

ISMUNHK 2017-2018  
ECOSOC CHAIR REPORT



TOPIC: ENSURING THE SAFETY OF  
RENEWABLE ENERGY

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# **Contents**

Introduction

Key Terms

Background Information and Key Areas to Consider

Key Parties Involved

Timeline

UN Involvement

Clashes

Possible Solutions

Guiding Questions

References



# Introduction

ECOSOC, being one of the principle organs of the UN, has established the Sustainable Development Goals<sup>1</sup>, hoping that member states would prioritise the global sustainable development. In particular, Sustainable Development Goal 7 focuses on the topic of ensuring access to affordable, reliable, sustainable and modern energy for all<sup>2</sup>. Even though many member countries have altered their energy mixes to incorporate more renewable energy sources, the result is still deemed unsatisfactory, with solar and wind energy only contributing to a minor share of energy consumption amongst the world leaders. As climate change becomes only more and more imminent, and as the problem of pollution becomes only more severe, it is only crucial that member states all cooperate to create the most utility through developing sustainably and responsibly.

In response to the above predicaments, countries have come together in the past through the UN to come up with what is now known as the 2030 agenda, which is a set of goals and aims of renewable energy to be achieved by 2030. Along with the 17 sustainable goals, it has been adopted by member states since 2016. Other successful agreements working towards the same goal, such as the Kyoto Protocol in 1997 and the Paris Climate Agreement in 2015, have also been negotiated between states to gradually sever the reliance on non-renewable energy.

In this conference, delegates are advised to seek resolutions that are geared towards promoting more efficient renewable energy usage in the long run and aiding undeveloped countries in implementing relevant technologies to achieve the 2030 agenda. Emphasis is put again on the fact that resolutions will work only if all countries are willing to cooperate.

## Key Terms

### Renewable Energy

- A factor of production, it is energy which is produced without reliance on the world's current resource bank. Examples include Solar energy, Wind energy, Hydroelectric energy, and biofuels.

### Non-renewable energy

- In opposite to the prior, non-renewable energy sources its production from limited and scarce sources which cannot be regenerated in a short period of time, pertaining but not limited to natural gas, oil, nuclear power, and coal.

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<sup>1</sup> *Sustainable Development Goals*, UN. Retrieved from:  
<https://www.un.org/sustainabledevelopment/sustainable-development-goals/>

<sup>2</sup> *Sustainable Development Goal 7*, UN. Retrieved from:  
<https://www.un.org/sustainabledevelopment/energy/>



## Economic Growth

- The increase of the productivity, or economic output, of an economy over a period of time. It usually refers to the expansion of its capacity to produce, as a result of the improvements in the factors of production.

## Sustainable Economic Development

- Based on economic growth, development extends to the improvement of living standards, such as hygiene, protection of human rights, access to quality education, and generally the human condition. Being sustainable, it refers to the increase of the capacity of the economy to produce without sacrificing the potential for growth in the future.

# Background Information and Key Areas to Consider

## Key Areas

### Financial Capacity of Member States

- Nonrenewable energy is undoubtedly a source of inexpensive energy that can be readily purchased, whereas the usage of renewable energy often requires additional facilities for generation. The list of facilities can range from wind turbines to long stretches of solar panels. When compared to the generation of renewable energy, many people believe that purchasing and burning nonrenewable energy sources, such as fossil fuels, will result in a lower cost to the country. Yet, it may not always hold true. According to UN Environment in 2017, the generation of energy through the burning of fossil fuel costs around \$49USD to \$174USD per MWh (Megawatt hours), while renewable energy production costs in between \$35USD to \$45USD per MWh<sup>3</sup>. This indicates that the prices of producing renewable energy is lower than ever.
- One of the key areas to consider regarding this topic is how to ensure that sufficient facilities are constructed in developing countries, so as to propel the progress of meeting the Sustainable Development Goal 7. Constructing these facilities will incur astronomical amounts, rendering the generation of renewable energy in impoverished countries impossible. For example, wind turbines under 100 kilowatts cost roughly \$3,000USD to \$8,000USD per kilowatt of capacity; a 10 kilowatt machine (the size needed to power a large home) might have an installed cost of \$50,000USD to \$80,000USD<sup>4</sup>. For solar panels, the installation cost is for a 5 kW system will cost around \$25,000-\$35,000<sup>5</sup>. The data quoted above only represents the average cost of generating renewable

