Policy objective: Reducing energy use and decreasing greenhouse gas emissions

Reductions in home energy use and greenhouse gas emissions can be achieved in a variety of ways, including through modifications to improve the efficiency of existing structures and standards and building techniques that promote better energy performance in new homes.

Homes that use less energy and have lower levels of greenhouse gas emissions generally make it possible for the tenants or owners to have lower utility bills. For low-income families and individuals and in areas with harsh climates, potential utility bill savings can have a major impact on the household budget. Buildings that are poorly insulated or have leaky windows or doors also tend to be cold in the winter and hot in the summer, and in extreme cases can expose residents to unsafe conditions. Steps to improve energy performance generally address these issues as well and result in a more comfortable living environment.

Reductions in energy use and greenhouse gas emissions can also be achieved by reducing the number and length of residents’ car trips from their home to their workplace or other destinations. Increasing the number of trips that can be taken with public transit helps to limit reliance on private vehicles, and also can provide a more affordable alternative to car ownership. (For additional guidance see the related brief,
Expanding access to public transit. Land use and zoning changes that promote higher-density, mixed-use development help to create walkable neighborhoods that reduce the need for residents to drive to take care of daily activities. (For additional guidance see the related brief, Encouraging mixed-use development.) Similarly, expanding the availability of affordable housing near job centers and public transit stations can help to reduce the length of necessary car trips. And while not their primary objective, employer-assisted housing programs may also help to reduce greenhouse gas emissions by creating affordable opportunities for workers to live closer to their job site and reduce their commuting distance.

Reduce energy use and decrease greenhouse gas emissions using the housing policy toolkit
Local jurisdictions can use several approaches to support reductions in residential energy use and greenhouse gas emissions.

- **Adopt energy-efficiency standards designed to reduce energy use.** Just as building codes specify standards for various systems in residential and other structures, energy-efficiency standards establish baseline requirements for energy performance in new buildings. Energy standards may also apply to existing homes, with compliance linked to a triggering event such as a major rehab or sale of the home. Compliance with energy standards can add substantially to the upfront cost of building and rehabbing a home or multifamily building, and communities should consider the size of the upfront expenditure as well as the payback period of potential upgrades (i.e., the length of time before savings on utility bills resulting from improvements in energy efficiency cancel out the cost of the upgrade) in deciding if and how to impose new requirements.
- **Provide financial assistance for energy-efficiency retrofits.** Older homes—whether single-family dwellings or multifamily buildings—are most likely to need updates to improve energy performance, but the owners of these homes may lack the resources to make upgrades. Even relatively modest measures like sealing gaps around windows and doors or installing insulation in walls can have a significant impact on energy use. Local jurisdictions can provide financial assistance to help cover the cost of these and other modifications.
- **Make regulatory changes that indirectly reduce home energy consumption.** Through revisions to the zoning code and other land use policies, local jurisdictions can facilitate the construction of smaller homes that require less energy to heat and cool.
- **Facilitate and promote mixed-use development and transit-oriented development.** Through revisions to the zoning code and other land use policies, local jurisdictions can make it easier to create mixed-use and higher density development that allows residents to make more trips on foot, by bike, or via public transit and shortens the
length of necessary car trips. Communities can also use zoning and housing subsidies to facilitate the development of higher density housing near public transit stations that includes housing affordable to people with a range of incomes, including low- and moderate income households, facilitating access to and use of public transit.

- Through zoning, incentive and subsidy policies, *expand the supply of housing* located in close proximity to job centers and ensure the housing includes units affordable to low- and moderate-income households. This will reduce the length of the car trips that workers need to take to get to work.

This exhibit describes how policy tools in the Housing Policy Library can be used to reduce energy use and decrease greenhouse gas emissions. The policies listed here are illustrative options within each category.

I. Create and preserve dedicated affordable housing units
**Logic/mechanism:**
Housing trust funds and other sources of local funding can be used to support energy-efficiency upgrades.

A range of policies can be used to create and preserve dedicated affordable housing near public transit stations and job centers.

Employer-assisted housing programs can create opportunities for residents to live closer to their workplace.

