



Cities & Climate Leadership

Energy Efficiency for Municipal Facilities

THE OPPORTUNITY:

Energy used to heat, cool, and operate buildings and other stationary facilities represents one-half to three-quarters of community-level greenhouse gas emissions (GHGs). This makes energy efficiency in public facilities – including city and county offices, schools, police and fire departments, libraries, parks, and other municipally owned or operated buildings – one of the most impactful and immediate ways for local governments to cut carbon pollution.

Additionally, municipal energy efficiency saves taxpayer money that otherwise would pay for energy bills. Local government leadership can also encourage energy efficiency action in non-governmental buildings, which drives deeper, community-wide GHG reductions.

Energy efficiency isn't just for buildings of any single type or vintage. Older buildings can realize significant energy and cost savings by integrating efficiency improvements into planned maintenance and equipment upgrades. Even new, state-of-the-art facilities (including certified green buildings) often can reduce energy use by fine-tuning existing systems and operations to realize their full energy performance potential.

The American Council for an Energy-Efficient Economy has demonstrated that energy efficiency is far more cost-effective than business-as-usual, finding that each dollar invested in electric energy efficiency can produce \$1.25 - \$4.00 in total benefits.¹

MIDWEST MUNICIPAL ENERGY EFFICIENCY LEADERSHIP:

As of 2017, more than 100 local governments and public agencies across the US have committed to improving energy efficiency in municipal facilities by at least 20% through the US Department of Energy's Better Buildings Initiative. These commitments include leading Midwest cities, counties, and other public institutions in Des Moines (IA), Minneapolis (MN), Mankato (MN), Milwaukee (WI), East Lansing (MI), Chicago (IL), Cook County (IL), Freeport (IL), Will County (IL), Rockford (IL), McDonough County (IL), Fort Wayne (IN), Knox County (IN), Michigan City (IN), Indianapolis (IN), Cleveland (OH), Cuyahoga (OH), Lucas (OH), and Toledo (OH).² Through efficient planning and management, these facilities are saving money, reducing GHG emissions, and showcasing their results.

Some municipalities conduct efficiency improvements using internal planning, engineering and procurement resources, while others choose to partner with energy service companies (ESCOs) that provide a range of services like opportunity identification, engineering, financing, and contracting. Many ESCOs provide all-inclusive efficiency solutions that pay for themselves through energy savings over a specified time period.

¹ [*The Best Value for America's Energy Dollar: A National Review of the Cost of Utility Energy Efficiency Programs*](#). American Council for an Energy Efficient Economy – March, 2014.

² [*US Better Buildings Initiative*](#). US Department of Energy – June, 2017.

BENEFITS:

Improving energy performance in municipal facilities not only addresses a significant portion of local GHG emissions, but also reduces operating expenses and encourages similar investment in the private and nonprofit sectors. Specific benefits include:

- **Fewer GHG Emissions:** With local government facilities comprising up to seven percent of community energy use, improving public building efficiency can substantially reduce city- and county-wide carbon pollution.
- **Lower Operating Expenses:** Saving energy in municipal facilities reduces building operating expenses, demonstrating effective government stewardship of tax funds.
- **Improved Building Function and Comfort:** Building performance isn't limited to energy consumption; many of the same features that drive energy savings (such as daylighting, sensors, and temperature controls) also make working environments healthier and more comfortable for employees and visitors.
- **Supporting the Local Economy:** Because energy efficiency improvements often require onsite work, they are good opportunities to use local workers and expertise.
- **Leading By Example:** By making a serious commitment to improving energy efficiency, municipalities can catalyze investment in commercial, industrial, and residential buildings, while earning national recognition for their efforts.

About the Environmental Law & Policy Center:

The Environmental Law & Policy Center (ELPC) is the Midwest's leading public interest environmental legal advocacy and eco-business innovation organization.

Since 1993, ELPC has developed and led successful strategic advocacy campaigns to improve environmental quality and protect our natural resources.

ELPC works with utilities and public utility commissions across the Midwest to create the best possible programs and strategies to reduce electricity demands and costs.

