

POWER UP: Energy in Our Environment

1 videocassette.....23 minutes

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INTRODUCTION

Each day seems to bring alarming news about global warming, air pollution, and acid rain. *Power Up: Energy in Our Environment* provides students with the basic framework they need to understand these energy-related issues and appreciate their importance.

The program uses a variety of techniques to cover the subject in a manner appropriate for young audiences. Footage gathered from all over the country provides vivid visual examples. Graphics and animation clarify important points. Children in the video perform experiments that students themselves can perform at school or at home. The video also includes specific examples of things that students can do to help solve our energy problems and to insure that as they grow up, Earth will be a fit place to live on.

The program is designed for grades four through six but can be used effectively in higher grades as well.

PROGRAM SUMMARY

The program begins with a view of Earth. It shows how even from space, the lights of cities and towns reveal the impact of our use of energy on this planet. The major theme of the video is then introduced: the burning of fossil fuels causes environmental damage, including smog, acid rain, and global warming.

After the title, the video shows a girl reading by a lamp. It traces the source of the electricity that lights the lamp back to a power plant that burns fossil fuels. It then describes our dependence on such fuels for much of our energy needs.

Two students demonstrate an experiment to show how glass in a greenhouse traps heat from the sun. The program shows how carbon dioxide in the atmosphere traps heat from the sun in the same way. It describes how levels of carbon dioxide in the atmosphere have risen, mainly because of the burning of fossil fuels. This has led to concerns that global warming will melt glacial ice, causing flooding of coastal areas. Global warming might also result in damage to agriculture.

The video then looks at how chemicals released into the air by automobiles, factories, and power plants cause smog and acid rain. Graphics and video footage show how acid rain can kill trees and fish. A boy demonstrates an experiment in which vinegar, which contains acid, disintegrates chalk. In the same way,

acid rain can damage statues, buildings, and monuments that are made of marble and limestone.

The United States is shown to bear a special responsibility for the environmental problems brought about by burning fossil fuels. The program notes that while we are only 6% of the world's population, we consume 25 % of the energy used and are responsible for 17% of the carbon dioxide released into the atmosphere. Various options for government action are discussed, including laws limiting pollution by automobiles and industry.

Different alternatives to burning fossil fuels are examined, and the pros and cons are discussed. Nuclear energy, the program notes, doesn't contribute to global warming or lead to acid rain and smog. But critics of nuclear energy argue that it results in waste that remains dangerously radioactive for thousands of years. Also, an accident might release radiation into the environment.

The program notes that while hydroelectric power is a clean source of energy, it often results in the flooding of large areas of land and may destroy the habitat of fish and other wildlife.

Both solar power and wind power are described as nonpolluting sources of energy that hold hope for the future but are still too expensive and impractical for wide-scale use right now.

The program then shows how conservation can help alleviate many energy-related problems. By using less energy, fewer fossil fuels are burned, cutting down on harmful emissions of carbon dioxide and chemicals into the atmosphere. Using less energy also conserves our limited supply of fossil fuels. The video shows several ways that students and their families can conserve energy, including: turning off lights and electrical appliances when they are not needed; turning down the thermostat and wearing sweaters in the winter; using a fan rather than an air conditioner in the summer; using less hot water; insulating houses; and driving less.

A brief summary reiterates the major points of the program.

OBJECTIVES

After viewing this program, students should understand:

- how we use and rely on energy in our daily lives
- what fossil fuels are
- what the greenhouse effect and global warming are
- what smog is
- what acid rain is
- how the burning of fossil fuels contributes to the greenhouse effect, smog, and acid rain
- the advantages and disadvantages of energy sources other than fossil fuels, including:
 - nuclear power
 - hydroelectric power
 - solar energy
 - wind power
- how, through conservation and other measures, we can lessen the effects of the burning of fossil fuels on the environment

REVIEW QUESTIONS

1. What are fossil fuels? Give some examples of such fuels.
Fossil fuels are fuels formed over millions of years from the remains of living things. Examples are oil, natural gas, and coal.
2. What are some of the ways we depend on fossil fuels?
Examples cited in the program include gasoline, jet fuel, cooking with natural gas, and factories and power plants that use coal and oil. Encourage students to think of other examples.
3. What are some problems associated with the burning of fossil fuels?
One problem is that fossil fuels are a limited resource. Eventually we will run out of them. Another problem is the release of carbon dioxide and chemicals into the atmosphere. These can damage the environment.
4. What is the greenhouse effect?
The greenhouse effect is named after greenhouses that let in sunlight but trap some of the heat from the sun. In the same way, carbon dioxide and other gases in the atmosphere let in light but trap some of the heat.

