**Forum:** Environmental Committee

**Issue:** The transition from coal-based economies to economies based on renewable energy

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**Introduction**

Coal is the cheapest source of energy, which has been used since the 1880s. Even though there is coal in abundance, the industry provides many jobs, and we know where to find it, the coal-based economy is very environmentally damaging.

Coal-based economies have many consequences on the Earth. To begin with, coal is “a carbon-rich black rock that releases energy when burned” (Union of Concerned Scientists, 2017), which means that every time we use coal-energy, a great number of airborne toxins and pollutants, such as mercury, lead, sulfur dioxide and various other heavy metals, are released into the air, causing air pollution. This brings many health problems, such as asthma, cancer, brain damage and premature death.

Apart from this, water pollution is another of the coal-based economies' effects. Coal-fired power plants produce more than 100 million tons of coal ash every year, which mostly ends up in ponds, lakes, and other sites that will contaminate waterways in the future. Drinking water supplies are also impacted by this ashes, so in the future we will have no more drinkable water. Also, water is impacted by other factors, such as the acid rock drainage from coal mines and the energy-water collisions that occur when coal plants rely too heavily on local water supplies.

Global warming is another important effect of the use of coal as a source of energy. As previously said, when coal is burned it reacts with oxygen in the air to produce carbon dioxide, which is a heat-trapping gas that acts like a blanket, warming the earth above normal limits. Drought, sea level rise, flooding, extreme weather, and species loss, are some of the global warming consequences.

**Definition of Key Terms**

**Renewable energy**

According to Chris Frewin, “Renewable energy is energy produced from sources that do not deplete or can be replenished within a human’s lifetime. The most common examples include wind, solar, geothermal, biomass, and hydropower. This is in contrast to non-renewable sources such as fossil fuels.” (Frewin, 2020)

**Economy**

Economy is the term used for the production and consumption activities that take place in a nation seeking to efficiently allocate its resources for the public benefit. An economy is often synonymous with the economic system. Therefore, it includes the distribution of resources to the factors of production as well the labor and capital required for the production factors to produce an output. (myaccountingcourse.com, n.d.)

**Coal**

“Coal is a combustible black or brownish-black sedimentary rock with a high amount of carbon and hydrocarbons. Coal is classified as a nonrenewable energy source because it takes millions of years to form.” (U.S. Energy Information Administration, n.d.)

**Coal based economies**

Also known as **coal mining**, is a country's economy which is based on the production of coal. Coal supplies over one-third of global electricity generation and plays a crucial role in industries such as iron and steel.

**Global warming**

According to the Merriam Webster dictionary, “Global warming is an increase in the earth's atmospheric and oceanic temperatures widely predicted to occur due to an increase in the greenhouse effect resulting especially from pollution”. (Merriam Webster, n.d.)

**Greenhouse effect**

The greenhouse effect is a process that occurs when gases in Earth's atmosphere trap the Sun's heat. This process makes Earth much warmer than it would be without an atmosphere. The greenhouse effect is one of the things that makes Earth a comfortable place to live. (NASA, n.d.)

**Clean energy**

Clean energy is defined as energy derived from renewable, zero-emissions sources (“renewables”), as well as energy saved through Energy Efficiency (“EE”) measures. (NCSEA, n.d.)

**Issue Overview**

**Historical Background**

“Coal was the fastest-growing primary energy source in the world between 2001 and 2010, when world consumption of coal increased by 45%. During the same time period, total anthropogenic GHG emissions were the highest in human history. According to the International Energy Agency, to have a 50% chance of staying within 2 degrees celsius of global warming, only zero carbon utilities and infrastructure should be developed beyond 2017. This means that the age of coal must soon come to an end.” (endcoal.org, n.d.).

Coal has many important uses worldwide. The most significant uses of coal are in electricity generation, steel production, cement manufacturing and as a liquid fuel.

According to [endcoal.org](https://endcoal.org/climate-change/), coal is the single biggest contributor to climate change. The burning of coal is responsible for 46% of carbon dioxide emissions worldwide and accounts for 72% of total greenhouse gas (GHG) emissions from the electricity sector. If plans to build up to 1200 new coal fired power stations around the world are realized, the greenhouse gas emissions (GHG) from these plants would put us on a path towards catastrophic climate change, causing global temperatures to rise by over five degrees Celsius by 2100. This will have dire impacts for all life on earth.

## Major Countries and Organizations Involved

In places where international locations get the lowest percentage of their power from coal, Europe leads the way again, boasting six of the pinnacle **10 international locations**.

**Norway** sits in first place with 0%. At the alternative end of the spectrum, 3 of the six countries at the bottom of the list are from Asia (**Indonesia, China and India**), although **South Africa**, which uses coal for nearly 90% of its electricity, is placed last in some of the 25 international locations assessed through the report.

When it comes to the transition from coal-based electricity production in the last decade, the sample follows a similar fashion to the change in carbon content; the **United Kingdom** and **Denmark** are in advance of the field. But the **United States** and **China** are making progress – each are within the top five, with 18% and 14% decreases respectively. (Assirati, B., n.d.)

## Latest Events

* COP24 - United Nations Climate Change Conference
* IRECs - International Renewable Energy Conference
* Biogaz Europe (29/01/2020)
* E-Hellas (04/02/2020)
* Corporate Renewables (11/3/2020)

## Possible Solutions

Raise awareness about the positive effects of renewable energy and help the countries economically in their transition so as to relieve their economic burden.

**Useful reference material**

## LINKS TO NGOs

* [Renewable world](https://renewable-world.org/)
* [Synergie Solaire](https://www.synergiesolaire.org/en/who-are-we/the-renewable-energy-sector-at-the-service-of-ngos/)
* [Ises](https://www.ises.org/) (International Solar Energy Society)
* [IISD](https://sdg.iisd.org/) (International Institute for Sustainable Development)

**SPEECHES OF POLITICAL LEADERS**

* [“Obama’s Speech on Renewable Energy Policy”](https://www.nytimes.com/2009/10/24/us/politics/24obama.text.html)
* [“Al Gore's Speech On Renewable Energy”](https://www.npr.org/templates/story/story.php?storyId=92638501)
* [Speech by Commissioner Arias Cañete: A "Renewable" Energy Union](https://ec.europa.eu/commission/presscorner/detail/en/SPEECH_15_4615)

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