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## Russia, Europe and Central Asia Energy Security and Pipeline Politics

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RUSSIA, EUROPE AND CENTRAL ASIA  
ENERGY SECURITY AND PIPELINE POLITICS

by

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## ABSTRACT

### RUSSIA, EUROPE AND CENTRAL ASIA ENERGY SECURITY AND PIPELINE POLITICS

Mehmet Kınacı  
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Energy Security will continue to remain as one of the top security concerns for Europe. Depleting reserves and growing energy demand have increased European dependence on external energy resources. Today, Russia is by far the largest supplier of oil, coal and the natural gas to Europe. Oil and natural gas revenues have played a vital role to rebound the Russian economy and have supported Putin's ambitions to reestablish Russia as a great power, increasing its influence over the former Soviet space. This complex energy relationship has increasingly been a cause of concern.

The main question this study seeks to answer is to what extent Russia could use natural gas/energy supplies to leverage political outcomes. The study finds that the Soviet Union, then Russia, have used energy relations as a natural extension of their foreign policy. Energy subsidies were used to reward Russia's allies, while price manipulation, cut off threats and coercion were used against others. The study also finds that Russia has used energy relations to create a wedge amongst European countries that are members of the EU and NATO. Construction of natural gas pipelines, Nord Stream I and II, and Turk Stream has reduced Russia's reliance on the Soviet legacy pipeline network that runs through Ukraine. While the Nord Stream II pipeline appears at the heart of the crisis in Ukraine, the new pipeline networks have allowed Russia to manipulate energy flow and to weaponize energy to achieve political outcomes.

Russia is also concerned to maintain its market share and reputation as a reliable supplier of energy to Western Europe, as fossil fuel revenues are critical to support its government's budget. While using every instrument of national power, diplomacy, military, and information, Russia has not threatened cutting energy supplies to Western Europe. This might change in the future as Russian exports are diversified to Asian markets. In case of a disruption, while increased Liquefied Natural Gas (LNG) imports provide a short-term relief, to reduce dependence on Russia over the mid-long term, Central Asia and Caucasus energy resources could be a viable alternative enabling Europe to diversify its energy sources.



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This dissertation is dedicated to my family, friends and teachers who kept their faith in me.  
To Steve and Max - gone but not forgotten.

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## CHAPTER 1

### INTRODUCTION

#### 1.1. The Importance of Energy

Energy is an essential part of our daily lives, economic development, and social stability. Reliable and affordable energy is indispensable for industry, agriculture, critical infrastructure, transportation, health, and modern communication systems. Energy has allowed governments, public sectors, and private entities to improve manufacturing and services, living conditions, prosperity, and the well-being of people across the globe. Energy is also a source of power and influence, which can lead to competition, drive for innovation, and technological development while presenting one of the greatest challenges for global environmental security.<sup>1</sup> The demand for energy is expected to increase, albeit more environmentally friendly energy sources will be utilized. Therefore, uninterrupted access and control over energy resources to meet growing demand will continue to be a challenge for both developed and developing countries.

Energy resources, such as oil and gas, are also considered as commodities and financial assets linking national and international markets. Oil and natural gas are transported via pipelines crossing national borders, and Liquefied Natural Gas (LNG) and oil tankers are sailing the world and creating an energy web.<sup>2</sup> These energy networks and systems have become a connecting tissue between countries and continents. Oil and natural gas pipelines serve as a means of connecting producers and customers, delivering energy to the end users.

The production, transport, and consumption of energy resources are generally based on supply and demand dynamics determined by market interactions at national, regional, and global levels. While energy is a large expenditure for importing countries, it is a major source of income and revenue for producing and transit countries. On the one hand, consumer countries

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<sup>1</sup> Pascual and Elkind, *Energy Security Economics*, 1.

<sup>2</sup> Dannreuther, *Energy Security*, 1.

are concerned with the security of supply. On the other hand, producing countries are concerned with the security of demand. Transit countries, between producers and consumers, are interested in becoming an energy hub to negotiate cheaper prices and gain political leverage.

## 1.2. Why the Subject Matters

Energy has become an indispensable part of economic development and social stability. Security of energy supplies remains one of the most critical aspects for maintaining the western way of life as well as the national security of concerned countries. Thus, energy security is a “deeply political concept shaped by factors beyond the materiality of energy systems”<sup>3</sup> and continues to be at the forefront of political, economic, social, technological, and environmental discussions. Possession of, or control over, energy resource increases the power and geopolitical influence of nations. In international relations, power is defined as “the capacity to do things and in social situations to affect others to get the outcome we want.”<sup>4</sup> In other words, “It is the ability of one nation to influence the behavior of other nations...A nation’s command of physical power, notably through its control over primary energy resources such as oil, not only shapes its economic development but also its national security and military strength.”<sup>5</sup>

Russia’s natural gas supply to Europe has been at the center of a geopolitical clash.<sup>6</sup> Oil exports allowed for a rapid economic recovery in Russia. However, Marshall Goldman argues that “natural gas and monopoly control of the gas pipelines...transformed Russia...into a robust energy superpower with restored political muscle.”<sup>7</sup> Why is building a direct natural gas pipeline from Russia to Germany so controversial amongst exporting, transit, and consumer countries and other powers such as the US? For example, if it were construction of a pipeline from Norway to Germany, the focus would be on the economics and environmental issues, not

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<sup>3</sup> Szulecki, Kacper, ed. *Energy Security in Europe*, 33.

<sup>4</sup> Nye, *The Future of Power*, 6.

<sup>5</sup> Hafner and Tagliapietra, *The Geopolitics of the Global Energy Transition*. v.

<sup>6</sup> Yergin, “The New Map,” 87.

<sup>7</sup> Marshall I. Goldman, “Petrostate: Putin, Power, and the New Russia,” 2008, 136.

over geopolitics. On the contrary, the European-Russia energy relationship, from the very beginning during the Cold War to today, has been affected by geopolitical considerations due to Russia's use of energy relations as an extension of its foreign policy. From the Soviet Union era to today's Russia, western decision-makers have always debated whether Russia could use energy interdependence as an instrument of geopolitical power and influence or if this relationship is based on market driven supply and demand dynamics. In most cases, this relationship is driven by both considerations and has evolved over time based on geopolitical and economic dynamics. Therefore, the views on energy relations depend in the eyes of the beholder, reflecting either the producer, consumer, or transit countries' position and interests.

The main question this paper seeks to answer is to what extent Russia could use natural gas/energy supplies to leverage political outcomes. In other words, under what conditions can Russia leverage energy power to support its foreign policy objectives? European energy dependency on imports has increased due to depleting energy resources since the beginning of the 2000s. Therefore, to what extent Europe is dependent on Russian energy supplies is another area this paper aims to answer. Russia's threat of energy flow disruption or the awareness of this potential cut off could affect Europeans' sense of security. How have the EU energy policy and strategy evolved to address increasing geopolitical concerns due to a high level of dependency on Russia? Could the US and other LNG-exporting countries provide alternative sources of supply to meet European natural gas demand? What would be the role of the Caucasus and Central Asia's energy resources to becoming a viable alternative to Russian supplies?

While market dynamics are likely to dominate the energy/natural gas relationship based on interdependence, I argue that the Soviet Union, then Russia, have used energy relations as a natural extension of their foreign policy. However, Russia's ability to create and use energy as a weapon relates directly to the level of European dependency on external resources, in

particular, energy imports from Russia. Energy security concerns, whether real or perceived, are directly related to national security and vary by nation according to the extent of their dependency on a single source. While the Russian foreign and energy policy approach to Europe has significantly been influenced by realist worldview and ‘zero-sum game’ thinking, I also argue that Russia is concerned to maintain its market share and reputation as a reliable supplier of energy to Western Europe, as fossil fuel revenues are critical to support its government’s budget.

The Soviet Union, later Russia, has become one of the main suppliers of fossil fuels to Europe, creating a high level of dependency for several countries, especially those in Central and Eastern Europe and the Baltics, that either were part of the Soviet Union or were former Soviet satellites. With the independence of former Soviet Republics and increased Western and Chinese economic relations, Russia has increasingly been dissatisfied and would like to increase its influence over the former Soviet-space or its “near abroad”<sup>8,9</sup>. The Russian approach to its near abroad is not expected to change in the near future. Additionally, recent events, such as Russia’s invasion of Ukraine, are driven by more a nationalistic sentiment than realist thinking. Realist approaches are rational and always monitor balance of power dynamics using a cost-benefit analysis. On the other hand, nationalist approaches are not open to reason that makes their actions more dangerous as they tend to take risks. As long as Russia’s ‘zero-sum game’ understanding continues, it will struggle to preserve influence over Central Asia and the Caucasus region through diplomatic pressure, covert economic dominance, and regional integration efforts.

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<sup>8</sup> William Safire, ‘On Language: Near Abroad,’ ‘defined as the claim by Russia of political interest and influence in states adjacent to it that were once part of the Soviet Union,’ The New York Times, 22 May 1994

<sup>9</sup> The term ‘*near abroad*’ is used by the Russian Federation to refer to the fourteen Soviet successor states other than Russia. The fourteen republics do not call themselves “near abroad.”  
<https://www.encyclopedia.com/history/encyclopedias-almanacs-transcripts-and-maps/near-abroad>

Central Asia and the Caucasus emerged as another source of energy supplies for global markets. While Russia has been seeking to assert its influence over the region, Central Asian Republics and the Caucasus are in search of access to the international markets. Europe, Russia and Central Asia/the Caucasus represent an energy triangle. The recent events in the Central Asia and the Caucasus have allowed Russia to increase its influence over the region. First, Russia's role in the ceasefire agreement between Azerbaijan and Armenia cemented its security interests and legalized the deployment and presence of Russian peacekeepers. Second, Russia has intervened in Kazakhstan after the protests turned into a violent uprising. Under the premises of the Collective Security Treaty Organization (CSTO), Russian-led military troops entered the country to restore order. Reports suggest that troops redeployed after stability was established.

These developments have increased Moscow's regional standing and supported its objective to reintegrate post-Soviet space under its sphere of influence. While Central Asia has the capacity, Russia's increased power would affect its energy relations with the West. It is not known if Russia would allow Central Asian and Caucasus energy projects that could both threaten its market share and its geopolitical influence in Europe. In this context, for the diversification of energy supplies, to what extent could energy reserves in Central Asia and the Caucasus region provide a credible resource alternative for the EU's energy needs, thereby reducing its dependence on Russia? Thus, Central Asia's ability to be a source of reliable energy supply is also reviewed.

The Russia-Ukraine gas crisis in 2006 was perceived as a "wake-up call" for the EU energy sector.<sup>10</sup> Likewise, the disruption of gas flow in the beginning of 2009 caused a humanitarian emergency in the Balkans and significant economic problems in Eastern European countries that rely on the Russian gas flow through Ukraine. The Russia-Ukraine

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<sup>10</sup> Russia-Ukraine Gas Crisis "Wake Up Call"



energy relations are also influenced by geopolitical concerns driven by both cooperation and conflict. While Russia and Ukraine had disputes in 2006 and 2009 over gas prices, payments, and tariffs for the transit of Russian gas to Europe,<sup>11</sup> the following Ukrainian conflict resulted in Russia's illegal annexation of Crimea in 2014, which was about power not energy.<sup>12</sup>

The European approach to energy relations is driven by liberal thinking. At the European Commission and throughout Western Europe, creating a single liberalized energy market through regulatory frameworks would increase competition and open up markets to multiple suppliers. The European view of interdependence and trade allow nations to address issues by defining their mutual interests, but have to be reviewed under the light of recent developments, especially Russia's invasion of Ukraine. Europe and Russia have mutual interests in the areas of energy, trade, technology transfer, finance and joint projects that require cross-border cooperation. The European liberal approach that seeks to increase trade and economic relations in multiple areas, has not supported regional stability and failed to improve democratization in Russia. These recent examples provide evidence that it may be time to revisit the role of interdependence in liberal thinking.

Additionally, the differences in the EU member states' understanding and articulation of energy security have been a challenge for the development of a common energy policy.<sup>13</sup> The European Commission's efforts to regulate this relationship, develop an EU Energy Security Strategy, common Energy Policy, and open up the European energy market for greater competition have been successful albeit they have limits as in the Nord Stream 2 case. While Russian gas supplies continue across the borders, diverging national interests of member nations will shape pipeline politics even though they are not aligned with the European policy and regulations. In my view, Europe will remain vulnerable against Russia's destabilization

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<sup>11</sup> Stern, Pirani, and Yafimava, *The Russo-Ukrainian*, 4.

<sup>12</sup> Umbach, "Russian-Ukrainian-EU"

<sup>13</sup> Szulecki, Kacper, eds. *Energy Security in Europe*, 36.

strategy using energy supply, especially natural gas, to leverage political outcomes at the time of its choosing.

While Europe started getting energy resources from external sources in the second half of the 20<sup>th</sup> Century, the EU has become a net energy importer of crude oil, natural gas, uranium, and solid fossil fuels, since the early 2010s. In 2018, Russia provided 30% of oil, almost 40% of natural gas, and 40% of coal to Europe.<sup>14</sup> The EU is likely to remain one of the main energy markets for Russia over the next two decades. This high level of energy imports from Russia creates an asymmetric interdependency that can be exploited by Russia for geopolitical purposes at a time of its choosing. A sudden disruption of a high proportion of the energy flow, in particular natural gas, would have tremendous economic, social, and political setbacks for the European countries that are members of the European Union and NATO.

Finally, I also argue that diversification of energy resources could reduce vulnerability of European countries and the EU/NATO members, thus lessening Russian influence. While Europe is in search for alternatives, Central Asia and the Caucasus have emerged as energy producers and have promising potential for the diversification of resources and routes for European energy security, especially after the Soviet Union disbanded. Due to their vast energy resources, Central Asia and the Caucasus have been one of the most important areas of Russian foreign and energy policy since the dissolution of the Soviet Union. Central Asia and the Caucasus region are also important for European and Asian neighbors with potential non-Russian, non-OPEC energy resources.

### 1.3. Contribution to the Literature

This paper contributes to the literature by applying competing theories to the existing challenges at different levels of actors: supranational, national, and industry (i.e., European Commission, member states, multinational corporations and industry), highlighting the

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<sup>14</sup> European Commission, "From Where Do We Import"

differences between the EU, member states, and industries as well as their priorities in understanding and approaches to energy security. Additionally, it provides insight on how parties involved in an asymmetric interdependence, such as Russia and its European counterparts, might have contrary views on the same relationships. This interdependence relates to how energy could be utilized as part of an instrument of national power to deter, if not to influence, decisions and political outcomes on other parties. Russia, an emerging energy powerhouse, has been exploiting European energy dependency and using energy as part of its hybrid warfare tools aligned with its long-term strategy to paralyze the EU, NATO, and Western decision-making.

Energy security is defined as a “wicked problem that is not aligned with traditional linear, analytical approaches.”<sup>15</sup> European-Russian natural gas relations involve multiple actors, such as states; non-state actors such as multinational corporations; and state-owned enterprises, international and supranational organizations. The interdependence between Europe and Russia encompasses a complex relationship between producer, transit, and consumers at multiple levels with converging and diverging interests that even changes over time. The debate over energy interdependence and reliance on Russian energy supply goes back to the Cold War period. Goldman argues, “Reagan understood the geopolitical risks that such a pipeline would create...Germany might someday find itself held hostage to Soviet demands.”<sup>16</sup> Europeans, led by Margaret Thatcher, ignored the sanctions and exported compressors and pipes-xii necessary to build the pipeline network. Soviet gas was delivered to Austria in 1968, followed by an agreement with West Germany in 1970.<sup>17</sup> Today, a vast gas pipeline network has been developed since the first Soviet-European agreement in the middle of the Cold War, and Russian gas exports to Europe have grown significantly “over five decades

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<sup>15</sup> Chester, “Conceptualizing Energy Security,” 893.

<sup>16</sup> Goldman, “Petrostate,” 137. Pipeline referred in this reference is the Bratstvo “Brotherhood” pipeline.

<sup>17</sup> Stern, “Soviet Natural Gas,” 100-102.

to become (along with gas from the North Sea) one of the foundations of Europe's energy economy.”<sup>18</sup>

There are two competing views that posit to explain European-Russian energy relations, especially the supply of natural gas that is highly dependent on pipeline infrastructure. The first view argues that energy trade and international economic cooperation have a positive influence on international relations, and gas flow remained stable over the last five decades, surviving several crises and strategic shocks including “...the fall of the Soviet Union and rise of Russian President Vladimir Putin's authoritarian state; outright warfare in Ukraine and elsewhere; massive experiments in deregulation; and the rise of environmentalism.”<sup>19</sup> This view is aligned with the liberal, market-driven, and pluralist approach that suggest interdependence and economic relations will contribute stability that would allow uninterrupted flow of natural gas.

On the other hand, the realist view suggests that the energy relation is a zero-sum game, linking it with national security of the countries involved and balance of power dynamics between producing, transit, and consumer countries. The EU, NATO Alliance, and the member nations have been troubled by Russia's attempt to use energy to leverage political outcomes against countries in the former Soviet Space, in particular Ukraine and Georgia. Russia could also use energy/natural gas supply to further create a wedge amongst European countries that are members of the EU and NATO.

The neoliberal and realist approaches, as well as the Copenhagen School, were used to explain the European-Russian energy relationship in the literature. However, a multipronged approach that focuses on the EU, member states, and industry, with different perspectives and diverging priorities was not provided. The EU, as a supranational international organization, has ambitions to establish a single energy market based on liberal principles. The member states of the EU maintain power and influence in deciding on their energy mix and energy contracts

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<sup>18</sup> Thane Gustafson. *The Bridge: Natural Gas in a Redivided Europe*. Harvard University Press, 2020, 7.

<sup>19</sup> Moravcsik, "Power of Connection," 27.

that are driven by both liberal and realist schools of thought. The member states have diverging views and different schools of thought in regard to European energy interdependence to Russia; while some focus on market dynamics, others view it as a vulnerability and a zero-sum game.

From the Russian perspective, priorities are aligned with foreign policy objectives albeit Gazprom abides certain market regulations. This paper would provide an analysis that could help Western policy-makers and energy experts to identify their policy priorities to counter Russian strategy. The subject of accessing a stable, abundant and uninterrupted supply of energy has been perceived as an existential threat especially by those countries in Central and Eastern Europe. The threat narrative was used by the political elite as well as government representatives, securitizing the energy security issue due to the high level of European dependence on Russian natural gas delivery. The sensitivity and vulnerability interdependence of these countries could be perceived as a national security concern. Central and Eastern members of the EU especially perceive their vulnerability as a vital security concern that brings the securitization aspect, the Copenhagen school's approach to energy security into the discussion. Securitization of energy security will be discussed; however, in-depth analysis of the core elements of the Copenhagen school's approach is not included in the literature review.

At the same time, newly independent countries of the Central Asia and Caucasus region have had limited success in developing greater cooperation to establish a corresponding foreign and security policy approach that could allow them to develop a coordinated and mutually acceptable strategy to transmit their energy resources to international markets. While they have a common history, shared geography, intertwined social and political structures, there are several reasons for this failure, such as competing national interests, a struggle for leadership, and a lack of supporting institutions affecting interstate relationships amongst regional countries. There are no mechanisms to curb competition amongst regional countries. Central Asia is a landlocked region, its geography has increased costs of building pipelines, and the

accomplishment of an agreed regime/structure has been another factor for the failure of the development of export pipelines. The drivers for competition ranged from achieving energy security to geopolitics, as well as domestic dynamics driven by autocratic leadership, nepotism, and corruption.

The ethnic, cultural, religious and language convergences and divergences of Central Asia and the Caucasus regional countries are considered as part of the key factors for social instability, and civil and interstate wars. Other factors include, albeit limited but continuous, Russian influence and race for domination and control of the region by internal and external stakeholders including China, the US, the EU, Turkey, and Iran. As a result, the absence of an energy security regime in Central Asia and the Caucasus region, as well as a lack of international institutions, have amplified the emergence of power politics and the balance of power dynamics.

#### 1.4. Energy Security – An Overview

Energy Security is a contested, multifaceted, highly politicized, and one of the most disputed issues in international relations.<sup>20</sup> While energy security is widely discussed and debated in governments, international organizations, and academic circles, there is no agreed definition. Recent studies indicate that more than 80 different definitions of energy security exist;<sup>21</sup> some of these will be listed in the following chapter.<sup>22</sup> One of the experts, Daniel Yergin, defined energy security as “the availability of sufficient supplies at affordable prices.”<sup>23</sup> The International Energy Agency’s (IEA) definition includes:

‘uninterrupted availability’ of resources, such as oil and gas, highlighting the differences between short and long-term aspects. While “long-term energy security mainly deals with timely investments to supply energy in line with economic developments and

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<sup>20</sup> Sovacool, *The Routledge Handbook*, 8.

<sup>21</sup> Ang, Choong, and Ng, “Energy Security: Definitions,” 1079-1080.

<sup>22</sup> Sovacool, *The Routledge Handbook*, 3-6.

<sup>23</sup> Yergin, *The Quest*, 266.

environmental needs...short-term energy security focuses on the ability of the energy system to react promptly to sudden changes in the supply-demand balance.”<sup>24</sup>

Owing to its multi-dimensional nature, there is no widely accepted and internationally agreed upon definition of energy security.

The views on the definition of energy security differ based on one's place in the supply chain from production to transit and receiving countries. Energy Charter Secretariat highlights that “the most distinctive difference in energy security concepts is found between energy importers and exporters, resulting from the emphasis on security of supply for the former and security of demand for the latter.”<sup>25</sup> Additionally, there are internal differences amongst the energy exporters/producing countries such as the Organization of the Petroleum Exporting Countries (OPEC)<sup>26</sup> and non-OPEC countries such as Russia, Kazakhstan, Azerbaijan, Brunei and Malaysia. It should also be noted that exporters/producing countries have both demand and supply security concerns considering their domestic consumption. While producing and consumer countries differ in motivation, energy security is reliant on the context and is highly dependent on infrastructure, especially oil and gas pipeline systems, that allows transit countries to influence supply and demand dynamics and physical security.

Energy security concerns are also derived from different risk factors including man-made or natural disasters, geopolitical tensions, conflicts, and accidents as well as other issues such as resource nationalism, price volatility, and high-level of dependency to a single source. All these concerns create vulnerabilities and anxieties for energy consumers over the security of supply. Based on these factors, Pascal and Elkind argued that the simple terms affordability and dependable supply are not sufficient to define energy security. They suggested that “[T]he

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<sup>24</sup> “Energy Security,” <https://www.iea.org/topics/energy-security>.

<sup>25</sup> Secretariat, Energy Charter, *International Energy Security*, 10.

<sup>26</sup> OPEC is an intergovernmental organization of 13 nations, namely Algeria, Angola, Congo, Equatorial Guinea, Gabon, Islamic Republic of Iran, Iraq, Kuwait, Libya, Nigeria, Saudi Arabia, United Arab Emirates and Venezuela. Last accessed on 21 October 2020 [https://www.opec.org/opec\\_web/en/about\\_us/25.htm](https://www.opec.org/opec_web/en/about_us/25.htm).

notion of energy security hinges on perspective: the temporal choices we make and the way we balance economic, national security, and environmental concerns.”<sup>27</sup> For example, the rapid changes in energy prices, whether it is a sharp increase or a decline, not only threaten energy markets but also destabilize the global economy. It was argued that the oil price peak of \$148 in 2008, driven by speculative actions of investors,<sup>28</sup> might have contributed to the economic recession. Finally, the energy relationships between producer and consumer countries are also open for exploitation as experienced during the recent Russia- Ukraine gas crisis in 2006 and 2009. The increased importance of supply security might allow producing countries to weaponize energy dependency to dictate political or security related impositions on transit and consumer countries.

#### 1.5. Dimensions of the Energy Security Concept

Energy has been a central element of human activities from primitive human groups to more industrial societies. Klare argues that “without adequate supplies of basic fuels, a complex society cannot maintain a high rate of industrial output, provide a decent standard of living to its citizens, or defend itself against computing powers.”<sup>29</sup> While energy resources are perceived as financial commodities, oil has been distinguished for its role in the economy and way of life in the West. With the recent movement to replace coal consumption, natural gas has become the second largest energy source for Europe following oil since the mid-1990s.<sup>30</sup> This has become a concern due to the increasing role of natural gas in Russia-European energy relations.

The definition of energy security remains vague and does not cover every aspect of the concept of energy security. The energy security concept encompasses the following additional dimensions: first, critical infrastructure protection, including physical security aspects from production and the supply chain to the end users; second, access to energy resources including

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<sup>27</sup> Pascual and Elkind, *Energy Security*, 2-3.

<sup>28</sup> Hamilton, “Causes and Consequences,” 234, 248.

<sup>29</sup> Klare, “Energy Security,” 484.

<sup>30</sup> Gilardoni, *The World Market*, 2.



investment, exploration, development and production; third, preserving a coherent energy security system that includes national policies and international organization to address disruptions and other emergencies in a timely manner; and finally, maintenance of trust that encourages long-term investment for exploration and development of infrastructure to move resources to the end users.<sup>31</sup> Taking into consideration all these dynamics involving states, state-owned enterprises, multinational corporations and international institutions increases the complexity of energy security.

The concept of energy security has evolved over time. Initial energy security concerns focused on providing supply to armies, addressing crises such as the 1973/74 oil embargo, and disruptions of gas supplies, and stabilization of oil prices to ensure affordability. The evolution of energy security is explained by the four ‘A’s of energy security: availability, accessibility, affordability and acceptability. Further analysis investigates the following questions: security for whom? Security for which values? From what threats?<sup>32</sup> Cherp and Jewell also provide alternative approaches that focus on vital energy systems and their vulnerabilities as well as political construct and securitization of energy security. Dannreuther argues that “energy security involves differing and unequal relations of political power, divergent understandings of justice, fairness, and conflicts over differing values.”<sup>33</sup> These views further emphasize the complexity of energy security as a concept and its relations with a wide variety of actors that include state and non-state actors such as supranational and international organizations, as well as multinational corporations with either diverging or converging interests depending on the situation.

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<sup>31</sup> Yergin, *The Quest*, 266–267.

<sup>32</sup> Cherp, and Jewell, “The Concept,” 75, 419.

<sup>33</sup> Dannreuther, *Energy Security*, 5.

## 1.6. European Energy Security

The EU has become one of the major importers of energy over the last two decades. While energy security appears an abstract concern, the EU is vulnerable to energy shocks due to its dependence on external energy sources, especially natural gas. The European Energy Security Strategy highlights that “The European Union's prosperity and security hinges on a stable and abundant supply of energy.”<sup>34</sup> However, the uninterrupted flow of energy is not an exclusive requirement for the EU member states; both developed and developing countries need energy to sustain their economic growth and prosperity while maintaining social stability.

During the Cold War, the Union of Soviet Socialist Republics (USSR) was reputed as being a reliable supplier of energy to Western Europe. However, since the collapse of the Soviet Union, this situation has changed owing to the “complex relations between Moscow and its former republics, most of which were heavily dependent on Russian energy.”<sup>35</sup> With the ascension of Central and Eastern European countries to the EU membership, the energy dependency to Russia has significantly increased. Baltic and other CIS countries were subject to price increases and supply interruptions during the 1990s. Recent developments indicate that energy security has become increasingly important for European countries, members of the European Union (EU), and the North Atlantic Treaty Organization (NATO), in regard to their economy, industry, society, and sustainability of daily life of their people.

European energy dependency has increased with the decline of domestic production and the situation has worsened with the extension of the European Neighborhood policy to include Ukraine, Belarus, and Moldova in 2009. The EU introduced the Third Energy Package consisting of the separation of energy supply and generation from the operation of transmission networks (unbundling), non-discriminatory access to energy infrastructure, and independence

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<sup>34</sup> European Commission, *Communication*, 2.

<sup>35</sup> Stent, “An Energy Superpower,” 77-83.

of national energy regulators.<sup>36</sup> These regulatory measures and increasing environmental concerns brought political pressures on development and control of the pipelines. This resulted in an increasing Russian resistance to the EU's energy policies and development of more assertive actions against the former Soviet space. Thus, the US and Western concerns over the political consequences of high-level European dependence on Russia has gained more validity compared to the Cold War period.<sup>37</sup>

Energy-related relationship is fundamentally an interaction between suppliers and consumers; it could also include a group of consumers such as members of the EU with diverging national interests. While there is agreement on the security of supply, views differ significantly over the concerns of the securitization of energy security. EU member states agree upon several key issues such as intensifying cooperation, strengthening emergency mechanisms, sharing risk assessment data, protecting critical infrastructure, increasing incentives for renewables and coordinating energy policies.<sup>38</sup> In this regard, the Juncker Commission identified a resilient "Energy Union" as one of their top ten priorities when they took office in 2014. After a year-long consultation, the Commission adapted an Energy Union Strategy that "has five dimensions:

- security of supply, solidarity and trust
- a fully integrated energy market
- energy efficiency
- decarbonization of the economy, and
- research, innovation and competitiveness."<sup>39</sup>

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<sup>36</sup> European Commission, "Third Energy Package."

<sup>37</sup> Stent, "An Energy Superpower," 80.

<sup>38</sup> European Commission, *Communication*, 3-4.

<sup>39</sup> European Commission, "The State. "

A unified EU approach to energy policy, especially towards Russia, has evolved over the last two decades albeit significant differences remain between member states.<sup>40</sup> European-Russia energy relations, especially natural gas, have political, institutional, legal and regulatory dimensions that involves “social-technical assemblages, infrastructure, commercial transactions, and contractual relations.”<sup>41</sup>

Increase in energy demand and security of energy supplies have become integral parts of national security for EU members with a high level of dependency to a single supplier. The EU has been seeking ways to compel Russia closer to its perspective on energy relations and to diversify energy resources to reduce high level of dependency to a single supplier. The Caspian region countries, Azerbaijan, Kazakhstan and Turkmenistan, with proven oil and gas reserves are identified as potential suppliers. Central Asia and Caucasus countries with vast energy resources have been exploring transmission networks to access the international markets in order to turn these valuable reserves into benefits to support their economic and social development.

