

sustainabilityprogram

REUSE > REINVEST > RETROFIT > RESPECT

“We can’t build our way out of this climate change crisis, we must conserve our way out.”

- Richard Moe, President Emeritus, National Trust for Historic Preservation

Preservation’s Essential Role in Addressing Climate Change

The construction and operation of buildings accounts for more than 40% of the United States’ carbon dioxide emissions. But reusing and retrofitting our existing buildings can reduce these emissions dramatically. In fact, our existing buildings are one of our greatest renewable resources.

Through our Sustainability Program, the National Trust for Historic Preservation is focusing the nation’s attention on the importance of reusing existing buildings and reinvesting in older and historic communities as critical elements in combating climate change. Americans already embrace as common sense the need to recycle aluminum cans, glass and newspapers. We advocate applying that same common sense to our built environment.

We don’t discount the value of new, green construction – in fact many green technologies can and should be applied to existing buildings to improve performance. But new construction – no matter how green – still uses energy and other natural resources and generates construction waste that clogs landfills. Through its research, the National Trust’s Sustainability Program is demonstrating that conservation and improvement of our existing built resources are environmentally logical and economically viable elements in combating climate change. *See the reverse of this sheet for the facts.*

Sustainable Stewardship of our Buildings and Communities - Guiding Principles:

- **Reuse** existing buildings: Use what you have. The continued use of our existing buildings reduces the amount of demolition and construction waste deposited in landfills, lessens unnecessary demand for energy and other natural resources and conserves embodied energy (the amount of energy originally expended to create extant structures).
- **Reinvest** in our older and historic communities: Older and historic communities tend to be centrally located, dense, walkable, and are often mass-transit accessible – qualities celebrated and promoted by Smart Growth advocates. Reinvestment in existing communities also preserves the energy embedded in infrastructure, such as roads, water and sewer lines.
- **Retrofit** our existing building stock: Many historic and older buildings are remarkably energy efficient because of their site sensitivity, quality of construction, and use of passive heating and cooling, while other buildings require improvements to reduce their environmental footprint. Historic buildings can go green without compromising historic character.

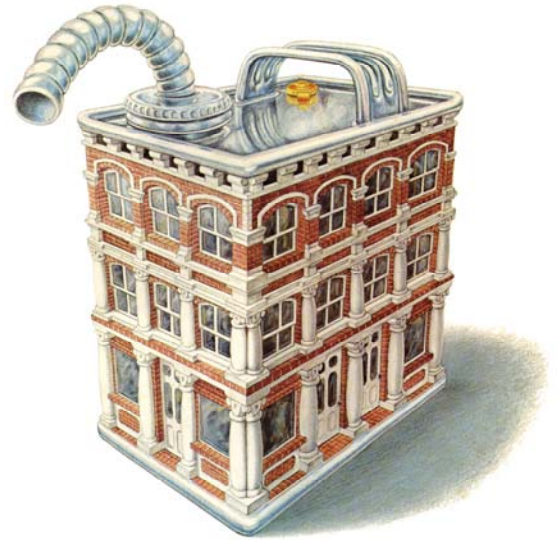
Our Commitment

- **Develop State and Local Policies to Support Historic Preservation as Sustainable Development:** Through our Preservation Green Lab, the National Trust will work with several cities to develop model policies that encourage preservation as sustainable development. This work will include refining building, energy and zoning codes, as well as developing model language for comprehensive plans and climate action plans.
- **Ensure Federal Policy Supports Reuse and Retrofits of Older and Historic Buildings:** With a new Administration and new Congress, there is unprecedented opportunity to focus national attention and resources on reusing and retrofitting existing buildings to meet carbon dioxide reduction targets, and to provide new green jobs. The National Trust is working to strengthen federal historic tax credits for rehabilitation, as well as expand existing tax credits for green retrofits of older and historic buildings.
- **Empower Preservationists:** The National Trust will provide our members -- from homeowners to professionals - with the tools they need to incorporate green practices into their historic homes and buildings. This will include development and dissemination of best practices and other guidance for greening older and historic buildings.

The Facts: Why Our Existing Buildings and Neighborhoods Matter

The Costs of Building Construction and Demolition

- The United States is responsible for 22% of the world's greenhouse gas emissions, though we have only 5% of the world's population. According to the Pew Center on Climate Change, the operation of buildings accounts for 43% of carbon emissions in the United States. The environmental impact of buildings is even more significant when we take into consideration the greenhouse gas emissions associated with manufacturing building materials and products.
- It takes a lot of energy to construct a building - for example, building a 50,000 square foot commercial building requires the same amount of energy needed to drive a car 20,000 miles a year for 730 years.
- We are much too inclined to think of our buildings as disposable, rather than a renewable resource. A 2004 report from the Brookings Institution projects that by 2030 we will have demolished and replaced **82 billion square feet** of our current building stock. Since it is estimated that there are about 300 billion square feet of space in the United States today, that means we anticipate **demolishing nearly 1/3 of our building stock** in the next 20-25 years.
- It will take as much energy to demolish and reconstruct 82 billion square feet of space (as predicted by the Brookings study) as it would to power the entire state of California - the 10th largest economy in the world with a population of about 36 million people - for **10 years**.
- If we were to rehab even 10% of this 82 billion square feet, we would save enough energy to power the state of New York **for well over a year**.
- Construction debris accounts for 25% of the waste in the municipal waste stream each year. Demolishing 82 billion square feet of space will create enough debris to fill **2600 NFL stadiums**.



Energy Efficiency of Historic and Older Buildings

It is often assumed that older and historic buildings are “energy hogs” and that it is more environmentally friendly to demolish these buildings and construct new energy efficient buildings than to preserve these existing buildings. However, recent work indicates otherwise.

- A recent study from the United Kingdom's Empty Home Agency finds that it takes between 35 and 50 years for a new, energy efficient home to recover the carbon expended to construct the house.
- Far from being energy hogs, some historic buildings are as energy efficient - or more so - than buildings constructed in later decades. Data from the U.S. Energy Information Agency finds that buildings constructed before 1920 are actually more energy-efficient than those built at any time afterwards - except for those built after 2000.
- In 1999, the General Services Administration examined its building inventory and found that utility costs for historic buildings were 27% less than for more modern buildings.
- Not all historic and older buildings are as sustainable as they should be - indeed, many are not. But an increasing number of case studies demonstrate that historic buildings can go green. The National Trust Lincoln Cottage Visitors Education Center in Washington D.C. is just one such example. LEED certification is anticipated for this rehabilitation project in spring 2008.