

# JejuMUN 8

## Background Guide

### United Nations Economic and Social Council

#### Agenda

**Achieving Carbon Neutrality: the proliferation of sustainable energy and establishment of global partnerships**

SDG: 7 (affordable and clean energy)

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## Committee Introduction

United Nations Economic and Social Council (ECOSOC), one of the six principal organs of the United Nations (UN) was founded in 1945 for coordination of economic, social, humanitarian, and cultural activities carried out by the UN. ECOSOC identifies solutions, facilitates international cooperation, and encourages universal respect for human rights and fundamental freedoms.

The council maintains a consultative status to more than 3900 Non-Governmental Organizations (NGOs) which allows them to attend UN conferences and speak about their concerns to the UN. The consultative relationship was established by ECOSOC resolution 1996/31.

ECOSOC membership is based on geographic representations such as Africa, Asia, Eastern/Western Europe, Latin America, and the Caribbean. Members are elected by the General assembly every 3 years. At the ECOSOC World Summit 2015, it was commanded that the council convene annual ministerial reviews to monitor progress on global partnerships and agreed development goals.

ECOSOC's role in reviewing international goals was enhanced by the creation of the High-Level Political Forum (HLPF), which is the meeting created for the adoption of Sustainable Development Goals (SDGs). The HLPF meets for the purpose of providing political guidance on implementation, reviewing the progress, and supporting the achievement of the SDGs by 2030.

The committee deals with the proliferation of sustainable energy and the establishment of global partnerships, which a lot of countries put a significant effort and time into accomplishing. In addition, many UN bodies including the Committee on Energy and Natural Resources and the Commission on Sustainable Development are within the purview of ECOSOC.

The United Nations Economic and Social council expresses deep concern over the emissions of environmental pollution and the inadequacy of global agreement regarding sustainable energies. Under the agenda, 'Achieving Carbon Neutrality: the proliferation of sustainable energy and establishment of global partnerships', the ECOSOC committee plans to discuss alternative solutions and draft constructive resolutions that will bring carbon neutrality and mitigation of the climate crisis.

## Agenda Introduction

The year 2020 and the beginning of the year 2021 were unlike any other year in our lifetimes. Throughout the pandemic, the dramatic impacts of COVID 19 harmed the global energy system and public health. It became undeniable for numerous nations to establish more progressive actions to “pursue efforts to limit the temperature increase to 1.5 °C above pre-industrial levels,” as stated in the Article 2 of the Paris Agreement.

As we set to discuss the agenda, *Achieving Carbon Neutrality: the proliferation of sustainable energy and establishment of global partnerships*, it is crucial to address the balance between progressive changes and economic incentives, considering the wealth gap among nations and within individual communities. It is because while the agenda itself focuses on the proliferation of sustainable energy, the hind-sighted hope of radical changes raises questions regarding the current economic status in developing countries; with no economic incentives, there would be no progressive development.

Despite the upcoming conflicts and predicted confrontations, however, all nations, cities, and people do have the single goal in common: that is to make the world a cleaner, and more sustainable place to live. While new challenges arise--with the average temperature of Earth continues to rise-- ECOSOC hopes to encapsulate different perspectives on this crisis and reach for tangible and promising resolutions for the future Earth.

# Letter from the Chairs

Dear esteemed delegates,

Welcome to the United Nation Economic and Social Council! My name is GhaBin Kim, and I am a sophomore at St.Johnsbury Academy Jeju. I'll be serving as a head chair for the ECOSOC committee. JejuMUN 8 will be my second conference participating as a chair, and for my vice-chairs, it will be their first time chairing. My deputy and associate chairs in this committee are Harry Jung and Alyssa Choi, who are also sophomores at SJAJ. It is an honor for us to be part of this tremendous conference as chairs.

Our MUN journeys all started in Middle school. We enjoy Model United Nations because it provides wonderful opportunities to learn about past and current global affairs. I liked the excitement of the process from the opening speeches to drafting resolutions.

As your chairs, we will be moderating the committee and helping delegates to draft a practical resolution with their fellow delegates. We highly encourage you to research the agenda, have a passion for representing your country, and be engaged. We recommend all delegates to have plentiful background knowledge about the agenda and Sustainable Development Goal 7 (Affordable and clean energy) for a successful debate.