5. Is the greenhouse effect necessarily bad?
No. ...up to a point. Without the greenhouse effect our planet would be much colder than it is now.

6. Why are we concerned about the greenhouse effect?
Many scientists think that the burning of fossil fuels has increased the levels of carbon dioxide in the atmosphere to the point where it may cause global warming, an increase in temperature of Earth's climate.

7. Why are people concerned about global warming?
The program cites several reasons. One is that global warming may make it difficult to grow crops in important agricultural areas such as the Great Plains. Also, global warming might cause glacial ice to melt. This would cause the sea level to rise flooding coastal regions and cities.

8. How is smog formed?
Smog largely results from chemicals released into the air as the result of using fossil fuels. Cars, factories, and power plants are among the main sources of these chemicals. In the air, these chemicals are "baked" by the sun to form smog.

9. Why are people concerned about smog?
The program describes how smog is a major cause of lung disease. Smog also damages plants.
10. What is acid rain and what causes it?
Acid rain has large amounts of acid in it. It is formed when chemicals from the exhaust of cars and from smokestacks of factories and power plants combine with water in the air.
11. How can acid rain cause damage?
It can kill certain kinds of plant life. When it accumulates in lakes, it can kill fish. It damages buildings, monuments, and statues made of limestone or marble.
12. Why do supporters of nuclear energy say that it will help the environment? *Nuclear power does not involve the burning of fossil fuels, so it does not contribute to the greenhouse effect or cause acid rain or smog.*
13. Why are some people against the use of nuclear power?
Critics of nuclear power argue that it produces waste that remains dangerously radioactive for thousands of years. They say we have not yet figured out a safe way to dispose of or store this waste. They also say there is the danger of an accident that could release dangerous amounts of radiation into the environment.

14. What is hydroelectric power?
Hydroelectric power is created when flowing water turns turbines that generate electricity.
15. In what ways is hydroelectric power good for the environment?
Since it doesn't involve the burning of fossil fuels, hydroelectric power doesn't add to the greenhouse effect or cause smog and acid rain.
16. Are there any ways that hydroelectric power might be bad for the environment? *It often involves flooding large areas of land behind dams. Rivers and streams are often changed so that they no longer run wild and free. The homes, fish, and other wildlife are often destroyed.*
17. What is solar energy?
Energy from the sun.
18. What are the benefits of solar energy? *It doesn't pollute the environment.*
19. Does solar energy have any drawbacks?
Solar energy systems are still expensive. Also, solar energy does not work well in places with little sunshine. At least for the present, solar energy can not meet many of our energy needs.

20. What is wind power?
It is power from the wind. Windmills can generate electricity.
21. What are the advantages and disadvantages of wind power?
The main advantage is that it is a clean source of energy. The main disadvantage is that it isn't practical in areas of little wind.
22. Why is energy conservation important?
By conserving energy, we cut down on the burning of fossil fuels. This helps reduce the amount of carbon dioxide released into the environment. It also means that fewer chemicals that cause smog and acid rain are released into the air.
23. What are some ways to conserve energy?
Examples in the program include turning off lights, televisions, radios and other things that consume electricity; insulating houses; using less hot water; turning the thermostat down in the winter; using a fan rather than an air conditioner in the summer; and driving less. Students should be encouraged to cite other examples.

ACTIVITIES

1. Ways To Save Energy

The video shows several ways in which students and their families can conserve energy. There are many others.

Ask students to keep a log for several days of how they use energy. Then have them compare their logs and draw up a master list of energy-saving ideas. This list can be incorporated into posters or bulletins that students could distribute throughout the school or take home.

Below are several ideas not mentioned in the program. You can discuss these ideas with your students if they haven't included them in their master list.

a. Take showers rather than baths: Showers use much less hot water. A low-flow shower head cuts down even more on the amount of water used.

b. Close the refrigerator door: Every time the refrigerator door is left open unnecessarily, a lot of energy is wasted.

c. Have a home energy audit: Many utilities offer free energy audits. A representative will check a home and advise homeowners about how they can save energy. Suggestions might include insulating an attic or weather stripping windows and doors.

