


Forum: The Economic and Social Council

Topic: Reducing Global Dependence on Imported Natural Gas to Enhance Energy Security

President

## Introduction

Natural gas is a key resource modern day society. It plays an important role in energy production, heating, and manufacturing. Some countries have become over reliant on imported natural gas in particular. This dependence can cause problems when exporting countries increase their natural gas prices or stop selling it entirely. Countries may depend on imported natural gas because they do not have enough natural gas of their own or do not have enough alternative energy sources. Political conflicts can make this dependence more dangerous because exporting countries may reduce or stop selling natural gas. Harsh weather can also damage energy infrastructure make it harder for countries to receive imported natural gas.

Fossil fuels are also an important source of energy. Fossil fuels are materials like oil and petroleum, which are extracted from oil reservoirs. Natural gas such as methane is extracted in a similar process. This process requires a lot of material and energy and causes many environmental problems as it pollutes neighbouring ecosystems and underground water aquifers.

To reduce dependence on imported natural gas, sustainable and renewable energies are being developed. These sustainable energies allow countries to farm their own energy with a nearly unlimited supply, and involve different types of energy, mainly solar energy, hydro energy, and wind power. These energy sources allow countries to farm their own energy without needing to buy natural gas from exporting countries to provide power for their citizens. Most countries are already investing in these energy sources, however, this comes with a high initial cost and a lot of time required for them to be used on a larger scale.

The topic of “Reducing Global Dependence on Imported Natural Gas to Enhance Energy Security” directly ties to this year’s AMMUN theme “Moderating Morality” as to be fair to people is to fairly judge their lives, and ensuring each person gets the rights they deserve. Therefore, being a source of energy and power, natural is a necessity which lots of countries depend on, as it provides heat and warmth to all people, and allow them to carry out multiple activities in their daily lives. Consequently, moderating the lives of people around

the world, which is why this theme is extremely important and connects to the theme of "Moderating Morality".

## Definition of Key Terms

### Energy Security

Energy security refers to the ability to provide uninterrupted, and constant supply of energy for an affordable price and is accessible to the population. This ensures that business, people, and essential services can access energy without major interruptions or sudden price increases.

### Import and Export

Imports are the goods, services, and resources that a country buys from another country, whereas exports are the goods, services and resources which a country sells to another country.

### Natural gas

Natural gas is a fossil fuel made of hydrocarbons and is mostly composed of methane. When the volatile gas is burned, it releases a large amount of energy

### Energy Dependence

Energy dependence is where a country relies on imported and external energy sources to provide energy for its own citizens and people. This makes the country vulnerable to price increases, or decisions made by foreign energy suppliers.

### Renewable energy

Renewable energy is power which comes from a source that replenishes quickly and naturally which include wind, solar, earth, heat and hydro power and are more sustainable compared to fossil fuels.

### Energy Infrastructure

Energy infrastructure are the physical networks and systems used to produce, transport and distribute energy around a certain area. To efficiently produce energy, well-funded energy

infrastructure is required.

# General Overview

## Causes of Dependence on Imported Natural Gas

Dependence on imported natural gas stems from several factors. Firstly, natural gas reserves are unevenly distributed around the world, meaning that some countries have abundant reserves while others have little to none. So, if a country has lots of natural gas reserves, they don't need to import. Instead, these countries will export natural gas to other countries. Whereas countries that don't have a lot of natural gas reserves or can't obtain natural gas due to a lack of materials, technology or funding are required to import natural gas from countries. The issue occurs when the countries who don't have natural gas begin to depend on imported natural gas to provide for their needs.

Consequently, countries that depend on imported natural gas can face serious challenges if gas exports are disrupted for any reason. One example is political conflict, such as the tensions between Iran and the United States in 2026, which led to the closure of the Strait of Hormuz. This caused the price of natural gas and other energy sources to increase around the world. Many nations that depended on gas imports which were sent via the strait of Hormoz were unable to buy the gas anymore.

