

Agency Trends

Beyond government-wide statistics are the stories of individual agencies' progress and the trends that they signify. In fact, anecdotal information suggests that Federal experience to date follows the typical script for the diffusion of new technologies: "innovators" take the first steps toward introducing new technologies; "early adopters" take the lead in diffusing these technologies for popular use; "the early majority" includes those helping bring the technologies into mainstream use; "the late majority" consists of those who only adopt the technologies when they feel that they must; and, finally, come the "laggards" who resist the technologies even after they are broadly accepted.³⁷



Design attributes of the U.S. Fish and Wildlife Service's Cusano Environmental Education Center in Philadelphia; focus on energy, construction materials, and water use. The walkway in this photo shows how the building encourages interaction with the surrounding wildlife preserve while causing minimum impact.

In the government context, the earliest *innovators* include those at government labs like the National Renewable Energy Laboratory (founded as the Solar Energy Research Institute in 1977), and Federal programs like FEMP (chartered in 1973), that were the first to introduce green building concepts to the Federal government, with a focus on energy issues. DOE's Departmental Energy Management Program (originally the In-House Energy Management Program) began funding energy efficiency improvements at DOE buildings in 1978.

In the early 1990s, several programs promoting different elements of green building (such as the Green Lights program, now known as ENERGY STAR®) started to focus on how to translate the often theoretical concepts of green building into common practice. And in 1992, the Energy Policy Act mandated that Federal agencies improve their energy efficiency and develop at least one "showcase" facility highlighting advanced energy efficient and/or renewable energy technologies.

³⁷Theory and terminology from: Rogers, Everett M (1995). *Diffusion of Innovations*. New York, The Free Press.

At around the same time, several *early adopters* among the Federal agencies began the process of incorporating green technologies into their facilities. FEMP demonstrated what could be done at Federal facilities with its high-profile “greening” projects, including the Greening of the White House (begun in 1993), and projects at the Pentagon (begun in 1993) and several National Parks, including the Grand Canyon National Park (1994), Yellowstone (1996), and the Presidio (1995). GSA’s Federal Courthouse in Denver (1995) provided yet another showcase facility. At the same time, the Navy and the National Park Service began investigating the concepts of green building with such groups as the American Institute of Architects and instituting pilot projects. Similarly, EPA began to design its green laboratory facilities at Research Triangle Park, NC and develop its Green Lease Rider for its Kansas City Regional Office.³⁸ In addition, EPA’s major renovation of the Ariel Rios Building in Washington, DC for its new headquarters demonstrated its commitment to “practice what it preaches.”



The new campus at Research Triangle Park embodies the Environmental Protection Agency’s commitment to the environment. Cost, functionality and environmental impact were kept in balance when selecting materials and systems. The result is a very green, very functional and very economical facility.

As some of these case studies proved the feasibility of the use of green building techniques and interagency networks began to spread the word, an *early majority* started forming and more agencies began to incorporate green building in their procedures. In the mid-to-late 1990s, as Executive Orders 13123 and 13101 were issued, official agency policy favoring green construction was adopted by EPA (with its Pollution Prevention Strategy), GSA (with the Planet GSA program), and the Navy, followed in the early 2000s by the Army, Air Force, NASA, State Department, USPS, Department of Health and Human Services/National Institutes of Health, several DOE labs, and other agencies. This was about the same time that several agencies (including EPA, Navy, and the

³⁸See FEMP’s Greening website <<http://www.eere.energy.gov/femp/techassist/greening.html>> and the Greening EPA website <<http://www.epa.gov/oaintrnt>>.

National Park Service) completed construction of notable green Federal buildings and made extensive case studies available.³⁹

Agencies appear to have had diverse motivations for their involvement in green building. Those with environmental and energy missions, such as EPA, DOE, and the Park Service, have had the advantage of internal and external constituencies to promote sustainability concepts and pressure them to live up to their missions. GSA's mission to provide quality workplaces supported healthy and high-performing indoor environments as well. This helps explain why these agencies have been among the earliest adopters. The military services were more likely motivated by an understanding that being proactive might help avoid costly environmental cleanups later in the life cycle of their facilities. In addition, the military has often been more disciplined in enforcing Executive Orders and related goals than other parts of the government. The fact that certain parts of the military, particularly the Navy, and other agencies have chosen to be among the earliest adopters may be attributed to the leadership of certain devoted individuals within these agencies.

Many of these and other Federal green building efforts are captured in case studies, policy statements, training, contract language and specifications, and guidebooks. Given this rich history of pilot projects and individual agency efforts, the Federal government is well poised to disseminate the best of these tools as part of a broader Federal green building effort, and work to promote Federal green building policies from the executive level to the field.

³⁹FEMP's Sustainable Design Criteria Index, a CD that includes sustainable development policy links to various agencies.