working together and receiving funding under this proposal. Each of the 6 projects has a "lead institution," and the total of 19 organizations across the projects comprise the 2025 Clean Tech Economy Coalition (CTEC, or "coalition"). Additional organizations across sectors will be engaged as partners, though they will not receive funding through this grant.

### **COMPONENT PROJECTS**

The 6 projects together seek to lay comprehensive "groundwork" for a thriving Clean Tech sector. Two support the lifecycle of tech transfer, innovation and commercialization. Two seek to align and ready key workforce and manufacturing partners. And finally, two focus on deploying clean technologies today, one focused on electric vehicle charging infrastructure and the other on downstate grid modernization.

Each project is described in this section, along with the roles of each organization. The scope and funding levels may shift based on feedback from the EDA and furthered thinking on the part of the coalition.

**PROJECT 1: University of Chicago Polsky Center for Entrepreneurship Clean Tech Innovation Center**

A Clean Tech Innovation Center centered in the Washington Park neighborhood with reach extending across Chicago's South Side. This project will bring community-driven priorities and the experience of UChicago and its research partners together to create an inclusive place-based clean tech innovation ecosystem. This partnership will seed new innovations through applied research and entrepreneurship, and connect into other coalition work and partners, workforce and training efforts, and manufacturer partners for a wrap-around approach.

- **University of Chicago, Polsky Center of Entrepreneurship (lead):** Construction of the Clean Tech Innovation Center, a new applied research, entrepreneurship, and workforce development facility located in the Washington Park neighborhood. Following completion of construction of the project, deploy 24 months of on-site programming during the grant term that will become self-sustaining beyond that period. The programming will connect applied academic research, workforce development, and entrepreneurship opportunities targeting clean tech economic growth in the South Side (\$26.3M total budget)
- **Emerald South Economic Development Collaborative**, a 501c3 nonprofit organization, will create vital links and synergies between the Clean Tech Innovation Center and surrounding neighborhoods. Assist with workforce development, program design, clean tech demonstration project development, and community engagement. (\$2.7M)

**PROJECT 2: Driving Equitable Economic Growth through Clean Energy Technology Innovations, Commercialization and Small Business Development**

An entrepreneurship, commercialization and small business support network located in Chicago's United Center Park neighborhood, with program outpost in Englewood and program areas in Auburn Gresham, and Dolton, IL with a Chicago MSA wide service area. The network offers lab equipment, wrap-around business support, trainings, and equitable access to capital for clean tech entrepreneurs, with particular focus on wealth and job creation through for underrepresented founders and business owners. From idea to commercialization, this project will connect to other coalition projects as well as existing community partners for comprehensive support. This is a collaboration between mHUB (Project Lead) and Evergreen Climate Innovations (formerly Clean Energy Trust), Elevate Energy and Greater Englewood Chamber of Commerce (Project Participants) and will provide a network approach to maximize community engagement and broaden access to capital-intensive resources and trainings to support Clean Tech startups.

- **mHUB (lead):** Expansion and relocation of mHUB to an Opportunity Zone and severely economically distressed census tract, and the expansion of resources to support the commercialization of energy and hardtech startups and small businesses, and community-based programs focused on capacity building and expanding diversity, equity, and inclusion within hardtech and manufacturing industry. (\$47M total budget)
- **Elevate Energy:** Green Workforce Incubator and Support for an Equitable Illinois (GreenWISE IL) aims to ensure that BIPOC communities participate in and reap the economic benefits of the green tech revolution. Led by Elevate and Sustainable Options for Urban Living (SOUL), GreenWISE IL will create a clean energy business and workforce incubator program and revolving loan fund for construction firms of color with specific focus on the Auburn Gresham neighborhood and Dolton, IL. (\$6M)
- **Greater Englewood Chamber of Commerce:** GECC will develop a community solar, storage, and electric vehicle car-sharing demonstration in the Englewood neighborhood and provide job training, skills development, and entrepreneurship support for predominately African-American and Hispanic Englewood residents. (\$3.2M total budget)
- **Evergreen Climate Innovations (formerly Clean Energy Trust):** Extend existing resources that improve the scope, caliber, and accessibility of training and commercialization assistance to regional clean tech companies. The training focus will be on advanced manufacturing jobs within energy efficiency, renewable energy, and across the entire clean tech landscape. The commercialization

focus will be on supporting startups as they graduate from accelerator programs to the point where they are prepared to take on venture capital funding and scale. (\$1.6M total budget)

**PROJECT 3: Decarbonizing manufacturing and expanding the supply chain through retooling, coordination, and market incentives to support clean tech industry growth**

This project seeks to support and incentivize supply chain participants to invest in sustainable practices, while also looking ahead to help direct future supply chain investments. Direct support for manufacturers takes a layered approach including technical assistance, direct financial assistance, and broader incentive to change via a novel system of vaulting carbon permits. This project will look to create climate monitoring and prediction tools that will allow project partners to better guide the needed supply chain investments as they evolve and engage in carbon and climate education programs and community engagement activities.

