



# Southern China International MUN

*Official Background Guide*

*G20 Committee: Addressing the issue of Energy Security in line with economic needs of NICs*

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## **1. Description of the Issue**

### **1.1 History of the Issue**

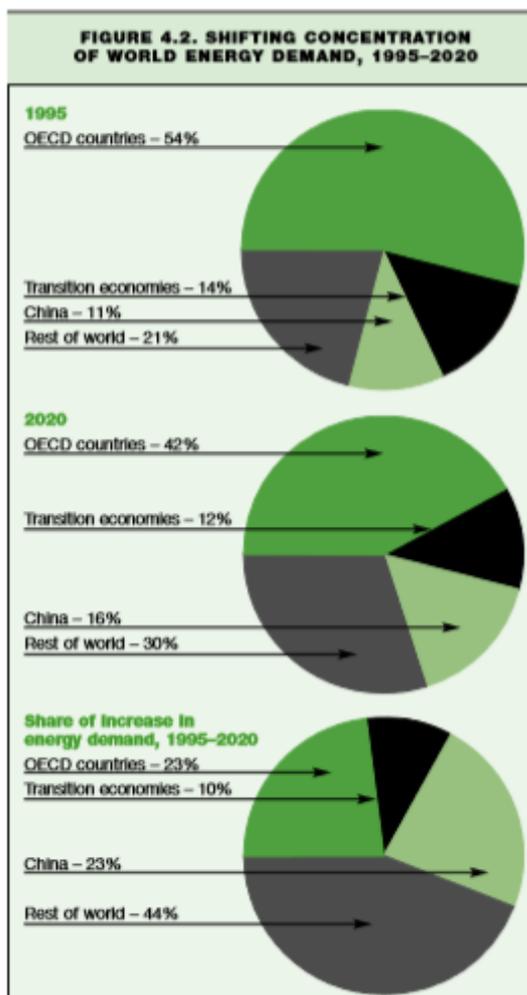
In a modernizing era with rapid utilization of energy in all aspects of urban and rural life, energy security poses as an upmost priority for all countries in the global trade network. Although countries that are economically stable and matured to their full potential are capable of keeping up with energy demands, newly industrialized countries (NICs) struggle to establish efficient procedures to ensure energy security for the country's further economic growth. Ranging from production, transport, and processing of energy sources, it is critical for countries to construct a plausible, effective, and reliable solution that can be implemented in all countries, including those that have not attained economic stability.

As defined by the United Nations, **energy security** is “the continuous availability of energy in varied forms, in sufficient quantities, and at reasonable prices.”<sup>3</sup> The objectives of energy security achievements have varied over the years as new challenges arose in correspondence to changing global economic status. The United Nations has emphasized the importance of access to affordable energy through the 7<sup>th</sup> Sustainable Development Goal “Affordable and Clean Energy”. One of its ultimate goals is to expand infrastructure and upgrade technology for supplying modern and sustainable energy services for all in developing countries by the year 2030.<sup>1</sup>

Energy security's significance was relatively meager due to low demands prior to the mid-18<sup>th</sup> century. However, with the 1950s being a catalytic time period for energy usage, the demand for energy doubled in North America, Western Europe, the Soviet Union, as well as Northeast Asia due to rapid advancements in economy, living standards, transportation networks, and electricity availability. As a result of the successful global economic boom, the activity within international energy trade quadrupled<sup>2</sup>. On the contrary, energy insecurity was a major threat to developing countries who struggled to compensate with growing demands.

The intensity of energy insecurity accelerated immensely during the 2 major **oil crises** characterized by a “sudden rise in the price of oil, often accompanied by decreased supply.”<sup>4</sup> In 1973, **OPEC** members of the Middle East radically raised oil prices to \$12 per barrel. They also imposed trade bans against the United States, Japan, and Europe which were major

importers of crude oil that consumed half of the entire oil supply. The crisis was brought about as a revenge mechanism against the Western world for helping Israel during the Yom Kippur war and in response to persisting decrease of U.S. dollar's value (common currency in oil commerce). This resulted in dramatic inflation in oil prices and caused economic recession in many importing countries. In 1974, the trade bans were alleviated, yet countries had to find new approaches to secure oil supply and recover their economy from the damage.<sup>4</sup> The second major oil crisis began in 1979 due to political unrest caused by the Iranian Revolution. This resulted in loss of total supply exports and rise in oil prices. The crisis exacerbated after the Iran-Iraq war (1980-1988). In 1981, oil price settled at \$32 per barrel. In response to these oil crises, beginning in 1983, capitalist economies searched for potential oil alternatives which has created an ironic situation of oversupply arising as a new challenge.<sup>4</sup>



