

**Committee:** Environmental Committee (EC)

**Topic:** Funding energy transition to cleaner sources

**Student Officer:** Vicky Syrotovska

**Position:** President



## Definition of Key Terms

**Energy transition** - This refers to the shift from the fossil-based (oil, coal, natural gas) global energy production and consumption resources to greener, renewable energy resources such as wind power, solar energy, etc.

**Clean sources of energy** - Also known as green energy or renewable sources, clean sources of energy are natural resources (wind, water, sunlight) that are not emitting any harmful chemicals into the environment while producing the energy. These sources differ from fossil fuels because we cannot run out of them if we use them in production.

**UN SDG** - The UN SDGs(United Nations Sustainable

Development Goals) are a list of goals the UN has set, in 2015, for humanity to be completed by 2030 that will lead to prosperity in the world. There are 17 goals in total, but the goals that we should pay close attention to on this topic are №7 “Affordable and Clean Energy”, №12 “Responsible Consumption and Production” and №13 “Climate Action”.



**Fossil fuels** - The most common type of energy production is by burning fossil fuels. These are the fuels that produce a lot of energy when burned, thus also produce a lot of carbon dioxide emissions. These are finite, as they are made from decayed plants and animals.

**Climate Change** - This is the long-term shift in temperatures and weather patterns. These patterns occur through history, however since the 1800s, because of the Industrial

Revolution, climate change was heavily impacted by human activities, mainly because of the burning of fossil fuels for energy production.

**The Paris Agreement** - The Agreement is a legally binding international treaty on climate change. It was adopted by 196 Parties at COP 21 in Paris, on 12 December 2015 and entered into force on 4 November 2016. (UNFCCC)

**Greenhouse gases** - These are the gases that have a “greenhouse effect” on the planet - they trap the heat produced by the Earth in the atmosphere, so the overall temperature on the planet rises rapidly. There are a few greenhouse gases: Carbon Dioxide (CO<sub>2</sub>), Methane (CH<sub>4</sub>), Nitrous Oxide (N<sub>2</sub>O), and Fluorinated gases. The biggest greenhouse gas and therefore the most dangerous one is Carbon Dioxide, it makes up 79% of all greenhouse gases, mostly because it is released a lot in everyday life (cars, meat production, etc.) and mostly during the production of energy from the burning of fossil fuels.

**Energy resource** - Any material that can be used as a basis or source of energy. The most common ones are fossil fuels.

**Coal energy** - This is the largest source of electricity generation in the world. The biggest coal supplier is China.

**Oil energy** - Oil energy is made from the burning of oil. The biggest oil suppliers are the US, Saudi Arabia, and Russia. However, there are also a lot of smaller countries rich in oil whose economy is dependent on oil. Venezuela has the biggest estimated oil reserves in the world, and it is the foundation of their economy, so when the US imposed an embargo on

Venezuela in 2006, the country's economy suffered a collapse. Other examples of economies dependent on oil are Iraq, Algeria, Azerbaijan, Nigeria, and others.

**Natural gas energy** - This is formed deep underneath the earth's surface. The biggest suppliers of natural gas are the USA, Russia, Iran, and Qatar.

**Nuclear energy** - Is essentially the energy in the nucleus - the centre of the atom - the power that holds an atom together. The process of getting the energy from the Nucleus is called "nuclear fission", the atoms are split and release this energy. Nuclear energy is produced in nuclear reactors or power plants. It is classified as a clean source of energy, as it doesn't contribute to climate change, since it doesn't release any chemicals.

**Wind energy** - one of the renewable energy resources. It is generated from the wind through converting kinetic energy to electricity using wind turbines. And therefore this energy's production emits no pollution.

**Solar energy** - Also a renewable energy resource, it is produced through solar panels and produces zero emissions. However, solar energy has some negative traits to it. It cannot be produced at night, since the production involves the sunlight. It uses up a lot of space.

**Hydropower** - Hydropower is basically energy produced from water moving from higher to lower elevations, it can also be generated from reservoirs and rivers. It is currently the largest source of renewable energy. It can be easily impacted by climate changes such as droughts or change in rainfall patterns.