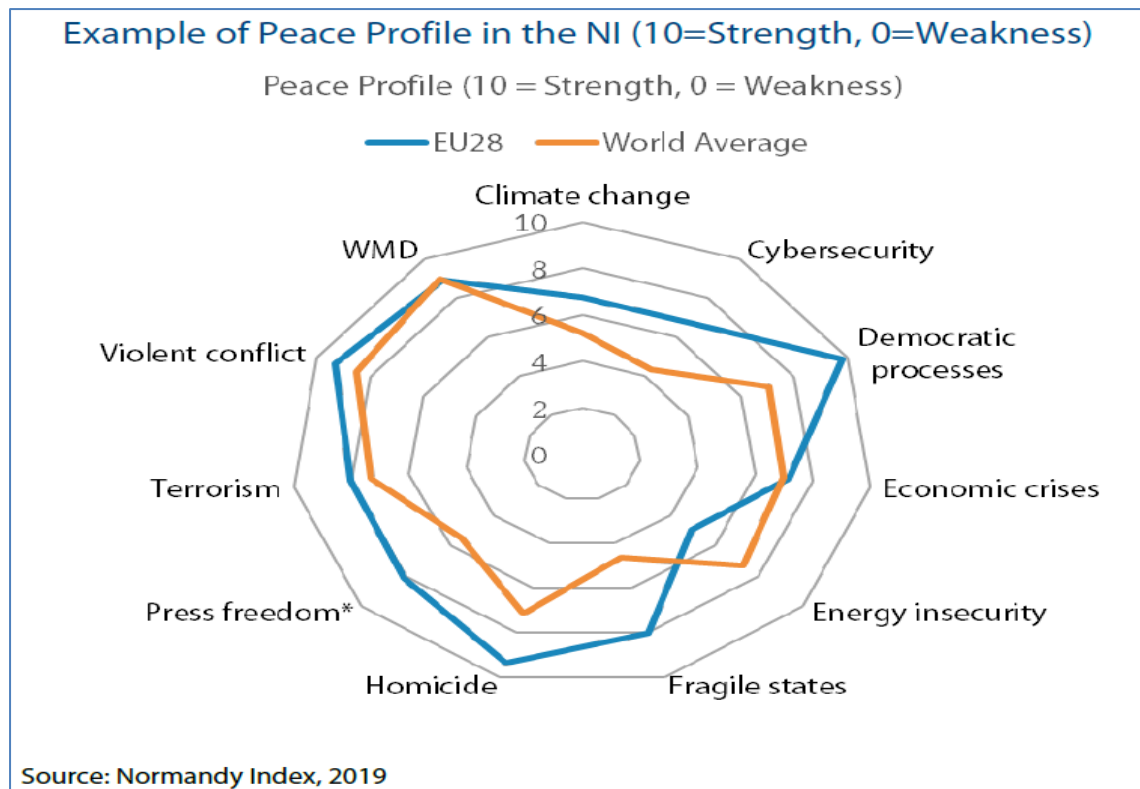
Looking into all the parameters of the Normandy Index: from climate change, economic crisis, hybrid threats, terrorism, violent conflicts, cybersecurity, disinformation, fragile states, and trans-border crime to weapons of mass destructions, the EU is “being more at risk in the area of energy security than the rest of world.”<sup>42</sup>

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<sup>40</sup> Kratochvil and Tichý, “EU and Russian Discourse,” 391–392.

<sup>41</sup> Bros, Mitrova, and Westphal, “German-Russian Gas Relations,” 5.

<sup>42</sup> European Parliament, “Mapping Threats to Peace and Democracy Worldwide,” Introduction to the Normandy Index, 2-5.

Figure 1: The European Union Global Strategy vs Eleven Threats<sup>43</sup>

Source: European Parliament, "Mapping Threats to Peace and Democracy Worldwide," Introduction to the Normandy Index,

### 1.7. Russia – An Emerging Energy Power

Russia's relationship with the West has been increasingly complex and deteriorating since the beginning of the 21<sup>st</sup> Century. Russian foreign policy has increasingly been assertive, driven by the balance of power and sphere of influence approaches influenced by a zero-sum game geopolitical mindset. Putin has continued to rely on Russia's vast energy resources such as oil and gas as well as pipeline networks, to gain/regain Russia's influence around the world and uphold its aspirations for great power status.<sup>44</sup> Russian foreign policy, reinforced by its

<sup>43</sup> European Parliament, "Mapping Threats to Peace and Democracy Worldwide," Introduction to the Normandy Index, May 2019, 5.

<sup>44</sup> Lo, Vladimir Putin, 61.

energy policy and strategy, supports Putin's ambitions to strengthen Russia's standing to balance American power.<sup>45</sup>

Russian foreign policy is closely intertwined with its energy policy. "The objective of the energy policy [is]...to maximize the effective use of natural energy resources and the potential of the energy sector to sustain economic growth, improve the quality of life of the population and promote strengthening of foreign economic positions of the country."<sup>46</sup> Unlike Iran and Venezuela, Russia has not overtly threatened supply disruptions to achieve political ends. However, Russia has taken steps to use energy "resources as a political tool to either punish or coerce its customers."<sup>47</sup> These measures include: consolidation of state control over energy resources; establishment of control over transit pipelines and distribution networks; and, using coercive and punitive measure such as threat, price hikes and disruptions. Thus, disrupting natural gas supplies is one method of utilizing energy resources for political power. Russia's relations with the affected parties, before and after the incident, such as the gas disruptions to Ukraine in 2006 and 2009, require further analysis to determine whether any coercive actions were taken.<sup>48</sup> The interaction between Russian foreign and energy policies has evolved over time and it is argued that "...the Nexus between economic capabilities and strategic ends has influenced Putin's thinking since even before his ascension."<sup>49</sup>

In the mid-2000s, Russia regained economic strength, owing to high oil and natural gas prices, and began seeking ways to increase its sphere of influence in the post-Soviet space. Although the Russian leadership denied using energy as a 'weapon,' its use of gas and oil to seek influence around the world was proven with its actions in Ukraine. Renz and Smith argue that "...during the post-Soviet era, Russia has more than once felt the need forcefully to exert

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<sup>45</sup> Andrei P. Tsygankov. *Russia's Foreign Policy Change and Continuity in National Identity*. Fourth ed. 2016. 139.

<sup>46</sup> Russian Federation Decree 1715, 10. [http://www.energystrategy.ru/projects/docs/ES-2030\\_%28Eng%29.pdf](http://www.energystrategy.ru/projects/docs/ES-2030_%28Eng%29.pdf)

<sup>47</sup> Stegen, "Deconstructing," 6511.

<sup>48</sup> Ibid, 6506-6509.

<sup>49</sup> Lo, Vladimir Putin, 65.

its position in the post-Soviet region (by military means, but also by using the ‘energy weapon,’ enforcing trade deals, regional integration, Eurasian civilization arguments, educational influence, promotion of Russian language, etc.)”<sup>50</sup> Russia has been exporting oil, natural gas, coal, and nuclear material to Europe as one of the main suppliers. In this context, natural gas differs strongly from oil in its physical and political characteristics,<sup>51</sup> and uninterrupted natural gas supply and determination of pipeline routes have become the most critical issues. While the EU focusing on supply security, Russia emphasized demand security by obtaining long-term contracts as well as acquiring and controlling European/Eurasian pipeline networks and other downstream assets.

#### 1.8. Central Asia/Caucasus and New Geopolitics of Energy

Central Asia and the Caspian region have emerged as one of the key areas of the world’s proven oil and gas reserves. While these hydrocarbon reserves are relatively small compared to the rest of the world, “they are considered of major geopolitical importance by external powers, as they are not controlled by the Organization of Petroleum Exporting Countries (OPEC) or by the Russian Federation.”<sup>52</sup> Central Asia and the Caspian region is landlocked; transporting oil and gas is complicated due to geopolitical, financial and technological reasons. Therefore, availability of these energy supplies for the EU and other energy consumers such as China depends on the development of export and transportation infrastructure connecting growing energy outputs to international markets. The capacity of Central Asia to provide alternatives for Russian energy has resulted in both cooperation and competition between and amongst regional countries as well as other stakeholders such as Russia, China, Turkey, Iran, and the EU.

While geography and energy infrastructure are presented as two of the key obstacles for access to international markets, there are other fundamental challenges resulting from the

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<sup>50</sup> Renz and Smith, “Russia and Hybrid Warfare,” 17.

<sup>51</sup> Levi, “Energy Security,” 10.

<sup>52</sup> Heinrich and Pleines, “Mixing Geopolitics and Business,” 107.

historical, economic, demographic, and most importantly geopolitical experiences of regional countries. The Central Asia and Caucasus countries recently gained their independence following the collapse of the Soviet Union, and they are highly dependent on Russia. Additionally, these countries do not possess institutions, experiences, technology, and most importantly financial resources to develop large energy projects. They rely on Western countries, financial institutions, and private industry with technology and know-how. The involvement of states, multinational corporations, financial institutions, and state-owned enterprises further complicates the problem.

Central Asia and the Caucasus have witnessed a geopolitical struggle between Russia and the West in determination of energy transportation routes since the late 1990s and early 2000s. For example, Russia was critical of the Baku-Tbilisi-Ceyhan (BTC) pipeline project, stating that it is a political venture rather than an economic one that aims to isolate Russia and Iran. The Kremlin argued that existing pipeline infrastructure through Russian territory would have been much cheaper for the Western consumers.<sup>53</sup> The BTC pipeline became operational in 2006; it connects Baku, Azerbaijan to Ceyhan, Turkey on the Mediterranean coast, passing through Georgian territory. Without the U.S. backing, BTC could not be constructed. The US and the EU proposed several energy routes, such as the Nabucco pipeline project, which was similar to the BTC pipeline, bypassing Russian territory. This project was “weakening both Russia's monopoly in Europe and its monopsony in Central Asia.”<sup>54</sup> Russia, using a state-owned company, Gazprom, initiated a competing project called South Stream. At the end, the Nabucco pipeline project did not materialize while the original South Stream changed direction and became the Turk Stream project. Russia sees its foreign and energy policies as closely intertwined and economic aspects can be sacrificed for political objectives to ensure that it can

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<sup>53</sup> Esakova, *European Energy Security*, 126.

<sup>54</sup> Fernandez, “Nabucco.”



continue to wield its power to influence energy routes, domestic and international affairs of Central Asian countries, as well as its relations with Europe.

### 1.9. Methodology and Paper Structure

In support of this study, qualitative and quantitative data were collected from the following sources: The International Energy Agency (IEA), the Energy Information Agency (EIA), IHS, the European Union, BP, Gazprom, and the Oxford Institute for Energy, as well as other academic studies. The combination of qualitative and quantitative data allows in-depth exploration of energy relations between the European Union and Russia. The analysis is supported by face-to-face interviews with individuals from some of these organizations such as IEA, IHS, BP, and the European Union. The data presented in this paper aims to explain cause and effect relationships in the arguments, and the findings are depicted by using supporting graphs, maps, tables and relevant charts as required.

The main question this paper seeks to answer is to what extent Russia could use natural gas/energy supplies to leverage political outcomes in Europe. The most critical aspects of energy relations, interdependence and diversification, have been at the heart of energy security and are the focus of this paper. In this regard, a review of different aspects of the main question will be provided: To what extent is Europe dependent upon Russian natural gas? Under what conditions can Russia leverage economic/energy interdependence for the purposes of national security? As Russia remains one of the main suppliers of energy, why are natural gas pipelines/networks so important for exporting, transit, and consumer countries? Additionally, to diversify energy supplies, to what extent energy could reserves in Central Asia and the Caucasus region provide a credible resource alternative for the EU's energy needs, thereby reducing its dependence on Russia.

While overall energy security issues have been studied to explain changes in energy mix, consumption, and evolution of European energy policies, the main focus remains on

natural gas reserves, production capacity, and pipeline networks due to the high level of competition, politicization, and securitization of the overall natural gas system. Pipelines account for 78% of natural gas trade while the rest transported as liquefied natural gas (LNG) via ocean going tankers, and their “infrastructures are extremely costly to build and require long-term horizons and predictable economic and political context.”<sup>55</sup> Therefore, while the energy security analysis of European countries includes fossil fuels, oil, gas, coal, nuclear, and renewables in energy mix, the focus will be on natural gas, especially on pipeline systems and energy distribution networks. The analysis also focuses on policy changes over time such as Germany’s decision to phase-out nuclear power and coal power plants that affect Germany’s energy mix and to some extent other EU members with significant consequences on their dependency to external energy sources, especially on natural gas.

The following three components are studied: the first component is the review of European Union energy dependence with a particular focus on Russia. This review will include whether European-Russian energy relations could be defined as mutual or asymmetric interdependence; vulnerability and sensitivity analysis of the EU; and select members’ relationship with Russia as a single point of failure. How has this energy interdependence evolved and how will it shape the European-Russia relations in the future? In this context, the following areas will also be investigated: to what extent will energy security concerns become a national security priority for the EU member countries? What is the role of a transit country? How did the state’s role in the gas trade evolve? Will there be regional/country differences in the EU based on geography and their level of dependency to a single source? And how will these differences affect the EU’s approach to Russian energy/natural gas supply?

The EU has been attempting to regulate energy trade, develop policies and set rules for market structures. A Third legislative Energy Package for an internal EU gas and electricity

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<sup>55</sup> Victor, Jaffe, and Hayes, “Natural Gas,” 4.

market was adopted in July 2009. Directive 2009/73/EC provides rules for the transmission, distribution, supply, and storage of natural gas.<sup>56</sup> The package covers areas such as “unbundling,” “independent regulators” and “cross-border cooperation” aimed at limiting Russian influence by separating energy supply and generation from the operation and transmission networks.<sup>57</sup> How was European energy policy evolved and shaped? What were the underlying concerns and challenges over time? Are these efforts and market-based principles sufficient for European energy security for the 21<sup>st</sup> Century? How will Russian grey zone activities affect the EU and NATO’s cohesion, and to what extent are individual members of the EU vulnerable against Russian coercion?

A combined historical literature review and a case study - Nord Stream II – discusses the underlying reasons for supporting and opposing views, different viewpoints between the Eastern/Central and Western European countries. This will be followed by an analysis of the Russia-Ukraine crisis that focuses on long-term Russian strategic objectives to diversify export routes by circumventing Ukraine through new pipelines, Nord Stream I-II, Blue Stream, and Turk Stream.

The following hypothesis is reviewed to explore European-Russia energy relations from a European perspective:

- H1: The decline in European domestic production and growing consumer demand increases EU member states’ dependency on Russian natural gas and pipeline networks, making them more vulnerable against Russian coercion, ensuring to a more assertive Russia. The higher the European dependency, the more Russia has the ability to use energy power to influence political outcomes. Thus, Russia exploits

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<sup>56</sup> Directive 2009/73/EC of the European Parliament and of the Council of 13 July 2009 concerning common rules for the internal market in natural gas and repealing Directive 2003/55/EC <https://eur-lex.europa.eu/legal-content/en/ALL/?uri=CELEX%3A32009L0073>

<sup>57</sup> European Commission, “Third Energy Package.”

European energy vulnerability to leverage political outcomes and uses energy as a weapon.

Russia is the largest supplier of energy resources to Europe. While there are alternatives for oil supply, natural gas transported via pipelines is difficult to diversify in case of a long-term disruption due to political, economic, technological, or other reasons. In this context, the following areas will also be explored: the higher the Russian control of gas and oil pipeline networks, the less leverage Europe has on Russia; the more dependent European countries are on a single energy source, the less secure they feel; the more diversified the European energy resources, the less vulnerable against energy supply disruptions; the more alternative energy resources are available for Europe, the more competitive pricing is available; the more cooperative/cohesive within the EU members, the less vulnerable from Russian coercion.

The second component will focus on Russia's natural resources, oil and natural gas, and its dependency on European markets. Russian natural gas supply to Europe is not new. In this part, I will cover how Russia-European natural gas relations have evolved since the 1960s, including the Cold War period. Energy income has been very important if not vital for the Soviet Union and later Russia's economy. Income through energy exports has been a subject for controversy as the Soviet's, then Russia, used these resources for defense procurement, supporting its assertive actions that undermine the liberal world order; achieving Russia's global ambitions to become a great power; and providing a lifeline to first Soviet and now for Putin's regime.

Russia's natural gas reserves, production and distribution networks are also very important for its domestic consumption, sustaining economy and growth as well as daily lives of the people. Without exports to European markets, domestic production could falter and might not be supported due to high level subsidies for Russian market. While energy inputs are so crucial to its economy and regime survival, under what condition could Russia use energy to

leverage political outcomes in Europe? Looking from the Russian perspective will allow a comprehensive assessment supported by the following hypothesis:

- H2: Russia is dependent on energy revenues in particular from Europe that has the largest share in oil and gas exports. Moscow views energy demand security as the foundation of European-Russia energy relations while maintaining asymmetric energy interdependence through high-level dependence of EU member states to a single source. The higher the Russian dependence on access to European markets, the more Russia seeks control over pipeline networks and to increase its influence over the transit countries, its near abroad, and European consumers.

Energy markets have become very competitive. Cheaper natural gas delivery to European markets is key for Russia to maintain competitive prices thus requires construction and control of the pipeline networks as well as long-term contracts. In this context the following areas will also be investigated: the cheaper Russian natural gas, the less desire European countries will drive for diversification; the higher the energy production and export, the more income for the Russian economy; the higher the Russian oil and gas revenues, the higher the political support for Putin his power vertical; the more diversified Russian gas and oil markets, the less affected Russia will be from US and European sanctions.

The analysis of Russia-European energy relations will be followed by a study of Central Asia and the Caucasus capacity to contribute to energy security for Europe. This part focuses on the availability of Central Asia's energy resource at an affordable price. The availability of energy resources depends on the level of fossil fuel reserves in Central Asia and the Caucasus. The affordability is linked with several factors including required investment for exploration and development of transport pipelines as well as the level of cooperation amongst regional countries. The level of cooperation amongst regional countries depends on their historical,

social, economic and energy, political, and security interests, but is also linked to their structural relations with Russia.

Energy reserves in Central Asia and the Caucasus region could provide a credible resource alternative for the EU's energy needs, thereby reducing its dependence on Russia. Therefore, the third hypothesis aims to study the energy reserves and transmission networks from Central Asia and the Caucasus to Europe in order to become a viable alternative:

- H3: Central Asia and the Caucasus region has sufficient oil and natural gas reserves that could provide alternative source of energy. The higher the capacity of central Asian Republics to access international/European markets, the more they have the potential for diversification by providing alternative energy supplies.

The EU is also concerned with political stability, human rights, and international democratic standards of suppliers; the better the political stability and democratic institutions in regional countries, the more they can be an alternative supply source. Central Asia and the Caucasus region have sufficient energy resources. However, access to international markets has been a challenge due to geography and lack of infrastructure. Therefore, the following supporting areas are also considered to ensure comprehensive research is conducted to explore the problem: the higher the oil and gas production of Central Asia, the more developed the pipeline system, the more Central Asia can serve as an alternative; the more price competitive Central Asian energy is, the more likely it can be an alternative.

Recognizing that one size fits all is very difficult for Central Asia and the Caucasus, so the EU, a regional entity itself, adapted a three-prong approach: bilateral, regional, and wider regional.<sup>58</sup> Energy relations along these lines are based on mutual cooperation, cost-benefit analyses of diversifying energy networks, while encouraging political stability and economic prosperity through regional cooperation. The findings shed light on whether the diversification

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<sup>58</sup> Plottka, "One Size Fits None," 124-125.

of energy supply sources, such as the building of a natural gas pipeline through the Southern Corridor, increases European supply security.

The EU approach to the region is based on two principles: first, coordination of EU policy in areas such as good governance, natural resources, security, and transportation; the second, seeking synergies in specific areas such as energy, security, and sustainable development. While several other factors drive the EU's approach, energy security represents one of the priorities of the EU strategy for the region. A closer energy relation with Central Asia and the Caucasus will allow the EU to access non-OPEC and non-Russian energy resources.

The final component of this paper is conclusions that focuses on the findings of previous chapters that examines the energy relationship among the EU, Russia, and Central Asia and the Caucasus.

The dependent variable of this study is the Russia's ability to use energy/natural gas supply to leverage political outcomes. Energy concerns are directly related to national security and varies by nation to the extent that their dependency is on a single source. The perception of insecurity directly relates to the stability of respective countries and regions. This paper examines the differences amongst the member countries of the EU and the divergence of national security concerns that explains why energy security is likely to remain as a major challenge for the EU for the foreseeable future.

The first independent variable is European countries dependence on Russian natural gas supplies. There is a significant difference between Western and Eastern Europe in their understanding of energy security, especially dependence on Russia's natural gas. Dependency could be further divided into two groups: first, dependency to a single source and the second, dependency due to the volume of imported gas. The level of dependency of European countries varies by whether they have potential for diversification to an alternative supplier, such as the

case for Poland and Lithuania that have built LNG degasification facilities. In this context, a dependency analysis of European countries is provided in the study.

The second independent variable is Russia's relations with the Central Asian and Caucasus countries, as they become a potential energy provider for Europe. Central Asian and the Caucasus Republics relied on a collaborative approach for the development of energy resources and transporting them to world markets. Although this approach was fruitful in some cases, such as the construction of the Baku-Tbilisi-Ceyhan pipeline, it was always challenged both commercially and politically by Russia that pursues establishing a sphere of influence over former Soviet space that is generally referred as its 'near abroad.'

The key question to consider with Russian relations is what would Russia's reaction be if the Southern Corridor increasingly reduced Gazprom's share in the European markets? In this context, the ability of Central Asia and the Caucasus countries to provide a credible alternative for the diversification of the European energy resources, in particular natural gas will be studied. While Central Asia and the Caucasus could be defined as a single geographic region, it consists of several countries with different historical, ethnic, political, economic, and national security interests. There are a number of important indicators/variables that might impact the capacity of the region by varying degrees.

The third independent variable is EU relations with Central Asia and the Caucasus. This relationship was driven by the European desire to diversify energy resources while constrained by issues ranging from human rights and civil society development to environmental concerns and good governance. Europe needs energy security more than ever as improving resilience and green energy take priority to recover from the impacts of the post COVID-19 economic crisis. Under current circumstances, increasingly revisionist Russia could leverage energy security for political outcomes that are likely to influence EU strategy towards the Central Asia and Caucasus region.



The following provides an overview of the structure of the paper. In Chapter II, a literature review and the theoretical framework is covered. The chapter starts with the definition of energy security and explains what energy security means for energy producers, transit countries, and consumers? The concept of energy security is evolving continuously and the views differ based on an understanding of international relations. This chapter provides analysis of realist and liberal theories and their approaches to energy security; sensitivity and vulnerability interdependence in an energy security context; and varying definitions and the evolution of the concept of energy security. Other dynamics that affect energy security will also be reviewed to understand how changes in energy supply and demand would affect energy security. Finally, the evolution of the concept of energy security is further examined using different lenses.

Chapter III covers how European energy security has evolved including intra-European energy relations and the EU member's relations with the Soviet Union and later with Russia. An analysis on the development of the natural gas trade (issues, concerns, supply and demand, and market dynamics) is discussed, as well as vulnerabilities over European dependency on a single source; this analysis will be based on the data of EU 27, which some cases include the UK and the EU candidate countries. The most recent policy developments and initiatives, such as the establishment of the single European market and its impact on natural gas enterprises, show that progress has been achieved for the EU's Energy Union concept. While the role of the new pipeline structures, such as Nord Stream 2 is included, it will also be presented as a case study in a stand-alone chapter.

Chapter IV provides an analysis of Russia's energy reserves, pipeline systems, and potential future projects that have direct impact on the evolution of its foreign and energy policies. In this context, the Russia-European energy security relationship will be reviewed and an in-depth analysis provided. What does 'Third Energy Package' mean for Russia? How were

state-owned enterprises, in particular Gazprom, affected by the implementation of regulations? The impact of the Russia-Ukraine gas crisis and other political constraints will also be reviewed as energy resources are being used in Russia's hybrid warfare toolbox. Russia is generally concerned over ensuring demand security. While maintaining market share in Europe, other alternatives, such as exports to China and other countries in the South and Southeast Asia, will be reviewed. The role of energy income in the Russian economy and how potential Central Asian and the Caucasus exports to Europe might affect European dependency will also be discussed. Therefore, this chapter also covers Russia's efforts to undermine Western support on projects that could transport oil and gas from Central Asia and the Caucasus through the Southern Corridor.

Chapter V is dedicated to the case study of the controversial Nord Stream pipelines, in particular Nord Stream 2. This discussion starts with the facts and figures of Nord Stream 1 that was also debated and heavily criticized by Central and Eastern European countries. Supporters and opponents of these projects' present arguments on the grounds that economic interdependence brings stability versus a zero-sum game approach driven by national security concerns. This chapter also covers Russia's natural gas exports to European countries and pipeline infrastructure/network used for the delivery.

In this context, the positions of key stakeholders - Germany, Poland, the United States, and Russia - are explained. NS 1 and 2 create a single point of failure resulting an increased vulnerability for Germany while minimizing Russian reliance on Soviet legacy pipeline networks transiting through Central and Eastern European countries. When Nord Stream 2 is fully operational, Russia will be able to negotiate with both Western and Central and Eastern European countries from a position of strength due to increased pipeline capacity. This will allow Russia to yield energy power to leverage political outcomes.

Chapter VI focuses on Central Asia and the Caucasus geography and history, starting from the Russian Empire period through the Soviet Union to current day. It explains the concept of ‘wider Central Asia’ and involvement of regional and global stakeholders that is also called the “New Great Game.”<sup>59</sup> Geopolitics of the region provide a better understanding of the way that actors are behaving today. Putting history and geography into perspective would also increase our understanding of how some of the findings could be applied to current circumstances. This chapter focuses on regional countries’ energy reserves, production capacity, and energy-related infrastructure developments, in particular oil and gas pipeline systems. An analysis of the Central Asia and Caucasus region’s proven oil and gas reserves and capacity to provide sufficient means to Europe to diversify energy resources is covered.

There are certain challenges and opportunities for Central Asia and the Caucasus countries regarding their ability to produce and export energy to international markets. One of the key questions is to what extent does existing infrastructure support their ambitions to export, given that in some areas they continue to depend on old Soviet infrastructure controlled by Russia? This chapter also includes new energy projects for production and pipelines that enable an increase in Central Asia and the Caucasus export capacity to international markets in the West such as the Trans-Anatolian Natural Gas Pipeline (TANAP) and the Trans-Adriatic Pipeline (TAP), as well as those directed to the East such as China and other neighboring countries.

Finally, Chapter VII provides a summary of the conclusions derived from the analyses in the previous chapters of the paper. The focus is devoted on energy security relations as well as on overall security considerations for Europe, Russia, and Caucasus-Central Asia triangle.

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<sup>59</sup> Pradhan, *Geopolitics of Energy*, 54. “It was British Lieutenant Arthur Connolly used Great Game phrase in his official letter.”

## CHAPTER 2

### LITERATURE REVIEW: THEORETICAL FRAMEWORK, DEFINITION AND EVOLUTION OF THE ENERGY SECURITY CONCEPT

#### 2.1. Theoretical Framework

The energy relationship between states is a source of inter-state cooperation and/or conflict. This relationship also involves non-state actors: international and supranational organizations, such as the International Energy Agency (IEA) and the European Union (EU) respectively, national and international energy companies, and financial institutions. Therefore, there are competing theoretical frameworks that aim to explain energy relations and the concept of energy security. Dannreuther argues that “distinction between a geopolitical or mercantilist conceptualization of energy security and a liberal, market-driven and pluralist approach...map onto the classical divide in International Relations theory between realism and liberalism.”<sup>60</sup> Energy security, in general, is perceived as part of national security while different approaches are influenced by ideological and normative frameworks. While realist and liberalist approaches represent main divisions in the way the concept of energy security is perceived, the changes in technology and environment have increased the way policies are developed.

A realist approach argues that energy security is a zero-sum game, linking it with the balance of power dynamics. On the other hand, a liberal approach, based on complex interdependence theory, suggests highlighting the importance of market dynamics, global governance structures, and the role of international organizations, norms, as well as other dynamics such as increasing concerns over climate change, to explain this relationship. Additionally, energy security was deliberated as part of international regimes. Proponents of the international regimes are linked with realist and liberal tradition while their understanding of these theories differs: on the one hand liberals suggest that regimes remain the normal state

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<sup>60</sup> Dannreuther, *Energy Security*, 23.

of affairs in the international system; on the other hand, realists argue that regimes are difficult to create and maintain in the face of alterations in underlying national power capabilities.<sup>61</sup>

Krasner refers to a “modified structural approach” that “accepts the basic analytic assumptions of structural realist approaches, which posit an international system of functionally symmetrical, power-maximizing states acting in an anarchic environment.”<sup>62</sup> Adding to this complexity, cooperation or confrontation/competition involves not only state actors but also multinational corporations, state-owned enterprises, and international organizations. Before going into detail on how evolution of European Union and market dynamics have shaped European-Russia energy relations and how geography, history and culture have influenced the Central Asia/Caucasus region’s relationships with Russia, the following international relations theories are reviewed as to their approach to energy security: realism and liberalism.

## 2.2. Realism and Energy Security

Morgenthau argues that “politics is governed by objective laws that have their roots in human nature.”<sup>63</sup> Human nature has not changed. Energy is and will remain an important aspect of life and prosperity for humanity. Mearsheimer suggests that realists have a pessimistic view of international politics, and their views are shaped by three main assumptions: first, states are the principal actors in international relations and great powers dominate and shape international politics; second, behavior of states and great powers are influenced by their external environment, not by domestic reasons; third, power dominates states thinking, and states compete for power.<sup>64</sup> In Waltz’s view “two elements of the structure of the international system are constant: the lack of an overarching authority means that its ordering principle is anarchy, and the principle of self-help means that all of units remain functionally alike.”<sup>65</sup> In the realist

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<sup>61</sup> Krasner, *International Regimes*, viii.

<sup>62</sup> *Ibid*, 1-21.

<sup>63</sup> Morgenthau, Thompson, and Clinton, *Politics Among Nations*, 4.

<sup>64</sup> Mearsheimer, *The Tragedy*, 17-18.

<sup>65</sup> Elman, “Realism,” 18.

view, states, as principal actors in the international system, seek survival, focus on their own security, pursue their own national interests, and compete for power in an anarchic system. These goals are potentially in conflict with other states' political interests and the resolution of a conflict of interest is generally linked with material capabilities.<sup>66</sup>

During the Cold-War, the Union of Soviet Socialist Republics (USSR) was one of two global superpowers that had been engaged in a "zero-sum" competition for power and influence against the United States and NATO. According to Tsygankov, "Realists have typically argued that the Soviet leaders, while employing a revolutionary ideology and acting under a totalitarian system of government, defended Russia's traditional interests."<sup>67</sup> He suggests that "Realism seems to work when the actual policies at play are of a zero-sum nature, but it errs when the zero-sum reality is not in place,"<sup>68</sup> and there are fundamental changes in Russia's foreign policy that present opportunity for cooperation with Western nations. However, this assertion contradicts what Morgenthau argues that states cannot trust anyone but themselves, and this foundation breeds hostility and war in international relations. Morgenthau also argues that "International politics, like all politics, is a struggle for power. Whatever the ultimate aims of international politics, power is always the immediate aim; ... the ultimate aim ...to promote one's interest by changing the mind of the opponent."<sup>69</sup> He also suggests that power politics and balance of power are the defining characteristics of international order that reduces the possibility of cooperation among states.<sup>70</sup>

It could be assumed that the following are commonly accepted realist core assumptions:

a generally pessimistic view of human nature; the centrality of states as actors in international relations; an emphasis of material capabilities of states; the essential insecurity of states; the uncertainty of states' intentions; a prevailing condition of anarchy in the international order; an emphasis on the structure and polarity of the

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<sup>66</sup> Mowle and Sacko, *Balancing and Bandwagoning*, 16.

<sup>67</sup> Tsygankov, *Russia's Foreign Policy*, 10.

<sup>68</sup> *Ibid*, 11.

<sup>69</sup> Morgenthau, Thompson, and Clinton, *Politics Among Nations*, 27, 333.