We all understand that participating in MUN conferences might be stressful for beginners, however, I can assure you that this experience will help you a lot in the future. Please don't hesitate to contact us if you have any questions, and remember to have fun!

Sincerely,  
ECOSOC chairs

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# Key Terms

## **Carbon Neutrality**

Carbon neutrality means achieving the balance between the emissions of carbon dioxide (CO<sub>2</sub>) and absorbing carbon from the atmosphere. In order to achieve net-zero emissions, all worldwide carbon emissions should be counterbalanced by carbon sequestration. Individuals, organizations, and businesses all can invest in carbon offsetting, which contributes to the reduction of carbon emissions worldwide.

## **Sustainable energy**

Sustainable energy, often referred to as clean energy, comes from natural resources or processes that are constantly replenished without any negative impact on the environment. Sustainable energy includes all renewable energy sources such as wind, solar, geothermal, tidal, and biomass. It is also one of the 17 global goals that make up the 2030 agenda for Sustainable Development.

## **Net-zero carbon emission**

After 197 countries joined the Paris Agreement, which called for keeping the global temperature to 1.5°C, countries have put significant effort into net-zero emissions. Net-zero carbon emissions can be achieved when any carbon emissions created by human activities are balanced out by removing greenhouse gases (GHGs) from the atmosphere through a process called carbon removal. Any remaining emissions can be balanced with the equivalent amount of carbon removal through forest restoration and Direct Air Capture and Storage (DACs) technologies. For the major emitting nations such as the G20 countries, the goal of achieving net-zero emissions has been set for the year 2050.

## **Carbon sequestration**

Carbon sequestration is closely related to carbon neutrality which reduces the progress of the greenhouse effect. There are two types of carbon sequestration: direct and indirect. The direct method is binding the carbon compounds at the source of its formation before it enters the atmosphere. The indirect method involves plants that bind CO<sub>2</sub> in photosynthesis or when the carbon compound is captured in a soil environment. While biological and geological carbon sequestration stores carbon dioxide in the natural environment such as the ocean, grassland, and forest, technological sequestration involves technologies such as graphene production, direct air capture (DAC), and engineered molecules.

## **Sustainable Development Goals and SDG 7**

The Sustainable Development Goals (SDGs), also known as the Global Goals, were adopted by the United Nations in 2015 as a universal call to end poverty, protect the planet, and ensure that all people live in peace by 2030. The 17 goals are socially, economically, and environmentally well balanced for universal development. SDG 7 is

affordable and clean energy, a goal created for the demand for cheap and environment-friendly energy corresponding to the worldwide increase in population. Expanding infrastructure and upgrading technologies in all countries will encourage growth and help the environment.

### **Biomass**

Biomass is a carbon-neutral electricity source generated from renewable organic waste such as forest debris, scrap woods, and manure. When burned, the biomasses are released into heat. Although it creates some amount of emissions, the emissions from burning biomass are less than the emissions produced by using fossil fuels.

### **Nationally Determined Contributions (NDCs)**

Nationally determined contributions (NDCs) are at the heart of the Paris Agreement and the achievement of long-term goals towards climate action. NDCs embody efforts by each country to reduce national emissions and adapt to the impacts of climate change. The Paris Agreement (Article 4, paragraph 2) requires each Party to prepare, communicate and maintain successive nationally determined contributions (NDCs) that it intends to achieve. NDCs are submitted every 5 years to the United Nations Framework Convention on Climate Change (UNFCCC).

### **GWP(Global Warming Potential)**

The global warming potential of a gas refers to the total contribution to global warming resulting from the emission of one unit of that gas relative to one unit of the reference gas, carbon dioxide, which is assigned a value of 1. It is often calculated over 100 years, though it can be done for any time period. Gases with high GWPs will warm the Earth more than an equal amount of CO<sub>2</sub> over the same time period.

### **Carbon dioxide equivalent(CO<sub>2</sub>-eq)**

Carbon dioxide equivalent, or else abbreviated as CO<sub>2</sub>-eq, is a measuring unit of carbon footprints. Utilizing the GWP ratio for different gases, CO<sub>2</sub>-eq provides the total greenhouse gas emissions that impact the environment. This method is used because the impact of other gases must also be held accountable when measuring the emissions from different nations. For instance, methane emissions have an 80 times more impact on climate change than carbon dioxide. However, if only CO<sub>2</sub> emissions are measured, the causes of global warming might not solely reflect the actual greenhouse gas emissions like methane.

