

CASE STUDY

BNY Mellon and The Green Grid: Using the PUE Metric to Save \$21M in Data Center Energy Costs

“Doing the Right Thing the Right Way”

The Bank of New York Mellon Corporation is a U.S.-headquartered multinational banking and financial services corporation. With \$1.6 trillion in assets under management and \$27.9 trillion in assets under custody and/or administration, BNY Mellon is the largest deposit bank in the world.

Since the time of its establishment as the Bank of New York by Alexander Hamilton in 1784, the company has dedicated itself to a single ethos: “Doing the right thing the right way.” Central to that ethos, and to the company’s business operations, is a commitment to corporate social responsibility that seeks to turn everyday transactions into impact that creates stability and growth worldwide. BNY Mellon seeks to take advantage of its market leadership by acting as a catalyst for positive change.

BNY Mellon is both an investments company and a technology company with digital infrastructure and data management central to its business. Powering the company’s operations and data centers requires energy, which BNY Mellon tries to use as efficiently and intelligently as possible.

Situation:

- As one of the world’s leading financial services companies, BNY Mellon is publicly committed to acting as a catalyst for positive corporate change.
- BNY Mellon relies on digital infrastructure and data management to run its business, requiring significant energy usage.

Challenges:

- Data centers consume large amounts of energy.
- In 2013, BNY Mellon data centers accounted for roughly 40 percent of the total energy consumed at the company’s global properties.
- Planned growth of BNY Mellon’s business services requires expanded need for computing and data storage capacity.

Meeting Growth Demands by Using Energy Intelligently

BNY Mellon’s data centers were typical in that they consumed extremely large amounts of energy to run. The company calculated that its data centers alone represented approximately 40 percent of the total amount of energy consumed by its entire portfolio of global properties. They also produced roughly 25 percent of the company’s total carbon emissions (including facility and travel emissions).

As the company’s business services continued to expand, its need for computing power and data storage experienced a commensurate growth in demand—and an increasing urgency to manage to expected energy consumption necessary to accommodate that growth.

“What BNY Mellon has done is leverage its membership in The Green Grid to employ valuable tools and strategies that apply directly to the company’s operational and systems excellence—and that has translated directly to bottom-line savings.”—Roger Tiple, *President and Chairman of the Board, The Green Grid*

Solution:

- In 2007, BNY Mellon launched its Enterprise Data Center Power Usage Effectiveness program.
- The Green Grid's PUE metric helps BNY Mellon measure its energy conservation efforts.

Results:

- Through early 2014, the program saved nearly 283 million kilowatt-hours (kWh) of electricity — a savings of \$21 million.

The Bottom-Line Value of a Continuous PUE Program

In 2007, BNY Mellon launched its Enterprise Data Center Power Usage Effectiveness (PUE) Program designed to pursue efficiency measures that conserve energy. As crafted by The Green Grid, PUE is calculated by dividing the amount of power entering a data center by the power used to run the computer infrastructure within it. Overall efficiency improves as the PUE score decreases.

BNY Mellon implemented a range of data center efficiency enhancements based on the PUE metric as a simple baseline for its data centers that site staff can easily track and document. These include airflow management improvements, optimization of control systems, and improvements to building envelopes and associated ancillary systems.

Through June of 2014, the program saved nearly 283 million kilowatt-hours (kWh) of electricity. BNY Mellon's savings total more than \$21 million since 2006.

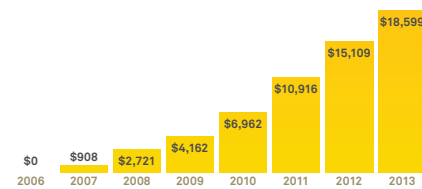
“What if all applicable organizations measured and reported PUE savings annually? What would the combined savings and positive environmental impact be?” — Dan Gaffney, Director of Global Critical Facilities, Global Procurement and Corporate Real Estate, BNY Mellon

DATA CENTER AVERAGE POWER USAGE EFFECTIVENESS (PUE)



Note: PUE is calculated by dividing the amount of power entering a data center by the power used to run the computer infrastructure within it. Overall efficiency improves as the PUE decreases.

CUMULATIVE PUE PROGRAM DOLLAR SAVINGS (IN THOUSANDS)



CSR AT BNY MELLON / 2013 REPORT



The Green Grid
3855 SW 153rd Drive
Beaverton, OR 97006 USA
Phone: +1 503-619-0653
Fax: +1 503-644-6708
www.thegreengrid.org