<sup>70</sup> Waltz, *Theory of International Politics*, 117-123.

international system; the pursuit of power; and the struggle to ensure security in this environment.<sup>71</sup>

Keohane and Nye highlight the inadequacy of realist assumptions to explain the changing conditions of world politics. They suggest complex interdependence comes closer to reality than realism. In Keohane and Nye's view, political processes under main realist assumptions could be listed as follows in Table 1:

Table 1: Political Processes Under Realist Assumptions<sup>72</sup>

| Political Processes                | Realism   |
|------------------------------------|---|
| Actors' objectives                 | The high politics of military security dominates economic and social affairs. Defending state's territory and interest will be the key objective.                         |
| State policy instruments           | Military national instrument of power will be the most effective, although other national instruments of power such economic and diplomacy will also be used.             |
| Agenda development                 | Potential shifts in the balance of power dynamics and emerging security threats will set agenda in high politics and will strongly influence other agendas.               |
| Linkages                           | Linkages will be key to reduce differences in outcomes among issue areas that reinforce international hierarchy.  |
| International Organizations' Roles | States are the main actors and focuses their self-interests. International organizations will play minor roles, while state power and the military force remain dominant. |

Source: Keohane and Nye, *Power and Interdependence*, Third Edition, pages 20-32

Klare argues that during the Cold War, the West relied on market dynamics rather than state-driven approaches in the area of energy security. The Soviet Union was perceived a

<sup>71</sup> Shambaugh and Shambaugh, *Tangled Titans*, 9-10.

<sup>72</sup> Keohane and Nye, *Power and Interdependence*, 20-32.

reliable supplier of energy. European leaders, specifically German Chancellor Willy Brandt, promoted energy policies that allowed West Germany to import 20% of its gas supplies from the Soviet Union, owing to much cheaper prices compared to Western Allies.<sup>73</sup> However, the situation has evolved and key decisions have been taken by governments which are increasingly shaped by market dynamics, even though private energy companies have played an important role since the end of the Cold War.<sup>74</sup> Dannreuther argues that most popular writers, including Klare, have adopted a realist framework to explain energy security relationships, albeit not always explicitly stated. According to Dannreuther “The ideological struggles between capitalism and communism of the Cold War era have now been replaced by a geopolitical struggle for access and control of natural resources.”<sup>75</sup> Additionally, the realist view suggests that states seek the use of force to reduce vulnerability due to dependency on natural resources.

Contrary to what was argued by Samuel Huntington that the post-Cold War period is defined by the clash of civilizations, Klare argues that “There is a high correlation between areas of conflict and concentration of critical materials.”<sup>76</sup> In his analysis of the conceptual motivation for the Iraq War, Yetiv suggests that Iraqi WMD programs, Iraq’s ties to terrorism, and democratization of Iraq were not the main arguments. There were possible alternative motivations such as oil security and reducing dependency to Saudi Arabia by controlling Iraqi reserves.<sup>77</sup> As this example suggests, resources are one of the main causes of contemporary conflicts, and they are “...vital ingredients of national power and prosperity, and that states inevitably compete for access to resources and are willing...to contemplate military action.”<sup>78</sup>

The realist approach to energy security is widely accepted as it relates to the fundamental role of state actors, competition to gain superiority over other actors, and

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<sup>73</sup> Bosch, “Energy Diplomacy,” 170.

<sup>74</sup> Klare, *Rising Powers*, 22.

<sup>75</sup> Dannreuther, *Energy Security*, 23.

<sup>76</sup> Klare, *Resource Wars*, 217.

<sup>77</sup> Yetiv, “The Absence,” 120-131.

<sup>78</sup> Dannreuther, *Energy Security*, 23.



anarchical nature of international relations. Esakova argues that “Energy resources are a power resource and one of the major measures for a state’s influence and power both on the national and international level. Nation states strive to provide their individual energy security acting as coherent units and dominant actors in energy politics and representing their sovereign interests.”<sup>79</sup> Energy security is considered as a key element of national security, a source of power that is based on material factors, including energy resources required to support the economy and the military.

Under the realist view to energy security, pursuing a multilateral approach and acquiring cooperation with other state actors are limited. Additionally, empowering international organizations and institutions for multilateral cooperation on energy issues, based on legal foundations and market dynamics, will be difficult. Energy resources are perceived as a source of geopolitical power, key for economic development and social stability. Therefore, military force is considered to be one of the fundamental instruments of access and control of energy resources by consumer and producer states, as part of their energy security strategy. Similar to the use of military instruments, economic sanctions are also considered measures applied under realist conditions. Therefore, security dilemma is applied as a state’s defensive measure, ensuring its energy security could be regarded as a direct threat by other parties.<sup>80</sup>

There are diverging views on how relative gains affect the distribution of energy related transactions. The realist approach to energy security proposes a zero-sum game, suggesting that the finite nature of energy resources requires one party’s gain could only be possible at another party’s loss. Therefore, state control of energy resources and distribution networks is critical and allows influence other parties’ policy choices. Those that adopt realist thinking tend to encourage establishment of a monopoly, such as Gazprom, to ensure Russian foreign policy objectives are considered in relations with the other countries. This approach is also driven by

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<sup>79</sup> Esakova, *European Energy Security*, 48.

<sup>80</sup> *Ibid*, 49-50.

geographical advantages and disadvantages associated with the ability to secure the flow of oil and gas reserves through pipelines and choke points. On the contrary, Esakova also argues that “The energy field may also be seen as a non-zero-sum game, because a single power cannot win all as some other powers are likely to benefit one way or another.”<sup>81</sup>

In the last decade, Gazprom has increased its share in the European gas market. The growing gas trade between Russia and Europe, at 37% in 2018 compared to 27% in 2011, will increase energy security concerns over security of gas supplies.<sup>82</sup> The Russian state controls over 50% share of Gazprom, one of the largest gas producing companies in the world.<sup>83</sup> The Russian natural gas sector is still largely controlled by several state-owned enterprises, with Gazprom having the highest share in this sector. Victor, Jaffe and Hayes argue that “Countries that commit to importing large volumes of gas place the security of their energy system partly in the hands of others.”<sup>84</sup> Therefore, Gazprom’s efforts to develop, build, and own pipeline networks are generally aligned with Russian foreign policy objectives.

Following Ukraine’s democratization and establishing relations with the West, Russia has made significant investments, both politically and economically, to develop several pipeline networks, such as Nord-Stream 1 and 2, Blue-Stream, and Turk-Stream, that circumvent (bypass) Ukraine and other Eastern European countries. As a result, pipeline networks, especially those carrying natural gas, have been a focus of Russia’s energy relations with Europe, driven by and aligned with Russian foreign policy objectives. While one might argue that the Russia-Ukraine gas dispute is driven by price adjustments and late payments, Russian attempts to undermine improving Ukraine - EU relations and maintaining Russian sphere of influence, in other words the realist worldview, is the main cause.

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<sup>81</sup> Esakova, *European Energy Security*, 50.

<sup>82</sup> Åslund, and Fisher. “New Challenges,” 4.

<sup>83</sup> Sönnichsen, “Gazprom Shareholder,”

<sup>84</sup> Victor, Jaffe, and Hayes, “Natural Gas,” 5.

### 2.3. Liberalism and Energy Security

Keohane and Nye argue that a new era has emerged and the traditional realist approach to international relations is not sufficiently explaining the changing nature of world politics.<sup>85</sup> Welch and Nye suggest that transnational economic development of the 1960s and 1970s increased interest in liberal theories. In this regard, liberal thinking aligned with economic interdependence posits three main strands, political, social, and economic, that help to explain the international system. Political aspects further break-down into two related parts, institutions and democracy.<sup>86</sup> While these aspects, individually, could help to describe the international system, their convergence allows a comprehensive analysis of change and actual situations. Dannreuther argues that liberalism accepts the fundamental realist assumption of anarchy. However, he suggests that “Liberalism differs from realism asserting that realism presents only a partial and incomplete picture of the international system.”<sup>87</sup> For example, the economic strand is highly relevant to explain energy context as it relates to trade and interdependence between states.

Trade encourages states to address issues by defining their mutual interest in economic terms, avoiding securitization and militarization of energy security. “Trade offers states a way to transform their position through economic growth rather than through military conquest.”<sup>88</sup> In his early 2000s assessment, Lo suggested that under Putin, “The Kremlin is anxious to depoliticize foreign economic policy as much as possible; the implicit message being that the business of money-making – whether in relation to Caspian Sea energy development pipelines, or arms sales – is too important to be muddled by the baggage of geopolitical pretensions.”<sup>89</sup> Lo also noted that Putin’s maximalist finance-driven approach towards the energy sector,

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<sup>85</sup> Keohane and Nye, *Power and Interdependence*, 3.

<sup>86</sup> Nye and Welch, *Understanding*, 58.

<sup>87</sup> Dannreuther, *Energy Security*, 25.

<sup>88</sup> Nye and Welch, *Understanding*, 58.

<sup>89</sup> Lo, 64.

particularly oil and gas, has important implications for Russia's role as a global actor. Keeping strict control of the gas market by using Gazprom allows Russia to maintain gas delivery under exclusive purview of the state. This situation has changed as the long-term contracts "where the state dominates the economy and international trade in gas is backed by state-to-state agreements."<sup>90</sup> Hayes and Victor defined this system as the "old world" that is in contrast the gas trade system defined as the "new world" where the role of states shifts to the market institutions.<sup>91</sup>

Liberalism also suggests that person to person contact increases social interactions which support understanding, thereby reducing the potential for conflict. Transnational and trans-governmental relations through multiple channels of contacts further blur the distinction between domestic and international politics, while creating conditions for complex interdependence.<sup>92</sup> These social and business interactions take place in different contexts, from student exchanges to tourist visits and joint business ventures, allowing diverging views on contentious issues and a better understanding of different perceptions. While proponents of this view argue that the world is different from the beginning of the 20<sup>th</sup> Century, uncertainty remains amongst foreign policy experts due to the similarity in conditions of today to pre-World War I conditions that did not prevent conflict between European powers. In the same context, Gustafson argues that natural gas was at the center when European-Russian business relations flourished in the early 1990s. For a time, normal economic ties were expected to foster normal political relations, and vice versa, "But natural gas has now become part of the problem, for reasons that could never have been anticipated during the Cold War."<sup>93</sup>

Exploration, development and production of energy resources require large investments and advanced technology of energy companies operating in global markets. These companies,

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<sup>90</sup> Victor, Jaffe, and Hayes, "Natural Gas," 321.

<sup>91</sup> Ibid.

<sup>92</sup> Keohane and Nye, *Power and Interdependence*, 29.

<sup>93</sup> Gustafson, *The Bridge*, 7.

excluding state-owned enterprises, are rarely influenced by state policies and generally operate independently from the political space. Dannreuther argues that “The international oil market is globally integrated and fungible<sup>94</sup> and the historical trajectory is, if anything, towards enhanced transparency and openness to market forces...Global gas markets appear to be moving in a similar direction.”<sup>95</sup> Several energy ventures are joint projects involving Russian state-owned enterprises and Western companies, such as Nord-Stream I and II, Turk-Stream, Blue-Stream, and others. While these projects promoted cooperation in certain regions, they did not prevent certain developments such as Russia’s illegal annexation of Crimea, interference in Eastern Ukraine, or the Russia-Georgian War.

In addition to social interactions, international institutions have the potential to reduce the difficulty of the security dilemma created by NATO and EU expansion. The Alliance gave the highest priority to NATO’s enlargement and expected Russia to “play a unique role” within the framework of the NATO-Russia Founding Act on Mutual Relations (establishment of NATO-Russia Council [NRC]); Cooperation and Security on the basis of common interest; and reciprocity and transparency to achieve a lasting and inclusive peace. However, the signs of resentment in Russia started emerging from the very beginning as former Warsaw Pact and Soviet Republics were becoming members of NATO and the European Union. Russia was against NATO and EU expansion and perceived its exclusion from the enlargement process as losing influence over its near abroad. The institutions directly related with energy and security, such as the NRC, the Organization for Security and Co-operation in Europe (OSCE), and The Energy Charter Treaty (ECT), have little impact to tame Russian and Western concerns.

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<sup>94</sup> University of Texas, Robert Strauss Center, Energy and Security, “Oil is a fungible commodity, meaning oil of different grades and origins is largely interchangeable. The fungibility of oil has important implications for how the global energy market and national security intersect. It diminishes the importance of OPEC and other large producers such as Russia in determining the world oil prices. For example, if the origin of a barrel of crude oil doesn’t matter to global trade, other producers could step in and increase their output if an energy giant like Saudi Arabia cuts its production in an attempt to raise prices.” The <https://www.strausscenter.org/energy-and-security-project/fungibility-oil/#:~:text=Oil%20is%20a%20fungible%20commodity,and%20origins%20is%20largely%20interchangeable.&text=The%20fungibility%20of%20oil%20has,market%20and%20national%20security%20intersect.>

<sup>95</sup> Dannreuther, Energy Security, 26.

International and non-governmental energy related organizations and civil society have played significant roles to influence state behavior, albeit in some cases in a negative sense for the liberal international order, such as the oil embargo imposed by the Arab members of the Organization of Petroleum Exporting Countries (AOPEC) against the United States, the Netherlands, Portugal, and South Africa. The embargo resulted in huge reductions in oil production and banned exports to targeted countries. International organizations in this regard affected state decisions. In response to AOPEC's oil embargo, another autonomous organization, the International Energy Agency (IEA) was created to coordinate a collective response to any major oil supply disruptions. While oil security continuously remains as one of the key aspects of the IEA's agenda, it also focuses on global dialogue for reliable, affordable, and clean energy.

These two organizations represent different parts of the energy relationship. While OPEC represents the interests of oil producing countries, the IEA offers measures for secure and sustainable energy supplies to its members. Their influence on international politics and the national security of its member states cannot be ignored. The ECT went into force in 1998 as a legally binding document that formulates the relationship between foreign investors and host states, protects their rights against the host states, while providing a framework for their activities. The international organizations have been and are likely to remain part of the supply and demand equilibrium as influential key actors. However, their efficiency and ability to influence outcomes depend on the level of commitment of the parties involved.

### 2.3.1. Interdependence - Mutual vs Asymmetric Interdependence

Keohane and Nye define interdependence as “mutual dependence.”<sup>96</sup> They argue that “interdependence in world of politics refers to situations characterized by reciprocal effects among countries or among actors in different countries.”<sup>97</sup> Keohane and Nye continue to

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<sup>96</sup> Keohane, and Nye, *Power and Interdependence*, 7.

<sup>97</sup> *Ibid.*

explain the effects as a result of these transactions as flow of money, goods, people, and messages across international borders. As the world becomes more interconnected, they suggest that “the effects of transactions on interdependence will depend on the constraints, or costs, associated with them.”<sup>98</sup>

Different views on economic interdependence and political conflict were also presented by Mansfield and Pollins. Their first view is “heightened interdependence fosters cooperative political relations.”<sup>99</sup> On the other hand, critics of this view suggest that “rather than fostering cooperation, increased interdependence generates political discord.”<sup>100</sup> Another group believes “...that economic exchange has no strong bearing on the high politics of national security.”<sup>101</sup> Montesquieu is quoted as saying, “...the natural effect of commerce is to lead to peace. Two nations that trade together become mutually dependent: if one has an interest in buying, the other has an interest in selling; and all unions are based on mutual needs.”<sup>102</sup> Mansfield and Pollins continue to explain this liberal position, making reference to Buzan who suggests that “a liberal economic order makes a substantial and positive contribution to the maintenance of international security.”<sup>103</sup>

On the other hand, dependency has been explained differently from the way it was described in “economic development and dependency.” Baldwin makes reference to Duvall’s point on the meanings of the dependence by stating, “The distinction [is] often made between ‘sensitivity interdependence’ and ‘vulnerability interdependence.’ While the first meaning implies mere ‘contingency,’ the second implies ‘need fulfilment that would be costly to forego.’”<sup>104</sup> The concepts of *sensitivity and vulnerability interdependence* are the cornerstones

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<sup>98</sup> Keohane, and Nye, *Power and Interdependence*, 7.

<sup>99</sup> Mansfield and Pollins, 1.

<sup>100</sup> *Ibid.*

<sup>101</sup> *Ibid.*

<sup>102</sup> *Ibid.*, 3.

<sup>103</sup> *Ibid.*

<sup>104</sup> Baldwin, “Interdependence and Power,” 475-476. He explains that although it is customary to attribute the distinction between “sensitivity” and “vulnerability” interdependence to Keohane and Nye (“World Politics and the

of the interdependence theory<sup>105</sup> introduced by Robert O. Keohane and Joseph S. Nye. Therefore, two different consequences exist for breaking the dependence as shown in the analysis provided by Keohane and Nye. Baldwin suggests that:

“The crucial difference between the first and second meaning of “dependence” has to do with the ease of breaking the relationship: “sensitivity interdependence” implies nothing about the cost of altering the relationship whereas vulnerability interdependence defined as “necessary,” “ineluctable,” “inevitable,” “inextricable,” or “unavoidable,” is grounds for suspicion that the author has in mind a relationship that would be costly to break.”<sup>106</sup>

Keohane and Nye, in their seminal work *Power and Interdependence*, argue that complex interdependence affects behavior of states and international relations with the following key assumptions:<sup>107</sup>

- Actors. There are multiple actors in the international system other than states. These entities and other trans-governmental channels create interactions involving individuals, international organizations and transnational/multinational companies.
- Issues. There is no arranged hierarchy among issues. Therefore, military security is not predominant at all times. The domestic and foreign policy issues are blurred, and domestic policy issues might require varying degrees of coordination involving several levels. Lack of coordination on issues requires cross-governmental policy which might result in significant costs.
- Role of Military Force. Use of military force depends on the issues and governmental relations with other regional governments influenced by the existence of complex interdependence. “Military force could be irrelevant to resolving disagreements on economic issues among members of an alliance, yet at the same time be very important for that alliance’s political and military relations with a rival bloc.”<sup>108</sup>

Esakova highlights the following characteristics of the political processes of complex interdependence that are relevant to energy security relations. The changes in distribution of power resources within issue areas shape the status of international regimes and political agendas. Changes to the roles and functions of international actors also affect linkages from

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International Economic System”) the distinction is also found in an earlier article by Kenneth Waltz (“The Myth of Interdependence” in *The International Corporation*, ed. Charles Kindleberger [Cambridge, Mass.: The MIT Press, 1970], p. 210.)

<sup>105</sup> Keohane and Nye, *Power and Interdependence*, 10.

<sup>106</sup> Baldwin, “Interdependence and Power,” 477.

<sup>107</sup> Keohane and Nye, *Power and Interdependence*, 20-22.

<sup>108</sup> Ibid.



other issues. For example, “Linkages by the strong states are more difficult since force is ineffective...Linkages by weak states take place through international organizations.”<sup>109</sup> The existence of multiple channels allows international organizations to play a more important role compared to state-focused realist assumptions. “Multiple channels connect societies, including: informal ties between government elites as well as formal foreign office arrangements.”<sup>110</sup> International organizations play a significant role, i.e., set agendas, induce coalition formation, and act as arenas for political action by weak states. The following table is a summary of Keohane and Nye’s point of view political processes under liberal assumptions.

Table 2: Political Processes Under Complex Interdependence Assumptions<sup>111</sup>

| Political Processes                | Complex Interdependence  |
|------------------------------------|--|
| Actors’ objective                  | Objectives of the states will be aligned with their national interests. Trans-governmental politics will shape and influence definition of objectives. Transnational actors will follow their own objectives.  |
| State policy instruments           | National instruments of power relevant to issue areas will play the most relevant role. International organizations, transnational actors and the way interdependence managed will play important roles.   |
| Agenda development                 | The changes in the distribution of power resources in issue areas will shape the agenda development; the status of international regimes; changes in the importance of international actors; linkages from other issues; and politicization as a result of increasing sensitivity interdependence. |
| Linkages                           | Strong states will find it more difficult to establish linkages due to ineffectiveness of force. On the other hand, linkages by weak states through international organizations will erode rather than reinforce hierarchy.  |
| International Organizations’ Roles | International organizations will use their ability to choose an issue and to mobilize votes as an important political resource. They will set agendas, encourage coalition-formation and allow weak states to play political role.   |

Source: Keohane and Nye, *Power and Interdependence*, Third Edition, pages 20-32

<sup>109</sup> Esakova, European Energy Security, 51.

<sup>110</sup> Keohane and Nye, *Power and Interdependence*, 21

<sup>111</sup> Ibid, 20-32.

### 2.3.2. Sensitivity and Vulnerability Interdependence in the Energy Security Context

Keohane and Nye argue that to understand the role of power in interdependence, it is necessary to distinguish sensitivity and vulnerability interdependence. While framework remains the same, sensitivity involves how quickly a policy change in one country could bring costly changes to another in terms of volume and associated costs.<sup>112</sup> Keohane and Nye refer to the:

“example of sensitivity interdependence that the United States, Japan and Western Europe that was affected by increased oil prices in 1971 and again in 1973-1975... The United States was less sensitive than Japan to petroleum price rises, because a smaller proportion of its petroleum requirements was accounted for by imports, but as rapid price increases and long lines at gasoline stations showed, that the United States was indeed sensitive to the outside change.”<sup>113</sup>

This could be explained by oil's role as a global commodity. The demand increase in other parts of the world has impacts on other consumers due to their sensitivity to rapid changes, even if their dependence to outside sources is limited. Stulberg refers to Keohane, Nye, and Hirschman and highlights that ‘sensitivity’ is “measured in terms of the volume and distribution of specific resources exchanged, refers to the extent to which a country is affected by the actions of another.”<sup>114</sup> In this context, he defines Russia's ability to leverage and control the Turkmen gas exports to the CIS countries and the European markets as an asymmetry. Finally, sensitivity interdependence is not limited to energy domain; it can be social, economic, or even political.<sup>115</sup>

Keohane and Nye suggest that consideration should be given to “what the situation would be if the framework of policies could be changed. If more alternatives were available...what would be the costs of adjusting to the outside change?”<sup>116</sup> If such alternatives differ from one country to another, policies and availability of other less costly options reflect the level of a country's vulnerability interdependence. An example of this would be two

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<sup>112</sup> Keohane and Nye, *Power and Interdependence*, 10.

<sup>113</sup> *Ibid.*

<sup>114</sup> Stulberg, *Well-Oiled Diplomacy*, 19.

<sup>115</sup> Keohane and Nye, *Power and Interdependence*, 11.

<sup>116</sup> *Ibid.*

countries, both importing the same percentage of oil from external sources, but one of them could shift to domestic resources in case of a rapid increase in energy prices. As Keohane and Nye mentioned, while they are both sensitive to the change in oil prices, one without domestic or other alternatives will be more vulnerable than the other. “The vulnerability dimension of interdependence rests on relative availability and costliness of the alternatives.”<sup>117</sup> Based on this foundation, Esakova further elaborates on this energy-based relationship:

- The level of sensitivity interdependence implies the relative volume of imported energy in the overall energy demand of an energy importing country;
- The level of vulnerability interdependence is measured by the alternatives to imported energy and the costs of switching to possible alternatives.<sup>118</sup>

The sensitivity and vulnerability interdependence are also closely linked with the supply and demand relationship. Farrell and Bozon argue that when uncertainty and anxiety dominates energy markets, prices are likely to increase. Energy producing and exporting countries are less concerned on “security of demand” while energy prices are high, in the same way energy importers are not troubled with the “security of supply” when prices are low. Geopolitical considerations become “a key factor encompassing everything, from the vigorous use of energy as a foreign- policy tool, to persistent strikes and unrest and instabilities in certain energy producing countries such as Russia and Venezuela...to rising instability in the Middle East.”<sup>119</sup> These geopolitical concerns, especially for importing countries, are directly linked with the ‘security of supply.’

On the other hand, security of demand, mostly an issue for producing and exporting countries, is affected by economic recession, especially in the largest oil importing countries, or policy changes that shape the energy mix of countries aiming to reduce CO<sub>2</sub> emission. If any

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<sup>117</sup> Keohane and Nye, *Power and Interdependence*, 31.

<sup>118</sup> Esakova, *European Energy Security*, 54.

<sup>119</sup> Campbell and Price, Eds. *The Global Politics of Energy*, 45, referencing Farrell and Bozon, *Demand-side Economics*, 45-61.

oil and gas exporting country does not have alternative markets, it is more vulnerable to demand shocks compared to other energy exporting countries. For example, Uzbekistan is a landlocked gas producer with no outlet to international markets. While it has abundant gas reserves, it is a net oil importer. Uzbekistan uses its natural gas resources to produce oil and reduce its vulnerability by decreasing its import from regional countries.<sup>120</sup> This attempt will shape Uzbekistan's sensitivity and vulnerability interdependence by using its own resources.

The following factors will influence Uzbekistan's energy policies:

- Diversification of energy mix;
- Reducing import dependence and increasing potential for fuel substitution;
- Supporting domestic market and price stability;
- Reducing the impact of price volatility in international markets.

2.3.3. Sensitivity and Vulnerability Interdependence - Analysis of Europe-Russia In order to understand European-Russian relations, it is important to understand not only geopolitical concerns but also economic ones, in particular energy, as well as impediments in these relationships. Therefore, a good start for this analysis is to understand European levels of energy dependence, as suggested by Esakova that "Sensitivity and vulnerability interdependence are the starting points for analysis of energy relationships, as such analysis helps to measure the level of dependence of each of the actors and the overall interdependence between the actors."<sup>121</sup> The EU Energy Security Strategy is focused on its collective response to the energy crises considering the Union's overall energy dependency on external resources. However, energy security issues have been considered an integral part of individual members' national security agenda at national levels, without taking into account a more collective approach and interdependence amongst the other members of the EU. This

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<sup>120</sup> "Colourless, Odourless, Buyerless," 31.

<sup>121</sup> Esakova, European Energy Security, 23.

outcome is aligned with the understanding suggest that “The study of the characteristics and development of an energy-based relationship should begin with the analysis of the sensitivity and vulnerability interdependence of each of the actors.”<sup>122</sup> In recent years, Russia - EU energy relations evolved around the two different perspectives of the parties involved. The foundation of these differences is reflected in the two different worldviews, based on realist and liberal approaches to energy security. It should also be noted that European-Russian energy relations have, in fact, evolved over time. During the Cold War, Russia presented itself as a reliable partner. At the end of the Cold War, there were high expectations based on previous experience assuming Russia would remain as a reliable partner for energy cooperation. These expectations were reflected with the initiation of the EU-Russia Energy Dialogue regime in 2000. However, Russia’s approach and commitment to the EU-Russia Energy Dialogue changed with geopolitical developments in Russia and former Soviet space since 2003.

With the Putin administration’s centralization policies, Russian foreign policy has also changed as a response to developments such as “the second wave of the North Atlantic Treaty Organization (NATO) enlargement in Eastern Europe, the 2004 EU enlargement and ‘colored revolutions’ in Ukraine and Georgia in 2003 and 2004.”<sup>123</sup> These developments changed Russian attitudes toward rapprochement and created a sea change in Russian foreign energy policy. Compounded by economic growth driven by high oil prices, Russia further distanced itself from the West, thus increasing the potential for conflict. As a result, Russia took a more confrontational approach with the West, including the 2006 and 2009 gas crises with Ukraine, the 2008 war against Georgia, the 2013 -2015 illegal annexation of Crimea, the support of the separatist movement in Eastern Ukraine, and the involvement in the war in Syria since 2013.

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<sup>122</sup> Esakova, *European Energy Security*, 23.

<sup>123</sup> *Ibid*, 15.

These geopolitical developments have second and third order effects on energy security considerations and brought up concerns regarding the reliability of Russia as a partner.

Esakova argues that sensitivity analysis of the EU against Russia could be measured by short-term supply disruptions.<sup>124</sup> Umbach highlights that Russia perceives this relation as asymmetric interdependence and “Russia can live at least one year without any European/Western investments and technologies; Europe cannot survive even 30 days without Russian gas.”<sup>125</sup> While this claim may not be the case with EU’s recent reverse flow and other resilience measures, it reflects the potential that the EU’s sensitivity interdependence could be regarded as high. Esakova, based on IEA principles, highlights the following parameters that could be used to measure the degree of a country’s sensitivity interdependence: “diversity of the primary fuel mix, import dependence and fuel substitutability, market concentration and share of politically unstable regions in imports.”<sup>126</sup> These metrics are useful and provide insights measuring a country’s sensitivity interdependence, the differences between member countries could be an area for exploitation by Russia.

In regard to vulnerability interdependence of the EU, Esakova argues long-term threats should be considered, such as the EU’s inability to diversify energy supplies and pipeline networks.<sup>127</sup> Additionally, efforts to increase energy efficiency, to improve market liberalization and to use alternative sources such as liquefied natural gas are investigated in the analysis. A lack of coherent energy policy could continue to hinder Europe to address these comprehensive challenges. Finally, pipelines and Liquefied Natural Gas (LNG) infrastructures are extremely expensive, and who can bear these costs affects national decisions. Russia’s attempts to engage European Union members individually using state-owned enterprises are expected to undermine any common strategy that reduces vulnerability interdependence.

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<sup>124</sup> Esakova, *European Energy Security*, 172.

<sup>125</sup> Umbach, “Russian-Ukrainian-EU Gas Conflict.”

<sup>126</sup> Esakova, *European Energy Security*, 172

<sup>127</sup> *Ibid*, 173.

#### 2.3.4. Sensitivity and Vulnerability Interdependence - Analysis of Central Asia and Caucasus-Russia

The relationship between Russia and Central Asia could also be defined as complex interdependence as it has the following three main characteristics:

- Multiple channels to connect societies exist, such as but not limited to, informal ties between governmental, non-governmental, international, and business elites. In addition to a systemic Soviet division of labor to enable production of material dependent upon Russia and other republics, there is a large Russian population in Central Asia, though with varying numbers from republic to republic. Ethnic Russians are generally in a position to influence the key decision-making systems of Central Asian societies.<sup>128</sup>
- There are multiple issues that dominate the agenda of interstate relations; however, for Russia, energy security is one of the most important priority items in their agenda. These issues could be categorized into three main areas: first, high-level political relationships; second, security co-operation in the region; and third, its range of investment in energy projects in these countries. Therefore, military security does not dominate the agenda.<sup>129</sup>
- During the annexation of Central Asia, the Russian empire used military force to control Central Asia. Although coercion might be part of Russia-Central Asia relations during the Soviet period, use of military force was not part of the relationship during the Cold War. Since the end of the Cold War, Russian attempts to establish security frameworks similar to the Warsaw Pact have not been successful.<sup>130</sup>

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<sup>128</sup> Keohane and Nye, *Power and Interdependence*, 21.

<sup>129</sup> *Ibid.*

<sup>130</sup> *Ibid.*, 22-23.

Central Asia/Caucasus and Russia relationship is as complex as European-Russian relationship. Russian policy since the end of the Cold War, led by its giant state own enterprise Gazprom, “to retain, as far as possible, control over Central Asian exports, and to limit attempts by Central Asian producers to open up export routes either to China and other Asian destinations or to Europe by routes that avoid Russia.”<sup>131</sup> During that period Russia controlled and influenced gas prices whether they are delivered to Russian consumers, CIS countries or European markets. Russian dominance over Turkmen gas exports was challenged with the construction of the Turkmen-Kazakh-Chinese natural gas pipeline in 2007. Turkmenistan and China reached a gas deal in 2006 allowing export of up to 30 Bcm/year Turkmen gas to China in 2011. These developments, including potential export of Central Asian gas to Europe via Azerbaijan and Turkey, increased pressure on Russia. As a result, Gazprom agreed to accept purchase agreements at European price levels with the Turkmen, Kazakh, and Uzbek national gas companies.