Our energy team also works to ensure that the strongest possible energy efficiency policies – such as Energy Efficiency Performance Standards or energy efficient building codes – are in place at the local, state and federal levels.

Please visit www.ELPC.org for additional information.



OVERCOMING CHALLENGES:

Because individual facilities vary in design, space uses, operating characteristics, and equipment, seizing municipal energy efficiency opportunities requires deliberate commitment and follow-through. It's no secret that resource constraints, unfamiliar equipment or procedures, and special building attributes (including historical landmarks, accessibility features, or leasing arrangements) can get in the way of public sector efficiency ambitions. Furthermore, changing deeply entrenched facility management and operating practices may call for sustained education, incentives, and feedback.

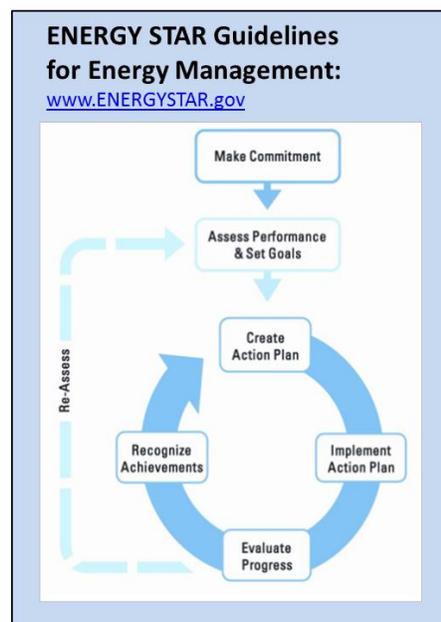
Fortunately, energy efficiency measures include no- and low-cost improvements, as well as incremental efficiency investments that offer rapid payback when combined with scheduled maintenance and equipment replacement. Many behind-the-scenes energy interventions achieve big savings with no negative impact on building facades or functionality, and energy-aligned leases help ensure that the public sector can benefit from energy efficiency as a

building owner or tenant. Municipal governments can also take advantage of new diagnostic tools, proven technologies, and well-established conservation tactics. By generating reliable, predictable cost savings, energy efficiency investments create opportunities to use private capital, shared savings contracts, or revolving energy efficiency funds (in addition to traditional infrastructure financing tools).

TAKING ACTION:

Municipal governments often have direct ownership or operating control over public facilities, which positions them well to take immediate action. Beginning with a commitment to measure building performance, improve efficiency, and track progress on an ongoing basis, municipalities can take the following steps to reap environmental and economic rewards:

1. Collect data on municipally-owned and operated facilities: To inform efficiency commitments and action, local governments should gather basic information on public buildings, including square footage, space uses, building systems and equipment, existing energy procurement contracts, and historical energy use.
 - Free tools like ENERGYSTAR Portfolio Manager (www.ENERGYSTAR.gov/PortfolioManager) and other energy management software make it easy to baseline energy consumption and draw apples-to-apples performance comparisons.
2. Conduct initial energy assessments: Basic energy assessments can be completed by facility engineers or outside companies; many Midwest energy utilities offer free assessments through state efficiency programs.
3. Identify and implement specific facility-level efficiency measures: Based on initial assessments, municipalities and contractors can prioritize facilities for specific operational and equipment improvements, including lighting, heating and A/C, ventilation, scheduling, automation systems, recommissioning, monitoring-based management, and other measures.
4. Explore energy efficiency financing options: In addition to traditional bonding, borrowing, and capital planning, public entities should consider the full-range of available efficiency funding opportunities, including utility rebates, energy performance contracts, group purchasing, and public-private financing partnerships.
5. Benchmark and publish facility-level building energy performance: By tracking and publishing building-level energy performance on an annual basis, local governments can highlight progress and create shared accountability for meeting economic and environmental goals across governmental agencies and other sectors.



After reducing energy consumption, municipalities that have already achieved high levels of energy efficiency can track performance across buildings and over time and take credit for both environmental and economic leadership.