



**MIDWEST CLIMATE CITIES TOOLKIT**

# Energy Efficiency for Municipalities

Energy efficiency is a reduction in energy use by buildings, systems, and appliances. In the United States, approximately two thirds of greenhouse gas emissions come from buildings. Energy efficiency is thus a critical measure for environmental conservation, as well as social and economic growth. It presents both residential and commercial benefits, but it has the largest impact on a municipal scale. By minimizing waste, municipalities can reduce energy usage with no reduction in the quality of outputs. With energy efficiency, municipalities will be able to protect the wellbeing of their communities by reducing their carbon footprints while also saving money.

## Benefits of Energy Efficiency

Midwest municipalities have the opportunity to lead in climate resilience. They have a fiscal and social responsibility to take care of their residents, and they can continue to do so by applying energy efficiency measures. By investing in reducing energy waste, municipalities will be able to save money and improve quality of life in the long term. Without having to make personal sacrifices or changing behavior, energy efficiency effectively increases productivity, decreases strain on utilities, and advances climate goals.

*Investing in energy efficiency can benefit municipalities in many ways.*

### **COST SAVINGS**

Efficiency improvements reduce overall energy use, thus lowering energy bills. After time, the cost will be offset by these savings. Additionally, decreased demand for energy services across markets can help reduce energy prices.

### **CLIMATE GOALS**

As cities in the Midwest develop ambitious plans to help combat climate change, energy efficiency provides a viable method to reduce carbon emissions. Efficiency reduces the use of our natural resources and the use of all utilities including electricity, water, and gas.

### **PRODUCTIVITY**

Installing efficient systems and appliances increases production yields per unit of input and reduces operation maintenance costs over time. Research suggests that energy efficiency leads to a positive change in GDP and has other macroeconomic benefits.

### **INCREASED INDEPENDENCE**

Energy efficiency reduces dependence on imported fossil fuels and other natural resources by reducing overall energy consumption. This can strengthen regional (and national) energy security.

### **HEALTH**

Optimizing heating, cooling, and ventilation systems will promote healthy humidity levels, comfortable temperatures, and proper ventilation indoors, which lowers the risk of illnesses and mold growth. Energy efficiency measures will also help to reduce airborne toxins and pollutants, which will help to alleviate respiratory problems. Additionally, efficient systems draw fewer resources from utilities, thus contributing to reduced emissions into our air and water.





## Moving Forward with Energy Efficiency

### 1. Create a Goal

Publicly announce your municipality's dedication to energy efficiency. Pass an ordinance or resolution in alignment with your sustainability objectives.

- Efficiency Plan examples: [Cook County \(full download\)](#), [Will County](#), [Kane County](#), [Wood County](#)
- EPA's report of [Best EE Program Practices](#)

### 2. Learn about financial incentives and regulations in your state

State and federal tax breaks and subsidies encourage energy efficiency implementation.

- [U.S. Dept. of Energy \(DOE\) List of Federal and State Incentives](#) and [Database of State Incentives for Renewables & Efficiency](#)

### 3. Identify Inefficient Building Systems, Compare Long-term Costs with Efficient Replacements

Determine the cost and benefits of retrofitting existing residential buildings with an energy audit. Heating, cooling, envelope, water, lighting, materials/products, and building appliances can all benefit from efficiency improvements. Common efficient technologies include improved insulation, high efficiency appliances, smart thermostats, solar panels, and CFL lighting.

- [Energy & Cost Savings Calculator](#) (U.S. DOE) and [Remodeling Valuation Tool](#) (independent)
- [Energy Star](#) Certified [Product Finder](#) and [Rebate Finder](#)

### 4. Establish New Building Standards

Develop municipality-specific green building standards and/or require LEED certification for future building projects. In addition to energy efficiency, "green buildings" may include water conservation strategies, use of recycled materials, and indoor air quality standards.

- [LEED Green Building Certification](#) and [Energy Star Certified Buildings](#)

### 5. Engage with the Community

Open a dialogue with community stakeholders to ensure that your plan is equitable and attainable.

- [Energy Efficient Homes](#)

### 6. Implement, Upgrade, & Install

Once a budget is determined and allocated, you should begin to make efficiency updates in government facilities. Then, encourage efficiency in the residential, commercial, and industrial sectors.

- [Sample Implementation Plan](#)

### 7. Maintain and Renew your Plan and Energy Efficiency Systems

In order for efficiency to be effective, you must update to reflect changing environmental standards.

### *Still want to learn more?*

- The International Energy Agency has up-to-date resources for efficiency implementation and information about its [many benefits](#). Click here for the [2020 Energy Efficiency report](#).
- Read through the EPA's full report on [The Multiple Benefits of Energy Efficiency](#).
- Get the rundown from [this web resource](#) and details of municipal efficiency from [this paper](#).

