Bloom Energy at a Glance

Global Footprint
Our corporate, manufacturing, and R&D offices serve as a strategic global anchors to help organizations around the world reduce carbon emissions, enhance resiliency, and chart a path toward a net-zero future.
One Platform. Multiple Solutions.

Our future-proof energy platform unlocks multiple pathways to net-zero.
Diverse Customer Ecosystem

Cloud Services & Technology

APPLE
Google
EQUINIX
IBM
Cyxtera
NOKIA Connecting People
intel
Adobe
Microsoft
ORACLE
LinkedIn
SoftBank
DIGITAL REALTY
CORESITE
IIVI
Extreme

Consumer Retail, Food & Beverage

Walmart
The Home Depot
Taylor Farms
IKEA
Ahold Delhaize
SAFEWAY
FedEx
macys
TARGET
The Coca-Cola Company
STAPLES
WILLIAMS-SONOMA, INC.
Kellogg’s
theWonderful company
MACERICH

Telecom, Media, & Entertainment

COX
COMCAST
AT&T
verizon
DISNEY

Hospitals & Healthcare

KAISER PERMANENTE
Sutter Health
Prime Healthcare
hoag
PARTNERS HEALTHCARE
DOWNSTATE Medical Center
Hospital for Special Care
NYC HEALTH+ HOSPITALS
Hartford HealthCare

Higher Education

Santa Clara University
Iona College
University of San Diego
Kean University
LIU
Caltech
Fuel Cell Basics

1. How it Works
Solid oxide fuel cells convert fuel into electricity without combustion.

$2\text{H}_2 + 2\text{O}_2^- \rightarrow 2\text{H}_2\text{O} + 4e^-$

Anode
Electrolyte
Cathode

Oxygen ions react with the fuel in the fuel cell to produce electricity

2. Cell to Server
The building blocks come together to form the Bloom Energy Server platform.

Fuel Cell → Stack → Power Module → Energy Server

14'9" x 7'0" x 8'8"
Flexible and Scalable Design
From KW To MW Scale Solutions

- Semiconductor Microgrid
  2.5 MW Installation

- Healthcare Data Center
  4.75 MW Installation

- University Campus
  2.2 MW Installation

- Constrained Space Power Tower
  8.35 MW Installation
# Bloom Solutions

## Microgrid Technical Offering

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<th>Primary Power</th>
<th>Bloom Microgrid</th>
<th>Bloom Microgrid – Advanced</th>
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<td><strong>Value Proposition</strong></td>
<td><strong>Baseline Power</strong></td>
<td><strong>Resilient Power</strong></td>
<td><strong>Uninterrupted Power</strong></td>
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<td>Low cost, clean, onsite</td>
<td>Power through grid outages</td>
<td>Premium power quality</td>
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<tr>
<td><strong>Key Capabilities / Use Case</strong></td>
<td>Lower CO₂ emissions and near zero criteria emissions, up to 20% savings on electricity</td>
<td>Low cost, clean power to support business critical loads through extended grid outages</td>
<td>Complete protection for sensitive loads from grid outages and disturbances</td>
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<td><strong>Profile Schematic</strong></td>
<td><img src="profile_schematic1.png" alt="Bloom Microgrid Schematic" /></td>
<td><img src="profile_schematic2.png" alt="Bloom Microgrid Schematic" /></td>
<td><img src="profile_schematic3.png" alt="Bloom Microgrid Schematic" /></td>
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<td><strong>Architecture</strong></td>
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City of Hartford Case Study
A Fuel Cell Community Microgrid
City of Hartford Case Study

Overview

MIGHTY MICROGRID
AN 800-KILOWATT FUEL CELL-POWERED MICROGRID HELPS HARTFORD REDUCE POWER COSTS AND PROVIDES EMERGENCY POWER FOR PARKVILLE’S NEIGHBORHOOD

NORMAL OUTPUT

800 KILOWATTS
FUEL CELLS

EMERGENCY OUTPUT

During non-emergency and emergency operation, the microgrid provides 100% of electricity needed.

Excess electricity generated by the system reduces electricity costs at four Hartford schools.

In the event of power outage, the system also provides emergency power to a local fuel station and grocery store.

DISCONNECT SWITCH IN THE EVENT OF POWER OUTAGE

UTILITY GRID

PARKVILLE ELEMENTARY SCHOOL
DwIGHT BRANCH LIBRARY
PARKVILLE SENIOR CENTER
CHARTER OAK HEALTH CENTER

GAS STATION
SUPER-MARKET

NON-EMERGENCY MICROGRID FEED
EMERGENCY MICROGRID FEED
EXCESS ELECTRICITY
UTILITY GRID FEED
EMERGENCY POWER SWITCH
GRID DISCONNECT SWITCH
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Location
City of Hartford Case Study

Location
City of Hartford Case Study

Benefits

• 800 kW
• 15 Year PPA
• Small Footprint
• 40% CO$_2$ reduction compared to Utility
• Zero SO$_x$ and NO$_x$ emissions
• Baseload power 24x7x365 in non-emergency mode
• Power during grid outage for core services
• Underground electrical conduits