

European Council (EUC) - Model United Nations Oak House School

Topic 1: *Energy security and the transition to renewable sources in a post-Russian gas era*

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Glosary:

1. Energy transition: The structural shift from fossil-fuel-based energy systems to renewable and low-carbon sources, supported by changes in technology, infrastructure, and policy.
2. Carbon neutrality/net-zero: A state in which greenhouse gas emissions are balanced by removals, either through natural sinks (forests) or technological solutions, resulting in no net contribution to climate change.
3. Energy security: The ability of a state to reliably access affordable, uninterrupted, and sustainable energy supplies to meet its present and future needs.
4. Sustainable development: Development that meets the needs of the present without compromising the ability of future generations to meet their own needs.
5. Intermittency: The variability of renewable energy production due to environmental factors.
6. Decarbonization: The process of reducing and ultimately eliminating carbon dioxide emissions from energy production by shifting to low-carbon technologies.
7. Liquefied Natural Gas (LNG): A non renewable natural gas that has been cooled to a liquid state for easier storage and transport.
8. Energy poverty: A situation in which households cannot afford adequate energy services, such as heating, cooling, or electricity, due to high costs, low income, or inefficient housing.
9. Just transition: A policy approach ensuring that the shift to renewable energy is fair, socially inclusive, and does not disproportionately harm workers, vulnerable communities, or regions dependent on fossil fuels.

10. Diversification (energy diversification): Reducing reliance on a single supplier or energy source by expanding the number of partners and technologies used.

Introduction to the topic:

Russia's invasion of Ukraine (February, 2022) has fundamentally altered Europe's geopolitical landscape, with profound implications for its energy security, exposing Europe's vulnerabilities, particularly its heavy reliance on Russian oil and natural gas. In 2025, Russia remains Europe's largest supplier of coal, oil, and gas, threatening Europe's energy independence and carbon neutral 2050 goals.

The European Council (EUC) introduced significant policy measures to reduce dependence on Russian hydrocarbons, including a decision in May 2022 to phase out nearly 90% of Russian oil imports (JSTOR, 2023). Moreover, in March 2022 the president of the European Commission announced the complete phase-out of imported fossil fuels from Russia by 2027 (Karda, 2023). These measures represent not only a political reaction to conflict but also an accelerated push toward the European Union's broader energy transition, driven by both climate commitments and the strategic need for greater energy sovereignty.

Nevertheless, reduced energy supplies from Russia have obliged member states to quickly seek out alternative sources. In the first year of Russia's war, the EU and its member states concluded around 100 energy cooperation agreements. Most of these were with countries that feature among the EU's largest, and most longstanding, suppliers of fossil fuels: 17 agreements with the United States, 9 with Azerbaijan, 9 with Norway, 8 with Qatar, and 7 with Algeria (European Parliament, 2023).

At the same time, the EU is facing a challenge: the bloc needs significant amounts of fossil fuels, mainly gas, from sources other than Russia in the short to medium term, but it also needs to progress its own transition to net zero as well as help others to fulfil their Paris accord climate commitments. This means that the EU and its member states have to balance meeting these short-term needs with building lasting energy alliances that support the EU's energy transition goals in the long term.

According to a 2023 Jacques Delors Institute report, addressing the "energy trilemma": achieving climate neutrality while ensuring security of supply and affordable prices, requires strengthened energy and climate

governance, a larger EU budget dedicated to energy, and deeper involvement of citizens in decision-making (European Parliament, 2023). Delegates must take all three dimensions into account when formulating a coherent policy approach to the EU's transition away from Russian energy dependence and towards a more sustainable energy future.

However, as the United Nations emphasizes, "the emerging energy system must promote resilient economies and societies for a more inclusive and equitable world" (United Nations, 2021). Therefore, delegates must also consider the social justice dimension of the transition, ensuring that the shift to renewable energy does not disproportionately burden vulnerable communities.

