



# GREEN THE CAPITOL YEAR END REPORT

2008

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## A Letter from the Chief Administrative Officer



Eighteen months ago, when Speaker Nancy Pelosi directed implementation of her vision for a greener, more energy-efficient institution, we embarked on a formidable journey. That journey was filled with exploration, as we began the sometimes arduous process of determining the House's environmental impact and exactly what we could do, as an internationally recognized institution, to become more environmentally responsible.

We set ambitious carbon reduction goals for the 110th Congress. I am happy to report, in less than two years, we reached our goals, and reduced our carbon footprint by 74 percent.

This report will touch upon the major operational changes we made to reach our targets and then outline our priorities for the Green the Capitol program in the 111th Congress. However, before doing that, I

would like to share just a couple of lessons learned.

First and foremost: we learned a lot. For starters, there is no off-the-shelf product an organization of this size and stature can purchase to instantly become more energy-efficient and sustainable. The attainment of the Speaker's goals resulted in an invaluable amassing of know-how as we assessed our carbon footprint and undertook efforts to reduce it.

Like repeatedly practicing a new language, each project we effectively implemented increased our overall fluency in environmental stewardship. There was no playbook to green the House when we started, so we wrote our own.

Which brings me to my second lesson learned: good ideas. When good ideas come from passionate, talented people they tend to have a viral quality. The Speaker's Green the



the Capitol program is no exception. We scoured the country looking at models of sustainability, reviewing case studies and meeting with academics and leading professionals in the areas of science, technology, lighting and green building operations. But sometimes the good ideas are in your own backyard. Ideas to reduce paper consumption by providing electronic receipts, reducing curtain size to pay for environmentally-friendly window blinds and refurbishing refrigerators that would otherwise have gone to landfills are among the ideas House employees brought forward.

What resulted from this self-education is one of the most powerful elements of the Green the Capitol program today: knowledge. Through painstaking analysis and perseverance, the House employees who work on this project have become remarkably positioned as authorities on exactly how a large, complex organization such as the House can go green. Their growing and respected expertise in this area has opened up doors that, in the beginning of this project, we could not have imagined.

Behind those doors lies the power of coalescence. We have begun building powerful alliances with other organizations in the Legislative Branch also interested in greening, including the Architect of the Capitol (AOC), the Office of the Clerk, the Sergeant at Arms and the Senate. We have partnered closely with the Architect to move the goals of the Green the Capitol program forward. We also continue to be recognized by other federal agencies, including the Department of Energy; and we have started laying the groundwork to strengthen these important ties with other government organizations external to the House.

The success of the Green the Capitol program has placed the U.S. House of Representatives in a unique leadership position. By continuing to green our operations and reduce our energy use even further, we offer an important message to the people our Members represent.

As our country moves toward a new green economy by creating green jobs nationwide and with Congress asking businesses and households to become more energy-efficient, we need our House to be in order. With the nation struggling to address climate change, conserve energy and work in an environmentally sustainable fashion, we are showing it can be done.

The House is a symbol of American democracy, therefore it is not enough for us to follow trends or create admirable appearances. We must continue to lead by example.

And this, we will do.

Best,



Dan Beard

## COMPACT FLUORESCENT LIGHTBULBS:

Sometimes saving energy is about installing some bright ideas. The transition from traditional, energy inefficient lightbulbs to environmentally-friendly bulbs is the perfect example of that. Since January 2008, over 10,000 incandescent bulbs have been replaced with modern compact fluorescent lights (CFLs) across the House campus. This switch reduced the House's overall electricity consumption by over **1,100,000 kWh**. In an effort to help employees green their personal lives, CFLs are also available at cost in the House Office Supply Store. Between January 2007 and August 2008, nearly 2,000 CFLs were sold in the store — reducing electricity use by more than **90,000 kWh**.



