

Broan-NuTone

Energy Efficiency

ABOUT BROAN-NUTONE

Founded in 1932, Broan-NuTone is Canada's largest producer of residential ventilation products. The company has over ten divisions worldwide, providing employment to 193 workers at its Mississauga facility. Broan-NuTone specializes in offering a variety of technologies aimed at ensuring all areas of the home are well ventilated. The company prides itself on offering the finest products in the industry, and since its inception, has been a forerunner in establishing industry standards.



Broan-NuTone Mississauga location

LOCATION

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ENERGY EFFICIENCY - ENERGY MANAGEMENT

Initiating an ecoforward™ outlook

Broan-NuTone was originally founded with the goal of improving the indoor environment while protecting the outdoors, and this environmental consciousness begins at the design phase. This is proven by the number of Broan-NuTone products that receive Energy Star ratings. The company is currently expanding its environmental initiatives with their most recent innovation, the ecoforward™ mission. In 2009, this program led the company to win an Energy Conservation award from the Natural Resources Canadian Industry Program (CIPEC) for best "Integrated Energy Efficiency Strategy", which is considered the most prestigious category of the awards.

The ecoforward™ concept began in 2008, when Broan-NuTone was in the final stages of developing a corporate program to monitor all areas of the company's activities. This program was created to discover opportunities for enhancing environmental protection, product development, and

manufacturing and marketing processes within the company. The company started investigating where and how much energy the company used with the intent of reducing overall energy consumption. At the Mississauga facility, numerous adjustments to energy consumption were implemented in 2008, with cost savings of 37.5 per cent per year, totalling up to \$225,000 annually.



2009 Natural Resources Canada (NRCAN) Canadian Industry Program for Energy Conservation (CIPEC) Leadership Award

ecoforward™ in Action

In April 2008, Broan-NuTone worked with a local company called Power Savings Systems Inc. to conduct an energy audit at the Mississauga facility. This comprehensive study examined the company's energy bills, load and cost breakdowns. This investigation was the first step of the corporate energy management program at the Mississauga facility, and it generated a list of potential savings and opportunities to take action on reducing energy use.

The audit looked at the amount of electricity and natural gas used, along with pinpointing sources of energy consumption. To raise awareness within the company of where and how energy use can be minimized, an ecoforward™ Green Team was formed. This team consists of employees from all levels of the company, which includes the Plant Manager, Director of Engineering and Quality, Engineers, Electricians and Millwrights collaborating to investigate and communicate solutions for optimizing energy use.

In 2009, projects implemented after the audit revealed substantial energy and profit improvements. By introducing a submetering process, Broan-NuTone was able to identify where and when energy was being used, which enabled the company to monitor, track and analyse its energy consumption patterns. Tracking and monitoring energy use lead to the identification of where minimizing consumption would have the most impact, enabling the organization to find appropriate solutions for reducing energy use.

Broan-NuTone also identified some challenges, such as lack of specialized staff and capital available to carry out projects, along with limited technology and training. They recognized that having a designated team investigating energy use was integral to ensuring that the company implemented necessary projects to save energy and increase returns. The Green Team was then created to focus ideas, spread the workload, and ensure a sufficient variety of skills were available to carry out required projects.

As a corporate standard, projects are required to have a one year pay back, and prioritizing projects was extremely beneficial for maximizing profits and seeing results quickly. Training for monitoring and tracking was made possible by collaborating with a variety of companies and



BNC Team Receives the 2009 Natural Resources Canada (NRCAN) Canadian Industry Program for Energy Conservation (CIPEC) Leadership Award for "Integrated Energy Efficiency Strategy". From Left to Right: Yong Feng, Manufacturing Engineer, Rodier Grondin, V.P.-Operations, John Martinovic, Director of Engineering & Quality, Doug Moulton, Plant Manager.

organizations which include Enbridge, Enersource, and National Resources Canada. Enbridge provided consulting services for using the most cost-efficient technologies, and worked with the Green Team on creating action plans. Services from Enersource included providing funding for retrofitting office lights, and offering a free seminar focusing on identifying opportunities for improvement in various areas of electricity consumption.

Broan-NuTone has implemented a variety of projects at its Mississauga plant, which include retrofitting fluorescent T12 office lighting to T8 lights with electronic ballasts at a cost of \$15,615, along with installing a timer for lights in the parking lot, and phase liners for equipment motors. The company was also able to reduce natural gas consumption by reusing water in tanks for washing (\$12,593 in savings), reducing the temperature of washing tanks (\$45,447 in savings), compressor heat recovery (\$8,184 in savings), and temperature reduction in the dry-off oven (\$36,792 in savings), for a total savings of \$103,016 annually in natural gas use.



Rodier Grondin, Vice President of Operations (Centre) accepts the 2009 CIPEC Leadership award from Glen Mifflin, CIPEC Chair (Left), and Malcolm Brown, Associate Deputy Minister, Natural Resources Canada (Right).

Moving Forward

Broan-NuTone knows the value of teamwork in meeting their environmental goals. By collaborating internally within the company and externally with local businesses, the company has reduced its greenhouse gas emissions by 21.5 per cent since 2008. The company has also realized substantial cost reductions - Broan-NuTone currently sees an annual approximate savings of \$225, 992 from water, natural gas, and electricity reductions. These savings are expected to increase with projects such as replacing motors in plant ovens further reducing natural gas use by \$22,000. Broan-NuTone is working hard towards its goal of reducing energy use by another 20 per

CASE STUDY

cent within the next two years.

“This project has been extremely well received at the corporate level within our worldwide organization. For us, the early success we have had only serves to whet our appetite for even more potential improvements. It has shown that energy consumption is not simply a fixed cost of doing business, it is an opportunity for ongoing improvement,” states John Martinovic, Director of Engineering and Quality.