

# Breakthrough Energy

Ambition in Action

September 2024

©2024 Breakthrough Energy, LLC. All rights reserved.

Confidential Information – use, reproduction or distribution without written permission is strictly prohibited.



We need to go from  
**51B**  
tons of emissions per year

to







# Breakthrough Energy is a global network of climate leaders committed to accelerating the world's journey to a clean energy future.

Our team spans the world's top climate researchers, innovators, investors, and policymakers working across the entire innovation pipeline – doing everything from funding and scaling technologies, advocating for climate smart policies, and mobilizing partners to take effective action.





We're on a mission to inspire and support the world to accelerate the climate solutions we need and eliminate their green premiums through technology, policy, and market innovation.

**We look across every source of emissions**

BE takes a comprehensive view of the challenge: supporting innovation across every emissions-producing sector of the global economy – manufacturing, electricity, agriculture, transportation, and buildings – what we call our “Five Grand Challenges.”

**We look at every lever for change**

Building a clean energy future requires progress in technology, policy, and markets. That's why we fund breakthrough technologies, advocate for climate smart policies, and mobilize partners around the world to take creative, courageous, and effective action.

**Across every stage of innovation**

Working with our world-class network of innovators, investors, industry leaders, and policymakers, BE accelerates the innovation of climate technologies at every stage – from discovery to development to deployment.

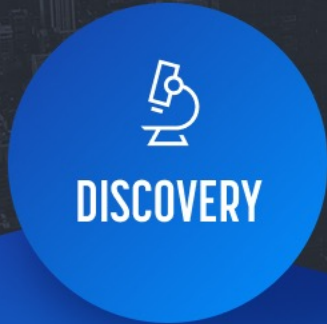
**To make it affordable for everyone**

We can't build a global clean economy if aspiring nations can't afford to grow their economies in an emissions-free way. That's why we keep our eyes on whether clean technologies can compete with dirty alternatives on cost, and use that difference—or Green Premium—to guide where and when to invest in innovation.





# Our Approach



**DISCOVERY**

Building a clean energy future starts with discovery and the ecosystems, people, and ideas that make it possible.

**PRE-VENTURE INNOVATION FUNDING**

- BE Fellows**
- Explorer Grants**
- Ecosystem Grants**
- Workshops**



**DEVELOPMENT**

Breakthrough technologies need great companies to take them to the next level. We help build those companies and prepare their solutions for impact.

**COMPANY BUILDING**  
**Breakthrough Energy Ventures**



**DEPLOYMENT**

Accelerating deployment requires more capital and new approaches.

**DRIVING IMPACT AT SCALE**

- Catalyst**
- BEV's Select Fund**



**Accelerating Progress**

Across every stage of innovation, our Policy & Advocacy, Partnerships, Communications, and Operations teams work to accelerate progress by shaping the technology, markets, and policy ecosystems and increasing understanding.

