



Highlights of [GAO-08-977](#), a report to congressional requesters

## Why GAO Did This Study

The federal government is the nation's single largest energy consumer, spending approximately \$17 billion in fiscal year 2007. A number of statutes and executive orders have established and revised goals directing agencies to reduce energy consumption and greenhouse gas emissions—such as carbon dioxide, which results from combustion of fossil fuels and natural processes, among other things—and increase renewable energy use. GAO was asked to determine the extent to which (1) federal agencies met energy efficiency, greenhouse gas emission, and renewable energy goals in fiscal year 2007; (2) federal agencies have made progress in each of these areas in the recent past; and (3) six selected agencies are poised to meet energy goals into the future. For this review, GAO, among other things, conducted site visits for six agencies and reviewed the Department of Energy's (DOE) annual reports to Congress on federal energy management.

## What GAO Recommends

GAO recommends that DOE (1) reevaluate the current measure for greenhouse gas emissions and establish one that more accurately reflects agencies' performance in reducing these emissions, and (2) finalize and issue guidance for agencies' use in developing long-term plans that contains key elements for meeting current and future energy goals. GSA, NASA, and USPS concurred; VA neither agreed nor disagreed; and the other agencies did not comment.

To view the full product, including the scope and methodology, click on [GAO-08-977](#). For more information, contact J Mark Gaffigan at (202) 512-3841 or [gaffiganm@gao.gov](mailto:gaffiganm@gao.gov), or Terrell G. Dorn at (202) 512-2834 or [dort@gao.gov](mailto:dort@gao.gov).

# FEDERAL ENERGY MANAGEMENT

## Addressing Challenges through Better Plans and Clarifying the Greenhouse Gas Emissions Measure Will Help Meet Long-term Goals for Buildings

### What GAO Found

Based on draft DOE data, most of the 22 agencies reporting to DOE for fiscal year 2007 met energy goals for energy efficiency, greenhouse gas emissions, and renewable energy. Specifically, all but one agency met the energy efficiency goal. Three of these agencies would not have met the goal through reductions in energy intensity—the amount of energy consumed per gross square foot—alone; they also used credits for the purchase of renewable energy or source energy to help meet the goal. Because the greenhouse gas emission goal is tied to the energy efficiency goal, the same number of agencies met the greenhouse gas emission goal, while 17 of the 22 agencies met the renewable energy goal.

Determining the extent to which agencies have made progress over time toward the goals is problematic due to key changes in the goals—as specified in statute and executive order—and how progress is measured. For example, the energy efficiency goal changed the types of buildings included and the baseline year against which progress was measured. The greenhouse gas emissions goal also changed, from a measure of greenhouse gas emissions to a measure of energy intensity; this change makes it problematic to compare performance before and after the change. Moreover, GAO found that a goal based on energy intensity is not a good proxy for emissions because a reduction in energy intensity does not always result in lower greenhouse gas emissions. Although there is no consensus on a best measure at present, alternative measures are in use that may better track agencies' greenhouse gas emissions than the current measure based on energy intensity.

Agencies' prospects for meeting energy goals into the future depend on overcoming four key challenges. First, the six agencies GAO reviewed—the departments of Defense (DOD), Energy (DOE), and Veterans Affairs (VA); the General Services Administration (GSA); the National Aeronautics and Space Administration (NASA); and the U.S. Postal Service (USPS)—had long-term plans for achieving energy goals that lacked key elements, such as plans that outline agencies' strategies that are linked to goals and provide a framework for aligning activities, processes, and resources to attain the goals of the plan. Second, investment in energy projects competes with other budget priorities, causing agency officials to increasingly rely on alternative financing mechanisms—contracts with private companies that pay for energy improvements. However, as past GAO work has shown, agencies entering into these contracts could not always verify whether money saved from using less energy was greater than projected costs and may yield lower savings than if timely, full, and upfront appropriations had been used. Third, agencies face challenges in obtaining reliable energy consumption data but are taking steps to collect more reliable data. Finally, facilities may lack staff dedicated to energy management and may find it difficult to retain staff with sufficient energy expertise; however, agency officials are participating in training and implementing initiatives for energy management personnel.