ENERGY RESOURCES

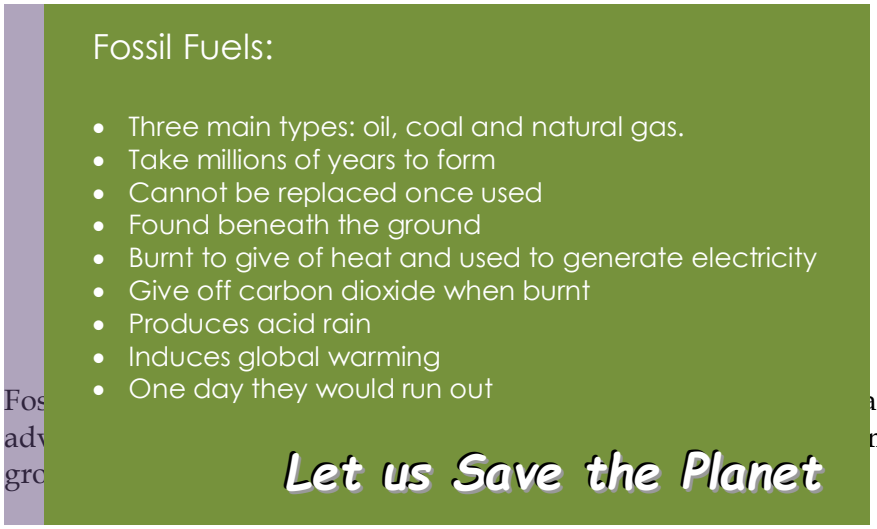
The discovery of fire by man, led to the possibility of burning wood for cooking and heating thereby using energy. Today, human society is well into a transition from increasing to decreasing availability of energy and other resources – a circumstance that is also worsened by our increasing populations.

Renewable Sources

For several thousand years human energy demands were met only by renewable energy sources. Renewable energy is basically the energy that comes from natural sources such as wind, sunlight, tides, biomass and geothermal heat --- that can be replaced endlessly, i.e. there is an endless supply. It is environment friendly and it can replace non-renewable energies like oil and coal.

Nonrenewable Sources

Nonrenewable resources are those which cannot be used again and again, like water and wind. Fossil fuels like coal, oil and gas, which are finite, and will eventually, run out are some examples of nonrenewable energy sources.



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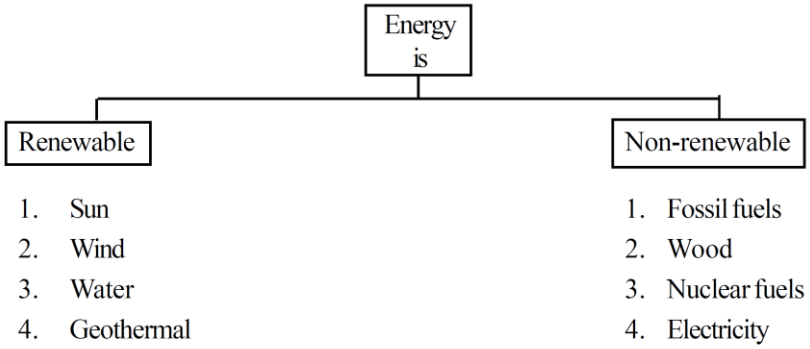


Coal:

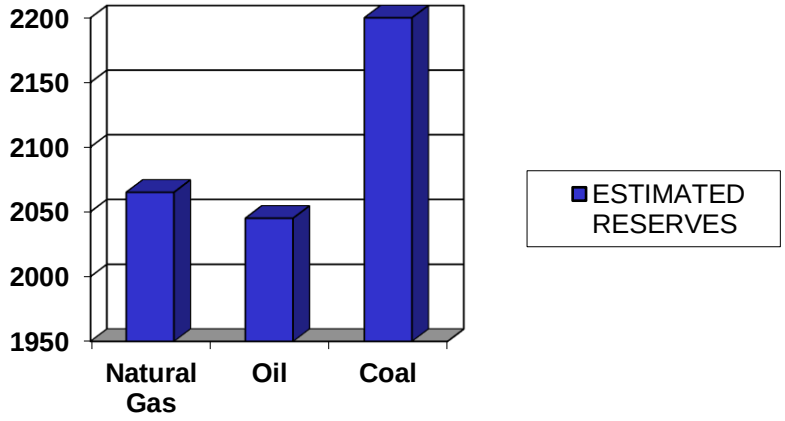
- Coal is a nonrenewable source and will run out in about 100 years.
- Transporting coal by lorry and train from the mine to the power stations causes pollution.
- Coal miners are affected by coal dust.
- Burning coal produces polluting gases like sulphur dioxide which makes acid rain.
- Burning coal releases the most greenhouse gases which may add to global warming.

