SUSANA AND DANIEL

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FOSSIL FUEL - PETROL

INTRODUCTION

In our time, fossil fuel is one of the most important energy carriers. By far most of all cars are using fossil fuel, like petrol or diesel – but right now a change is happening! We can witness a significant change in our daily life, as more and more people are interested in protecting our one and only earth! Our goal is to compare the past with the present and bring in our ideas, how the future will look like.

TEASER

Fossil fuel (fossiler Brennstoff) was firstly mentioned by Andreas Libavius, a german physician, in 1597 and later used by Mikhail Lomonosov, a russian polymath (man with high knowledge at different subjects) and scientist, in 1757. The term "fossil fuel" was firstly used by Caspar Neumann, a german chemist, in 1759. Fossil means, that it is obtained by digging into the ground.

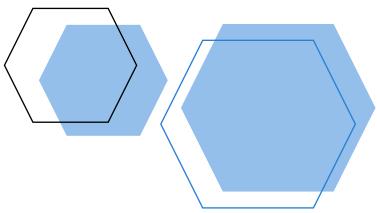


WHAT IS FOSSIL FUEL?

Before we start right away, it is important to know exactly, what fossil fuel is. Fossil fuel is a energy carrier (Energieträger), which can be out of petrol, gas, coal or oil. All of those contain carbon and were created million years ago.

All of them can be burned. The created heat is used to provide power for either a machine or another construction. The heat can also directly heat up some places like homes. As an example, the energy output can be used to create steam, which goes into a turbine. The turbine then is creating electricity.





THE PAST:

Our ancestors didn't have "modern" sources of energy. They used animals and their muscles, food and maybe coal. After the beginning of the industrial revolution in Great Britain, more and more new types of energy carriers were used. Old carriers were rethought.

People started to depend on those types of energy, as many companies were doing big businesses with them. Many jobs were also depending on the usage of the "new" energy carriers. The usage was rising sharply.

More and more new kind of technology were discovered. Those resulted in a huge increase of fossil fuel usage!

Hydraulic fracturing for shale gas retention pond Drilling Fracking Production proppant drilling rig wellhead liquids separation tank blender Christmas tree aquifer conducto casing gas and fluid vehicle treater manifold surface casing intermediate production casing fracking fluid

Here you can see a detailed image how fracking is done:

NEW OBTAINABILITY:

While mankind evolved, the used technology also evolved. Oil was largely used and obtained by drilling into the earth etc. New methods such as fracking were invented. Those methods were cheaper, faster and economically superior!

Fracking (Fracken, hydraulisches Risserzeugen) is a process, in which a large pressure is going into the underground and "opens" it. In this process gas and crude oil are gained. The gained gas and oil are transported to the top with a hydraulic pipe. This process in really popular in the USA, as it is cheap. The US-government is actively supporting fracking companies and methods.

Now we discussed the positive things about fracking, but what are the disadvantages? Fracking is quite bad for the environment and is harmful to our planet. That's the reason, why it isn't as popular in Europa as it is in the United States. Right now, several EU-countries are discussing and planning to buy more gas from the United States, which were gained by fracking!

CURRENT SITUATION

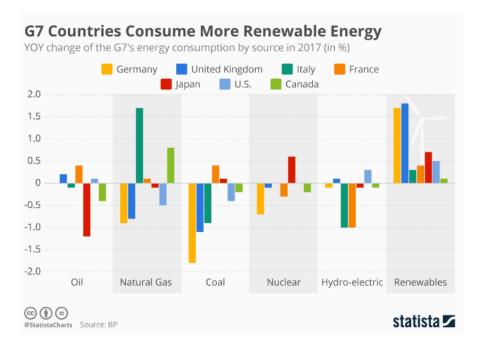
Right now, we're heavily depending on fossil fuel. Only a few countries are using over 80% environmentally friendly energy sources, which is way to low, but it goes into the right direction!

When we look at every developed country, we can see, that 80% of the total supply of energy is provided by fossil fuels!

In the US, natural gas and oil are the most used types of energy carriers for residential, commercial, industrial and transportation users. Electric power plants are often still using coal energy, which is outdated.

We discussed those graphs and statistics together and came to the conclusion, that fossil fuel isn't the only way to generate electricity. Right now, it might be the cheapest, but while looking long-term into the future, it's just outdated and bad for everything.

Luckily, many people are starting to be interested into protecting our one and only earth, the only place we can survive (right now?), which is a great development!



Here you see the different types of energy usages in the G7 countries.

OUR IDEAS FOR THE FUTURE:

Whilst we're still using many old types of fossil fuel today, we think that in 100 years less and less will be used and even needed. Third world countries will still be depending heavily on crude oil and coal but developed countries will switch to sustainable energy carriers like solar energy!

Fossil fuel won't disappear totally from developed countries though! We think natural gas will be used more and more. It still isn't environmentally friendly, but far better than crude oil. Countries like France, the United States or Japan are currently developing a new type of nuclear energy power plant, which could change everything. Personally we think nuclear energy will overcome fossil fuel by a lot and will take the first place in the race.

SUMMARY:

There are many different types of energy carriers, and unfortunately fossil fuel is still widely used. We both think, that this won't change fast, as quite some time is needed to change the thinking from humans and their habits - but we're sure that renewable energy will overcome fossil fuel sooner or later. Sustainable energy carriers are rising as sharply, as fossil fuel did during the industrial revolution, which is awesome!

SOURCES:

- [1] fossil fuel (britannica.com)
- [2] hydraulic fracturing (wikipedia.com)
- [3] fossil fuels in general (eesi.org)

PICTURES SOURCES:

- [1] picture hydraulic fracturing (britannica.com)
- [2] Energy consume of G7 Countries (cdn.statcd.com)