Students can find out whether their utility provides energy audits. If such a service is available, students can write for information that they can then take home.

d. Recycle: When something is recycled, it is reprocessed into a new, useful product. This often results in large savings in energy. For example, used paper can be recycled and made into new paper. Every ton of paper recycled this way saves approximately 4,100 kilowatt-hours of electricity—electricity that would have been used to manufacture paper from wood. In addition to paper, metals, glass, certain kinds of plastic, and many other things can be recycled.

Students can find out whether their community has a recycling program. If it does, they can encourage their families, school, and local businesses to participate. If no recycling program exists, they can write letters to local officials urging that they start a program.

e. Find ways of doing things that don't require electricity: We tend to use a lot of electrical gadgets for things that can be done quite easily without electricity. Examples include sharpening pencils, opening cans, and brushing teeth.

2. Where Does Your Power Come From?

The program traces the electricity that lights a lamp back to its source, a power plant that burns fossil fuels.

Students can find out where their electricity comes from by writing the public relations department of their local utility. Knowing the source of their electricity will give them an idea of what pollutants are produced whenever they turn on a television or leave their lights burning.

3. Acid Rain Experiment

The program shows how the acid in vinegar disintegrates the calcium carbonate contained in chalk. In the same way, acid rain can harm buildings and statues made from limestone or marble, both of which contain calcium carbonate.

Students can duplicate the experiment in the video. As a control, they could put one piece of chalk into plain water and compare what happens to chalk put into vinegar.

Science Kit Boreal has a kit describing this and a series of other environmental experiments. For more information, write:

Science Kit Boreal 777 East Park
Drive Tonawanda, New York
14150

4. Greenhouse Experiment

The video shows two students measuring the temperature inside a fish tank, first with the top open and then with the top covered with a piece of glass.

Students can do this same experiment in school or at home. It is best to do it outside when the sun is directly overhead. If the bottom of the tank is glass, students should cover the bottom with a thin layer of soil or a piece of paper. Otherwise, rays of light will pass through the bottom of the tank, making the results of the experiment more difficult to interpret.

After putting the glass plate on the tank, students should allow time for the heat to build up. Ask them to record the temperature at 5-minute intervals.

GLOSSARY

Acid rain: Rain that contains a lot of acid. It is formed when chemicals that result from the burning of fossil fuels combine with water in the air.

Atmosphere: The layer of air that surrounds Earth. It consists mainly of oxygen, nitrogen, and carbon dioxide.

Calcium carbonate: A chemical compound found in limestone, marble, and chalk.

Carbon dioxide: One of the gases found in the atmosphere. The burning of fossil fuels also releases this gas into the air.

Energy conservation: The careful management of energy so that less energy is used.

Fossil fuels: Fuels formed over millions of years from the remains of living things. Examples are oil, natural gas, and coal.

Global warming: The warming of Earth's climate due to the buildup of heat from the greenhouse effect.

Greenhouse effect: The trapping of heat from the sun by Earth's atmosphere.

Hydroelectricity: Electricity generated from the energy of flowing water.

Insulation: Material that cuts down on the amount of heat that escapes from a house.

Nuclear energy: Energy released from the splitting of atoms.

Photovoltaic cells: Cells that convert the energy from sunlight into electricity.

Smog: Pollution caused by, among other things, the burning of fossil fuels.

Solar energy: Energy from the sun.

Turbine: Machine with turning blades that runs a generator.

Wind power: Energy from the wind.

For More Information

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857-0666

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Natural Resources Defense Fund 40
West 20th Street New York, NY 10011
(212)727-2700

Renew America
1001 Connecticut Avenue NW, Suite 1719
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Sierra Club
730 Polk Street
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U.S. Council for Energy Awareness
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Washington, DC 20035

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Reduce, Reuse, Recycle: Environmental Concerns

Source of Life: Water in Our Environment

Script

Female Narrator

When viewed from space, the Earth may seem at first untouched by human activity.

The planet's most prominent features are its oceans and continents, and the feathery clouds that float above them. These give no indication of any human presence.

But even from space, the impact of humans on the Earth becomes apparent. In the darkness of night, patterns of light mark the locations of cities and towns.

Such lights even outline the shores of the United States, marking the boundary between land and ocean.

