



Highlights of GAO-07-654, a report to congressional addressees

June 2007

## ENERGY EFFICIENCY

# Important Challenges Must Be Overcome to Realize Significant Opportunities for Energy Efficiency Improvements in Gulf Coast Reconstruction

### Why GAO Did This Study

Following several hurricanes in 2005, the need to rebuild and repair destroyed and damaged homes and buildings in the Gulf Coast region may create opportunities for making energy efficiency improvements and realizing energy cost savings. While numerous federal agencies are involved in the recovery process, the Department of Housing and Urban Development (HUD) and the Department of Energy (DOE) interact with the states on a regular basis regarding matters of energy efficiency. This report, initiated under the authority of the Comptroller General of the United States, examines (1) the extent of opportunities for incorporating energy efficiency improvements in the Gulf Coast reconstruction, (2) potential challenges to realizing the energy cost savings during the reconstruction, and (3) the role of HUD and DOE in promoting energy efficiency in the rebuilding of the Gulf Coast.

GAO limited the scope of its work to Louisiana and Mississippi since these states experienced the majority of the hurricane damage. GAO assessed opportunities for incorporating energy efficiency measures by conducting site visits and interviewing federal, state government officials; home builders; and energy efficiency experts. GAO also worked with a DOE national laboratory to develop energy cost savings estimates. GAO is making no recommendations.

[www.gao.gov/cgi-bin/getrpt?GAO-07-654](http://www.gao.gov/cgi-bin/getrpt?GAO-07-654).

To view the full product, including the scope and methodology, click on the link above. For more information, contact Mark Gaffigan at (202) 512-3841 or [gaffiganm@gao.gov](mailto:gaffiganm@gao.gov).

### What GAO Found

Reconstruction in the Gulf Coast creates a significant opportunity for incorporating energy efficiency improvements that could produce long-term energy cost savings in residential and commercial buildings. The sheer magnitude of the reconstruction effort and Louisiana's and Mississippi's recent adoption of more energy-efficient building codes makes this an opportune time for incorporating energy efficiency improvements in the rebuilding efforts. In partnership with a DOE national laboratory, GAO analyzed energy cost savings opportunities and estimated that adopting these newer building codes could reduce residential energy costs in these two states by at least \$20 to \$28 million per year, depending on the extent of the rebuilding efforts in these states. Furthermore, the analysis also showed that annual energy expenditures for commercial buildings—hospitals, schools, offices, and retail buildings—built to newer energy standards could be about 7 to 34 percent lower than buildings built to older standards. There also are opportunities for consumers to make additional energy efficiency improvements to both building types by replacing old, damaged equipment.

There are three substantial challenges to realizing the energy cost savings opportunities presented by the Gulf Coast reconstruction: (1) the shortage of a skilled construction workforce, and specifically, the shortage of workers trained to meet the newer building codes; (2) the lack of trained building code inspectors to ensure compliance with newer building codes in Louisiana and Mississippi; and (3) the difficult financial issues facing consumers, such as the sufficiency of insurance and other compensation payments, that may make decisions about energy efficiency a low priority. States have efforts under way to address many of these challenges and it will take time and sustained commitment for them to be successful.

The rebuilding of the Gulf Coast is largely a state and local matter, but HUD and DOE have played a supportive role in promoting energy efficient rebuilding. HUD and DOE have provided financial and educational resources that can encourage energy efficient rebuilding, and both agencies have broader national programs that may support energy efficiency improvements in the rebuilding of the Gulf Coast. HUD has made \$16.7 billion in funding available for general rebuilding purposes, such as restoring damaged housing, and allows states to determine how to spend these funds, including using them for energy efficient improvements. HUD also has several national initiatives that may directly improve the energy efficiency of the public housing stock in Gulf Coast states. DOE has sponsored education and training on energy efficiency issues to state and local officials, private industry, and consumers in Louisiana and Mississippi. As part of its nationwide effort to assist all states with energy efficiency initiatives, DOE provides grants to states to design and carry out their own energy efficiency programs. DOE's energy expertise as well as HUD and DOE resources may prove valuable to the states and consumers as they make decisions about energy efficient rebuilding in the Gulf Coast.