



## ComEd: Helping Chicago Businesses Turn Green

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In the U.S., commercial buildings consume more than 60 percent of all energy, and as much as 80 percent of which is wasted. Chicago-based Commonwealth Edison (ComEd) wanted to empower its building manager customers to reduce this waste by tracking their energy usage with the U.S. Environmental Protection Agency's (EPA) ENERGY STAR program. Yet collecting whole building energy usage data from back-end systems, as required by ENERGY STAR, is an intensive process, taking as much as six hours per request – putting large-scale conservation of this type out of reach.

ComEd is one of the nation's largest electric utilities, with approximately 3.8 million customers in the Chicago area. This footprint includes more than 350,000 businesses, including hospitals, hotels, medical office buildings, wastewater treatment plants, courthouses, financial centers, warehouses, schools and others.

ComEd, seeing the opportunity to drive commercial building energy efficiency among customers while harvesting considerable savings, knew it would need to first simplify the process of categorizing, analyzing, managing and submitting energy data for its large base of commercial customers. Only then would the utility be able to reduce the administrative burden of tracking building-level energy usage, and thereby facilitate broad, rapid enrollment in ENERGY STAR.

By automating the ENERGY STAR data submission process for these businesses, ComEd realized it would not only be able to encourage commercial and industrial customers to assess and improve their facilities' energy usage, but also would enable them to save money, reduce their impact on

the environment, quantify the impact of operational improvements and increase their property value. A clear win all around, but how to make it happen?

### ENERGY STAR for Multi-tenant Facilities

The EPA's ENERGY STAR program was introduced in 1992 as a voluntary labeling program designed to promote energy efficient products. While the first labeled products were computers and monitors, the program has expanded to include major appliances and commercial buildings.

In a growing number of states, a commercial ENERGY STAR rating is now required at the time of building sale, rental, and for government grants. This certification has been shown to translate into a three percent premium in rental value and a sixteen percent increase in sale price for commercial buildings. In

fact, ENERGY STAR has become so successful, it is now being incorporated as the standard yardstick by which buildings are measured for demanding standards such as Leadership in Energy and Environmental Design (LEED) 2009.

### ENERGY STAR Works

Americans, with the help of ENERGY STAR, saved enough energy in 2009 alone to avoid greenhouse gas emissions equivalent to those from 30 million cars – all while saving nearly \$17 billion on their utility bills.

<sup>1</sup> Source: Doing Well by Doing Good? Green Office Buildings, a 10,000 building study by the Center for the Study of Energy Markets, University of California Energy Institute, September 2009

### Syncing with ENERGY STAR

Beyond the administrative hassle, getting customers to begin tracking whole building usage was perhaps the most significant hurdle. Building managers had to retrieve an entire building's electricity consumption data manually through ComEd in order to enter the figure into ENERGY STAR Portfolio Manager, the program's interactive energy management tool that allows managers to track and assess energy consumption for an entire commercial building.

Moreover, each tenant who occupied space within that building would need to sign a privacy form provided by ComEd, who could then release the data for that particular tenant. Consequently, the process to acquire a building's usage data was extremely cumbersome and paper-driven, with additional customer fees required. Only a small percentage of building managers actually took the time to participate.

Further challenges were encountered as customers were exposed to minor address differences in tenant records, causing errors in data retrieval and further delaying the request process. Even single occupant buildings don't have an easy go of it. Oftentimes with multiple meters and addresses, these buildings face the same energy data collection challenges as multi-tenant facilities.

ComEd began looking for a solution that would automate this process of collecting, submitting, and validating energy usage data.

### Automating the ENERGY STAR Submission Process

In its quest to help hundreds of thousands of Chicago-area businesses begin the ENERGY STAR enrollment process, ComEd selected Calico Energy Service's Green Certification software, the first and only energy management solution designed specifically to facilitate the submission of building-wide energy usage data. Green Certification – an upgrade to ComEd's existing Energy Usage Data System (EUDS) – radically simplifies the process of organizing

and sharing energy data by serving as an automated bridge between existing back-end utility data systems and Portfolio Manager.

