

# Bank of America Finds Opportunity in Energy Efficiency

PG&E Programs Help Major Financial Institution Reduce Usage by a Million Watts



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## The “Bank of Opportunity” Goes For Green

The Bank of America Corporation (BAC) serves half of all U.S. households and 98 percent of the Fortune 1000 through a network of about 5,800 banking centers and some 18,000 automated teller machines nationwide. Although they are headquartered in Charlotte, North Carolina, BAC has about 400 facilities, including some 340 retail banking centers ranging from 3,000 to 10,000 square feet, in Pacific Gas and Electric Company’s (PG&E) Northern California service area. BAC also has two operations centers encompassing more than a million square feet apiece and about 50 administrative office facilities in the area.

Bank of America nurtures a strong corporate commitment to environmental responsibility. In 2007, BAC launched a 10-year, \$20 billion business initiative to address climate change through lending, investments and philanthropy as well as corporate energy efficiency initiatives. The latter included a \$3,000 vehicle reimbursement program that has helped more than 3,700 BAC employees purchase new hybrid, highway-capable electric and compressed natural gas-powered cars. BAC currently occupies more than 13 million square feet of space in LEED-certified buildings nationwide and has invested \$150 million in energy-conservation measures at company facilities since 2007, saving BAC more than \$100 million to date.

In 2007, PG&E asked Bank of America for one million watts—a region-wide, targeted reduction in electrical consumption. PG&E’s concept was a holistic, integrated approach that would involve a dedicated PG&E team and outside consulting resources working directly with BAC management to develop solutions across the entire portfolio of buildings. This team-oriented approach leveraged multiple PG&E incentive programs and economies of scale, which were essential to producing the return on investment that BAC required.

Bank of America’s top management team committed wholeheartedly to the effort and directed its Northern California facilities to do the same. BAC turned out to be an ideal participant in the program because of the extensive number and scale of energy efficiency measures available.

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## Benchmarking—Finding Efficiency Opportunities

One powerful tool enabling BAC's massive energy efficiency campaign is benchmarking, which the company has used to identify both the largest energy users in its portfolio and the best opportunities for increasing efficiency. With PG&E's innovative Automated Benchmarking Service (ABS), an ENERGY STAR® benchmarking score is assigned to every building based on energy use per square foot and nine other criteria. ABS tracks the scores on a historical basis and automatically updates them once a month (so the customer doesn't have to manually enter meter data each month), allowing swift comparisons of energy use across multiple facilities simultaneously.

Bank of America was the first PG&E customer to take advantage of ABS on a portfolio-wide basis in an effort to establish baselines for comparisons of large-scale energy use patterns. BAC benchmarked 67 properties in PG&E territory.

## Operations Centers Cool Energy Use with Retrocommissioning, Window Film

BAC's San Francisco area operations facilities were identified by the benchmarking process as ideal locations for significant energy savings. PG&E's Retrocommissioning (RCx) program, in which engineers survey building heating, ventilation, and air conditioning (HVAC) systems to identify potential retrofits to reduce energy demand, found many such opportunities at BAC's San Francisco operations facility.

Supported by a \$208,000 RCx incentive from PG&E, the San Francisco facility carried out wide-scale HVAC upgrades, repairs and retrofits that reduced its annual heating and air conditioning energy costs by more than \$335,000 and reduced its electric usage by more than 2.5 million kilowatt hours. These measures included the installation of variable frequency drives on fan motors and air-side economizers on upper floors, as well as a general streamlining of the system. This one massive project has prevented more than a thousand tons of carbon emissions annually—the equivalent of removing 146 cars from the road each year.

The BAC Concord operations facility carried out a half dozen projects involving upgraded pump motors and adjusted set points to maximize HVAC efficiency. This facility reduced its energy demands by a half-million kilowatt hours and more than 250 kilowatts, backed by a PG&E rebate package totaling more than \$50,000.

