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Master Thesis

"**Geoeconomics & Energy Diplomacy**"

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ΚΑΛΛΙΓΕΡΟΣ

ΚΩΝΣΤΑΝΤΙΝΟΣ ΑΝΑΣΤΑΣΙΟΣ

(υπογραφή)

Abstract

This paper examines the connection between energy and international politics with an emphasis on geoeconomics, energy diplomacy, and the emerging new geopolitical equilibriums in the 21st century. The role of oil in the 20th century as a key pillar of international security and strategic alliances is analyzed, as well as the gradual transition towards new forms of energy such as natural gas, LNG and renewable energy sources. A special reference has been made to Qatar's strategy, which uses its energy diplomacy as a tool of influence in Europe and Asia, its reliance on the Nord Stream and Turkish Stream pipelines of Russia and Europe, as well as the war in Ukraine as the focal point of the global energy geo-economy. The analysis extends to the eastern Mediterranean, where conflicts and partnerships between Greece, Turkey, Israel, Egypt and the EU make the region an area of competition and opportunities for cooperation. Finally, the strategic implications of the green transition, technological innovation, and global climate governance mechanisms are examined, highlighting the transition to a new energy model where energy is defined not only by hydrocarbons but also by sustainability, innovation, and institutional impact.

Keywords: Energy, International politics, Geoeconomy, Energy diplomacy, Eastern Mediterranean, Qatar, Russia, Ukraine, Green transition, Energy security, Global governance, Climate change.

Contents

Introduction

In recent years, energy and international politics have become so intricately intertwined that it's difficult to separate them. Oil, natural gas, and even renewable energy are not only drivers of economic growth but also tools of influence and power, shaping the decisions of governments, alliances, and powerful corporations. In the modern world, "power" is no longer measured solely in armies and weaponry. Geoeconomics and energy diplomacy have become central, demonstrating that states also pursue their own interests through control of energy markets, transmission networks, and access to critical resources. Consequently, issues such as security of supply, possession of strategic reserves, and the transition to more environmentally friendly forms of energy directly influence the balance of power and determine whether partnerships or conflicts will emerge on the international stage.

According to Blackwell and Harris in their book War by Other Means : Geoeconomics describes the use of economic means to achieve geopolitical objectives. Simply put, trade agreements, economic sanctions, foreign investment, and even energy supply chains can become tools of pressure and influence, replacing or supplementing military power. Energy plays a unique role in this context: it is the foundation of economic growth, yet it is also a key security concern and, in times of crisis, can easily become a source of vulnerability. The close connection between energy, strategy, and international security clearly demonstrates that access to energy resources is a key element of national strategy and the global balance of power.

Energy diplomacy, on the other hand, describes the ways in which countries attempt to secure, diversify, and protect their energy access. This can be achieved through long-term supply contracts, so-called "pipeline diplomacy," participation in international institutions, or exerting influence over strategic energy infrastructure. The United States' 20th-century dependence on oil and the crucial role of Russian natural gas in European security are classic examples of the connection between energy and national security.

However, in the 21st century, we are facing profound changes. As highlighted in "Green Transition: The New Geopolitics of Energy," the global shift toward renewable energy and a low-carbon system is reshaping the international geopolitical landscape. Countries with reserves of key minerals such as lithium and cobalt or leading positions in renewable energy technology are becoming new centers of power. This has not eliminated geopolitical challenges; it has simply shifted them elsewhere, creating new dependencies and competition.

In this context, the Mediterranean region, Russia, Qatar, and Turkey, provide important case studies. These countries demonstrate how geography, resources, and strategic ambitions can shape energy diplomacy and geopolitical economic policy. Whether Russia uses natural gas as leverage, Qatar relies on liquefied natural gas as a soft power tool, or Turkey aspires to become an energy superpower, energy continues to dominate political and economic hierarchies.

This thesis, therefore, explores the interplay between geoeconomics and energy diplomacy as key tools of modern international politics. It first outlines the conceptual foundations of geoeconomics and energy diplomacy, then analyzes their interplay. Finally, it uses case studies to illustrate how these dynamics operate in practice. It aims to demonstrate that energy is no longer simply a matter of supply and demand but a matter of shaping power, security, and the global order.

Chapter 1st: Introduction to Geoeconomics

1.1. Definition and theoretical background

The term "geoeconomics" refers to the use of economic instruments and strategies to achieve strategic, geopolitical, and national objectives. Modern literature has expanded this concept. Olson (2023) describes geoeconomic diplomacy as a form of diplomacy based on the instrumentalization of economic interdependence, arguing that states no longer exert influence solely through military or political means, but rather through targeted economic practices.

Raggimir (2025) links geoeconomics with the Sustainable Development Goals, arguing that energy transitions and sustainable development represent new areas of competition and strategic influence, in which economics plays a central role in

reshaping the international balance. Generally speaking, geoeconomics is defined as the area where economics and geopolitics interact, with energy at the heart of this relationship. Markets, resources, and technology are not neutral economic goods but strategic tools that can determine the balance of power in the 21st century.

1.2. Geoeconomics tools: sanctions, market control, investment, energy

Geoeconomics manifests itself mainly through specific tools used by states and international actors to achieve strategic goals. Economic sanctions are the most prevalent example, as they act as a means of pressure on states that deviate from international requirements or violate rules of international law. The experience of recent decades, from the sanctions of the United States and the European Union against Iran to the extensive economic penalties against Russia following the invasion of Ukraine, demonstrates how sanctions can limit a state's economic activity and reduce its ability to advance its geopolitical ambitions. Blackwill and Harris (2016) argue that sanctions are not just a tool of punishment but also a strategic means of redefining the balance of power through economic weakening.

A second key tool is market control. States that have a dominant position in critical economic activities can influence prices, create shortages, or direct the flow of products according to their strategic interests. China is a prime example, as its control over rare earth supply chains gives the country a particularly important bargaining advantage in technological and industrial sectors that are vital to the West. Olsen (2023) points out that the instrumentalization of markets is not only based on the physical possession of resources, but also on the ability to impose regulatory control and create interdependencies that limit the autonomy of other states.

Similarly, the sovereign wealth funds of Qatar or the United Arab Emirates use the capital derived from energy resources to create economic influence on a global level. Rajmil (2025) emphasizes that these types of investments are not solely linked to cost-effectiveness but serve long-term strategic choices, often embedded in national growth and strength strategies. Qatar, as a leading exporter of liquefied natural gas, is leveraging its energy power not only for its economic growth, but also for the formation of an international profile that strengthens its geopolitical position. In the modern era, as Quitzow and Zabanova (2025) highlight, the green transition and the

development of renewable energy technologies create new fields of geoeconomic confrontation, as states that secure access to critical metals and energy storage technologies gain an advantage in the international system.

The tools of geoeconomics therefore constitute a wide range of practices that allow states to exert influence beyond the limits of military power. Sanctions, market control, strategic investments and energy power complement each other, offering the possibility of shaping international relations that are based more on economic dependence and less on military conflict.