Central Asia and the Caucasus sensitivity interdependence to Russia has three dimensions: first export depends on the balance amongst Russian production capacity, domestic customers’ consumption, and availability of markets for Russian gas export. The second, the availability of Russian pipeline networks for Central Asian gas deliveries to less desirable markets such as Ukraine that pay lower prices compared to European markets. Russia plays the transit country role in this context. Finally, Central Asian countries are highly dependent on the revenues whether they are from Russia, CIS countries, or European markets that are available through pipeline transit from Russia.

The alternatives have increased since the 2010s whether markets in the East or in the West, albeit remains limited in terms of Central Asian/Caucasus capacity to deliver natural gas. Therefore, vulnerability interdependence of Central Asian and Caucasus countries to Russia

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<sup>131</sup> Pirani, *The Impact of The Economic Crisis on Russian and CIS Gas Markets*, 26.



has decreased due to availability of alternative markets. However, there would be not only economic but also security consequences should any of the republics attempt to break up the relationship with Russia as it was the case during the Russian Empire then USSR periods.

#### 2.4. Energy Security Definition – An Overview

A vague definition of energy security connotes different meanings for different people, depending on their role and function in the energy supply chain. This large variation of diverging understanding of the definition has further security consequences from global level issues such as climate change, to regional and national energy security concerns. Table 3 lists definitions that provide the convergence and divergence of the main aspects of energy security.

Table 3: Energy Security Definitions - Evolution of Factors<sup>132</sup>

| Serial | Definition   | Sources  |
|--------|--|--|
| 1      | The availability of energy at all times in various forms, in sufficient quantities and at affordable prices, without unacceptable or irreversible impact on the environment. These conditions must prevail over the long term. Energy security has both a producer and a consumer side.  | Anderson et al. <sup>133</sup>                     |
| 2      | To assure adequate, reliable supplies of energy at reasonable prices and in ways that do not jeopardize major national values and objectives.  | Andrews <sup>134</sup>                             |
| 3      | The ability of an economy to guarantee the ability of energy resource supply in a sustainable and timely manner with the energy price being at a level that will not adversely affect the economic performance of the economy. Thus, there are several factors that can influence the “security” of energy supply, such as: (1) the availability of fuel reserves, both domestically and by external suppliers; (2) the ability of an economy to acquire supply to meet projected energy demand; (3) the level of an economy’s energy resource diversification and energy supplier diversification; (4) accessibility to fuel resources, in terms of the availability of related energy infrastructure and energy transportation infrastructure; and (5) geopolitical concerns surrounding resource acquisition. | Asia Pacific Energy Research Centre <sup>135</sup> |

<sup>132</sup> Sovacool, Routledge Handbook, 4-6.

<sup>133</sup> Anderson, Coelho, Doucet, Freudenschuss-Reichl, Jefferson, Jochem, and Karekezi et al. "World Energy," 42.

<sup>134</sup> Andrews, "Energy Security," 17, reference to Yergin, "Energy Security."

<sup>135</sup> A Quest for Energy Security, 5.

Table 3 (Continued)

| Serial | Definition   | Sources   |
|--------|--|---|
| 4      | A condition in which a nation and all, or most, of its citizens and businesses have access to sufficient energy resources at reasonable prices for the foreseeable future, free from serious risk of major disruption of service.  | Barton et al <sup>136</sup>                             |
| 5      | Measures taken to reduce the risks of supply disruptions below a certain tolerable level. Such measures should be balanced to ensure that a supply of affordable energy is available to meet demand. Security of energy supply thus encompasses both issues of quantity and price.   | Bazilian, O'Leary, Howley and Gallachóir <sup>137</sup> |
| 6      | Reliable and adequate supply of energy at reasonable prices... it simply means uninterrupted supply that fully meets the needs of the global economy.  | Bielecki <sup>138</sup>                                 |
| 7      | Loss of welfare that may occur as a result of a change in price or availability of energy.   | Bohi, D. and Michael A. Toman <sup>139</sup>            |
| 8      | Adequate energy supply and affordable prices as well as social and cultural sustainability and environmental preservation.   | Brown and Sovacool <sup>140</sup>                       |
| 9      | "Low vulnerability of vital energy systems" opens a road towards more detailed specifications of<br>(a) vital energy systems; and<br>(b) their vulnerabilities, composed of exposure to risks and resilience.  | Cherp and Jewell <sup>141</sup>                         |
| 10     | Diversity of supply; clean fuels that are affordable and readily available; stability; smarter use of energy resources; reliability; electrification of ground transport; bio-based mobility fuels.  | CNA <sup>142</sup>                                      |
| 11     | Accelerate the transition to a low carbon economy requires urgent and ambitious action at home and abroad...<br>• save energy;<br>• develop cleaner energy supplies; and<br>• secure reliable energy supplies at prices set in competitive markets. Our strategy continues to be based on the principle that independently regulated, competitive energy markets, are the most cost-effective and efficient way of delivering our objectives | Department of Trade and Industry, UK <sup>143</sup>     |
| 12     | To convey the connection between the economic activity that occurs in both domestic and international energy markets and the foreign policy response of nations (apart from the fundamental connection between national security and a healthy economy).   | Deutch <sup>144</sup>                                   |
| 13     | Threats to security often come in the form of low probability but high-consequence events (failure of Russian gas exports, or a nuclear accident-causing similar reactors to close).   | Doczy, Borner, MacKerron                                |

<sup>136</sup> Barton, Redgwell, Ronne, and Zillman, *Energy Security: Managing Risk*, 5.

<sup>137</sup> Bazilian, O' Leary, Howley and Ó Gallachó, *Security of Supply in Ireland*, 13.

<sup>138</sup> Bielecki, "Energy Security: Is the Wolf at the Door?" 237.

<sup>139</sup> Bohi and Toman, *The Economics of Energy Security*, 1.

<sup>140</sup> Brown and Sovacool, "Developing," 335-349.

<sup>141</sup> Cherp and Jewell, "The Concept," 420.

<sup>142</sup> CNA, "Powering America's Defense," 2, 26, 27.

<sup>143</sup> Department of Trade and Industry, UK, "Meeting the Energy Challenge," 8.

<sup>144</sup> Deutch, "Priority Energy Security Issues, In Deutch, Lauvergeon, and Prawiraatmadja (eds), *Energy Security and Climate Change*, 1.

Table 3 (Continued)

| Serial | Definition   | Sources  |
|--------|--|--|
| 14     | To ensure that energy supplies are available, sufficient, affordable and sustainable. This will mean taking a broad range of measures: conserving and raising energy efficiency; rationalizing pricing and taxation systems; improving energy sector governance; and diversifying energy supplies, in particular making greater use of alternative and renewable resources.  | Economic and Social Commission for Asia and the Pacific, United Nations (ESCAP, UN) <sup>145</sup> |
| 15     | To ensure the uninterrupted physical availability of energy products and services on the market, at a price which is affordable for all consumers (private and industrial), while contributing to the EU's wider social and climate goals.   | European Commission <sup>146</sup>   |
| 16     | Reliable and affordable access to energy supplies – is inextricably tied up with military and national security.   | Florini <sup>147</sup>   |
| 17     | The availability of energy at all times in various forms, in sufficient quantities, and at affordable prices.  | Goldemberg <sup>148</sup>  |
| 18     | The way of equitably providing available, affordable, reliable, efficient, environmentally benign, proactively governed, and socially acceptable energy services to end-users, which is gaining ever more prominence on contemporary policy agendas. Energy security has supply-side and demand-side components.   | Goldthau, Sovacool <sup>149</sup>  |
| 19     | A methodology that can be used to explain energy security...four Rs: review (understanding the problem), reduce (using less energy), replace (shifting to secure sources), and restrict (limiting new demand to secure sources).   | Hughes <sup>150</sup>  |
| 20     | The ability of a nation to muster the energy resources needed to ensure its welfare. In a narrower meaning it refers to territorial energy autonomy. Consequently, energy supply security is a matter of both domestic policy and international relations.   | International Atomic Energy Agency <sup>151</sup>  |
| 21     | The uninterrupted availability of energy sources at an affordable price. Energy security has many aspects: long-term energy security mainly deals with timely investments to supply energy in line with economic developments and environmental needs. On the other hand, short-term energy security focuses on the ability of the energy system to react promptly to sudden changes in the supply-demand balance. | International Energy Agency (IEA) <sup>152</sup>   |
| 22     | The term may be defined in terms of access to secure, stable, and reliable supplies of efficient and modern energy supplies and appliances at prices that are affordable and in amounts adequate to meet demands for basic energy services in full to ensure human health and well-being and without detriment to the environment  | International Institute of Applied Systems Analysis <sup>153</sup>                                 |

<sup>145</sup> ESCAP-UN, "Energy Security and Sustainable Development," xvii.

<sup>146</sup> European Commission, Communication, 639.

<sup>147</sup> Florini, "Global Governance and Energy," In Pascual and Elkind (eds), *Energy Security*, 151.

<sup>148</sup> Goldemberg, ed. *World Energy Assessment*, 11.

<sup>149</sup> Goldthau, and Sovacool, "The Uniqueness," 235.

<sup>150</sup> Hughes, "The Four 'R's," 2459.

<sup>151</sup> Galinis, Miškinis, Vilemas, and Tarvydas, "Analyses of Energy Supply Options."

<sup>152</sup> IEA, "Energy Security."

<sup>153</sup> Sovacool, "Introduction," 4.

Table 3 (Continued)

| Serial | Definition  | Sources                            |
|--------|---|------------------------------------|
| 23     | Air pollution and global warming are two of the greatest threats to human and animal health and political stability. Energy insecurity and rising prices of conventional energy sources are also major threats to economic and political stability...energy-related solutions to global warming, air pollution mortality, and energy security while considering impacts of the solutions on water supply, land use, wildlife, resource availability, reliability, thermal pollution, water pollution, nuclear proliferation, and undernutrition.  | Jacobson <sup>154</sup>            |
| 24     | Proposes to use the term energy services security (ESS) instead of energy security...refers to the certainty level at which the population in a defined region can have access to affordably and competitively priced, environmentally-acceptable energy services of adequate quality.  | Jansen <sup>155</sup>              |
| 25     | Assurance of the ability to access the energy resources required for the continued development of national power ... it is the provision of affordable, reliable, diverse, and ample supplies of oil and gas and their future equivalents and adequate infrastructure to deliver these supplies to market.  | Kalicki and Goldwyn <sup>156</sup> |
| 27     | Energy-based indicator set can cover most relevant sustainability issues. This simplifies the formal modelling of the framework; interdependences and interactions between components or the selected indicators can be modelled...In this set, economic activity, climate change, poverty, equity, energy resources, energy efficiency, and air pollution will be covered.   | Kemmler and Spreng <sup>157</sup>  |
| 28     | <ul style="list-style-type: none"> <li>• Development of flexible, transparent and competitive energy markets, including gas market;</li> <li>• Diversification of energy fuels, sources and routes, and encouragement of indigenous sources of energy supply;</li> <li>• Reducing our greenhouse gas emissions, and accelerating the transition to a low carbon economy, as a key contribution to enduring energy security;</li> <li>• Enhancing energy efficiency in supply and demand, and demand response management;</li> <li>• Promoting deployment of clean and sustainable energy technologies and continued investment in research and innovation;</li> <li>• Improving energy systems resilience by promoting infrastructure modernization and supply and demand policies that help withstand systemic shocks and cyberattacks;</li> <li>• Putting in place emergency response systems, including reserves and fuel substitution for importing countries, in case of major energy disruptions; a host of factors must be considered from both domestic and international perspectives, including: ensuring domestic access to energy, securing the electric grid, encouraging the development of global markets, and supporting alliances and partnerships that strengthen energy security.</li> </ul> | Kenderdine <sup>158</sup>          |

<sup>154</sup> Jacobson, "Review of Solutions," 148-149.

<sup>155</sup> Jansen, Energy Services Security, 1-2.

<sup>156</sup> Kalicki, and Goldwyn, "Introduction," 9.

<sup>157</sup> Kemmler and Spreng, "Energy," 2466-2467.

<sup>158</sup> Kenderdine, "Valuation of Energy," 3.

Table 3 (Continued)

| Serial | Definition   | Sources                                      |
|--------|--|--|
| 29     | Secure, reliable and affordable energy supplies are fundamental to economic stability and development (IEA, 2006); the availability of energy at all times in various forms, in sufficient quantities, and at affordable prices (The World Energy Assessment, 2000:11); The key principles: <ul style="list-style-type: none"> <li>• Diversification of energy supply sources is the starting point for energy security;</li> <li>• A “security margin” consisting of spare capacity, emergency stocks and redundancy in critical infrastructure is important;</li> <li>• Relying on flexible markets and avoiding the temptation to micromanage them can facilitate speedy adjustment and minimize long-term damage;</li> <li>• Understand the importance of mutual interdependence among companies and governments at all levels;</li> <li>• Foster relationships between suppliers and consumers in recognition of mutual interdependence;</li> <li>• Create a proactive physical security framework that involves both producers and consumers;</li> <li>• Provide good quality information to the public before, during and after a problem occurs;</li> <li>• Invest regularly in technological change within the industry;</li> <li>• Commit to research, development and innovation for longer-term energy balance and transitions;</li> </ul> | Kessels, Bakker and Wetzelaer <sup>159</sup> |
| 30     | A future where abundant, reliable, and affordable energy is produced with little impact on the environment and no dependence on the goodwill of hostile nations (P.V. Domenici, The Chairman of the Senate Energy and Natural Resources Committee [2004])  | Kessels, Bakker and Wetzelaer <sup>160</sup> |
| 31     | The five Ss: supply, having resources, such as fossil fuels, alternative energy, and renewable energy; sufficiency, adequate quantity of fuel and services from these sources; surety, having access to them; survivability, resilient and durable sources of energy in the face of disruption or damage; and sustainability, reducing waste and limiting damage to the environment.   | Kleber <sup>161</sup>                        |
| 32     | The ability to assure adequate, sustainable supply of energy at a reasonable cost, including externalities. One might also think about energy security as a process, an ebbing and rising flow: <ul style="list-style-type: none"> <li>• The flow of primary energy from its varied sources and the shifts from one source to another over time;</li> <li>• The flow of energy products across energy infrastructure and the shifts in the patterns of flows in this infrastructure;</li> <li>• The flow of energy across private and government channels and the shifting balance between these flows;</li> <li>• The flow of energy across international borders and the shifting balance of regional and national power and control over these flows.</li> </ul>  | Konoplyanik <sup>162</sup>                   |

<sup>159</sup> Kessels, Bakker, and Wetzelaer, “Energy Security,” 7-8.<sup>160</sup> Ibid, 7.<sup>161</sup> Kleber, “The US Department of Defense,” 2.<sup>162</sup> Konoplyanik, “Responding to Emerging,” 1.

Table 3 (Continued)

| Serial | Definition  | Sources   |
|--------|---|---|
| 33     | From the viewpoint of a consumer and net importer of energy sources, energy security denotes the right to use reliable sources of energy at competitive prices produced by an environmentally sustainable and safe means. It also includes the absence of physical disruptions and volatile increases in prices. On the other hand, energy security is in the perspective of a producer and net exporter of energy resources, signifying the security of supply as well as security of demand.  | Kurian and Vinodan <sup>163</sup>                 |
| 34     | The traditional definition of sufficiency, reliability, and affordability now seems incomplete. Environmental sustainability, geopolitical factors, and social acceptability are clearly elements that need to be added to our calculus.  | Logan and Venezia <sup>164</sup>                  |
| 35     | Rests on three pillars:<br>1) Making domestic energy infrastructure, notably electric and gas grids, resilient; 2) Phasing out, not expanding, vulnerable facilities and unreliable fuel sources; Ultimately eliminating reliance on oil from any source.   | Lovins <sup>165</sup>                             |
| 36     | The concept of maintaining a stable supply of energy at a “reasonable” price to avoid the macroeconomic costs associated with interruption of energy supply or increases in energy price.   | Medlock <sup>166</sup>                            |
| 37     | Provision of reasonably priced, reliable, and environmentally friendly energy (references to the IEA and EC definitions).   | Mueller-Kraenner <sup>167</sup>                   |
| 38     | Security of energy supply is the resilience of the energy system to unique and unforeseeable events that threaten the physical integrity of energy flows or that lead to discontinuous energy price rises, independent of economic fundamentals.<br><br>An external and an internal dimension of energy supply security are of importance...The external dimension is mainly defined by concerns about import dependence from potentially unstable countries. The internal dimension instead is about creating appropriate incentive mechanisms and frameworks to allow public and private actors to invest in adequate levels of production and transport capacity that provide continuous access to energy services at stable prices. | Nuclear Energy Agency <sup>168</sup>              |
| 39     | Provision of adequate, affordable, efficient, and reliable energy services with minimal adverse impacts on the environment  | Omorogbe <sup>169</sup>                           |
| 40     | Energy policy objectives...securing energy supply continuity, securing properly functioning energy markets and promoting energy efficiency, energy savings, and promotion of new and renewable energy resources.  | Scheepers, Seebregts, Jong, Maters <sup>170</sup> |
| 41     | Analyzed in terms of changes in net energy import dependency of the power sector (NEID) and diversification of energy resources used to generate electricity (SWI).   | Shrestha, Farooq and Kumar <sup>171</sup>         |

<sup>163</sup> Kurian and Vinodan, “Energy Security,” 384.

<sup>164</sup> Logan and Venezia, “Weighing U.S. Energy Options.”

<sup>165</sup> Lovins, “How Innovative Technologies,” 1.

<sup>166</sup> Medlock III, “Economics,” 65.

<sup>167</sup> Mueller-Kraenner, *Energy Security*, xi.

<sup>168</sup> Keppler, and D’haeseleer. *The Security of Energy*, 9, 16.

<sup>169</sup> Omorogbe, “Regional and National,” 124.

<sup>170</sup> Scheepers, Seebregts, de Jong, and Maters, “EU Standards,” 11.

<sup>171</sup> Farooq, Kumar, and Shrestha, “Energy, Environmental and Economic Effects,” 997.

Table 3 (Continued)

| Serial | Definition  | Sources  |
|--------|---|--|
| 42     | Energy technologies are judged according to five criteria: <ul style="list-style-type: none"> <li>• technical feasibility, meaning that such systems must be commercially developed and available to enter the American energy market;</li> <li>• cost, in terms of whether their use would increase or decrease electricity prices for consumers;</li> <li>• negative externalities, in terms of their impact on human health and the environment;</li> <li>• reliability, in terms of how dependable such technologies are at generating and delivering electricity; and,</li> <li>• security, or how safe and immune such technologies are from attack or accident. The use of such criteria—while they may appear as common sense to many—reveals some surprising results.</li> </ul> | Sovacool <sup>172</sup>                                |
| 43     | The threats of supply and price disruptions arising from risks associated with the sources of gas supplies, the transit of gas supplies and the facilities through which gas is delivered. There are two major dimensions of these risks: <ul style="list-style-type: none"> <li>• short-term supply availability versus long-term adequacy of supply and the infrastructure for delivering this supply to markets;</li> <li>• operational security of gas markets, i.e., daily and seasonal stresses and strains of extreme weather and other operational problems versus strategic security, i.e., catastrophic failure of major supply sources and facilities.</li> </ul>  | Stern <sup>173</sup>                                   |
| 44     | Over the last decade it has become one of the government's priorities. Physical supply of electricity and gas, i.e., ensuring there is no interruption in energy flows (concretely: to avoid power cuts, for example). Price security or stability, i.e., ensuring that energy sources are sufficiently diverse to protect consumers from sudden price hikes.   | <i>The Switch</i> <sup>174</sup>                       |
| 45     | Focuses on the geographical location of energy resources, political stability of producing and consuming countries, and availability of fuel substitutes. This view sees energy supply as a key component of national security and correct policy becomes a matter of maintaining economic vitality and military strength.  | Tonn et al <sup>175</sup>                              |
| 46     | Availability of usable energy supplies, at the point of final consumption, in sufficient quantity and timeliness so that, given due regard for encouraging energy efficiency, the economic and social development of the country is not materially constrained  | US Agency for International Development <sup>176</sup> |
| 47     | Capacity to avoid adverse impact of energy disruptions caused either by natural, accidental, or intentional events affecting energy and utility supply and distribution systems   | US Department of Defense <sup>177</sup>                |

<sup>172</sup> Sovacool, "Coal and Nuclear Technologies," 102.

<sup>173</sup> Stern, "Security of European Natural Gas," 6.

<sup>174</sup> "Energy Security," *The Switch*.

<sup>175</sup> Tonn, Healy, Gibson, Ashish, Cody, Beres, Lulla, Mazur, Ritter, "Power from Perspective," 1434.

<sup>176</sup> U.S. Agency for International Development (USAID), "South Asia," 2.

<sup>177</sup> Kleber, "The US Department of Defense."

Table 3 (Continued)

| Serial | Definition   | Sources  |
|--------|--|--|
| 48     | Access to affordable, reliable and sustainable energy. Modern energy is essential to reach other SDGs and is at the center of efforts to tackle climate change.  | World Bank <sup>178</sup>  |
| 49     | An umbrella term that covers a range of issues linking energy, economic growth and political power, such as the security of energy supply, the level and quality of access, and uncertainty over prices.   | World Economic Forum<br>- <i>Global Energy Architecture</i> <sup>179</sup> |
| 50     | Autonomy, energy supply that is within the control of a country and free from disruption by external agents; reliability, or distribution that is safe and meets demand without interruption; affordability, or prices commensurate with the buying power of consumers; and sustainability, or sufficient supply of energy to support a high quality of life without damaging the environment.   | World Economic Forum - <i>Global Risks 2009</i> <sup>180</sup>             |
| 51     | Reliable, stable and sustainable supply of energy at affordable prices and social costs. Exploring and implementing long-term sustainable solutions in this complex field are vital to promote peace and economic growth.  | World Economic Forum<br>- “Global Agenda Counsel” <sup>181</sup>           |
| 52     | The absence of, protection from, or adaptability to threats that are caused by or have an impact on energy supply chain.   | Winzer <sup>182</sup>  |
| 53     | From a European perspective, as a significant energy consumer and net importer of oil and gas, energy security means access to reliable sources of energy, at competitive prices, produced in environmentally responsible and safe manner. From an Algerian perspective, as a significant energy producer and net exporter of both oil and gas to Europe, the concern is not so much about security of supply, but security of demand. | Witton <sup>183</sup>  |
| 54     | The availability of sufficient supplies at affordable prices.  | Yergin <sup>184</sup>  |

Source: Author's compilation from multiple sources

## 2.5. Energy Security Definition – An Analysis of Energy and Security

The Energy security phrase could be further analyzed by looking into the ‘energy’ and ‘security’ terms separately. The Oxford English Dictionary defines energy as “the strength and vitality required for sustained physical or mental activity and/or power derived from the

<sup>178</sup> “Overview,” World Bank.

<sup>179</sup> World Economic Forum, *Global Energy Architecture*, 16.

<sup>180</sup> World Economic Forum, *Global Risks 2009*,” 20.

<sup>181</sup> World Economic Forum, *Global Agenda*.

<sup>182</sup> Winzer, “Conceptualizing,” 41.

<sup>183</sup> Witton, “Can Algeria,” 3.

<sup>184</sup> Yergin, *The Quest*, 266.



utilization of physical or chemical resources, especially to provide light and heat or to work machines.”<sup>185</sup> Energy should also be perceived as part of a system that helps individuals to continue maintaining their standard of living and societies to develop and prosper. Energy supports “the basic necessities of modern human life, industry, and transportation.”<sup>186</sup> Goldthau and Savacool define energy as:

...the socio-technical system in place to convert energy fuels and carriers into services—thus not just technology or hardware such as power plants and pipelines, but also other elements of the ‘fuel cycle’ such as coal mines and oil wells in addition to the institutions and agencies such as electric utilities or transnational corporations that manage the system. It’s not only extracting natural riches from the ground but processing in a responsible way is crucial for how we use the energy.<sup>187</sup>

Security is defined as “the activities involved in protecting a country, building or person against attack, danger or threat.”<sup>188</sup> While the absence of threats could also be used as an approach to describe security, it is generally related to “an actor, activity, technology, or system.”<sup>189</sup> Protection against attacks, such as terrorism or piracy, could easily be rendered into using military means to ensure uninterrupted flow of resources and the physical protection of exploration, production, transition and distribution of supplies. This could be alluded to external and/or internal factors that could be measured against objective criteria. However, an individual’s perception of security is subjective. While it is difficult to measure, subjective security could be an important aspects of policy development. The external and internal threats might originate resource nationalism and energy exporting countries control over the resources to utilize supplies achieving political ends or poor infrastructure and inefficient markets.<sup>190</sup>

The energy security definitions lead us several ways to cluster and categorize energy security. Securitization of energy along national and state centric lines encompasses vulnerability of energy dependent countries, concerns over the international balance of power

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<sup>185</sup> Soanes, Oxford English Dictionary, 12<sup>th</sup> Ed., 2011, s.v. “Energy.”

<sup>186</sup> Secretariat, Energy Charter, “International Energy Security,” 8.

<sup>187</sup> Goldthau and Sovacool, “The Uniqueness,” 233.

<sup>188</sup> Soanes, Oxford English Dictionary, “Security.”

<sup>189</sup> Johansson, “A Broadened Typology,” 200.

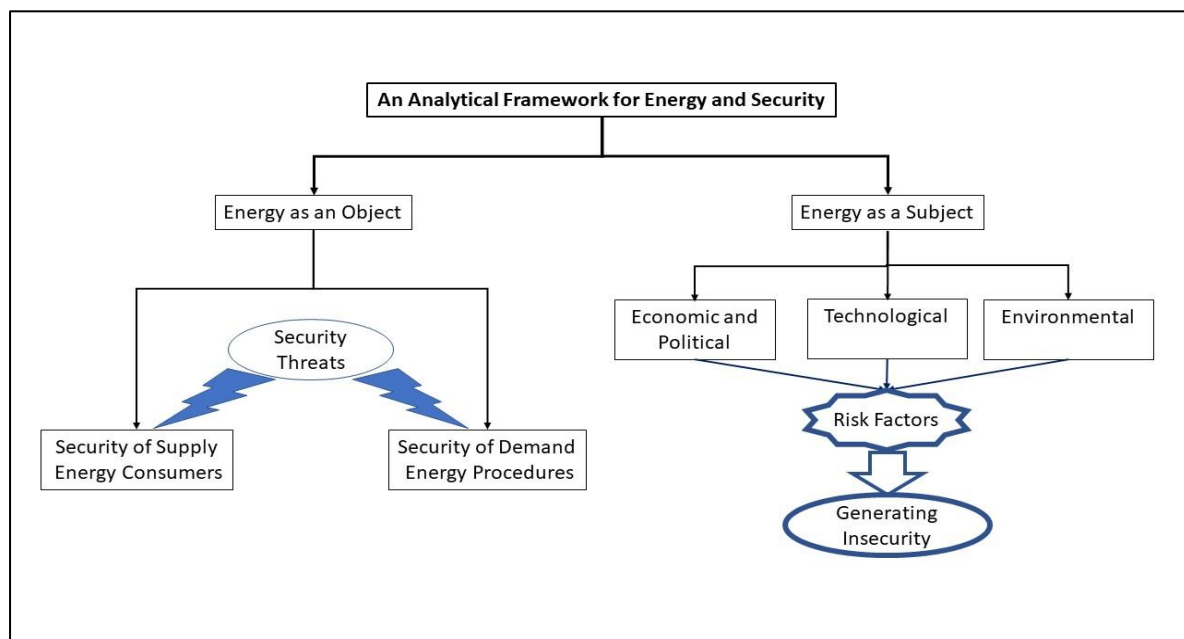
<sup>190</sup> Ibid.

and national security, protection of state and its functions. The human security viewpoint focuses on “safety from chronic threats such as hunger, disease and repression; and protection from sudden and harmful disruptions in the pattern of daily life”<sup>191</sup> that addresses security concerns of individuals. Energy security could be part of any discussions along these lines.

As depicted in Figure 2, Johansson uses two main frameworks to cluster and categorize key aspects of energy security:

- First, energy system as an object with a focus on energy supply and demand security;
- Second, energy system regarded as a subject generating insecurity and acting as a threat multiplier.

Figure 2: Analytical Framework to Study Energy and Security Relations<sup>192</sup>



Source: Bengt Johansson, *A broadened typology on energy and security*,  
<https://www.sciencedirect.com/science/article/pii/S0360544213001886?via%3Dihub>

<sup>191</sup> Johansson, "A Broadened Typology," 200.

<sup>192</sup> Ibid, 202.

An energy system includes a set of technical and non-technical components that allow delivery of energy from production to the end-users.<sup>193</sup> The first framework, energy as an object, is further bifurcated into two angles, security of supply and security of demand. Johansson argues, “A well-functioning energy system has at least two aspects, security of supply and security of demand.”<sup>194</sup> While these two perspectives differ significantly based on one’s place in an energy system, there is a fundamental relationship between securing energy supply and demand based on market dynamics. Energy systems as an object are vulnerable against external and internal threats, and they need to be protected to ensure they deliver services for individuals and society to accomplish their functions.

Security of supply consists of a system from exploration, extraction, preparation (liquefaction), transportation using pipelines or other means, refining, and distribution to the end users. External and internal, man-made, and natural threats could affect this system any time, resulting in potential disruption of the supplies. Energy interruption, price shocks, and long-term high price levels are considered threats to security of supply. Uninterrupted and stable supply of energy resources is a key prerequisite for provision of supply security that is mostly a concern for energy importers. Most of the EU members fall into this category due to their dependency on energy imports. Therefore, the EU energy strategy focuses on resilience, protection of the critical energy infrastructure, resource availability, and market-based supply and demand relationships.

Energy exports are a key source of income for the economy and the national budgets of energy producers and exporters. In order to maintain a stable income, security of demand is a major concern for these countries as the energy sector’s share is large in their industrial production. For example, oil and gas revenues contributed to 36% of the Russia’s federal budget

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<sup>193</sup> Hogselius, *Energy and Geopolitics*, 15.

<sup>194</sup> Johansson, "A Broadened Typology," 202.

in 2016, and fossil fuels accounted for as much as 63.2% of Russia's export in 2017.<sup>195</sup> While consumer countries would like to push prices low as much as possible, exporting countries benefit from the high energy prices. An increase in oil prices between 2003 and 2008 caused a global financial crisis which allowed Putin to build Russia's public finances before the global economic meltdown. Based on IEA and BP reports, "Russia is the world's largest exporter of energy resources: #2 for oil exports, #1 for gas exports, and #3 for coal exports in the world in 2017."<sup>196</sup> Security of demand is critical for the Russian economy as well as Central Asian and Caucasus countries.

Price volatility and energy competition are considered as external threats against the energy system and cause concern not only for consumers but also for producers. Stable energy prices and security of transportation networks form mutual interests shared with the energy importing and exporting countries. Energy exporters also focus on the protection of their market shares. Russia has provided alternative gas pipeline projects to reduce interest in the Nabucco project, moving gas from Turkmenistan and Azerbaijan through Turkey to Europe. Russia uses every overt and covert means to prevent, delay, and when possible, control Central Asian and the Caucasus region's access to international markets. Putin was successful for the cancellation of the Nabucco projects. Russia's gas supply to Europe has been at the heart of a geopolitical competition and one of the key drivers for the Russian intervention in Ukraine.

