

Using Energy Wisely



RENEWABLE ENERGY
THE INFINITE POWER
OF TEXAS

HIGHLIGHTS

- Almost everything uses energy
- Energy conservation and energy efficiency mean less energy used
- Less energy, less pollution
- Changing the way we use energy
- Energy efficiency saves money

HOW MUCH ENERGY DO WE USE?

Imagine how much energy your family car would use in 156 years. That is how much the world uses every second. In the time it takes you to snap your fingers, the world

uses the same amount of energy as 85,000 gallons of gasoline.

That means that you and I and every person in the United States use as much energy as seven gallons of gasoline every day.

Everything we do uses energy:

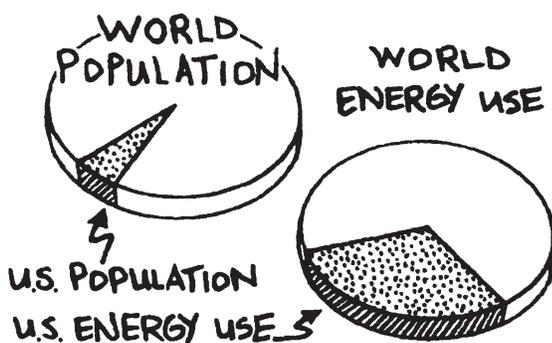
- growing our food
- lighting our schools
- cooking our food
- driving to our offices
- making products
- keeping our homes cool or warm

Energy is such a big part of our lives, we could not make it through the day without it.

ARE WE USING ENERGY WISELY?

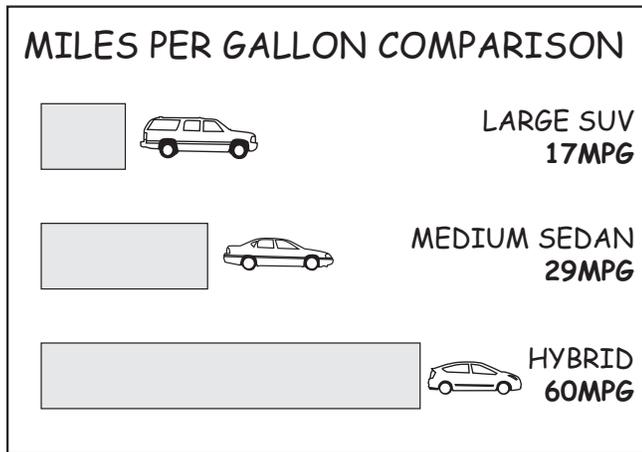
In many cases, the answer is no. A person in the United States uses twice as much energy as someone in Japan or Germany. The U.S. has only 5 percent of the world's population, but uses about 25 percent of the world's energy.

Scientists say that everything from cars, to light bulbs, to factories, to our homes could use less energy than it does now. Using less energy to do the same thing is called



WORLD vs. U.S. The United States has about 5% of the world's population, yet uses about 25% of the world's energy.

energy efficiency. We could have the same level of comfort while using one-half of the energy we do now.

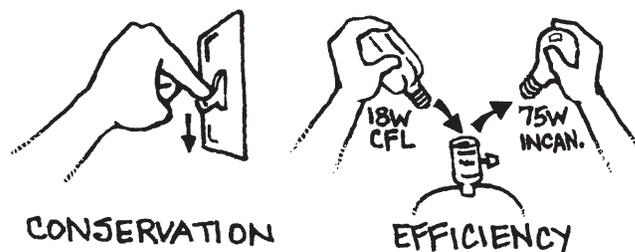


FUEL EFFICIENCY OF DIFFERENT CARS Some cars are more efficient than most cars we see on the road today. Hybrid cars, which use gas and electric motors, are more than 3 times as efficient as large SUVs.

ENERGY CREATES POLLUTION

Imagine every person at your school and in your city using as much energy as seven gallons of gasoline every day. Now imagine burning seven gallons of gasoline at an assembly in your school. Not only would it be dangerous, but it also would create a lot of pollution.

The air in your school would be filled with pollutants such as carbon dioxide, sulfur dioxide, nitrogen oxide and carbon monoxide. Some of these gas pollutants are dangerous for people to breathe and make some people sick.



CONSERVATION & EFFICIENCY Conservation is using energy without waste. Efficiency is using items that use less energy.

Using energy creates pollution. Saving energy prevents pollution.

WHAT ARE ENERGY CONSERVATION AND ENERGY EFFICIENCY?

Energy conservation is doing things that save energy. It means that you turn off the lights when you leave the room. It means that you set your heater to a lower temperature in the winter and wear a sweater around the house. It could also mean that you set your air conditioner to a higher temperature in the summer and use a ceiling fan. Energy conservation means that you do not use energy when you do not have to.

Energy efficiency is replacing items that are not energy efficient with ones that are. It means switching from a regular light bulb to a compact fluorescent bulb that uses less energy or buying an efficient refrigerator.

Some people think energy conservation means keeping their house too cold in the winter or too hot in the summer. But you do not have to be uncomfortable when conserving energy or using it more efficiently. When done the right way, conservation and efficiency will not even be noticed. Energy conservation and energy efficiency are important ways to use our energy wisely.