1.3. The relationship between geoeconomics and strategy and security

Geoeconomics is inextricably linked to strategy and security, as states leverage economic tools not only to enhance their prosperity, but also to protect and expand their geopolitical power. In this context, the economy ceases to be a neutral sphere of production and consumption and is transformed into a vehicle for achieving strategic goals. The strategic dimension of geoeconomics is particularly evident in times of crisis, when resource management, sanctions and trade agreements are used as instruments of political pressure.

Blackwill and Harris (2016) emphasize that geoeconomics functions as a "war by other means", i.e. as an alternative form of confrontation, which can often be as effective as military action. The strategic use of economic tools allows states to impose costs on their adversaries without resorting to armed conflict. Russia, for example, has put its energy policy at the core of its strategy, instrumentalizing gas exports as a means of control and pressure on Europe. On the other hand, widespread Western sanctions after 2022 show how geoeconomics can be integrated into the security strategy, seeking to limit Russia's economic ability to finance military operations.

The relationship between geoeconomics and security is not limited to traditional energy sources or natural resources. The green transition and new technologies add an additional dimension, as the possession and control of critical metals, such as lithium or cobalt, and the superiority in storage and renewable energy technologies are now strategic security factors. The analysis of Quitzow and Zabanova (2025) highlights that the transition to a low-emission energy and industrial system does not

reduce the geo-economic dimension of energy, but simply transforms it, creating new fields of competition and dependency.

Chapter 2nd: Introduction to Energy Diplomacy

2.1. Energy diplomacy

2.2. Traditional and modern energy diplomacy

Like the energy system itself, energy diplomacy has undergone profound transformations between the 20th and 21st centuries. Its traditional form was inextricably linked to fossil fuels (primarily oil and, later, natural gas) and the strategic ambitions of major powers to control energy sources and transportation routes. However, its modern incarnation, focused on green transformation, renewable energy, technology, and the security of critical metal supply chains, highlights new forms of interdependence and competition.

Traditional energy diplomacy developed in a context where access to oil was synonymous with the concept of national power and security. As the How *Oil Influences US National Security* study shows, the foreign policy of the United States was largely shaped around ensuring control over oil flows from the Middle East. The creation of OPEC and the oil crisis of the 1970s highlighted the ability of producers to use energy as a weapon of geopolitical influence. Olier (2023) notes that oil and gas have been the pre-eminent "hard currency" of international politics, with major powers forming alliances, supporting regimes, or engaging in conflicts in order to ensure stable access to these resources.

In the post-Cold War era, Russia leveraged natural gas as a key lever of its energy diplomacy, decisively influencing Europe through its dependence on pipelines to the old continent. The *Entanglement of Energy, Grand Strategy, and International Security* highlights how energy dependence was translated into a strategic tool for exerting pressure and shaping international security. traditional forms of energy diplomacy were based on bilateral supply agreements, price imposition, and the geopolitical importance of maritime corridors such as the Strait of Hormuz or the Suez Canal.

Modern energy diplomacy is radically different from its predecessor. It is no longer limited to oil and gas but is adapting to the green transition and opening its agenda to new areas. As discussed in "The Green Upheaval: The New Geopolitics of Energy," the phase-out of fossil fuels and the rapid development of renewable energy are creating a new geopolitical landscape. Energy storage, photovoltaics, wind turbines, and the rare metals required for their production are becoming increasingly strategic. Raggimir (2025) even links this development to the Sustainable Development Goals, emphasizing that energy diplomacy is not limited to security of supply but also encompasses sustainable development, green innovation, and the development of new markets.

This means that the actors involved are also changing. For example, the EU is no longer reliant on energy imports but is investing in international partnerships for renewable energy and developing regulatory instruments that influence international trade, such as the Carbon Border Adjustment Mechanism (CBAM). As Quitzow and Zabanova (2025) point out, the shift to a zero-emissions model is creating new geoeconomic forces and giving countries with strategic metals or "green" technology know-how an advantage.

Another element of modern reality is the involvement of multinational corporations. As Abou Chakra (2023) emphasizes, energy security no longer depends solely on governments but also on the decisions of large corporations investing in technology and critical infrastructure. Therefore, energy diplomacy is no longer solely a matter of states; the private sector, international organizations, and social movements are participating and co-shaping the global energy landscape.

A comparison between traditional and contemporary energy diplomacy reveals that both rely on energy as a resource. However, the former focuses on natural resources and strategic competition, while the latter operates in a more complex environment, focusing on green transformation, climate change, and innovation. Stergiou (2022) notes that the green economy, far from easing geopolitical tensions, has actually altered the dynamics of geopolitical tensions, while also presenting new challenges and opportunities for cooperation.

Ultimately, the transition to new energy diplomacy does not mean the demise of traditional approaches. Hydrocarbons remain crucial in regions such as the Middle East and Russia. However, the new reality demands a balance: how can a stable supply be ensured without sacrificing sustainability and geoeconomic advantages? Today, energy has become a focal point where strategy, economics, and international politics are more intertwined than ever before.

2.3. Oil as a foundation

Oil was the cornerstone of 20th-century energy diplomacy and remains a defining factor in international relations. Its strategic importance stems from its dual dimensions: on the one hand, it serves as the fundamental energy source supporting industrial development and military power; on the other, it is a raw material inextricably linked to the economic and commercial balance of the international system (Oliver, 2023).

The establishment and action of OPEC confirmed the centrality of oil as the foundation of energy diplomacy. The oil crisis of 1973, when Arab countries used the embargo as a tool of political pressure, demonstrated that oil could be turned into a powerful weapon with international consequences. From that point on, energy security was organically integrated into the security strategies of consumer countries, while producers understood that they could use oil to strengthen their international influence.

Russia, although best known for its gas policy, also used oil as a tool of geoeconomic power, especially in the post-Soviet period. As highlighted in *The Entanglement of Energy, Grand Strategy, and International Security*, oil and gas exports formed the basis of the Russian strategy to strengthen national power and finance the state apparatus, giving Moscow a central player in the global energy system.

The fundamental position of oil is maintained even in the modern era of the green transition. Although the development of renewable energy sources and decarbonisation policies have gradually reduced the share of oil in total consumption, demand remains particularly high, especially in emerging economies. Rajmil (2025) emphasizes that the energy transition does not abolish the importance of

hydrocarbons, but creates a transitional stage where oil continues to be a key pillar of international markets and geopolitical balances.

2.4. A New Driver of Green Transformation

The European Union is a prime example of a new form of energy diplomacy. Through the European Green Deal and mechanisms such as the Carbon Border Adjustment Mechanism, the EU is leveraging the transition as a tool of international influence, imposing regulatory standards that affect the global economy. This "normative power" strengthens the EU's position on the global energy scene, not based on the possession of wealth-producing resources, but on the ability to formulate rules. Rajmil (2025) links this evolution to the Sustainable Development Goals, showing that the green transition is not only environmental, but also geoeconomic, as countries that control the reserves of these resources gain a comparative advantage in the new energy system.