<sup>3</sup> *Production Cost Of Renewable Energy Now 'Lower' Than Fossil Fuels*, Forbes (April 24, 2018), Retrieved from: <https://www.forbes.com/sites/gauravsharma/2018/04/24/production-cost-of-renewable-energy-now-lower-than-fossil-fuels/#261aeff8379c>

<sup>4</sup> *How Much Do Wind Turbines Cost?*, Windustry, Retrieved from: [http://www.windustry.org/how\\_much\\_do\\_wind\\_turbines\\_cost](http://www.windustry.org/how_much_do_wind_turbines_cost)

<sup>5</sup> *How Much Does it Cost to Install Solar on an Average US House?*, Solar Panel Authority, Retrieved from: <https://www.solarpowerauthority.com/how-much-does-it-cost-to-install-solar-on-an-average-us-house/>



energy for a large household. Even with a low cost of generating renewable energy in long run, the initial step of building the facilities is more challenging than one would think. Many of these developing countries have a low GDP per capita, which is reflected in the low standard of living. Without ample resources to even support their own citizens, erecting these facilities to generate renewable energy to suffice the ever-growing demand for electricity in developing countries, whether for production or self-consumption, is seemingly futile as they cannot afford the huge expenditure. Moreover, after the completed construction, these facilities require comprehensive maintenance work to assure that they will function properly. The consistent manpower and expertise required are not found in developing countries and therefore generation of renewable energy is unsustainable.

Bearing in mind the UN goal of expanding infrastructure and upgrade technology for supplying modern and sustainable energy services for all in developing countries, in particular least developed countries, small island developing States, and landlocked developing countries, in accordance with their respective programmes of support by 2030, developed countries are hence called upon to aid developing countries that heavily rely on fossil fuels in constructing and generating renewable energy.

## Environmental Concerns

- Albeit being cleaner sources of energy, nuclear energy and renewable energy sources do not have absolute environmental benefits over conventional non-renewable resources. In the majority of cases, the construction of large scale renewable energy and nuclear energy facilities require large land masses, and thus involve the deforestation of the surrounding areas. The Solar Panel project in New Jersey, pursued by Six Flags, has received opposition from environmental groups over the future cutting down of 66 acres of trees<sup>6</sup>, destroying greenery which contributes to the coherence of the earth's atmosphere and thus speeds up climate change. The construction of the Three Gorges Dam in China has changed the landscape, loosening the soil to trigger landslides and also increases the risk of earthquakes due to the change of the mechanics of the plates it rests on<sup>7</sup>. Nuclear Energy sources also have detriments of their own, as inappropriate treatment of the plant itself and its waste will result in radioactive byproducts being exposed to civilians, raising the risk of cancer and other life-threatening diseases akin to what happened in Chernobyl, which negative effects extended to as far as Belarus.<sup>8</sup> Such potential harms must be taken into consideration when discussing replacement sources of current polluting sources of information.

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<sup>6</sup> *The Green Roller Coaster*, Slate, Retrieved from:

[http://www.slate.com/articles/technology/future\\_tense/2016/06/going\\_solar\\_isn\\_t\\_green\\_if\\_you\\_cut\\_down\\_tons\\_of\\_trees.html](http://www.slate.com/articles/technology/future_tense/2016/06/going_solar_isn_t_green_if_you_cut_down_tons_of_trees.html)

<sup>7</sup> China's Three Gorges Dam: An Environmental Catastrophe?, Scientific American, Retrieved from:

<https://www.scientificamerican.com/article/chinas-three-gorges-dam-disaster/>

<sup>8</sup> *Health effects of the Chernobyl accident: an overview*, WHO, Retrieved from

<https://www.scientificamerican.com/article/chinas-three-gorges-dam-disaster/>



## Guiding Questions

1. How might sustainable energy sources be developed across all member states?
2. What can be done to minimize the drawbacks of current renewable energy sources?
3. How to integrate the usage of renewable energy into end-use application so as to meet the 2030 Agenda?