Historical Background:

Historically, Western European engagement with Russian energy had been framed largely as an economic partnership rooted in post-1970s market liberalization and supply stability. In this context, dependency was once perceived as a pragmatic means of ensuring affordable energy following the 1970s OPEC crises. Initially, Europe's strategic pivot did not translate into an immediate surge in renewable deployment. Instead, states sought alternative suppliers, notably the United States, Norway, and North African partners, to secure liquefied natural gas (LNG). To address acute shortages, some Member States temporarily increased coal usage to stabilize supply during the winter of 2022. These emergency measures, combined with rapid expansion of offshore LNG terminals, largely mitigated short-term disruptions. Nevertheless, Central and Eastern European nations faced considerable challenges, including elevated energy prices and occasional shortages, which raised broader concerns about renewable energy's capacity to meet seasonal demand (JSTOR, 2023).

Consequently, long-term energy policy must not only expand renewable generation but also prioritize modernization of existing infrastructure and enhancement of cross-border grid interconnectivity to strengthen regional cooperation (D'Alfonso, 2022).

These disruptions have compelled European Union (EU) member states to reassess their energy strategies, highlighting how geopolitical tensions and resulting uncertainties in energy markets can quickly undermine efforts to maintain a secure and affordable energy supply. The EU

member states' responses to the energy crisis followed two distinct paths. Some countries prioritized short-term energy security by reopening coal plants, while others pursued ambitious decarbonization strategies aimed at long-term sustainability. These efforts focus on expanding renewable energy, enhancing energy efficiency, and implementing measures to gradually reduce reliance on imported hydrocarbons (Gueye, Karanfil, Omgba; 2025).

Issues to consider:

- **Energy security v sustainability**

The European Commission released in May 2022 a strategy roadmap called the REPowerEU Plan. Although this plan mainly aims to make Europe independent from the Russian energy supply before 2030, it proposes a broader set of measures and policies to reduce the EU's energy dependence on “unreliable suppliers” and volatile oil and gas prices (European Commission, 2022). The acceleration of deployment of renewables, as a key measure taken by the Commission, is expected to expedite the transition to clean energy and drive the EU toward greater energy independence by phasing out legacy energy systems. Yet this outcome is not assured. What if greater renewable integration does not translate into the anticipated improvements in energy independence?

Energy prices are primarily influenced by the availability and cost of marginal fuel sources. This means that increasing the share of renewable energy in the energy mix may not necessarily guarantee greater energy security. Energy prices can undergo significant fluctuations, particularly when the price of the marginal fuel source varies significantly: within the initial two weeks following the invasion in February 2022, oil, coal, and gas prices surged by approximately 40%, 130%, and then 180% (Gueye, Karanfil, Omgba; 2025).

- **Socio economic factors & funding**

According to the European Parliament (2023) socially just energy transition is essential to maintain public support and avoid placing disproportionate burdens on vulnerable groups. Because the shift away from fossil fuels affects regions and sectors differently, it often requires industrial restructuring, worker reskilling, and costly changes for households. High upfront expenses and rising energy prices can worsen

energy poverty, especially for low-income households and small businesses.

Currently, only 44.8% of the population living in least developed countries have access to electricity, and 76% of rural areas have access to electricity, while urban areas have 97%. Around 3 billion people do not have access to clean cooking energies, while 2.2 billion people rely on traditional wood fuels, resulting in 4 million deaths due to household pollution (European Parliament, 2023). This issue can be faced by expanding renewable sources of energy, such as wind and solar power, meaning that electricity becomes more accessible for lower and middle-income households worldwide.

Moreover, equitable access to affordable and reliable energy - particularly during peak winter demand - remains a core challenge. Overreliance on renewables without sufficient investment in complementary infrastructure, such as energy storage, grid expansion, and hydrogen technologies, may potentially exacerbate energy inequality and deepen said social disparities.

To address these inequalities, the EU provides targeted financial support, tax incentives, and measures that help consumers move away from fossil-fuel dependence. Without such policies, the social costs of decarbonisation can trigger public resistance and political pressure to slow climate action.

The Social Climate Fund (SCF), adopted in 2023 and budgeted at €65–86.7 billion for 2026–2032, supports households, micro-enterprises, and transport users affected by extending the Emissions Trading System to buildings and road transport. It finances temporary income support and long-term investments in renovation, clean heating, and sustainable mobility. Member States must submit Social Climate Plans by mid-2025.