- **Cook County Government (lead):** Develop the Advanced Sustainable Practices in Manufacturing Program to offer one on one business advising, educational services and resources, and grants to businesses to catalyze investments in sustainability practices. The program will also help manufacturers diversify into clean energy supply chains. (\$15M total budget)
- **Center for Neighborhood Technology:** Work with Cook County to develop sustainable practices businesses can take to mitigate the impacts of environmental justice issues. Build on its pilot tool to document urban flooding in the Calumet region and expand to 15 additional geographies in the Chicago region. (\$3.2M total budget)
- **Climate Vault:** Scale operations of calculating emissions for manufacturing organizations served through this project, assisting in taking steps to reduce or eliminate their carbon footprint, among other activities. Support the creation of market incentives to increase adoption of carbon mitigating technologies. (\$1.2M total budget)
- **Illinois Manufacturing Excellence Center:** Leverage IMEC resources to support establishing and scaling the clean tech supply chain with support including but not limited to capability with manufacturing outreach, particularly with small and mid-sized manufacturers, assessment and technical assistance capabilities, as well as utilizing the US Commerce NIST MEP's approach to measuring economic impact.

**PROJECT 4: Understanding future workforce trends and coordinating state, county city colleges toward building capacity for emerging skills requirements**

This project seeks to build a state-wide view of the current and future workforce needs in clean tech, understand where there are critical gaps relative to local talent pools, and design the education and training programs needed to facilitate job matches. Project participants span the state university system, community colleges, and city colleges to ensure a coordinated approach across these vital parts of the workforce training infrastructure. This project will also support matching for the immediate workforce needs of projects 5 and 6 in this proposal.

- **Southern Illinois University Edwardsville on behalf of the Illinois Innovation Network (lead):** Launch a state-wide clean tech workforce development program by engaging industry, mapping assets and needs, ensuring local talent pools have access to education and training resources necessary for success. Develop curriculum, facilitate on-the-job training, and recruit for education and training programs. Reduce employer barriers to participation in education and training efforts. (\$9.3M total budget)
- **Daley College:** Assist with the creation of clean tech workforce development programs and curriculum utilizing facilities, equipment, and technologies developed across this coalition. Engage industry to facilitate demand-driven training programs that support the growth of the clean tech manufacturing supply chain. (\$2.6M)
- **College of Lake County:** Expand existing clean tech workforce development programming utilizing existing facilities and those proposed as part of this coalition. Leverage existing and new partnerships with manufacturers, the community, and government agencies to assist in placing that workforce at existing and newly attracted clean tech employers. (\$30M)
- **Bright Star Community Outreach:** The Greater Bronzeville Clean Energy Workforce Initiative is a collaborative effort between 100+ partner organizations, including schools, non-profit organizations, and community stakeholders to bring clean energy education and training to the community. Assist in recruiting and developing the clean tech workforce in Bronzeville, sharing in the development of and



utilizing the curriculum, training programs, and technology demonstration developed by others in the coalition. (\$2M)

**PROJECT 5: Grid modernization and energy storage with focus on downstate coal impacted communities and urban settings**

This project will span testing to implementation, specifically around grid modernization in rural and urban settings. A grid modernization effort around Carbondale led by SIUC will enable deployment of technologies such as energy storage and electric vehicles that will directly work to revitalize this coal-impacted community, while a microgrid testing sandbox run by Northwestern will generate new insights for development and future scaling. Argonne will support the transfer of ideas and technologies across this lifecycle, as well as facilitate the sharing of learnings across other projects and linkages to workforce and supply chain needs.

- **Southern Illinois University Carbondale (lead):** Define and optimize changes in the Southern Illinois electrical grid to support widespread deployment of distributed energy resources, including electric vehicles, energy storage, and renewable generation. Deploy commercial, personal, and public transportation electric vehicle charging infrastructure. Connect technology deployments with workforce development activities led by SIU Carbondale and deployed across the state. (\$7.2M)
- **Argonne National Laboratory:** Lead the technology transfer of energy storage, microgrid development, and electric vehicle charging infrastructure in deployments led by SIUC and Northwestern. Promote industrial production across the supply chain in regions most affected by the transition to clean technologies. Assist project 4 in transferring the technical knowledge within Argonne into workforce development programs and make connections between the workforce and industry. (\$14.4M)
- **Northwestern University:** Develop an advanced microgrid in an accessible suburban campus location that enables testing of long duration energy storage. The project will provide access to the test bed for coalition partners (including public, corporate, and academic) to transfer its learnings to economic development, workforce development, and decarbonization efforts across the region. (\$6.2M)

**PROJECT 6: Electric vehicle charging and infrastructure deployment throughout southern Cook County and Chicago**

This project seeks to scale up Electric Vehicle infrastructure and test new applications of these technologies. A primary focus will be to install >110 EV charging stations primarily in distressed or underserved communities. In addition, this project team will test two additional concepts: 10 electric school buses and charging station, and an EV car-sharing program. Participants will work in partnership with community sites and seek to quantify impacts to air quality. Learnings will be shared across these pilots and will be cross-pollinated with parallel efforts in Southern IL.