CHANGING THE WAY WE USE ENERGY

Students in school today will be the most energy efficient group of people in history! The energy efficiency of almost every thing you use is getting better. We are starting to use energy more wisely.

Once you start saving energy, you will find that there are some things in your home that you might not need to use at all. Instead of using a clothes dryer, for example, you can dry your clothes outside in the sun.

New refrigerators are three times as efficient as old refrigerators. Today you can buy windows that keep your house cooler in the summer and warmer in the winter because of the type of glass they use. You can buy a car today that drives nearly 65 miles on a gallon of gasoline.

Even more efficient models of these items and others are on the way. Soon there will be cars that can drive from coast to coast on one tank of gas, windows that

cloud up on hot days to keep the heat out, and refrigerators that use one-half the electricity of today's most efficient ones.

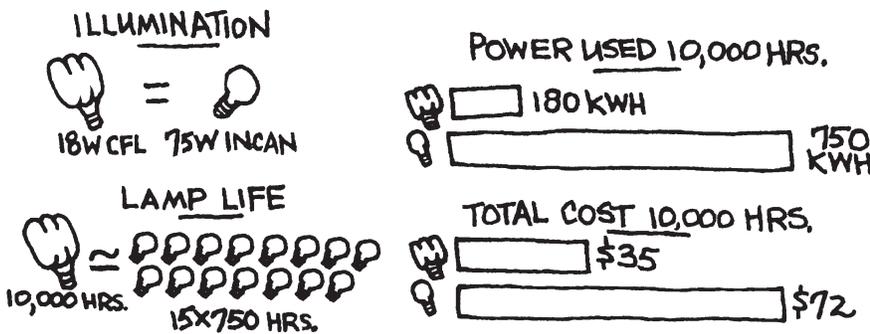
EFFICIENCY AND CONSERVATION SAVE MONEY

You have a choice when you use energy. Think about light bulbs. Some light bulbs use much less energy than others. You also have a choice in air conditioners, most appliances and cars. You may already be using products that conserve energy and save money.

A 75-Watt incandescent light bulb can be replaced with an 18-Watt compact fluorescent light bulb. Both produce the same amount of light. But using a light bulb that uses less energy will save you money while enjoying the same amount of light.

When the cost of energy is included, the cheapest product is the one with the lowest cost to own and use. Not only does the compact fluorescent light bulb save money, but it also reduces pollution. Look for efficient products and figure out how much

energy they will use. And remember to turn off lights or the TV or radio when you are not using them. Riding your bike, walking or taking the bus instead of getting into a car and driving somewhere saves a lot of energy. Reusing and recycling things saves energy, too. Choose to use energy wisely.



COMPACT FLUORESCENT BULBS vs. INCANDESCENT BULBS You have a choice when you use energy, like choosing light bulbs that save energy and money.

A DAY WITHOUT ENERGY: TRY IT

Imagine how you would spend a day without using any energy. When you wake up (to your wind-up alarm clock) you could mix some water with powdered milk to have with your dry Cereal . (Oops. How much energy does it take to make cereal and powdered milk?) You could at least squeeze some oranges for juice.

Remember, no electricity to watch TV or use lights: read only by daylight. No gas for the car: walk or bike everywhere. It's OK to use free, natural energy like sunshine to dry your clothes, but be sure to wash them by hand in cold water.

What other ways do you use energy? What foods require energy to cook or keep fresh? (Remember, ice cream needs electricity to keep it frozen.) How will you get to school? Does your classroom have enough windows to provide light? Will the temperature be comfortable without air conditioning or heat? Would meeting out-side under a tree be better?

- Think how you will get through a day without energy
- Tell the class what you will do all day to use less energy.
- What is the smallest amount of energy you need for a day?

RESOURCES

FREE TEXAS RENEWABLE ENERGY INFORMATION

For more information on how you can put Texas' abundant renewable energy resources to use in your home or business, visit our website at www.InfinitePower.org or call us at 1-800-531-5441 ext 31796. Ask about our free Teacher Resource Guides and CD available to teachers and home schoolers.

ON THE WORLD WIDE WEB:

Home Energy Brief #2 - Lighting
<http://www.rmi.org/sitepages/pid194.php>

The Home Energy Saver
<http://hes.lbl.gov/>

Texas Watt Watchers Program
<http://wattwatchers.org/>

Sierra Club Suggestions to Reduce Global Warming
www.sierraclub.org/globalwarming/tenthings.asp

VIDEO:

Toast, Bullfrog Films, 1974

Wake Up Freddy, Bullfrog Films, 1994

BOOK:

Homemade Money, Richard Heede, Rocky Mountain Institute, 1995



RENEWABLE ENERGY
 THE INFINITE POWER
 OF TEXAS

InfinitePower.org

Financial Acknowledgement This publication was developed as part of the Renewable Energy Demonstration Program and was funded 100% with oil overcharge funds from the Exxon settlement as provided by the Texas State Energy Conservation Office and the U.S. Department of Energy. Mention of trade names or commercial products does not constitute endorsement or recommendation for use.

State Energy Conservation Office

111 East 17th Street, Room 1114
 Austin, Texas 78774
 Ph. 800.531.5441 ext 31796
www.InfinitePower.org

Texas Comptroller of Public Accounts
 Publication #96-807 (08/06)