

FOR DATA CENTERS

# Bloom Energy Backgrounder

## Mission

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

## Who We Are

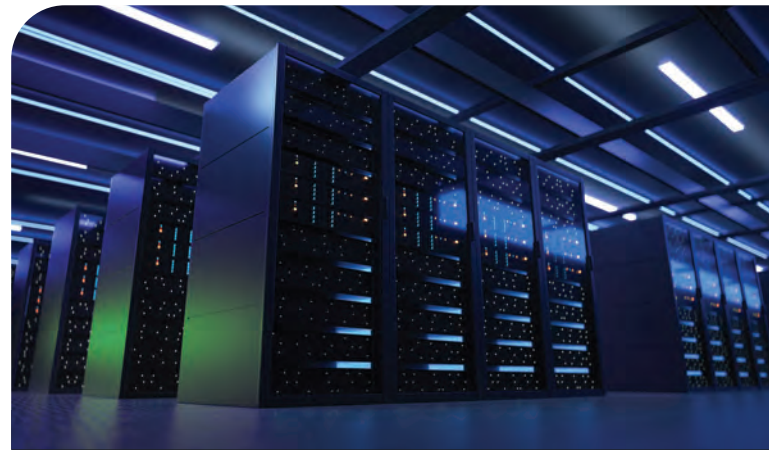
Bloom Energy empowers data center operators to take charge of their energy. The company's leading solid oxide platform for distributed generation of electricity and hydrogen is changing the future of energy. Data Centers around the world turn to Bloom Energy as a trusted partner to deliver the power needed to get critical infrastructure commissioned and turned over in a reasonable timeframe. Our future-proof technology delivers lower-carbon energy today, while enabling adaptability for a net-zero tomorrow.

## AlwaysON, Clean Energy

Data center owners and operators are facing challenges from the high demand for critical infrastructure, coupled with unprecedented supply chain and power supply constraints. 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.

## Resilient, Reliable Energy

US grids outages have increased 60% over the past decade and electric utilities are running out of power in markets such as Northern Virginia, Silicon Valley, Los Angeles, and the Pacific Northwest. Bloom's Microgrid enables data center operators to continue leasing data center space in grid constrained markets by providing 24x7 onsite power.



## Quick Facts

<b>Founded</b>	Established in 2001 as Ion America, renamed Bloom Energy in 2006
<b>Business Model</b>	Distributed energy and hydrogen production company
<b>Technology</b>	Bloom Energy Server and Bloom Electrolyzer, powered by Bloom's proprietary solid oxide platform
<b>Solutions</b>	Distributed electricity production, hydrogen generation, and marine transportation
<b>Revenue</b>	2022 revenue of >\$1 billion
<b>Employees</b>	2,000
<b>Headquarters</b>	San Jose, California
<b>Customers</b>	Over 150 customers across 1,000 sites
<b>Deployed Systems</b>	1 GW

## 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 CO<sub>2</sub> 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<sub>x</sub> reductions and 2.2 million pounds of NO<sub>x</sub> reduction, a 100% and 99.7% reduction vs. grid alternatives respectively.

### 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.

### 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. Electricity accounts for nearly 80 percent of cost of hydrogen production through electrolysis. 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.

## Industry Timeline

2009

First installation at Google

2013

First data center microgrid

2015

Utility drops 138kV feed, Bloom powers data center without impact

2017

100 MWs in data center/technology installations

37 MW announced with Equinix

2018

Frost and Sullivan Technology Innovation Award for data center power infrastructure

2021

40th data center installation

2023

75 MW project announced with AWS across 3 data centers



## Customers

Customers are the cornerstone of Bloom's mission.

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



**Equinix Data Center**

1 MW | San Jose, CA



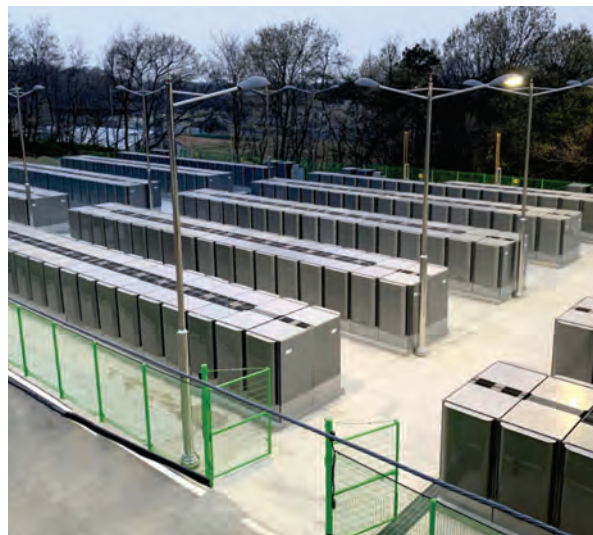
**Healthcare Data Center**

4.75 MW | Napa Valley, CA



**Power Tower**

8.35 MW



**Hwasung**

19.8 MW | Paju, South Korea



**KT Daeduk**

900 kW | South Korea



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

[bloomenergy.com](http://bloomenergy.com)

**What  
Powers  
You**

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