The green transition also creates new alliances and forms of cooperation. Countries like China and India have invested massively in renewables, combining economic growth with a reduction in reliance on imported hydrocarbons. Khan (2024) highlights that China, through the Belt and Road Initiative, is promoting not only hydrocarbon infrastructure but also renewable energy projects, claiming a leading role in the new energy landscape. Khan et al. (2023) note that India is leveraging energy diplomacy to connect Eurasia with its rapidly developing renewable energy technologies.

Another hallmark of the new dynamics in energy diplomacy is the involvement of non-state actors. High-tech companies, investment funds, and international institutions are playing a leading role, as green energy requires technological innovation and substantial investment. Abou Chakra (2023) notes that today's energy security depends not only on adequate resource supplies but also on access to expertise and capital, highlighting the central role of geoeconomic diplomacy.

Finally, the green transition also has a "soft power" dimension. Stergiou (2022) emphasizes that some countries, such as Greece in the Eastern Mediterranean, promote a green economy not only as an environmental strategy but also to enhance their international image and strengthen their bargaining power. This suggests that

energy transition can be a catalyst for new forms of cooperation but also a source of new competition.

The green transition is creating new dynamics in energy diplomacy. Power stems not only from ownership of hydrocarbons but also from the ability of a country or institution to invest in technology, control key raw materials, and shape international norms. Therefore, green diplomacy has not only replaced traditional diplomacy, but is also changing traditional diplomacy, marking the beginning of a new geo-economic era.

Chapter 3rd: Geoeconomics and Energy Diplomacy

3.1. How energy is used as a lever of geoeconomic power

Energy is one of the most decisive drivers of geoeconomic power, as it combines its economic value with its political importance. Owning, controlling, or brokering access to energy resources enables states to influence international relations, shape interdependencies, and guide the strategic decisions of other actors. As Blackwell and Harris emphasize in their book War by Other Means (2016), energy is one of the core tools of geoeconomics because energy dependence provides a unique opportunity to exert pressure without resorting to military force.

Russia exemplifies this logic. By controlling natural gas exports, Russia uses its energy policy as leverage against Europe and creates conditions of European dependence, thereby enhancing its bargaining power. Energy, grand strategy, and international security are intertwined. Blackwell and Harris explain, that energy is not merely an economic commodity but a strategic tool that determines a state's scope of action in the international system. Similarly, Qatar has leveraged its position as a major exporter of liquefied natural gas to enhance its international profile and gain influence beyond its geographic borders.

The use of energy as a lever of geoeconomic power also manifests itself in the management of key markets and infrastructure. Pipelines, liquefied natural gas terminals, and power interconnections are not only technical projects but also political tools, as they determine who controls energy flows, potentially affecting the security

and economy of the entire region. Abu Chakra (2023) points out that energy security is becoming a strategic area, and countries that control key infrastructure can determine the scope of action for others.

The green transition does not negate this dimension, but reshapes it. As Quitzow and Zabanova (2025) emphasize, reliance on critical metals and renewable technologies creates new forms of geoeconomic power. China, for example, is using its control over rare earth supply chains to strengthen its position on the international stage, turning the energy transition into a means of geoeconomic strategy. In a similar vein, the European Union seeks to shape international rules through the Carbon Border Adjustment Mechanism, using market regulation as a means of diplomatic and economic influence.

3.2. The Interaction between Energy Markets and International Power Politics

The relationship between energy markets and the operation of international power is reciprocal and dynamic, reflecting the interplay between economic and strategic parameters. Energy markets are not independent economic spheres but are deeply embedded in the international power system. Prices, supply, and demand are directly influenced by geopolitical developments, and the structure of energy markets can simultaneously enhance or constrain a country's power.

Historically, the oil crises of 1973 and 1979 demonstrated the vulnerability of energy markets to geopolitical decisions and the catalytic influence of the energy dimension on power politics. As Olier (2023) points out, the use of oil by OPEC members as a tool for exerting pressure has made it clear that the international balance of power does not depend solely on military power, but also on the ability to control energy flows.

In modern times, Russia has used natural gas as a key lever to exert influence in Europe. The energy dependence of European states on Russian exports, as highlighted in *The Entanglement of Energy, Grand Strategy, and International Security*, has provided Moscow with a negotiating advantage, which manifested itself especially after 2014 with the Ukrainian crisis and culminated after the 2022 invasion. This

strategy underscored that the energy markets are an integral part of international power policy and that their disruptions have direct security implications.

At the same time, interdependence is not only about producers, but also about consumers. The United States, as reported in *How Oil Influences US National Security*, invested in energy self-sufficiency through shale oil and gas exploitation, reducing dependence on the Middle East and strengthening its autonomy in foreign policymaking. as it altered the balance of supply and demand, affecting prices and geopolitical balances.

The green transition introduces new forms of interdependence, no longer limited to hydrocarbons, but extends to the supply chains of critical raw materials and technologies. As Quitzow and Zabanova (2025) note, international power policies are beginning to revolve around access to metals like lithium and cobalt, while China has established a dominant position in the relevant markets. This means that 21st-century energy markets are linked to different resources, but remain a central field of strategic debate.

Therefore, the interdependence between energy markets and power politics is fundamental to understanding the geoeconomy. Energy markets are not just places of exchange, but power-sharing mechanisms, in which the economy and politics feed each other. Energy diplomacy acts as a bridge between these two spheres, proving that energy is not only a source of economic growth, but also a key factor in shaping the international order.

3.3. The role of the great powers (USA, China, Russia, EU)

The great powers of the international system use energy not only as an economic good, but also as a strategic tool for shaping power, influence and security. Against this backdrop, energy is a key area where geoeconomics, diplomacy, and strategy intersect.

The United States has historically viewed energy security as an integral part of its national strategy. As discussed in the article "How Oil Affects U.S. National Security," the U.S. presence in the Middle East is inextricably linked to securing access to oil reserves, which influences the formation of alliances and military commitments.

However, with the "shale revolution», the US gained increased energy self-sufficiency, reducing dependence on imports and gaining a new bargaining advantage in international markets.

As Khan (2024) shows, energy security is one of the key pillars of Chinese foreign policy, with the Belt and Road Initiative serving as a platform for both building energy infrastructure and strengthening Beijing's geo-economic influence. China has invested massively in renewables and established a dominant position in rare earth markets, allowing it to set rules and influence the global green transition.

Russia remains one of the most prominent use cases of energy as a tool of power. As analyzed in *The Entanglement of Energy, Grand Strategy, and International Security*, oil and gas exports are the foundation of the Russian economy and, at the same time, the main driver of geopolitical pressure. The dependence of many European countries on Russian supplies has enabled Moscow to exert significant influence, especially after the crisis in Ukraine in 2014 and the invasion in 2022. Russia's energy strategy highlights the close interconnection between geoeconomy and national power.

The European Union approaches energy diplomacy differently, due to the lack of large domestic hydrocarbon reserves. Instead of relying on traditional power sources, it invested in regulation, market integration and the green transition. Through the European Green Deal and the Carbon Border Adjustment Mechanism, the EU is attempting to shape the international regulatory framework, highlighting what is often called "normative power". As Quitzow and Zabanova (2025) emphasize, the energy transition in Europe is not only an environmental plan, but also a geo-economic strategy that aims to reduce dependence on third countries and strengthen the competitiveness of European industry.