**The Energy Charter**, published in 1994 and signed by 53 signatories served as a model guideline for both major crude oil exporters and importers to rebuild its protocols for energy security. It aims to “promote energy security through the operation of more open and competitive energy markets”<sup>6</sup> while “respecting sustainable development and sovereignty over energy resources”.<sup>6</sup> In efforts to attain the aforementioned goals, the Energy Charter specifies its clauses on protecting foreign investment, creating non-discriminatory trading systems of energy sources (aligned with World Trade Organization policies), establishing and protecting trans-border energy flow through secure pipelines, grids, or other transport mechanisms, and solving conflicts between countries and investors regards to energy trade. Years later in 2015, the charter was revised and re-published. Overall, this treaty aspires to promote energy efficiency and minimize the negative impacts energy consumption may have on the environment.<sup>6</sup>

A major determining factor of energy security is adequacy of supply. A **resource base** is “the

sum of reserves and resources<sup>3</sup>.” **Reserves** are the “occurrences that are known and economically recoverable with present technologies<sup>3</sup>” while **resources** are defined as either energy supplies that are “less certain or not economically recoverable with present technologies” or both<sup>3</sup>. Improvements in technology can convert a resource to a reserve. Currently, coal is the most abundant fossil fuel with approximately 1,000 billion tons in reserves. It is an evenly distributed, relatively cheap source of energy that is predicted to last more than 220 years<sup>3</sup>. Yet, the most prominent disadvantage of coal is the negative environmental impacts. Therefore, environmental policies hinder the growth in global coal trade. Heavy investments are being made toward enhancing technologies to reduce the

environmental impacts<sup>3</sup>. As of renewables, hydroelectricity and biomass (in addition to wind power and geothermal energy) occupies 15% of total energy resources used for generation. The most dominant renewable is hydroelectric power. Alongside being environmentally friendly and affordable, it produces 2,500 terawatt hours of electricity annually<sup>3</sup>. With the growing potential of renewable energy and ample resource bases (predicted to last beyond mid-21<sup>st</sup> century), energy insecurity (in developed countries, who are able to afford supply prices) is not heavily influenced by a lack of supplies but rather the disruptions in trade, inefficient distribution, waste generation, and unstable protocols.

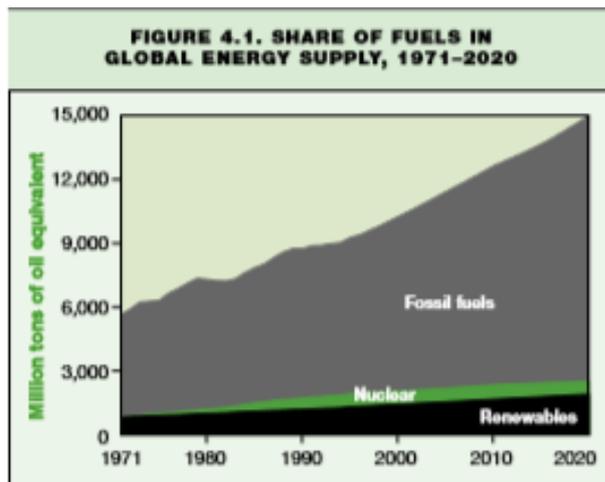
Another important determining factor of energy security is supplies security. Statistics show uneven global distribution of energy consumption. In recent years, however, non-OECD developing countries' consumption of energy is balancing out with that of previously dominant OECD members. OECD's energy market share has decreased from 70% in the 1970s to 42% in 2020<sup>3</sup>. Although discrepancy between energy consumption rates have reduced, new challenges arise regards to supply security. Disruptions in energy supply is detrimental to importers because it tremendously hinders the nation's economic growth or activity. Likewise, it causes harm to exporters because fossil fuels, a high commodity product, is not generating profit through trade<sup>3</sup>.