The Just Transition Fund (JTF), created in 2021 with €17.5 billion, assists regions most affected by the phase-out of fossil fuels and carbon-intensive industries. It funds job creation, reskilling, clean technologies, circular-economy projects, site regeneration, and renewable district heating. Territorial plans outline which regions receive support and how funds are allocated.

Financing remains a major challenge. Meeting the Green Deal and REPowerEU objectives requires over €620 billion in additional annual investment, with REPowerEU alone needing €300 billion by 2030.

Because funding determines what measures are realistically achievable, delegates must consider how financial support enables or limits their country's position. Member States with fewer resources may demand stronger EU funding before agreeing to ambitious targets, while wealthier states may push for stricter conditions. Funding therefore shapes what commitments each delegation can support and how far they can go without triggering social or economic backlash.

Hence, while the European Union's transition aligns with climate and sovereignty goals, it requires balanced strategies that address both technological and social dimensions (JSTOR, 2023).

- **Fossil fuel reliance**

Globally, more than \$7 trillion annually is being channeled to subsidize the fossil fuel economy, highlighting the need to reform taxation and subsidy practices (European Parliament, 2023). The allocation of resources towards subsidies affects the long term transition towards sustainable energy sources, which is why reforms are necessary to accelerate energy systems and transition to sustainable futures. In Europe, there was a slight decrease in fossil fuel subsidies until 2021, where the amount passed from €56 billion, to €123 billion in 2022, as a measure to protect consumers from high prices. This in turn, prevents resources from being allocated towards more sustainable sources of energy.

Energy tariffs for fossil fuel-based energy are an important factor when analyzing the long-term success of renewable sources of energy because they define the competitiveness of renewable energy facilities.

Governments can address the barrier that low-tariffs present for renewable energy by developing new market instruments that create enabling conditions for further deployment of renewable energy, making these sources more affordable and competitive (Karda, 2023).

- **Intermittency of renewables**

A central challenge for the EU's energy transition is ensuring a stable and reliable electricity supply while rapidly expanding renewable generation. Unlike fossil-fuel plants, which can produce power on demand, many renewable sources cannot be controlled to match consumption patterns (European Commission, n.d.). This variability known as intermittency means that solar panels generate no electricity at night or during heavy cloud cover, and wind turbines stop producing during calm or excessively strong winds. As the grid must balance supply and demand in real time,

such fluctuations can create shortages, destabilise the system, and undermine public confidence if not properly managed.

Delegates should therefore consider comprehensive solutions, including large-scale energy-storage technologies, investment in modern “smart grid” infrastructure, diversification of renewable and dispatchable energy sources, and demand-response programmes that shift consumption to periods of high renewable output.

EU Policy & Past Actions :

The European Union’s energy and climate policy is structured around several major initiatives that together aim to achieve climate neutrality, strengthen energy security, and accelerate the shift to renewables, especially in the context of reducing dependence on Russian gas (Karda, 2023).

The foundation of this framework is the European Green Deal (2019), which sets the long-term objective of EU climate neutrality by 2050. This goal was made legally binding by the European Climate Law (2021), which also established an intermediate target of reducing net greenhouse gas emissions by 55% by 2030. To align EU legislation with these objectives, the Commission proposed the Fit for 55 Package (2021), which revises key laws on renewable energy (RED), energy efficiency (EED), energy taxation, the performance of buildings (EPBD), and gas and hydrogen markets, while introducing new instruments such as the Social Climate Fund.

Following Russia’s invasion of Ukraine, the EU adopted REPowerEU (2022), a strategic plan to end the Union’s reliance on Russian fossil fuels. It focuses on three pillars: reducing energy demand, diversifying energy imports, and accelerating renewable deployment. REPowerEU raises targets for renewables and efficiency, streamlines permitting for clean-energy projects, expands solar and wind capacity and integrates energy-related investments into national recovery plans.

