



Energy Star Buildings

Introducing... Energy Star Showcase Buildings



The U.S. Environmental Protection Agency (EPA) promotes energy efficiency because electricity generation contributes to air pollution, including 35 percent of all U.S. emissions of carbon dioxide. It also accounts for 75 percent and 38 percent of all U.S. emissions of sulfur dioxide and nitrogen oxides, respectively. By using more energy-efficient equipment in our homes, offices, and factories, we can reduce this pollution—while saving money!

What Is the Showcase Buildings Program?

As part of its market-driven, nonregulatory Energy Star Buildings program, EPA is working to identify 20 to 30 buildings nationwide to "showcase" comprehensive energy-efficient upgrades. Showcase Building owners will work closely with EPA to

demonstrate an upgrade process that maximizes energy savings through the appropriate use and sizing of energy-efficient heating, ventilating, and air-conditioning systems and other related building efficiency measures. The Showcase Buildings ini-

tiative will demonstrate the potential pollution prevention of cutting-edge, energy-efficient technologies, paving the way for a broader Energy Star Buildings program to be marketed nationwide.

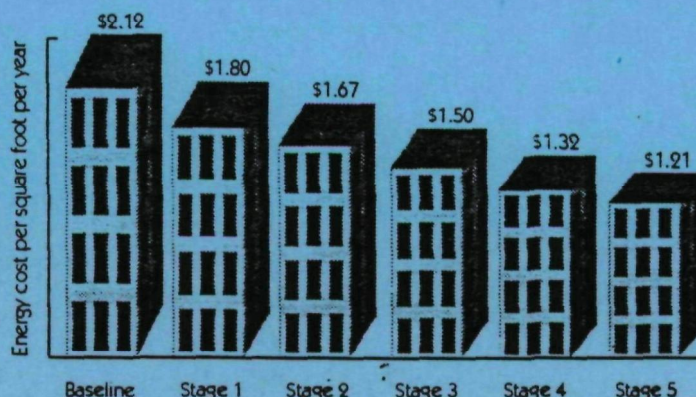
How Can It Make a Difference?

Each year, about \$70 billion is spent to operate commercial and industrial buildings in the United States. Fortunately, there is an array of readily available,

energy-efficient technologies on the market that can profitably cut this energy use by more than 40 percent. That's \$28 billion annually that can be reinvested in the economy

rather than wasted on unnecessary electricity use. Moreover, less electricity use means cleaner air!

How Much Can I Save?



Costs will fall and energy savings will rise as each stage of the Showcase Buildings initiative is completed. (Data are based on the Energy Star Buildings upgrade of a 100,000-square-foot office building in Washington, DC.)

Savings Example: Variable Speed Drives

Variable speed drives (VSDs) control fan and pump motor speeds precisely, greatly improving the efficiency of HVAC systems. EPA

recently completed a Variable

Speed Drive Demonstration

Study, in which EPA and a group of nine Green Lights Partners con-

ducted a series of tests on exist-

ing installations of variable-

speed-drive controls on HVAC fan

systems. The purpose of these

tests, which were held in several

U.S. locations, was to monitor the

energy savings relative to

mechanical inlet-vane airflow

controls. In most cases, the

observed savings were signifi-

cant, averaging 53 percent. In

general, VSDs are expected to

save from 30 to 60 percent in

retrofit applications on existing

variable-air-volume systems.

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Over the next 2 years, EPA will work closely with a group of 20 to 30 Green Lights Partners to complete comprehensive and accelerated single-building efficiency upgrades. These Showcase Buildings will demonstrate that the com-

How Does EPA Help?

In addition to publicly recognizing an organization for its participation in the program and the energy savings it achieves, EPA provides a number of technical resources to help plan and implement building upgrades. These resources include:

- The *Building Retrofit Manual*, a step-by-step guide to a comprehensive commercial building upgrade.
- Software to calculate savings from upgraded fan systems.
- A data base of financing programs for building-efficiency upgrades.

How Do I Join?

To participate in the Energy Star Buildings program, organizations must first agree to join EPA's Green Lights program, committing to identify and implement 90 percent of profitable lighting upgrades in their commercial and industrial space within 5 years. EPA offers its Partners extensive technical, organizational, and publicity support for lighting upgrades.

Green Lights Partners may become full Partners in the Energy Star Buildings program by signing an addendum to their existing Green Lights Memorandum of Understanding (MOU). As Energy Star Buildings Partners, they are expected to survey all owned U.S. commercial building space to identify prof-

itable efficiency upgrades (rate of return greater than prime rate plus 6 percent), and to complete 90 percent of all profitable upgrades within 7 years.

- Case studies documenting monitored savings for specific technologies (such as variable speed drives or fan motors).
- Generic specifications for specific energy-efficient technologies.
- Information and guidance on indoor air quality issues.
- Guidance on how to use the CFC phaseout as an opportunity to increase building efficiency and reduce the cost of the transition to acceptable alternative refrigerants.



For more information about the Energy Star Buildings program and the Green Lights program, please contact:

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