# Discovery

Pre-venture Innovation



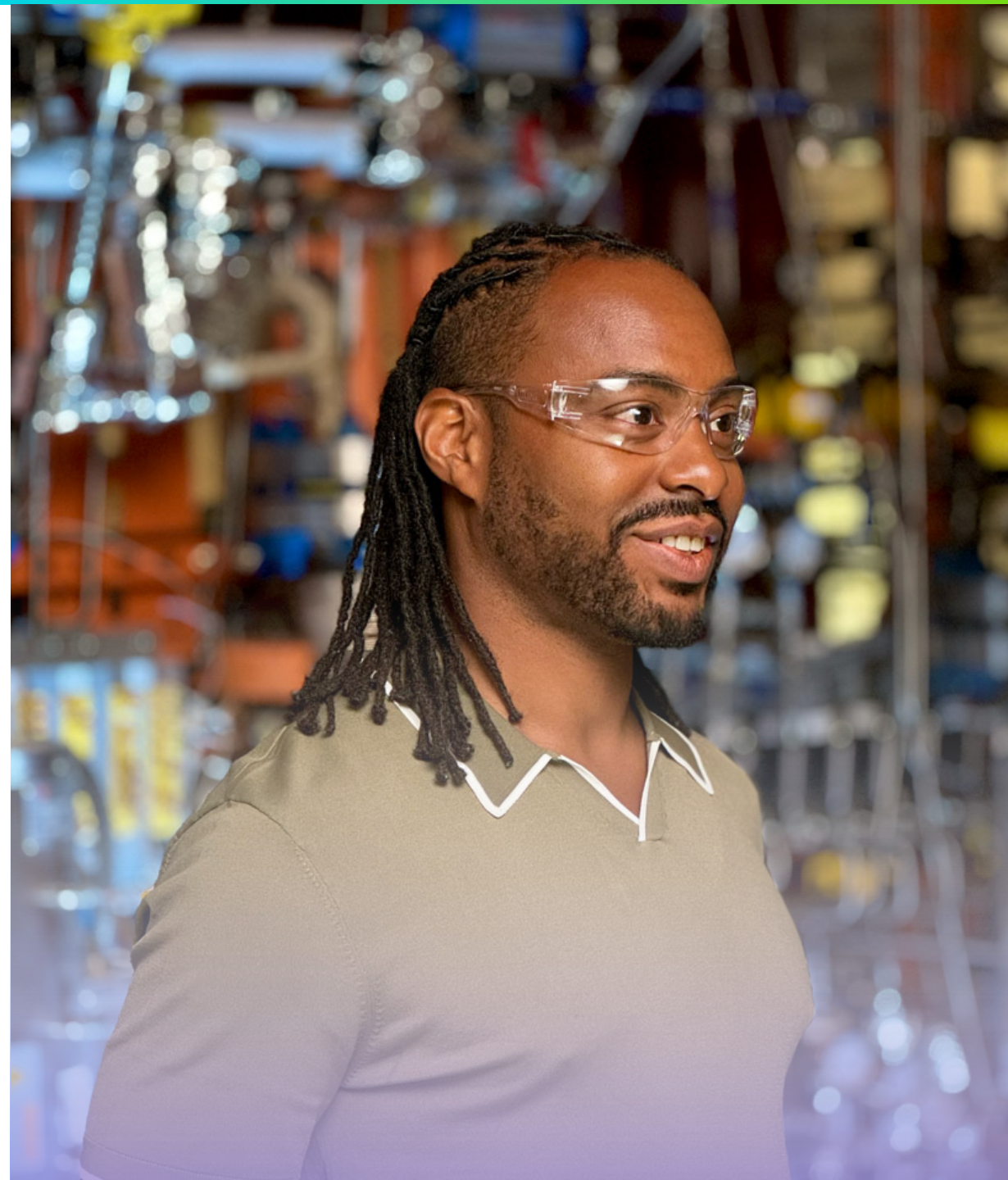




## BE's Discovery Team strategically drives the exploration of early-stage technology by supporting innovators, building ecosystems, and seeding ideas.

- We support innovators in taking their technologies from lab to market through our flagship **Fellows program** and **explorer grants**.
- We nurture and build innovation ecosystems through our **ecosystem grants, university venture programs**, and our **global south program**.
- We seed ideas and solutions where attention is needed through our **workshops**.

**We call this stage “pre-venture innovation” because our funding is not-for-profit.**







## Our flagship Fellows program is about helping innovators bridge the gap from lab to market.

It offers early-stage innovators capital and provides mentorship, education, and access to the Breakthrough Energy network.

There are two types of Fellows:

**Innovator Fellows** are world-leading scientists and engineers with a critical climate technology to commercialize

**Business Fellows** provide guidance and strategic input to Innovators on their path to commercialization.





**Explorer Grants** are for ideas that are too early even for the BE Fellows Program. These grants are for ideas that are not yet out of the lab, let alone spun out into a company.

**Ecosystem Grants** are provided to organizations and universities fostering collaboration and innovation in developing climate solutions. These grants facilitate experiential learning and development, helping to mitigate risks associated with novel technologies.

**Workshops** bring together scientific experts on some of the most cutting-edge subfields to identify, at the earliest possible stage, if there are ideas or concepts that we can eventually scale up to an Explorer or Fellows project—or even straight to a company that’s ready for investment.