## The Economic Impact of Dependency on Imported Natural Gas

Over dependence on imported natural gas can pose as a major economic threat. Firstly, its economy becomes dependent on foreign countries, as exporting countries determine the price at which natural gas is sold. This may force the country to compromise on necessities like healthcare and education, to provide energy for the population. This also causes economic vulnerability, the economy may become very unpredictable. For instance, if a political issue arose, or a gas shortage happened globally, the country will either need to pay a lot of money for natural gas or will need to

produce energy using different methods such as nuclear power or sustainable energy which may not provide for the whole population,

A weakened economy is also prone to inflation, which is extremely harmful to the people's quality of life. Basic goods and necessities become expensive, while labourer's salaries remain unchanged, so people are unable to afford necessities, causing them to suffer and experience other hardships. Furthermore, high natural gas prices also affect the workforce, as when the price natural gas increases, this means that businesses must pay more money for power and electricity. This reduces company profits, discourages investment and slows economic growth. This also affects jobs, as if a business can't turn over a profit, or isn't making enough money, they will be forced to dismiss workers in order to keep the business running.

## Social Impacts of Depending on Imported Natural Gas

Countries that depend on imported natural gas also face several social challenges. Energy poverty is a serious issue. These social challenges are considered dangerous consequences of over reliance on imported natural gas, as if the price of natural gas increases, fewer families will be able to afford electricity and power. Hence, fewer families will be able to afford to heat their homes during the wintertime, they may struggle to afford energy required to cook, and bathe, which puts their health at risk. Finally, they can't afford basic necessities which come with electricity like lights and charging devices. So overall, this decreases their quality of life and makes them more prone to health issues. Moreover, poorer families will need to make decisions between paying their energy bills and other necessities such as food, medicine and clothing, which may also increase problems that the family faces.

From a services perspective, the infrastructure and different healthcare and educational services also suffer. Hospitals and schools require electricity to function efficiently, as hospital require electricity to power machinery, and most schools require it for digital boards, internet connection, and light. Unreliable or expensive energy can make it harder for hospitals to operate medical equipment and provide services efficiently, some people will not be able suffer and to be treated because of this, while schools will have a harder time providing a proper education to students.

Furthermore, the importation of natural gas can harm the environment. Firstly, the transportation methods of the natural gas release carbon dioxide, as it is exported via ships, or pipelines, however the ships use a lot of gas, and so releases a lot of carbon dioxide into the atmosphere. Moreover, since the countries run on natural gas, they use a lot of natural gas every day to provide power and energy for their citizens, so, burning natural gas releases carbon dioxide and other pollutants into the atmosphere which harm the environment. Finally, methane leaks can occur when extracting natural gas, which increases global warming and damages air quality. The methods of exporting the natural gas and the uses of natural gas are considered harmful to the environment, as it contributes to climate change which lowers the quality of life of the people and harm the health of people.

## Actions taken to help decrease dependency on imported natural gas

Each country has a different approach to solve this issue. Firstly, countries who already have a large amount of natural gas reserves would choose to use their own supply instead of importing gas from other countries. These countries would become self-sufficient, relying on their own technologies rather than assistance from other countries. Technologies such as drilling equipment and pumps are used to extract natural gas, while pipelines transport it to households and, in some cases, to other countries. As a result, these countries do not depend on foreign nations for their natural gas supply.

However, many countries are now focusing on resources that are abundant within their territories and provide sustainable energy solutions. As a result, numerous countries have invested in renewable energy sources. The choice of renewable energy depends on various factors, including climate conditions, cost, technological availability, natural resources, and existing infrastructure. Many countries with hotter climates which get a lot of sunlight throughout the year, would invest in solar energy by using solar panels which are able to generate electricity. Countries which have many large rivers and dams and reliable water supplies can invest in hydropower, which relies on the movement of water from dams and rivers. Finally, wind power is another sustainable energy source which many countries decided to invest in using wind turbines, which would use the movement of air as energy.

# Major Parties Involved

## United States of America

The United States of America is the largest natural gas exporter in the world. Its large number of exports per year makes it an influential party in the global natural gas market, as many countries in Europe and Asia purchase American natural gas. Consequently, if the United States faced a major production, transport, or political issue, this could affect the global gas price, less natural gas available on the global market. Moreover, it uses both pipelines between countries and large ships to export the natural gas to other countries. It mostly sells to countries in Europe and Asia using massive ships, however, also sells to its neighbouring countries (Canada and Mexico) using the pipelines. This makes it central to many deals and exports for natural gas.

