

Bringing Sustainability to Cook County

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Cook County is the second most populous county in the United States, home to both the largest single-site jail and the second largest public health system in the nation. Under the leadership of Board President Toni Preckwinkle, Cook County is making significant investments in sustainability through an inventive approach to energy management and financing.

The new Residential Treatment Building on the Department of Corrections campus.



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Guaranteed Energy Performance Contracting

The largest single-phase project ever undertaken by a county, Cook County's Guaranteed Energy Performance Contracting (GEPC) initiative, will fund more than \$60 million in facility upgrades to the John H. Stroger, Jr. Hospital Campus and the Department of Corrections Complex without requiring a tax increase or depleting limited capital funds.

GEPC represents an innovative solution that responds to the County's need for energy management. Energy upgrades typically require additional expenditures from the County's budget, which may translate to increased taxes for residents or diverting limited capital away from other worthy projects. The GEPC model offers a financially and socially responsible way to address deferred building maintenance and capital improvements. By implementing vital energy conservation measures, the County's facilities will perform better, ensuring sustainability for years to come.

The GEPC initiative targets building energy use which accounts for 66% of the greenhouse gas emissions in Cook County. The jail and hospital facilities are the top two energy-consuming assets owned and operated by the County. As a result of these efforts, the County will realize approximately 20% reduction in emissions and more than 20% savings in energy use at those facilities.

The \$60 million in savings to the County's operating budget will pay for the improvements over a 20-year period, including the cost of financing. The savings are guaranteed by the Energy Services Companies (ESCOs) contracted for the work; if a shortfall occurs, the ESCO will reimburse the County. With GEPC, the energy savings will meet or exceed the implementation costs of facility upgrades.

Given the initial success of the GEPC initiative, investment-grade audits are under way at the County Building at 118 N. Clark, the Dunne Administrative Building at 69 W. Washington, Provident Hospital, four suburban courthouses and the Highway Department's maintenance facilities. If these projects move forward to implementation, 78% of the County's building square footage, representing 85% of the County's total energy consumption, will be under contract for major energy efficiency upgrades.

Qualified Energy Conservation Bonds

The County's GEPC projects at the Hospital System allowed the County to qualify for Qualified Energy Conservation Bonds (QECBs) which give state and local governments a low-cost financing option to fund energy conservation improvements. Use of these low cost bonds requires compliance with strict criteria. For example, the County must save over 20% of the energy usage in a facility to apply for the bonds. Consequently approximately, \$25 million of the County's GEPC project at Stroger Hospital is being financed by these bonds, offering the County an effective below-market interest rate of less than 1% on the financing. The County's QECB project is the second largest in Illinois.

QECBs were authorized for local governments by the federal government under the American Recovery and Reinvestment Act, the federal economic stimulus program. Funding from the program has been used to retrofit public buildings, power buildings with renewable energy and to improve public transit infrastructure.

Illinois Energy Now Public Sector Energy Efficiency Program

Cook County and its ESCO contractors are working closely with the Illinois Department of Commerce and Economic Opportunity to maximize the energy grant money available to the County through the Illinois Energy Now Public Sector Energy Efficiency Program. The Program offers public entities rebated incentives for natural gas and electric efficiency projects. The rebates are based on completed energy conservation measures.

From June 2013 through May 2014, Cook County has received over \$2.7 million in rebates or grants for energy conservation measures at the Department of Corrections Campus. An additional \$265,000 in rebates was received from Stroger Hospital Campus energy conservation measures. This includes five rebate applications for exhaust and filter systems (\$113,466), pumps at the Hospital's chilled water plant (\$82,800) and variable speed drives on pumps at the Hektoen building (\$26,956), as well as ventilation systems and lighting. Johnson Controls, an ESCO on the hospital project, estimates that an additional \$600,000 in rebates and grants will be obtained from June 2014 through May 2015.

**John H. Stroger, Jr. Hospital Campus:
Serving Cook County’s Neediest
Patients**

Thousands of people depend on the Cook County Health and Hospitals System and its facilities. The system is a safety net for the region’s most vulnerable residents. More than 320,000 patients were seen in 2012, and 70% were uninsured or underinsured.

Stroger Hospital is the system’s flagship facility. The 464-bed hospital is anchored by 228 medical/surgical beds, with dedicated units for obstetrics, pediatrics, intensive care, neonatal intensive care and burns. The hospital’s adult emergency room treats more than 110,000 patients annually, while the Pediatrics Emergency Room treats 45,000 children each year with a no-wait policy.

The \$26 million GEPC at the Stroger Hospital campus includes various energy conservation measures at John Stroger, Jr. Hospital, Ruth M. Rothstein Core Center, Robert Stein Institute of Forensic Medicine, Hektoen Building and the Stroger Powerhouse. Construction is scheduled for completion in December 2014 and will result in reducing energy consumption by 20% and greenhouse gas emissions by 19%.

**Department of Corrections Complex:
An Aging Infrastructure in Need of
Modernization**

The Cook County Department of Corrections (DOC) complex and other buildings identified by the County as part of this initiative are in urgent need of modernization. Many rely on outdated sys-



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tems which are inefficient and costly or impossible to repair.

The DOC complex includes the nation’s largest single-site county jail, as well as a healthcare facility, ten detainee divisions, courts, educational programs, a boot camp, on-site food service, central plant facilities and administrative offices for prosecutors, public defenders and the Sheriff’s Office. This complex, located on 96 acres in Chicago, houses an average of 9,000 detainees each day. The DOC’s facilities contain many building systems long past their useful life.

Many of the buildings are more than 40 years old and rely on original heating, ventilating and control systems. Six buildings are original to the site and more than 100 years old. Others were built in the 1970s when energy was cheap and efficiency was not a consideration. Most of the boilers were original equipment and are considered “energy hogs” by today’s standards.

The three-year, \$34 million project now under way at the DOC campus will improve building standards, increase energy efficiency and realize 20% energy savings and 22% greenhouse gas emissions reduction. The scope contains 17 energy conserva-

tion measures throughout the 22 buildings encompassing over 4 million square feet. The upgrades include replacing chillers, exchanging seven inefficient high pressure steam boilers with three high efficiency boilers, improving control systems, upgrading lighting, installing sub meters and a solar thermal renewable energy project. The ESCO will complete construction of the energy upgrades at the County’s jail facilities in December 2014.

The Energy Benchmarking Ordinance

This year, the Cook County Board of Commissioners passed its first-ever energy benchmarking ordinance. The Benchmarking Ordinance requires the County to track annual energy and water use of its buildings larger than 35,000 square feet. The Ordinance also requires that an annual report be issued to the President of the Cook County Board of Commissioners, and be available to the public.

With all of these improvements, Cook County is well on its way of meeting President Preckwinkle’s goal of being a “model of sustainability.” ◀

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