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A World in Harmony: Creating a Future of Mitigated Polarization by Addressing Ongoing Crises

SA4-Sustainability

Transitioning to clean energy resources in times of war

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RESEARCH REPORT

Forum: SA4-Sustainability

Issue: Transitioning to clean energy resources in times of war

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Introduction

Transitioning to clean energy in times of war is a complex process. During war, the availability and supply of traditional energy sources such as fossil fuels can be disrupted or even cut off completely, leading to energy shortages that can have severe consequences for military operations, national security, and civilian populations. Which can be seen clearly in one of the most recent wars that is happening in the war of Ukraine.

Transitioning to clean energy resources such as solar, wind, and hydroelectric power can provide important benefits. Clean energy resources can be more resilient to supply disruptions and less vulnerable to attacks, making them a more reliable source of energy during wartime. In addition, clean energy resources can be deployed in remote or off-grid areas, providing energy security and independence.

However, there are also significant challenges to transitioning to clean energy resources during times of war. The cost of deploying and maintaining clean energy resources may be higher than traditional energy sources, especially in the short term.

To overcome these challenges, governments and militaries may need to invest in building the necessary infrastructure for clean energy deployment, such as energy storage systems and smart grids. They may also need to provide incentives for private sector investment in clean energy technologies, and collaborate with international organizations to share knowledge and resources.

Overall, transitioning to clean energy resources during times of war is an important step towards achieving energy security, reducing greenhouse gas emissions, and building more resilient and sustainable energy systems for the future.

Definition of Key Terms

Greenhouse Gas

an increase in the amount of carbon dioxide and other gasses in the atmosphere (= mixture of gasses around the earth), that is believed to be the cause of a gradual warming of the surface of the earth (cambridge dictionary)

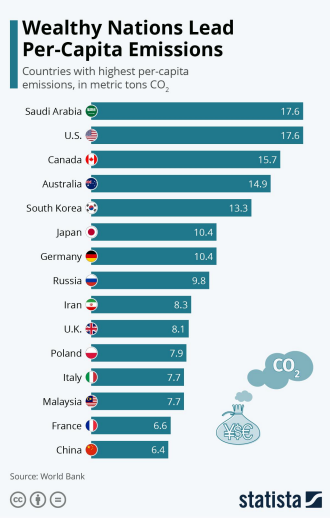
Renewable Energy

energy that is produced using the sun, wind, etc., or from crops, rather than using fuels such as oil or coal (cambridge dictionary)

General Overview

Countries such as the USA and China are observed to be the countries with the biggest carbon pollution. The vast majority of counties have determined to transition to clean energy since exploring that fossil fuels cause more than %70 of greenhouse gas emissions even before the issue of the war in the Ukraine brought it to attention. In many countries, depending on fossil fuels has become an increasing problem without the concern of war. Many countries are approving laws regarding transition to clean and renewable energy. This issue was not discussed much around the world, however, with the war in Ukraine with Russia, the problem came to the attention of governments and media. Because of this particular war, countries such as Europe and USA applied economic sanctions to Russia which is one of the biggest suppliers for fossil fuels. This leads to the question of where countries under the war or who is affected by the war, will find energy supplies.

Countries are establishing law and trying to find solutions towards transitioning to renewable energy. There have been reports from organizations such as the International Energy Agency (IEA) that the war in Ukraine will not be slowing down causing more problems with fossil fuels in the future. Some countries found the solution of burning coals as an alternative solution because of the war in Ukraine, which is reported to be a short-lived solution. The demand for fossil fuels is predicted to peak in the near future, approximately for 15-20 years. Although shortages of fossil fuels such as gas and oil are happening right now, policies of countries transitioning to clean energy are observed to be slow.



The global investment for clean energy is expected to rise from $1.3 trillion in 2022 to more than $2 trillion annually by 2030. In the United States, Congress approved spending more than $370 billion for technologies under the Inflation Reduction Act which will provide tax intensives for low carbon emission technologies that could enable the country to reduce its greenhouse emissions. Japan is following a new “green transformation” program that will help fund hydrogen and other low-emission technologies. Other countries such as South Korea, China and India have all established targets for renewable energy.

In 2023, global carbon dioxide emissions from fossil fuels are expected to rise roughly 1 percent which will approach record high, partly because of the increase of coal use in places like Europe where countries try to replace Russian gas shortage with coal. Russia is also expected to be hit by the economic sanctions that it has been facing. As countries try to reduce their reliance on Russian gas and oil, Russia is expected to face challenges in finding new markets. While European nations currently appear to have enough natural gas storage which will get them for the year,

they are expected to face a hard time next year as stocks are drawn and new supplies from the United States or Qatar which are meant to replace the Russian gas has slowed down.