## Russia

While the United States of America is the largest exporter of gas, Russia has the most natural gas reserves. This means that Russia can provide for itself in terms of natural gas while also being able to export this resource. For this reason, and due to its strong geographical positioning, Russia has been selling natural gas to Europe for many years. However, its biggest weakness was that they failed to create more pipelines to other countries, they depended mostly on European countries. This meant it was much more difficult for Russia to export natural gas to other countries, as they would need to ship the natural gas in large ships which would take a lot more time, would pollute the environment and would cost more. So, depending only on European countries and China proved to be a major flaw in their operation.

## Iran

Iran is another country which is abundant in natural gas, however, similarly to Russia, its limited infrastructure, international sanctions, and low foreign investment make it difficult for it to sell and export its natural gas to other countries. Iran mainly exports gas using the pipelines and lacks the infrastructure required to process the gas to send it to other countries via ships. However, Iran has an extremely strong geographical location. Iran has a large influence over a body of water called the “Strait of Hormuz” where around 112 billion metric tons of natural gas pass through per year, or an estimate of 20% of natural gas which is shipped using massive tankers. This is because middle eastern countries such as Qatar and The United Arab Emirates

also use the strait to export natural gas, and so if it closes, the amount of natural gas available internationally decreases, causing prices to rise and creating difficulties for countries that depend on imports.

## United Nations

The United Nations assists countries tackle the issue by providing support and proposing solution that countries might implement. The main sustainable development goal connected to energy and power is sustainable development goal 7: affordable and clean energy. This goal can help countries reduce their dependence on imported natural gas by encouraging countries to invest into domestic clean energy plants. This sustainable development goal aims to increase accessibility to affordable and reliable energy, while expanding the use of renewable energy. This means that firstly, from an environmental perspective, carbon emissions which come from burning natural gas will be reduced, as countries increase their use of cleaner energy sources. Secondly, making energy more affordable can reduce the number of families who must choose between paying their energy bills and buying necessities such as food, water, and medicine. This can also improve people's health as people become less prone to sickness as they would be less exposed to dangerous conditions.

## European Union

For many years the European Union depended heavily on Russian natural gas. In 2021, approximately 45% of the European Union natural gas imports came from Russia and was used for heating, electricity, manufacturing and heavy industry such as steel, chemicals, glass and fertiliser production. However, this made the European Union very vulnerable because if trade stopped with Russia, or Russia decided to increase the price or reduce exports for any reason, this would cause major issues as their supply of natural gas would be cut in half since half of their imported natural gas was provided by Russia. So, in 2022 the European Union constructed a plan to reduce its dependence on imported Russian natural gas and improve its energy security. The European Union implemented several measures to achieve this transition. First, it began to buy natural gas from multiple countries and stopped depending solely on Russian natural gas. Second, they began depending on sustainable energy sources such as solar and wind energy. Finally, they improved and developed infrastructure between each of the countries to export and transfer gas more easily.

## Timeline of Events

| Date | Event |
|---|---|
| **1959–1964** | Natural gas began to be transported internationally by ships. This allowed countries to import gas from distant suppliers and increased international trade in natural gas. |
| **1973–1974** | The global energy crisis showed the dangers of relying heavily on imported energy. The International Energy Agency was created in 1974 to help countries improve energy security and prepare for future supply problems. |
| **1970s–1990s** | Large international gas pipelines were built, especially between Russia and Europe. These pipelines provided reliable energy but also made some countries dependent on a limited number of suppliers and transport routes. |
| **1997** | Qatar began exporting large amounts of natural gas by ship. This provided importing countries another major supplier and reduced the need to depend only on nearby pipelines. |
| **January 2006** | A gas dispute between Russia and Ukraine interrupted supplies travelling to Europe. This showed that political disagreements could threaten the energy security of countries that depended on imported gas. |
| **January 2009** | Another Russia–Ukraine dispute caused a much larger interruption in gas supplies. Several European countries experienced shortages, which encouraged governments to improve storage and emergency planning. |
| **2010–2019** | Europe became increasingly dependent on Russian natural gas. This made European energy security more vulnerable to changes in Russian exports and political relations. |
| **September 2015** | The United Nations adopted Sustainable Development Goal 7: Affordable and Clean Energy. The goal encouraged renewable energy, energy efficiency and stronger infrastructure, which could help countries reduce their need for imported natural gas. |