# Development

Company Building



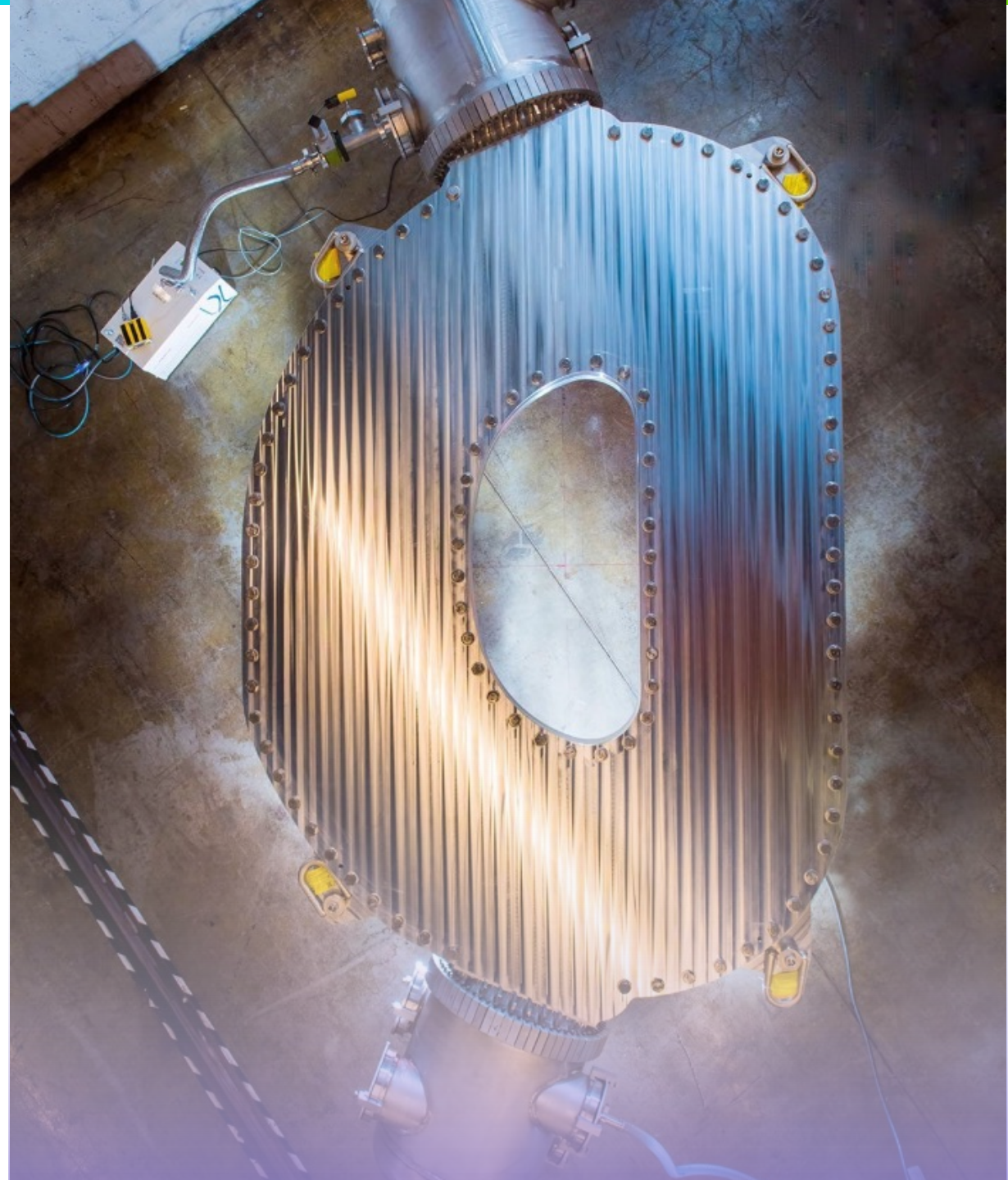




## It's not enough to invent a great solution. A clean energy future will be built by great companies.

Once we've validated a groundbreaking innovation, Breakthrough's Ventures team invests in startups and helps them accelerate the development of their teams and technologies by offering an unparalleled combination of technical and entrepreneurial expertise.

**Breakthrough Energy Ventures** invests in groundbreaking startups from around the world whose technologies can significantly reduce emissions across the Five Grand Challenge areas. Ventures has raised more than \$3.5B in committed capital and has supported more than 110+ cutting-edge companies.