The Renewable Energy Directive (RED III) sets a binding EU-wide renewables target of 42.5% by 2030, with additional obligations for transport, industry, heating and cooling, and renewable hydrogen uptake. The Energy Efficiency Directive reinforces the principle of “energy efficiency first,” mandating a 11.7% reduction in final energy consumption by 2030 and stronger savings obligations for both Member States and the

public sector. To ensure consistent implementation, the Governance of the Energy Union Regulation requires each Member State to submit a 10-year National Energy and Climate Plan (NECP), providing a coordinated approach to monitoring progress toward EU climate and energy goals. Alongside this, the EU is restructuring its gas, hydrogen, and electricity systems: new gas and hydrogen legislation will integrate low-carbon gases and support the creation of cross-border hydrogen infrastructure, while electricity market reform seeks to stabilise prices and incentivise renewable investment (European Parliament, 2023).

Finally, the Green Deal Industrial Plan, including the Net-Zero Industry Act and Critical Raw Materials Act, aims to boost European clean-technology manufacturing and secure supply chains for solar, wind, batteries, heat pumps, hydrogen technologies, and other strategic net-zero sectors.

Main Types of Renewable Energy:

Type:	Key information:	Further research for delegates:
Solar power	Solar energy technologies convert sunlight into energy, either as electricity (photovoltaics and concentrated solar power) or in the form of solar heat. Solar is the fastest growing energy source in the EU and is cheap, clean and flexible. The cost of solar power decreased by 82% between 2010-2020, making it the most competitive source of electricity in many parts of the EU. In 2024, 46.9% of the electricity generated in the EU came from renewables and 22% of renewable electricity came from solar energy (Eurostat, March 2025). June 2025 was the first month in history where solar energy was the main source of electricity generated in the EU at 22%. In addition, solar energy is the most accessible renewable energy for households and contributes to protecting consumers from volatile energy prices. Key EU producers: Germany, Spain, Portugal	• <u>Revised Renewable Energy Directive (EU/2023/2413)</u> • <u>European Solar Charter</u>

Wind power	Wind is a clean and abundant energy source used to generate electricity. It can be harnessed either on land (onshore) or at sea (offshore). Continued improvements in manufacturing and wind turbine design combined with improved capacity factors (more electricity generated per turbine) have driven down the costs of wind power and reaffirmed its position as a key driver of the clean energy transition. According to Eurostat (2025), wind accounted for 39.1% of the total electricity generated from renewable sources in the EU in 2024. However, it is not enough to singlehandedly meet the EU's energy and climate targets by 2030. The EU and the wind industry have therefore committed to ramp up both onshore and offshore wind in the coming years. Key EU producers: Germany, Denmark, Sweden	• European Wind Charter (of 19/12/2023 - updated in April 2024) • Wind Pledges - European Wind Power Action (19/12/2023) • Wind energy (DG Research and Innovation)
Hydropower	Hydropower is derived from flowing water that powers a turbine. It is one of the oldest sources of renewable energy, having been used already in pre-industrial times, for instance, in watermills. As the second largest renewable electricity source, hydropower continues to be an important energy source today. In 2024 it accounted for 29.9% of the EU's total electricity generated from renewables (Eurostat, 2025). Besides providing a lot of renewable electricity, hydropower technology can also deliver services to Europe's electricity system, such as flexibility and energy storage, which are important to maintain the stability of the electricity system and integrate an ever-growing share of variable renewable energy production, for instance from solar and wind power, into the energy system. Key EU producers: Sweden, Austria, Croatia	• Amending Renewable Energy Directive (EU/2023/2413) • Revised Renewable Energy Directive (2018/2001/EU) • Renewable Energy Directive (2009/28/EC) • Video: People with energy - Hydropower station in Austria

