

# Fossil Fuels

The highest consumption rate in today's world is of [fossil fuel](#). They are a man's— best friend. Some thousands of years ago, in the carboniferous era, due to drastic changes in the earth's— atmosphere today's—fossil fuels were formed. From the day it has been extracted and discovered, they have served the mankind and are still one of the most useful tools for human existence. The fossil fuels include petroleum, coal and natural gas.



## Advantages of Fossil Fuels

1. **Easily Available** : Since these fossil fuels have been of such a great utility, more and more extractions are going on every day. The geologists all around the world are trying to find out mines of coals. The pressure is even more as the

population is increasing day by day. With the advancement in science and technology, the refineries and the extraction procedures have also improved a lot. This makes the availability even smoother.

2. **Produce Large Amount of Energy** : Fossil fuels are easily combustible. Most combustion engines need to be powered with little amount of fuel to and they can produce large amount of energy. Fossil fuels have been serving us for centuries. It is considered as a portable form of energy. Industrial revolution has popularized the usage of fossil fuel in the entire planet. All machines, devices, vehicles depend on the fossil fuels, may it be coal, petroleum or natural gas. Sustainable fuel sources like solar, wind or geothermal have complex process to harness energy from them.

3. **High Calorific Value** : All energy produced has some calorific value. The more the value, the more effective it is. Fossil fuels are the highest producers of calorific value in terms of energy. This is also one of the reasons why they are still preferred over the renewable sources of energy or the alternative sources of energy.

4. **Stability** : The fossil fuels are composed of the molecules of carbon, and hydrogen. This makes them very stable. The nuclear energy, for instance is produced from radioactive elements and the energy is produced due to their instability. Fossil fuels, due to their constancy in the constitution of the molecules are easy to store as well. They do not form any other compound if stored in the cans for a long time. For the same reason, carrying fossil fuels is also easy than any other form of fuels.



5. **Transportation** : The industries need regular supply of fossil fuel like oil, gas and coal. The biggest advantage of using fossil fuels is that they can be easily stored and transported from one place to another. This needs the fuels to be strong enough to be carried from one part of the land to another. Large reserves of coal are taken from the coal mines to the industries which are acres away from the mines. The petroleum is being carried too far off power stations to produce energy. These transportation are possible as these fuels are portable. Even natural gas is nowadays being transferred to different areas.

6. **Abundantly Available**: Though every effort is made to make the usage of alternative fuels popular, still fossil fuels are the most common ones in use. This is because, these are very easily available. They have a vast presence over the globe. Though it is known to everyone that fossil fuels are going to expire one day but they would still last for another 40 -50 years at current consumption rates.

7. **Low Cost** : Fossil fuels are available all over the world and the methods to extract energy from them are also not that expensive. To obtain the fossil fuels in their refined form, they need to be properly treated. This

does not need a wide set up and is economical. Unlike other alternative sources like solar power or wind turbines whose initial investment cost are too high, fossil fuels have pretty low cost as compared to them. The high cost prevents many people from installing wind turbines or solar panels at their home.

8. **Easy Set Up** : Since they are widely available, the construction of fossil fuel power plant can take anywhere in the world as long as you get large quantities of fossil fuels to feed them. They are easier to extract and process and are capable to produce large amount of energy at a single location.

## The by-products of After Refining

Petroleum extraction is done in blast furnace. There are certain steps that need to be followed in the refining of this fossil fuel. Every step performed in blast furnace produces one or many by products. These products are derivatives of petroleum. Naphthalene, wax, benzoyl, asphalt and many more examples are there which the widely used products are

The cosmetics that are used in today's market are also majorly manufactured from the by-products of petroleum. Vaseline is one of the most famous companies. All these products form an industry of their own. They do not have any link directly with the fossil fuels. But they are obtained from them. They have their own utility and there are industries based on them. These industries, even considered as small scale industries, definitely contribute to the country's socio-economic development.