### **Land use, land-use change, and forestry (LULUCF)**

The term LULUCF is used in relation to the forestry and agricultural sector in the international climate negotiations under the United Nations Framework Convention on Climate Change (UNFCCC). LULUCF covers greenhouse gas emissions and removals related to soils, trees, plants in general, biomass and timber. This means in principle all human activities that take place on agricultural land,

forested land, wetland and peatland and which result directly in emissions or removals of greenhouse gases, such as draining of peat land, felling of forest or ploughing up grassland for growing crops.

### **Enhanced Transparency Framework(ETF)**

The enhanced transparency framework guides countries on reporting their greenhouse gas emissions, progress toward their NDCs, climate change impacts and adaptation, support provided and mobilized, and support needed and received. The enhanced transparency framework also includes processes for technical experts to review reported information and a multilateral peer review where countries can ask questions of one another.

# Historical Background

Timeline of Key Events:

## **June 5-16, 1972:**

UN Conference on the Human Environment takes place. Also known as the Stockholm Conference, it was the first major UN conference on international environmental issues. The conference marked the turning point of the development of international environmental politics.

## **February 12-23, 1979:**

World Climate Conference takes place in Geneva. This was one of the first major international conferences on climate change, attended by scientists from a wide range of disciplines. The conference later led to the establishment of the World Climate Programme.

## **December, 1988:**

The Intergovernmental Panel on Climate Change (IPCC) is established. IPCC is a scientific and intergovernmental entity under the auspices of the UN, responsible for the comprehensive and clear reporting of climate change and its potential socio-economic impacts.

## **1990:**

The IPCC produces its first assessment report. In this report, the IPCC concluded that human GHG emissions are adding to the atmosphere of the Earth, and that it is, with great importance, to require international cooperation to tackle its consequences. This report played a valuable role in the establishment of the United Nations Framework Convention on Climate Change (UNFCCC).

## **May, 1992:**

Convention on Climate Change is adopted. The text of UNFCCC is adopted at the UN Headquarters in New York. For the first time binding gas emissions reduction aims are targeted for industrialized nations.

## **1994:**

The UNFCCC entered into force.

## **December 11, 1997:**

The Kyoto Protocol was ratified (entered into force in Feb, 2005). It was the first GHG reduction treaty. This treaty only binded developed nations to target the global average of 5% reduction in GHG emissions, following the principle of “common but

differentiated responsibility and respective capabilities.” In detail, the protocol, following its annex-based structure, is set in accordance with agreed individual targets, including 37 industrialized countries.

**June 11, 2001:**

President George W. Bush removes the US from the Kyoto process. His rationale was that the protocol only created a burden for reducing emissions on developed nations instead of developing ones.

**January, 2005:**

The EU's Emissions Trading System(ETS) is launched. It became the first and largest emission trading scheme, providing a basis of EU's climate policy.

**November, 2010:**

The Cancun Agreements are adopted. Among its agreements, it provided a comprehensive package to assist developing nations pursue their climate actions. The Green Climate Fund(GCF) is established.

**December, 2015:**

The Paris Agreement was adopted, which officially entered into force in November 2016. This treaty is one of the most influential agreements on climate change, because it was the first binding agreement on climate change. Working as a landmark in the multilateral process among nations, it “undertakes ambitious efforts to combat climate change,” UNFCCC asserted.

**June, 2017:**

The US withdraws from the Paris Agreement under the presidency of President Trump. This was a major stepback to global cooperation for climate change.

**Nov 28, 2019:**

The European Parliament declares a climate emergency. According to the EU, the resolution sets out to “ensure that all relevant legislative and budgetary proposals are fully aligned with the objective of limiting global warming to under 1.5 °C.” The resolution to declare a climate emergency was adopted with 429 votes for, 225 votes against, and 19 abstentions.

**Dec 11, 2019:**

The Green Deal is adopted to set the EU's goal of reducing net GHG by at least 55% by 2030.

**Oct 7, 2020:**

The European Climate Law is adopted. The new law, the EU noted, “aims to transform political promises that the EU will become climate neutral by 2050 into a binding obligation and to give European citizens and businesses the legal certainty and predictability they need to plan for the transformation.”