- **Northwestern University (lead):** Partner with Cook County to deploy an additional 40 direct current fast charging stations across 20 locations, deploy 10 electric school buses, and pilot a V2G enabled bus charging station. Offer electric vehicle education programs in marginalized communities, potentially through workforce development and innovation hubs in this coalition. Research air quality impacts of EV adoption. (\$7.5M)
- **Cook County Government:** Install 55 standalone dual-port Level 2, 10 streetlight dual port Level 2, and 10 direct current fast EV charging stations in locations across Cook County underserved by EV charging infrastructure, primarily in the South suburbs of Chicago. Complete a feasibility study for a potential EV car sharing program focused on low-income residents. Connect these charging station deployments with workforce development efforts of this coalition. (\$6.8M)

**SCOPE OF SERVICES**

The CTEC seeks a consultant to assess market demand for both the expanded facility, services and programming of mHUB related to Clean Tech and the planned new innovation center by UChicago.

The consultant shall assess market demand for both

- 1) The expanded facility, services and programming of mHUB related to Clean Tech and
- 2) The planned new innovation center by UChicago.

This assessment should include surveys, interviews, and evaluation of regional economic, entrepreneurial and intellectual property activity and potential job creation.

The assessment should take into account the potential opening of both facilities. In other words, CTEC is particularly interested in understanding what type of differentiation in service offerings is required, if any, to support market demand for both an expanded center by mHUB in United Center Park and an innovation center by UChicago in Washington Park.

### **1 Feasibility study**

This assessment of market demand should at a minimum address the following:

1. Determine if the focus on Clean Tech is an appropriate and advantageous focus area for the two spaces, with sufficient demand in both areas, using interviews, surveys, and secondary research to assess volume of relevant research, potential entrepreneurs, and linkages to workforce development efforts.
2. Assess the level of community and business support for the facilities and business model. This will include face to face interviews with local community, business and government leaders to gauge the potential level of interest in the facilities.
3. Market research and community outreach should culminate in a market analysis, which clearly and fully demonstrates why the incubator spaces are or are not feasible. Copies of any survey results, interview transcripts, and other work materials generated by the consultants shall be provided with the final report.
4. Estimate the expected outcomes for key metrics (job creation, economic activity, etc.).

It will be critical to assess the potential expansion of mHUB's services as distinct from existing programs and services, including those that already related to Clean Tech. In addition, the feasibility assessment should determine whether mHUB's facility alone is feasible, and then whether the pair of facilities is feasible and under what conditions.

### **2 Facility considerations**

1. Determine the range of services and equipment needed within each facility to generate willingness and desire for researchers, entrepreneurs and community members within the region to engage.
2. Based on conversations with stakeholders, identify any potential facilities or considerations for facilities.

An ideal consultant will have experience conducting feasibility studies for federal funding applications, and in particular for the EDA.

### **PROPOSAL CONTENT**

- A general description of your firm, including history, staff and structure, as well as your understanding of the work
- A description of your firm's qualifications and technical capabilities
- A narrative of your project approach, including research methods and engagement strategies to achieve the above scope of work
- A proposed timeline of the work schedule and deliverables
- A brief explanation of your firm's understanding of and approach to inclusive growth
- A summary of your firm's commitment to diversity, equity, and inclusion (DEI), including any WBE/MBE/WBE status, DEI policies or practices, specific DEI expertise held by team members, or other relevant information
- A profile of the consultant team, including resumes/bios of specific team leads and members
- Detailed budget including the total number of hours devoted to each task, staff levels and hourly fees of proposed team members



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- Relevant examples of previous work
  - Professional references, including at least one current or past client. Please include the contact name, organization, email address, and phone number for your references

### **PROPOSAL TIMETABLE**

- RFP distributed – January 10, 2022
- Proposals due to mHUB – January 18, 2022
- Follow-up questions as needed – January 19-20, 2022
- Firm selected and notified – January 21, 2022
- Expected project start – January 24, 2022
- Expected project completion – February 25, 2022

### **SELECTION CRITERIA**

The winning team will be selected by its ability to meet the following criteria:

- Overall experience and reputation of company and consultant team
- Technical expertise in the areas of economic development, with specific respect to innovation economies and inclusive growth
- Commitment to inclusive growth principles and diversity, equity, and inclusion
- Clarity of project approach with respect to project goals and scope
- Quality and relatedness of previous work and positive references
- Project budget, clarity, and value, including hourly fees and total cost

### **KEY CONTACTS**

The following are the key contacts for information you may seek in preparing your proposal:

- Devi Raja, Lead Consultant, [devi@aimandarrowgroup.com](mailto:devi@aimandarrowgroup.com), 846-651-5537
- Manas Mehandru, Chief Operating Officer, [Manas@mHUBChicago.com](mailto:Manas@mHUBChicago.com), 312-248-8704
- Haven Allen, Chief Executive Officer, [Haven@mHUBChicago.com](mailto:Haven@mHUBChicago.com), 312-248-8705

Requests for additional information and questions should be coordinated through Devi Raja.

Please return the complete proposal via email to Devi Raja at [devi.@aimandarrowgroup.com](mailto:devi.@aimandarrowgroup.com). We would also appreciate a response if you decline to submit a proposal.