# Recommendations

## Equity & Access Focus Area
## **Final Report**

*Presented by the*
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## PROJECT OVERVIEW

Shifting the paradigm for how clean energy innovations realize market entry and success was an impetus for the founding of Grid Catalyst. Of the interconnected factors affecting the current state of entrepreneurship in this field, access to demonstration sites for market-testing is a barrier limiting the number of innovations and talented entrepreneurs realizing commercial success.

Grid Catalyst is positioned to expand access to demonstration opportunities by serving as a trusted navigator for both potential host sites and potential entrepreneurs needing market testing. Grid Catalyst's value as a trusted navigation partner extends additionally to the problem of how opportunities in the field of clean energy entrepreneurship are developed and positioned so that Black, Latino, Asian, Indigenous and women innovator talent thrives in this sector.

The capital-intensive nature of energy innovation, the time horizon for research and development, the technical expertise, the business knowledge necessary for forging an entrepreneurial endeavor, the relationships and networks that introduce opportunities and enable success and, most fundamentally, the early exposure to STEM and entrepreneurship career pathways, are all factors that contribute to the narrow band of who currently works in clean energy entrepreneurship.

Grid Catalyst identified the Center for Economic Inclusion as a needed consultant at the founding stage of Grid Catalysts' partnership mapping and program development so that the needed relationships, practices, programming, mental models were identified earlier and baked into the creation of Grid Catalyst so that racial equity and gender is centered.

### Why racial diversity in clean energy innovation matters

This focus on diversity is a critical component for meaningful growth and innovation within the clean energy sector. Additionally, as the Brookings Institute states in its *Advancing inclusion through CLEAN ENERGY JOBS* report, "correctly identifying the scope of the clean energy economy also matters because it could help address some of the country's central economic challenges."[1] . Creating an inclusive clean energy workforce will require a more concerted effort to ensure all individuals can fill the jobs created by this evolving industry. The opportunity for expanding entry into this sector is abundant with women comprising fewer than 20 percent of clean energy production and energy efficiency sectors and Black workers comprising less than ten percent of these roles.

The National Association of State Energy Officials (NASEO) published a report in 2021, examining the disparities within the energy sector. Of the factors cited in the report, White energy workers were more likely to have access to support networks. Whites also reported higher rates of exposure to energy careers at job fairs and networking events. Nearly half (47%) of whites expressed that they knew the steps necessary to obtain the career they desired; this compares to 40 percent of Black or African American, 37 percent of Asian, and 26 percent of Native Hawaiian and American Indian energy workers. Similarly, Asian, and Hispanic and Latinx energy workers reported lower rates of

access to professional development opportunities. Once in the workplace, Whites were found to hold higher levels of career satisfaction and were more likely to report being in leadership roles compared to racial and ethnic minorities.[2]

Coupled with the opportunities in the clean energy sector is the economic potential in business ownership. Black, Brown, and Women-owned businesses, particularly with equitable investments of intellectual, social, financial and political capital, are critical to building wealth, creating jobs and growing the economy.

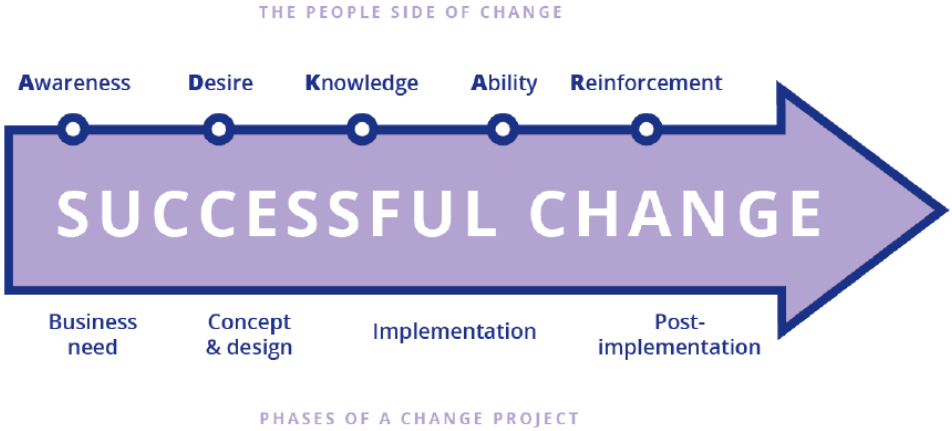
African American business owners have 12 times more wealth and have higher levels of wealth mobility than counterparts who are not business owners.[3] Additionally, employers of color are more likely to hire people of color from their community.[4] Although studies show there are opportunities to build wealth through entrepreneurship, challenges like access to start-up capital, technical assistance and resources make it difficult for entrepreneurs of color to be successful. In the Twin Cities as of 2020, less than 3% of African Americans, Latinx or Asian people owned their own businesses, compared to 7.2% of whites.[5]