Newly Industrialized Countries are especially at larger risk of energy insecurity due to the lack of economic stability and availability of investments towards establishing stable, efficient, and minimal waste-producing protocols/facilities for energy production and distribution. Not only does processing infrastructure and maintenance fee require funds, but educating faculty members, purchasing necessary supplies, and devising productive procedures also require monetary support. Unskilled staff members and poor planning can lead to detrimental consequences because it leads to wasting precious energy resources, thus leading to more energy insecurity<sup>3</sup>. Not to mention, while resource prices may be affordable for developed nations, NICs may not have the federal budget to heavily invest upon large quantities of high quality energy.

## **1.2 Recent Developments**

The objectives of energy security have evolved over the past 50 years. Energy security has aimed to "limit vulnerability" to disruption of energy flow and emphasized "availability" of domestic energy to compensate for steadily rising demands. Prices have become more disclosed to the public and oil suppliers increased, thus creating intense competition between non-governmental firms. A larger fraction of the energy market is now being heavily influenced by independent businesses and markets rather than official treaties or diplomatic agreements<sup>3</sup>.

Additionally, there have been rapid advancements, research, and improvements made in



renewable energy due to continuous increase in severity of global warming. As a result, renewables have become a competitive source of energy against traditional fossil fuels (oil, coal, etc.). There has been significant reduction in costs in renewable energy. There has been a 77% decrease of price between the years 2010-2018 for electricity prices generated by solar photovoltaic. However, renewables are still limited to generation of electricity and cannot fully substitute energy generation for heat and transport. Continuous growth is predicted to occur, and its demand is expected to grow by

64% between the years 2018 to 2030.<sup>5</sup>

Decarbonisation is another new focal objective for energy security. The signing of the **Paris Agreement** in 2015 emphasized the importance of combating climate change and raising awareness of the threatening effects energy could have on the environment. More countries have been converting from traditional energy sources to fueling vehicles with electricity (e.g. electric cars). Yet, the extent to how much progress has been made towards this goal varies substantially between the economic statuses of countries.<sup>5</sup>

New challenges that surface in this era include stabilizing energy in both the domestic and international scale and finding a healthy equilibrium between environmental sustainability and energy security<sup>3</sup>.

Along with changes and challenges, significant improvements have also been made in the last 50 years towards providing affordable and sufficient supply of crude oil, especially extracted from the Middle East. Energy insecurity caused by lack of supplies and long-term disruptions in trade (due to wars, diplomatic conflicts, etc.) are reducing to a historical low. Resource diversification has also enhanced energy security through the use of **coal, natural gas, and renewables** (hydropower, photovoltaics, etc.).

Whilst all changes, **crude oil** remains as the most convenient, affordable, and versatile form of energy because other types of energy sources tend to require higher expenses for processing, maintenance or are limited to the production of singular type of energy. Still, many importing countries are utilizing crude oil alternatives which can negatively impact the economy of oil exporting countries<sup>3</sup>. Crude oil is predicted to make up for 30% of energy demand by 2030. Although that may seem like a small value, it is higher than many other oil alternatives. Oil consumption is predicted to grow in developing countries to 0.9 million barrels per day between 2018 and 2030. The COVID-19 pandemic has shook the oil industry immensely. Prices decreased by approximately 66%, between January to April of 2020, when the pandemic was at its worst. This was predominantly due to crash in global trade and decrease in overall industrial activity. Prices have improved in May of 2020, yet it was proven that the oil market is in urgent need of stronger policies to increase resilience to unprecedented threats that may arise in the future.<sup>5</sup>

A recent document published by the International Energy Agency is the **World Energy Outlook 2020** (WEO 2020).<sup>7</sup> It is a thorough analysis of the current global energy system and its potential future. It investigates how the COVID-19 pandemic has impacted the global energy market both considering the severity and unique effects on the energy sector. Its analysis includes an illustration of the different stages of economic recovery from the pandemic and the recovery position the energy market will be in when the specific scenarios (Stated Policy Scenario, Delayed Recovery Scenario, Sustainable Development Scenario, and Net Zero Emissions by 2050) unfold. It is a crucial report because it aids countries to prepare and plan for future challenges or opportunities to effectively recover from the struggles in the energy sector.<sup>7</sup>

