

GHG Project Case Study

Parlaying Efficiency into Green Power: Staples' Experience with Optimizing GHG Performance

Staples established its Office of Environmental Affairs in 2002 to set company policy and drive environmental commitments. One of the biggest challenges for the new office was justifying initial capital investment for projects that did not appear to deliver returns meeting the company's internal hurdle rate. To overcome this challenge, project champions used a "whole systems" approach to understand project benefits. For energy management, this included looking at the difference between anticipated budgets and actual expenditures and recognizing that these variances would cost the organization in planning and performance. They also looked at synergies among multiple projects as well as overall project costs, including both up-front and maintenance costs. Finally, Staples weighed a project's long-term affect on reducing their overall GHG emissions profile, and therefore overall risk.

Staples has been steadily acquiring knowledge on energy efficiency and load reduction, including its experience with a California demand reduction program during the 2001 energy crisis. As a result, the Office of Environmental Affairs began to systematically implement best practice approaches to energy management in all company stores. These projects ranged from control technology retrofits for lighting and HVAC load to incorporating more green design principles into new construction. In one project, Staples increased the energy efficiency of a warehouse by installing motion- and sound-activated fluorescent lighting instead of installing traditional spot lighting from halogen bulbs, and this

quickly became the standard for all future warehouses. Another simple but noticeable change was made in its lighting fixture specifications. At no cost, changing the specifications saved two watts for every lamp used in more than 1,500 locations. Combined with a 30 percent longer life, the small shift in equipment specifications amounted to large savings.

Since 2001, Staples reduced energy consumption by 12.3 percent per square foot of floor space. This included 46,000 megawatt-hours in the first year and an additional 19,000 megawatt-hours in the second, with savings of \$4.5 million and \$2.0 million, respectively. By reducing energy consumption, Staples also reduced the indirect GHG emissions that are released when electricity providers burn fossil fuels to generate power. Using the average emissions factor for the United States, Staples' energy efficiency avoided more than 41,000 metric tonnes of GHG emissions over two years. This is equivalent to taking nearly 8,000 cars off the road.

The effort to reduce emissions did not stop with energy efficiency. The company leveraged the money it saved from its efficiency investments to purchase renewable power, including renewable energy certificates equivalent to 46,000 megawatt-hours each year. Consequently, in 2003 Staples was able to increase its renewable power use from less than 2 percent of its annual electricity consumption in the United States to an industry-leading 10 percent. The use of green power resulted in an additional 35,000 metric tonnes of avoided GHG emissions.

These actions have led to considerable recognition and positive publicity. In 2004, the Department of Energy and the Environmental Protection Agency selected Staples for the annual Green Power Leadership Award, a competitive award that recognizes outstanding commitments and achievements in the green power marketplace. The work by Staples has also been covered in investment press, for example, by the Millstone Evans Group of

Raymond James & Associates and by *The Progressive Investor*, an e-journal by SustainableBusiness.com. News about Staples' green energy purchase also appeared in several newswires, publications, and Web sites. Positive recognition like this can improve Staples' brand image, improve its relationships with stakeholders, and help the company to establish itself as a leader in business and on the environment.