In addition, businesses owned by people of color are currently concentrated in sectors such as transportation and warehousing, retail, health care and social assistance. White-owned businesses are concentrated in construction, finance and insurance, and professional, scientific, and technical services.

## METHODOLOGY

The Center for Economic Inclusion catalyzes shared prosperity by advancing an inclusive economy. Central to this work is the Center's use of the core concepts from the Prosci ADKAR Model which necessitate motivating both individual and project or organizational level changes to ultimately achieve systems change. For individual and organizational change to take root and be sustained, this process must follow a chronological sequence of stages.

A simplified explanation of this model for the people and project stages is depicted in this diagram:



**Stage 1:** Awareness, through compelling communication of the why behind a need for change

**Stage 2:** Desire, to be part of or support the change

**Stage 3:** Knowledge, of how to change by building needed learning opportunities

**Stage 4:** Ability, to implement the knowledge needed for change through coaching, practice, and continued action

**Stage 5:** Reinforcement, to ensure the change sticks through accountability and measurement of progress

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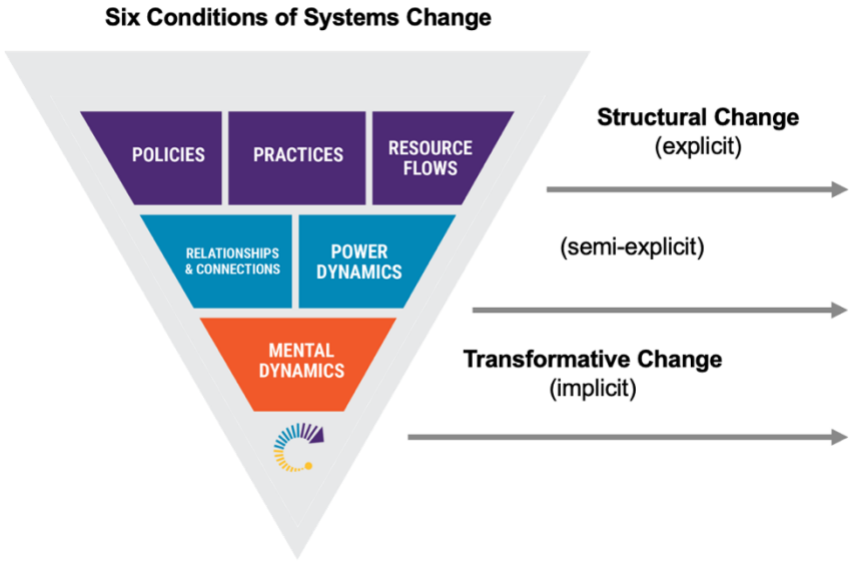
A second key methodological approach informing the Center's practice is **FSG's Six Conditions of Systems Change**, which calls for the close examination of the interconnected conditions that hold a problem of inequity in place.

As illustrated, these conditions are dissected beginning with what is most "explicit", such as policies, practices, and resource flows, to conditions that are less explicit such as relationships and power dynamics.