The situation for the developing countries such as Bangladesh and Pakistan is highly concerning since they are facing energy shortages as deliveries of natural gas are diverted to Europe. It is believed that nearly 75 million people around the world who recently gained access to electricity are likely to lose it in the near future. If it happens, for the first time in a decade, the number of people worldwide who lack access to modern energy will increase.

On the other hand, with the issue of the importance of transitioning clean energy in times of war or in general has come to the attention, governments are investing and working towards a more sustainable world. The UN has put the issue of renewable energy as a priority for this year.

Major Parties Involved and Their Views

United States of America

After the war in the Ukraine, the USA has imposed economic sanctions towards Russia. However, this was not a huge problem for the USA since they have their own resources for gas and oil. They were able to sell oil to European countries who imposed economic sanctions towards Russia too. Furthermore, the USA is one of the countries with the biggest carbon pollution with 6,347.7 million metric tons of carbon dioxide equivalents in 2021, therefore have been investing towards renewable energy.

Russia

Russia is one of the biggest suppliers of natural gas and oil to other countries, especially European countries. As a result of the war many countries enforced sanctions toward them. Russia is expected to have challenges in finding new markets for their resources.

European Union

Because of the war in the Ukraine, they also imposed economic sanctions towards Russia which caused severe problems for the European Union since their resources of energy mainly come from Russia. European countries are trying to find resources such as clean energy to replace fossil fuels.

Timeline of Events

There have been efforts on transitioning to clean energy. However, because of the infrastructure of the countries, cost of transitioning to clean energy, they have not been efficient. Most of the countries have established their own laws and policies about transitioning to clean energy.

June 12, 1992	*United Nations Framework Convention on Climate Change (UNFCCC)* 154 nations signed this treaty to reduce atmospheric concentration of greenhouse gasses. This treaty was signed in order to prevent climate change.
December 12, 2015	*Paris Agreement* The agreement was adopted in the United Nations by 196 Parties. The Paris Agreement's central aim is to keep the temperature rise below 2 degrees in the next decade.
February 24, 2022	*The War in the Ukraine* With Russia invading Ukraine, the issue of gas shortage started and brought up the attention of transitioning to clean energy resources.
September 2, 2022	*Economic Sanctions Against Russia* The G7 group of nations agreed to impose economic sanctions on Russian oil in order to reduce Russia's ability to finance the war with Ukraine. The European Union and Australia joined and imposed economic sanctions.

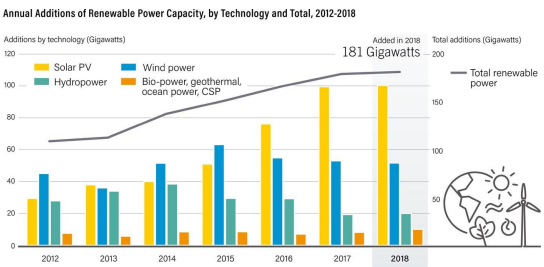
Treaties and Events

The UN and governments have worked towards transitioning to clean energy. Unfortunately, because of infrastructure and costs, transitioning to renewable energy is a hard process that needs loads of money and effort. One of the agreements that was signed was the United Nations Framework Convention on Climate Change (UNFCCC) which aimed to reduce greenhouse gas emissions and prevent climate change. This agreement was signed by 154 nations.

One of the most known treaties about prevention of climate change is the Paris Agreement, signed on 12 December 2015. It has been signed by 196 parties and aims to keep the temperature rise below two degrees near the next decade. Without changing to renewable energy, it is a hard goal to maintain which various countries have broken.

Last few years, the UN put the topic of climate change in more to the focus and held UN Climate Talks which discusses the issues of climate change and about ways to prevent it.

Evaluation of Previous Attempts to Resolve the Issue



There have been lots of conferences and agreements by numerous organizations and laws from countries to try to prevent climate change. However, since the industrial revolution, governments have based their energy on fossil fuels. Almost every one of these conferences were inefficient since it takes money and a big change in infrastructure to transition to clean energy. Countries such

as Norway succeed in transitioning to clean energy. %98 percent of the electricity comes from renewable energy resources in Norway and they have been using hydropower as a source of energy. This shows that transitioning to clean energy may take effort but is still very possible.

Possible Solutions

The possible solutions can be found by the governments by creating laws. The government should eliminate subsidies for fossil fuels and put a higher price on carbon. Also renewable energy could be made a global public good which everyone has access to. The investments that have been made to fossil fuels could be directed towards renewable energy.

Source Recommendations

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