

CASE STUDY | LAWRENCE - DOUGLAS COUNTY, KS

Integrating sustainability efforts of the Midwestern community of Douglas County, KS (population: 112,211) and its county seat of Lawrence, Kansas (population: 88,727) was a logical strategy, as the county and city offices are located just five blocks away from each other.^{1,2} This collaboration has allowed the community to effectively track and monitor energy usage, utilizing ENERGY STAR Portfolio Manager, to see energy savings, cost



Decorative lighting in downtown Lawrence, KS was replaced with LEDs to improve lighting quality and cut energy by 30%.

savings, and engage the staff and the community in sustainability efforts. Sustainability efforts in Douglas County and Lawrence are managed by Sustainability Coordinator, Eileen Horn. As a staff member shared between the city and county, she reports directly to the city manager and county administrator and works with department heads in both local governments to achieve sustainability goals and outreach to the community. This shared position has allowed her to streamline efforts and maximize value to both organizations, as she has

been able to apply and modify best practices across the two organizations.

Energy efficiency has been a key priority for the position since Horn entered the organization in 2009. There was a realization that no one had the top-down view to be able to track, monitor, and benchmark energy use for the county's eight buildings and the city's 75 facilities and 450 electric meters. Portfolio Manager, the U.S. Environmental Protection Agency's (EPA) online management and tracking tool for energy and water, was identified to provide this capability.

The county and city utilize Portfolio Manager in two distinct ways:

City-Level: The City of Lawrence has 75 facilities and 450 electric meters that monitor its facilities and amenities. Each department is billed separately, making it difficult to coordinate and manually enter in data. The city utilizes a fee-for-service tool that uploads data on the use of electricity, natural gas, diesel fuel, gasoline, and water for all building and meters. This tool is linked to Portfolio Manager to leverage its national benchmarking capabilities and obtain ENERGY STAR scores.

County-Level: In contrast, Douglas County monitors only eight buildings. This smaller number of buildings, the location of the county's centralized purchasing and billing office next door, and a full-time intern on staff to enter data make it feasible to use Portfolio Manager as a standalone tool. The

¹ <http://quickfacts.census.gov/qfd/states/20/2038900.html>

² <http://quickfacts.census.gov/qfd/states/20/20045.html>

building automation system within the county allows for real-time monitoring of energy use, which has given a close up view but no month-to-month tracking or indication of energy demand. Portfolio Manager has enabled them to fill this information gap.

One of the major benefits that this tool has offered is the ability to rank buildings in terms of priority to realize greatest opportunities for both cost and energy savings. In response to data trends, the city and county could recognize “energy hog buildings,” initiate professional audits and incorporate retrofits as appropriate. The enhanced capacity to strategically invest in energy saving measures resulted in cost-savings. For example, through tracking use, the staff noticed that significantly more energy was used in the City’s Lawrence Arts Center than in a comparable building. They proceeded to conduct an energy audit and decided to retrofit lighting with LEDs in the exhibit area. The full \$9,656 cost of upgrades is expected to be recovered in 2 ½ years through energy savings alone, with additional savings anticipated from reduced maintenance.

The City and County have used Portfolio Manager to increase transparency and engage both staff and the community in energy savings efforts. The ability to use data to set and meet energy savings goals has resulted in increased staff buy-in. When the City of Lawrence’s Climate Protection Task

Force came together in 2009, one of the key recommendations was to improve energy efficiency of buildings throughout the community, providing a model through their own city buildings first. Goals had been made with limited knowledge of what could realistically be achieved, so the data provided by the tracking tool guided goal modifications. This enabled staff to work together to figure out how to reach target numbers.

The ability to track energy use has been leveraged by the City of Lawrence to inspire staff and community engagement by introducing a fun and competitive edge into energy savings. In 2011, the City held the “Energy Smackdown,” a competition between the city’s five fire stations in a race to the bottom to decrease energy use. Each month for five months, reports on stations’ progress came out. Staff began to employ creative ways to reduce consumption, such as turning out the lights when rooms were occupied and plugging appliances into powerstrips. The winning station reduced its energy consumption by 20 percent, in contrast to the expected 3-5 percent reduction. In 2012, this successful contest was held again between the city’s three recreational centers with the winner achieving 12 percent reduction. Many energy-saving behaviors stuck long after the competitions ended, contributing to long-term positive gains towards greater efficiency.

Transparency has allowed city and county staff to



Using Portfolio Manager to Identify Energy Saving Opportunities

Tracking buildings’ energy usage has helped the community to identify which buildings require further study. Audits have been conducted on key facilities, including the building that houses United Way organizations. The energy audit identified a much-needed boiler replacement, which will save approximately \$3,400 per year in energy costs, a savings that can be passed directly to the 20+ nonprofits housed in that building.

increase the buy-in of elected officials and community members, as well as highlight sustainability achievements. In Douglas County, the capability to show measurable outcomes of success increased the commission's support of sustainability efforts, leading to the establishment of a revolving loan fund designated for sustainability activities. Dollars from this fund contribute to cost premiums of energy efficient upgrades, for example covering the cost difference for upgrading to a more fuel efficient fleet vehicle. This demonstrates Portfolio Manager's effectiveness as a tool for increasing confidence in decision-making for staff and policymakers. Additionally, ENERGY STAR's nationally recognized branding has helped to draw attention of community stakeholders.

"When we go to neighborhood groups and other organizations to talk about energy savings and say ENERGY STAR, they recognize the brand; so they know and understand the concept," Horn said.

Making the use of Portfolio Manager as transparent and shareable across the organization as possible has resulted in significant benefits to the organization. By training as many staff members as possible to use the tool, particularly those in maintenance and building, it has encouraged participation in initiatives and maximized capacity to identify energy-saving opportunities.

ENERGY STAR Portfolio Manager will continue to be utilized in Lawrence and Douglas County. Not only has it saved the city and county both money and resources, it has provided a way to engage staff and the residents in efforts towards meeting sustainability goals.

For more information about ENERGY STAR Portfolio Manager and other ENERGY STAR programs visit the website.

