



Energy Conservation and YOU

ENERGY EFFICIENCY

The United States uses a lot of energy—nearly a million dollars worth each minute, 24 hours a day, every day of the year. With less than five percent of the world's population, we consume about one fourth of the world's energy resources. We are not alone. People in Asia and Europe also use a large amount of energy.

The average American consumes six times more energy than the world average. Every time we fill up our cars or open our energy bills, we notice the cost of that energy.

EFFICIENCY AND CONSERVATION

Energy is more than numbers on a utility bill; it is the foundation of everything we do. All of us use energy every day—for transportation, cooking, heating and cooling rooms, manufacturing, lighting, and entertainment. We rely on energy to make our lives comfortable, productive and enjoyable. To maintain our quality of life, we must use our energy resources wisely.

The choices we make about how we use energy—turning machines off when we're not using them or choosing to buy energy efficient appliances—impact our environment and our lives. There are many things we can do to use less energy and use

it more wisely. These things involve energy conservation and energy efficiency. Many people think these terms mean the same thing, but they are different.

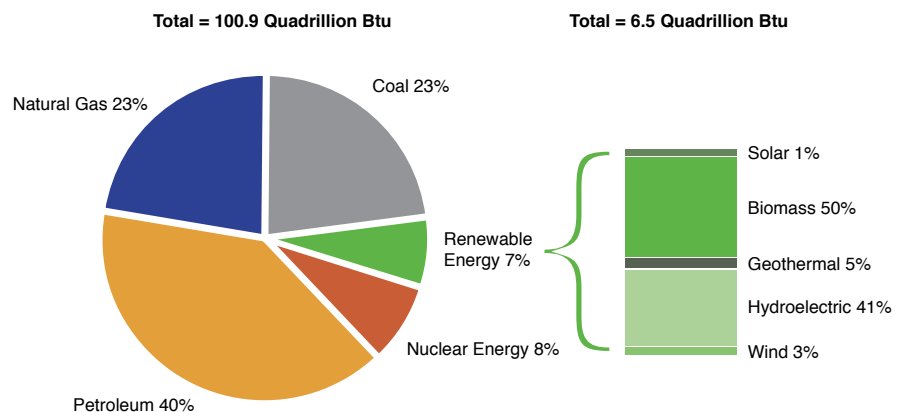
Energy conservation is any behavior that results in the use of less energy. Energy efficiency is the use of technology that requires less energy to perform the same function. A compact fluorescent light bulb that uses less energy than an incandescent bulb to produce the same amount of light is an example of energy efficiency. The decision to replace an incandescent light bulb with a compact fluorescent is an example of energy conservation.

ENERGY SUSTAINABILITY

Efficiency and conservation are key components of energy sustainability - the concept that every generation should meet its energy needs without compromising the energy needs of future generations. Energy sustainability focuses on long-term energy strategies and policies that ensure adequate energy to meet today's needs, as well as tomorrow's.

Sustainability also includes investing in research and development of advanced technologies for producing conventional energy sources, promoting the use of alternative energy sources, and encouraging sound environmental policies.

The Role of Renewable Energy Consumption in the Nation's Energy Supply, 2005



Have you heard...

CLIMATE CHANGE

A term used to refer to all forms of climatic inconsistency, but especially to significant change from one prevailing climatic condition to another. In some cases, "climate change" has been used synonymously with the term "global warming"; scientists, however, tend to use the term in a wider sense inclusive of natural changes in climate, including climatic cooling.

BIODIESEL

An alternative fuel that can be made from any fat or vegetable oil. It can be used in any diesel engine with few or no modifications. Although biodiesel does not contain petroleum, it can be blended with diesel at any level or used in its pure form.

ALTERNATIVE FUEL VEHICLE (AFV)

A vehicle designed to operate on an alternative fuel (e.g., compressed natural gas, methane blend, electricity). The vehicle could be either a vehicle designed to operate exclusively on alternative fuel or a vehicle designed to operate on alternative fuel and/or a traditional fuel.

Energy at Work and Home

Energy is the biggest challenge in the world, and we have to do something major about its inefficiencies. The problem of energy inefficiencies can be attributed to transportation (27 percent), industry (25 percent), and buildings (48 percent). The breakdown was calculated by the U.S. Energy Information Administration statistics published in 2003.

WWW.EIA.DOE.GOV



Conservation Consultants is a local non-profit organization dedicated to a mission of "Responsible energy use in homes and other buildings." The Pittsburgh, PA offices' specialty is performing Energy Audits for residential homes.

WWW.CCICENTER.ORG

Energy conservation does not have to impact your lifestyle and can actually save you some money!



ENERGY STAR is a joint program of the U.S. Environmental Protection Agency and the U.S. Department of Energy helping us all save money and protect the environment through energy efficient products and practices.

Results are already adding up. Americans, with the help of ENERGY STAR, saved enough energy in 2006 alone to avoid greenhouse gas emissions equivalent to those from 25 million cars — all while saving \$14 billion on their utility bills.

WWW.ENERGYSTAR.GOV

Light Energy Saving Tips

As a nation, we spend about one-quarter of our electricity on lighting, at a cost of more than \$37 billion annually. Much of this energy is wasted using inefficient incandescent light bulbs. Only 10 percent of the energy used by an incandescent bulb produces light; the rest is given off as heat.

Compact Fluorescent Lights (CFL) and Light Emitting Diode (LED) bulbs have revolutionized energy-efficient lighting.

CFLs are simply miniature versions of full-sized fluorescents. They screw into standard lamp sockets, and give off light that looks just like the common incandescent bulbs - not like the fluorescent lighting we associate with factories and schools. CFLs are four times more efficient and last up to 10 times longer than incandescent. A 22 watt CFL has about the same light output as a 100 watt incandescent. CFLs use 50 - 80% less energy than incandescent and each CFL you install can save you \$30 to \$60 over the bulb's life.

LEDs are small, solid light bulbs which are extremely energy-efficient. Until recently, LEDs were limited to single-bulb use in applications such as instrument panels, electronics, pen lights and, more recently, strings of indoor and outdoor Christmas lights. Recent improvements in manufacture have lowered the cost of LEDs, which has expanded their application. The bulbs are now available in clusters, from 2 to 36 bulbs, and are popular especially for battery powered items such as flashlights and headlamps. LEDs are also available in arrays which fit standard AC and DC receptacles, lamps, recessed and track lights.

AT HOME

- Clean your light fixtures regularly.
- Turn off lights when leaving a room.
- Provide task lighting over desks, tool benches, etc., so that activities can be carried on without illuminating entire rooms.

- Put lamps in corners of rooms where they can reflect light from two wall surfaces instead of one.
- Use compact fluorescent bulbs
- Install photoelectric controls or timers to make sure that outdoor lighting is turned off during the day.

AT WORK

- Set the Power settings on your computer to automatically go into Sleep/Standby mode after 15 minutes or so of inactivity.
- If you use a desktop, use an LCD monitor. They use lots less energy than CRT's.
- Use a laptop computer. They use lots less energy than desktops.
- Use a power strip so you can easily turn off all your computer accessories at once.
- Smart power strips go one step further, by automatically cutting power to peripherals when you turn your computer off.