As a subject, energy systems could generate security concerns or could become a threat multiplier in several ways based on: economic and political, technological, and environmental risk factors.<sup>197</sup> Energy systems are highly politicized and contested. Large projects such as Nord Stream 1 and 2 have become contentious, involving major powers, international organizations, industry, state-owned enterprises and financial institutions. For example, due to US sanctions,

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<sup>195</sup> OECD, "Fossil Fuel Support,"

<sup>196</sup> Mitrova and Melnikov, "Energy Transition," 74.

<sup>197</sup> Johansson, "A Broadened Typology," 202-203.

the Nord Stream 2 project was delayed when it reached the final phase of construction. Political and economic aspects, such as Western sanctions due to Russia's illegal annexation of Crimea, affected technology transfer to the Russian energy sector. Critical energy infrastructure has been targeted over the years, and it will continue to be targeted by not only physical means but also cyber-attacks. Sovacool lists countries that were subject to attacks on critical infrastructure:

Afghanistan, Angola, Argentina, Bolivia, Brazil, Chile, Cyprus, Egypt, El Salvador, Germany, Guatemala, France, India, Iran, Ireland, Iraq, Israel, Italy, Japan, Korea, Kuwait, Lebanon, Libya, Mozambique, Netherlands, Nicaragua, Nigeria, Portugal, Puerto Rico, Qatar, Saudi Arabia, Singapore, Spain, Sweden, Syria, Taiwan, Turkey, Uganda, United Kingdom, United States, Vietnam, and Zimbabwe.<sup>198</sup>

The most recent attacks occurred in Eastern Europe and the Baltics, where Ukrainian and Estonian energy infrastructure were targeted by technology-based threats. Growing use of electronic, digitized and internet/intranet-based control mechanisms and management systems have increased vulnerability of energy systems against individuals, non-state and state actors.

While these points establish a foundation for initial analysis using both qualitative and quantitative data, parameters and indicators measuring energy security might change over time. For example, increased focus on decarbonization and change in climate related policies over energy mix could also affect prioritization at individual, local, national, and global levels. Changes in market dynamics, extreme weather events, technical and operational deficiencies could influence production capacity resulting in supply interruptions. These external and internal factors have direct influence on supply and demand dynamics and relations between energy producers, transit countries and consumers.

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<sup>198</sup> Sovacool, "Introduction," 30.

### 2.5.1. Key Elements of Energy Security – Availability, Reliability, Affordability, and Sustainability

Energy security definitions listed above in Table 3 could be further categorized based on traditional factors that are mostly perceived as the lowest common denominator: availability, reliability, affordability, and sustainability.

- Availability: the physical existence of energy resources and services, oil, gas, coal etc. and users/consumers ability to acquire what they need. Elkind argues that:
  - Availability requires the existence of commercial energy markets in which buyers and sellers trade energy goods and services, markets that take shape only when parties agree on terms that accommodate the commercial, economic, political, strategic, and other interests of buyers, sellers, and shippers. Mutuality of interest among players in the value chain is therefore a prerequisite for energy security.<sup>199</sup>
  - While many energy resources are available in nature, such as the Arctic region which holds 13% of the world's undiscovered oil and 30% of its undiscovered gas,<sup>200</sup> they require extensive investments, advanced technology, and physical conditions to explore and extract them. These resources are available, but they are costly and difficult to extract. Additionally, the creation of markets requires legal and regulatory frameworks that are acceptable to all parties involved. Therefore, availability involves multi-stakeholders and mechanisms based on markets and regulations to allow users/consumers to secure these resources.
- Reliability: Disruption of energy supplies is a major concern for users/consumers as well as producers and exporting countries. Uninterrupted energy flow is an essential part of market dynamics as well as maintenance of basic services

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<sup>199</sup> Pascual and Elkind, *Energy Security*, 121-123.

<sup>200</sup> US Energy Information Agency, "Arctic Oil."

such as heating homes, offices, and schools; operating factories and supporting industry; and providing power for hospitals and transportation. The disruption of energy systems could be a result of external and internal threats that include man-made and naturel causes. For example, recent hurricanes Katrina, Rita, and Sandy have undermined US domestic supply chains while terrorist or cyber-attacks have disrupted supplies in other countries. The following measures enhance reliability while improving energy security:

- “Diversification of sources of supply,
  - diversification of supply chain used for processing, transporting, and distributing energy,
  - resilience or the ability to handle shocks and recover from failures,
  - reducing energy demand to ease the burden on infrastructure,
  - redundancy in case failures occur (especially in energy infrastructure),
  - creating emergency stocks,
  - disseminating timely information to markets.”<sup>201</sup>
- Affordability: Energy prices affect users/consumers choices, and if energy is not affordable, it cannot be used. IEA data shows 1.1 billion people do not have access to electricity worldwide; this is also referred to as energy poverty.<sup>202</sup> The affordability aspect of energy security is not only related with the high or low levels compared to consumers’ income levels; the volatility of price is also a concern. Consumers naturally prefer low energy prices. However low prices could motivate an increase in energy consumption and might have negative impacts on the energy mix of countries. Governments might focus on short term benefits and delay environmentally friendly and technologically advanced energy solutions due to higher costs of such policy

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<sup>201</sup> Pascual and Elkind, *Energy Security*, 29.

<sup>202</sup> Daly, “1.1 Billion People Still Lack Electricity. This Could Be the Solution,” In *World Economic Forum*.

choices. Elkind argues that getting energy prices at the right level is one of the central requirements for improving energy security.

- Sustainability/Acceptability: This mainly addresses environmental concerns related to energy systems/industry and is also referred to as acceptability. In recent years, increased attention has been directed to adverse effects of climate change and environmental security. The use of fossil fuels, coal, hydrocarbon gas liquids, natural gas, and petroleum have caused greenhouse gas emissions. Growing public pressure and changes in environment have increased emphasis on environmental sustainability with implications for coal power plants to the automobile industry, air travel, and other areas that drive energy consumption. Climate change will continue to increasingly affect the energy mix of countries. The most recent European Commission analysis highlights achieving climate neutrality by 2050 under its green resilience objective. This report states, “This entails eliminating our dependency on fossil fuels, reducing our impact on natural resources...changing lifestyles, production and consumption patterns, and climate proofing infrastructure.”<sup>203</sup> Elkind highlights that energy infrastructure typically is long-lived and past decisions are expected to remain valid for another decade or more.<sup>204</sup> Therefore, climate change related policies and decisions will affect energy security approaches from both consumer and producer countries driven by supply and demand dynamics. Technologies used to increase energy security will also be driven by climate change policies as governments’ taxes and subsidies are expected to be shaped by public concerns.

- These key elements of energy security will be affected by a number of components that are shaped by threats to energy security. These threats vary from increasing extraction costs to national policies, legal regulatory or environmental

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<sup>203</sup> European Commission, “2020 Strategic Foresight Report.”

<sup>204</sup> Pascual and Elkind, *Energy Security*, 124-128.



concerns as well as man-made or natural disasters, political and military interventions.<sup>205</sup>

## 2.5.2. Key Elements of Energy Security – Alternative Approaches

The definition of energy security depends on one's place in the energy system and it means different things to different people under different circumstances and situations. Additionally, energy security as a concept is extended to areas such as climate change and energy poverty that are related to energy policy issues. While there are different definitions, the meaning of energy security also depends on the problems that are being considered. The differences are largely driven by national priorities of respective countries in the energy system. Pundits of social scientists, in particular those studying energy security, provide clarity and increase explanatory and predictive force by not trying to eliminate the differences in energy security definitions.<sup>206</sup>

Alternative approaches to define energy security go beyond availability, reliability, affordability, sustainability/acceptability and posit the following three questions:

- Security for whom?
- Security for which values?
- From what threats?

In their analysis, Cherp and Jewell reinforce Buzan's argument that a concept of security that fails to ask *Security for whom?* makes little sense. While early energy security studies of the 1970s are clear in their explanation of referent object as oil-importing industrialized nations, "the scope of contemporary energy security studies goes beyond OECD oil importers to include nations of all levels of development that extract, import, export and use a variety of energy sources and carriers."<sup>207</sup> Energy security systems also involve private

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<sup>205</sup> Pascual and Elkind, *Energy Security*, 122.

<sup>206</sup> Cherp, and Jewell, "The Concept," 416.

<sup>207</sup> Ibid, 417.

consumers, other non-state actors such as industry and businesses, energy companies, and in particular state-owned enterprises, that have increased their influence on policy development as well as prioritization of energy related investment. Early energy security definitions address concerns of oil/gas importing countries/nations, which have a different interpretation of energy security, *Affordability for whom?* This was not explained well especially to private consumers, industry, and businesses. Household and private consumers would like energy prices low compared to their income, and businesses would like to maintain a competitive edge and maintain low energy prices. On the other hand, energy companies focus on profitability and business continuity.<sup>208</sup>

The second key question is *Security for which values?* This investigates whether energy security definitions analyze the link between energy security and relations with human values. Cherp and Jewell argue that in the 20<sup>th</sup> century, “the classic energy security studies proceeded from the strong, self-evident and implicit connection between national values such as political independence and territorial integrity and a particular energy system: oil supplies.”<sup>209</sup> However, in the 21<sup>st</sup> century, energy security concerns extend beyond oil to other energy sectors such as natural gas. It also moves beyond traditional geopolitical values and is connected with social, environmental and political values. Therefore, energy security metrics move beyond geopolitical issues but include environmental and other concerns that might be more interested to the public and drive policy development.

The final question is *From what threats?* This question elaborates on the differences between potential risk to disrupt energy supply/systems and resilience to maintain business continuity in case a disruption occurs. Resilience-enhancing policies, including green resilience, have become a strategic focus for the European Commission’s post-COVID 19 recovery agenda. Understanding sensitivities and vulnerabilities of the energy systems could

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<sup>208</sup> Cherp, and Jewell, “The Concept,” 418.

<sup>209</sup> Ibid, 417.

enable alternative approaches and further contextualization of energy security. Cherp and Jewel suggest that “low vulnerability of vital energy systems” could describe energy security and allow conceptualization of recent developments and potential future energy systems.<sup>210</sup>

## 2.6. Evolution of Energy Security Concept

There are two different narratives in regard to the development of the energy security concept. The first narrative focuses on how exponential transition from human power in pre-modern agrarian societies transformed to fuel-based industrial societies. Once scarce and expensive energy resources have become widely accessible and used by large populations, providing prosperity and development to Western countries. This monumental change in human condition is driven by availability and affordability of energy resources. While the better human conditions get, the demand for energy increases. The increase in demand is directly correlated with the increases in human population and condition. The second narrative agrees on the effects of the energy driven transition in societies. However, it questions equal and fair distribution of “the resulting economic and political conditions, highlighting the structural inequalities and the unevenness of global development.”<sup>211</sup>

The rapid economic growth in the 1950s and 1960s in Europe and in Japan increased demand for oil and “had a transformative impact on the world energy scene and on global politics...commercial competition could turn into a national rivalry that cast in terms of threats and security, disrupting the working relationships that the world economy requires.”<sup>212</sup> During the 1973 Arab-Israel War, in protest to US support of Israel, Arab states stopped exporting oil shipments to the U.S. and its allies. The oil shortage has caused economic, social and political problems that resulted in further securitization of the subject. The most recent examples are Russia’s cutting gas delivery to Ukraine in 2006 and 2009 to leverage political outcomes. The

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<sup>210</sup> Cherp, and Jewell, “The Concept,” 418.

<sup>211</sup> Dannreuther, *Energy Security*, 34.

<sup>212</sup> Yergin, *The Quest*, 194.

effects were felt not only in Ukraine, but also in Europe, and exacerbated concerns in Eastern European and Baltic countries that have higher dependence on Russian energy resources.

The concept of energy security is also closely linked with geopolitics and national security concerns of the parties involved. This is not a new phenomenon. Securitization of energy goes back to 1911 when British ships using coal were converted to using oil. This change enabled the British to increase their ships' speed and allowed more space for weapons and ammunition; however, it created another problem: finding a secure oil supply.<sup>213</sup> Although securitization of energy is commonplace, the source of national concerns differs significantly, increasing the complexity of the subject. The following are a few different examples of how energy security is achieved or considered as a market-driven relationship based on global governance mechanism:

- After its independence in 1990, Lithuanian leadership recognized that total reliance on Russian resources undermined their national security. They adopted a policy to diversify energy supply both in oil and gas.<sup>214</sup>
- Retired Admiral Dennis Blair, in his testimony to the US Senate, argued that excessive dependence on oil for transportation was inconsistent with the U.S national security strategy. He was concerned for the increased reliance on a volatile region of the world.<sup>215</sup>
- The U.S. limited oil exports to China after the communist revolution in 1949 and then cut oil supplies with the outbreak of the Korean War, affecting Chinese military operations. This development still echoes today and has pushed China for self-reliance for defense and economic development, resulting in energy security becoming a crucial aspect of Chinese national strategy.<sup>216</sup>

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<sup>213</sup> Yergin, *The Quest*, 264, 265.

<sup>214</sup> Sholk and Sagers, "Lithuania's Gas Market," 9.

<sup>215</sup> Yergin, *The Quest*, 181.

<sup>216</sup> Ibid, 195-196.

- Oil and gas have powered the Russian economy since the collapse of the Soviet Union, and they have become the engine of recovery and growth, the number one source of government revenues, while heavy reliance on oil and gas has also created vulnerabilities. During a NATO organized international conference in 2012, in Zagreb, NATO and EU members complained about the security of energy supply and Russia's actions to cut gas flow through Ukraine in 2006 and 2009. The Russian Ambassador stated that demand security is their biggest concern.<sup>217</sup>
- To avoid the Russian sphere of influence in Central Asia and the Caspian region with its vast energy resources, the US and the West focused on potential reintegration of the region into the world energy market to increase diversification and contribute energy security. Regional countries were not in a position to disengage from Russia, "as the Azeri national security advisor put it, 'Oil is our strategy, it is our defense, it is our independence.'"<sup>218</sup>
- Kazakhstan had similar complex post-Cold War geopolitical struggles in relations with Russia, striking a balance between re-definition of former Soviet space - a new Russian near abroad strategy – and the rest of world. The geography of Central Asia was an additional challenge in getting oil and gas to global markets due to a lack of sufficient infrastructure, excluding those controlled by Moscow.<sup>219</sup>
- In addition to Central Asian and the Caucasus countries, players included Russia, the U.S., the EU, China, Iran, and Turkey, with different objectives and priorities. Where those objectives converged and were supported by the markets, energy and pipeline politics produced positive outcomes, while struggle and competition continued elsewhere.

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<sup>217</sup> Author's interaction during the meeting.

<sup>218</sup> Yergin, *The Quest*, 49.

<sup>219</sup> Ibid, 67-72.

Is energy security being perceived as a military concept or an economic one? Does it make any difference whether it is a military or economic concept? These questions were reviewed by Esakova, who concluded that “In purely economic terms, energy security is measured as the physical supply interruption and non-emergency price level. In military terms, energy security is defined as an equivalent to national security, i.e., an essential element guaranteeing a country’s military security.”<sup>220</sup> The gas crises in 2006 and 2009 between Russia-Ukraine started as an economic crisis, then evolved into a military conflict in 2013 and 2014. Physical supply interruption was used to coerce other parties to achieve political ends. Therefore, it is difficult to differentiate whether energy security is in an economic or security context. This issue has also been reflected at the EU and NATO. While it deploys military forces against piracy and terrorist threats, the EU perceives energy security as an economic issue and develops strategies to deal with challenges by utilizing market forces. NATO is more concerned with the high-level dependency of its members on foreign energy suppliers and distribution networks.<sup>221</sup> NATO member nations are also interested in energy supply chains spreading across the globe that increase potential for disruption by state and non-state actors.

European Energy Security Strategy highlights that energy security is a market-driven economic concept and should be dealt with by cooperation and the energy development of internal markets with increased interconnections.<sup>222</sup> However, this approach has not been followed by Russia. Dellecker and Gomart argue that “...in Eurasia as anywhere, energy and geopolitics are closely intertwined...Russia’s official energy strategy to 2020 urges the state to be deeply involved in the energy sector so as to protect the country from both internal and external threats...the official strategy notes that “energy security is the most important element in Russia’s national security.””<sup>223</sup>

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<sup>220</sup> Esakova, *European Energy Security*, 44.

<sup>221</sup> NATO Strategic Concept 2010, 12-13.

<sup>222</sup> European Commission, “Energy Security Strategy,” 2.

<sup>223</sup> Dellecker and Gomart, *Russian Energy*, 1.

Energy security is perceived to be part of national security for any state. Esakova argues that “Energy resources are a power resource and one of the major measures for a state’s influence and power both on the national and international level.”<sup>224</sup> As a consequence, states highly dependent upon imported energy perceive this dependency as a source of national vulnerability and follow an increasingly geopolitical approach. The consumer states sense of vulnerability is exacerbated due to location of natural resources in volatile regions such as the Middle East and Central Asia, “where weak and fragile states with multiple internal sources of conflict”<sup>225</sup> and a lack of institutions that help to alleviate distrust while setting conditions for cooperation exist.

The Russian approach to Ukraine and Europe has significantly been influenced by realist thinking. Esakova argues that “...the realist conditions in [the] energy context suggest that survival in the international system of anarchy is possible only by means of securing the state’s individual access to energy resources.”<sup>226</sup> The realist-oriented energy security framework is widely supported and accepted as one of the key dynamics of competition and conflict between the United States and China. However, gaining energy independence and becoming a major supplier of oil and gas after the shale gas and oil revolution, United States-China relations in the energy domain has been influenced by market dynamics, while competition shifted other areas such as technology and trade.

Competition for resources has also changed the way states approach energy security. Central Asia and the Caucasus (Caspian Sea basin) has emerged as a potential area with vast untapped resources which has instigated the New Great Game to access and control energy resources of the region.<sup>227</sup> Dannreuther also suggests that “The perception of Russia’s stranglehold on Europe has similarly influenced Western perception Russia’s policies towards

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<sup>224</sup> Esakova, *European Energy Security*, 80.

<sup>225</sup> Dannreuther, *Energy Security*, 24.

<sup>226</sup> Esakova, *European Energy Security*, 48.

<sup>227</sup> Klare, *Rising Powers*, 115.

Ukraine. Popular and elite discourse have resurrected the idea of a renewed post-Cold War ‘great game’ in Central Asia ...as part of a geopolitical struggle between China, [the] West and Russia over oil, gas, and mineral resources of these regions.”<sup>228</sup> Based on Collier and Hoeffler’s research on the causes of post-Cold War civil conflicts, Dannreuther highlights that the main cause of these conflicts are not grievance issues as generally perceived, but rather driven by “greed and material rewards offered in particular by control of natural resources.”<sup>229</sup>

## 2.7. Conclusions

Energy security is contested, multifaceted, and highly politicized, and it is likely to remain one of the most disputed issues in international relations. There is no agreed definition of energy security or a shared understanding of the energy security concept. The strategic and geopolitical role of energy will continue as the concerns for security of supply occupy decision-makers agendas along the lines of the four ‘A’s – availability, accessibility, affordability and acceptability. While energy disruption could happen for a variety of reasons such as failures of technology, natural or man-made disasters, extreme weather events, using oil as a political weapon like what happened in the 1973 AOPEC oil embargo caused a haunting damage on the long-term legacy of energy supply and demand dynamics.<sup>230</sup> Russia-Ukraine gas crises in 2006 and 2009 resulted in supply cut-offs to Europe albeit they were for economic reasons, as an outcome of price and debt disputes. Russia’s illegal annexation of Crimea and ongoing intervention in Eastern Ukraine, as well as attempts to establish pipeline networks circumventing Ukraine, brought energy security concerns to the agenda of Western decision-makers, especially those of energy dependent European Union members.

The literature is dominated by two competing views centered on realist and liberalist schools of thought that explain energy relations between Europe and Russia, the world’s largest

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<sup>228</sup> Dannreuther, *Energy Security*, 24

<sup>229</sup> Ibid, 25.

<sup>230</sup> Yetiv, *Crude Awakenings*, 139-143.



importer and the largest exporter of gas. The realist view securitizes the issue by using geopolitical and energy security lenses while liberals argue that interdependence is based on economic relations, efficiency, norms, and the role of institutions. These diverging views on energy security, based on national, economic and/or business interests, are reflected differently in two geographic zones: Western and Central/Eastern Europe that includes countries in Baltics and Balkans. In Western Europe, economy and efficiency tends to predominate the views on European-Russia natural gas relations while in Central/Eastern Europe, national security concerns come to the forefront. This might directly relate to Baltic, Balkan and Central/Eastern Europe's proximity to Russia. However, Russian strategy to eliminate energy transit countries and utilize energy prices or cut-offs to leverage political outcomes have also influenced the development of a negative perception.<sup>231</sup> As Gustafson argues, Europe, Germany in particular, should not be perceived as a homogeneous entity in terms of views on European-Russia energy relations. There are two different camps operating with different opinions:<sup>232</sup> "For the first community, economics and efficiency are the paramount explanations of events and the surest guides to policy...For the other community, the Russian-German gas trade is fundamentally about geopolitics and security, particularly the threat of gas as a weapon for Russian political and strategic ends."<sup>233</sup>

These competing views go beyond the literature and create diverging perspectives between and within countries, amongst energy companies, financial and economic institutions, security and policy think tanks, as well as government ministries of countries. Albeit these differences, European-Russia energy relations have evolved over-time since the first gas trade started in the 1960s. This relationship survived fundamental geopolitical and geoeconomics changes such as the end of the Cold War, re-unification of Germany, the collapse of the Soviet

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<sup>231</sup> Grigas, *The New Geopolitics*, 147.

<sup>232</sup> Gustafson, *The Bridge*, 356-357.

<sup>233</sup> Ibid.

Union, EU enlargement in 1995, 2004, 2007, and 2013, and NATO expansion including former Soviet states. Russia's illegal annexation of Crimea and intervention in Eastern Ukraine was a watershed moment for increasing tendencies for a geopolitical approach to the European-Russian energy relations.

The EU stands out one of key players to regulate energy markets by introducing competition doctrine and the market-based innovations for transforming and reforming the European gas sector. Over the last six decades, European - Russia energy relations, in particular gas, have become more complex with the involvement of transnational energy companies, state-owned enterprises, international and supranational organizations, increasingly complex legal requirements, as well as construction of a web of pipelines, connectors that carry gas to all parts of Europe. The following chapter will study European-Russian energy relations but will also include neighboring and EU aspiring countries that have a transit role such as Ukraine. Additionally, the United States-led shale gas revolution will be discussed with its increasing share in international markets.

## CHAPTER 3

### EUROPEAN ENERGY SECURITY

#### 3.1. Introduction

In response to the critics of the Royal Navy's decision to convert battleships from coal to oil, Churchill told them the fundamental principles of energy security: "On no one quality, on no one process, on no one country, on no one route, and no one field must we be dependent."<sup>234</sup> In another occasion, he said, "Safety and certainty in oil lie in variety and variety alone."<sup>235</sup> While energy concerns focused on supplying military forces, armies, and navies, in the beginning of the 20<sup>th</sup> Century,<sup>236</sup> there has been a shift towards using energy to support rapid industrialization and development after World War II. The idea of diversification has been the cornerstone of European energy security.

Initially, natural gas was seen as a by-product of oil and was paid little attention as a commercially valuable energy source due to challenges to transport natural gas over long-distances. A gradual change of natural gas use as a source of energy coincided with the end of the war. Oil industrialists realized natural gas could be used as an energy source on its own and started building pipelines.<sup>237</sup> Natural gas became one of the main drivers for optimism and post-war economic growth between the mid-1940s and the AOPEC oil embargo in 1973.<sup>238</sup> The energy crisis brought energy security concerns to the public eye and policy makers' attention due to increasing pressure to reduce energy dependency on external resources, especially to a single source. Hogselius argued that, "Mentioning energy and geopolitics in the same sentence evokes memories of dramatic international events and crises such as the 1973 oil embargos, Russia's alleged use of natural gas as a foreign policy tool."<sup>239</sup>

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<sup>234</sup> Yergin, *The Quest*, 265.

<sup>235</sup> Ibid.

<sup>236</sup> Grigas, *The New Geopolitics*, 10.

<sup>237</sup> Hogselius, *Energy and Geopolitics*, 6.

<sup>238</sup> Gustafson, *The Bridge*, 11.

<sup>239</sup> Hogselius, *Energy and Geopolitics*, 1.

In this chapter, I will explain the evolution of natural gas in Europe and increasing dependency on external sources, especially to Russian natural gas. I will start with the development of the European natural gas market and initial Soviet Union exports headed for Europe in late 1960s during the Cold War. This will be followed by the evolution of European as a single market as Central and Eastern European countries joined the European Union and NATO, which resulted with a significant impact on the EU's gas dependency to a single source. At the same time, Russia's growing desire to control pipeline networks to increase its leverage over the former satellite or Soviet republics - in its 'near abroad' - where energy dependency is generally higher.

I will also review the EU's search for a common energy policy and creation of an Energy Union initiative to counter Russian influence. In this context, the differences between Western and Central/Eastern European countries and the latter's energy security concerns are studied. European attempts to meet increasing demand for natural gas and to reduce dependency to a single source by diversifying natural gas imports whether via pipelines or LNG terminals will be reviewed.

### 3.2. European-Soviet Union Energy Relations - Natural Gas in Europe

#### 3.2.1. Cold War Period – Eastern Europe

European-Soviet Union, later European-Russian, energy relations started with oil transactions and have evolved over time with the first gas trade which started in the late 1960s.<sup>240</sup> The Soviet Union had large oil, natural gas, and coal reserves and had the capacity to provide cheap gas in large volumes. There were two trends, at the time, which made Soviet gas attractive for Western Europe, especially for Austria, Southern Germany, France, and Northern Italy. First, there were large Soviet gas reserves discovered in Tyumen, West Siberia, in the early 1960s. The second, relaxation in East-West relations.<sup>241</sup> While the remoteness of these

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<sup>240</sup> Yergin, *The Quest*, 23.

<sup>241</sup> Hogselius, *Red Gas*, 35.

natural gas reserves caused intense political debates in Moscow due to lengthy transport distances, they were new and untouched. The following map shows the East and West Siberian, Turkmen, and Azerbaijan oil and gas production fields and connecting pipelines.

Figure 3: Selected Oil and Gas Pipeline Infrastructure in the Former Soviet Union <sup>242</sup>



Source: US Energy Information Agency, [http://www.eia.doe.gov/cabs/Russia/images/fsu\\_energymap.pdf](http://www.eia.doe.gov/cabs/Russia/images/fsu_energymap.pdf)

Soviet desire for increasing energy exports was driven by finding hard currency for trade with the West. Stern highlights that, “The countries of Eastern Europe were heavily dependent upon the USSR for supplies of oil and gas. No East European country, except Romania, produced more than negligible quantities of oil, although Poland and Hungary are modest gas

<sup>242</sup> “U.S. Energy Information Administration - EIA – ‘Selected Oil and Gas Pipeline Infrastructure in the Former Soviet Union.’”

producers.”<sup>243</sup> By the mid-1960s, Moscow was able to supply oil and gas to Eastern European countries. Grigas writes that, “Russia began using oil as an instrument of soft power, particularly in Eastern Europe...initially supplying oil at very low prices, Russia was able shift dependence of eastern Europe’s heavy industry sector from cheap coal to cheaper oil.”<sup>244</sup> However, by the end of the 1960s and early 1970s, when oil prices increased during the crisis, Eastern Europe was encouraged to get oil from the Middle East in exchange for manufactured goods and technology. The growing dependency on Soviet energy, a lack of integrated and transparent pricing mechanisms, and the alleged exploitation of Eastern European importers through price discrimination resulted in growing concern in Eastern Europe.<sup>245</sup> Additionally, the 1973 Oil crisis had a devastating effect on Eastern Europeans as their purchasing power decreased significantly.

The AOPEC oil embargo was one of the main reasons for the strategic decision for Western Europe to establish energy relations with the Soviet Union. European countries were seeking for other sources to diversify their energy supply. Esakova argues that while Europe considered developing future energy relations with the Soviet Union, that was the beginning of realizing its energy producing potential, while still being required to make major investments in its energy sector.<sup>246</sup> Therefore, their dependence on Soviet energy was strengthened.<sup>247</sup>

Soviet gas sector development was closely linked with the increasing demand in Europe.<sup>248</sup> Natural gas exports to Poland started after World War II, in the late 1940s, with very small quantities. This was followed by exports to other Eastern European countries, Czechoslovakia, and further extended to the south to Bulgaria and to the north to the German

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<sup>243</sup> Stern, “Soviet Natural Gas,” 6-7.

<sup>244</sup> Grigas, *The New Geopolitics*, 101.

<sup>245</sup> Prybyla, “Eastern Europe,” 154.

<sup>246</sup> Esakova, *European Energy Security*, 155.

<sup>247</sup> Stern, “Soviet Natural Gas,” 6-7.

<sup>248</sup> Grigas, *The New Geopolitics*, 101.

Democratic Republic (GDR).<sup>249</sup> Competition for pipelines in Eastern Europe started as early as the 1960s. In referencing Harrison, Gustafson states, “In 1964, Ulbricht<sup>250</sup> demanded that Khrushchev<sup>251</sup> commit to building a pipeline to the GDR and to begin gas deliveries by 1969.”<sup>252</sup> Ulbricht used the fact that pipelines were being built to Poland and Czechoslovakia as the foundation of his argument. Solving natural gas transport challenges was an essential step to move Soviet gas from giant gas fields in Urengoy, Yamburg and Medvezhe, initially to Eastern then to Western Europe.<sup>253</sup> Finally, Khrushchev accepted construction of the gas pipeline to the GDR and provided economic support to save the socialist cause by avoiding any negative comparison with West Germany. However, Khrushchev was later blamed by East European socialist leaders for favoring the GDR while other Eastern European countries requested economic support for their problems.<sup>254</sup>

The Soviet planned to extend pipeline networks from Eastern Europe to the West. In this context, the Soviets contacted with Poland and East Germany for increasing diameters of the pipeline and building an expansion to export Soviet gas to West Germany. This proposal was met with strong opposition by East Germans, and Soviets were forced to cancel their demand using a large diameter pipe. The Central and Eastern countries become large importers of Soviet natural gas, by 1973, Poland, Czechoslovakia, and East Germany, Bulgaria in 1974, and in 1975 Hungary were all connected to the Soviet pipeline network. Therefore, “all Soviet satellites except Romania had become importers.”<sup>255</sup> According to Gustafson, “This early episode shows that the Soviets already had a larger goal in mind - to transit gas through the

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<sup>249</sup> Stern, “Soviet Natural Gas,” 58-59.

<sup>250</sup> Britannica, “Walter Ulbricht.”

<sup>251</sup> Gibney, “Nikita Khrushchev,” in full Nikita Sergeyevich Khrushchev, first secretary of the Communist Party of the Soviet Union (1953–64) and premier of the Soviet Union (1958–64).

<sup>252</sup> Gustafson, *The Bridge*, 62. “The conversation between Khrushchev and Ulbricht took place on November 30, 1960. Quoted in Hope M. Harrison, “Driving the Soviets up the Wall: Soviet-East German relations 1953-1961,” Princeton, NJ: Princeton University Press, 2005), 152.

<sup>253</sup> Stern, “Natural Gas in Europe,” 1.

<sup>254</sup> Gustafson, *The Bridge*, 62-63.