**Our team is purpose-built to invest in, launch, and scale global companies that are creating innovations to eliminate greenhouse gas emissions throughout the global economy.**

We seek true breakthroughs and are committed to supporting our portfolio companies by bringing to bear a unique combination of **technical, operational, market, and policy expertise.**

Our venture funds have more than **\$3.5 billion** in committed capital to invest in companies ranging from seed to growth stage. And we've invested in **more than 110 companies**—each with the potential to reduce greenhouse gases, at scale, by at least half a gigaton every year.





# Deployment

Impact at Scale





## Once a technology is ready for impact, Breakthrough Energy supports companies in several ways.

The **Catalyst** team brings together leading organizations from across the private sector to fund and enable first-of-a-kind projects for emerging climate technologies, bringing a unique combination of project development expertise and flexible capital – in the form of grant funding and equity investments.

Our Ventures team's **Select Fund** is a later-stage investment vehicle created to support climate tech companies – within and beyond the existing portfolio – that have overcome core technical hurdles and are either on the verge of commercial deployment or are already in the marketplace generating revenue.







**Catalyst is a novel platform that funds and invests in project companies utilizing emerging climate technologies that reduce emissions. By investing in these opportunities, Catalyst seeks to accelerate the adoption of these technologies worldwide and reduce their Green Premiums.**

Catalyst both funds large **demonstration** projects and invests in **first-of-a-kind** commercial-scale projects that use key emerging climate technologies.

In addition to capital, Catalyst leverages the team's **energy infrastructure investing and project development expertise** to work with innovators on advancing their projects from the development stage to funding and ultimately, to construction.





**Infinium's**  
Project Roadrunner:  
The largest power-to-liquids sustainable aviation fuel project in Texas



**Rondo's**  
EU Projects:  
Leading industrial decarbonization with advanced thermal battery technology



**Energy Dome's**  
Ottana project:  
A first-of-a-kind long duration energy storage project deploying Energy Dome's CO2 Battery technology



**LanzaJet's**  
Freedom Pines Fuels sustainable aviation fuel (SAF) plant



**Xcel Energy's**  
first two deployments of *Form Energy's* multi-day iron-air batteries



# Accelerating Progress

Policy & Advocacy, Partnerships, and Communications



## Across every stage of innovation, our Policy & Advocacy, Partnerships, and Communications teams work to accelerate progress by shaping markets, building innovation ecosystems, and increasing understanding.

Our **Policy & Advocacy Teams** around the world advocate for policies that drive innovation, incentivize investment, and reduce the costs of clean energy.

Our **Partnerships Team** mobilizes leaders across the private sector to collaborate with the most promising climate tech companies and invest with impact.

Our **Communications Team** shapes understanding of critical climate technologies and sectors, helping to frame challenges and opportunities around the energy transition for key audiences.

**Cipher**, an independent news platform supported by BE, covers the technological innovations we need to combat climate change and transform our global energy systems.

Our **Operations Team** makes it all possible.







## We champion climate-smart policies globally, driving innovation, enabling new technologies, and shaping economic and regulatory reforms to accelerate the energy transition.

In the **United States**, we were instrumental in the policy victories of the past few years and helped ensure they contained strong support for innovation and emerging technologies. Now we're doubling down to support implementation and invest anew in innovation.

Our team in **Europe** has helped the continent maintain its lead on climate forward policy while developing a policy agenda that more effectively drives innovation and supports risk-taking.

We're currently working with industry, thinktanks, and policy makers in **APAC** to heighten the focus on climate innovation, and to accelerate pathways for deployment while keeping in mind regional decarbonization priorities.





We connect leading corporate, financial, government, and philanthropic organizations with the most promising climate tech startups, projects, and innovators to accelerate scaling the technologies required to achieve net zero.

- We advance public-private collaborations through initiative such as the **Energy Resilience Leadership Group** and the **Clean Grid Initiative**.
- We unite resources and expertise to bridge the funding gap through philanthropic efforts such as **Funding Climate Impact, Invest in Our Future, Mission Possible Partnership, and Allied Climate Partners**.





# Thank You