Finally, to achieve transformational change there must be an examination of the layer that is most implicit - mental models - which includes the assumptions people hold.




Together, these two core methodologies inform the Center's approach to problem identification, strategy design and stakeholder mapping and the recommendations in this report for how Grid Catalyst can center racial equity and gender for mission impact. In addition to research of the clean energy field, and the Center's knowledge of the Twin Cities' entrepreneurial ecosystem, these recommendations were informed by focused strategy sessions with Grid Catalyst and six interviews with entrepreneurs of color and six entrepreneurial support organization leaders.

## HURDLES


### Challenges to creating an inclusive clean energy entrepreneurial ecosystem

With clean energy being one of Minnesota's strongest growth sectors, there exists great opportunity for small business growth. Clean energy jobs rebounded twice as fast as overall state job growth in 2021 according to the 2021 Clean Jobs Midwest Report. However, without intentional, laser-like focus on needed interventions to clear away hurdles, the clean energy innovation sector will underperform because the full talents of potential clean energy leaders will go untapped.

Currently, 27.4% of the clean energy workforce is female, while women comprise nearly half of the state's labor force and 41.1% of business ownership. Minnesota has higher representation of Black or African American and Hispanic and Latinx workers in the clean energy workforce than is represented in the state overall employment numbers, but this has not translated to representation in clean energy leadership, including ownership, c-suite positions, boards of directors, and venture capital and investor profiles.[6]

Grid Catalyst designed their accelerator program to expand access to demonstration opportunities to market test innovations from entrepreneurs who are in the late stage of their entrepreneurial journey. Focused attention and resources at the earlier stages of the entrepreneurial journey are also needed so that the cohorts benefitting from Grid Catalyst's accelerator programming will include women, Black, Latino, Asian, and Indigenous innovators.

Success along the entrepreneurial journey for clean energy innovation involves many steps embedded in historically exclusionary systems, networks and practices, and language.

**Exposure to STEM and entrepreneurship**

Opportunities for smooth entry into STEM pathways are often determined from an early age when students need to complete specific sequences of math and science coursework for admission into STEM programs in higher education.

For students who do pursue STEM fields, exposure to innovation opportunities in the field may be limited. There is wide variability in whether schools encourage cross-disciplinary collaboration, particularly related to entrepreneurship and startups.

Additionally, technical college pathways may not include exposure to entrepreneurship and business ownership, thereby limiting exposure to students developing career pathways through this entry point.

**Access to capital and necessary networks**

Access to needed capital with reasonable terms can be a challenge at multiple stages, even as there is more activity and investment happening in the clean energy innovation sector.

Research from the Federal Reserve Bank of Minneapolis shows that Black, Native American, and other entrepreneurs of color were less likely to receive a loan, and to receive less money when they do, than White entrepreneurs.[7] Access to credit and critical banking relationships are an immense hurdle for many promising innovators.

Awareness of state and federal support mechanisms for research and development, prototypes, lab space, and startup funding may not be reaching all potential audiences. The potential risks of financial instability due to unpredictable income and health insurance for entrepreneurs as they move through ideation, research and development, and commercial launch is a real factor that may dissuade aspiring innovators from following their idea. Capital needs also include funding for prototypes, patents, business development, and marketing.

Access to the networks that promote accelerator opportunities, especially if the networks are insular and not intentionally promoting to expand inclusive reach, is likely to miss potential innovators.

## NARRATIVE CHANGE

An additional hurdle that influences the composition of the clean energy innovation workforce are the mental models people hold about what a STEM career looks like, what entrepreneurship means and for whom these career paths are intended.

Like most fields, clean energy and entrepreneurship is full of vocabulary that is rich with insider language that can unintentionally deter individuals from thinking they can participate in these sectors. Translating professional and technical vocabulary into widely understood language that describes the opportunity, the skills needed, the support available, and the benefits to pursuing career pathways in clean energy entrepreneurship is needed.

