Bloom energy

Data Sheet

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 system provides reliable and resilient power to facilities. It is designed in a modular concept ideal for on-site distributed power generation, operating 24×7, 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 system and integrated in a heat capture application.

Bloom Energy has deployed over 1.5 GW across 1,200+ sites. The Energy Server system is suitable to address power needs, having installations across industries, such as retail, data centers, hospitals, sporting arenas, manufacturing, and warehousing.

Clean

Our systems reduce criteria pollutants (NO_x, SO_x, and particulate matter) to near zero and have far lower carbon emissions than legacy technologies.

Reliable

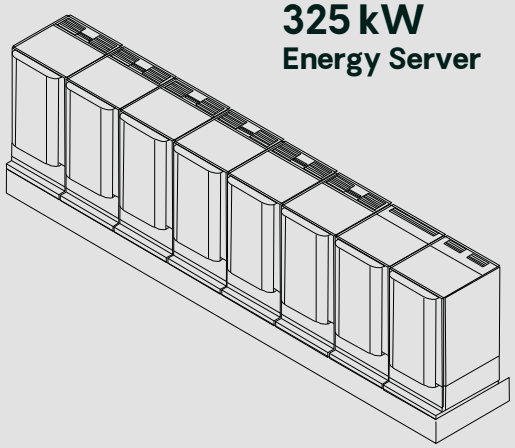
The Bloom Energy Server system is designed around a modular architecture of simple repeating elements. This enables us to generate power 24×7×365.

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 system has survived extreme weather events and other incidents 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, and 400 V
Frequency	50/60 Hz

Inputs

Fuel[1]	Natural gas
Input fuel pressure	12-18 psig (15 psig nominal) 0.82-1.24 barg (1 barg 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% (exhaust heat available @ > 350 °C)
Total efficiency	>90%

Emissions[2]

NO_x	0.003 lbs/MWh (0.001 kg/MWh)
SO_x	Negligible
CO	0.013 lbs/MWh (0.005 kg/MWh)
VOC	0.01 lbs/MWh (0.004 kg/MWh)
CO_2 @ stated efficiency	679-833 lbs/MWh 308-378 kg/MWh

Environmental

Weight (w/skid)	28,745 lbs (13 mt)
Dimensions (w/skid)	29'5" × 4'4" × 8'2" (9 m × 1.3 m × 2.5 m)
Temperature range	-20 °C to 45 °C (-4 °F to 113 °F)
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 61000-6-2, EN 61000-6-4, KS C 9610-6-2, KS C 9610-6-4
Grid interconnection	IEEE 1547 2018, UL 1741 SB, CA Rule 21, CEI 016, KEPCO, G99, C10/11, VDE-4110[3]

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.

Model number for Energy Server 6.5 follows the format:
ES6-XXXXXXXXXXX-XXXXXX-X

Additional Benefits

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

1. Contact Bloom Energy for information on using biogas, blended hydrogen, and hydrogen with the Energy Server.
2. Bloom Energy Server 6.5 is certified by the California Air Resources Board Distributed Generation Certification Program under Executive Order DG-058.
3. Certifications expected to be available in early 2026.

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Power to Go Farther, Faster