## **Introduction**

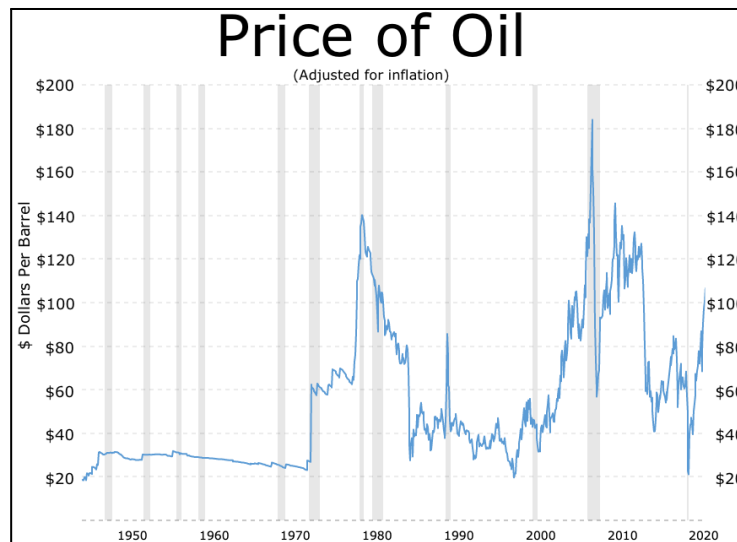
Climate change is one of the most significant issues humanity is currently facing. The biggest problem is the CO<sub>2</sub> emissions that mostly come from energy production. The most common ways of producing energy are from burning fossil fuels (such as oil and coal), which release massive amounts of carbon dioxide. All this CO<sub>2</sub> produced gathers up in the atmosphere, creating a thick layer, which causes the same effect as a greenhouse (hence the name “greenhouse gas”) - trapping the heat and warming up the inside (on Earth) even more. Because of the rising temperatures, the Earth’s nature is being disturbed. The icebergs in Antarctica are melting and because of this, a lot of cities and countries that are situated low above water are at risk of sinking, thus people are being displaced. Many animals are losing their homes. There are severe forest fires that destroy flora and fauna. All in all, it is predicted that unless we change our energy consumption habits and amount of CO<sub>2</sub> emissions, the Earth’s temperature will rise by 2.8°C by the end of this century.

## **Overview**

### **History of energy transition**

The movement started in the 1970s after the energy crisis due to the disruption of the oil supply from the middle east. This is known as the “1973 oil crisis”. In October 1973 the members of OAPEC (Organisation of Arab Petroleum Exporting Countries) proclaimed an oil embargo, targeted at the countries who stood in support of Israel in the Yom Kippur War (an armed conflict between Israel on one side and Egypt and Syria on the other, over the land that was lost to Israel by the other party during the Arab-Israeli war in 1967). The embargo affected countries such as Canada, Japan, USA, the Netherlands, UK, Portugal, South Africa. Because of this, there was a jump in the prices of oil which led to the “world’s economy going into the steepest economic contraction since the Great Depression”.

Control of oil by the suppliers became known as the “oil weapon”. Theories suggest that this oil weapon was supposed to force the West into accepting and believing into a pro-Arab position. In the end, this led to the countries searching for other sources of energy to avoid being manipulated by the oil-suppliers.



### Further developments

As time went on, people became more aware of and concerned about Climate Change. In 1988, the UN established the Intergovernmental Panel on Climate Change (IPCC) to report on scientific findings. Technology advanced and the alternatives to fossil fuels were spreading worldwide. For example, the solar panels that before were only used in space to support the ship, were now being used for the production of energy. Despite the growing popularity of renewable energy sources, fossil fuels are still being widely used.

### The main problem

The complete switch to renewable energy would mean significant decline of demand for the fossil fuel industry. For the countries that depend on the export of these products would mean a very likely economic crisis. Additionally, green energy is more expensive in production and countries with large production industries (such as China) are not willing to

switch to the more expensive resources when there are much cheaper and easier alternatives.

## **Parties involved**

**China** - has the biggest emissions in the world. It is estimated that they released approximately 4.65 billion metric tons of carbon dioxide in 2021 and the numbers keep rising every year. Overall China produces almost 30% of the world's carbon emissions. Coal burning is the biggest factor contributing to the pollution.

**Iraq's** - oil exports make up 99% of all their exports. This means that if the demand for oil was to suddenly fall, they would most likely suffer an economic crisis. Unfortunately, Iraq is not the only country that is at risk in this situation.

**Venezuelan** - oil exports make up 97% of their total exports. In fact, the country is already suffering from an oil embargo imposed on them back in the 2000s. Other countries with a high oil export percentage are **Qatar** (88%), **Nigeria** (87%), **Kuwait** (94%) and others.

**South Africa** - may suffer from the same issue, except with coal exports. They are ranked number 5 in the production of coal in the world.

## **Possible solutions**

Currently, countries are switching to resources such as wind, hydro, and solar energy. But the switch to such sources will cut the demand for fossil fuels, which many countries (especially LEDCs) economies are dependent on. So if the consumers were to suddenly stop buying the coal, oil or natural gas, a lot of the countries-suppliers would suffer a sudden economic collapse. In order to prevent this from happening, other more developed member states could invest money into these countries to help them survive the economic

change and develop in other sectors of production. This will not only help us fight the climate crisis, but also aid the countries that currently depend on fossil fuels to be more free and self-reliant.



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