## Current State of Affairs

It is undeniable that climate change imposes one of the most deadly threats-- similar or worse than a pandemic like today-- to this planet. A striking portion, with 97% of climate scientists, also have reached a consensus on the very existence and the cause of climate change. The amount of CO<sub>2</sub> in the atmosphere reached record levels in 2020 despite Covid, indicating a continuous increase in GHG emissions, and therefore, aggravation of global warming.

With record levels of CO<sub>2</sub> came the hottest year on record as well: "Earth's average temperature has risen more than 2 degrees Fahrenheit (1.2 degrees Celsius) since the late 19th century," NASA analysis revealed. Regardless of such statistics and many more, however, the existence of climate change and its detrimental effects are indisputably apparent even with our physical senses: with the recent years of unprecedented wildfires across the US, the extraordinary heat of Siberia, and every other peculiar phenomenon caused by global warming, humanity not only heard or saw the imminent threats-- we *experienced* through it.

Recognizing the threats, the EU and UN--along with zealous advocates-- pioneered their way to expedite the efforts to reduce carbon emissions and raise awareness of the imminent crisis. The EU, with progressive nations leading the climate change act, has recently announced a package of proposals, in July 2021, in an effort to write a law that sets out the European Green Deal-- reaching for climate neutrality by 2050. This proposal included tariffs on some carbon-emitting imports and a shift from fossil fuels-- ending gas- and diesel-powered cars in just 14 years. The UN, along with the EU, urged nations--especially developed countries-- to contribute to the advancement and leadership of GHG reduction. In addition, on August 7, 2021, the Intergovernmental Panel on Climate Change (abbreviated as IPCC), a scientific body convened by the UN, released a major report based on the analysis of more than 14,000 studies. The report has concluded that the Earth has already warmed up by 1.1 degrees Celsius, and that humans have emitted much GHG emissions to the Earth's atmosphere that even if nations take immediate action on cutting emissions, the impact of climate change-- from catastrophic flooding to extreme droughts-- will continue to aggravate for at least the next 30 years.

Recognizing these efforts, individual countries also have shown their intentions to reduce carbon emissions and endorse technological advancements in clean energy. Through NDCs, in line with article 4 of the Paris Agreement, nations such as, but not limited to, Japan, Korea, and the US, recently announced their NDCs to reduce GHG. The US set out an economy-wide target of reducing its net GHGs by 50-52 percent below 2005 levels in 2030; Korea announced its updated NDC target to reduce 24.4% from the total national GHG emissions in 2017, which is 709.1 MtCO<sub>2</sub>eq, by 2030; other countries, 192 in total, also set out "ambitious targets" in their NDCs, many of which updated recently to set at the most ambitious level.

However, these efforts are simply not enough: the implementation is not enough to make a meaningful impact, and initiatives are not progressive enough to

speed the pace of climate action. Cooperation among nations is troubling, and citizen efforts are still far from sufficient. Meanwhile, governments around the globe still subsidize fossil fuels by 180 billion dollars annually, despite record-low fossil fuel consumption subsidies with a 40% decrease from 2019.

In addition, the developing countries struggle to keep up during their economic crisis in the midst of Covid. They are inevitably bound with the gigantic fight among big nations for the future hegemony of the renewable energy market, exacerbating the wealth gap between rich and poor. The recent proposal from the EU is a perfect exemplar: albeit very progressive, there is a carve-out to the carbon tax. The proposal levy tariffs on most nations-- both developed and developing countries-- but exempt the US from paying tax. This example, and many more, only illustrates the upcoming conflicts among the world's largest economies and the economic polarization among nations.

Considering all these inefficiencies of the current status quo, the need for global cooperation is essential. With all the nations intertwined in global tapestry, it is the goal of this committee to set ambitious goals, aid developing countries, and cooperate among developed nations to tackle the biggest challenge humanity is confronting.

#### Additional Resources:

- All NDCs are listed as pdf on this website if you want to research deeper into each nation's targets and plans:  
<https://www4.unfccc.int/sites/NDCStaging/Pages/All.aspx>
- The most recent major report released by the IPCC are on this homepage:  
<https://www.ipcc.ch>

# Stances of Parties

## **Afghanistan**

Afghanistan is one of the lowest energy-consuming countries in the world. Hydropower is the major source of sustainable energy due to Afghanistan's mountainous terrain. According to the Afghanistan Ministry of Energy and Water, the renewable energy resource potential of its state is estimated at over 300,000 MW (megawatts).