The human presence on Earth is notable in many ways...but none more dramatic than how we use energy.

We use energy to light our nights...

to get from one place to another...

to power our machines and to build things.

Energy is the force that makes things work. Our lives depend on energy.

Male Narrator

But our use of energy can also be harmful to our planet. The smog that covers many of our cities comes from our factories, power plants, and cars.

The gases they release into our atmosphere may be causing changes in our climate...

and they are largely responsible for the acid rain that is killing trees and fish.

In this program we will look at some of the ways our use of energy threatens the Earth...

and at different things we all can do to help protect the planet that is our home.

Title: Power Up: Energy in Our Environment**Female Narrator:**

When we turn on a light, we don't ordinarily think about the energy that makes it possible for the light to shine.

Most people know that the energy that provides us light comes from electricity.

And getting this electricity is usually as easy as putting a plug into an electric outlet.

If we traced this electricity back to its source, we would see that it is brought into our homes by electric wires...

and that these lead to larger power lines that crisscross our country carrying large amounts of electricity.

These power lines in turn lead to power plants that are the source of our electricity. Many of these power plants generate electricity by burning coal, oil, or natural gas. These are known *as fossil fuels*.

Male Narrator

Fossil fuels were formed from the remains of living things that died millions of years ago and were gradually buried under many layers of rock and soil.

Under great pressure and heat, this material slowly turned into oil, coal, and natural gas that can be pumped or dug from the ground.

We depend on fossil fuels for many of our energy needs. Oil, for example, goes through a refining process that turns it into different products...

including the gasoline that powers most of our cars...

and the jet fuel that enables planes to fly.

We often cook and heat our homes with natural gas.

And many industries depend on oil or coal to run their machinery and to manufacture things.

Female Narrator

But there are problems with our dependence on fossil fuels for energy.

One problem is that eventually, we will run out of these fuels. Already it is becoming much harder to discover new places where oil can be pumped.

Another problem is that burning fossil fuels—particularly oil and coal—damages the environment by releasing harmful wastes and gases into the Earth's atmosphere.

The atmosphere is a layer of air that surrounds the Earth. This air is a mixture of different gases, including oxygen, nitrogen, and carbon dioxide.

Carbon dioxide in the atmosphere traps heat from the sun through a process called the *greenhouse effect*.

The greenhouse effect is named after greenhouses where plants are grown. A greenhouse traps the heat from sunlight, making it warm enough to grow plants even in the winter.

You can do an experiment to observe how a greenhouse works. Put a thermometer inside an empty fish tank.

After a minute, note the temperature.

Then put a sheet of glass over the top of the tank. The glass lets the light and heat from the sun in but prevents some of the heat from leaving.

After a few minutes, check the thermometer again. You should be able to observe an increase in temperature.

Carbon dioxide in the Earth's atmosphere acts like the sheet of glass. It lets in sunlight, but traps some of the heat.

This is a good thing...up to a point. Without carbon dioxide in our atmosphere and without any greenhouse effect, our planet would be, on average, about 60 degrees colder.

For many thousands of years, carbon dioxide remained at very small levels... just enough to keep the Earth comfortably warm. But now some scientists fear that too much carbon dioxide has entered the atmosphere...mainly because of the ways humans have been using energy.

Male Narrator

The problem started over 150 years ago, when people began building factories that burn fossil fuels. Carbon dioxide and other gases and chemicals were released into the air through smokestacks.

The introduction of the automobile in the early 1900's was another important factor. As more and more people used cars, their gasoline engines spewed more carbon dioxide into the air.

According to some estimates, the amount of carbon dioxide in the atmosphere has increased 10% in the last 30 years.

And the problem may get much worse if we continue to burn large quantities of fossil fuels.

Many scientists fear that if we do nothing about this problem, it will lead to *global warming*, a rise in the Earth's average temperature.

While it is difficult to predict how much the Earth's temperature might rise, even a small increase could have serious consequences.

Parts of the world might become drier, making it difficult to grow crops. The Great Plains of the United States, for instance, is one of the world's most productive farming regions.

But with even a slight increase in temperature, it could become much more difficult for farmers in the Great Plains to grow corn, wheat, and other crops.

Increases in temperature might also cause large amounts of glacial ice to melt...

and this could cause the water level of the oceans to rise.

