

ENERGY EFFICIENCY IN BUILDINGS

THE KEY TO EFFECTIVE AND EQUITABLE CLEAN ENERGY ACTION FOR CITIES



Cities across America are making ambitious commitments to achieving 100% clean energy and steep reductions in greenhouse gas emissions. The challenge now is to fulfill these commitments in a technically sound, cost-effective, and equitable way. Reducing energy use in buildings is a vital and necessary part of meeting this challenge.

- **Energy efficiency makes the scale-up of renewable energy more feasible and less risky.** Scaling up renewable energy requires new equipment and facilities for generation, transmission, distribution, storage, and controls. Energy efficiency (EE) reduces the amount of new equipment and infrastructure needed, helping cities get to their clean-energy targets faster, cheaper and with less uncertainty.

EE also simplifies the challenge of ensuring grid reliability. Because solar and wind energy are intermittent and location-dependent, scale-up can lead to mismatches between demand and available supply. EE can minimize the need for fossil energy to fill gaps, hasten the retirement of coal-fired and gas-fired plants, reduce price volatility, and limit the vulnerability of our energy systems to disruptions.

- **Energy efficiency makes climate action more cost-effective for both city governments and citizens.** In terms of both city and family budgets, a local focus on EE is likely to be much more cost-effective than a narrow emphasis on credits or purchase agreements for renewable electricity generated remotely.

In developing its plan to get to 100 percent clean energy by 2035, the City of Atlanta analytically determined that an approach emphasizing investment in local clean energy potential, including expanded EE, would return roughly *\$41 in local benefits for every \$1 spent*, as opposed to \$0 in local benefits and a negative benefit-cost ratio for a scenario emphasizing out-of-area renewable energy credits. In the local clean energy scenario, benefits would include an increase in local incomes by more than \$1 billion, reduction in health costs of city residents by \$635 million, and reduction in electricity bills by about 55 percent for program participants. *More than 90 percent of the cited benefits would come from energy savings through EE.* [Source: Clean Energy Atlanta]

- **Energy efficiency makes climate action more equitable.** Nationwide, on average, low-income households pay 7.2 percent of their income on utilities—*more than three times what higher-income households pay*. This disproportion arises not only because low-income families have less to spend, but also because their homes tend to be older and inefficient. Focused efforts to implement EE in economically vulnerable neighborhoods can help relieve this energy burden, thereby boosting equity while also supporting city climate action goals.

ENERGY EFFICIENCY IN BUILDINGS

THE KEY TO EFFECTIVE AND EQUITABLE
CLEAN ENERGY ACTION FOR CITIES

- **Energy efficiency creates local jobs.** EE is labor intensive, driving the creation of local jobs in construction, renovation, installation, operations and maintenance. Purchasing renewable power transmitted from distant sources sends money away from the community and does not create these jobs. According to the *2019 U.S. Energy and Employment Report*, EE produced more new jobs in the United States in 2018 than any other energy sector, and accounted for more than 2.3 million jobs overall, as compared with about 534,000 in renewable energy and about 200,000 in coal.

Dozens of cities already recognize the advantages of prominently including energy efficiency in buildings in their climate action plans. Efficiency works. It pays. It is the foundation for smart city climate action, leading to a greener, more prosperous, more equitable future for all.

Recommended City Actions on Energy Efficiency

- Include EE policies and programs in your city's clean energy plans.
- Before and after your city adopts a clean energy plan with these elements, focus on making the case to elected officials to follow through with needed legislation and budget support.
- If your city is considering long-term power purchase agreements or community choice aggregation, first apply integrated planning to determine how EE and demand management could reduce costs and technical complexity. Also consider potential job and equity benefits.

- Identify and implement policies and programs to improve EE in buildings.

Policies on building energy performance

- Require benchmarking and transparency of building energy performance
- Strengthen enforcement of building energy codes for new and renovated buildings
- Implement building energy performance standards for existing buildings

Programs to enhance EE in buildings

- Maximize the EE of the city's own buildings
- Develop integrated programs and policies that will simultaneously make homes healthier, more comfortable, more resilient, and more efficient for the benefit of low-income residents
- Offer support for energy audits and retuning

Financial benefits and access for building owners

- Issue challenges and incentives to boost EE in buildings
- Create programs to increase the availability of financing for increasing EE
- Apply green leasing to maximize EE of tenant-occupied buildings

Outreach and partnerships

- Promote EE among residents via informational outreach and incentives
- Establish partnerships with your local utility in designing and implementing these programs, as well as rate structures that encourage efficiency, load-shifting and building-grid integration

For more detailed information on designing and implementing these approaches, please see the City Energy Project Resource Library at <https://www.cityenergyproject.org>, or contact the Institute for Market Transformation at www.imt.org.