Unpacking the “why should I do this?” question, using clear and compelling language to describe where clean energy and clean energy innovation is headed over the immediate and long-term future is critical to attracting a wider talent pool to include people who do not currently identify as an innovator or as a potential clean energy leader.

Creating opportunities to hear directly from audiences Grid Catalyst seeks to cultivate, such as high-school and college students, about their current understanding, assumptions, and perceptions about clean energy and entrepreneurship will be critical to changing the narrative that may currently be dissuading or obscuring interest from targeted communities.

Conversations with trusted advisors, conducting focus groups and interviews with specific audiences are additional methods to gain insight into developing language that will resonate with potential candidates who may not already be considering entry into these fields.

Being a founder is about being able to actualize an idea that comes from your heart and mind out into the world. That journey is rewarding because it comes from you, instead of taking someone else's idea and making it happen.

Describing entrepreneurship as purpose-driven work grounded in community needs and as a method for increasing community strength is an example of how language can be used to shift the mental models people may have about what it means to be a business owner. Similarly, connecting rising gas prices and the effects on the economic well-being of community members, is a potential on-ramp for explaining the tangible need for energy innovation that isn't reliant on fossil fuels.

Questions to consider in shaping narratives about clean energy entrepreneurship as a pathway:

- What are the opportunities?
- What are the skillsets needed?
- What steps do you take to explore this space?
- Who might you already know or relate to that works in this sector?
- How can working in energy entrepreneurship benefit your family? Community?
- What resources would be available to support me?
- Would I be supported if I take this path? Would I be tokenized?
- How can my skills be matched with other partners in this work who need people with my unique experience, perspective, and talent?

## INNOVATION HUB

The Grid Catalyst Clean Energy Innovation Hub will serve as a first stop for aspiring entrepreneurs, early-stage startups, late-stage entrepreneurs, and individuals interested in learning more about opportunities and support available in clean energy. This work builds on the PowerUp program and the commitment to create greater community access to innovation pathways.

The programming and partnerships being developed for the Hub are grounded in the need to expand who gets:

- Exposed to the field of clean energy
- Exposed to what being an innovator is and sparking interest in building the innovator muscle and mindset
- Pitch opportunities for ideas addressing community identified energy challenges
- Networking and facilitated "match-making" to connect clean energy subject matter experts and business savvy innovators

- Programming, networks, relationships, funding opportunities in clean energy entrepreneurship
- Demonstration projects for ideas that are ready to be tested

The Hub platform will enable both active and passive user engagement with information available to connect participants to needed supports regardless of their entry point into the field of clean energy and innovation. Information on funding streams, business start-up, mentorship and problem-solving support, opportunities to learn more about the clean energy sector, as well as information for late-stage entrepreneurs ready for the Grid Catalyst accelerator will all be accessible through the Hub. The platform will also further enable collaboration with industry partners and entrepreneurial support organizations.


The Grid Catalyst Clean Energy Innovation Hub will build and sustain a thriving clean energy innovation ecosystem in Minnesota with multiple entry points.

## STRATEGIC PARTNERSHIPS

The goal of the Hub is to establish the partnerships and programming necessary to meet the needs of current and aspiring clean energy innovators. Further, this collaborative work can braid together a more intentionally connected Minnesota-based clean energy ecosystem. To accomplish this, it is useful to outline the potential partnership domains.

### Education Partners

Exposure to STEM and entrepreneurship through partners connected to high-school-aged students is one domain area. Grid Catalyst can serve as a resource and navigation point for programming already offered by partners to this targeted age group. The potential to supplement existing STEM curriculum and entrepreneurial programming with an introduction to clean energy innovation is one strategy to increase knowledge of both opportunities in this field and the myriad pathways for careers in this growth sector. Junior Achievement has been identified as an interested partner to begin piloting this approach, through their Innovation Incubator. This type of opportunity also enables Grid Catalyst to

learn first-hand from high school students what language resonates with them as they are provided knowledge of the clean energy innovation sector.