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|---|---|
| **February 2016** | The United States began exporting large amounts of natural gas by ship. This gave Europe and Asia access to another major supplier and helped countries diversify where they bought gas from. |
| **21 September 2021** | Natural-gas prices increased rapidly, as global demand rose after the COVID-19 pandemic. Import-dependent countries faced higher energy costs, inflation and pressure on households and businesses. |
| **24 February 2022** | Russia invaded Ukraine. Russian gas supplies to Europe later fell drastically, causing a major energy crisis and showing the risks of depending heavily on one foreign supplier. |
| **18 May 2022** | The European Union introduced the REPowerEU plan. It aimed to reduce dependence on Russian fossil fuels by saving energy, finding different suppliers and expanding renewable energy. |
| **2022–2024** | European countries reduced gas consumption, bought gas from more suppliers and invested in renewable energy. This improved energy security but did not completely remove dependence on imported gas. |
| **Present and future** | Countries are investing in renewable energy, energy efficiency, storage and stronger energy networks. The aim is to avoid depending too heavily on one fuel, supplier or transport route. |

## Attempts to solve the issue

### Association of Southeast Asian Nations (ASEAN) Memorandum of understanding on the trans-Asean Gas Pipeline Project, 2002/07/05

This solution was attempted in Southeast Asian countries such as Indonesia, Malaysia, Singapore and Thailand to connect their natural gas systems by connecting their pipelines. Therefore, any country with a surplus of natural gas could easily sell it to other countries quickly. This would improve energy security as countries would have multiple suppliers, gas could easily move between borders, a shortage in one country would have a smaller effect, and neighbouring countries could cooperate more easily during emergencies. However, this project was only partially successful due to differences in policies and laws, the cost of building all the pipelines and government disagreements regarding who should pay or have control over this infrastructure. So, some pipelines were built in countries, but the network was not completed to the extent originally planned.

This project was essential to the region due to countries having different levels of natural gas production. Some countries produce more gas than they consume, while other countries depend heavily on imports. Connecting the countries' pipelines meant countries with surplus amounts of natural gas could move the natural gas to countries experiencing shortages. Moreover, it also reduced transport time and improved regional cooperation. To conclude, the project could also create new dependence between neighbouring countries as countries would still rely on foreign gas, even though it would come from several regional suppliers rather than one supplier. Therefore, it improved access to natural gas but did not completely remove the dependency on imported natural gas.

## REPowerEU Plan, 2022/05/18 (COM (2022)230 Final)

This solution was introduced after the Russian invasion of Ukraine in 2022, since most European countries had depended on Russia for their natural gas supply. The plan had three main actions which would help the European union maintain a secure energy supply which would help all its citizens. To begin, the plan saved energy, by improving efficiency and reducing unnecessary consumption such as standby energy. Next, the plan was to diversify natural gas suppliers by purchasing gas from multiple suppliers, and not rely on mostly Russia for natural gas, which ensured that in any situation, the European Union would have multiple suppliers of natural gas and so any political issue or shortage from one country wouldn't have a significant effect on the European Union. The final part of this plan was to invest more into clean energy such as hydrogen, solar, wind, and other renewable energies. Overall, this plan was successful, as the European Union had an extremely vulnerable energy supply, however these changes enhanced its energy security and reduced risk of major shortages if one of the suppliers stopped providing energy.

This plan also aimed to protect citizens and businesses from sudden increases in natural gas prices. By lowering energy waste and increased the renewable energy produced so the European Union could lower the overall amount of natural gas imported. However, the plan did not completely end the dependence on natural gas from other suppliers, as while it did lower the dependence on imported natural gas from Russia, it still meant that many countries depended on foreign natural gas. Additionally, renewable energy projects can be extremely costly and required long periods of time to construct.

