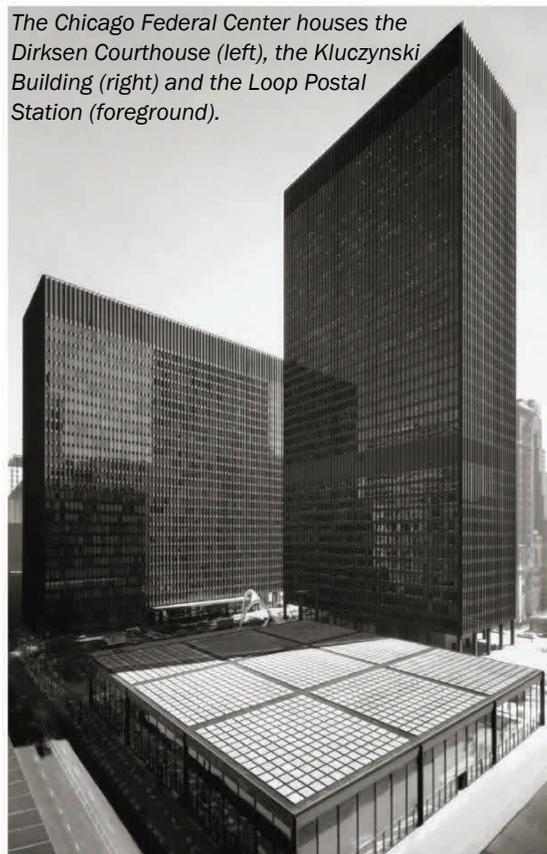


Case Study: Energy System Upgrade Reduces Natural Gas Use

The U.S. General Services Administration's Chicago Federal Center reduced its natural gas use by 25 percent compared to the previous year. This was accomplished through the implementation of multiple heating, ventilation, and air conditioning system and operational improvements. The agency saved \$140,000 during one year as a result of this upgrade.

Several modifications to the center's HVAC (Heating Ventilation Air Conditioning) system made a significant difference to GSA's energy reduction efforts. In particular, the agency replaced all of the system's air handlers, heating coils and perimeter fan coil units to increase system efficiency and installed two new building automation systems. In addition, instead of turning on boilers once

in the fall and leaving them on until spring, GSA has begun shutting down the boilers during winter warm spells. Turning high-pressure boilers on and off often can cause damage to the complex piping system from frequent expansion and contraction caused by large temperature fluctuations. Therefore, GSA facility engineers must take extra care to monitor the system closely.



The Chicago Federal Center houses the Dirksen Courthouse (left), the Kluczynski Building (right) and the Loop Postal Station (foreground).

Key Topics

- Energy reduction.
- Cost savings.

Results

- Reduced natural gas use by 25 percent.
- \$140,000 savings.

Facility at a Glance

- Large multi-building and grounds complex maintained as federal office space, a large post office, courthouse, outdoor public space and an underground parking structure.
- 6,700 employees work on the campus, which occupies more than an entire city block in Chicago's downtown business district.
- Participant since 2011 in the FGC energy and waste categories.
- Recipient of EPA Region 5 FGC Award: Most Improved in the Energy category.

Sustainable Materials Management

Federal Green Challenge



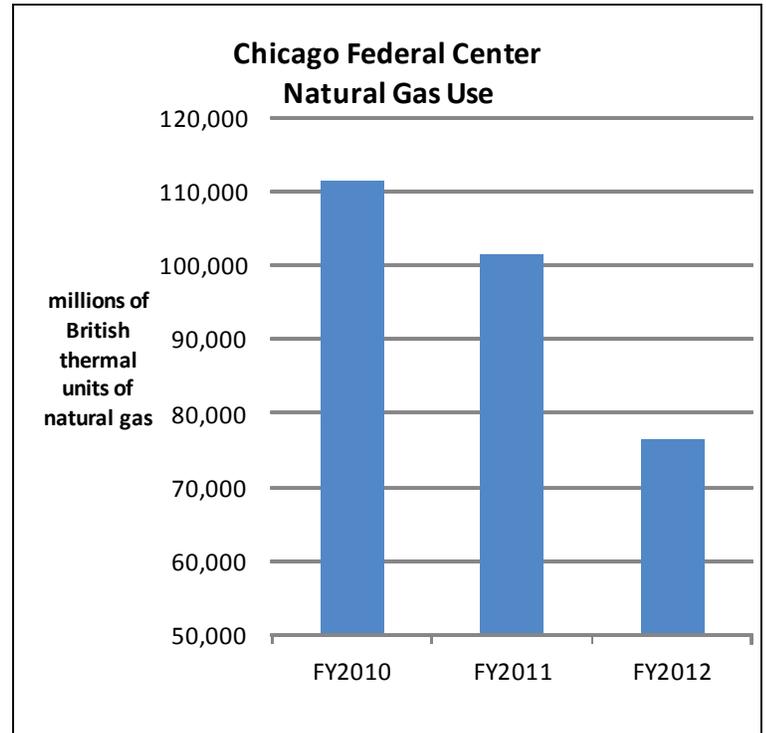
CHANGING HOW WE THINK ABOUT OUR RESOURCES FOR A BETTER TOMORROW

Natural Gas Use Reduction

Another important contribution to the complex's ability to reduce energy is a GSA-reporting tool which tracks energy use. The reporting tool taps into the existing GSA energy usage database to provide reports and analysis for end users such as property managers and operations and maintenance contractors.

The energy system upgrade was funded in part by American Reinvestment and Recovery Act money.

The entire GSA property management team worked collaboratively with each other and the center's agency occupants to implement the upgrade. "This is a really strong group of people that were able to work together easily to get the HVAC upgrade completed," said Sustainability Program Specialist Bridget Richardville.



About the Federal Green Challenge

The Federal Green Challenge, part of EPA's Sustainable Materials Management Program, is designed to challenge federal agencies throughout the country to lead by example in reducing the federal government's environmental impact. It helps agencies meet obligations under Executive Orders 13514 and 13423.

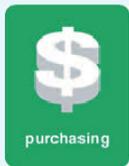
In 2012, nearly 300 federal agencies, representing more than 500,000 employees participated in the Federal Green Challenge. Their combined efforts resulted in an estimated cost savings of more than \$31 million to U.S. taxpayers.



waste



electronics



purchasing



energy



water



transportation

For More Information

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