Three additional emerging opportunities to explore are with the Best Buy Teen Tech Centers, UpTurnships, and the Regional Apprenticeship Training Center in North Minneapolis with Renewable Energy Partners.

Higher education partnerships will continue to be a targeted component of the relationships Grid Catalyst builds and sustains to support the work. Collaboration with the University of Minnesota through the Institute on the Environment, Technological Leadership Institute, and Carlson School of Management will be a focus, particularly with how the University is approaching expanded access to STEM and entrepreneurship to students from racially and ethnically communities under-represented in their department programs.

Additional partnership exploration with Dunwoody College of Technology and with the Dougherty Family College at the University of St. Thomas, both of which have higher numbers of students from racially and ethnically diverse communities, will provide Grid Catalyst the potential for greater exposure to an expanded network of college students.

Potential collaboration ideas to explore with these colleges include developing experiences for students from across disciplines to practice ideating and exploring start-ups, and the connection between climate challenges and business innovation. Programming would explore how to develop ideas into businesses, financial fundamentals of startups, customer, and market discovery, building partnerships, business management, and how to pitch. This opportunity could be developed with other entrepreneurial support organizations who already offer this type of training but would need to be customized for the participants.

Initiatives for high school and college student engagement could also include internship and fellowships with emerging startups and with Grid Catalyst, seed grants for idea development, mentorship and networking targeted to this demographic.

- One goal for the first year is to develop one or two initiatives that are targeted to high school students, who can be connected to the Hub. This could be through a strategic partnership program and through events created for high school students to network and connect with clean energy and entrepreneurial leaders.
- A second goal is to develop one or two initiatives targeted to higher-education students

**Early-Stage Innovators**

In building out the programming and partnerships needed to effectively support aspiring- and early-stage entrepreneurs, there is great potential for accelerating collective impact through intentional work with existing entrepreneurial support organizations (ESOs) in Minnesota. The Hub platform can

provide a navigational component that enables participants to have a one-stop place to learn about the available programming offered and a roadmap for where to go for what type of resource and support need.

- Through the network of entrepreneurial support organizations, Grid Catalyst can further extend the dissemination of information about the opportunities for innovation in clean energy. Reciprocal information flow and connection points will be mutually beneficial, enabling energy and climate focused innovators who may be participating in start-ups programming through ESOs to get connected to the Grid Catalyst network. Similarly, aspiring entrepreneurs who come first to Grid Catalyst will learn about complimentary programming offered through ESOs.
- Focus for early-stage support should be in funding that specifically targets investment in racially and gender diverse innovators. Mitigating the factors that negatively influence aspiring entrepreneurs, such as health insurance and economic stability, is critical to the success of expanding access to the entrepreneurial pathway. State and federal partners such as DEED and the Small Business Innovation Research program and corporate partners who may be able to support more employee-led innovation through small pilots for side hustle endeavors are examples of emerging considerations.

**Late-Stage Startups and the Accelerator Program**

Understanding how to translate opportunities for partnership and build new pathways for needed connections is a key value of Grid Catalyst's accelerator cohort. Entrepreneurs in the cohort are connected to host organizations to establish demonstration projects that could help commercialize and scale clean energy solutions.

| K-12<br>10% time allocation | Higher Ed<br>(25% time allocation | Early-Stage Innovators<br>25% time allocation | Late-Stage Accelerator<br>30-40% time allocation |
|---|---|---|---|
| Junior Achievement | Dunwoody | Hub - ESOs | Narrative |
| Achieve – MPLS, St. Paul | St. Thomas | Subject matter experts | Network |
| UpTurnships | Minneapolis College | Career shift | Access points |
| Regional Apprenticeship Training Center – Stem MN, North High School | Metro State | Side hustle | Navigation |
| Best Buy Teen Tech Centers | North Hennepin | SBIR | Money: investors, plus, PRI |
| | St. Paul College | | Prioritization of diverse candidates |
| | UMN | | Partners/leaders |
| | Century | | |
| | Augsburg | | |

The technical expertise and time needed to source and vet the feasibility of new clean energy innovations poses a challenge for entities that could serve as host sites. And one challenge facing clean energy focused entrepreneurs is gaining a viable entry-point to needed demonstration partners due to a complex maze of relationships and gatekeeping within entities that could be host sites.