### **Key Terms**

**Energy security** – “the continuous availability of energy in varied forms, in sufficient quantities, and at reasonable prices.” (United Nations)

**Newly Industrialized Country** – a country that has recently achieved industrialization and is at a point of economic transition from low level of economic development to high level of economic achievement. The most prominent characteristic of a NIC is drastic growth in GDP. Economists often debate on which countries fulfill the requirements to be categorized as a NIC because of the ambiguous frameworks. However, India, Turkey, Brazil, South Africa and Thailand are common countries that are included in the list.<sup>15</sup>

**Resources** – energy supplies that are “less certain or not economically recoverable with present technologies” or both<sup>3</sup>. Resources enhance energy security by ensuring the availability of energy sources.

**Reserves** – occurrences that are known and economically recoverable with present technologies<sup>3</sup>. Like resources, reserves also enhance energy security for the local and international market.

**Upstream** – stage in the commodity chain that is heavily focused on production and extraction of raw gas and oil resources.<sup>16</sup> Usually, less economically advanced countries are heavily involved in this upstream activity.

**Downstream** – stage in the commodity chain that is heavily focused on manufacturing raw gas and oil resources into the final product to be sold.<sup>17</sup>

## **2. Emphasis of the Discourse**

### **2.1 Right Wing Approach**

Although some countries may lean towards either a right wing or left wing nation, it is important to keep in mind that there is no distinctive line that distinguishes whether a country is entirely liberal or conservative. As a matter of fact, most countries’ governments are a contribution of both parties’ beliefs.

In the past, a clear cut division was present between opposite political parties towards the issue of enhancing energy security. However, traditionally conservative branches have evolved and constructed viewpoints that are radically different than what they had advocated for in the past. For example, left-wing parties in the **United States** has increasingly been advocating for utilization of renewables and clean energy alternatives.<sup>9</sup> From data collected during the 2020 presidential election preparation, results concluded that 81% of survey subjects “support government action to accelerate the development and use of clean energy.”<sup>9</sup>

Considering that a substantial fraction of survey takers were in support of right-wing politicians, it illustrates the changes that have occurred in their viewpoints. Not to mention, **China** has also shown tremendous leadership in the promotion, implementation, and development of renewable energy sources<sup>10</sup>. For example, highly urbanized regions of China have already actualized the use of electric vehicles in public transportation.

## **2.2 Left Wing Approach**

Countries that take a more liberal approach toward energy security advocate two major approaches. Firstly, countries strongly believe that interdependence is a pragmatic solution to energy insecurity. They have stated that “security is higher when all the terms of a chain are parts of the whole process.”<sup>8</sup> According to their ideology, if one country is an upstream operator while another contributes to the energy market through downstream business, the commodity chain of energy will be at its most secure position. This is because if one country does not adequately conduct necessary procedures in a timely manner, the negative impact of disruptive energy flow will not only cause a burden for its trading partner but also its own economic activity. Therefore, the theory proposes that both ends of the commodity chain will feel a strong sense of responsibility. It also emphasizes a positive side-effect of rising interdependence by stating that “conflict is far less possible.”<sup>8</sup>

However, a serious threat arises with increased interdependence within energy commerce. Under the assumption that it is a nation’s nature to desire dominance over others, in which can be achieved through surplus of energy, there is a possibility that resource rich countries may maliciously manipulate dependent countries in political or economic relations. This could lead to numbers of undesirable consequences including corruption. Therefore, the second approach urges alternative energy sources and transport routes.<sup>8</sup> This would protect importing countries from being overly reliant on suppliers. It would also emaciate the struggles of when energy supply is weakened due to unexpected occurrences.

