

Energy Server 5

Always On, Clean Energy
Using Patented Solid Oxide
Fuel Cell Technology



The Energy Server 5 provides combustion-free electric power with these benefits



Clean

Our systems produce near zero criteria pollutants (NOx, SOx, and particulate matter) and far fewer carbon emissions than legacy technologies.



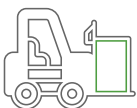
Reliable

Bloom Energy Servers are designed around a modular architecture of simple repeating elements. This enables us to generate power 24 x 7 x 365 and can be configured to eliminate the need for traditional backup power equipment.



Resilient

Our system operates at very high availability due to its fault-tolerant design and use of the robust natural gas pipeline system. Bloom Energy Servers have survived extreme weather events and other incidences and have continued providing power to our customers.



Simple Installation and Maintenance

Our Energy Servers are 'plug and play' and have been designed in compliance with a variety of safety standards. Bloom Energy manages all aspects of installation, operation and maintenance of the systems.

| Energy Server 5 | | Technical Highlights (ES5-EAXAAC) | |
|--|---|-----------------------------------|--|
| Outputs | | | |
| Nameplate power output (net AC) | 250kW | | |
| Load output (net AC) | 250kW | | |
| Electrical connection | 480V, 3-phase, 60 Hz | | |
| Inputs | | | |
| Fuels | Natural gas, directed biogas | | |
| Input fuel pressure | 10-18 psig (15 psig nominal) | | |
| Water | None during normal operation | | |
| Efficiency | | | |
| Cumulative electrical efficiency (LHV net AC) ¹ | 65-53% | | |
| Heat rate (HHV) | 5,811-7,127 Btu/kWh | | |
| Emissions² | | | |
| NOx | 0.0017 lbs/MWh | | |
| SOx | Negligible | | |
| CO | 0.034 lbs/MWh | | |
| VOCs | 0.0159 lbs/MWh | | |
| CO ₂ @ stated efficiency | 679-833 lbs/MWh on natural gas; carbon neutral on directed biogas | | |
| Physical Attributes and Environment | | | |
| Weight | 13.6 tons | | |
| Dimensions (variable layouts) | 14'4" x 8'8" x 6'9" or 28'8" x 4'4" x 7'2" | | |
| Temperature range | -20° to 45° C | | |
| Humidity | 0% - 100% | | |
| Seismic vibration | IBC site class D | | |
| Location | Outdoor | | |
| Noise | < 70 dBA @ 6 feet | | |
| Codes and Standards | | | |
| Complies with Rule 21 interconnection and IEEE1547 standards | | | |
| Exempt from CA Air District permitting; meets stringent CARB 2007 emissions standards | | | |
| An Energy Server is a Stationary Fuel Cell Power System. It is Listed by Underwriters Laboratories, Inc. (UL) as a 'Stationary Fuel Cell Power System' to ANSI/CSA FC1-2014 under UL Category IRGZ and UL File Number MH45102. | | | |
| Additional Notes | | | |
| 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 | | | |
| ¹ 65% LHV efficiency verified by ASME PTC 50 Fuel Cell Power Systems Performance Test | | | |
| ² NOx and CO measured per CARB Method 100, VOCs measured as hexane by SCAQMD Method 25.3 | | | |

About Bloom Energy

Bloom Energy's mission is to make reliable, clean energy affordable for everyone in the world. The company's product, the Bloom Energy Server, delivers highly reliable and resilient, Always On electric power that is clean and sustainable. Bloom's customers include twenty-five of the Fortune 100 companies and leaders in cloud services and data centers, healthcare, retail, financial services, utilities and many other industries.

Bloom Energy

4353 North First Street
San Jose, CA 95134

T 408 543 1500
F 408 543 1501

info@bloomenergy.com
www.bloomenergy.com

Be

© Bloom Energy Corporation 2019. All Rights Reserved
DOC-1013935 Rev A

Energy Server™ 5

Always On, Clean Energy
Using Patented Solid Oxide
Fuel Cell Technology



The Energy Server 5 provides combustion-free electric power with these benefits



Clean

Our systems produce near zero criteria pollutants (NOx, SOx, and particulate matter) and far fewer carbon emissions than legacy technologies.



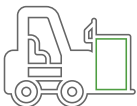
Reliable

Bloom Energy Servers are designed around a modular architecture of simple repeating elements. This enables us to generate power 24 x 7 x 365 and can be configured to eliminate the need for traditional backup power equipment.



Resilient

Our system operates at very high availability due to its fault-tolerant design and use of the robust natural gas pipeline system. Bloom Energy Servers have survived extreme weather events and other incidences and have continued providing power to our customers.



Simple Installation and Maintenance

Our Energy Servers are 'plug and play' and have been designed in compliance with a variety of safety standards. Bloom Energy manages all aspects of installation, operation and maintenance of the systems.

| Energy Server 5 | Technical Highlights (ES5-YA8AAN) |
|--|---|
| Outputs | |
| Nameplate power output (net AC) | 300 kW |
| Load output (net AC) | 300 kW |
| Electrical connection | 480V, 3-phase, 60 Hz |
| Inputs | |
| Fuels | Natural gas, directed biogas |
| Input fuel pressure | 10-18 psig (15 psig nominal) |
| Water | None during normal operation |
| Efficiency | |
| Cumulative electrical efficiency (LHV net AC) ¹ | 65-53% |
| Heat rate (HHV) | 5,811-7,127 Btu/kWh |
| Emissions² | |
| NOx | 0.0017 lbs/MWh |
| SOx | Negligible |
| CO | 0.034 lbs/MWh |
| VOCs | 0.0159 lbs/MWh |
| CO ₂ @ stated efficiency | 679-833 lbs/MWh on natural gas; carbon neutral on directed biogas |
| Physical Attributes and Environment | |
| Weight | 15.8 tons |
| Dimensions (variable layouts) | 18'94" x 8'8" x 7'0" or 32'11" x 4'5" x 7'5" |
| Temperature range | -20° to 45° C |
| Humidity | 0% - 100% |
| Seismic vibration | IBC site class D |
| Location | Outdoor |
| Noise | < 70 dBA @ 6 feet |
| Codes and Standards | |
| Complies with Rule 21 interconnection and IEEE1547 standards | |
| Exempt from CA Air District permitting; meets stringent CARB 2007 emissions standards | |
| An Energy Server is a Stationary Fuel Cell Power System. It is Listed by Underwriters Laboratories, Inc. (UL) as a 'Stationary Fuel Cell Power System' to ANSI/CSA FC1-2014 under UL Category IRGZ and UL File Number MH45102. | |
| Additional Notes | |
| 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 | |

¹ 65% LHV efficiency verified by ASME PTC 50 Fuel Cell Power Systems Performance Test

² NOx and CO measured per CARB Method 100, VOCs measured as hexane by SCAQMD Method 25.3

About Bloom Energy

Bloom Energy's mission is to make reliable, clean energy affordable for everyone in the world. The company's product, the Bloom Energy Server, delivers highly reliable and resilient, Always On electric power that is clean and sustainable. Bloom's customers include twenty-five of the Fortune 100 companies and leaders in cloud services and data centers, healthcare, retail, financial services, utilities and many other industries.

Bloom Energy

4353 North First Street
San Jose, CA 95134

T 408 543 1500
F 408 543 1501

info@bloomenergy.com
www.bloomenergy.com

Be
© Bloom Energy Corporation 2019. All Rights Reserved.
DOC-1011391, Rev. A.