With the successful launch of the 2022 Energy Startup Cohort, Grid Catalyst will continue to learn from cohort participants and Innovators Network partner organizations about the factors informing the success of the demonstration effort and the emerging challenges. As Grid Catalyst renews and extends its focus on prioritizing racially diverse and women innovators in the program recruitment and selection process, the continued identification of restrictive access points to the program and the work to build a diverse pipeline in earlier stages will be critical.

- Engage with partners who can benefit from participation and help shape the direction and reach of this work. Recognizing that not everyone will have the time, capacity, and interest for this particular niche.
- Intentionally shift the networks between startups, energy sector, and other industries to be more intersectional and inclusive.
- Develop funds/funders that can support diverse founders throughout the stages of their business development. On average, big banks approve around 60% of loans applied for by white small-business owners, 50% by Latinx small-business owners, and 29% by Black small-business owners.[8] Similarly, Black startup entrepreneurs received only a tiny fraction — 1.2 percent — of the record $147 billion in venture capital invested in U.S. startups through the first half of 2021, according to Crunchbase numbers. That compares with the more than 13 percent of the U.S. population that is Black or African American.[9]

**Workforce**

As Grid Catalyst considers the role they could play in developing expanded pathways for clean energy innovation careers, workforce partnerships are an additional avenue that could be further developed. Understanding which partners are currently involved in workforce training for clean energy careers, the targeted audience for current recruitment efforts and the skill sets, wages, and the focus of current efforts is a necessary first step. With the Excel Energy Power Up training program and the Collaborative Pathways Program for environmental career pathways as two examples, the opportunity for intersection with these and other efforts underway coupled with the idea of launching additional pathways is worth consideration.

Workforce development considerations:

- Grid Catalyst can build partnerships with workforce partners that widen the pathway conversation to include entrepreneurship, innovation, and business ownership in standard programming
- Examine ways programs and partners might secure multi-year funding critical to the sustainability and effectiveness of launching new pathways
- Work with partners to understand and identify the transferrable skill sets and knowledge base from other industries
- Work with partners build intentional connections between training and employment partners

- Communicate and consistently reinforce the desired outcomes and expectations with all partners

## THEMES

Themes from interviews with entrepreneurs, entrepreneur support organizations and other leaders include the following:

- Networking is critical but also needs to be curated to be most useful to aspiring entrepreneurs, matching what they most need access to given their stage in the innovation journey
- Minnesota's entrepreneurial culture is most open to "connection" conversations, rather than conversations that lead to traction; Strategic thinking is needed to improve the coaching/networking/match making element so both parties benefit
- Time required for participation, and the comfort level of engaging in available networking and programming available, can be barriers for women and people of color
- Creating partnerships with community leaders who can expand the network of who is introduced to the idea of clean energy innovation is a viable strategy to raise awareness
- Entrepreneur support organizations in the Twin Cities have an opportunity to leverage each other to provide increased awareness of support opportunities to aspiring entrepreneurs
- Investment needs in programming, mentorship, and support for the various stages of the entrepreneurial journey are distinct; what is needed at the ideation stage is different from what is needed at the growth stage
    - Early ideation – see yourself as a leader, see people showing up to see your idea, space to explore, learn and ideate
    - Further development of idea into a pilot demonstration – how to run and measure a pilot/proof of concept project
    - Additional development – protecting intellectual property, market base research
    - Ready for market entry trial, start generating revenue, working full time on the innovation
- Supports for and investment in the person leading the innovation are as needed as supports for and investment in the idea being developed
- Aspiring entrepreneurs need to better understand how to mitigate risk so that they are not financially dependent on their idea succeeding, and therefore opt not to pursue it due to the consequences of potential failure

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