

Bloom Energy Backgrounder

Mission

To make clean, reliable energy affordable for everyone in the world

Who We Are

Bloom Energy empowers businesses and communities to responsibly take charge of their energy. The company's leading solid oxide platform for distributed generation of electricity and hydrogen is changing the future of energy. Fortune 100 companies and Utilities around the world turn to Bloom Energy as a trusted partner to deliver lower carbon energy today and a net-zero future. Our future-proof technology delivers lower-carbon energy today, while enabling adaptability for a net-zero tomorrow.

AlwaysON, Clean Energy

Businesses and communities are facing escalating threats to their energy supply – from an aging grid infrastructure, to rising electricity costs, to more frequent and intense natural disasters, and threats of cyber-security attacks. Bloom's energy platform is poised to meet these challenges head on. The Bloom Energy Server is an onsite power generation platform that delivers highly reliable, uninterrupted 24x7 power. Using solid oxide fuel cell technology, Energy Servers convert natural gas, biogas, or hydrogen into electricity at a high efficiency and without combustion, significantly reducing environmental impacts.

Unlock The Hydrogen Future

Our Bloom Electrolyzer is at the forefront of innovation as we develop the technology to enable to the hydrogen economy of the future. Our unique solid oxide technology produces hydrogen using less electricity, drastically reducing the costs of hydrogen production and helping to bolster adoption. We are proud to have won the award for Best Emerging Technology at the 2021 S&P Global Platts Award. Bloom Energy's Electrolyzer proves that powering our planet through hydrogen is not only possible – it's here. Hydrogen Generation Electricity accounts for nearly 80 percent of the cost of hydrogen production through electrolysis. Bloom's solid oxide platform intentionally



Quick Facts

Founded	Established in 2001 as Ion America, renamed Bloom Energy in 2006
Business Model	Distributed energy and hydrogen production company
Technology	Bloom Energy Server and Bloom Electrolyzer, powered by Bloom's proprietary solid oxide platform
Solutions	Distributed electricity production, hydrogen generation, and marine transportation
Revenue	2021 full year revenues of \$972.2 million
Employees	2,000
Headquarters	San Jose, California
Customers	Over 100+ customers across 700+ sites
Installations	>700MW

operates at high temperatures to maximize fuel efficiency, requiring less energy to break up water molecules and produce hydrogen and drastically reducing the cost of production. Bloom's Electrolyzer is 30% more efficient than its competitors when using both electricity and steam and can produce green hydrogen from 100 percent renewable power. This efficiency enables the Bloom Electrolyzer to produce clean, affordable hydrogen at scale, which customers can use either as a fuel source or store for consumption at a later date, powering the future of hydrogen adoption forward.

Resilient, Reliable Energy

U.S. grid outages have increased 60% over the past decade. Bloom's AlwaysON Microgrid enables businesses to protect themselves from increasingly frequent and lengthy outages, both planned and unplanned, by providing 24x7 onsite power. Bloom microgrids have powered facilities through thousands of power outages, ensuring that high quality power is available at all times for our customers.

Clean Energy

Carbon Impact

Bloom Energy Servers convert fuel into electricity at the highest efficiency of any power solution available today. By using fuel more efficiently, Servers running on natural gas produce less carbon emissions compared to the average of U.S. marginal power generators. Additionally, a portion of Bloom's fleet runs on renewable biogas that generates carbon-neutral electricity. In 2020, Bloom Energy Servers achieved approximately 440,000 metric tonnes of CO₂ reduction vs. grid alternatives.

Air Quality Impact

Because fuel cells are a non-combustion technology, Energy Servers produce virtually zero of the criteria air pollutants that form smog, cause asthma, and worsen public health. In 2020, Bloom's solution achieved approximately 550,000 pounds of SO_x reductions and 2.2 million pounds of NO_x reduction, a 100% and 99.7% reduction vs. grid alternatives respectively.

Predictable Costs

With U.S. grid power prices predicted to increase by over 40% through 2026, businesses are looking for ways to protect against rising costs. Bloom's energy solution enables customers to hedge against volatility and price escalation by fixing a large portion of their electricity cost.

High Power Density

Bloom provides significant power generation in a small footprint. For example, Bloom's solution is approximately 125 times more space-efficient than solar power generation. Because Energy Servers are modular, customers can easily scale the solution as their business and demand for power grows.

Timeline

- 1960s** — First hydrogen fuel cell is built by Bloom co-founder Jim McElroy as part of NASA's Gemini program
- 1980s** — Bloom co-founders pioneer electrolyzer technology that creates hydrogen and oxygen from splitting water molecules
- 1980-1990s** — Bloom co-founders engineer electrolyzers and life support systems for space shuttles, missions, and stations
- 1990s** — Bloom co-founder Dr. KR Sridhar expands research into Solid Oxide Electrolyzer technology
- 2001** — Dr. Sridhar's team at the Space Technologies Laboratory at the University of Arizona creates an electrolyzer to convert carbon dioxide into oxygen for NASA Mars Missions
Company founded, originally as Ion America, in Sunnyvale, CA
- 2000s** — Bloom obtains 19 electrolyzer patents
- 2006** — First 5 kW field trial unit ships to the University of Tennessee, Chattanooga
- 2008-2010** — Bloom Energy Server launches additional deployments at Walmart, Coca-Cola, FedEx, Bank of America, and more
- 2011** — First microgrid deployment at Owens Corning
- 2012** — Bloom breaks ground on state-of-the-art Delaware Manufacturing Center
- 2013** — First international project in Japan with Softbank and first datacenter mission critical microgrid
- 2016** — First community microgrid deployment for the City of Hartford, CT
- 2018** — Bloom Energy is publicly traded on NYSE (\$BE)
- 2019** — Bloom partners with Samsung Heavy Industries to build fuel cell-powered marine ships
- 2021** — First hydrogen fuel cell and electrolyzer projects are deployed
First installations of onsite biogas-powered solutions at a landfill site and a dairy farm
Bloom secures SK ecoplant contracts for 500 megawatts through 2024 (estimated \$4.5B revenue)



Customers

Customers are the cornerstone of Bloom's mission.

These are some of the leading companies who have chosen Bloom:

Caltech



Genentech



Morgan Stanley

ORACLE

Walmart*



Leadership Team

KR Sridhar, PhD

Founder and Chairman,
Chief Executive Officer

Greg Cameron

President,
Chief Financial Officer

Shawn Soderberg

Executive Vice President,
General Counsel and Secretary

Sonja Wilkerson

Executive Vice President
& Chief People Officer

Carl Cottuli

Senior Vice President,
Development Engineering

Timothy Schweikert

Head of Global Sales

Ravi Prasher, PhD

Chief Technology Officer

Billy Brooks

Executive Vice President,
Sales - Americas

Jim Cook

Senior Advisor

Peter Gross

Advisor

Board of Directors

KR Sridhar, PhD

Michael J. Boskin

The Honorable Mary K. Bush

Cynthia (CJ) Warner

John Chambers

Jeff Immelt

Eddy Zervigon

In Memoriam

Venkat Venkataraman

Former Executive Vice President
of Engineering and Chief Technology Officer

General Colin L. Powell

USA (Retired), former board member



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**What
Powers
You**

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