Overall, the major powers are leveraging different models of energy geoeconomy: the U.S. relies on self-sufficiency and technological innovation, China relies on control of critical materials and infrastructure, Russia relies on the use of hydrocarbons as leverage of pressure, and the EU on regulatory power and the green transition. The diversity of these strategies reflects the particular geopolitical conditions and priorities

of each power, but also the common assumption that energy remains a central tool of power in the international system.

3.4. The transition from fossil fuels to RES as a new geo-economic field of competition

The global transition from fossil fuels to renewable energy sources (RES) is not only a technological or environmental process, but also a new geo-economic field of competition. For decades, hydrocarbons have been the foundation of global energy diplomacy, shaping strategies, alliances, and conflicts. Today, renewable energy and low-carbon technologies are becoming corresponding instruments of power, with major powers and regional alliances fighting for dominance.

As Quitzow and Zabanova (2025) emphasize, the energy transition is giving rise to new geoeconomic dynamics focused on technological leadership in key raw materials (such as lithium, cobalt, and rare earths), batteries, and photovoltaics, as well as control over supply chains. Possession or control of these resources and technologies plays a role similar to that of oil and gas in the 20th century: it provides strategic advantages and creates new forms of dependency.

China is perhaps the most unique player in this new landscape. As Khan (2024) reports, Beijing has consolidated control over global rare earth markets and has gained a dominant position in the production of photovoltaic panels and batteries. This allows it to determine not only prices but also the conditions of international competition in green energy. This strategy reveals that the transition does not reduce the geo-economic dimension of energy, but strengthens it through new forms of dependency.

The European Union has invested in a different strategy. Through the European Green Deal and the Carbon Border Adjustment Mechanism, it attempts to turn the green transition into a tool of regulatory strength. As Stergiou (2022) notes, the EU is attempting to position itself as a global leader in standard-setting for climate policy and energy, influencing the global market through regulatory tools rather than through the possession of raw materials.

The United States, bolstered by its technological superiority, has set itself the goal of dominating the fields of innovative technologies, such as hydrogen and energy storage. *Green Upheaval: The New Geopolitics of Energy* highlights that the U.S. sees the transition not only as a response to climate change, but also as an opportunity to maintain its hegemony in the global economy, gaining a share in the new energy markets.

Russia, by contrast, is in a more defensive position. Its dependence on hydrocarbon exports makes it vulnerable to an international environment conducive to renewable sources. However, it is trying to reorient itself through investment in the nuclear program and strategic partnerships with emerging economies in order to maintain its influence. This shows that the energy transition creates both opportunities and threats, depending on the position that each country occupies in the global energy system.

Finally, the energy transition is not limited to the great powers. Emerging economies like India and regions like the Eastern Mediterranean are emerging as significant hubs of green growth, leveraging renewables to enhance their geoeconomic position. Khan et al. (2023) show that India, through its energy diplomacy in Eurasia, is attempting to link green growth with its geopolitical strategy, while Mediterranean states are leveraging solar energy and offshore wind as a means of regional cooperation and power projection. The transition from fossil fuels to renewables does not eliminate the geo-economic dimension of energy, but ushers in a new era of competition and power redeployment. Raw materials, technologies and regulatory initiatives are becoming the new fields of confrontation, turning green energy into a central axis of the 21st century.

Chapter 4th: Case Studies

4.1 Turkey

The integration with the European Union has been the country's primary concern for a long time. In order to achieve this goal, Turkey capitalized on its economic benefits and attempted to become a significant political and economic partner of the European Union, as evidenced by the signing of the Ankara Accord in 1963. Recent instances can be traced back to Turkish claims regarding the need for the EU to recognize Turkey's growing population and youth, as a member. With these claims, Turkey is attempting to utilize its resources in order to be admitted.

Since then, the Turkish government's attempts to show the value of their proposals to the EU have continued. However, the most obvious advantages of Turkey is its geographic location. It's essential and mandatory in the safety of the European Union's energy, as documented by the European Council and Parliament in clause 7 of their decision no 1364/2006: " Indeed, the country's surrounding countries have a significant impact on its energy policy. They supply the majority of the community's natural gas needs, are integral to the transmission of primary energy to the community and will become more significant participants in the internal markets for gas and electricity (European Council and Parliament, 2006, p. 262/2).

As is documented in the decision, the countries surrounding the decision have a significant impact, and Turkey is one of them. As such, Turkey is crucial to the distribution of primary energy to the Community. Turkish presidents that understand the truth will always seek to maintain it. The final example in the energy sector is the Trans-Anatolian Pipeline Project, which is intended to transport natural gas from the Shah Sea Gas Field II to Turkey and then to Europe (TANAP, 2015). As such, this goal demonstrates the attempt of Turkey to take advantage of its geographic position between the East and the home of energy suppliers, as well as the West, the home of energy consumers.

Despite this, the significance of Turkey to European energy markets has been a controversial topic. TANAP being a notable example. Typically, TANAP is supposed to supply 10 billion cubic meters of gas to travel to the European gas markets, the IEA's

2013 forecast indicates that demand for gas in the European market will increase by 0.5 percent over the following 20 years (IEA, 2013).

The projected gas shift, which is 10 billion cubic meters, is a small portion of the total demand of the EU. However, TANAP is an endeavor that will ultimately have a larger impact than other projects located in the East or West. This is why TANAP is of great significance to the European Union. Conversely, without the TANAP, which is essential to the transition of gas through Turkey, the name of the South Gas Corridor would be lost, Roberts explains (2013, p. 28).

This project has a significant impact on the Caucasus's political stability as well. To maintain political stability in the Caucasus, the largest conflict that needs to be addressed is the Turkish-Armenian dispute. The resolution of this dispute is also intended by the European Union, because an occurrence of instability in the region would lead to a higher degree of unsafety regarding the European Union's supply of energy. However, TANAP advocates the association between Turkey and Azerbaijan, which may impede Armenia from enhancing its ties with Turkey. Perhaps the procedure, which led to the removal of the 2009 protocols for peace in the region, from the Armenian Parliament, in February of 2015, may have been initiated by the energy-related issues in the region. This should be studied in greater detail elsewhere, but it is not important to this thesis. As such, from the perspective of Azerbaijan, TANAP is likely to be politically significant in the region. From the Armenian perspective, this attempt has little significant value.

4.1.1. The Eastern Mediterranean, hydrocarbon exploration, EastMed

Recently, the Eastern Mediterranean has become recognized as a region that is particularly significant for the safety of global energy sources and the political distribution of power. The revelation of significant natural gas reserves, such as Tamar (2009) and Leviathan (2010) in Israel, Aphrodite (2011) in the Cypriot EEZ and Zohr (2015) on the Egyptian continental shelf, led to the potential for the region to become a new center for energy exploration (Tsakiris, 2018; Shaffer, 2019).