# Where We've Been

## THE HOUSE SAYS GOODBYE TO COAL

During the 110th Congress, we undertook several major initiatives that dramatically reduced our carbon footprint, which was initially estimated by the Government Accountability Office and the Department of Energy as 91,000 short tons of carbon dioxide-equivalent. We have often referred to the initiatives we first undertook as the "low hanging fruit," meaning we initially regarded them as measures that were obvious and simple, yet would yield striking results.

However, changing processes and procedures in an institution as old and venerable as the U.S. House of Representatives is not without its challenges. The first major change we accomplished, together with the Architect of the Capitol (AOC), centered on our fuel mix in the Capitol Power Plant (CPP). The plant provides heating and cooling to a wide array of federal buildings on Capitol Hill, including the House. Unfortunately, because the CPP is historically coal-fired, it heavily adds to the amount of carbon attributed to House operations.

The Green the Capitol program undertook an intense examination of the institution's reliance on fossil fuels.

Through our efforts, we discovered the boilers at the CPP could be adjusted to run with cleaner-burning natural gas. Although natural gas prices are generally more volatile than coal and, depending on market conditions, higher, it was determined the environmental benefit of using natural gas outweighed the increase in cost.

Converting to natural gas was not as easy as just flipping a switch. It required careful consultation with the Architect, which operates the plant. It also took months of navigating a complex procurement process, enlisting engineers to study the most efficacious way to make the changeover and establishing a deft budgetary management process to finance the project.

The end result proved worth the effort. Although the CPP is still one of the largest emission sources in the District, according to the Environmental Protection Agency, the House now has less of a negative impact on the environment. By switching our share of the fuel mix to natural gas, we have shown clean energy is not only viable, but possible without a major overhaul in the existing infrastructure.

## GOING ON AN ENERGY DIET

While we aggressively worked to mitigate greenhouse gas emissions associated with House operations, the Green the Capitol Office recognized reducing energy use is fundamental to this objective and initiated numerous projects to reduce energy consumption throughout the past 18 months.

These projects included replacing thousands of incandescent lightbulbs with more energy-efficient compact fluorescent lights, replacing the beverage vending machines with Tier 2 ENERGY STAR counterparts and improving the efficiency of heating and air conditioning systems.

Additionally, the CAO is evaluating emerging technologies that could allow the House to generate

electricity from alternative sources that do not rely on fossil fuels and are thus gentler on the environment. We are making progress on the "five percent per year" energy reduction goal by constantly looking for new ways to reduce the institution's annual energy costs. Throughout the next Congress, the Green the Capitol program will continue to strive toward the very aggressive "50 percent energy reduction over 10 years" goal.



# THE "WINDS" OF CHANGE AT THE HOUSE OF REPRESENTATIVES

There may not be windmills on the National Mall yet, but an important environmental change has nonetheless happened in terms of how the



House powers its six million square feet of office space. The electricity the House uses, like its heating and cooling, was derived from fossil fuel sources via the public utility's grid system.

The Green the Capitol Office researched a viable alternative to this problem. The House's power provider could certify the House's electricity needs were, in theory, derived from wind sources. Like the other two aforementioned initiatives, this was not as simple as making a phone call to the power company's customer service office.

The budgetary appropriations and contract negotiations with the energy company equated to a complex process that took months to navigate. The House's electricity needs are significant and therefore insisting none of the electricity generated comes from fossil fuels was a daunting goal.

Although this victory was not as visible as the changes to the buildings or those fictional windmills on the Mall, its symbolism is staggering. As a major consumer of commercially purchased electricity, it is unprecedented that the House's electricity needs are currently counterbalanced by wind power renewable energy certificates (RECs).

By doing so the House has taken the lead and proven the market for renewable power is now viable. Now similarly sized institutions can and will begin to demand their energy from non-fossil sources.

## GREEN MOVES:

The 111th Congressional Transition was an opportunity to make the time honored process of moving into the next Congress more eco-friendly. The CAO, in partnership with the AOC, provided employees with a variety of green programs aimed at improving recycling and reducing waste during office moves. Office resupply areas were set up where an estimated **12,500 pounds** of unwanted supplies and books were dropped off and picked up for reuse by House employees. The book drive was particularly successful, resulting in a donation of nearly **3,000 books** to the Library of Congress Surplus Book Program.

