



Breakthrough Energy

OUR MISSION

We are creating a world powered by clean energy.

Every year, the world adds 51 billion tons of greenhouse gases to the atmosphere. To avoid the worst impacts of climate change, we need to bring this number to zero by 2050. This is one of the most difficult challenges humans have ever taken on, but we must do it—and Breakthrough Energy has a plan.

Why is getting to zero so difficult? Because nearly everything we rely on to live a modern life produces greenhouse gases—how we generate electricity, build basically everything, grow food, cool and heat our spaces, and move from place to place. We need to eliminate emissions from all of those activities and we have just 30 years to get it done.

Revolutionizing our physical economy would be hard enough, but there's an added complication: for a century, we have designed our markets to make the building blocks of our society, like cement and gasoline, cheap and abundant. As a result, those technologies are great at the jobs we ask them to do. But they're also dirty and cause climate change. Now, we have to replace all of those cheap technologies with ones that do the same jobs just as well, but without threatening our future on this planet. Restructuring our markets, policies, and behavior to do that will be hard. But we can and we will, and Breakthrough Energy is here to help make it possible every step of the way.

Breakthrough Energy is dedicated to helping humanity avoid a climate disaster. Through investment vehicles, philanthropic programs, policy advocacy, and other activities, we're committed to scaling the technologies we need to reach net-zero emissions by 2050.

At Breakthrough Energy, we are changing the way we power the world by accelerating the cycle of innovation for products that don't yet exist, while reducing the Green Premium—the price difference between a clean technology and the existing, dirty one—for the products we do have. This makes it both possible and affordable to do the right thing for the planet and our future on it. We support cutting-edge research and development in key areas, invest in companies that turn green ideas into clean products, help scale those technologies around the world, and advocate for policies that create a market for these zero-carbon technologies.

OUR STRATEGY

Everyone needs access to affordable and reliable clean energy. We have a strategy to provide it.



Developing Solutions: We know the main sources of global emissions—we call them the Grand Challenges: manufacturing (31%), electricity (27%), agriculture (19%), transportation (16%), and buildings (7%). At Breakthrough Energy, we invest in research & development, companies, products, and other solutions to accelerate the discovery and deployment of new clean technologies across these five Grand Challenges.



Building Markets: It takes a lot of capital and patience to invest in new clean technologies. We bring together investors, entrepreneurs, and manufacturers with the ambition, courage, and vision to turn game-changing discoveries into scalable and competitive solutions.



Innovating Policies: The world's economic and energy policies are built around technologies that emit greenhouse gases. That must change. At Breakthrough Energy, we develop and advocate for smart policies that public and private sector leaders can implement immediately to promote the development and commercialization of clean energy solutions.



Forging Partnerships: No single person, policy, or technology can get us to zero alone. That's why we are bringing together a diverse group of stakeholders, including governments, researchers and scientists, investors, entrepreneurs, business leaders, activists, and citizens around the world to ensure we work together to scale solutions and transform our global economy.

"If we want to avoid a climate disaster, we need a technological transformation on a scale and at a speed we haven't yet seen. That's going to take governments, researchers, public and private institutions working together and investing in the innovations we need to achieve net-zero greenhouse gas emissions."

BILL GATES

Founder, Breakthrough Energy

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OUR NETWORK

We don't just think about how to get to zero. We help make it happen.

Breakthrough Energy Catalyst

To get to zero, promising clean technologies must rapidly get to scale, yet too often funding gaps prevent the deployment we need. We're helping fill those gaps through this landmark program that invests in commercial stage demonstration projects and brings together the right stakeholders—including developers, buyers, and financiers—to increase the availability of low-carbon products and reduce the Green Premium.

Breakthrough Energy Ventures

Our two billion-dollar fund builds groundbreaking companies that can significantly reduce emissions from each of the five Grand Challenges.

Breakthrough Energy Grid Modeling

Our team of top scientists, including software engineers and data scientists, develops rigorous analytic tools to equip decision-makers—from policymakers to CEOs—with the information they need to make data-driven choices that advance the clean energy transition.

Breakthrough Energy Fellows

Every year we fund a cohort of the world's most innovative researchers and scientists working on critical new clean technologies—connecting them to a network of entrepreneurs, executives, and industry leaders, and guiding their discoveries to a commercial pathway.

Breakthrough Energy Europe

We have created first-of-a-kind partnerships with the EU that connect government leaders with corporations and investors, driving investments to scale innovation and decarbonize their economies.

Breakthrough Energy Policy and Advocacy

We advocate and lobby for smart policies that encourage innovation and deploy clean technologies into our communities. From the halls of Congress to campaign trails across the country, we partner with leading voices and make the case for policies that help us get to net-zero emissions by 2050.

By acting now and working together, we can develop the solutions to avoid a climate disaster and make sure everyone has access to clean, affordable, and reliable energy.