

# NATIONAL TRUST FOR HISTORIC PRESERVATION®

## 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. In the United States, building construction and operations account for **48% of Greenhouse gas emissions**.
- 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 10<sup>th</sup> 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 **2500 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.

- Recent calculations indicate that it takes about **65 years** for an energy efficient new building to save the amount of energy lost in demolishing an existing building.
- 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.

Learn more at [www.nationaltrust.org/green](http://www.nationaltrust.org/green)