

The Bloom Energy Server® 6.5

Bloom Energy's solid oxide fuel cell (SOFC) platform provides a non-combustion pathway to convert fuels directly to electricity without combustion. The Energy Server is fuel-flexible and can generate energy using natural gas, blended hydrogen, biogas or hydrogen. A modular platform approach provides a pathway to upgrade existing systems to align with the sustainability goals of our customers over time. With no water consumption during normal operation and a high operational efficiency, the Bloom Energy Server significantly reduces greenhouse emissions today, while providing a pathway to operate with cleaner fuels in the future.

The Bloom Energy Server provides reliable and resilient power to facilities. It is designed in a modular concept ideal for on-site distributed power generation, operating 24x7, supporting the power demand in grid parallel or in a microgrid architecture. In addition, the heat from the flue gas can be captured from the Energy Server and integrated in a Combined Heat and Power (CHP) application.

Bloom Energy has over 1.2 GW of power generation installations deployed globally across six countries. The Energy Server is suitable to address power needs in any industry and has multi-megawatt installations across industries such as retail, datacenters, hospitals, sporting arenas, manufacturing and warehousing.



Clean

Our systems reduce criteria pollutants (NOx, SOx, and particulate matter) to near zero and has far lower carbon emissions than legacy technologies.



Reliable

Bloom Energy Server is designed around a modular architecture of simple repeating elements. This enables us to generate power 24 x 7 x 365.



Resilient

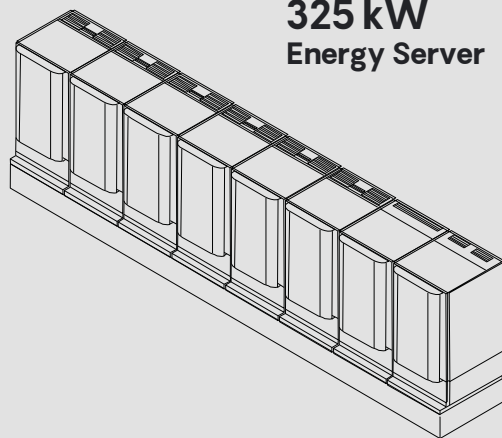
Our system operates at very high availability due to its fault-tolerant design and its use of a robust natural gas pipeline system. The Bloom Energy Server has survived extreme weather events and other incidences and continues to provide power to our customers.



Simple Installation and Maintenance

The Energy Server is 'plug and play' and has been designed in compliance with a variety of safety standards. Bloom Energy manages all aspects of installation, operation and maintenance of the systems.

325 kW Energy Server



Specifications

Outputs

Nameplate power output (net AC) 325 kW
Voltage 3-ph. 480, 415, 400 and 380 V
Frequency 50/60 Hz

Inputs

Fuel¹ Natural gas
Input fuel pressure 12–18 psig (15 psig nominal)
0.82–1.24 bar (1 bar nominal)
Water None during normal operation

Efficiency

Cumulative electrical efficiency 65–53% (LHV net AC)
Heat rate (HHV) 5,811–7,127 Btu/kWh (6,131–7,519 kJ/kWh)
Cumulative thermal efficiency >36%
Total efficiency >90%

Emissions²

NO_x 0.003 lbs/MWh (0.001 kg/MWh)
SO_x Negligible
CO 0.013 lbs/MWh (0.005 kg/MWh)
VOCs 0.01 lbs/MWh (0.004 kg/MWh)
CO₂@stated efficiency 679–833 lbs/MWh (308 – 378 kg/MWh)

1. Contact Bloom Energy for information on using biogas, blended hydrogen and hydrogen with the Energy Server
2. NO_x and CO measured per CARB Method 100, VOCs measured as hexane by SCAQMD Method 25.3
3. Certifications expected to be available in 2024

Physical Attributes and Environment

Weight (w/skid) 31,926 lbs (14.8 mt)
Dimensions (w/skid) 29'5" x 4'4" x 8'2" (9 m x 2.5 m x 1.3 m)
Temperature range -20 °C to 45 °C
Humidity 0%–100%
Seismic vibration ASCE7 SDC (Seismic Design Category) D
Location Outdoor
Noise <65 dBA @ 10 ft (3 m)

Codes and Standards

Safety FC1, UL 1741, UL 1998, CE, KESCO
EMC EN 5501/KN11, EN 61000, KN32, KN35
Grid Interconnection IEEE 1547 2018, UL 1741 SB, CA Rule 21, CEI 016,
KEPCO, G99, C10/11³, VDE³

Meets stringent CARB 2007 Distributed Generation emission standards.

An Energy Server is a Stationary Fuel Cell Power System. It is Listed by UL Solutions (UL LLC) as a 'Stationary Fuel Cell Power System' to ANSI/CSA FC1-2014 under UL Category IRGZ and UL File Number MH45102.

Additional Benefits

Access to a secure website to monitor system performance & environmental benefits. Remotely managed and monitored by Bloom Energy. Capable of emergency stop based on input from the site.



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Flexible. Future Proof.

Accelerate your path to
a zero-carbon future.

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