Recycling information was presented with the development of an interactive website called "Picture Your Move." In just one month, the House's document destruction service shredded and recycled **over 30 tons of paper**. To encourage offices to use fewer environmentally-destructive cardboard boxes, reuse areas were established and the option of using reusable moving crates was presented. Nearly 30 offices rented a total of **1,700 crates** for this purpose, replacing the equivalent of twice the number of cardboard boxes.

The offices have also transitioned to a new shade of green. **Two thousand Smart Strip** power outlets have been installed in many Member offices, reducing the amount of energy consumed by computers and other electronics by up to 70 percent. The eco-friendly renovations don't stop there. The House is also installing low-volatile organic compound (VOC) carpets, using low-VOC paints and insulating window shades. Policies recommending the purchase of ENERGY STAR-qualified electronics were also formalized, encouraging more efficient power management settings for all House offices.

## GREEN CLEANING:

The CAO is also "cleaning house," replacing traditional cleaning products with those that don't harm the environment. The environment is not the only beneficiary of this change — green cleaning products are also a healthier alternative for janitorial staff and employees. In January 2008, the CAO began purchasing green cleaning supplies that meet the standards of certification programs such as Envirosodic and Green Seal. In the first nine months of 2008, the use of these cleaning products prevented nearly **6,000 pounds of air pollutants** from being emitted.

# NOT FILLING LANDFILLS

Before the Speaker launched the Green the Capitol program, the waste sent to landfills from the various House cafeterias, which serve 240,000 meals a month, was significant. Everything, with the exception of plastic recycled bottles, was thrown in the trash, resulting in thousands of tons of garbage.

Such wastefulness also added even more emissions above the estimated 91,000 short tons of carbon-dioxide equivalent. Making matters worse, the waste, which emits methane (a potent greenhouse gas), had to be frequently shipped by fossil-fuel burning trucks.

So when a contract was negotiated with the House's new food services vendor, Restaurant Associates (RA), the Green the Capitol Office recognized an important opportunity: a chance to implement a zero-waste program in all of the House's eateries.

Like the CPP fuel-switching project, this was easier said than done. Restaurant Associates, while willing and enthusiastic, had no template to offer on how this would be accomplished. The Green the Capitol staff began an intense search for American-made biodegradable products that could replace all of the plastic and Styrofoam being used by House employees and visitors.

Through an exhaustive evaluation and procurement process, all containers, cups and utensils were replaced with biodegradable products. Simply making this switch, however, was not enough. The Green the Capitol staff was not content with sending biodegradable materials to landfills. After thoroughly studying the issue, it was determined, to truly eliminate waste, the food service items, along with all kitchen scraps and uneaten foodstuffs, should be composted. Tons of material originally bound for landfills now goes to a commercial composting facility that turns food scraps and compostable waste into a usable soil product in 90 days.

The Green the Capitol Office identified and procured a pulping machine to process the House's cafeteria waste stream and developed a compost collection system in all of its eateries. All of the waste generated by the House's restaurants is pulped, reducing its volume by 90 percent and its weight by as much as 50 percent.

The impact of this program is measurable in the sheer tonnage of waste kept from landfills. In 2008, the House diverted 884 tons of compostable waste from landfills to compost facilities. But perhaps more importantly, this program's efficacy lies in



the important message it delivers to the millions of customers our eateries serve every year. With a well-orchestrated branding and messaging campaign, the Green the Capitol program has educated our staff and guests, letting them know, with every meal they eat, they are helping Congress lead by example and doing their part to reduce waste, save energy and protect the environment.