## **Bangladesh**

With the tremendous economic growth in recent years, Bangladesh started demanding more electricity. The goal of the Bangladesh government is to make enough energy available for all by 2021 by developing sustainable energy sources such as solar, wind, tidal, and wave energies.

## **Canada**

Compared to other OECD countries, Canada has a high share of renewables in its energy supply. With the astounding growth in hydropower technology, over 16% of the total energy production in the country is renewable. The Canadian government highly supports the northern biomass industry, which covers both the unemployment and the carbon emissions issues.

## **China**

China is one of the leading countries in the development of renewable energy sources. The country mainly has a capacity for hydroelectric, solar, and wind power, growing faster than its fossil fuel and nuclear power capacity. China has pledged to achieve carbon neutrality by 2060 and aimed to lower the carbon dioxide emissions rate by 2030. China's Action Plan for the Prevention and Control of Air Pollution illustrates that its government is willing to increase the share of renewables in China's energy mix.

## **Democratic Republic of Congo**

Due to its geographical location, hydropower and biomass are the future of renewable energy in the Democratic Republic of Congo (DRC). Although the country has an abundance of hydro-based power generation, more policies on accessibility are required. 80% of DRC's total population does not have access to energy sources, leaving only 20% with access to electricity.

## **France**

As one of the developed countries, France is a leading player in tackling climate change. France set very aggressive policies towards climate change. The Paris Agreement was established in France. Nuclear generation represents over 67%

of electricity, compared with 13% for hydropower, 7.9% for wind, 6.9% for gas, and 2.5% for solar.

### **Germany**

While Germany presented a few ambitious goals for the use of clean energy, feasible action was not taken accordingly. Germany still heavily relies on gas from Russia. Recently, President Biden condemned Germany for its contradiction to the goal set with the EU. Regardless, Germany have shown some efforts including limiting annual emissions from sectors including energy, transportation, buildings and agriculture.

### **India**

As one of the developing countries contributing to the proliferation of renewable energy, the primary objective of India is to advance economic development. The India Ministry of Power(MoP) constructed a 10-year detailed action plan and additional plan further about sustainable energy to ensure that the energy is adequately supplied to the citizens within the country at a reasonable cost and efficiency.

### **Indonesia**

Indonesia already has ambitious targets to increase the use of renewable energy since the country is included within the top five countries with the highest renewable energy in the Asia-Pacific region. The country has announced 23% of electricity generation from renewable courses by 2025. According to the International Renewable Energy Agency(IRENA), it reported Indonesia could feasibly exceed its current goal and evolve even more.

### **Iran**

70% of Iran's electricity generation comes from natural gas. Iran has targeted for a reduction of 4% of its greenhouse gas emission by 2033 after the Paris Agreement. In addition, the country's geography and climate are highly suitable for various forms of renewable energy production such as wind, solar and hydropower.

### **Israel**

Israel is hugely contributing to the proliferation of green energy by implementing government projects and policies. Under Israel's government resolutions, the Ministry of finance and the Ministry of Water have decided to construct solar energy power construction.

### **Japan**

Achieving net-zero emission is an urgent issue for Japan's government. Japan has targeted to reduce emission by at least 26% until 2030 and to chive carbon neutrality by 2050. Under this agenda, in October 2020, Hiroshi Kajiyama, Japan's economy minister, revealed plans to make renewable energy a major power source within the local energy mix.

## **Pakistan**

Pakistan has rapidly adopted various forms of green energy solutions since 2017. China-Pakistan Economic Corridor was created to manage Pakistan's shortfall of energy for several years. In 2020, the country has formally adopted the Alternative and Renewable Energy Policy 2019.

## **Republic of Korea**

The Korean government is committed to substantially increasing the share of renewable energy sources in the electricity supply, gradually phasing out coal and nuclear power from the energy mix, significantly improving energy efficiency, and fostering the country's nascent hydrogen industry. The country's goal is to increase the share of renewable energy sources to 20% by 2030 and to 30% by 2040.

## **Russian Federation**

Although Russia's current use of green energy is very low, it has the largest known natural gas reserves on the planet. Russian leaders have shown a strong political will to support the development of renewable energy by adopting a target of 4.5 per cent of all electricity generation and consumption from renewable sources by 2020.

## **Saudi Arabia**

Until now, the energy consumption of Saudi Arabia was only focused on burning oil, since the country is one of the world's top oil producers. However, the Saudi Green Initiative stated it aims to be "a global leader in forging a greener world", which shows its efforts to diversify the economy away from its oil dependence.

