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Highlights

Highlights of GAO-11-638, a report to congressional requesters

GREEN INFORMATION TECHNOLOGY

Agencies Have Taken Steps to Implement Requirements, but Additional Guidance on Measuring Performance Needed

Why GAO Did This Study

The federal government's substantial use of information technology (IT) contributes significantly to federal agencies' energy use and environmental impact. To help mitigate this impact, organizations have adopted practices for using computing resources in a sustainable and more environmentally friendly manner—sometimes referred to as "green IT." These practices include equipment acquisition, use, disposal, and related processes.

GAO was asked to (1) determine the extent to which the government has defined policy and guidance on green IT and how selected federal agencies are implementing this policy and guidance, and (2) identify leading green IT practices used by federal agencies, state and local governments, and private-sector organizations. To do this, GAO evaluated federal guidance and policy, as well as guidance and initiatives at selected agencies; identified and characterized efforts in the public and private sectors; and interviewed officials.

What GAO Recommends

GAO recommends OMB and CEQ develop green IT guidance to help agencies more effectively measure performance and encourage the use of leading practices. In comments on this report, OMB and CEQ partially concurred with the recommendations. They agreed to encourage the use of leading green IT practices but did not agree that additional guidance was needed for measuring performance. GAO continues to believe that additional guidance is needed to help determine the effectiveness of agencies' efforts.

View GAO-11-638 or key components. For more information, contact David A. Powner at (202) 512-9286 or pownerd@gao.gov or Frank Rusco at (202) 512-3841 or ruscof@gao.gov.

What GAO Found

Two executive orders, from 2007 and 2009 respectively, assign responsibility to federal agencies for increasing their environmental sustainability and contain green IT-related requirements. These requirements include acquiring electronic products that meet certain environmental standards, extending the useful life of electronic equipment, implementing power management on computers, and managing federal data centers in a more energy efficient manner. In meeting these and other sustainability requirements, agencies are required to designate senior sustainability officers and develop performance plans that prioritize actions for meeting the requirements in the executive orders. The six agencies in GAO's review (the Departments of Agriculture, Commerce, Energy, and Health and Human Services; the Environmental Protection Agency; and the General Services Administration) have developed sustainability performance plans and taken additional steps to implement the executive orders' requirements. For example, they have increased their acquisition of certified energy-efficient IT equipment, established and implemented policies to extend the useful life of agency equipment, and developed environmental policies for disposing of electronic equipment. However, the overall effectiveness of the agencies' efforts cannot be measured because key performance information is not available. Specifically, the agencies have not identified the information needed to measure the progress or results of their efforts. For example, the agencies have generally not established baselines (starting points) or developed performance targets that are consistently defined in terms of quantifiable benefits, such as a reduction in energy. This is in part because the Office of Management and Budget (OMB) and a key White House council--the Council on Environmental Quality (CEQ)--have not developed specific guidance on establishing performance measures for green IT efforts. Without such guidance, the effectiveness of these efforts and their contribution to overall federal sustainability goals will remain unclear.

GAO identified a number of leading practices used by federal, state, and local government and private-sector organizations that are relevant to green IT. These practices include enhanced leadership, dedicated funding, prioritization of efforts, and improved employee training, as well as acquiring IT equipment with the highest energy efficiency ratings; consolidating equipment and services; reducing use of paper; and using new, more efficient computers. For example, according to a 2009 survey of federal employees, agencies spend about $440.4 million per year on unnecessary printing. By contrast, in the non-federal sector, a major IT equipment company implemented managed print services that reportedly reduced the number of printers by 47 percent globally, cut per-page print costs by up to 90 percent, and saved more than $3 million in 2 years in the United States alone.

_____ **United States Government Accountability Office**