## **2.3 Stance of Intergovernmental Organizations**

The Organization of Petroleum Exporting Countries (OPEC) is an essential intergovernmental organization that consists of member countries whom are major crude oil exporters. OPEC advocates that “security of demand is as important to producer, as security of supply is to consumers.”<sup>11</sup> It holds a two sided perspective towards energy security to favor both oil exporters and importers. They also acknowledge that achieving energy security is a common goal for all countries, regardless of current economic or developmental status. They promote providing modern energy service for all countries and inhabitants within those boundaries, focusing on the entire crude oil commodity chain by considering both upstream and downstream activity. OPEC desires to “work together, and share the responsibility for a healthy and stable energy interdependent world”<sup>11</sup>, thus showing that they appreciate a global trade network of oil. Currently, member countries of OPEC are expanding the volume of oil extraction to ensure they can keep up with gradually increasing energy demands, which is predicted to continuously grow in the near future. Since member countries’ economies are predominantly reliant on oil exports, they hope for: predictable demands in the oil market, moderated fluctuations in prices, and an even balance in supply and demand. OPEC is not strictly against the promotion and use of renewables. However, they are skeptical of whether

this substitute would hold sustainable in the long term. If demands for energy continues to grow at a rapid pace, especially in developing countries, renewables alone would not be able to generate the entire capacity that a country needs in order to reach its full potential.<sup>11</sup> The International Energy Agency, holds slightly differing views from OPEC and places emphasis on other aspects of tackling energy insecurity. They urge member countries to consider both short term and long term actions that can be actualized to reach ideal levels of energy security. In the short term, the IEA states that countries should utilize effective, productive, and tactful measures to cope with sudden disruptions in energy flow. In the long term, providing enough energy for economic deployments and environmental aid will support energy security within a nation. Not to mention, they emphasize the importance of three factors that determine energy security. Firstly, they believe that resilience, or the ability to “withstand shocks from a wide range of sources”<sup>12</sup> is a major principle that should be taken into consideration when evaluating a country’s energy security. If nations are resilient enough to defend against natural disasters, diplomatic conflicts, and newly arising hardships, it is more likely that the flow of energy will remain stable, and thus maintain energy security. Secondly, maintaining sufficient energy despite of water shortages and extreme weathers also measures the status of energy security within a nation. In recent years, water shortages and radical weathers have served as a prominent boulder for energy processing. However, if a nation is able to construct necessary infrastructure to overcome these challenges, the IEA believes it would enhance its energy security. Lastly, tackling cyber-attacks in energy system is a new determining factor that is important to consider. Due to the rapid spread of internet technologies, energy security threats have been seeping in through online. IEA acknowledges the importance for countries to create new policies to solve these newly emerging issues.<sup>12</sup>

#### **2.4 Stance of developed countries**

As countries transition from developing countries to developed countries, new trends in the energy sector arise as a consequence. Firstly, developed countries are heading towards market liberalization. As a result, competition is intensifying which allows local consumers to purchase energy sources at the lowest possible cost without jeopardizing the quality of it. Due to higher rates of competition between independent suppliers, developed countries are seeing more just-in-time delivery systems. This further reduces costs and creates a more convenient and efficient system for source delivery and product distribution.<sup>13</sup>

As awareness of climate change and global warming continue to arise in the global community, developed countries are taking the lead in promoting eco-friendly energy usage and production. They are initiating decarbonisation strategies and investing heavily on reducing harmful green-house gas emissions. Fortunately, due to the enthusiasm of promoting environmental sustainability in the energy sector, it is predicted that CO<sub>2</sub> emissions (caused by energy) will decrease by 3.6 Gtoe by the year 2050.<sup>5</sup>

#### **2.5 Stance of developing countries**

Developing countries, are at larger stake in attaining energy security when compared to its counterpart. “The imperative of industrialization, urbanization and economic development in developing regions will continue to lead to higher energy demand, which is likely to be met, at varying degrees, by fossil fuels.” Consequently, CO<sub>2</sub> emissions in developing countries are predicted to rise.<sup>5</sup>

In the past, developing nations majorly contributed to the global energy market through providing raw resources to be sold to developed nations. However, now, developing

countries have transitioned into major consumers of energy. They are increasingly using energy to support domestic economic activity, support the growing population's individual needs, and support social development by improving living conditions. The most intimidating challenge that they face is how to "best secure and use these significantly larger amounts of energy in a manner that both promote continued economic growth and is sustainable."<sup>14</sup>

### **3. Possible Solutions**

#### **3.1 In Favor of Developed Countries**

Developed countries have a wider range of steps they can take to improve their country's status in energy security. With the available money, not only is it beneficial for them to formulate protocols to provide energy in the current era but also multiple generations to come.

