



NATIONAL GRID, USA

Commercial Whole Building Assessment Initiative (WBA)

The Company



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National Grid is the second largest utility in the U.S., delivering electricity to 3.3 million customers in New York, Massachusetts, Rhode Island, and New Hampshire while providing power to an additional 1.1 million customers of Long Island Power Authority (LIPA). National Grid also delivers natural gas to approximately 3.4 million customers throughout its service area.

Goals and Objectives

National Grid has partnered with the U.S. Environmental Protection Agency's (EPA) ENERGY STAR® program to help its commercial customers improve the energy and financial performance of their buildings. Through the Whole Building Assessment Initiative (WBA) National Grid offers a range of services, including benchmarking using EPA's energy performance rating system in Portfolio Manager. The initiative began in 2005, and is offered to commercial and municipal customers in Massachusetts, Rhode Island, and New Hampshire. It is a stand-alone initiative that leverages existing efficiency incentive programs. National Grid's Business Energy Efficiency Services team established 2008 goals of benchmarking 50 buildings, and bringing them through the WBA process, to achieve savings of 5,000,000 kWh and 500 kW.

Description

The National Grid WBA Initiative uses a "whole team" approach for program delivery. This involves strong interaction among team players that include National Grid staff, the customer and facility staff, engineering and technical vendors, and implementation contractors. National Grid staff provides management oversight of the projects and maintains a strong network of subcontractors who perform engineering, technical, and implementation tasks.

The process begins with customer leads generated by both National Grid staff and team vendors. Each eligible customer may have one facility benchmarked using Portfolio Manager.

Based on the EPA energy performance rating and an energy intensity score that is determined by the National Grid team, the customer is categorized for an appropriate level of services. Customers with fewer savings opportunities are encouraged to take advantage of incentive programs and informational services. For buildings with considerable energy savings potential, a Technical Scoping Study identifies a full range of energy efficiency opportunities (across fuels), including low-cost and no-cost solutions. Based on the Technical Scoping Study the team creates an Action Plan that summarizes the energy savings opportunities, identifies the relevant utility incentives, establishes energy savings goals, and with the customer identifies which projects the customer will undertake. The Action Plan is a key tool that links the Whole Building Assessment to the implementation of energy savings projects, accessing incentives through the existing commercial and industrial incentive programs.

▶ Target Customers

The WBA Initiative is offered to commercial and municipal customers with facilities that have electric loads of at least 200 kW and square footage ranging from 30,000- 300,000.

▶ Marketing/Outreach

Initially, National Grid marketed the program by direct mail postcards. Current marketing activities are conducted regionally using National Grid's Energy Solutions team approach. With this team approach, key-account managers work with large customers; energy efficiency consultants are responsible for working with mid-size customers. Lighting and mechanical service vendors, who work in the field as part of the National Grid team, also actively seek participants for the initiative. Municipalities sometimes seek participation while developing their own energy efficiency plans responding to EPA's Community Energy Challenge or other energy reduction challenges.

▶ Process

Once a potential participant is identified, an initial meeting, either in person or by Webinar, is conducted. The goal of the first meeting is to describe the initiative, understand the customer's needs and issues, and to gauge



customer interest in energy efficiency. To participate, the customer signs a memorandum of understanding and agrees to share the cost of a Technical Scoping Study equally with National Grid. For municipal customers, the cost of the study is paid by National Grid if a project is undertaken within a year. Participation is limited to one building per customer. The WBA Initiative consists of four key steps:

Establish the Building's Energy Performance

The building's EPA rating is calculated by the National Grid team to determine if it is a good candidate for significant energy savings. The rating gauges the energy performance of the building and compares it to similar buildings across the country. Buildings considered to be high in energy intensity (low EPA rating and high kWh/sq ft. usage) qualify under the WBA to have a Technical Scoping Study conducted. Regardless of score, customers may request a Scoping Study and National Grid will share the cost.

Technical Scoping Study

For qualified buildings, National Grid consultant(s) tour the facility to evaluate the system efficiency and provide efficiency recommendations. The study includes:

- An overview of the building's operation and performance characteristics
- An inventory of low-cost and no-cost improvement strategies
- A list of cost-effective and energy-efficient capital improvement measures including cost, savings, and "simple payback"
- A description of potential utility incentives
- Recommendations for long-term and more complex energy-efficiency opportunities

Action Plan

An Action Plan meeting with the customer examines the study's findings, assesses relevant utility program offerings, sets energy goals for the building and determines which projects the customer would like to undertake. The plan may include education and training for facility operations and maintenance staff, and building occupants. For school facilities the training may take the form of Building Operator Certification for facility staff combined with National Grid's "How Sweet It Is" campaign. This campaign, offered in partnership with EPA's "Change the World Start with ENERGY STAR" campaign, teaches school children about energy efficiency.

Implementation

National Grid works with customers to implement energy efficiency projects, to study measures that could result in significant energy savings, and to contribute to energy awareness and training activities. Customers are encouraged to continue monitoring their energy use, to re-benchmark buildings, to assess the energy performance of other buildings they own, and to establish a long-term plan for achieving their energy efficiency goals.

Results

Because of the WBA Initiative, more commercial customers are taking advantage of the existing National Grid incentive programs to improve their energy efficiency. Thirty nine percent (39%) of WBA participants from 2007 through 2008 are planning to implement energy efficiency projects that qualify for utility incentives. Many customers are expected to continue monitoring their energy use and to re-benchmark their buildings as part of ongoing improvements.

From 2007 through 2008, National Grid engaged 83 customers as WBA participants. Of those, 32 commercial customers with locations throughout Massachusetts and Rhode Island, proceeded with projects. Total incentives authorized in 2008 are \$598,316 with total incentives paid through October of approximately \$300,000. Estimated kW savings are 218 kW with an estimated annual net reduction of 2,850,000 kWh.

Additionally, through the WBA Initiative, National Grid hosted ten (10) "How Sweet It Is" Campaigns with WBA participating schools. This Campaign resulted in 3,186 pledges in support of the "Change the World Start with Energy Star" Campaign, and the distribution of educational materials and compact fluorescent bulbs to those who made pledges.

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