These findings aren't solely limited to the economic development dimension, but also involve matters of sovereignty, international law and regional security. A significant progression in this direction was the establishment of the East Mediterranean Gas Forum (EMGF) in 2019, this forum was led by Greece, Cyprus, Egypt, Israel, Italy, Jordan and the Palestinian Authority, under the auspices of the European Union and with the assistance of the U.S. (Stergiou, 2020). The EMGF is intended to serve as a hub for collaboration in the expansion of natural gas development and the enhancement of European energy security, it also aims to promote regional stability.

The EastMed pipeline initiative, which promotes the transmission of natural gas from the deposits of the Eastern Mediterranean to Europe, via Cyprus, Greece and Italy, is also considered in this regard. The pipeline is approximately 1,900 kilometers long and has a capacity to transport up to 10 billion cubic meters of natural gas per year.The endeavor is considered a "Project of Common Interest" (PCI) by the EU, as it attempts to diversify the sources of energy and reduce the reliance on Russian gas (Tagliapietra, 2021).

However, its implementation is still unknown due to the high costs (over $6 billion), technical issues (such as the deep sea), and geopolitical disagreements. Turkey avidly discourages EastMed, it disputes the maritime territory of Greece and Cyprus, and claims that their own position is mandatory as a European route for energy (Çevik, 2022). The United States, which initially endorsed the proposal, reconsidered their position in 2022, and favored more "flexible" solutions, such as the development of electrical connections and LNG infrastructure (U.S. State Department, 2022).

The narrative of the Eastern Mediterranean exemplifies the intricate nature of energy diplomacy. Natural gas fields facilitate the development of economic advancement, cooperation between regions and European energy security. Conversely, the dispute over maritime territory, the different strategies employed by states and other regional participants, as well as their differing levels of exploitation, results in a field of conflict. As Tocci (2021) mentions, the Eastern Mediterranean region is not only a source of energy, but also serves as a "laboratory" in which the issues of international law, geopolitics and the green transition are studied.

4.1.2. Strategy "energy hub"

The idea of having an "energy center" is important to the strategy of many states that want to become areas of transportation, distribution and exchange of energy, regardless of the presence or lack of natural resources. This reasoning is derived from the country's location, infrastructure and international ties, all of which can lead to a country's being both consumer and producer, or only producer but also a manager of energy flows.

Greece is a common example of a country that attempted to implement this concept. Their strategy is part of the pursuit of alternative energy sources and methods that will lessen their reliance on Russia (the European Commission, 2020). Projects like the Trans Adriatic Pipeline (TAP), which carries natural gas from Azeri fields through Greece to Italy, the Greece-Bulgaria Interconnector (IGB), and the Liquefied Natural Gas (LNG) infrastructure in Revithoussa and Alexandroupolis, are crucial to this strategy (Tagliapietra & Zachmann, 2022). Greece doesn't produce hydrocarbons in large quantities, but it can serve as a means of transferring and disseminating European energy in the market.

Similarly, Turkey has pursued a singularly ambitious "energy center" strategy, they have invested in pipelines like Blue Stream and TurkStream that carry Russian gas, as well as TANAP, which is part of the Southern Gas Corridor. Ankara attempts to become an immortal middleman between the East and the West, it increases its influence in Europe, as well as the Caucasus and the Middle East (Austvik & Rzayeva, 2017).

The strategy of "energy hub" is not confined to traditional fuels. As part of the green transition, states will devote resources to the development of alternative energy sources and to the interconnexion of electricity. Greece participates in initiatives like the Greece-Cyprus-Israel electrical link (EuroAsia Interconnector) and the intended connection with Egypt (Euro Africa Interconnector), both of which seek to provide alternative energy from the Middle East and North Africa to Europe (Katsouris, 2021).

It's obvious that the strategy of the "energy center" increases the political importance of a nation, this is because it grants them a significant role in the safety of their region

and international partners. However, it also has an associated challenge of political infighting, high costs of investment, the risk of having too much reliance on a few sources, and the need to balance traditional and green energy.

4.2 Qatar

4.2.1. LNG and soft power

Despite its small size and limited population, Qatar has been able to become one of the most significant participants in the energy sector on a global scale. The country's natural gas resources, especially in the North Field area, are split with Iran (South Pars); this area is the basis of the country's strategy. Since the 1990s, Qatar has dedicated extensive funds to the development of natural gas liquefaction technology (LNG), over a few decades, it has become one of the leading LNG exporters in the world, having a network that covers Asia, Europe and the U.S. (Ulrichsen, 2020; IEA, 2023). The Qatar energy strategy has a dual approach. On the one hand, it's economic and strategic: through long-term agreements with states like Japan, China, South Korea and Germany, Qatar has achieved a consistent income and a strong association with the energy sector (Henderson, 2022).

Conversely, it also has a political component, as LNG functions as a form of influence. Energy dependence is linked to political power; this enables Qatar to enhance its international reputation. This model is associated with the concept of "soft power". Qatar isn't happy with simply providing energy, but also aims to have a global presence via sports, culture and communication. The task of hosting significant events, such as the 2022 World Cup, the global reach of the Al Jazeera network, and the extensive funding of Western countries is all examples of the way power is converted into soft power (Kamrava, 2013).

As such, Qatar utilizes LNG as both a fundamental component of economic development, as well as a means to increase its political standing. Gas isn't simply a commodity. It's also employed as a form of diplomacy, which increases the emirate's standing in both the local and global community, and grants itself a higher degree of influence than expected from its physical and demographic attributes.

4.2.2. Qatar's energy diplomacy as a factor of political influence (especially in the EU and Asia)

Energy diplomacy is the paramount platform for Qatar's international policy. Despite its diminutive size and limited military accomplishments, the emirate has succeeded in utilizing its natural gas resources, and has become a significant part of the global energy industry. Converting it into a leading gas importer in a liquid state (LNG) not only benefits it financially, but also grants it a political influence that extends from Europe to Asia.

In the European Union, Qatar's status was specifically enhanced in response to the Russian invasion of Ukraine in 2022, when European countries attempted to diminish their dependency on Russian gas to a significant degree. The EU attempted to supplant traditional system providers, and Qatar became the focus of this diversification strategy (Shendrikova, 2025). The practice of signing long-term contracts with countries like Germany and France has not been adversely affected by financial concerns, instead, it has led to a political framework that is more intense with regards to energy security, this is now an important part of the European strategy. Despite differences regarding human rights or labor conditions, the EU was forced to deviate on its values in order to maintain energy security, which is demonstrated by the Qatari government's role as a supplier (Deirmentzoglou, 2024).

In Asia, Qatar has a "safe anchoring" philosophy that involves economic collaborations like China, Japan, South Korea and India. For example, China pledged to spend $500 million on oil and gas exploration in 2022, this was one of the largest contracts for oil and gas in the history of the energy market, it would last for 27 years and would ensure a consistent supply (Kozhanov, 2021). These agreements have a monetary value as well as a bond with the Asia-Pacific region. This facilitates Qatar to increase its influence in the Asia-Pacific region. Additionally, Asia is primarily responsible for the absorption of LNG, as a result, Qatar has a mechanism that allows it to transition from a significant position.