Bioenergy	Derived from biomass and biofuels, bioenergy is a sustainable source made from organic materials. Biomass originates from organic material from forestry and agriculture from waste and residues of biological origin as well as the biodegradable fraction of waste. It can be used for heating, electricity generation, and the production of transport fuels. According to the Union bioenergy sustainability report (2023), biomass for energy continues to be the main source of renewable energy in the EU and accounted for about 59% of the renewable energy consumption in 2021. Key EU producers: Sweden, Finland, Austria, Germany, and Denmark	• <u>Renewable Energy Directive</u> • <u>Implementing regulation on sustainability criteria for forest biomass</u> (EU/2022/2448) • <u>Study: Union bioenergy sustainability report</u> (2024) • <u>News: Bioenergy report outlines progress being made across the EU</u> (27/10/2023)
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Key stakeholders & current situation:

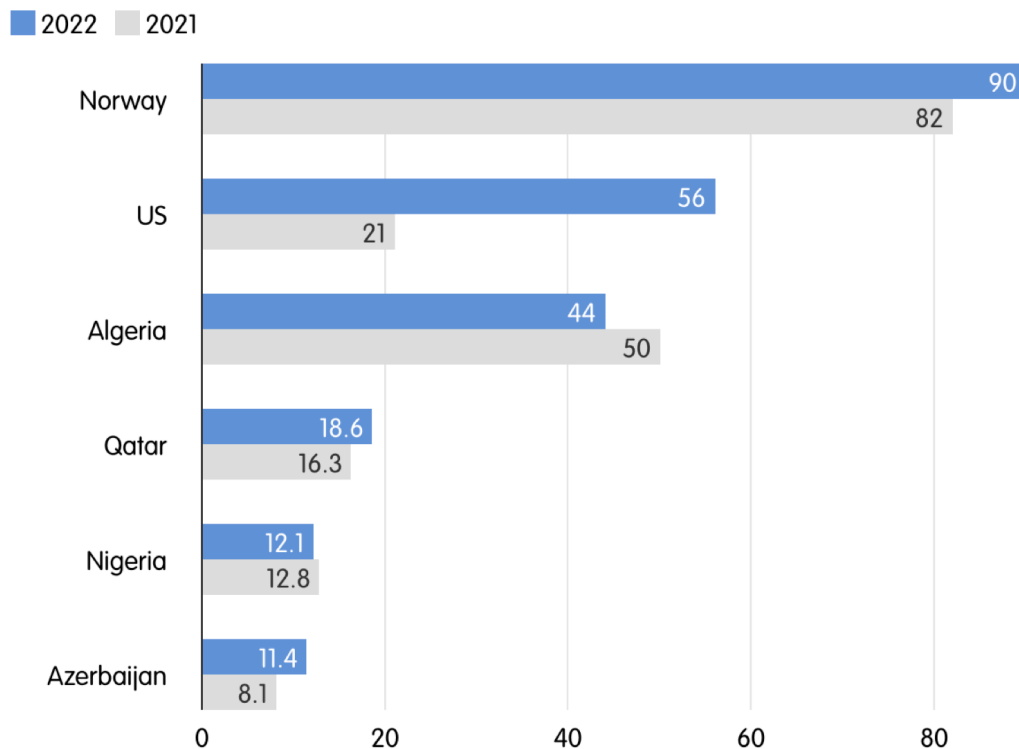
Following the sharp reduction in Russian gas imports, Norway became the EU's most important gas supplier, surpassing the United States and Algeria. The US contributed the largest absolute increase in gas supplies and remains the EU's main supplier of liquefied natural gas (LNG), which can be transported by sea without relying on pipelines, ahead of Qatar and Russia. Qatar and Azerbaijan also expanded their exports to the EU. Despite sanctions, some Russian gas continues to reach the EU via LNG and existing pipelines, and LNG imports from Russia even increased during the first year of the war.

Before the war, Norway was Europe's second-largest gas supplier after Russia, providing 25% of gas and nearly 10% of oil. Suppliers like Egypt, Angola, and Trinidad and Tobago quickly redirected volumes to meet Europe's needs. After the invasion, the EU and member states raced to secure new deals worldwide. In April 2022, the EU and US agreed to add 15 bcm of gas that year, scaling to 50 bcm annually through 2030, while

Azerbaijan pledged to double exports by 2027. Germany, Italy, and Poland led national efforts, boosting fossil fuel imports, mainly gas, to stabilize Europe's energy supply.