Low-lying coastal regions and cities would then flood. Much of Florida, for example, might be under water.

Some scientists doubt that global warming will occur, even if carbon dioxide levels in the atmosphere continue to increase. But many people feel that we should be taking the risk very seriously.

Female Narrator

Global warming isn't the only threat to the environment from the use of fossil fuels. Smog is another.

Smog is a major health problem. Along with cigarette smoking, smog is a leading cause of different kinds of lung disease.

Smog is caused by a number of different things. The smokestacks of power plants and factories that burn coal release chemicals into the air that cause smog.

Smog-causing chemicals also come from the tail pipes of cars when they burn gasoline.

In the air, the chemicals from cars, factories, and power plants—as well as from other sources—mix with other chemicals and are *baked* by the sun to form smog.

Male Narrator

Smog is often very visible, but another kind of pollution, acid rain, is more difficult to see.

To the eye, acid rain looks like any other rain—but it contains harmful amounts of acid.

Acid rain results from invisible chemical particles that are produced by burning fossil fuels for energy.

Coal-burning power plants and factories, and gasoline-burning cars give off these chemicals, which combine with water vapor in the air.

They can then travel hundreds of miles before returning to Earth in acid rain.

Acid rain can make lakes unfit for fish and other animals and kill certain kinds of plants.

These trees in the Adirondack Mountains in New York died because of the effects of acid rain.

Acid rain can also damage statues, monuments, and buildings that are made of limestone or marble.

You can do an experiment to see the effects of acid rain. Pour some vinegar into a glass. Vinegar has a lot of acid in it.

Then put a piece of chalk into the vinegar. Chalk contains calcium carbonate, one of the ingredients of limestone and marble.

Observe what happens.

The chalk begins to disintegrate. In the same way, acid rain can destroy marble and limestone.

Female Narrator

Acid rain...smog...the greenhouse effect...these three problems affect the well-being of our planet.

And all three problems have similar sources—the burning of fossil fuels for energy.

The United States bears special responsibility for these problems.

While the United States has only about 5% of the world's population, U.S. citizens consume 25% of all the energy used.

Americans are also the source of 17% of the carbon dioxide released into the atmosphere.

There are things that our national and state governments can do to help protect the environment.

Laws can be passed and enforced to make factories and power plants cut down on the pollution they release into the atmosphere.

Car manufacturers can be required to make cars that burn gasoline more cleanly.

Many laws have already been passed that cut down on pollution from car and factories, but many people feel still tougher laws are needed.

Male Narrator

Another thing that government can do is encourage the development of energy sources other than fossil fuels.

But some alternative forms of energy are themselves controversial. Take nuclear power. Nuclear power plants like this one don't release carbon dioxide into the atmosphere. Therefore, they don't contribute to the greenhouse effect and global warming.

Nuclear power plants also generate electricity without polluting the air with chemicals that cause acid rain or smog.

But critics of nuclear energy argue that it has its own problems. For one thing, they say, there is the risk of an accident that could release dangerous amounts of radiation into the environment.

Humans exposed to such radiation could become extremely sick or die. Workers like these at nuclear power plants, in fact, take many precautions to avoid contact with radiation.

Critics also protest that nuclear power plants produce waste that remains radioactive for thousands of years, and we have yet to figure out a safe way to dispose of this waste or store it until it is safe.

People who support nuclear energy say that new designs for power plants make accidents very unlikely and that the problems of waste storage and disposal can be solved.

They argue that we should build more nuclear power plants to provide energy without smog, acid rain, or global warming.

Others continue to disagree, saying that these benefits are not worth the risks that nuclear energy poses.

Female Narrator

There are other alternative sources of energy. One is flowing water.

Mills like this used water for energy for hundreds of years, to do work such as grinding grain into flour.

Today, large dams harness the power of flowing water.

When water flows through these dams, they turn machines called turbines that help generate electricity.

Electricity created this way is called *hydroelectricity*. Hydroelectricity—like nuclear power—doesn't pollute the air or add to the greenhouse effect.

But there may be a price to be paid in other ways. When large dams are built, huge areas of land above the dam are covered with water.

Dams change rivers that once ran wild and free, often destroying the homes of fish and other wildlife in the process.

Male Narrator

Another alternative source of energy is the sun. Energy from the sun is called *solar energy*.

All living things depend on solar energy to survive. Plants use the energy of sunlight to manufacture their own food.