<sup>255</sup> Hogselius, *Red Gas*, 171.

satellite countries to Western Europe.”<sup>256</sup> Additionally, it also indicates political relations took precedence over economic relations, as the GDR relinquished transit benefits through gas flow to the West.

### 3.2.2. Cold War Period – Western Europe

In Western Europe, natural gas was discovered and industrialized after WWII. This area benefited from the existing infrastructure that was supporting the so-called “town gas” and “coke gas.”<sup>257</sup> Additionally, public and private players have gained experience in how to handle natural gas. However, the development was slow and different in each country. Italy was the first exception with major finds in Po Valley, and pipelines were built to support the production. France had a similar breakthrough with a small discovery. LNG from the US and Algeria become a major source for the UK natural gas supply.

In Germany, coke gas and town gas were the main sources to support consumption, managed by municipality-owned utilities, until major discoveries of natural gas in Groningen in the Netherlands that changed the European gas industry and set the foundation for today’s gas interactions. The main European focus was shifted to the Netherlands and its giant Slochteren gas field in Groningen. The idea of building trans-border gas pipelines started with applications made by West German energy companies to “build a pipeline from the Dutch border to Germany’s industrial heartlands.”<sup>258</sup> This was a starting point for exporting gas via pipelines and international gas trade. In the 1960s, the discovery of Groningen in the Netherlands was followed by British and Norwegian discoveries of large reserves in the North Sea. These developments coincided with the discoveries made in Soviet West Siberia and the Algerian Southern Saharan Desert.<sup>259</sup>

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<sup>256</sup> Gustafson, *The Bridge*, 65.

<sup>257</sup> Gustafson, *The Bridge*, 13. Town gas was produced by burning coal in large gas plants generally in or near cities. Coke gas was a by-product of the steel industry.

<sup>258</sup> Hogselius, *Red Gas*, 34.

<sup>259</sup> Gustafson, *The Bridge*, 19-20.



Austria was the first Western country that received Soviet natural gas in 1968, shortly after negotiations started in 1967,<sup>260</sup> and “it would become more dependent on deliveries from the East than any other nation in continental Western Europe.”<sup>261</sup> Gustafson highlights the significance of Austria as a crucial step for showcasing that “gas exports across the ‘Iron Curtain,’ despite ideological differences and recurring diplomatic tensions, could be conducted reliably on straightforward commercial principles.”<sup>262</sup> Austrian domestic gas production was small and in decline. To meet increasing gas demand, Austrians were watching the development of Soviet so-called Bratstvo (Brotherhood) Pipeline. The first natural gas exports to Europe originated from Soviet territories closer to European borders, such as Ukraine and the central region of Russia where initial pipelines were constructed. Even after the Ukrainian and Eastern-central Russian gas resources were depleted, pipelines continued to be used to transport Siberian gas to Europe. This resulted in Ukraine becoming a transit hub for Soviet, then Russian, natural gas exports.<sup>263</sup>

Extending Soviet gas from the Czechoslovak terminus in Bratislava to Vienna required construction of 55 kilometers of new pipeline;<sup>264</sup> this was more geographically advantageous than supplies from any other source.<sup>265</sup> Soviet gas exports to Austria made commercial sense. However, Cold War geopolitics were also involved in the selection of Austria as an example. The Soviets wanted Austria to maintain its neutrality and were increasingly concerned about growing attraction of the European Economic Community (EEC). Additionally, Austria opened up potential exports to Italy while setting an example for the rest of Western Europe.<sup>266</sup>

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<sup>260</sup> Stern, “Soviet Natural Gas,” 102-103.

<sup>261</sup> Hogselius, *Red Gas*, 45.

<sup>262</sup> Gustafson, *The Bridge*, 55.

<sup>263</sup> Grigas, *The New Geopolitics*, 104, 105.

<sup>264</sup> Gustafson, *The Bridge*, 56.

<sup>265</sup> Stern, “Soviet Natural Gas,” 103.

<sup>266</sup> Gustafson, *The Bridge*, 55.

Figure 4: Soviet Bratstvo (Brotherhood) Pipeline<sup>267</sup>

Source: Stern, *Soviet Natural Gas Development to 1990*, p. 60

In the early 1960s, the Federal Republic of Germany (FRG), or West Germany, was excluded from Moscow's export strategy due to the overall political relationship and the "anti-German policies formed [as] part of a broader Soviet strategy aimed at disturbing West European integration efforts."<sup>268</sup> The Soviets viewed NATO and other Western organizations, such as the European Coal and Steel Community, the European Atomic Energy Community (EURATOM), and the European Economic Community (EEC), as anti-Soviet establishments.<sup>269</sup> West Germany – Soviet gas relations had multiple dimensions, and key individuals, including both West German and Soviet experts and negotiators, government officials as well as Gazprom and Ruhrgas representatives, played important roles in overcoming

<sup>267</sup> Stern, "Soviet Natural Gas," 60.

<sup>268</sup> Hogselius, *Red Gas*, 67.

<sup>269</sup> Ibid.

diplomatic and commercial challenges. Ruhrgas signed a twenty-year contract for Soviet gas imports. The Chancellor of West Germany, Willy Brandt,<sup>270</sup> approached German-Soviet gas relations as a geopolitical strategy that could help reducing tensions between the West and the East.<sup>271</sup> Hogselius highlights that “In a speech to the European Council in January 1967, Willy Brandt pointed at Germany’s historical role as a ‘bridge between Western and Eastern Europe’ and...his government intended to rebuild this bridge, which had been destroyed by the Cold War.”<sup>272</sup>

Without the role Brandt played, Gustafson argues that the first gas deal would not have happened. This gas deal was part of larger geopolitical approach adopted by Brandt called *Ostpolitik*<sup>273</sup> that remained the foundation of West German foreign policy in the following decades.<sup>274</sup> Throughout the Cold War, cooperation started with gas-for-pipe deals and the “economic sphere was perceived as a major element of détente and ‘change through rapprochement.’”<sup>275</sup> The European Community and Moscow signed the first strategic agreement in 1970. “This agreement,” Esakova argued, was based on the fact that “the USSR needed Western financing and technology, while Western European countries - West Germany, France, Austria, Italy, and Belgium - looked to diversify their gas supply.”<sup>276</sup> On the other hand, Stern highlights that, “When the first contract was concluded in 1970, there was a certain amount of alarm in government circles about possible dependency. Two more deals, in addition

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<sup>270</sup> Britannica, Willy Brandt, original name Herbert Ernst Karl Frahm, German statesman, leader of the German Social Democratic Party of Germany (Sozialdemokratische Partei Deutschland, or SPD) from 1964 to 1987, and chancellor of the Federal Republic of Germany from 1969 to 1974. He was awarded the Nobel Prize for Peace in 1971 for his efforts to achieve reconciliation between West Germany and the countries of the Soviet bloc.

<sup>271</sup> Grigas, *The New Geopolitics*, 103.

<sup>272</sup> Hogselius, *Red Gas*, 78.

<sup>273</sup> Britannica, *Ostpolitik*: defined as the “West German foreign policy begun in the late 1960s. Initiated by Willy Brandt as foreign minister and then chancellor, the policy was one of détente with Soviet-bloc countries, recognizing the East German government and expanding commercial relations with other Soviet-bloc countries. Treaties were concluded in 1970 with the Soviet Union, renouncing the use of force in their relations, and with Poland, recognizing Germany’s 1945 losses east of the Oder-Neisse Line. The policy was continued by Chancellor Helmut Schmidt.”

<sup>274</sup> Gustafson, *The Bridge*, 70-71.

<sup>275</sup> Bros, Mitrova, and Westphal, “German-Russian Gas Relations,” 5.

<sup>276</sup> Esakova, *European Energy Security*, 155, 156.

to Trilateral agreement, have been completed; however, and the original fears of Germans seem to have been allayed.”<sup>277</sup> Apparently, political drivers over Brandt’s Ostpolitik encouraged companies with subsidies and financial support to agree on the gas deal. This agreement started as a state-to-state level deal; however, over time, while Soviet level engagement was directed by top government officials and state-owned enterprises, Western engagement was mostly dictated by market dynamic and private companies.

Highlighting the importance of the West German-Soviet gas deal in 1970, Gustafson argues that if “The Soviet-Austrian contract of 1968 had shown that an East-West gas deal was feasible...a loophole... the Soviet–West German contract was a breakthrough, the beginning of a breach in the Iron Curtain that would only grow larger over the following decades.”<sup>278</sup> When the deal was reached, German state level involvement had ended with the signing of the contract, but the Soviet, then Russian, top leadership were always involved in setting strategic directions and managing geopolitical issues. In the mid-60s, while the demand for Soviet gas was not significant and could not economically be justified, at the time the contract was concluded, the demand for natural gas was growing between 30 to 60% a year. To this day, Germany remains the largest buyer of Russian gas in Europe.<sup>279</sup> The following table depicts Soviet Natural Gas Exports in 1970s, including imports from Iran and Afghanistan.

Table 4: Soviet Natural Gas Export in 1970s, Including CMEA and the West (Bcm)<sup>280</sup>

| Year           | 1970 | 1973 | 1974 | 1975 | 1976 | 1977 | 1978 |
|----------------|------|------|------|------|------|------|------|
| CMEA countries |      |      |      |      |      |      |      |
| Poland         | 1.0  | 1.7  | 2.1  | 2.5  | 2.5  | 2.8  | 2.9  |
| Czechoslovakia | 1.4  | 2.4  | 3.2  | 3.7  | 4.3  | 4.9  | 5.0  |

<sup>277</sup> Stern, “Soviet Natural Gas,” 100.

<sup>278</sup> Gustafson, *The Bridge*, 72.

<sup>279</sup> Ibid, 73, 74.

<sup>280</sup> Data in this table is taken from Stern, “Soviet Natural Gas,” 59.

Table 4 (Continued)

| Year                        | 1970 | 1973             | 1974 | 1975 | 1976 | 1977 | 1978 |
|-----------------------------|------|------------------|------|------|------|------|------|
| Bulgaria                    | -    | -                | 0.3  | 1.2  | 2.2  | 3.0  | 3.0  |
| German Democratic Republic  | -    | -                | 2.9  | 3.3  | 3.4  | 3.6  | 3.7  |
| Hungary                     | -    | -                | -    | 0.6  | 1.0  | 1.0  | 1.2  |
| Other Countries Total       |      |                  |      |      |      |      |      |
| Austria                     | 1.0  | 1.6              | 2.1  | 1.9  | 2.8  | 2.8  | 3.0  |
| Federal Republic of Germany | -    | 0.4              | 2.2  | 3.1  | 4.0  | 5.8  | 6.0  |
| Italy                       | -    | -                | 0.8  | 2.3  | 3.7  | 5.5  | 5.5  |
| France                      | -    | -                | -    | -    | 1.0  | 2.0  | 2.0  |
| Finland                     | -    | -                | 0.4  | 0.7  | 0.8  | 0.8  | 1.0  |
| Total <sup>a</sup>          | 3.3  | 6.1 <sup>b</sup> | 14.0 | 19.3 | 25.8 | 31.3 | 33.3 |

Data Source: Jonathan F. Stern, *Soviet Natural Gas Development to 1990*, Table 2-15

<sup>a</sup> Numbers may not sum to totals due to rounding.

<sup>b</sup> Stern highlights that the statistical yearbook gives an export of 6.8 bcm without any explanation of the discrepancy of 0.7 bcm.

The first European-Soviet gas trade agreements were based on trading goods not money. According to Gustafson, “The Soviets needed steel, technology, and finance; the East Europeans needed energy; and the West Europeans needed export markets. For all sides, gas was a currency, a substitute for money.”<sup>281</sup> Gas was used as a currency during this exchange, in fact, it was very difficult to determine the actual price of the gas due to gas invoice settlement through arbitrarily priced goods and politically priced credit, especially in Soviet-German gas trade in the 1980s.<sup>282</sup>

The Reagan administration urged Europe to consider over-reliance to Soviet natural gas while Europe agreed to build East-West or widely known as Yamal – the world’s largest pipeline at the time. The US offer to Europe to use coal as an alternative fuel for natural gas was not widely supported. In 1981, the US responded with sanctions against the Soviet Union

<sup>281</sup> Gustafson, *The Bridge*, 75.

<sup>282</sup> Ibid, 75, 76.

when the USSR introduced martial law in Poland. While in 1982, US sanctions included American-made and -licensed energy equipment that could be used in development of the West Siberian pipeline to Western Europe. However, the Reagan administration's efforts failed to gain traction in West Germany and other European countries. The pipeline network, called the Brotherhood, served as the primary transport means for Soviet, then Russian, gas exports to Europe and Ukraine during the Cold War.<sup>283</sup> With the collapse of the Soviet Union, the dynamics changed overnight between Russia and Ukraine, and the latter became the main transit country while the former remained the supplier. Today, the division of industry infrastructure and Brotherhood Network continues to be part of geopolitical struggle between Russia and Ukraine with severe consequences for Europe.

### 3.2.3. Cold War Period – European Gas, Groningen and North Sea Reserves

There were two major natural gas discoveries during the Cold War period in Europe; the first one was a huge gas field in the Groningen in the Netherlands in 1959.<sup>284</sup> This discovery, laying in at a great depth, encouraged companies and geologists to continue exploring the North Sea region, close to the British Coast. Large natural gas deposits were discovered in the British sector of the North Sea, at West Sole, in 1965, that was followed by the biggest oil and gas discovery at the Norwegian sector of the North Sea in 1969.<sup>285</sup> While Europe had a web of pipelines crossing the continent like a few strands of string in the 1960s supporting local gas markets, Yergin argues that, "The real European gas market only began with the development of the Groningen field in Holland."<sup>286</sup> The Groningen discovery is also important that it helped the development of the:

...doctrine for pricing gas that has been used in every European gas contract practically down to the present day. The basic idea is that gas should be priced according to its value to the user, not its cost to the producer... the price of gas must not exceed that of

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<sup>283</sup> Grigas, *The New Geopolitics*, 106.

<sup>284</sup> Yergin, *The Quest*, 317.

<sup>285</sup> Gustafson, *The Bridge*, 111, 114.

<sup>286</sup> Yergin, *The Quest*, 333.

competing fuels at the point of consumption... it logically leads to the idea that the price at the wellhead should be the “netback” - that is, the price to the consumer minus the costs of transportation and distribution.<sup>287</sup>

The Norwegian gas industry has extensive challenges similar to those in Soviet industry. However, there were significant differences between the Norwegian state socialism directed capitalist approach and the Communist system on the following areas: ownership and control was the first area; the Norwegian approach to industrial and technology policy; and the way Norway established relationships with the European Union and the resulting business models under which gas was exported to Europe, especially the way contracts were put in place.<sup>288</sup> Norwegian industry, in contrast with the Soviet gas industry, was developed “primarily on commercial principles, based on a close partnership between the state and private-sector capital and expertise, especially international oil companies.”<sup>289</sup> On the contrary, Soviet leaders were skeptical of foreign companies’ involvement to the degree that they managed the whole process. They were also concerned and worried about Washington’s involvement in creating a dependency for technology.

While in both cases support from foreign companies were crucial for successful development of the gas networks, the Norwegian case involved foreign companies from the very beginning. The Norwegian model, compared to the Soviet Gazprom model, enabled a “company-state relationship, open to the outside world and aimed at developing cooperative relations with international companies offshore, under the benevolent but watchful eye of the Norwegian government.”<sup>290</sup> Additionally, Norway allowed Phillips to negotiate a gas contract with European companies led by Ruhrgas, using the classic Groningen contract model and gas pricing that had become the norm by that time and was also used by the Soviets in their

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<sup>287</sup> Gustafson, *The Bridge*, 26.

<sup>288</sup> *Ibid.*, 108.

<sup>289</sup> *Ibid.*

<sup>290</sup> *Ibid.*, 401.

first contracts with Austria and Germany.<sup>291</sup> The ‘Norpipe’ pipeline, 443 kilometers in length, was commissioned in 1977, four years after the contract was signed. Through these pipelines, Norway became one of the main suppliers of natural gas to European markets while the UK’s North Sea fields were used to support its domestic market and consumers.

To present alternative gas resources for Continental Europe, the Reagan administration urged Norwegians to develop Sleipner and Troll gas fields as potential competitors against Soviet gas (See Figure-5: Norwegian Gas Fields and Pipelines to both Continental Europe and the UK). This was an example of how commercial interests intertwined with geopolitics.<sup>292</sup> The United States “imposed a unilateral embargo that prohibited companies from exporting...equipment that was essential to the construction and operation of the West Siberia Pipeline. The Europeans, however, were as determined as the Soviets to go ahead.”<sup>293</sup>

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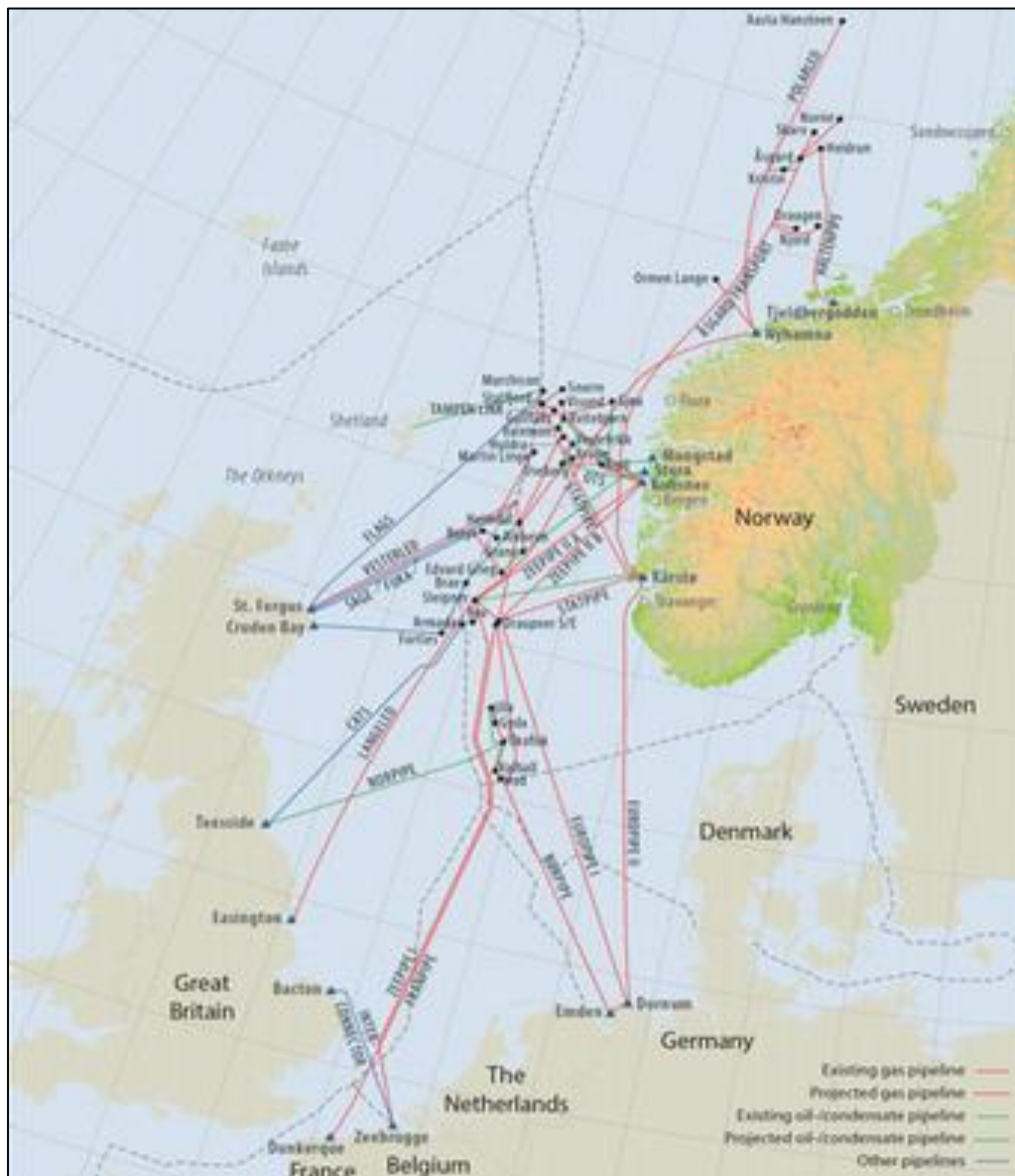
<sup>291</sup> Ibid, 123.

<sup>292</sup> Gustafson, *The Bridge*, 124.

<sup>293</sup> Yergin, *The Quest*, 334.



Figure 5: Norwegian Gas Fields and Pipelines to both Continental Europe and the UK<sup>294</sup>



Source: US Energy Information Agency, with permission from the Norwegian Petroleum Directorate  
<https://www.eia.gov/international/analysis/country/NOR/background>

The West Siberia Pipeline and Soviet gas would allow Europe to diversify away from the unstable Middle East resources as well as reduce coal in its energy mix. With Thatcher leading the UK's opposition for domestic reasons, the Reagan embargo collapsed. While the

<sup>294</sup> US Energy Information Agency, with permission from the Norwegian Petroleum Directorate,  
<https://www.eia.gov/todayinenergy/detail.php?id=16311>

US administration was not successful in convincing the Allies, the two arguments presented for the embargo remain valid still today even after the end of the Cold War and the collapse of the Soviet Union. The following argument raised by Stern in the 1980s reinforces the US position at the time and remains as a major challenge even for today's Russian-German energy relations:

“The major concern about Soviet gas exports to the West is that, while oil deliveries can be replaced by fuel from other source, a country that becomes dependent on Soviet natural gas will find it difficult, if not impossible, to substitute fuel in the event of an embargo. Thus, in case of natural gas, the dependence relationship between importer and supplier is very great.”<sup>295</sup>

### 3.2.4. Cold War Period – Energy Security and Interdependence

During the Cold War period, Western Europe's perception of the USSR was as a reliable and politically stable partner compared to the Middle East that was affected by political instability and presented as unstable supply source.<sup>296</sup> In 1980, Stern predicted that “by 1990, natural gas will have equaled and possibly overtaken oil in importance in the Soviet fuels production balance...irrespective of possible deliveries to the West, Soviet natural gas will command considerable attention over the next decade.”<sup>297</sup> This analysis has proven valid even for today as Russian gas export dependency of Central and Eastern European countries remain not only an economic but also a geopolitical concern. He also suggested that “Natural gas will be an extremely important energy export of the USSR and will be the most significant energy export to the hard currency.”<sup>298</sup> Esakova brings up the main concern regarding the interdependence as an outcome of this energy relationship between Europe and Russia. She suggested that the “mutual interdependence” relations might mean for Europe a worst-case scenario – a total halt in gas deliveries. However, at the time, the impact in terms of the level

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<sup>295</sup> Stern, “Soviet Natural Gas Development,” 171.

<sup>296</sup> Esakova, *European Energy Security*, 156.

<sup>297</sup> Stern, “Soviet Natural Gas Development,” 177.

<sup>298</sup> *Ibid.*

of sensitivity and vulnerability interdependence of Western Europe was considered as reasonable due to the available alternatives, spare and storage capacities.<sup>299</sup>

Major West Siberia discoveries in the early 1980s boosted Soviet production, making them the largest gas producer of the world. However, to transport West Siberia's gas required Western involvement as it was highlighted "No Western pipe, equipment, and finance, no West Siberian gas."<sup>300</sup> Gustafson noted that "There was much anxiety in Washington and the European capitals about whether the Soviets would use gas as a weapon in the Cold War."<sup>301</sup> However, this project went ahead as planned. The West Europe-Soviet relationship was perceived as mutual interdependence due to the Soviet's reliance on the West's support and the importance of Western technology and finance to develop the West Siberia Pipeline.

The interdependence remained as one of the key aspects of European-Soviet Union relations by the end of the Cold War. Thus, mutual interdependence meant different things for Europe and the Soviet Union. A total interruption of the Soviet gas supply could be defined as worst case scenario for Western Europe, but the impact was manageable, and disruption could be short-term because of a natural gas storage and spare capacity provided by alternatives such as coal, oil, and nuclear power. However, the long-term impacts could be managed by re-prioritization of energy supply. On the other hand, the short-term impact on the Soviet Union would be neglectable albeit the long-term impact would be grave due to a lack of energy cooperation with Europe and losing the most profitable markets.<sup>302</sup>

In development of the pipeline networks, former Soviet satellite states emerged as "transit countries," and with the sudden collapse of the Soviet Union, newly independent states joined the transit country group including Ukraine, Belarus, Moldova, Poland, the Czech

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<sup>299</sup> Esakova, *European Energy Security*, 156.

<sup>300</sup> Gustafson, *The Bridge*, 76.

<sup>301</sup> Ibid.

<sup>302</sup> Esakova, *European Energy Security*, 155.

Republic, Hungary, Lithuania, Latvia, and Estonia. These countries are located in Central and Eastern Europe, and several of them have joined the European Union and become members of the NATO Alliance.<sup>303</sup> These countries have imported energy from Russia, or earlier the Soviet Union. They received a high level of gas subsidies, benefited from transit fees, and used Russian dependency to export to Europe as a leverage in their relations with Russia.<sup>304</sup> This toxic relationship between Russia and its former satellites and newly independent republics changed the energy security landscape, resulting in economic and political disputes that continue today.

The US administration under President Reagan was concerned by increasing Soviet gas exports to West Europe. The US had, at that time, two valid arguments; first, natural gas could continue to provide hard currency for financing the Soviet military industrial complex. The US was working with NATO Allies to counter Soviet military expansion by increasing the Alliance's military capabilities. Allowing Soviets to allocate more defense funds through income gained via European gas money did not make any sense. The second, increased Western dependency on Soviet natural gas could be used as a leverage to create a wedge within the Alliance.<sup>305</sup> These two arguments are still legitimate concerns within European-Russian energy relations.

The European-Soviet relations started as a state-to-state relationship covering both economic and geopolitical contexts. Over time, European considerations were shifted, weighing over the economic aspects of interdependence. As argued by Hogselius, "The Iranian revolution, the second oil price shock, the Soviet Union's invasion of Afghanistan, the Polish crisis of 1981–1982, and Reagan's new confrontative policy toward Moscow did not affect the increasing trends of natural imports from the USSR to Europe in the 1980s. However, Soviet decisions were always taken at the political level, putting long-term perspectives and security

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<sup>303</sup> Esakova, *European Energy Security*, 158.

<sup>304</sup> *Ibid*, 159.

<sup>305</sup> Yergin, *The Quest*, 334.

dynamics into consideration, utilizing price and pipeline routes to support their position. The Cold War period set the conditions for the Russian approach to shape the natural gas landscape that continued for some time after the Cold War, until the European Union's energy market gained strength to challenge the status-quo.

### 3.3. European Energy and Natural Gas Markets

#### 3.3.1. Initial Steps - the Directive on Transit of Natural Gas

In the 1980s, there was a shift in Europe toward establishment of a 'Single European Market' that enabled "abolition of barriers of all kinds, harmonization of rules, approximation of legislation and tax structures, strengthening of monetary cooperation, and the necessary flanking measures to encourage European firms to work together."<sup>306</sup> The Commission's white paper on a Single Market focused on the internal European market; it had no mention of energy. However, when implementation of these measures started, it was apparent that single market measures have fundamental effects shaping energy markets, especially the natural gas market. Grigas argued that, "Possibly the greatest regulatory and policy undertaking of the EU institutions to date is to attempt to merge the separate national energy markets into a single EU market."<sup>307</sup> The white paper, COM (85) 310, initiated this challenging endeavor that is still being tested today with Russian attempts to create a wedge within the EU.

While Single European Market started as an internal market liberalization and privatization effort, consequences affected and continue to influence European relations with the Russian gas behemoth, Gazprom. Although the timetable set by the Commission required completion of the programmed by the end of 1992, the gas sector in Europe resisted a change in business practices and greater liberalization. This resulted in the step-by-step introduction of measures as Energy Packages; other political and environmental developments such as German

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<sup>306</sup> "Lex Access to European Union Law." White Paper from the Commission to the European Council (Milan, 28-29 June 1985) COM (85) 310, 14 June 1985. Commission of the European Communities,

<sup>307</sup> Grigas, *The New Geopolitics*, 151.

unification, the collapse of the Soviet Union, EU and NATO expansion, the Ukraine crisis, and climate change will continue to affect the energy landscape.

Boersma provided a holistic view of the natural gas system that is comprised of four elements:

...markets, infrastructural companies, governmental institutions, and regulatory authorities. The marketplace is where the producers, suppliers, traders, and consumers operate. This is where natural gas is supplied to both small consumers (retail) and large energy-intensive industries, and where traders operate at energy exchanges and increasingly trade short-term (spot market) and long-term (futures) products.<sup>308</sup>

The way contracts are developed is key to ensure market liberalization efforts are materialized. However, in the early 1990s, the European natural gas system was still maintaining traditional gas trade rules that were started in Groningen in the 1960s. The so-called ‘old system’ was based on long-term contracts, managed markets, and inter-fuel pricing.<sup>309</sup>

At the same time, other areas and regions such as North America, Australia, and Great Britain were adopting new market approaches that offered short-term (spot market) trade, so called the “new system” that allowed “liberalized pipeline access, greater stress on market signals, and the beginning of gas-on-gas competition.”<sup>310</sup> While implementation of the programmed was not completed in time, Gustafson references gas expert Simon Blakey, who suggested that “The Commission’s impact on national-level decision-makers...can genuinely be said to have changed the playing field on which gas industry conducts its business.”<sup>311</sup> The White Paper did not have an immediate effect on natural gas businesses, especially industry practices such as gas-on-gas competition.

While member states, especially Germany, kept their positions to resist liberalization efforts, there was a “pushback against the application of competition law to the energy

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<sup>308</sup> Boersma, *Energy Security*, 43.

<sup>309</sup> Gustafson, *The Bridge*, 186

<sup>310</sup> *Ibid.*

<sup>311</sup> Gustafson, *The Bridge*, 192, Refer to Simon Blakey, Third Party Access for Gas – The Evolving Options,’ IHS Markit Brief, November 1992).

sector.”<sup>312</sup> Natural gas usage continued to increase in Europe, and it has gained a larger share than coal in total primary energy consumption in 1994. Gas and electricity networks were not regulated in Europe, and in Germany, the gas industry was mainly a private-sector business. Electricity and gas industries are generally perceived as national assets due to their role as part of national critical infrastructure that remain within national borders. Governments wanted to control the critical energy infrastructure due to their importance for security as well as their high level of dependence on electricity and gas supply.<sup>313</sup> The main focus of these efforts was to achieve “security of supply and environment protection.”<sup>314</sup>

The Directive on the Transit Gas through grids (91/296/EEC)<sup>315</sup> highlighted the importance of greater integration of the European energy market; the role of natural gas as an essential part of European energy balance; and the requirement for greater reliance on natural gas for diversification of energy resources. Gustafson highlighted that the Directive “met strong resistance in Germany and the Netherlands. This was mainly due to member states’ natural gas industry monopolies’ resistance to change, in particular in Germany, and to some extent in France, as well as other countries in continental Europe.