## **Singapore**

Solar energy is the most secured renewable energy for Singapore. The Energy Market Authority (EMA) has been taking proactive actions to facilitate the solar energy system, despite the challenges such as land constraints and local weather conditions.

## **Spain**

In 2018 Spain announced an ambitious environmental policy that would see the country end its dependence on fossil fuels and instead draw 75 percent of its electricity from renewables by 2030, rising to 100 percent by 2050. Ultimately Spain's goal is to completely decarbonize its economy, slashing its greenhouse gas emissions by 90 percent.

## **Sweden**

Even though Sweden has already reached the government's goal of increasing the use of green energy up to 50%, the share of renewable energy used keeps growing. The next target is 100% energy production by 2040. The government's

energy policies such as The Electricity Certificate System have also promoted the use of sustainable energies.

### **Turkey**

Turkey's population is growing at an annual rate of 1.04%. If Turkey uses only traditional energy sources, it simply will not have enough energy capacity for its population. Therefore, Turkey aims to utilize its energy potential, including from renewable sources in a cost-effective manner. Turkey targets the share of renewable resources in electricity generation to be at least 30% by 2023 as in its 2009 Electricity Market and Security of Supply Strategy.

### **Uganda**

The Energy policy for Uganda was developed in 2002 to sustain the economic growth the country had achieved in the last decade and to ensure widespread access to affordable modern energy. The main policy goal is to meet the energy needs of Uganda's population for social and economic development in an environmentally sustainable manner.

### **United Kingdom**

The United Kingdom has been relying on coal, oil and gas supplies, therefore, needs a radical change within the country now. The 2009 Renewable Energy Directive sets a target for the UK to achieve 15% of its energy consumption from renewable sources by 2020. Its increase of the proportion of the energy resources will significantly help the nation's energy security.

### **United States of America**

Renewable energy is the fastest-growing energy source in the United States, increasing 100 percent from 2000 to 2018. Renewables made up more than 17 percent of net U.S. The Energy Policy Act (EPA) addresses energy production in the United States, including energy efficiency, renewable energy, energy tax incentive, climate technology, etc.

### **Brazil**

Renewables compose almost 45% of Brazil's primary energy demand, which makes their energy sector one of the least carbon-intensive in the world. As the third largest hydroelectricity producer in the world after China and Canada, about 77% of total electricity demand is supplied by hydropower in Brazil.

### **Czech Republic**

The Czech Republic committed itself to produce at least 13% of consumed electricity from renewable energy sources by 2020, in line with the national target set out by EU Directive 2001/2001 of 11 December 2001 on the promotion of the use of energy from renewable sources. In addition, the Czech government approved the National Renewable Energy Action Plan that set a target of 15.3% of energy from renewable sources in gross final energy consumption by 2020.

## **Egypt**

Egypt possesses an abundance of land, sunny weather and high wind speeds, making it a prime location for renewable energy projects. Egypt intends to increase the supply of electricity generated from renewable sources to 20% by 2022 and 42% by 2035, with wind providing 14 percent, hydro power 2 percent, photovoltaic 22 percent, and concentrating solar power 3 percent by 2035.

## **Ethiopia**

Hydropower and biomass are Ethiopia's primary energy sources, followed by oil (5.7%) and hydropower (1.6%). At the same time the economy is one of the fastest growing in the world, with an average growth of 10.8% since 2005.

## **Iceland**

Iceland is one of the closest countries in achieving net-zero emissions. About 85% of the total primary energy supply in Iceland is derived from domestically produced renewable energy sources. Renewable energy provided almost 100% of electricity production, with about 73% coming from hydropower and 27% from geothermal power.

## **Italy**

Italy's government has put energy and climate at the centre of its political agenda. The national energy and climate plan set very ambitious targets for renewables by 2030; aiming to reach 30% in total energy consumption and 55% in electricity generation. In addition, The Government is revising incentives and subsidies which are not considered to be efficient or aligned with decarbonisation targets.

## **Lebanon**

With abundant sources of wind and solar power, Lebanon has adopted an ambitious target to cover 30% of its energy consumption from renewables by 2030. The key actions set by the country include implementation of stable regulation for renewable energy deployment, adoption of the measurement of carbon emission, and complementing national targets with technology-specific renewable energy targets.

