

Bloom Energy: Mission Critical



Bloom Energy has developed a revolutionary on-site primary power generation system. The Bloom Energy Server is based on a proprietary fuel cell technology that provides a more reliable, cleaner, and cost effective alternative to the traditional electric grid. Bloom provides a transformational new data center topology that greatly simplifies the architecture and eliminates the need for many legacy components.

The Bloom Energy Server

The technology is based on a solid oxide fuel cell platform with roots in the NASA Mars Program. The Bloom Energy Server converts fuel into electricity through a clean and efficient electro-chemical process which emits significantly less greenhouse gases, NOx, SOx, and particulate matter than conventional combustion technologies. The system can run on natural gas for significant greenhouse gas reductions, or biogas for a carbon neutral solution.

Primary Power For Critical Loads

The Bloom Energy Server architecture provides building blocks that enhance reliability.

- Extended outage protection
- Eliminates surges, sags or interference
- Highly modular, scalable design
- Predictable electricity costs
- 24 x 7 Uninterruptible Power
- Availability of the BE solution = 99.998%
- Concurrently maintainable
- Highly redundant design
- Fault tolerant
- Hot swappable field replacement units
- Eliminates the risk of power over-provisioning



Fuel Cell
25 W

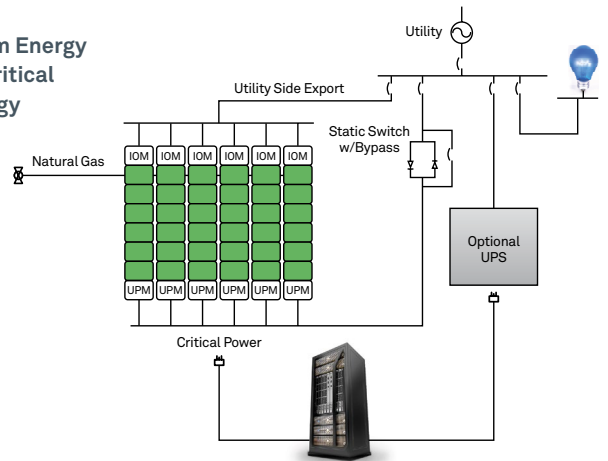


Server
200-250 kW

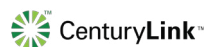


Solution
250 kW to MWs

Sample Bloom Energy Mission Critical Topology



Partial Customer List



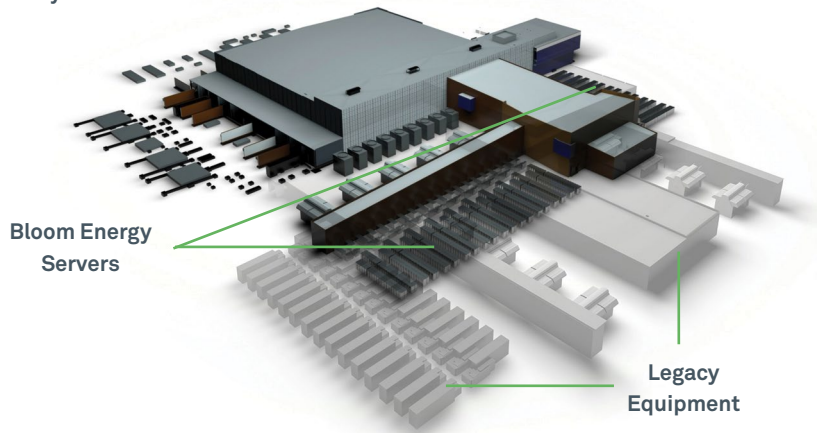


The Bloom Energy modular, always-on architecture replaces the need for legacy systems and reduces expensive building footprint.

Bloom Displaces Legacy Equipment

- Diesel generators
- UPS
- Switch gear and transfer switches
- Batteries
- Smaller building shell
- Reduces need for high-voltage interconnection infrastructure

eBay Data Center



Total Cost of Reliable Power

TCO for reliable power requires a lifecycle time horizon for the use of a critical facility and a realistic understanding of what the cost of energy and O&M costs will be over that time. Components of data center TCO that Bloom can impact include:

- Capital equipment
- Installation cost
- Operation and maintenance
- Efficiency
- Long-term natural gas purchase contracts which reduce price uncertainty against electric utility escalation

The TCO for reliable power for a critical facility requires an understanding of energy and O&M costs over the lifetime of the facility. Contact Bloom Energy today to begin the evaluation for your mission critical facility.

