



The Computerworld Honors Program

Honoring those who use Information Technology to benefit society

Final Copy of Case Study

YEAR:
2012

STATUS:
Laureate

Organization name:
Bloom Energy

Organization URL:
www.bloomenergy.com

Project Name:
Bloom Energy

What social/humanitarian issue was the project designed to address? What specific metrics did you use to measure the project's success?

Bloom Energy's mission is to make clean, reliable energy affordable for everyone in the world. Energy is a great enabler; it powers modern life. Yet today, nearly 2 billion people lack practical access to energy. Moreover, this population is growing rapidly. Meeting their energy needs in the early 21st century could unlock incredible human potential. This is an essential goal for our company. Today, we begin this journey by deploying our highly efficient, clean, and quiet power generators to companies like Google, Coca Cola & AT&T. Their validation will help make Bloom commonplace for the broader world. Bloom already powers nearly 100 different locations. Our sites are multiplying rapidly, providing measurable results in cost savings and environmental benefits for each customer.

Please describe the technologies used and how those technologies were deployed in an innovative way. Also, please include any technical or other challenges that were overcome for the successful implementation of the project.

Bloom has commercialized an Energy Server based on planar solid oxide fuel cell (pSOFC) technology that was first pioneered at NASA to support life on Mars. Back on Earth, SOFC technology had long been recognized for its high efficiency and promise for producing low-cost, clean electricity. But it had never made it out of the lab. Starting in the early 2000s, Bloom's engineers developed myriad breakthroughs in material science, applied thermodynamics, and systems integration to create a commercially viable product. Today, Bloom's technology allows

for something at once simple and profound: it converts oxygen from the ambient air and any hydrocarbon fuel (including renewables) into clean electricity, right where it is needed. We call the product an Energy Server, as it produces energy in a modular, fault-tolerant system architecture that can be finely matched to any energy need.

Please list the specific humanitarian benefits the project has yielded so far.

Bloom's installations have saved over 100,000 tons of CO2 to date -- a figure which keeps growing rapidly. This is just the beginning, as each installation operates 24x7x365 for decades. Thus, the vast majority of the CO2 emissions savings from these early installations are yet to come. There is another humanitarian benefit, which is far more consequential. Bloom is demonstrating that it is possible to create a new energy paradigm, where energy generation is tailored to personal needs. This can inspire today's workforce and children seeking to create a better world.

Please provide the best example of how the project has benefited a specific individual, enterprise or organization. Feel free to include personal quotes from individuals who have directly benefited from the work.

Bloom has benefited many organizations and enterprises by saving them money on their energy costs & reducing their CO2 footprint. We are now helping companies meet their surging energy needs in data centers. NTT America recently deployed Bloom's Energy Servers to power part of their data center in San Jose. The quote speaks for itself: "As one of the major data center operators in the world, we recognize the importance of energy efficiency and the need for distributed generation and use of clean fuels," said Kazuhiro Gomi, president and CEO of NTT America. "Equally important is our enterprise customers' interest in, and support of, energy efficiency both from the environmental and cost-reduction avenues. As a key driver for the future of the data center, NTT America will continue to evaluate, support and deploy technologies that can be environmentally sound and cost effective for our customers."