## **Malaysia**

Renewable energy resources available in Malaysia are biomass, solar, mini-hydropower, municipal waste and biogas. Among them, the Ministry of Energy, Green Technology and Water state that the huge potential renewable energy in Malaysia is biomass and solar energy.

## **New Zealand**

New Zealand has always been at the forefront of renewable energy development. It currently has the fourth-highest renewable electricity percentage in

the OECD, currently at around 84% and growing. The country's target is to reach 100% renewable energy by 2035.

### **Norway**

In Norway, 98 percent of the electricity production comes from renewable energy sources. Hydropower is the source of most of the production. Hydropower has been the basis for Norwegian industry and the development of a welfare society since they started utilizing the energy in rivers and waterfalls to produce energy. The usage of electricity has increased in line with the economic growth in Norway.

### **Poland**

Although Poland still contains 36 of the 50 most polluted cities in Europe, recent foreign investment in renewable energy in Poland suggests a bright future for its green transition. The U.S., France and South Korea are in talks with Poland about investing in nuclear energy, one of the cleanest forms of power.

### **Venezuela**

The main renewable source of Venezuela is hydropower, which accounts for 71% in 2004. The country has an impressive national renewable energy infrastructure, however, the poverty rates continue to rise in Venezuela, the country regularly experiences nationwide electricity blackouts. However, utilizing renewable energy in Venezuela would alleviate rising poverty rates in the country.

### **Vietnam**

With the incredible growth of Vietnam, the government, in a bid to promote the goals set out in this plan, issued a decision in 2015, approving Vietnam's renewable energy development strategy up until 2030. IT stated 10% of the Vietnamese energy (excluding hydropower electricity) would come from renewables. The decision reassured the government's commitment to a reduction of coal-fired energy.

# Possible Solutions

## **Improving international resolution for reaching carbon neutrality**

Carbon neutrality is a goal for every country including all developing and developed countries. Hence, having an effective solution is essential for managing the carbon in the world. However, the main cause of carbon, fossil fuel, is hard to stop, since it bestows a great impact on the global economy and livelihood. Consequently, it is extremely difficult to immediately stop using or creating the factors that create carbon. Accomplishing the solutions for both the long term and having a simple solution that effectively makes a difference is significantly needed these days. The lack of an economic base for developing countries is a drag on progress for reaching the goal. Simple solutions such as riding bikes other than driving a car, will not need much of the money. Though, for an extensive solution, money will be a cardinal component of it. A solution will be necessary for all countries. Accordingly, the developed countries may reinforce the developing neighbor countries economically and materially so that they have a necessary element needed for their extensive solution.

## **Education**

One of the most leading ways to stop creating carbon dioxide is educating people by empowering their knowledge, values, and skills for their actions towards climate change, which leads to encouraging them to change their behavior and attitude towards the climate crisis. Education happening in the school that is related to climate change should inspire children and teens to be aware of this consequential issue and have to know the right facts in order for the right action. It is crucial to inform and educate children for future generations, nevertheless, the education for elders is supreme too. There are different ways of educating people, but it is important to guide them with precise knowledge. Accordingly, education is significant for promoting climate action towards people regardless of the generation.

## **Funding/Campaign**

Climate change involving the increasing carbon dioxide is currently a defining issue and now is a defining moment. If this current trend continues, according to NRDC, in 2100, it will cost 1.9 trillion dollars(in today's dollars) annually for the impact of climate change. We have to stop making it worse. In order for that to happen climate finance is needed for the ease of climate change due to the large scale of investments for finding the solution that significantly reduces the problem. Currently, the source for all money is from the public, private and alternative sources, so different ways of funding is essential for increasing the money of climate finance. Next, making people aware of the current situation of climate change is another solution. One of the numerous solutions is an advertising campaign, which is an advertisement for a message and this may make people be conscious and

understand the currency of the climate crisis. Consequently, various types and funding and different ways to inform people are needed for the development.

## Questions to Consider

1. What is the best way to measure the effectiveness of an implemented renewable energy?
2. What incentives can we use to promote the use of renewable energy?
3. What international agreements is the country involved in?
4. What factors should be considered for practical implementation in developing countries?
5. Is the economic base necessary for the implementation of this current situation? Is there any solution that is not necessary for money for developing countries?
6. What are the best ways to improve the existing infrastructure?

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