## RECYCLED PAPER:

The CAO has reduced virgin paper consumption by offering only paper with high or 100 percent recycled content. In October 2007, the House Office Supply Store began selling 100 percent post-consumer recycled office paper. In January 2008, more environmentally-friendly paper products were added to the shelves, including 100 percent post-consumer content binders and folders and 50 - 100 percent recycled cardboard boxes. These changes have resulted in the conservation of nearly **4,000,000 gallons of water**, eliminated over **200 tons of solid waste** and prevented over **800,000 pounds of carbon dioxide** from being released into the atmosphere.

# Where We're Going



Greening the House of Representatives is a moving target. Although we successfully achieved many of our carbon reduction goals based on the original assessment of our carbon footprint, we understand the House's environmental impact changes with each passing year. We will continue to build on what we've learned and further strengthen our ability to green the Capitol going forward.

There is, however, much more work to do.

We recognize more can and should be done beyond the required maintenance of our Year One reductions. Which is why we are about to enter an even more ambitious phase of the Green the Capitol program, one that will require and fully capitalize on the formidable achievements we've realized and the knowledge we've gained thus far.

Just as it is a goal of the program to have the House serve as an important example of sustainability for other Legislative Branch entities and, more symbolically, the nation, during the second chapter of the Green the Capitol Initiative, we will work aggressively to position the Office of the Chief Administrative Officer (CAO) as a completely green organization.

Unlike the House-wide "low-hanging fruit" we've plucked, going forward we are looking to promote greening objectives throughout our own operational tree. Every CAO employee will be a part of "going green" and operating in a sustainable manner. We are setting this goal to make every effort to eliminate our waste stream. To do this, we will launch a sweeping analysis and reform of all of our business practices, which will involve all of our 650 employees.

There is immense opportunity inherent in this endeavor. Because CAO employees quite literally touch every corner of House operations, a fully sustainable CAO, in effect, brings us all-the-closer to a fully sustainable House of Representatives.

Here's our plan to do this:

The House's Information Resources division (HIR) contributes an enormous percentage of carbon to our overall footprint. That's because the institution's massive computing power uses an extraordinary amount of electricity and generates heat, which greatly increases the energy use required in providing

adequate cooling. Implementing sustainability education and setting specific energy reduction goals for HIR, like reducing the amount of physical hardware used in offices across the Capitol complex, will greatly reduce energy consumption and the overall carbon footprint.

Office coordinators are the group of CAO staff who have traditionally liaised with all 441 Member and 24 Committee offices and serve as the human face of the CAO. All office coordinators will be trained to be experts in sustainable business practices. In doing so, they will, in turn, serve as valuable resources to all of the House offices they serve, able to assist various operations external to the CAO in reducing their energy consumption and emitted carbon.

Providing all CAO staff with sustainability training will directly support a wide-array of specific operational improvements as part of the second phase of the Green the Capitol program. Specifically, the CAO will move toward a zero-waste environment, which includes the adoption of paperless business practices. The CAO will operate a zero-emissions vehicle fleet, expand green commuting options for House employees and institute sustainable procurement practices.

While simultaneously greening the CAO, the organization will also provide this expanding knowledge base to Member and Committee offices. In addition to the improved role of the office coordinators and HIR staff, the Green the Capitol Office will begin the critical task of assisting other House offices in implementing their own sustainability measures.

For example, all goods and services the CAO provides House offices through its procurement program will be fully sustainable. As offices adopt more of these business practices, they will be able to track their impact on the House's overall reduction in energy and carbon emitted through a website.

It is a priority of the Green the Capitol Office to reach out to the Members and their staff, on a continuing, consultative basis, to help them green not only their offices on Capitol Hill, but also their District offices.

Working aggressively to train CAO employees on how to provide sustainable resources to the rest of the House will be paired with the continuation of all the major initiatives

established in the first phase of Green the Capitol. However, the 111th Congress will also see the introduction of several green technology demonstration projects. Select providers of energy-saving technologies will be allowed to test their advances within the House of Representatives.

This will be done in a closer, expanded partnership with the AOC. This strengthened relationship with the Architect is expected to yield a host of improvements throughout the Capitol campus, including a formalized “night lighting” program, a sustainable design principle for all land use and new building construction and the relighting of the Capitol Dome with energy-efficient technologies.