## Key Parties Involved

### China

- As China relies heavily on imported oil and fossil fuels for electricity generation, the government has been drastically incentivizing corporates with the use of subsidies to develop and generate renewable energy through the use of solar panels, dams and wind turbines. This has allowed it to gradually assert its position as the leader of the era of renewable energy. However, solar panels age in less than two decades, resulting in a huge amount of hazardous waste from these retired panels. China hosts the world's largest number of solar panels, yet it lacks the technology to recycle and reclaim the usable parts.

### Oil Dependent Economies

- Middle Eastern Countries and Russia have oil-based economies which have the oil extraction industry as their primary source of production. While these countries have been investing heavily in renewable energy sources, such as Saudi Arabia having planned renewable energy projects worth 7 billion<sup>9</sup>, their economies are still heavily reliant on non-renewable energy sources. Being direct substitutes of oil, drastic development of alternatives might decrease the price of oil, and potentially harm their economies, resulting in increased global tensions.

### Western Nations

- Sweden is currently the leading European nation that meets more than half of her energy demand with renewable energy<sup>10</sup>. The European Union has also issued "Renewable Energy Prospects for the European Union"<sup>11</sup>, which calls for member nations to transition their energy mixes and become more environmentally friendly. However, certain member countries have been finding it unfeasible to adjust

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<sup>9</sup> *Saudi Arabia Plans Up to \$7 Billion of Renewable Energy Projects This Year*, Bloomberg (Jan 16, 2018), Retrieved from: <https://www.bloomberg.com/news/articles/2018-01-16/saudi-arabia-plans-up-to-7-billion-of-renewables-this-year>

<sup>10</sup> *Europe's Transition to a Green Energy Future*, Euronews (Feb 6, 2018), Retrieved from: <http://www.euronews.com/2018/02/06/europe-s-transition-to-a-green-energy-future>

<sup>11</sup> IRENA, *Renewable Energy Prospects for the EU*, Retrieved from: <http://www.irena.org/publications/2018/Feb/Renewable-energy-prospects-for-the-EU>



the proportion of renewable energy in the short term, as the transition itself might pose a threat to economic stability.

## USA

- The US has been an active developer of its renewable energy sources, like solar energy. However, with its recent leave from the Paris Climate Agreement<sup>12</sup>, skepticism has been shed over its willingness to fully commit to this project, in light of other cheaper energy alternatives which can bring more economic growth. Considering the looming trade war between China and the US, over exports including solar panels<sup>13</sup>, and the emphasis it puts on its trade balance, there are strong reasons suggesting that it prioritizes the development of its own industries over the transition to cleaner energy sources through importing cheaper alternatives.

## Developing Nations

- India has proven to be extremely committed to doubling her renewable capacity by 2022 and is set to overtake the EU's progress. Given that many developing nations do not have adequate facilities and the expenses in affording renewable energy, very few developing countries have adopted renewable technologies, as limiting their energy consumption might hinder their economic growth. For example, especially in developing African countries are looking into expanding their coal industries despite voices supporting advancement towards renewable energy<sup>14</sup>. This reflects that financial support is more important than a mere change in mindset.

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<sup>12</sup> *Trump and the Paris Agreement: What Just Happened?* The Atlantic, Retrieved from: <https://www.theatlantic.com/science/archive/2017/08/trump-and-the-paris-agreement-what-just-happened/536040/>

<sup>13</sup> *Did Trump just start a trade war with China?* CNN, Retrieved from <http://money.cnn.com/2018/01/23/news/economy/trump-solar-china-trade-war/index.html>

<sup>14</sup> *Sources of Energy in Developing Countries*, Global Edge (Feb 2, 2018), Retrieved from: <https://globaledge.msu.edu/blog/post/55554/sources-of-energy-in-developing-countries>