Oil and Natural Gas:

- Environmental damage can be caused when building the rig and by accidental oil spillages.
- Working on an oil or gas rig can be dangerous due to the risk of explosions and bad weather.
- Oil and natural gas are not renewable, so once the supplies are used, they will run out.
- Burning these fuels releases greenhouse gases into the air. This may add to global warming.
- The price of oil and gas will increase because supplies are running out and lots of people will want it.

Nuclear:

- The waste that is produced when using nuclear fuel is radioactive and very harmful. It needs to be disposed of carefully for hundreds of years.
- World uranium supplies may run out in about 50 years.



ENERGY CONSERVATION

Energy-efficient improvements not only make your home more comfortable, they can yield long-term financial rewards. Reduced operating costs more than make up for the higher price of energy-efficient appliances and improvements over their lifetime.

This section shows you how easy it is to reduce your energy use at various situations. It is a guide to easy, practical tips for saving energy. Please, take a few moments to read the valuable tips in this booklet that will save you energy, money and environment by reducing pollution and conserving, the already depleting natural resources.

WHY SHOULD WE CONSERVE ENERGY?

- When we save energy we save money on our utility bills.
- Occupant comfort.
- National interest.
- Energy conservation results in reduced pollution, making a better environment for everyone.
- When we conserve energy we conserve our natural resources like coal, gas, oil and water.

We must conserve energy because of a number of reasons:

Energy saved is energy produced. A little bit of conscientious saving and some common sense can go a long way in cutting down on power demands drastically. Not only does that reduce the pressure on energy production

and subsequently pollution, but also slash your household electricity bills by as much as half!

1. Demand exceeds supply: There is an increasing demand for energy due to increasing population, industrialization, traffic on roads and automation in home, office and farms.

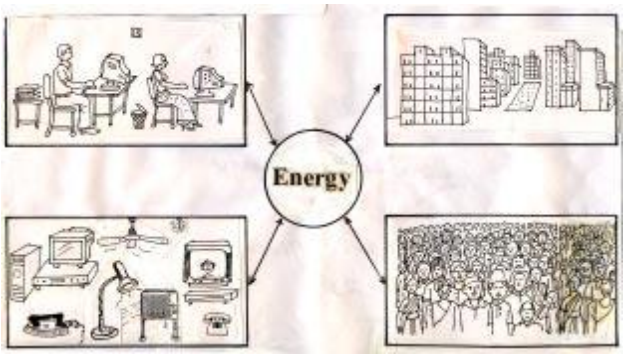


Figure: Demands on energy

After this what?

You can see that oil and natural gas are likely to run out during your own lifetime. The choice is before us! Either we carry on as we are or we must plan the use of fuels so that we conserve them for future use.

Let us Save the Planet

- Increasing number of people need more houses to live in and this leads to increased felling of trees to provide timber and furnishing.
- More kerosene and gas are needed to cook food for more people.
- More people today need more electricity to light their home, to run their fan/cooler/AC, to run washing machines, computers etc., **which results in increased power consumption, leading to power cuts**.

2. Energy saved is energy generated: Whatever energy you save in your daily activities gets accumulated as savings in a bank, so that you can use it in future. As your 'energy savings' grow, there will be less pressure to produce more energy. Similarly, the energy that you save could be used elsewhere.

3. Fuels are limited: Fuels are the most common sources of energy and you should know that the deposits of coal, gas and oil are limited. A look at the chart given below

will tell you where we stand today in terms of their availability to us in the years to come.

Fuel	Known supplies (in years)	When likely to run out
1. Natural Gas	About 30	AD 2035
2. Oil	About 50	AD 2055
3. Coal	About 280	AD 2285