Therefore, Qatar's energy policy is considered a form of soft power, as it doesn't solely rely on military or economic power, instead, it employs a combination of these two

resources in order to provide a crucial resource with stability and dependability (Griffiths, 2019). Additionally, Qatar relies on energy income to finance international media (e.g., Al Jazeera), sports-related events (e.g., the 2022 World Cup), and direct foreign investment in Europe and Asia, all of which are intended to increase the country's popularity and enhance the country's reputation.

4.3 Russia

4.3.1. Europe's energy dependence and pipelines (Nord Stream, TurkStream)

The EU has had Russia supplies gas for decades. In 2021, Russian gas accounted for about 40– 45% (Eurostat 2022). Nord Stream 1 was the main German source of piped gas in 2020–2021. Nord Stream 2, with identical volume as Nord Stream 1 but completed only in 2021, was never brought into operation because Russia invaded Ukraine (European Parliament, 2022).

However, September 2022 saw a series of blasts destroy all the infrastructure. The strikes will forever leave two underwater lines unrepaired twisting broken pieces around (Reuters 2022). After the outbreak, European gas imports from Russia fell like a stone. They went from about 48% in Q1 2021 to only 12% in Q2 2025 (Council of the EU, 2025).

The loss to Nord Stream was partly covered by LNG. Europe increased deliveries of liquefied natural gas from 81 bcm in 2021 to 133 bcm 2023; the United States provided 40% of these (IEA, 2024). TurkStream continued to serve as the main conduit for Russia gas heading to Southeast Europe, delivering gas mostly to Turkey, Bulgaria, Serbia and Hungary at its capacity of 31.5 bcm/year (Global Energy Monitor, 2023). Moreover, the expiration of the transit contract through Ukraine at the end of 2024 formally put to rest an historical corridor (S&P Global, 2025). The EU strategy was laid out in REPowerEU (2022) before 2030 it will replace all, if possible Russian energy imports, to new sources of gas or electricity other than Russia through diversifying suppliers, LNG infrastructure building, saving energy and developing renewable energy sources (European Commission, 2022).

Year/Period	Total EU imports (bcm)	Russian % share	Streams via Nord Stream (bcm)	Flows via Ukraine (bcm)	Streams via TurkStream (bcm)	EU LNG imports (bcm)
2019	~330	41%	58	89	14	83
2020	~320	43%	59	67	13	82
2021 (before the crisis)	~350	45–48%	59	55	18	81
2022 (after the invasion)	~335	~30%	<20 (Gazprom reductions)	28	20	119
2023	~340	~20%	0 (after the explosions)	15	19	133 (USA ~40%)
2024 (end of Ukraine)	~345	12–15%	0	5 (phasing-out)	20	130
2025 (Second quarter)	~350	~12% pipeline	0	0 (termination of contract)	21	135

Sources: *Eurostat (2022), European Parliament (2022), Council of the EU (2025), IEA (2024), Global Energy Monitor (2023), S&P Global (2025).*

4.3.2. The war in Ukraine as a turning point for the energy geoeconomy

The invasion of Ukraine by Russia in 2022 was the event that changed the international energy game. Europe, which had been importing gas and oil from Russia for a few decades, rapidly had to formulate its policy. In August 2022, prices in the Dutch TTF exchange rose to the unprecedented level of EUR 300/MWh, causing significant damage to the European industry and great suffering to the local consumers. The

“price shock” vividly demonstrated the energy-security nexus, a major driver for positive transformation in institutions and politics. The European Commission’s plan, REPowerEU, envisages an end to Russian-made fossil fuels “well before 2030” by reducing consumption, production.

European Union and the United States have established a dedicated Task Force to consider the possibility of increasing American LNG exports to Europe. At the same time, the Member States have committed to voluntarily decreasing their gas consumption by 15% this winter. Unprecedented sanctions accompanied the gas crisis. The European Union stopped importing Russian coal and limited the price of Russian crude oil and gas products. As a result, Russian oil is traded on a much lower rate in comparison to the international benchmarks and indicators tracking it, such as Urals v Brent, but Moscow is losing significant income and is dependent on its two biggest buyers, China and India. For instance, the Russian Federation decreased its oil exports to the European Union from 27% in 2021 to 3% in 2024 (European Commission, 2024).

The turnaround has been even more dramatic in gas. This is no longer the case with Russia, which went from supplying more than 40% of Russian imports in 2021 to an equivalent figure of only 11% in that of 2024(Bruegel, 2024). The expiration of Ukraine’s transit agreement by 2024 killed off the ‘Eastern Corridor’ and officially severed Europe from it (ENTSOG, 2024). In this context, Germany – which had no LNG infrastructure at all before the crisis – constructed (in less than 1 year) floating terminals (FSRUs) in Wilhelmshaven, Brunsbüttel and Lubmin to replace the lacking energy due to the accident at Nord Stream (Bundesnetzagentur, 2023). The EU-wide consumption of gas, meanwhile, dropped by 20% in 2022-23 due to savings measures and the de-industrialization of energy-intensive industries (IEA, 2023).

This realignment also had international ramifications. The US became Europe’s top exporter of LNG to Europe, with Qatar bolstering its role and boosting its geopolitical influence. Russia, meanwhile, sought to ‘re-orientate’ towards Asia, building up crude oil exports to China and India - a thrust that was determinative of energy overflows that had developed since the times of Cold War (OIES, 2023). Moscow is pouring more money into projects such as LNG and new gas pipelines like Power of Siberia 2 to deepen its ties with China.

Indicator	2021	2022	2023	2024
Share of Russian gas pipeline in the EU	~41%	23%	15%	11% (Bruegel, 2024)
Share of Russian oil in EU imports	27%	20%	10%	3% (European Commission, 2024)
TTF price (€/MWh, average)	~47	~120	~40	~35 (IEA, 2023)
Imports of LNG into the EU (bcm)	80	135	150	160 (IEA, 2023)
Reduction in gas consumption in the EU (%)	–	–13%	–20%	–19% (IEA, 2023)

The key takeaway is that the war in Ukraine has ended an era of Europe's "one-dimensional" energy reliance on Russia. The new construct is defined by multidimensional security, significant supplier diversification, strategic reorientation towards LNG and parallel acceleration of the green transition. So, in this "new normal", energy is not just an economic magnitude but a mechanism of security, strategy and geoeconomic power.

4.4 The Mediterranean as a whole

4.4.1. Conflicts and collaborations

In recent years, the Eastern Med has become one of the most dynamic geopolitical spots in which member states' energy resources are closely connected to matters of national security, regional stability and global solidarity. The findings of natural gas in the EEZ's of Cyprus, Israel and Egypt had paved the way for turning Eastern Mediterranean into a substantial energy hub that could help diversifying Europe's own market from Russian dominance adding to its mix (Tsakiris, 2014, 6; Tziampris, 2015:39). But geopolitical reality proved more complicated: disputes over maritime zones, historical suspicions and rivalries between such regional players as Greece, Turkey, Cyprus, Israel and Egypt made for a tangled mess.