## Timeline

Date	Event
August 2011	UN released a document titled Promotion of New and Renewable Sources of Energy, acknowledging the importance of renewable energy.
2011	Sustainable Energy for All, an initiative launched by the UN Secretary-General Ban Ki-moon, aims at supporting the Paris Climate Agreement and catalyzing the progress of the Sustainable Development Goals.
May 13, 2013	ECOSOC's Integration Meeting on "Achieving sustainable development: Integrating the social, economic and environmental dimensions" gathered high-level representatives of member states to examine how integration of the economic, social and environmental dimensions of sustainable development in renewable energy sectors.
January 1, 2016	The 17 Sustainable Development Goals and the 2030 Agenda for Sustainable Development have been adopted by member nations in a UN Summit.
2020	Countries in the European Union should have meet the short-run target: obtaining 20% of energy from renewable energy sources by 2020.
2030	17 Sustainable Development Goals and the 2030 Agenda should be achieved.

## UN Involvement

- Other than the Sustainable Development Goals, UNESCAP has held two conferences to enhance energy security and accelerate the transition from nonrenewable energy to renewable energy within the Asian Pacific region<sup>15</sup>.
- On April 18, 2018, the First Review of Sustainable Energy SDG at UN High Level Political Forum 2018 was held, in which the publication "Accelerating SDG 7 achievement: Policy briefs in support of the first SDG 7 review at the UN High-Level Political Forum 2018" was introduced. The publication highlights the ambiguity in attaining the SDGs by 2030 when improvements in energy efficiency and financial flows into renewable energy are constantly lagging behind. If the SDGs cannot be achieved by then, billions of people will therefore be deprived of sustainable energy sources, better education, and greater protection from climate change.<sup>16</sup>

<sup>15</sup> UNESCAP, *The Second Asian and Pacific Energy Forum*, Retrieved from: <http://www.unescap.org/intergovernmental-meetings/apef2>

<sup>16</sup> UN, *First Review of Sustainable Energy SDG at UN High Level Political Forum 2018*, Retrieved from:





## Possible Solutions

### Solution 1: Financial Support

- Developed nations may consider subsidizing or donating to renewable energy projects in developing countries, so that the facilities can be financed adequately. Delegates should acknowledge the potential of corruption within these projects, in which recipients of funds do not use these subsidies for purposes of furthering renewable energy projects, therefore a detailed and comprehensive framework should be established to prevent the abuse of power.

### Solution 2: Creating financial incentives for foreign investments

- Similar to the above in that the aim of this is to provide enough funds for the expenditure of these programmes, firms in economically stronger companies can be incentivized to invest and take part of energy development in these countries through market-based policies such as the reduction of taxes, and deregulation. However, these policies can potentially strengthen the dominance of these stronger corporates over the share of the future energy market in these countries, and squeeze out the local firms.

### Solution 3: Sharing of information

- Given that some member states may not have the expertise in managing and utilizing these complex facilities, education and the sharing of information is crucial. With better knowledge and understanding of the operations, developing nations will have definitely been more self-sufficient in building more renewable energy-related facilities. Delegates are warned that the sharing of information may encourage the infringement of intellectual property rights by some particular countries. Hence, more transparency regarding the process of transmitting information should be considered.

### Solution 4: Deterrence

- Another alternative to promote cleaner energy is through deterring the use of polluting substances. This can include taxes and/or tradeable permits on corporates which exceed a certain limit of carbon emissions, so to provide incentives for them to either switch to cleaner alternatives, or to pay for the development of renewable energy. A more severe solution could be sanctions, in which a country decides not to trade with states which do not comply with environmental safety standards. However, caution must be taken against consequences such as an increase in international tensions, and the potential aggravation of member states.



Delegates should note that these solutions are not exhaustive and that any other creative and thought-out solutions would be greatly appreciated.

## Further research suggestions

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<https://www.forbes.com/sites/jamesconca/2013/10/20/european-economic-stability-threatened-by-renewable-energy-subsidies/#76f03844705e>

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