## Possible Solutions

To solve this issue, there are multiple aspects which can be tackled. Firstly, investing into clean and renewable energy. These energy sources include solar, hydro, and wind energy. These energy sources are extremely important because they can provide countries with energy based on the natural resources available to them. Solar energy harnesses the sun rays using solar panels and so countries which get a lot of sun throughout the year can use this energy source to become more dependable and enhance their energy security. Next is hydro power. Hydro power uses the energy found in running water and so uses the water running and turn it into electricity. So, countries which have many water bodies that move, such as large rivers, or have large bodies of water can build dams, which allows them to use their resources and turn it into a clean and renewable energy such as Canada and Brazil. Finally, wind energy which can be farmed using wind turbines is for countries who have strong winds as the wind turn the wind turbines and generate electricity. Denmark is an example of a country that has successfully invested in wind energy, allowing it to generate surplus electricity during windy periods and export it to neighbouring countries, strengthening both its economy and regional energy security. For all energy types, from an economic aspect, it is more expensive to set up the machines and technologies required to harness the different types of energies, however, after installation, it is cheaper overtime as renewable energy can be cheaper to operate since sunlight, wind, and flowing water do not need to be purchased as fuel, and the only payments that must be made are maintaining the technologies and hiring workers. This is extremely helpful to the country, as they become more energy independent, as the country uses its own resources to produce energy and reduce dependence on other countries, who may stop selling to them or reduce their supply of natural gas. This way, nations can ensure that they always have a steady amount of energy throughout the year. Finally, it is also much better environmentally, as it doesn't burn any materials which release carbon dioxide, and so there are low carbon emissions when compared to natural gas and fossil fuels which decreases global warming and is very helpful for the environment.

The second solution involves trade. Since the main issue is not having a stable supply of natural gas and attempting to reduce the risk of having no energy. Making trade agreements is another possible solution which countries can implement, as policies and agreements allow higher security for countries. Trade agreements can be signed over long periods of times which ensure that the country reduces the risk of running out of natural gas suddenly. Trade agreements can be signed to ensure that the country has a stable supply natural gas. The agreement should have clear rules, penalties, and methods for solving disputes. Therefore, if an agreement is enforced, then this

gives the country a more stable and reliable supply of natural gas which won't run out and is enough to provide for the citizens, and so trade agreements are another viable solution.

The third solution which can be implemented is to improve energy efficiency and reduce unnecessary consumption. Multiple steps can be taken to do this, first making sure that the citizens use energy as efficiently as possible, so improving insulation in houses so less people use heaters and heat or cold is maintained in buildings. Using more energy efficient heating systems and appliances. Modernising older factories to make them more efficient and making them waste less energy. Finally, encouraging businesses and people to reduce unnecessary energy consumption by running awareness campaign or providing tax reductions or financial support to businesses who consume less energy or update machinery. This would greatly improve citizens' lives, as more energy is available and so energy is cheaper, this also ensures that countries are less vulnerable to natural gas shortages.

## Guiding Questions

1. How much natural gas does your country export annually?
2. What is your countries stance on renewable energy? Are they with harnessing renewable energy or do they keep going with natural gas?
3. What are the available natural resources which your country can use to produce renewable energy?
4. What trade agreements are already in place with your country regarding natural gas?
5. How much natural gas does your country have?
6. How much natural gas does your country have and are able to export or use it on their citizens?
7. How much has your country already invested into renewable energy sources?
8. What country exports the most amount of natural gas to your country?
9. How much natural gas does your country store in case of emergencies?
10. How much natural gas is imported into your country per year?
11. How much natural gas does your country export to other countries per year?
12. Does your country mainly depend on imported natural gas or resources of the country?

# Appendix

- Total energy production from natural gas 2024
  https://www.eia.gov/international/rankings/country/USA?aid=1&f=A&pid=4413&u=0&v=none&y=01%2F01%2F2024
- Reliable, affordable access to all fuels and energy sources
  https://www.iea.org/topics/energy-security
- Russia's invasion of Ukraine: Implications for energy markets and activity
  https://thedocs.worldbank.org/en/doc/18ad707266f7740bced755498ae0307a-0350012022/related/Global-Economic-Prospects-June-2022-Topical-Issue-2.pdf
- What is renewable energy
  https://www.un.org/en/climatechange/what-is-renewable-energy

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