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BAC also carried out a massive window film deployment at the two facilities in an effort to reduce radiant heating and ease HVAC energy use, particularly at peak hours. The effort has saved close to 370 kilowatts and produced a PG&E incentive payment of nearly \$110,000. Another rebate of the same proportion supported a lighting retrofit, including fluorescent lighting upgrades to third-generation T8 and T5 electronic ballasts. This has saved nearly 2.3 million kilowatt hours.

### Banking Centers—Efficient and Smart

**PG&E paid out nearly \$48,000 in incentives to support Bank of America's HVAC retrofits, which saved more than 400,000 kilowatt hours and nearly 100 kilowatts annually.**

Under PG&E's New Efficiency Options (NEO) and Energy Efficiency Rebate programs, 272 BAC facilities carried out large-scale lighting retrofit projects based on detailed lighting surveys of the buildings. The minimum requirement for the NEO program was 20,000 square feet, so groups of ten facilities were aggregated to meet that standard in order to purchase new lighting equipment with quantity discounts.

The banking centers upgraded their fluorescent lighting to third-generation T8 and T5 electronic ballasts and optimized the quantity and quality of the light to not only reduce energy usage but also improve the customer and associate experience. This effort produced energy savings by utilizing both higher-efficiency fixtures and lower illumination. Many facilities also deployed occupancy sensors in administrative offices, vaults, storage areas and break rooms that turn off the lights when no one is present. The massive retrofit involved thousands of fixtures and saved 3.4 million kilowatt hours and more than 60 kilowatts, supported by PG&E rebates of more than \$280,000.

At least 23 banking centers also carried out HVAC retrofits that included replacing rooftop air conditioning units and fan motors under a PG&E program that provides incentives to third-party suppliers to keep new HVAC equipment in stock and readily available. PG&E paid out nearly \$48,000 in such incentives to support the BAC retrofits, which saved more than 400,000 kilowatt hours and nearly 100 kilowatts annually.

Finally, PG&E helped 42 banking centers execute a corporate initiative to install a smart building management system (BMS) that provides centralized, energy-use optimization and waste detection. This is done by automating control of all lighting and HVAC functions, from thermostat set-points to pre-set on/off scheduling. These systems are controlled remotely—very remotely—from BAC's operating center in North Carolina, where the system is constantly running diagnostics to identify energy waste and comfort issues. The BMS initiative is already saving 100 kilowatts a year, and PG&E supported the measure with a \$100,000 rebate.



## Demand Response

Bank of America was an early and enthusiastic adopter of PG&E's Demand Response program, in which large users agree to reduce energy consumption on high-demand days to lighten the load on the grid. BAC joined the Demand Bidding Program (DBP) in 2005, collecting PG&E incentives for submitting load-reduction bids prior to demand response events. DBP participants can elect to submit a bid or not, but they face no penalty if they fail to reduce load.

In 2008 BAC enrolled in the Base Interruptible Program (BIP), which pays a customer a monthly incentive of up to \$9 per kilowatt to reduce energy use to a level pre-selected by the customer. The incentive is paid whether or not a demand response event occurs during that month, but the customer pays an additional charge if they fail to reduce load to the selected level during a curtailment event. And in 2010, Bank of America enrolled in the Peak Day Pricing Plan, PG&E's latest Demand Response program, which encourages customers to conserve energy when temperatures are high throughout PG&E's territory.

Two BAC operations facilities are Demand Response partners, and their savings of 842 kilowatts have been rewarded with PG&E incentives of more than \$84,000.

## The Bottom Line

From 2007 through 2010, Bank of America implemented PG&E energy efficiency programs at 274 project sites, saving 2.45 megawatts, 11.5 gigawatt hours and more than 19,000 therms—the equivalent of preventing nearly 8,300 tons of carbon emissions into the atmosphere or removing nearly 1,600 cars from the road.

## NEXT STEPS

**To learn how PG&E can help your business promote sustainability, manage energy consumption and reduce costs with large-scale energy efficiency measures, contact your local PG&E representative or call our Business Customer Service Center at 1-800-468-4743. More information is available at [www.pge.com/office](http://www.pge.com/office).**