

## COMMUNITY PARTNER

### WILL COUNTY, IL



#### **Implementation Model: Achieving Savings Without Significant Capital Investment**

##### **COMMUNITY SIZE**

Large Urban, Population 683,000

##### **GOAL**

To achieve energy reduction of 20% by 2020 throughout the County-owned portfolio from a 2009 baseline

##### **BARRIER**

Lack of access to capital due to short remaining useful life of building

##### **SOLUTION**

The County focused efforts on low cost energy conservation measures and launched an education and outreach program to provide Health Department staff the tools and information needed to reduce energy use

##### **OUTCOME**

The Health Department building achieved a 22% reduction in energy use between 2009 and 2012, achieving a payback period of less than five years. Staff is now supportive of and engaged in energy conservation, and the County has built on their success with the Health Department to work with additional County Departments

### Overview

In 2012, Will County joined the U.S. Energy Department's Better Buildings Challenge and pledged to reduce energy use in the County's building portfolio 20% by 2020 relative to a 2009 baseline. As a step

toward meeting this goal, a series of full service energy audits were completed on five County buildings, including its oldest, the Health Department, which was built in 1920. A number of opportunities for energy efficiency capital improvements were identified. However, the Health Department building was deemed ineligible for significant capital investment due to its short remaining useful life (RUL) expectancy of only five to ten years. Instead of capital intensive improvements, the County focused on low cost energy conservation measures and employee behavior change efforts in order to reach energy reduction goals.

## Will County's Playbook



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### Policies

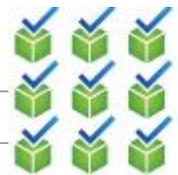
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In June 2012, the Will County Energy Efficiency and Conservation Plan (EE&CP), a product of the Will County Land Use Department, was adopted by the County Board. A 22-member public-private Task Force advised the development of the EE&CP, which identifies a set of energy management goals and actions, as well as strategies to achieve those goals. The goals identified include a 20% reduction in energy consumption in County facilities by 2020 and a 25% increase in the production and use of renewable energy by 2025 to support the State of Illinois in reaching its Renewable Energy Portfolio Standard.

To help meet the goals set forth in the EE&CP, the Task Force created the County of Will Energy Management Procedures (EMP), which addresses energy conservation and utilities management for County-owned buildings and facilities and distributed it to all County department heads to share with staff. These procedures provide detailed guidance on the approaches each department takes to support the reduction of energy consumption in Will County buildings and to sustain the County's commitment to environmental improvement. These Energy Management Procedures provide:

- Structured and accountable energy management.
- Fiscal accountability for energy use and conservation projects.
- Efficient, collaborative mechanisms for purchasing and delivering energy.
- Guidance for planned design, engineering, and construction projects.

As county-wide policy, the procedures are designed to support buildings and facilities managed under the County of Will by Facilities Management in improving energy consumption from fiscal year 2009 levels. System wide, these efficiency measures support a goal to reduce total consumption by 20% by 2020.



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### Process

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The County requested the University of Illinois Smart Energy Design Assistance Center to conduct a series of free, full service energy audits on five County buildings, including the Health Department. As a result, several opportunities for energy efficiency improvements were identified.

The 65,000 square foot Health Department building, however, did not meet the County's return on investment (ROI) criteria due to its short remaining useful life (RUL) and was therefore ineligible for capital-intensive efficiency upgrades that had payback periods greater than five years. The remaining useful life expectancy of buildings is determined based on the age, staff size, services provided, access, daily traffic volume, and overall condition of the building.

To ensure energy performance goals were met throughout the entire building portfolio, County officials developed non-capital intensive ways to reduce energy use in the Health Department building. The energy efficiency measures that met the five year payback criteria were installed. These included replacing T-12 fluorescent lights with 25W T-8s, installing motion and occupancy sensors throughout the building, retrofitting to LED exit signs, and installing computer energy management software. This project qualified for a 20% rebate through the Illinois Department of Commerce and Economic Opportunity, which helped to meet the ROI criteria. (Potential measures identified but not pursued due to their longer payback period included replacing the boiler, insulating steam lines, installing direct digital controls, and retrofitting exterior lighting.)

A staff engagement program was then initiated to promote energy saving behaviors. Two staff members representing the Land Use Department Resource Recovery and Energy Division (RRED), responsible for a portion of the County's energy efficiency projects, conducted the following employee educational and outreach activities to help the Health Department save energy and money.