Key non-Russian natural gas suppliers to the EU (2021–2022)

In billion cubic metres



Source: CSIS, Global X, Asharq Al-Awsat
ECFR · ecfre.eu

Fig. 1: Key non-Russian natural gas suppliers to the EU (Karda, 2023)

Burning natural gas releases carbon dioxide, contributing to climate change, which is why the EU's dependence on it raises concerns even when new supply deals stabilize short-term energy needs. Even with these new deals, the EU remains heavily dependent on fossil fuels, particularly gas, to meet domestic demand. Securing more supply stabilizes energy in the short term, but it does not reduce reliance on non-renewable sources, highlighting the tension between immediate energy security and long term climate goals.

- **Current “transition fuels”: Gas, electricity & hydrogen**

Gas	Gas emits less CO ₂ than other fossil fuels and was for a long time considered a 'transition' fuel on the way to climate neutrality, especially in the context of switching from coal. In recent years, the EU has also made efforts to accelerate the shift from natural gas to renewable and low-carbon gases. The 2021 fit for 55 set of proposals included a hydrogen and decarbonised gas market package, revising the existing gas directive and regulation.
Hydrogen	Hydrogen is predicted to play an important role in the transition to a net-zero energy system: the REPowerEU initiative increased renewable hydrogen production targets to 10 million tonnes imported by 2030.
Electrification	Electrification is another important part of the energy transition, especially in terms of energy use in industrial processes, transport (electric vehicles) and buildings (heat pumps). The EUC expects electricity demand to increase significantly, with the share of electricity in final energy consumption growing from 23% today to around 30% in 2030, and towards 50% by 2050.

Questions a Resolution Should Answer:

Current energy security challenges: What strategies can the European Union adopt to maintain energy stability while progressing toward its climate and decarbonization goals?

The transition to renewable energy: What are the main barriers and opportunities for accelerating the EU's transition to renewable energy while ensuring resilience and competitiveness?

Policy decisions: How quickly should member states phase out gas dependency? Should the EU set binding renewable targets for all members? Should some states receive transition funding or exemptions?

Social and economic factors: How can European policymakers ensure that the shift to clean energy protects jobs, supports vulnerable populations, and promotes social fairness? How can Europe balance the short-term

economic costs of transitioning away from fossil fuels with the long-term benefits of a sustainable energy economy?

Global energy diplomacy: How can the European Union leverage international partnerships to promote global energy security while advancing a fair and inclusive clean energy transition?

Environmental impact: How can Europe achieve energy sovereignty while safeguarding ensuring that the renewable transition contributes to long-term environmental sustainability?

Conclusion:

As Europe navigates a post-Russian-gas era, delegates must recognize that energy security and the transition to renewable sources are inseparable priorities. Russia's invasion of Ukraine exposed the risks of overdependence on a single supplier, compelling the European Union to diversify its energy imports, strengthen strategic resilience, and accelerate its long-term decarbonization agenda (European Parliament, 2023; Karda, 2023). Yet diversification toward LNG and other fossil fuels addresses only short-term vulnerabilities and cannot resolve the structural challenges posed by climate change, volatile energy markets, and rising global competition for resources.

For the EU to achieve climate neutrality by 2050, it must expand renewable capacity, modernize infrastructure, and integrate technologies that mitigate intermittency, such as: storage, smart grids, and hydrogen systems, while ensuring affordable access for households and industries (United Nations, 2021). At the same time, the transition must remain socially just. Financial mechanisms like the Social Climate Fund and the Just Transition Fund demonstrate that equitable burden-sharing is essential to sustaining public support and preventing energy poverty (European Parliament, 2023). Funding therefore remains a decisive factor shaping what commitments each Member State can realistically endorse.

Ultimately, delegates should strive for balanced, forward-looking solutions that reinforce Europe's energy sovereignty, uphold climate commitments, and ensure that no community is left behind. A successful resolution will

integrate geopolitical realities with technological innovation, financial solidarity, and environmental responsibility, guiding the EU toward a secure, sustainable, and equitable energy future.

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