# Bloom Energy Backgrounder

#### **Mission**

To make clean, reliable energy affordable for everyone.

#### Who We Are

Bloom Energy empowers businesses, grid operators, and communities to manage their energy responsibly. The company's leading solid oxide platform for distributed electricity and hydrogen generation is changing the energy future. Fortune 100 companies and utilities worldwide turn to Bloom Energy as a trusted partner to deliver lower-carbon energy today and a net-zero future.

## **Energy Server® Platform**

Businesses and communities are facing escalating threats to their energy supply, from an aging grid infrastructure to rising electricity costs, more frequent and intense natural disasters, and threats of cyber-security attacks. Bloom's Energy Server platform is poised to meet these challenges head-on. Energy Server installations comprise an onsite power generation platform that delivers highly reliable 24x7 power. Using solid oxide fuel cell technology, Energy Server modules convert natural gas, biogas, or hydrogen into electricity efficiently and without combustion, significantly reducing environmental impacts. Energy Server systems have produced 32B kWh of combustion-free electricity to date.

## Bloom Electrolyzer™ Platform

The Bloom Electrolyzer platform is at the forefront of innovation as we develop the technology to enable the future hydrogen economy. Our unique solid oxide technology produces hydrogen using less electricity, reducing hydrogen production costs and helping bolster adoption. The Bloom Electrolyzer platform proves that powering our planet through hydrogen is not only possible – it's here. Electricity for conventional electrolysis accounts for nearly 80 percent of the cost of hydrogen production. Bloom's solid oxide platform intentionally operates at high temperatures to maximize fuel efficiency, requiring less energy to break up water molecules and reducing hydrogen production costs. The Bloom Electrolyzer platform is 20–25% more efficient than its



#### **Quick Facts**

Founded Established in 2001 as Ion America,

renamed Bloom Energy in 2006

**Business** Distributed energy and hydrogen

Model 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** 2023 full year revenue of

\$1.33 billion

Employees ~2,300

**Headquarters** San Jose, CA

Customers Over 250+ customers and

990+ sites

**Installations** 1.2 + GW

competitors when using both electricity and steam and can produce green hydrogen from 100 percent renewable power. This efficiency enables the Bloom Electrolyzer platform to produce clean, affordable hydrogen at scale. Customers can use it either as a fuel source or store for consumption at a later date, enabling the future of hydrogen adoption going forward.

#### Resilient, Reliable Energy

US weather-related grid outages have increased 100% over the past decade. Bloom's Microgrid solutions enable 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 always available for our customers.

## **Clean Energy**

## **Carbon Impact**

Energy Server power modules convert fuel into electricity with high efficiency compared to other power solutions. Energy Server power modules running on natural gas produce less carbon emissions than the average US marginal power generators. Additionally, a portion of Bloom's fleet runs on renewable biogas that generates carbon-neutral electricity. In 2023, Bloom Energy Server modules achieved approximately 992,481 metric tonnes of CO<sub>2</sub> reduction vs. grid alternatives.

## Air Quality Impact

Because fuel cells rely upon non-combustion technology, Energy Server modules produce virtually zero of the criteria air pollutants that form smog, cause asthma, and worsen public health. In 2023, Bloom's solutions achieved approximately 704,416 pounds of SOx reductions and 2.45 million pounds of NOx reduction, respectively, a 100% and 99.8% reduction vs. grid alternatives.

#### **Predictable Costs**

With US grid power prices predicted to increase in the near future, 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 costs.

## **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 the Energy Server platform is modularly assembled, customers can quickly scale Bloom's solution as their business and power demand grow.

#### **Timeline**

Dr. Sridhar's team at the Space Technologies 2001 Laboratory at the University of Arizona creates an electrolyzer to convert carbon dioxide into oxygen for NASA Mars Missions

Bloom Energy is founded, initially as Ion America, in

Bloom obtains its first patent (with ongoing 2004 innovation producing over 375 issued US. patents)

First 5 kW field trial unit ships to the University of 2006 Tennessee, Chattanooga

Bloom Energy Server platforms deployed at Walmart, Coca-Cola, FedEx. Bank of America and more 2008-2010

2011 First microgrid deployment at Owens Corning

Bloom breaks ground on state-of-the-art Delaware 2012 Manufacturing Center

First international project in Japan with Softbank 2013 and first data center mission-critical microgrid

First community microgrid deployment for the 2016 City of Hartford, CT

2018

2019 build fuel cell-powered marine ships

First hydrogen fuel cell and electrolyzer projects are 2021

> First installations of onsite biogas-powered solutions at a landfill site and a dairy farm

Bloom secures SK ecoplant contracts for 500 MW

Inaugurated a \$200M production facility in Fremont, 2022 CA & a 2 GW electrolyzer line in Newark, DE

Bloom electrolyzer platform used for the world's 2023 largest SOEC installation (4MW) at NASA Ames Research Center

Deployed first CHP-enabled SOFC in Italy

Extended partnership with SK ecoplant through an incremental purchase commitment of 250MW through 2027

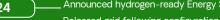
Celebrated 10th anniversary of opening Delaware

Entered new markets by signing contracts in the UK, Belgium, Germany, Taiwan, and Thailand

Announced hydrogen-ready Energy Server® 2024

> Released grid following configuration "Be Flexible", which allow customers to operate in the grid-





islanded mode







#### **Customers**

·Customers are the cornerstone of Bloom's mission.

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







































# **Leadership Team**

**KR Sridhar** 

Founder, Chairman and Chief **Executive Officer** 

**Daniel Berenbaum** 

Chief Financial Officer

Satish Chitoori

**Chief Operations** Officer

Carl Cottuli

Head of Development Engineering

Aman Joshi

Chief Commercial Officer

Karen Maxwell

Head of Quality and Reliability

Ravi Prasher

Chief Technology Officer

James Roth

Head of Government Affairs and Policy **Shawn Soderberg** 

Chief Legal Officer and Corporate Secretary

Sonja Wilkerson

Chief People Officer

Jim Cook

Senior Advisor

**Peter Gross** 

Advisor

## **Board of Directors**

**KR Sridhar** 

Michael J. Boskin

Barbara Burger

Mary K. Bush John Chambers Jeff Immelt

**Gary Pinkus** 

Cynthia (CJ) Warner

**Eddy Zervigon** 

Bloom Energy Headquarters 4353 North First Street San Jose, CA 95134 USA

bloomenergy.com

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