One solution that would greatly favor developed countries is to actively **invest in the deployment, study, and research of alternative energy sources as well as renewables**<sup>3</sup>. Not only may this support the country's aim to achieve energy demands but also may generate enormous economic gains if these new products draw the global market's attention. The central government can frequently incentivize research projects regards to the energy sector and fully support the field.<sup>3</sup>

Also, energy security can be reached by developed countries through **finding a perfect balance between energy consumption and environmental sustainability**<sup>3</sup>. Not only would this solution resolve energy insecurity issues but also environmental damage caused by irresponsible energy usage. Countries could formulate environmental policies that protect the environment's conditions without hindering further economic growth<sup>3</sup>. While this may be a challenging goal to achieve, through international cooperation and economic support, developed countries have the potential to reach such milestones.

#### **3.2 In Favor of Developing Countries**

As of developing countries, some of many preferable and plausible methods of eradicating energy insecurity would be the following measures:

Firstly, increasing energy direct exports would be favorable for both the economy of the developing country and contribute to global energy security.<sup>14</sup> In the past, most of energy exported (ready for use) was from economically stable OECD member countries. This meant that developing countries would export raw materials to OECD nations to be processed, then exported from there. A method to multiply the economic benefit of oil exporting developing countries would be to participate in direct oil export. This would lead to a higher profit that can then immediately be used towards investing in domestic sites for further economic development. However, it is important to note that government transparency is crucial to ensure that profit gained will be invested towards the benefits of energy security and economic development.<sup>14</sup>

Additionally, securing energy for both current and future usage is an ideal preparation mechanism to ensure energy security and adequacy in developing countries. As more development occurs, the demand for energy will continue to grow. Therefore, it is crucial for developing countries to create measures to compensate with the exponential growth in energy demand. To do so, these nations should focus on securing sources of energy from both

international relations as well as local production in an “efficient and sustainable manner”<sup>14</sup>. They should consider diversification of energy sources, equilibrium between imports and production, and types of energy production and strong delivery infrastructure.<sup>14</sup> Finally, bringing awareness to the potential negative impacts that energy can cause is important for achieving sustainable energy usage in developing countries. Educating the population on the risks of CO<sub>2</sub> emission increase, promoting sustainability, and seeking methods to regulate (minimize) greenhouse gas emissions can help developing nations advance towards this ultimate goal.<sup>14</sup>

#### **4. Keep in Mind the Following**

When researching your country’s stance on this topic, make sure to investigate the current situation of energy security in the scope of your country at a national level. Then, expand the scale to how your country is effecting the global energy market and whether it is supporting or hindering the world’s energy security. Lastly, consider how NICs could achieve energy security with their current economic status. Some questions to guide you through your research are the following:

1. *What method does your country utilize to secure its energy supply, and how effective has it been?*
2. *Does your country currently have energy security policies that can be applied to Newly Industrialized countries?*
3. *How can your country support energy security in less economically developed, transitioning, or NICs?*
4. *What does your country define as the fine line between promoting environmental sustainability without hindering energy usage and internal economic growth?*
5. *Does your country emphasize the importance of a global energy market of interdependent trade or securing energy through energy independence? Why and how does your country stand for its stance?*
6. *What types of solutions can a country rely on to resolve immediate energy insecurity as well as guarantee energy adequacy in the country’s future?*

#### **5. Evaluation**

Energy security has evolved tremendously over the years and still faces new challenges. Rising concerns of environmental sustainability, mitigating energy flow disruptions, and diversification of energy sources are emerging topics that the global community must attend to. While the situation is difficult for all countries to tackle, it is especially troubling for NICs, who have higher energy demands and require more than average quantities of energy to supplement their rapid rate of advancement. Therefore, it is important to find a balance to all the all aspects of this complex issue. It will not be an easy task and will require the innovative thoughts of intelligent delegates. Think outside the existing framework. Good luck.

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