The software allows Chicago building managers to quickly benchmark their building's energy usage. They can also easily baseline and evaluate building-wide energy consumption, set investment priorities, verify and quantify energy efficiency investments, and work toward gaining ENERGY STAR certification.

Since Green Certification is a software-as-a-service (SaaS) offering, regular technical improvements to Portfolio Manager are transparent to the utility and its customers. Furthermore, Green Certification is updated frequently to meet evolving EPA requirements. This enables the ComEd team to focus its resources on other initiatives and trust that customers' data will be successfully submitted every month as required by the EPA – without the need to develop, support, or maintain an internal software system.

The solution's enterprise-class data security systems and data aggregation (which eliminates privacy concerns by collecting individual customer data and eliminating the need to obtain data privacy release forms) ensure all customer usage data is safe, giving customers confidence in the

calculation, storage and transmission of their data. It also includes separate dashboards for administrators, account managers and building managers – enabling utilities to assist customers with the configuration, management and submission of data to ENERGY STAR.

### Small Change, Big Impact

ComEd estimates that the software reduces time spent on energy usage requests by 96 percent – reducing the time required to set up each building from 10-12 days to just 24 hours. As of today, the utility has automated the submission of energy data to Portfolio Manager for more than 300 million square feet of office space.

#### What is Green Certification?

With Green Certification, utilities can provide their customers with automated access to vital energy data from back office systems for their building and property manager customers. This empowers building managers to quickly and easily analyze energy consumption data and benchmarking.

For ComEd, this new approach has dramatically reduced the administrative burden of gathering energy data, and helped building managers take full advantage of ENERGY STAR to examine and compare their buildings' usage history. Using this information, building managers are empowered to develop new energy-saving strategies and measure their effect.

### Sustainable Impact

Energy management software such as that being used by ComEd provides an excellent approach to encouraging ENERGY STAR participation among businesses. It streamlines the submission process and saves both utilities and building managers time and money. More energy-efficient buildings mean less pollution, as well as cost savings that can be passed to consumers. Ultimately, this type of solution promises to contribute to the advancement and adoption of ENERGY STAR across the nation, providing utilities with a fast path to driving commercial building energy efficiency in their service territory.

Given the dramatic increase in the number of regulations and incentives at the state, federal, and local level, all of which require government and commercial operators to submit building energy usage reports through Portfolio Manager, ComEd's deployment is a lighthouse for both utilities and building owners. It shows that despite the barriers and potential for complexity, building managers can save money by increasing the energy efficiency of their buildings, complying with regulations and differentiating their properties for rental or sale.

For its efforts, the Association of Energy Services Professionals (AESP) awarded ComEd's solution its Outstanding Achievement in Energy Program Design or Implementation award in February 2010. ComEd also received the 2009 ENERGY STAR Special Recognition Award for Innovation in Customer Service. ■

### About the Author

**Kevin J. Bricknell** is the Energy Data Services Manager in ComEd's Marketing and Environmental Programs Department. He joined the department in June 2005 and is currently responsible for management of the Energy Usage Data System and Energy Insights Online programs for ComEd in Chicago. During his 31-year ComEd career, he has held a variety of supervisory and managerial positions in the Customer Service and Treasury Departments. Kevin is a graduate of Roosevelt University, where he earned a Master of Science in Marketing Communications graduate degree and a Bachelor of Science degree in Marketing.

### "Green is a Group Effort"

ComEd is dedicated to helping their commercial building customers reduce their energy use, and Calico is proud to be their partner in this effort. The utility is joined by other groups in Chicago dedicated to making a positive impact on the environment.

One group, The Chicago Climate Action Plan (CCAP), is known as the city's roadmap for reducing greenhouse gas emissions to 25 percent below 1990 levels by 2020 and 80 percent below 1990 levels by 2050. Like ComEd, the CCAP recognizes the significant environmental gains of reducing commercial building energy waste and has made energy-efficient buildings a top priority.

"This type of collaboration is essential, as 'going green' cannot occur in a silo. Green efforts require many people to make many changes over the long term. Chicago is a model for other cities that want to enact change at this level."  
— Brian Dawson, CEO, Calico Energy Services