These advances will be integrated into the new Administration’s anticipated greening policies, ensuring the House is fully compliant with any greening standards the Executive Branch establishes.

Furthermore, as the creation of “green jobs” becomes a national priority under the new Administration, these modifications in our business practices will parallel this emerging national initiative. In fact, our green programs have already created or supported environmental jobs, from the technician who runs our composting facility to the employees who work for two of our green vendors — who provide us with compostable water bottles and “recycle” our used refrigerators with environmentally-friendly cleaning products.

At the conclusion of the 111th Congress, the Green the Capitol program will be fully institutionalized. However, this can only happen if sustainable practices are seen as a responsibility and benefit of working for the House of Representatives, a concept the CAO is committed to championing.

The second phase of Speaker Pelosi’s program will establish the CAO as a fully green division of the House, one that will serve as an example and encourage other House offices to do the same. Only when sustainable practices are an integral part of all House operations will the true vision of the Green the Capitol program be realized.

In the words of Speaker Pelosi, the House will be

“*...not only a shining example of our democracy, but a symbol of our commitment to the future.*”

A proposal to relight the Dome, seen here illuminated during a recent test of the new energy-efficient lighting, will be ready for evaluation this Spring. If approved, this Green the Capitol project is estimated to save energy and greatly improve the landmark’s visual aesthetics.

Photo: The Lighting Practice.



# Green Progress by the Numbers

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- **240,000** meals are served in House cafeterias every month, and all Styrofoam and plastic food service items, including utensils, sandwich clam shells and cups have been eliminated.
- Switching to the use of compostable water bottles kept **100,000** plastic water bottles from area landfills.
- Approximately **700 tons** of food service waste was sent to commercial composting facilities turning trash into valuable soil.
- Floor-to-ceiling curtains have been replaced with material saving swags on **340** windows. The savings have been used to purchase and install insulating green window shades in freshmen Member offices.
- **84** Tier 2 ENERGY STAR energy-efficient vending machines were installed which will reduce energy consumption by over **200,000 kWh** and save over **\$25,000** in energy costs per year.
- Approximately **350** individual computer servers for freshmen Members of Congress were consolidated in a central data center decreasing energy consumption by **45 percent**.
- **180** House employees enrolled in the bike-sharing *Wheels4Wellness* program with over **300** bikes checked out since July 2008.
- All new carpet and paint is low-VOC (volatile organic compounds), improving indoor air quality and the health of House employees.
- Mini refrigerators and ergonomic office chairs are being diverted from landfills, then cleaned and refurbished to be reused. For the price of a single new chair, **30** chairs can be refurbished.
- To establish baseline electricity usage, **75** water and steam meters are being installed in House office buildings.
- Initiated a pilot ventilation duct sealing program in the Rayburn House Office Building, sealing **80 percent** of existing leaks and improving overall efficiency.
- Adjusted HVAC or heating ventilation and air conditioning operations to reduce energy consumption of various air handling fans by **14 percent**.
- The House Office Supply Store saved **66,000** sheets of paper per year by switching to electronic receipts.
- **60,700 pounds** of paper were shredded and recycled during the transition from the 110th Congress to the 111th.
- Outgoing Member offices using office supply collection centers located in three House buildings recycled approximately **12,500 pounds** of supplies. These supplies were then given to incoming Member offices. This equated to a cost savings for new Members and it also diverted usable supplies from landfills.
- Reusable moving crates replaced the need for **3,400** cardboard boxes used during office moves for the transition from the 110th to the 111th Congress.
- Compact fluorescent light (CFL) bulbs replaced **10,000** incandescent bulbs across the House campus, reducing all House electricity consumption by over **1,100,000 kWh**.
- **2,000 Smart Strip** power outlets for computers, printers and copiers were installed in Member offices. *Smart Strips* have the potential to reduce energy consumption by up to **70 percent**.