Member states were not moving away from the “old system” of traditional gas markets and long-term supply contracts (LTSCs). The reluctance was due to the requirement for structural changes that the industry, local state governments, and utility services were resisting to accept. For example, “Of the forty-three companies covered by the Transit Directive, twenty-nine were German...more than twenty of them were either customers, suppliers, or joint-venture subsidiaries of Ruhrgas.”<sup>316</sup> Members states’ failed to fully agree on third-party access to transmission pipelines, so the Transit Directive remained as a “procedural document with no

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<sup>312</sup> Gustafson, *The Bridge*, 201

<sup>313</sup> *Ibid*, 192

<sup>314</sup> Boersma, *Energy Security*, 44.

<sup>315</sup> Council Directive 91/296/EEC of 31 May 1991, “Lex Access to European Union Law.”

<sup>316</sup> Gustafson, *The Bridge*, 199.

provisions on transit tariffs, capacity allocation, and congestion management.”<sup>317</sup> Yafimava highlights Stern’s point suggesting that, “Russian gas only becomes the property of European buyers once it has reached its delivery point(s) at their national borders as specified in their LTSCs concluded with Gazprom.”<sup>318</sup> Jirusek and Vlcek refer to the main elements of LTSCs summarized by Konoplyanik:

- “They provide demand security that facilitates for upstream investment and field development;
- The values of natural gas both domestic consumers and export are aligned with the fuel oil replacement value;
- Regular price review both within at the given contract pricing formula and review of the formula itself;
- Net-back price to delivery point;
- The system was designed to remain stable and predictable by reducing the number of actors in the market and limited cross border gas competition due to fragmentation of national markets.”<sup>319</sup>

Therefore, measures identified in the Transit Gas Directive and following the EU Directive and Regulations will only matter after these border points of entry. The following map clearly shows that the geographical location of delivery points where pipelines enter German territory is far beyond the Russian border, due to a Cold War legacy division of “East” and “West” borders.

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<sup>317</sup> Yafimava, *The EU Third Package*, 2.

<sup>318</sup> *Ibid*, 32.

<sup>319</sup> Jirušek, Vlček, Kodůusková, Robinson, Leshchenko, Černocho, Lehotský, and Zapletalová. *Energy Security*, 380.



Figure 6: Russian Gas Supplies to Europe: Borders and Delivery Points<sup>320</sup>



Source: Katja Yafimava, *The EU Third Energy Package for Gas and the Gas Target Model*, OIES,

### 3.3.2. The First Gas Directive – Prolonged Move to Energy Markets

The First Gas Directive was released in 1998, setting common rules for the internal market in natural gas.<sup>321</sup> The changes towards liberalization and privatization enabled the European Commission to introduce regulatory measures for the development of the energy sector. The Directive on trans-European networks in the energy sector (96/391/EC) laid down a series of measures aimed at creating a more favorable context, such as the realization of projects of common interest in connection with the development of trans-European networks in

<sup>320</sup> Yafimava, *The EU Third Package*, 32.

<sup>321</sup> Council Directive 98/30/EC of the European Parliament and of the Council of 22 June 1998, “Lex Access to European Union Law.”

the energy sector.<sup>322</sup> The Commission, with this Directive, focused on common projects in development of trans-European energy networks and achieving community-wide interoperability. Technical cooperation for proper functioning of interconnectors and cooperation for projects reducing delay were identified as favorable for common interests and eligible for funding support.

The Commission continued its efforts to set the rules for the internal market in natural gas. Directive 98/30/EC “lays down the rules relating to the organization and functioning of the natural gas sector, including liquefied natural gas (LNG), access to the market, the operation of systems, and the criteria and procedures applicable to the granting of authorizations for transmission, distribution, supply, and storage of natural gas.”<sup>323</sup> The Directive also established common rules for the natural gas systems.<sup>324</sup> Several other key issues were also covered, such as guaranteeing non-discriminatory access to member-states markets; developing minimum technical standards for storage and distribution facilities; requirements for integrated natural companies to maintain separate accounts for gas and non-gas activities; accommodating third-party access (TPA); gradual market opening and reduced market domination.<sup>325</sup>

The First Gas Directive introduced harmonization by setting common rules for generation, supply and transmission, unbundling, and negotiated third-party access. This was one of the key initial steps for the establishment of a natural gas market albeit with little materialized effect on issues such as third-party access, transparency, and unbundling. Member states continue to use the Directive on the Transit Gas and the First Gas Directive together and had to choose between regulated and negotiated third-party access.<sup>326</sup> Gustafson noted that these three issues emerged as the key battleground for achieving a single gas market: “exclusive

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<sup>322</sup> European Council Decision 96/391/EC, 28 March 1996, “Lex Access to European Union Law.”

<sup>323</sup> Council Directive 98/30/EC of the European Parliament and of the Council of 22 June 1998, “Lex Access to European Union Law.”

<sup>324</sup> *Ibid*

<sup>325</sup> Boersma, Energy Security, 44.

<sup>326</sup> Yafimava, The EU Third Package, 3.

rights; third-party access; and unbundling that were all related to gas transit.”<sup>327</sup> It should also be noted that the First Gas Directive was released before the Central, Eastern European, Balkan, and Baltic countries joined the European Union. Although it focused on Western Europe, little progress was achieved on the key issues, further delaying Europe’s achievement of a single gas market before the EU enlargement. With the participation of these countries, there were increased energy security concerns due to a high level of dependency of new members.

### 3.3.3. The Second Gas Directive – Establishing Common Rules

The Commission released the Second Gas Directive 2003/55/EC<sup>328</sup> in 2003, repealing the Directive on Transit Gas and the First Gas Directive, recognizing the limited progress achieved with the previous Directive 98/30/EC and highlighting its shortcomings on the desired completion of the single natural gas market. The Second Directive aimed at establishing harmonization and market integration that advanced rules on national regulators. However, it failed to provide a level of competition for a flourishing energy market. In the wake of the First Directive, Gustafson emphasized two examples of progress achieved during the period: first, the UK-Belgium Interconnector pipeline that brought gas from the liberalized UK market to Europe, established a bridge between spot and continental long-term contract prices; second, an increased utilization of the European Commission’s power through implementation of competition and antitrust policies of the Directorate-General for Competition (DG-COMP).<sup>329</sup> The Second Gas Directive “eliminated the notion of transit and awarded an identical treatment to all gas flows in the European Union, irrespective of whether they were cross-border(s).”<sup>330</sup>

The Second Directive focused on establishing common rules for the transmission, distribution, supply, and storage of natural gas. The Directive focused on the unbundling of

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<sup>327</sup> Gustafson, *The Bridge*, 198

<sup>328</sup> Directive, E. U. "Council Directive 2003/55/EC," concerning common rules for the internal market in natural gas and repealing Directive 98/30/EC.

<sup>329</sup> Gustafson, *The Bridge*, 193, 194.

<sup>330</sup> Yafimava, *The EU Third Package*, 3.

transmission system operators highlighting that transmission system operator “shall be independent at least in terms of its legal form, organization, and decision making from other activities not relating to transmission.”<sup>331</sup> The Second Directive also identifies transmission system operators responsible for “ensuring the long-term ability of the system to meet reasonable demands for the transportation of gas.”<sup>332</sup> Boersma summarizes key aspects of the second Gas Directive:

The new directive also aimed to improve the access of new suppliers to the market and gave consumers the ability to switch freely between gas suppliers... a number of measures were recorded in the directive to ensure among others transparent contract conditions and dispute settlement mechanisms...prompted member states...to appoint independent regulators to monitor transparency, discrimination, the level of competition and the tariffs used by system operators.<sup>333</sup>

With the Second Gas Directive and Gas Regulation 1775,<sup>334</sup> DG-COMP started setting precedence by increasingly enforcing competition rules. While liberalization and privatization are seen as appealing areas for policymakers to focus in energy systems, other crucial areas such as exclusive rights, third-party access, and unbundling were not attractive areas to tackle due to resistance from member states. Boersma argued that Commission policy makers believed at the time “there was no incentive at the member state level to collaborate on these matters: infrastructure investments and designing of regulatory regimes.”<sup>335</sup> These sensitive areas were accepted as national business and should be regulated by nations.

In 2005, the DG-COMP initiated Energy Sector Inquiry (ESI) to identify critical shortfalls of the existing Directive and Regulations to achieve a competitive and transparent gas market. The findings of the ESI showed that EU competition law did not provide sufficient means for access or changing the legacy transportation contracts that were incompatible with

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<sup>331</sup> Directive, E. U. "Council Directive 2003/55/EC," Concerning common rules for the internal market in natural gas and repealing Directive 98/30/EC.

<sup>332</sup> Ibid.

<sup>333</sup> Boersma, *Energy Security*, 45.

<sup>334</sup> Regulation (EC) No 1775/2005 of the European Parliament and of the Council of 28 September 2005 on conditions for access to the natural gas transmission, “Lex Access to European Union Law.”

<sup>335</sup> Boersma, *Energy Security*, 56.

the new regulation.<sup>336</sup> Additionally, “access to transit pipelines, transit congestion, and transparency of access to transit networks could not be tackled effectively solely through application of competition law.”<sup>337</sup> Boersma confirms these findings and suggests, “The EC concluded that these rules and measures did not provide the necessary framework for achieving the objective of a well-functioning internal market.”<sup>338</sup>

On the other hand, the Commission was very keen to address the shortfalls in the establishment of the European energy market. Gustafson refers to DG-COMP Neelie Kroes’ 2006 statement in Vienna:

Despite the two waves of liberalization...a single competitive European energy market is still not a reality...Shortly after coming into office, I was pleased that my Commission colleagues backed my suggestion for an in-depth assessment of energy markets. Over the past nine months, we have used a new tool – the sector inquiry-to find out the barriers to free competition in energy.<sup>339</sup>

#### 3.3.4. The Third Energy Package – Natural Gas Markets

The Third Energy Package, Directive 2009/73/EC, was proposed in 2007, approved in 2009, and became law in the EU in March 2011.<sup>340</sup> It is the most incisive and comprehensive change and a significant step forward in completing and adding new impetus for the transformation of the EU gas market structure and single European energy market: aiming to deliver real choice for all consumers of the EU; providing new business opportunities and more cross-border trade; achieving efficiency gains, competitive prices, and higher standards of service; and contributing to security of supply and sustainability.<sup>341</sup> The excerpt are depicted in the following pages. However, the 2003 Directive did not sufficiently address the following challenges:

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<sup>336</sup> Yafimava, *The EU Third Package*, 3.

<sup>337</sup> *Ibid.*

<sup>338</sup> Boersma, *Energy Security*, 45.

<sup>339</sup> Gustafson, *The Bridge*, 204.

<sup>340</sup> European Commission, “Third Energy Package.”

<sup>341</sup> Directive, EU Third Gas. “Directive 2009/73/EC,” para 1.

There are obstacles to the sale of gas on equal terms and without discrimination or disadvantages...non-discriminatory network access and an equally effective level of regulatory supervision...the present rules and measures do not provide the necessary framework for...a well-functioning internal market ...Without effective separation of networks from activities of production and supply (effective unbundling), there is a risk of discrimination.<sup>342</sup>

The First and the Second Energy Packages were introduced before the EU enlargements in 2004 and 2007. Western Europe reunited with the eight countries of central and Eastern Europe: Czechia, Estonia, Hungary, Latvia, Lithuania, Poland, Slovakia and Slovenia. While accession of the new members finally ended the division of Europe, it significantly changed the European Union's energy landscape. New members of the EU included the former satellites and members of the Soviet Union. The general perception in these countries, especially in Poland, suggested that the EU energy policy before the 2004 enlargement had not sufficiently addressed Europe's overdependence on energy imports.<sup>343</sup> European-Russian energy relations have been a major challenge for the EU integration.<sup>344</sup> In parallel to Russia's efforts to eliminate transit countries and raise energy prices, tensions increased in Ukraine, Belarus, and Baltic states.<sup>345</sup>

These concerns, especially dependency on Russian gas, were brought to energy security discussions in the development of the Third Energy Package. "It was largely Polish efforts that led to energy solidarity language being inserted into the Lisbon Treaty...Poland has lobbied to get European funds to build its energy infrastructure."<sup>346</sup> Poland is also recognized with its high-level "securitization" approach to energy policy, oftentimes framing it as a national security issue and an existential threat.<sup>347</sup> The Lisbon Treaty sets energy security as one of the objectives of EU energy policy that provided a legal basis for EU actions.<sup>348</sup>

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<sup>342</sup> Directive, EU Third Gas. "Directive 2009/73/EC," paras 4-6.

<sup>343</sup> Boersma, *Energy Security*, 125.

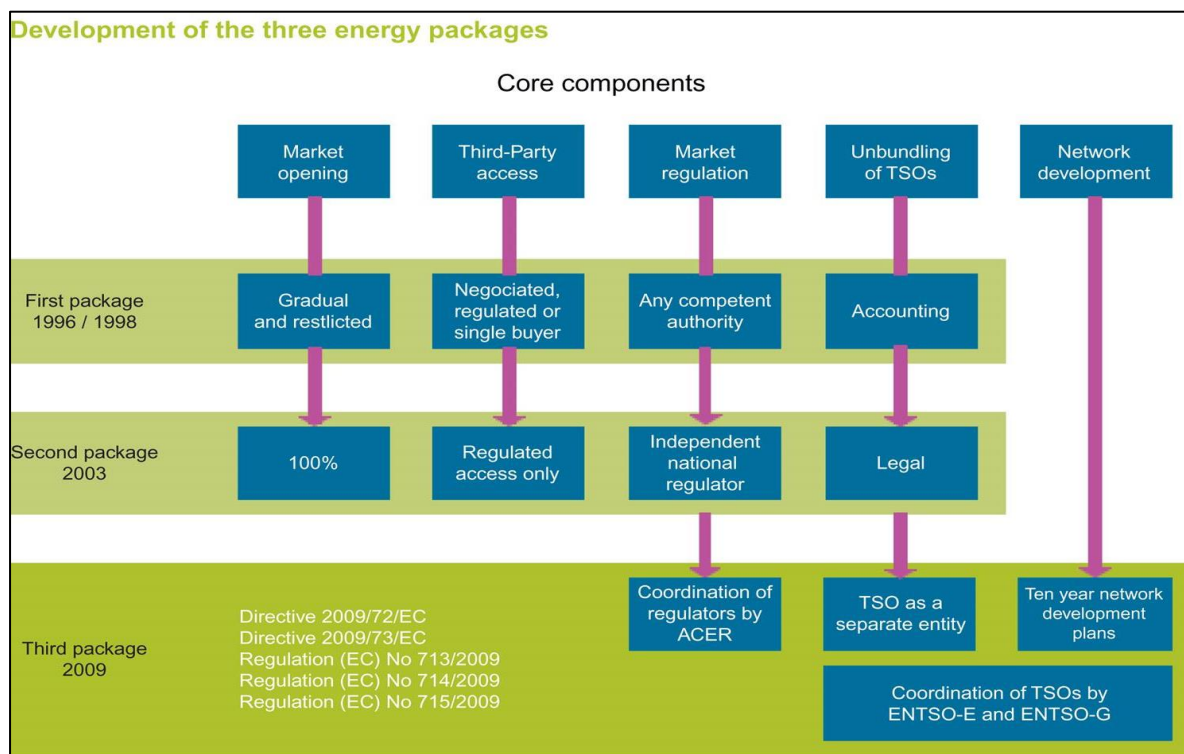
<sup>344</sup> Bros, Mitrova, and Westphal, "German-Russian Gas Relations," 5.

<sup>345</sup> Grigas, *The New Geopolitics*, 147.

<sup>346</sup> Boersma, *Energy Security*, 125.

<sup>347</sup> *Ibid*, 124.

<sup>348</sup> Russell, "Energy Security in the EU's External Policy,"

Figure 7: The EU Energy Packages - Evolution of Energy and Gas Markets<sup>349</sup>

*Transmission System Operators (TSO); Agency for Cooperation of Energy Regulators (ACER); European Network of Transmission System Operators (ENTSO); ENTSO-E (in electricity); ENTSO-G (in gas)*

The EU's natural gas market packages have two prongs as highlighted by Grigas: "first, they include directives, decisions, regulations, and infringement procedures that are specifically tailored for [the] energy sector; second, they invoke competition law."<sup>350</sup> In 2015, Boersma argued that "European institutions have been reforming European gas markets with the aim to increase competition and create one single market, yet this proves to be a lengthy and complex task that has not been completed to date."<sup>351</sup> He also suggested that insufficient implementation of the legislation by member states is another reason for lack of progress to achieve effective competition.<sup>352</sup> Additionally, member states were hesitant to delegate authority to Brussels for

<sup>349</sup> Faure-Schuyler, Welsch, and Pye. "European Energy Policy Objectives." 31-39.

<sup>350</sup> Grigas, *The New Geopolitics*, 150.

<sup>351</sup> Boersma, *Energy Security*, 143.

<sup>352</sup> *Ibid*, 144

the unbundling of integrated energy companies, especially countries with protectionist behavior were holding back.<sup>353</sup> Yafimava agrees with this sentiment suggesting, “Despite the avalanche of Directives and Regulations adopted since the early 1990s, the EU single liberalized gas market had failed to make serious progress; the EC began to use EU Competition law.”<sup>354</sup> However, with the introduction of the Third Energy Package, the EU has “unilaterally changed the regulatory framework, inducing more-short term elements. The outcome increased institutional mismatches at the regulatory, contractual and commercial levels.”<sup>355</sup>

In this environment, with diverging views on energy security, the Third Energy Package focused on addressing shortcomings of the Second Energy Package. The package introduced significant reforms on the implementation of more stringent unbundling; ensured more independent regulators for application of the rules; established Agency for the Cooperation of Energy Regulators (ACER) to help the different national regulators to cooperate and ensure the smooth functioning of the internal energy market; enhanced transparency and cross border cooperation for ensuring electricity and natural gas is effectively transported through pipelines and grids by National transmission system operators; and finally, set the rules to protect European energy consumers’ rights by creating open and fair retail markets that allow choice, or changing of suppliers, without extra charges and receiving information on energy consumption.<sup>356</sup>

The European gas market should not be perceived as a homogeneous entity. It comprised of several national gas markets with different characteristics.<sup>357</sup> 1990 marked an important development for the German gas market, Gazprom and BASF-Wintershall established a joint venture called Wingas. The joint venture agreement allowed Gazprom to

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<sup>353</sup> Boersma, *Energy Security*,” 56.

<sup>354</sup> Yafimava, *The EU Third Package*, 3.

<sup>355</sup> Bros, Mitrova, and Westphal, “German-Russian Gas Relations,” 45.

<sup>356</sup> Directive, EU Third Gas. para 1, concerning common rules for the internal market in natural gas and repealing Directive 2003/55/EC, paras 4-6.

<sup>357</sup> Kalicki and Goldwyn Eds. “Reforming the Gas Market,” by Loyola de Palacio, *Energy & Security, Toward a New Foreign Policy Strategy*, 177.



enter West European in particular German gas markets. The German-Russian natural gas relationship was perceived as a strategic partnership between the early 1990s that become a “new Ostpolitik” in the early 2000s, succeeding at the idea of “rapprochement through interdependence.”<sup>358</sup> This cooperation also expanded building a new pipeline system, interacting with local utilities, and giving Gazprom opportunity to market Russian gas directly to East Germany as part of the joint venture.<sup>359</sup>

According to Gustafson, “The continued growth of the Gazprom-Wintershall Alliance, right down to the present participation of Wintershall and OMV in today’s joint consortium to build the Nord Stream 2 pipeline from Saint Petersburg to north Germany.”<sup>360</sup> Gazprom has an important role in the German market. However, with the introduction of the Third Energy Package, German-Russian natural relations could not be addressed bilaterally without taking into consideration the EU that established regulatory frameworks. In this context, the Nord Stream 2 will be discussed in detail as a case study further in the paper.

The EU Energy Commissioner (DG-Energy), Andris Piebalgs, was attempting to address energy issues along the following main areas: “sustainability, security of supply, and competition”<sup>361</sup> while giving priority for a common European energy policy development, market liberalization, and privatization. DG-Energy, in close coordination with the DG-COMP, followed a two-prong approach to address market reform in the electricity and gas industries. While DG-COMP focused on implementation of competition law, DG-Energy established a forum to “explore the technical and political issues, and get the buy-in of the companies under the eye of government representatives.”<sup>362</sup> Both approaches were essential and complemented

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<sup>358</sup> Bros, Mitrova, and Westphal, “German-Russian Gas Relations,” 5.

<sup>359</sup> Gustafson, *The Bridge*.

<sup>360</sup> *Ibid*, 223.

<sup>361</sup> Stent, “An Energy Superpower,” 86.

<sup>362</sup> Gustafson, *The Bridge*, 207, 208.

each other with the Commission's vision achieving sustainability, security of supply and competition. According to Stent:

The sustainability issue focuses on the environment and the climate change... security of supply means focusing on new sources of energy, such as renewables, and reducing dependence on imports...in terms of competitiveness, the EU will table a strategic plan for research into new technologies.<sup>363</sup>

In response to Lithuania's complaints, DG-COMP started an investigation against nearly two dozen subsidiaries and affiliates of Gazprom in 2011. Contrary to expectations, these developments did not lead to another gas crisis or a cut-off. The investigation continued for three-and-a-half years and was followed by negotiations between Gazprom and DG-COMP, lasting another three years. Gazprom conceded to comply with the regulations. Gustafson concludes that DG-COMP's success against Gazprom sets a precedence on both symbolic and practical levels and marks the completion of the liberalization of the European gas market.<sup>364</sup>

The DG-COMP affair finally came to a close, with an amicable settlement that did not conceal the essential outcome: a sweeping victory by DG-COMP and a wholesale series of concessions by Gazprom. As a result, the marketization revolution has finally spread to Eastern Europe and—after stiff resistance—has been accepted by Gazprom.<sup>365</sup>

The traditional method of gas market exchange was a preferred “modus operandi” for Gazprom and could be further described by two key characteristics. This model based on long term contracts “strengthens the position of fundamental gas suppliers, providing them with tools to exert market and political power. It also prevents any significant changes of status quo, cementing the position of these companies.”<sup>366</sup> The following figure highlights the key aspects of the Third Energy Package that brought significant regulatory measures for European energy market with important consequences on Gazprom's efforts to control transmit and downstream assets.

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<sup>363</sup> Stent, “An Energy Superpower,” 86.

<sup>364</sup> Gustafson, *The Bridge*, 391.

<sup>365</sup> Ibid.

<sup>366</sup> Jirušek, Vlček, Kodůusková, Robinson, Leshchenko, Černoch, Lehotský, and Zapletalová. *Energy Security*, 380.

Figure 8: The Third Energy Package

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| <p style="text-align: center;"><b>The Third Energy Package (Excerpts explaining key concepts)</b></p> <p><b>Aim:</b> The previous round of EU energy market legislation, known as the Third Energy Package, aims at improving the functioning of the internal energy market and resolving certain structural problems.</p> <p><b>Scope:</b> The package covers the following five areas: 1) unbundling, 2) independent regulators, 3) Agency for the Cooperation of Energy Regulators (ACER), 4) cross-border cooperation, and 5) open and fair retail markets.</p> <p>1) <b>Unbundling:</b><br/>Unbundling is the separation of energy supply and generation from the operation of transmission networks. If a single company operates a transmission network and generates or sells energy at the same time, it may have an incentive to obstruct competitors' access to infrastructure. This prevents fair competition in the market and can lead to higher prices for consumers. Unbundling must take place in one of three ways, depending on the preferences of individual EU countries:</p> <ul style="list-style-type: none"> <li>• ownership unbundling</li> <li>• independent system operator</li> <li>• independent transmission system operator – (All important decisions must be made independently of the parent company.)</li> </ul> <p>2) <b>Independent regulators:</b><br/>A competitive internal energy market cannot exist without independent regulators who ensure the application of the rules. The requirements for national regulators have undergone a number of changes, specifically:</p> <ul style="list-style-type: none"> <li>• Regulators must be independent from both industry interests and government. They must be their own legal entity and have authority over their own budget. National governments must also supply them with sufficient resources to carry out their operations</li> <li>• Regulators can issue binding decisions to companies and impose penalties on those that do not comply with their legal obligations</li> <li>• Electricity generators, gas network operators, and energy suppliers are required to provide accurate data to regulators</li> <li>• Regulators from different EU countries must cooperate with each other to promote competition, the opening-up of the market, and an efficient and secure energy network system.</li> </ul> <p>3) <b>Agency for the Cooperation of Energy Regulators (ACER)</b><br/>In order to help the different national regulators to cooperate and ensure the smooth functioning of the internal energy market, the EU established the ACER. It is independent from the Commission, national governments, and energy companies. ACER's work involves:</p> <ul style="list-style-type: none"> <li>• drafting guidelines for the operation of cross-border gas pipelines and electricity networks</li> <li>• reviewing the implementation of EU-wide network development plans</li> <li>• deciding on cross-border issues if national regulators cannot agree or if they ask it to intervene</li> <li>• monitoring the functioning of the internal market including retail prices, network access for electricity produced from renewables, and consumer rights.</li> </ul> <p>4) <b>Cross-border cooperation</b><br/>National transmission system operators are responsible for ensuring electricity and natural gas is effectively transported through pipelines and grids. Due to the cross-border nature of Europe's energy market, they must work together to ensure the optimal management of EU networks. They also coordinate the planning of network investments and monitor the development of new transmission capabilities.</p> <p>5) <b>Open and fair retail markets</b><br/>The third package includes rules designed to benefit European energy consumers and protect their rights. They include the right to choose or change suppliers without extra charges, receive information on energy consumption, and quickly and cheaply resolve disputes.</p> |
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Source: Table is exact words from the key points derived from the European Commission's webpage.<sup>367</sup>

<sup>367</sup> European Commission, Third Energy Package, [https://energy.ec.europa.eu/topics/markets-and-consumers/market-legislation/third-energy-package\\_en](https://energy.ec.europa.eu/topics/markets-and-consumers/market-legislation/third-energy-package_en)

The traditional gas market system used to allow Soviets, then Russia/Gazprom charging unfair prices through price manipulation, controlling cross-border gas sales through destination clauses, and including conditional clauses to obtain unrelated commitments from wholesalers.<sup>368</sup> These practices allowed Gazprom to leverage consumers. The Third Energy Package have started to change the status quo, or the existing architecture of the EU gas market, by bringing structural and behavioral transformation.

DG-COMP has increasingly used legal and regulatory framework for establishing such a functioning market. Examples of this have already appeared with the DG-COMP's handling of Lithuania's complaint against Gazprom for anticompetitive behavior. The complaints highlighted Gazprom's abusive long-term supply contracts against Central and Eastern European countries with limited or no viable alternatives. DG-COMP highlighted the following preliminary charges:

“Gazprom is breaking EU antitrust rules by pursuing an overall strategy to partition Central and Eastern European gas markets with the aim of maintaining an unfair pricing policy in several of those Member States... Gazprom implemented its strategy in three different ways, first, by hindering cross-border gas sales through so-called destination clauses; second, by charging unfair prices; and third, by making gas supplies conditional on obtaining unrelated commitments from wholesalers.”<sup>369</sup>

According to the Commission, eight member countries of the EU were specifically targeted; these countries are located in Central Europe, Eastern Europe, and the Baltic and Balkan regions. They were “largely cut off not only from the rest of the European gas system but also from each other.”<sup>370</sup> They were previously part of the Council for Mutual Economic Assistance (COMECON), or the Soviet Union itself, and were connected to Russia and Russian gas through the old Soviet system.

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<sup>368</sup> Gustafson, *The Bridge*, 394.

<sup>369</sup> Ibid.

<sup>370</sup> Ibid, 396.

The DG-COMP case against Gazprom was successfully settled in 2018. First, DG-COMP and Gazprom accepted gas “swaps” into so-called gas islands, countries that Russia is the only supplier to such as the Baltics and Bulgaria.<sup>371</sup> The second, establishing spot prices used in European hubs as a key benchmark instead of using oil-indexed gas prices. This is very significant, especially for the Central and Eastern European countries that do not have an easy alternative access to natural gas. While oil-indexed prices were not completely abandoned, Gazprom made significant concessions over its long-held pricing system. Gustafson highlights that, “The settlement of the DG-COMP investigation, which was achieved in the middle of one of the most serious crises in East-West relations since the end of the Cold War, showed both the power and persistence of DG-COMP as well as the ability of the Russian side to adapt to the regulatory and commercial framework created by the three Gas and Power Directives over the previous thirty years.”<sup>372</sup> While Russia continues to focus on increasing its European market-share and rent-maximization, the EU is concerned with growing energy security in the area of natural gas supply.

### 3.3.5. The Fourth Energy Package – Clean Energy for All Europeans

In 2016, the EC published a proposal, “Clean Energy for All Europeans,” that reflects the influence of the Energy Union established in 2015. The EU recognized that the common energy market and climate policies, two key pillars related with energy, were in fact two sides of the same coin and cannot be addressed separately.<sup>373</sup> The Fourth Energy Package lays out an integrated climate and energy policy that focuses on achieving energy and climate targets but also supports the proposed reforms “to market design and network operation to adapt to renewable generation, which is more variable, more distributed and requires greater flexibility.”<sup>374</sup>

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<sup>371</sup>Gustafson, *The Bridge*, 395.

<sup>372</sup>Ibid, 399.

<sup>373</sup>Szulecki, Kacper, eds. *Energy Security in Europe*, 195-196.

<sup>374</sup>“EU Legislation,” CRE (French Energy Regulatory Commission).

In 2019, the EU completed its energy policy framework that is aligned with the climate change targets by moving away from fossil fuels and reducing greenhouse gas emissions. The package is expected to be turned into law within the next few years and will provide benefits to the environment, customers, and the markets/economy. This package will set the foundation for the EU's long-term strategy for achieving carbon neutrality by 2050.<sup>375</sup>

The Clean Energy Package aims to achieve European climate and energy targets. It consists of eight legislative proposals including Energy Union governance, electricity market design, rules for the ACER, and security of supply. It has not provided a specific natural annex or amendment. The package has addressed five main focus areas of the European Energy Union: energy security; the internal energy market; energy efficiency; decarbonization of the economy; and research, innovation, and competitiveness. The Energy Union and its effects on European Energy Policy and Energy Strategy will be covered in the following paragraphs. The Clean Energy Package will have implications on member states' national energy mix; in other words, the fuel choices of the member states will be shaped by the requirements to achieve the European Union's commitments to the Paris Agreement measures. Szulecki and Westphal argue that, "It is now a necessity under the Paris Agreement's framework to restore the EU's soft power, linking it to the Sustainable Development Goals agenda, and securing global leadership in sustainability transition."<sup>376</sup>

### 3.4. Natural Gas Supply Disruption to Europe

#### 3.4.1. Russia – Ukraine Gas Crises of 2006 and 2009

With the collapse of the Soviet Union, Russia and Ukraine recognized that Russia has the gas and Ukraine has the pipelines.<sup>377</sup> The system functioned despite several problems because it was divided into two parts that required a compromise and mutual sacrifices to

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<sup>375</sup> European Commission, "Clean energy for all Europeans."

<sup>376</sup> Szulecki, Kacper, eds. *Energy Security in Europe*, 196.