And we in turn depend on plants, and on the meat of animals that have eaten plants, for our food.

We can use solar energy in other ways. The roof of this house has solar collectors that use the sun's energy to heat water. One disadvantage of such collectors is that they don't work during the night or when it is cloudy.

But solar energy can also be used to generate electricity and store it in batteries. These cars participated in a special race from Florida to Indiana.

Each car depended for energy not on gasoline, but on special fuel cells called photovoltaic cells. When sunlight strikes these cells, chemical reactions occur that generate electricity.

Solar energy doesn't pollute the air or add to the greenhouse effect. A drawback of solar energy, however, is that solar collectors and photovoltaic cells are still very expensive, although progress is being made in bringing down the costs.

Female Narrator

The wind is another nonpolluting source of energy. Just as the wind can drive this pin wheel...

It can also drive much larger windmills to generate electricity—like these windmills in the Altamont Pass in California. Wind power doesn't pollute the air or contribute to global warming by producing carbon dioxide.

But not many places are as windy as the Altamont Pass, and even there the wind doesn't blow all the time.

Solar energy and wind power hold promise for the future, but—at least for a while—they are not going to solve our energy problems by themselves.

But there is another way of helping to protect the Earth...something that we can all do right now. We can conserve energy...use less of it.

Energy conservation serves two purposes. Fossil fuels like oil are nonrenewable resources. That means that once they're used up, they can't be replaced.

By conserving energy, we can make our limited supplies of these resources last longer.

The other purpose is that every time you and your family conserve energy, less carbon dioxide and fewer harmful chemicals are released into the atmosphere; for example, by power plants that generate electricity.

Male Narrator

There are many ways that each of us can conserve energy every day. Some are as simple as turning off lights when we're not using them.

When we do use our lights, we can use special fluorescent bulbs that require much less energy. These bulbs cost more, but they end up saving money because they use less electricity.

If you look around your home, you'll see many other ways of conserving energy.

Turn off televisions, radios, stereos and other electrical things when you are not using them.

In the summer, you can use a fan rather than an air conditioner to keep cool. An air conditioner uses ten times more electricity than a fan.

In the winter, you can turn down the thermostat 5 or 6 degrees,

and wear a sweater if you feel cold.

If everyone in America did this, we'd save 500,000 barrels of oil every day—oil that would have been burned for energy.

Female Narrator

Another way your family can save energy is to insulate your house. Insulation traps heat, preventing it from leaking through the roof and walls. It then takes less energy to keep your house warm.

Using less hot water also saves energy. For example, it takes a lot of energy to heat the water to wash dishes. You can conserve some of this energy by not running a dishwasher until it's full.

Of course, one of the best ways to save energy is to drive less. Over and over, we've seen how burning gasoline causes problems with smog and acid rain, and may also contribute to the greenhouse effect.

Instead of taking the car, try walking or bicycling if you only need to go a short distance.

For longer distances, you and your family can take mass transportation...such as a subway or train.

A train or subway can carry hundreds of people... saving huge amounts of energy that would be used if all these people drove.

Male Narrator

In this program we've seen how we get much of our energy from fossil fuels like oil, coal, and natural gas.

But we've also seen how using fossil fuels causes problems in our environment.

Fossil fuels add carbon dioxide to the Earth's atmosphere. This can trap heat from the sun and might lead to global warming.

Fossil fuels also pollute the air with chemicals that cause smog.

And fossil fuels are responsible for acid rain that can kill trees and fish...

and damage statues and buildings.

Female Narrator

We've looked at alternatives to fossil fuels and examined their benefits and drawbacks.

We've seen that nuclear energy doesn't give off harmful materials that produce smog, acid rain, or global warming; but it does produce waste that remains dangerously radioactive for thousands of years.

Hydroelectric power is a clean source of energy, but it may result in the flooding of vast areas of land and often destroys the homes of fish and other wildlife.

Solar power and wind power offer hope as important sources of energy in the future...

but neither can take care of more than a small part of our energy needs today.

Male Narrator

Yet we saw that there are things we can do right now to help solve our energy problems.

In particular, by conserving energy, we can decrease our use of fossil fuels.

Conserving energy cuts down on the carbon dioxide and pollution that harm our environment.

And so, by conserving energy, we each can play a part in helping make the Earth a safer and better place.

THE END