Turkey is the most problematic actor in that equation. Due to its partial lack of participation the UNCLOS and territorial claims in the Aegean and Mediterranean Sea, there have been recurrent tensions with Greece and Cyprus. The 2019 Turkish–Libyan memorandum has gone a step further as it sets maritime borders that do not take into account the presence of Greek islands such as Crete, Kastellorizo and Rhodes, to which Athens responded defensively (Herzog 2020Nachmani198794). The 2020 escalation, during the research ship Oruc Reis crisis in August-September 2020, proved that the energy dimension constitutes a political tool developed by Ankara as part of “a revisionist power” strategy (Oğuzlu, 2010:276).

In response to this Turkish stand, Greece started stepping up its cooperation with countries that have common interests in energy security. This approach is concomitant with the aim to enhance the legitimacy of Greek positions, which includes the constitution of the first so-called ‘East Mediterranean Gas Forum (EMGF), convoying them based on participation and cooperation with Italy and Egypt, through ratifying UN EEZ delimitation agreements signed: the agreement with Italy was ratified by July 2020; an advance on Egyptian partial delimitation made so that Hellenic Republic creates EMGF (Tziampris, 2015, 50).

Israel, which has been looking resiliently for energy extroversion since 2010, has finally found how to articulate it with Greece and Cyprus in a context of strategic alignment. The model of Israel, Greece and Cyprus which has also been expanded to include Egypt and referred to by some scholars as "comfortable semi-alliance" (Tziarras, 2016: 410-411; Tziampris, 2015: 47). The institutionalisation of the EMGF with Egypt, Israel, Greece and Cyprus including Jordan and Italy and the EU as an observer, has reinforced multilateral dimension of these also-if disjointed-collaborations in trying to build an institutionalised space for dialogue on energy (Schneider 2020).

Egypt plays a unique role given that the Egyptian LNG terminals in Idku and Damietta are the most direct outlet for export of Israeli and Cypriot natural gas to Europe (Stergiou 2016, 381). Cairo is becoming an “energy nucleus” for the region, providing infrastructure not present elsewhere in the region while acting as a stabilizing factor in the region.

The European Union has also strongly focused on the Mediterranean, under pressure from the Ukraine crisis and until a few years ago also in the desire to diversify from Russia, investing in projects like EuroAsia Interconnector and EuroAfrica Interconnector, including the hydrocarbon dialogue in an overall green transition strategy that looks decades ahead (European Commission 2022).

A blend of rivalry and partnership is evident in the Eastern Mediterranean case. On the one hand we have Turkey in a conflict with Greece and Cyprus, which is attempting to change the facts on the international law, however, alliances between for example the Greece-Israel-Cyprus triangle, and the role of Egypt show that it can also act as a factor conducive to cooperation – in order to enhance regional security and support EU strategic interests (Tziarras, 2016, 415; Lerman, 2016, 13).

4.4.2. Eastern Mediterranean: geo-economic competition and energy security

The Eastern Mediterranean has emerged as one of the most important geo-economic regions in the 21st century, in which energy and security are indissolubly interrelated. The findings of significant natural gas reserves like those of Leviathan and Tamar in Israel, Zohr in Egypt and “Aphrodite“ in Cyprus have motivated new prospects for the future energy diversification of Europe and the role to be acquired by the region as a global hub (Stergiou, 2016, 381; Tsakiris, 2014, 6). But with such potential come stiff challenges, with rivalry between the countries in the region seeking to extract energy without sacrificing some of their terrestrial and geopolitical ambitions.

Geo-economics is visible at two levels: sire by securing state territory and maritime zones, and sode in constructing markets and export routes. Moreover, by pursuing its own strategy, Turkey has attempted to position itself as a central power in maritime energy balances by openly disputing the EEZ boundaries of Greece and Cyprus and chafing against the EU (Litsas 2018; Nachmani 1987,90–94). Greece, on the other hand, bases itself on international law and has forged regional alliances with Israel, Cyprus and Egypt in an effort to boost its legitimacy and deterrence (Tziampris 2015: 47).

In the wake of the war in Ukraine, Europe's energy security has only grown more important. From there, the Eastern Mediterranean emerged as a possible alternative for supply source that could lower reliance on Russian gas (European Commission, 2022). It is in this context that the EU deepened its engagement within the context of the EMGF and supported investments both in infrastructure (EastMed Pipeline) and connectivity (EuroAsia, EuroAfrica electricity interconnections). EastMed , while still controversial because of the cost and technical challenges associated with it, isn't disputable given that the country members already signaled their political support to the East Med (Greece-Cyprus-Israel) is also a "geopolitical" tool (Tziarras: 2016).

The Protocols, however, are not everything that needs to be considered when planning strategic energy networks: If one looks at the region it is also true that there exists, apart from some yet unresolved major issues (Cyprus), structural weakness, such as its missing strong regional security net or double strategies of interests between Turkey and the EU –making thus, a common disintegrated network even more difficult (Inbar 2008: 86; Athanassopoulou 2003:111). Nevertheless green transition and declining demand for fossil fuel imply the necessity of renewables-driven diversification with more focus on power storage technologies (European Commission, 2022).

And lastly the Eastern Mediterranean is a zone of competition and cooperation. Energy resources can be either an accelerator of conflict, by the expression of sovereignty and politics, or a driver of consent as long as there are institutionalized mechanisms such as the EMGF. In any event, the strategic geoeconomy of energy in this region is necessarily an extension of Europe's own security and new global balances.

5. The Future of Energy Geoeconomics: Transition, Technology, and Global Governance

5.1. The Green Transition as a Strategic Shift

The green shift is one of the most crucial strategic evolutions for global politics of our time. Whereas in the past, hydrocarbons – primarily oil and gas – were essential to any energy balance, today the world is moving towards renewables, low emission technologies and other forms of fuel. This process represents not only the

environmental interests and the needs in regards to climate change, but is also marked by the redefinition on which to base the international energy diplomacy (Quizto and Zabanova, 2025).

Advancing renewables (wind, solar, geothermal) is more than technology; it is a geostrategic tool. Nations that hold the edge in storage technologies (e.g., advance batteries for storage) will have strategic advantage because effective handling of intermittent RES production is a critical ingredient for energy security (IEA, 2023). Hydrogen (referred to here as 'green hydrogen'), is increasingly seen as a key fuel of the future, that is suitable for storage, transport and substitution of fossil fuels in energy-intensive sectors (European Commission, 2022).

At the same time, the green transition is producing new geo-economic protagonists. China is dominant in the production and processing of such strategic raw materials as lithium, cobalt and rare earths that are required for batteries, photovoltaics and wind turbines. China has oversight over 60% of the world's lithium production and 70% of cobalt refining, according to the IEA World Energy Outlook 2023. This is actually the same as "the geoeconomic 'monopoly' [...] possessed by oil producing countries in the 20th century" (IEA, 2023). On the other hand, India is strategically investing in photovoltaic panel production and developing a robust domestic market for electric vehicles, with the aspiration to be among the future "global centers" of clean energy (Quitzo and Zabanova 2025).