[http://www.conserve-energy-future.com/Advantages\\_FossilFuels.php](http://www.conserve-energy-future.com/Advantages_FossilFuels.php)

## Fossil Fuels

**Fossil fuels** as the name suggests are derivatives of plant and animal fossils that are million years old. These are primarily formed from the remains of the decayed plants and animals of the carboniferous era. The three fuel sources coal, natural gas and oil/petroleum helps to meet the energy and electricity demands of today's world. The demand for energy will never be in the declining graph. Industrial revolution has shown the way and it's still going on



Fossil fuels are the major energy sources but still when over consumption takes place lead to disastrous effects such as air pollution. Burning of fossil fuels releases carbon dioxide, nitrogen monoxide, nitrogen dioxide, sulphur dioxide, carbon monoxide etc. that have severe consequences on the habitats. They also affect human health.

They are non-renewable sources of energy as they are derived from pre-historic fossils and are no longer available if once used. Their source is limited and they are depleting at a faster rate. When extracted it poses a severe damage to the landscape as they are to be dig out from underground wells.

## Disadvantages of Fossil Fuels

1. **Environmental Hazards** : Pollution is the major disadvantage that is formed due to fossil fuels. When burnt they give out carbon dioxide, a greenhouse gas which is the main aspect of global warming. Rise in temperature of earth have resulted in melting of polar ice caps, flooding of low lying areas, rise in sea levels. If such conditions conquer the face of earth will face radical changes.

2. **Rising Prices** : Middle-east countries have huge reserves of oil and natural gas and many other countries are dependent on them for constant supply of these fuels. Organization of the Petroleum Exporting Countries (OPEC) is a group of 13 countries including Iran, Iraq, Kuwait, Qatar, Saudi Arabia and UAE. They are responsible for 40 percent of the world's oil production and hold the majority of the world's oil reserves, according to the Energy Information Administration (EIA). OPEC constantly monitor the volume of oil consumed and then adjusts its own production to maintain its desired barrel price. This result in worldwide price fluctuations, according to the U.S. Department of Energy.

3. **Acid Rain** : When burnt, sulphur dioxide gas is also produced which is the factor for acid rain. Acid rain leads to destruction of monuments made up of brickwork or marbles, even crops are affected due to acidification of loams. Coal mining results in destruction of abundant lands and also endangers the lives of mineworkers. The natural gas causes nasty smells and also a lot of problems with transportation. Transportation of crude oil causes oil spills over seas reasoning to hazards to the aquatic life by lessening the oxygen content of water.



4. **Human Health Getting Affected** : The ozone layer is being worn-out due to the release of greenhouse gases from the fuels. Hence, ozone holes are being created from which harmful UV rays enter the earth surface that affect human life causing diseases like cancer. The melanin present in the skin reacts with these high wave radiations. Skin cancer is the major form of disease that is caused due to the reaction of infra-red rays and the pigment present in the skin.

5. **Non-Renewable** : As the fossil fuels are extracted to an unlimited level it is for sure that they will deplete some day or the other. Since they are non-renewable it is likely

that fuels expenses will face a hike in near future. It would take millions of years to replace coal, and oil, and we are using them quickly. There is a limited amount of these fuels available and we are not actually sure where that limit is.

6. **Impact on Aquatic Life by Oil Spill** : Fossil fuels are needed in huge reserves wherever their plants are set up. This requires them to be transported to the desired location via truck, train, ship or airplane. Often we hear of some leaks in oil tankers or ship getting drowned deep under the sea that were carrying crude oil to get refined. The impact of this is that crude oil contains some toxic substances which when mixed up with water pose serious hazards to aquatic life.

7. **Coal Mining** : Extraction of coal from areas that have huge reserves is not only a difficult and dangerous task but also pose health hazard to the lives of several workers who work there. The coal mining destroys wide areas of land and results in ecological imbalance.

8. **Need Huge Amount of Reserves** : The coal power plants needs huge and regular supply of coal to produce large amount of electricity on a constant basis. This means they need reserves of coal almost train-loads of fuel near power stations to carry out the process of generating electricity. This is required since today also many nations are dependent on coal as a major source of producing power.

Technologies to get more out of the earth are progressing, but they don't seem to be doing it as quickly as our demand is growing. In addition, while coal is much more abundant than oil, extraction of coal can be very unsafe, and is damaging to the environment on a large scale, causing erosion, acidification of the environment, and destruction of wild lands. Though the fossil fuels meet our energy and fuel needs, still it's a high time to look forward for the alternative renewable sources of energy such as wind turbines, solar panels, tidal generators and compost. As said by a great man, there is enough for everyone's need but not enough for everyone's greed.