**Specific policies:**
Set aside a portion of [housing trust fund](#) awards to help cover the cost of energy-efficiency upgrades for eligible homeowners and landlords.

Adopt policies to support [targeted efforts to create and preserve dedicated affordable housing in gentrifying or resource-rich areas](#) near public transit stations and job centers. Specific tools include [inclusionary zoning policies](#) and incentives such as [density bonuses](#), [reduced parking requirements](#), and [expedited permitting for qualifying projects](#).

Prioritize projects located near transit or job centers when allocating subsidies to support development of affordable rental housing, including [general obligation bond proceeds](#), gap financing for [Low-Income Housing Tax Credit projects](#), and [capital subsidies](#).

Support [shared equity homeownership](#) and creation of other affordable homeownership opportunities in areas with access to public transit and/or job centers.

Create an [employer-assisted housing](#) program for public employees or recruit and support private companies implementing their own programs.
### II. Promote affordability by reducing barriers to new supply

**Logic/mechanism:**
Policy tools that facilitate development of higher-density and lower-cost housing types may also support the creation of homes that consume less energy.

**Specific policies:**
Revise zoning codes to allow for higher residential density and mixed-use development that includes a residential component in areas near public transit stations.

- Revise building codes to streamline the development process for buildings that include features intended to reduce energy use.

- Enact zoning changes to facilitate the use of smaller, lower-cost housing types like accessory dwelling units and micro-units.

### III. Help households access and afford private-market homes

**Logic/mechanism:**
Energy-efficiency standards and programs to support energy-efficient retrofits help to improve energy performance throughout the housing stock as well as lower out-of-pocket operating costs.

**Specific policies:**
Provide support for energy-efficient retrofits to enable lower-income households to make upgrades.

- Adopt energy-efficiency standards for building systems and components that reduce energy use and greenhouse gas emissions in new and existing homes.

### IV. Protect against displacement and poor housing conditions
**Logic/mechanism:**
Housing and building codes can include provisions to promote reduced energy use and greenhouse gas emissions.

Weatherization and homeowner rehab assistance programs make resources available to help lower-income households make energy-efficiency retrofits.

**Specific policies:**
Provide [tax incentives](#) and [access to capital](#) to enable owners of unsubsidized affordable rental properties to undertake energy-efficiency upgrades.

Consider opportunities to promote improved energy performance through changes to [housing and building codes](#).

Create a [homeowner rehabilitation assistance program](#) that includes measures to reduce energy use while improving home safety and quality.

Implement a [weatherization assistance program](#) focused on reducing energy use in existing homes.

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**Combining policies to reduce energy use and decrease greenhouse gas emissions**
The policies highlighted in the exhibit can be used in combination, as illustrated in the following scenario.

A city administers a program that helps low-income households pay their utility bills. In recent years the program has been increasingly oversubscribed and the city decides to take steps to help reduce home energy use, in hopes of reducing pressure on the program and the burden that high utility bills take on household budgets. As a first step, housing department staff review the local housing trust fund guidelines and expand the eligible uses for homeowner rehab assistance to include home modifications that support improved energy efficiency. When setting goals as part of the process of updating the Consolidated Plan required for HUD grant programs, housing staff propose to use HOME and CDBG funds to support energy efficiency improvements and preservation of affordable housing near public transit service.

The city already administers a homeowner rehabilitation assistance program that
helps low-income homeowners improve the safety and quality of their homes. To improve the effectiveness of the program, the city prepares consumer education materials that help homeowners understand how they can make the most of energy efficiency upgrades (e.g., regular maintenance of appliances) and avoid behaviors that undermine efficiency improvements (e.g., opening the window when a room gets too hot, rather than turning down the heat). The city also arranges for program staff to receive training on how to perform basic home energy audits, so they can assess opportunities to reduce energy use as part of their routine inspections and make referrals to the state Weatherization Assistance Program when appropriate.

Finally, the city revises the zoning rules for areas within ¼ mile of the city’s public transit stations to provide for increased density, a greater mix of residential and non-residential uses, and the mandatory inclusion of a minimum share of affordable housing within new development.

See also:
- Policy objective: Expanding access to public transit
- Energy-efficiency standards
- Energy-efficiency retrofits