The green transition's geo-economy is not only a matter of resource competition, but also of changing interdependencies. Value chains in strategic metals, including expertise related to renewable process technologies and the capability to establish international partnerships are now energy factors that influence the state's strategic autonomy (Sterzio 2022). The EU, for instance, realizes its reliance on China in the supply of critical raw materials and currently pursues strategies to diversify sources and thereby lower strategic risks in its Critical Raw Materials Act (European Commission 2023).

Thus, the green transition is more than an ecological project: it is a strategic turning point which will generate new energy axes, opening up new opportunities and

vulnerabilities. Global warming, technology and the geopolitics of critical raw materials converge in a new energy reality where the spread and use of clean technologies — and their materials supply system — will have as much or more geopolitical importance than fossil fuels did in the previous century.

5.2. Technological Innovation and Energy Security

Energy security will be increasingly determined by technological innovation, as the challenges presented by the green transition, geo-economic instability and geopolitical rivalries call for fresh solutions. So, the traditional understanding of energy security as access to hydrocarbons is no longer valid - today this concept does involve an ability to research and produce new technologies, find diversified sources of energy carriers and develop new ways in storing-accumulating-controlling them (IEA, 2023).

Digitisation and 'smart grids' are key drivers of this evolution. Artificial intelligence-based, big data analytics technologies will improve demand management practices, loss reduction, and renewable resource optimization. The deployment of energy storage technologies (lithium-ion batteries but with solid electrolytes or green hydrogen) are essential in tackling volatility that accompanies RESP such as solar power (European Commission, 2022).

Meanwhile, technological advances make energy systems more resilient in the face of emergencies. The issue of resilient, decentralized energy infrastructure has never been more relevant than in the midst of a pandemic and during the still ongoing war in Ukraine. Infrastructure like microgrids, blockchain-type peer-to-peer energy trading systems and security issues in networks are important to consider for power stability and security (Quitzo and Zabanova, 2025).

Revolution in renewable technology is talking the speech of energy freedom. China and India, for instance, are strong in the area of large-scale production of photovoltaics and wind turbines. While the EU funds state-of-the art research such as offshore windmill farms and CO_2 storage lines through programs like Horizon Europe (European Commission, 2023). This is not only a mechanism for addressing energy security, but

also an instrument of geopolitical influence — since the player who leads in key technologies can set market rules.

In the end, energy innovation has a direct connection to the SDGs' success, particularly for SDG 7 ("Clean Energy for All"). As International Renewable Energy Agency (IRENA) has noted on several occasions, technological solutions are essential to deliver affordable and more sustainable energy for all and energy security is not simply a strategic issue. But it can also do global social good (IRENA, 2022).

So, technology is not an extra piece of the puzzle for greening; it is an essential element of energy security for 21 st century. Progress in storage, digitization, open facilities for production and development of "clean" technologies are modifying the international map energy-wise to build dependencies and opportunities for strategic autonomy.

5.3. Global Governance and Climate Commitments

The issue of geo-economics energy also leads to the consideration of global governance and international climate pledges. The Paris Agreement (2015) represents a turning point, committing to limit the increase in global average temperature to "well below 2°C above preindustrial levels and pursuing efforts to limit the temperature increase to 1.5°C" (Milman & Phillips, 2015). Ever since, International Climate Conferences (COP meetings) are established as the milestone where countries discuss not only environmental policies but also technology plans, funding for all of them and access to markets.

The notion of Climate Security has produced a new aspect of global security. Since 2007, the UN has been debating on how climate change operates as a "threat factor" that accentuates water scarcity, population displacement and natural resources conflicts (UN Security Council, 2007). Energy is a particular focus of the debate: nations are pushed to guarantee their energy security in a manner that does not conflict with sustainability targets.

The European Union has been a leader in global climate governance, and some of its legally binding targets are established in the context of the Climate Border Adjustment Mechanism (CBAM) Regulation and European Green Deal. Such measures are not only

intended to mitigate emissions, but also as geoeconomic means of influence given that they directly impact on international trade conditions (European Commission, 2021).

Meanwhile, G20 and G7 are key platforms for energy governance which have repeatedly committed to decarbonising the economies. However, implementation is patchy: hydrocarbons-dependent countries such as Saudi Arabia or Russia are taking a more cautious approach, balancing the necessity of energy revenues with international world demand (IEA, 2023).

(And financing the green transition is a big part of that.) The "100 billion. “Dollars per year to help developing nations,” conceded Paris, who said that implementation has been at the epicenter of disagreement because there have not been commitments. It aggravates the rivalry for technology and financial resources, bringing to the fore economic dimensions of global energy governance" (OECD, 2022).

Accordingly, global governance structure and carbon commitments have reframed the word energy. The hallmark of energy in the 21 st century will no longer be the drive for hydrocarbons or critical raw materials, by more and more whether countries can lead when it comes to clean energy, sustainable development and global institutional arrangements. From the environment, new energy to geopolitics point of view, it is an important strategic factor in shaping the landscape that climate change remains a key issue.

Conclusions

The analysis of energy and international politics demonstrates that energy has evolved from a mere economic commodity into a decisive instrument of power and influence. Throughout the 20th century, oil shaped the foundations of global alliances and conflicts, acting as both a driver of industrial growth and a cornerstone of military and economic security (Walt, 1987; Morgenthau, 1973). In the 21st century, natural gas and renewables have gradually supplemented this role, creating new dependencies, vulnerabilities, and opportunities for cooperation.

The case studies highlight this transformation clearly. In the Eastern Mediterranean, the discovery of hydrocarbon reserves created both prospects for regional cooperation and new tensions, as overlapping claims and divergent geopolitical interests of states like Turkey, Greece, Israel, and Egypt turned energy into a contested field (Tziarras, 2016; Tsakiris, 2014). Qatar, leveraging its LNG capacity, showcased how energy diplomacy can be used as a form of soft power, expanding its influence particularly in Europe and Asia while embedding itself into global markets (Ulrichsen, 2020). Russia, on the other hand, illustrated the risks of energy dependence, as its pipelines (Nord Stream, TurkStream) once symbolized European stability, a reality dramatically altered after the Ukraine war, which reshaped the energy geoeconomy and accelerated Europe's diversification policies (European Commission, 2022).

A central conclusion is that energy diplomacy no longer rests solely on state-centric, traditional diplomacy, but increasingly includes corporations, international institutions, and transnational initiatives. The green transition has added an additional layer of complexity: while it reduces reliance on hydrocarbons, it generates new geopolitical frictions around rare earths, renewable technologies, and energy infrastructures (Quitzow & Zabanova, 2025). Thus, instead of reducing geopolitical tensions, the energy transition reshapes them, creating new interdependencies.

From a strategic perspective, the coexistence of traditional and modern energy diplomacy is evident. Hydrocarbons remain central in certain regions, yet renewable energy, technology, and climate-related policies define the new competitive environment. The balance between energy security, sustainable development, and geo-economic influence will determine the trajectory of global politics in the coming decades.

Ultimately, the study shows that energy is not merely a background condition but a structural factor of international relations. The competition for resources, control of infrastructure, and leadership in green technologies will continue to shape alliances, rivalries, and the international order itself. Energy is, and will remain, one of the main axes around which the global balance of power revolves.

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