First, the RRED staff briefed the Department Director and five Department Division Directors, considered key to successfully implementing the efficiency program as well as providing approval to conduct outreach to the staff. Because utility bills across the County are paid from a central general fund, individual departments do not see the cost savings of reduced energy use. Therefore, in the management meeting, County staff specifically talked about the total cost to operate the Health Department based on the building's energy [report card](#) and current usage on Portfolio Manager. The building energy report cards collected information on hour of operation, staff, and visitors from the public. The meeting also explained the EE&CP, EMP, the County's participation in the Better Buildings Challenge, and the need for the Health Department to operate more efficiently. The Health Department Director approved the program, and RRED staff left the meeting with plans to address the five individual departmental divisions.

Second, the RRED staff convened meetings with staff members from the five department divisions. The staff presentation highlighted County utility expenditures, day-to-day operation of the Health Department and the savings opportunities available through reduced energy use. RRED staff also introduced the County-wide green building competition. Each department was provided a [property identification card](#) to allow staff to inventory equipment and remove redundant items. This energy reduction strategy proved to be useful in conjunction with the EMP.

The EMP is a framework of guidance to ensure that the County of Will is operating, maintaining and repairing components of the utility system to attain optimum efficiency in energy use, while the property identification card engaged staff in making their workplaces more efficient. The property identification cards collected information on workplace equipment such as fans, water coolers, refrigerators, radios, space heaters, and even identified the types of plants and landscaping outside of the building.

An [Auditing for Success](#) form was also provided to help the department follow up on the changes each department's staff made to reduce energy usage and to ensure they were being followed. For example, four surplus refrigerators were removed from the building and computers

were set to enter sleep mode if not turned off every night. At the conclusion of the meeting, RRED staff signed up 26 staff members to participate in the County-wide Green Team. Additionally, approximately ten staff members were recruited to the Health Department's internal Green Team.

Third, the RRED staff convened monthly meetings of the internal Health Department Green Team. The internal team reports progress monthly to the County-wide Green Team, and RRED shares current energy usage information with the teams. Issues discussed include:

- Plans to reduce excess equipment;
- Options to improve comfort while removing unnecessary space heaters. Staff were also given a link for purchasing foot warming pads to replace the space heaters which were removed from the building;
- Reduction of printers and the induction of a sleep mode on personal computers; and
- Addition of a staff garden.

Fourth, RRED staff applied "lessons learned" from the Health Department experience to make their outreach to other County departments more impactful and successful. Take away insights included:

- Management buy-in is critical.
- Clearly articulating the benefits of energy efficiency in ways that are directly relevant to staff is key to changing behavior.
- Access to data is crucial. The ability to access data entered in Portfolio Manager allowed RRED staff to obtain actual energy usage metrics.
- Understanding the operations of a building and equipment requirements is important to finding sustainable solutions. For example, some of the Health Department computers are linked to specific federal or state programs and cannot be turned off at the end of the day.

Through enhanced education, implementation of the EMP, and creation of the internal green team, Health Department employees have the necessary information and tools to make visitors more aware of energy use when visiting the facility. The County plans to apply these techniques to other County buildings serving the public on a large scale.

Lastly, on a parallel track, RRED has been working to expand membership in the County-wide Green Team and increase stakeholder engagement by staff, managers, and elected officials. Green Team members help to identify and implement the conservation behaviors needed to augment the County's energy efficiency retrofits. The ongoing administration of the County-wide Green Team is handled by two staff members from RRED and requires approximately three hours per month of staff time. The initial meetings and recruitment at the Health Department required approximately 15 hours of staff time.

[If using a list, follow the format below]:



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## Tools and Resources

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- [Will County EEC Plan](#)
- [County of Will Energy Management Procedures](#)
- [Property Report Card](#)
- [Property Identification Card](#)
- [Auditing for Success](#)



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## Measuring Success

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The RRED provide annual energy performance updates from their building data collected and analyzed through the Better Buildings Challenge to all department heads and at the County-wide Green Team meetings. The reports include baseline and most recent year energy use intensity as well as percent change over time.



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## Outcomes

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The Health Department building achieved a 22% reduction in energy use between 2009 and 2012, achieving under a five year payback, without significant capital investment. Less than 5% is estimated to be from the low cost projects, with the majority of savings attributed to behavior change. The Health Department adopted the County's efforts to reduce energy use in the workplace. They used the property identification cards to inventory equipment and to scrap redundant pieces, reduced usage of space heaters and fans, and implemented a recycling program.

In addition, County staff gained insight into the operations of each division within the Health Department and a better understanding of the complexity of operations across County departments. This knowledge will better inform future actions that can be taken to encourage energy savings.

As of February 2014, the successes within the Health Department are serving as a model for other departments across the county. RRED met with the Chief of Staff and Operations Manager of the Community Health Center (separate from the Health Department) to begin the same process at their location. The County has authorized RRED to follow the same education and outreach strategy with the Community Health Center staff. RRED will also start this process at the County Courthouse.