<sup>377</sup> Gustafson, *The Bridge*, 318.

continue. Except for gas deliveries to Finland and Turkey, Russian exports to Europe were transported through three transit countries: Ukraine, Belarus, and Moldova. Owing to historical evolution of the natural gas pipeline system, Ukraine occupied the most important position with more than 80% of the gas transported through its territory. According to Stern, the Russian-Ukrainian gas relationship in 1990s was characterized by:

“Ukrainian inability to pay for up to 50 Bcm/year which it imported from Russia, leading to very high levels of debt and unpaid bills which led to reduction of Russian gas supplies to Ukraine for short periods of time, aimed at restoring payment discipline which in turn led to...unauthorized diversions of the volumes in transit to European countries.”<sup>378</sup>

Increased gas prices and accumulating debt resulted in a reduction in gas delivery to Ukraine. At the same time, Russian intimidation was increased to control, and if possible, acquire geopolitically important strategic facilities such as the Naval base in Sevastopol and most importantly the natural gas pipeline networks. Over time, Russia, Ukraine, and their natural gas companies have become increasingly confrontational due to pricing, debt, tariffs, and overall ownership of the energy infrastructure, especially pipelines.<sup>379</sup> While Russia was able to secure a lease for the Sevastopol Naval Base, the main base of the Russian Black Sea Fleet, the Ukrainian parliament was against handing over control of the pipeline system and consistently vetoed this as a betrayal of national sovereignty.<sup>380</sup> More importantly, Russian leaders were frustrated with the political developments in Ukraine. However, the 2006 and 2009 crises could be attributed to pricing and debt issues. The details of the Russia-Ukraine crisis will be analyzed in the following chapter. The following map depicts the importance of the Ukrainian pipeline networks for Russian gas exports to Europe.<sup>381</sup>

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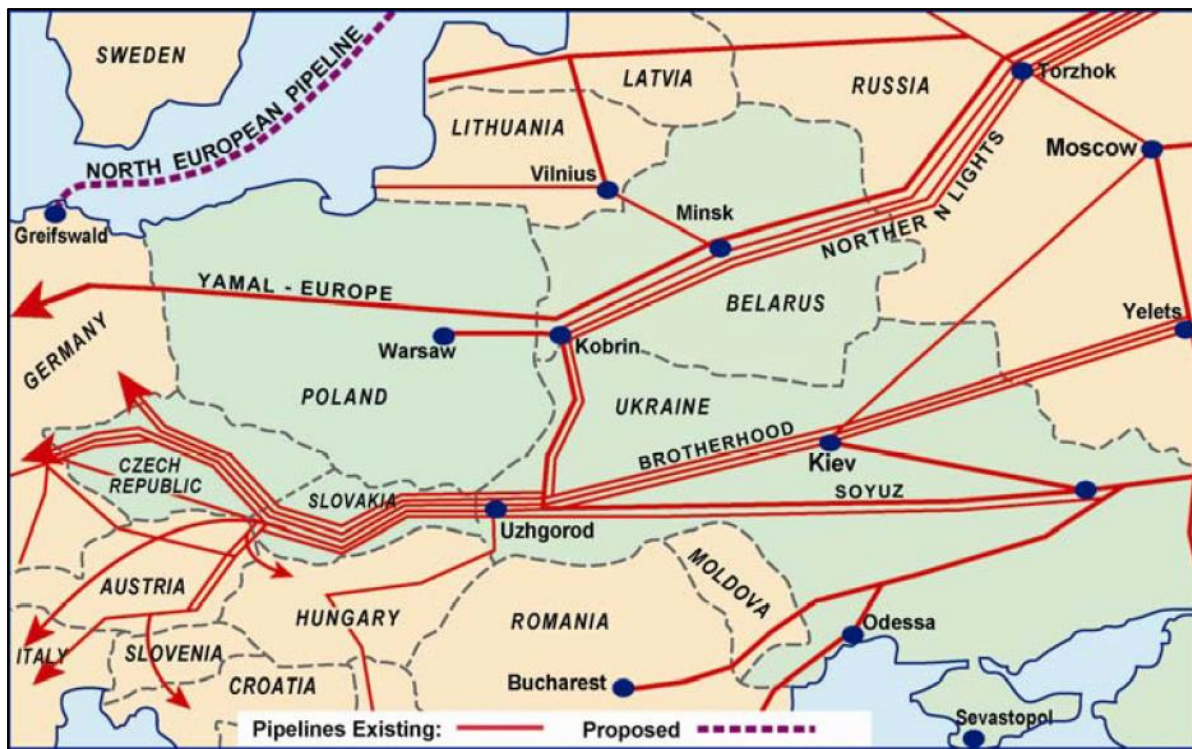
<sup>378</sup> Stern, “The Russian-Ukrainian gas,” 2.

<sup>379</sup> Gustafson, *The Bridge*, 318-320.

<sup>380</sup> *Ibid*, 325.

<sup>381</sup> Stern, “The Russian-Ukrainian gas,” 3.

Figure 9: Ukraine's Pipeline Network for Russian Natural Gas Exports to Europe<sup>382</sup>



Source: Jonathan Stern, OIES, *The Russian-Ukrainian gas crisis of January 2006*

Although the EU has made progress in improving its energy security after the initial Russia-Ukraine crises of 2006 and 2009, Europe's energy dependence on Russia has been rising rather than falling. Russia continues to provide one third of the EU's oil and gas. The EU statistics office suggests that the EU reliance on imported energy increased from 63.4% in 2009 to 65.8% in 2012.<sup>383</sup> Alarmed with the severe impact of reduced gas flow and the potential for further disruptions, the EU convened an Energy Council meeting on 19 February 2009. This was the first regular meeting since the gas crisis between Russia and Ukraine in January 2009. While oil stocks were reviewed, the main concern was the security of the natural gas supply. A press release stated that:

<sup>382</sup> Stern, "The Russian-Ukrainian gas," 3.

<sup>383</sup> Lewis, and Emmott. "EU leaders accelerate."



During the crisis, the EU demonstrated that it could speak with one voice and was able to act quickly and resolutely...sending monitors to remote locations in Ukraine and Russia... Mitigation measures...allowed most countries to manage the situation successfully. Solidarity measures...were swiftly implemented... However, the weaknesses of EU energy security and the EU's energy situation were also identified. It confirmed that the EU urgently needs to continue the development of the internal market, to improve energy interconnections for security of supply, to reinforce its emergency mechanisms and to strengthen its negotiating position vis-à-vis our major suppliers.<sup>384</sup>

The Energy Council meeting adapted measures to allow the EU to address emerging challenges. The process also enabled the EU to lay out a strategy encompassing not only energy security issues but also establishing a single market and climate change mitigation measures. This eventually led to the development of the EU Energy Security Strategy that highlights the EU's energy import dependency on Russia.

### 3.4.2. European Support to Ukraine in Dealing with Russia

Ukraine has been a special interest for European energy security as the main transit hub for natural gas transport. The 2006 and 2009 natural gas supply disruptions caused concerns not only at the EU but were also widely condemned by NATO. Energy supply security was discussed at the NATO Bucharest Summit in 2008, highlighting that “energy developments could have major security implications for Allies and the Alliance. After all, in particular for some of NATO's new members that were burdened with serious energy vulnerabilities, energy security was a question of national security.”<sup>385</sup> Russia's actions were described as part of its hybrid warfare toolbox that is used to coerce Ukraine towards the Russian sphere of influence. On the other hand, EU support to Ukraine included offering guarantees for its debt to Gazprom in 2014; facilitating arrangements for receiving gas from EU countries such as Slovakia at a reasonable price; mediating the Ukraine-Russia transit agreement in 2019 with favorable terms for Kyiv.<sup>386</sup>

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<sup>384</sup> European Commission Press Release

<sup>385</sup> Grubliauskas, and Rühle, "Energy Security: A Critical Concern," 26.

<sup>386</sup> Russell, "Energy Security in the EU's External Policy," 18.

One of the fundamental reasons for the Russia-Ukraine gas crisis was the Kremlin's perceived threat of color revolutions. The Rose Revolution in the newly independent Georgia and the Orange Revolution in Ukraine not only represented the potential for waves of democratization that could spread to Russia, but they also meant that the Kremlin was losing control of the Ukrainian gas pipeline network that transported more than 80% of Europe's natural gas. Therefore, the 2009 natural gas cut-off was a defining moment for Russia-Ukraine relations, and both parties had so much to lose. Gazprom, with the potential threat of losing its four-decades-old reputation of being a reliable supplier, could not have decided this by itself.

Gustafson argues that, "Putin had been personally involved in every stage of Russian gas policy from the moment he took office, and consequently he can surely have had no illusions about how Europe would react to a cut-off."<sup>387</sup> This example shows that the leadership in the Kremlin, whether Soviet or Russian,<sup>388</sup> has always considered geopolitical context when making decisions on large projects such as the Nord Stream 2 and always sought to exploit the differences amongst the EU members and NATO Alliance, especially with the old members represented by Western Europe and new members that are part of Central, Eastern Europe, the Baltics, and the Balkans.<sup>389</sup>

Recent developments in Ukraine have shown that "energy has come to symbolize the geopolitics of the 21<sup>st</sup> century, reflecting countries' diminishing reliance on military and political power,"<sup>390</sup> argues Peterson and Barysch. Russia's annexation of Crimea has been motivated by changing its geopolitical priorities; however, a lack of unified European response to Russia has been driven by increasing energy security concerns and asymmetric energy interdependency of members of the European Union to Russia. While Eastern European

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<sup>387</sup> Gustafson, *The Bridge*, 335.

<sup>388</sup> Yergin, "The New Map." Yergin references the book by distinguished diplomat and historian George Kennan on Soviet foreign policy titled *Russia and the West under Lenin and Stalin*. This title indicates Kennan's perception of Russia even during the Soviet Union period.

<sup>389</sup> Grigas, *The New Geopolitics*, 146.

<sup>390</sup> Peterson and Barysch, *Russia, China*.

countries such as Poland and Lithuania wanted to see a strong NATO military response, Western European countries preferred to pursue a diplomatic solution to this crisis. The main reason for this diverging response was the considerable level of interdependency between Russia and Western European members of the EU, in particular in the areas of trade and energy supply.

### 3.5. European Energy Policy and Strategy

#### 3.5.1. The Development of Energy Policy for the Enlarged EU

In 2003, the European Commission released an Energy Policy<sup>391</sup> that was focused on energy relations of the enlarged EU with its neighbors and most important geographical partners, including Russia, Ukraine, and regions such as the Caspian Basin, the Mediterranean, and North Africa. This policy emphasized completeness of the internal energy market and security of energy supplies of the EU by establishing regulations within the “Wider Europe” geographical scope that includes Southeast Europe and the Caspian Sea Regions. The policy objectives were identified as enhancing the security of energy supplies; strengthening the internal energy market; supporting modernization of energy systems including partner countries; and facilitating major infrastructure projects.<sup>392</sup>

A policy paper written by the European Commission identifies natural gas security of supply as a major challenge and expects that the import requirements will increase due to demand from an enlarged European Union. This policy paper was written before Eastern European countries and the Baltics, then Balkans, had joined the EU. The gas had to come from areas that were geographically further away from the European Union. In order to get natural gas from these regions, new infrastructure, new pipelines, would be required. In the context of the EU-Russia Energy Dialogue:

For the European Union, it is important to maintain and enhance Russia’s role as a supplier of gas and oil and to strengthen Russia as a secure and reliable supplier through

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<sup>391</sup> Commission of the European Communities, “Communication.”

<sup>392</sup> Ibid, 4.

technology transfers and investments to upgrade Russia's energy infrastructure...a new political impetus...by working together towards a strategic European Union-Russia energy partnership...ensuring adequate energy supplies and appropriate prices for economic development...of the European continent, and the long-term nature of investments in energy production and transport.<sup>393</sup>

The policy paper recognized the mutual dependence in the energy sector and planned an energy dialogue platform between the European Union and Russia. The Commission policy also laid out key issues including "identification of energy infrastructure projects of common interest and the central role of long-term gas supply contracts in securing the conditions for the Internal Energy Market by facilitating investments."<sup>394</sup> The policy paper also recognized the different regulatory systems for gas in Russia and suggested that a common regulatory space would increase business opportunities as well as lead to secure and efficient gas supplies. The Commission's long-term intent for Russia was a step-by-step market integration and a balanced market interpenetration, similar to the other external gas suppliers to the EU.

Ukraine was recognized as the most important transit country as 80% - 90% of the total Russian gas exports to Europe moved over Ukrainian territory. Ukraine has one of the most extensive natural gas infrastructures in Europe, with around 14,000 km of pipeline that has the capacity to move 175 bcm per year and has 30 bcm storage capacity. Most of the infrastructure was built during the Soviet Union timeframe. The policy paper recognizes the challenge to guarantee the overall performance, safety, and security of the Ukrainian network.<sup>395</sup>

The Policy paper also mentions the EU's interest in the Caspian Basin region with its extensive oil and gas reserves that could contribute to European security of supply. It lists reserves and production of the regional countries of Kazakhstan, Azerbaijan, and Iran. The oil and gas resources of the Central Asian and Caspian regions, as well as their potential for diversification of energy resources for Europe, is covered in the following chapters. The policy

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<sup>393</sup> Commission of the European Communities, "Communication." 8.

<sup>394</sup> Ibid, 9.

<sup>395</sup> Ibid, 13.

paper identifies whether these resources are transported to Europe, either through Russia or through other transport routes, and states that “secure and safe export routes for Caspian oil and gas will be important for the EU’s security of energy supply as well as crucial for the development of the Caspian region.”<sup>396</sup> Iran and Turkey were identified as potential routes for what will be called later as ‘Southern Corridor Pipeline.’

Esakova refers to Westphal and Aalto’s analysis of EU energy policy that suggests three main principles that characterize the European Union’s energy policy: “first, market rules and competitiveness, which reproduces the core idea and the strongest sector of the EU integration, the Single Market; second, sustainable development, which comprises such issues as environmental protection and fight against climate change, energy saving, increased energy efficiency and utilization of renewable energy resources; and finally, security of energy supplies.”<sup>397</sup> Energy directives and other regulatory measures focus on addressing these challenging issues. However, differences amongst member states’ priorities in implementation of regulatory measures and determining their energy mix as well as interaction with Russia and transit countries remained as a source of contention.

### 3.5.2. Energy 2020 - A strategy for competitive, sustainable, and secure energy

In 2010, European Commission released Energy Strategy 2020 that identified the following energy policy objectives: “To ensure the uninterrupted physical availability of energy products and services on the market, at a price which is affordable for all consumers (private and industrial), while contributing to the EU’s wider social and climate goals. The central goals for energy policy are now laid down in the Lisbon Treaty.”<sup>398</sup> The strategy paper recognized the progress achieved on security of supply, competitiveness, and sustainability, albeit slowly, and expressed concerns over the slow adaptation of energy systems, outdated infrastructure,

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<sup>396</sup> Commission of the European Communities, “Communication.” 12.

<sup>397</sup> Esakova, *European Energy Security*, 194, 195. Reference to Aalto and Westphal, 1-21.

<sup>398</sup> European Commission, “Energy 2020.”

and less competitive energy economies. This strategy paper does not address any issues related with Russia, Ukraine, or other potential sources for resources that were part of the 2003 policy paper. This was potentially due to European decision-makers lack of a clear way ahead for how to handle Russia after the 2006 and 2009 Russia-Ukraine gas crises.

2010 Strategy focused on internal markets and pointed out some significant shortfalls mentioned in the Second and Third Energy Packages in the following areas: fragmented internal energy market; shortfalls on transparency, accessibility, and choice; different national rules and practices that still dominates the growing companies within and beyond national borders; lack of full implementation of internal market legislation; and finally, albeit limited but remaining barriers to open and fair competition. The high number of investigations into anti-competitive behavior in the energy sector was mentioned as a significant concern that emerged as part of the Commission's Energy Sector inquiries.<sup>399</sup>

Natural gas was mentioned with the assumption that supply will remain stable and that it “will continue to play a key role in the EU's energy mix in the coming years, and gas can gain importance as the back-up fuel for variable electricity generation.”<sup>400</sup> It touches upon the interconnectedness and diversification of pipeline and LNG networks as well as domestic networks with external sources. Strategy highlights that:

Energy security is closely intertwined with the EU's foreign and security priorities. Diversification of fuels, sources of supply and transit routes is essential for EU security as are good governance, respect for the rule of law and protection of EU and foreign investments in energy producing and transit countries...EU policy will pay particular attention to safety and security of oil, natural gas pipelines...by combining energy policy and CFSP instruments.<sup>401</sup>

2010 Strategy also highlighted the challenges to achieve the 20/20/20 climate targets on greenhouse gas emission reductions, share of renewables, and energy efficiency efforts that

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<sup>399</sup> European Commission, “Energy 2020.” 3.

<sup>400</sup> Ibid, 10.

<sup>401</sup> Ibid, 18.

were adopted in 2007. However, Europe has not only achieved but also gone beyond its greenhouse gas emission reduction targets in 2020, falling to 24% below 1990 levels in 2019.<sup>402</sup>

In terms of share of renewables, European renewable energy share represented 19.7% of energy consumed, only 0.3% short of the 2020 target.<sup>403</sup>

### 3.5.3. European Energy Security Strategy (2014)

The European Commission's European Energy Security Strategy highlights that, "The European Union's prosperity and security hinges on a stable and abundant supply of energy."<sup>404</sup> It continues, stating that:

In the winters of 2006 and 2009, temporary disruptions of gas supplies strongly hit EU ... was a stark "wake-up call" ... a lot has been done ... strengthen the EU's energy security in terms of gas supplies and to reduce ... dependent on one single supplier... The EU needs... a hard-headed strategy for energy security ... resilience to these shocks and disruptions to energy supplies in the short term and reduced dependency on particular fuels, energy suppliers and routes in the long-term.<sup>405</sup>

European energy security concerns, in general, could be defined as supply security and member nation's high-level dependence on a single external supplier. The EU imports more oil (almost 90%) than natural gas (66%); however, dependence on natural gas has become a major source of concern due to lack of potential energy sources for diversification. Several member states rely on natural gas from Russia as a single supplier, and some members still import electricity from Russia to sustain support for the increasing power demand of their economies. Strategy papers highlight that, "Energy security issues are addressed only at [the] national level without taking fully into account the interdependence of member states."<sup>406</sup>

The EU Energy Security Strategy also outlined short- and long-term measures. In the short-term measures that were focused on overcoming a major disruption during the winter

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<sup>402</sup> European Commission, "Kick-starting" 1.

<sup>403</sup> Roubanis, Dahlstrom, and Noizette. "Renewable energy statistics." 1-8.

<sup>404</sup> European Commission, "European Energy Security Strategy," 2.

<sup>405</sup> Ibid.

<sup>406</sup> European Commission, "European Energy Security Strategy," 3.

2014/15, “particular attention [was] paid to vulnerable areas, to [enhance] storage capacity, to [develop] reverse flows, and to [develop] security of supply plans at [the] regional level and to [exploit] more [of] the potential of Liquefied Natural Gas.”<sup>407</sup> The so-called stress test mentioned in the strategy was carried out by EU member states as well as neighboring countries in August and September 2014. The outcome of the stress test that simulated different energy supply disruption scenarios for a period of one or six months were as follows: first, a complete halt of Russian gas imports to the EU, and the second, a disruption of Russian gas imports through the Ukrainian transit route.<sup>408</sup>

As reflected in the findings and press release of the Commission, cooperation is the key to mitigate the impact of the supply disruption. However, the results of the stress test clearly show Europe’s vulnerability to the disruption of the supply from Russia. It suggests that “a prolonged supply disruption would have a substantial impact on the EU. Eastern EU countries and Energy Community countries would be particularly affected.”<sup>409</sup> The outcome of the worst-case scenario, interruption of all Russian gas supplies for six months, suggests that Hungary, the Balkans, the Baltic States, and Finland would have a severe shortfall by February even with gas sharing and other measures mitigating the impact.<sup>410</sup> In order to address supply challenges and increase energy security, the EU’s long-term measures should include diversifying supplier countries and routes.

There are a few issues that would shed a light on the future of European-Russian energy relations based on the findings of the ‘Stress Test.’ While the Commission analysts used periods of one month and six months for each case, it does not define the length of the disruption that would have a substantial impact. The findings are based on individual national simulations, taking into account the situation in neighboring countries. While nations focus on avoiding a

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<sup>407</sup> European Commission, “European Energy Security Strategy,” 4.

<sup>408</sup> European Commission, “Memo, Q&A on Gas Stress Test.”

<sup>409</sup> Ibid.

<sup>410</sup> Russell, “Energy Security in the EU’s External Policy,”



national crisis, the report draws upon analysis of national responses that concludes that a cooperative approach could significantly reduce the impact in the most affected countries. That result might be true during an exercise or a stress test that involves reactions by national technocrats and bureaucracy; however, ongoing vaccine distribution and pandemic measures determined by political leaders have been extremely uneven and problematic within the EU member states, even between countries such as Germany and Austria due to border closures or test requirements that could never have been imagined. In a real disruption, the situation could be much worse than the test outcome suggests.

In case of a major supply disruption, there will be a rush to meet domestic demand and a market-based approach as suggested as a potential solution of the test would never satisfy those countries in need. There will be pressure for the release of strategic shocks, forced fuel switching, and demand curtailment, but these measures will be uneven throughout the EU member states. Due to different levels of dependence on Russian natural gas and diverging national priorities, the stress test might not reflect potential conditions in a real crisis situation.

With the Energy Security Strategy, the Commission is looking into taking a stronger political role, which is a step forward creating the Energy Union that is explained below. The Third Energy Package has caused major changes to the German domestic energy markets as well as to the gas industry's relations with Russia, in particular with Gazprom. While the future of the European natural gas demand remains uncertain, owing to climate change measures and technology advancements, European and U.S. sanctions over the Ukraine crisis limits Germany's policy choices for further discussions over security of gas supply matters and gas market design beyond the Third Energy Package.

Bros, Mitrova and Westphal argue, "The 'geopolitical burden' on natural gas stems from Russia's strong position in the natural gas market in the EU. Russia's natural resource endowment in such close proximity to the EU is no longer seen without bias as being an asset

to the EU or Germany.”<sup>411</sup> Central and Eastern European and the Baltic members of the EU have been vocally criticizing Germany “for placing its economic interests first, at the expense of the EU, whereas Russia has been perceived as trying to weaken the EU by using German-Russian ties.”<sup>412</sup> The Nord Stream 1 and 2 projects are perceived as Russia’s geopolitical approach to natural gas supply, increasing its market share in Western Europe. Additionally, Russian attempts to bypass Ukraine as a transit country allows leveraging future natural gas supply to increase its power and influence.

#### 3.5.4. European Energy Union

Following the release of the European Energy Security Strategy in 2014, the Junker Commission identified establishment of an Energy Union<sup>413</sup> as one of its key priorities. Energy Union strategy identifies five intertwined and mutually reinforcing dimensions: ensuring energy security by diversifying Europe’s energy sources through cooperation between EU countries; fully integrated internal energy markets that enables the free flow of energy without regulatory or technical barriers; improving energy efficiency that will reduce energy import dependency, lower emission, and drive growth and employment; retaining Europe’s leadership in renewable energy and maintaining climate targets by decarbonizing the economy; and finally, supporting research, innovation, and development for a breakthrough in clean energy low-carbon technologies that drive energy transition and allow maintaining competitiveness.<sup>414</sup>

The Energy Union provided an umbrella concept to address several challenging issues from energy security to achieving climate targets. One of the most important aspects of the Energy Union is that it offers an excellent opportunity to complete the internal gas market. The Energy Union could increase EU energy infrastructure investment to address key issues such as member states’ dependence on a single source, namely Russia. While this is mostly a

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<sup>411</sup> Bros, Mitrova, and Westphal, “German-Russian Gas Relations,” 45.

<sup>412</sup> Ibid.

<sup>413</sup> European Commission, “Energy Union.”

<sup>414</sup> Ibid.

concern for Central and Eastern European countries, there are certain steps to increase accessing alternative energy resources such as initiatives by Poland and Lithuania to build LNG terminals. As highlighted by Boersma, despite the political desire to achieve energy independence, member nations are likely to be required to pay a premium due to competitive pricing of Russian gas via pipeline. Although the Energy Union was introduced as a drastic reform and major change in the European approach to Russia, in particular energy relations and natural gas trade,<sup>415</sup> the objectives identified in the Energy Union have yet to be accomplished due to diverging national interests of Western, Central, and Eastern Europe.

The most recent report on the state of the Energy Union, The Fifth Report on the Progress Achieved, released in October 2020 focuses on COVID-19 recovery efforts. The report highlights the EU's new focus on the European Green Deal that aims "to transform the EU into a fair and prosperous society and combines policies to tackle climate change, to protect and restore biodiversity, eliminate pollution, to move to a circular economy, and to ensure that no one is left behind in the green transition."<sup>416</sup> Natural gas will have important role for the EU's transition to achieve 2050 climate targets. In that regards, the EU's dependence on Russian natural gas is expected to increase and natural gas is perceived as a transition fuel as Europe continues to reduce coal plants and phase out nuclear power.

The Fifth Progress Report is also accompanied by assessment of the final national energy and climate action plans. Each EU member state provides its own assessment of the five main areas identified in the Energy Union strategy and shares their best practices. For example, Lithuania provided the following assessment in the area of energy security:

Maintaining high levels of security of supply is a priority in the ongoing transformation of the energy system, with the objectives by 2030 of 45% renewables powered electricity and increasing the share of domestic renewable energy for electricity generation to 70% to replace imports... When considering risks...projects that focus on interconnectors with neighboring countries for both gas and electricity. However, the generation capacities of the neighboring countries are not sufficiently taken into

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<sup>415</sup> Boersma, "The Challenge."

<sup>416</sup> European Commission, "2020 report on the State of the Energy Union."

account...As regards diversification of sources and routes, the plan specifies measures and key objectives for diversification and to reduce import dependency for gas and electricity, but not for oil.”<sup>417</sup>

These reviews and annual assessments allow the Commission and member nations to coordinate energy security efforts and concerns, especially joint projects, as Europe targets a carbon-neutral economy in accordance with the European Green Deal.

### 3.6. The EU-Russia Energy Cooperation Mechanisms – Multilateral Frameworks

#### 3.6.1. Energy Charter Treaty

With the collapse of the Soviet Union in 1991, the European Economic Community (ECC) promoted international energy cooperation with former Soviet satellites and new republics in Eastern Europe and Central Asia, based on a shared interest in secure energy supply and sustainable economic development.<sup>418</sup> This process allowed development of the Energy Charter Treaty (ECT) that was signed in 1994 and went into force in 1998. ECT is a legally binding document that provides framework for foreign investors’ activities and protect their rights in the host states. The treaty focuses on the following main areas:

...the protection of foreign investments; non-discriminatory conditions for trade in energy materials, products and energy-related equipment and provisions to ensure reliable cross-border energy transit flows through pipelines, grids and other means of transportation; the resolution of disputes between participating states and host states; the promotion of energy efficiency and attempts to minimize the environmental impact of energy production and use.<sup>419</sup>

There are fifty-six members of the ECT. While Russia signed the document in 1994, the Russian Parliament did not ratify the treaty due its Protocol on Transit that would allow freedom of transit without distinction of origin, destination of ownership, and non-discriminatory pricing.<sup>420</sup> In other words, it would allow unlimited third-party access to Russia’s pipeline network that is still debated between Russia and the EU. ECT was the first

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<sup>417</sup> European Commission, “Assessment.”

<sup>418</sup> European Energy Charter, “International Energy Charter.”

<sup>419</sup> European Energy Charter, “The Energy Charter Treaty.”

<sup>420</sup> Esakova, *European Energy Security*, 197.

attempt to challenge Gazprom's monopoly; if it were approved, ECT would enforce multilateral regulations over Russia's pipeline network. For example, Gazprom's role as buyer and reseller of Central Asia and Caspian gas would cease, and Turkmen gas would sell their gas to Europe or other former Soviet states at European prices. Additionally, ratification of the Charter would allow European companies to participate in Russia's upstream and in ownership of Russia's transit energy infrastructure. These concessions, from the Russian point of view, are against Moscow's approach seeking to revise post-Cold War era arrangements and increase its influence its "near abroad."<sup>421</sup>

The Energy Charter is still in effect for solving European and International investor-state disputes. At the time of this writing, around 135 cases were introduced under the premises of the Charter's obligations. However, there is increasing pressure for a review of the Treaty due to changes in investment law and environmental objectives. Brauch argues, "The special protections that the Energy Charter Treaty gives to fossil fuel investors and their investments go in the opposite direction of what is needed for the world to decarbonize its energy matrix and fight the climate emergency."<sup>422</sup>

### 3.6.2. EU-Russia Energy Dialogue

There were different expectations when a bilateral EU-Russia Energy Dialogue was introduced during the EU-Russia Summit in 2000 in Paris. Based on the developments in the 1990s, there were high expectations, assuming Russia would remain as a reliable partner for energy cooperation. These expectations were reflected with the initiation of the EU-Russia Energy Dialogue regime covering some of the Energy Charter Treaty principles. The joint declaration refers to rigorous implementation of the Partnership and Cooperation Agreement (PCA) in the economic and social spheres. Additionally, it states that:

The EU and Russia have decided to institute, on a regular basis, an Energy Dialogue ... will provide an opportunity to raise all the questions of common interest relating to the

<sup>421</sup> Stent, "An Energy Superpower?" 86.

<sup>422</sup> Brauch, "Should the European Union."

sector, including the introduction of cooperation on energy saving, rationalization of production and transport infrastructures, European investment possibilities, and relations between producer and consumer countries. The planned ratification of the Energy Charter Treaty by Russia and the improvement of the investment climate will be important aspects in this context.<sup>423</sup>

The dialogue initially contributed to confidence building and problem solving such as recognizing mutual dependence and establishing joint ventures. It has not progressed as planned and failed to fully integrate the Russian and European energy systems.<sup>424</sup>

Russia's approach and commitment to the EU-Russia Energy Dialogue changed with the geopolitical developments in Russia and the former Soviet space since 2003. With the Putin administration's centralization policies, Russian foreign policy has also changed as a response to the developments such as "the second wave of the North Atlantic Treaty Organization (NATO) enlargement in Eastern Europe, the 2004 EU enlargement, 'colored revolutions' in Ukraine and Georgia in 2003 and 2004."<sup>425</sup> These developments changed Russian rapprochement attitude and created a sea change in Russian foreign energy policy. Additionally, Russia realized that individual European countries prefer to deal with Russia bilaterally such as the Nord Stream and South Stream projects indicated. Since Central and Eastern European countries preferred a common EU policy, it was not possible to align national priorities, especially amongst the old members of the EU and the new members, mostly former Soviet satellites or new republics.<sup>426</sup>

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<sup>423</sup> Joint Declaration of the President of the European Council, J. CHIRAC, assisted by the Secretary-General of the Council/High Representative for the Common Foreign and Security Policy of the EU, J. SOLANA, of the President of the Commission of the European Communities, R. PRODI, and of the President of the Russian Federation, V. V. PUTIN, 30 October 2000, [https://ec.europa.eu/energy/sites/ener/files/documents/2011\\_eu-russia\\_energy\\_relations.pdf](https://ec.europa.eu/energy/sites/ener/files/documents/2011_eu-russia_energy_relations.pdf)

<sup>424</sup> Stent, "An Energy Superpower," 86.

<sup>425</sup> Esakova, *European Energy Security*, 15.

<sup>426</sup> Stent, "An Energy Superpower," 86.

### 3.7. European – Russia Energy Relations

#### 3.7.1. Energy Demand and European Energy Security– An Overview

Over the last three decades, European energy policy evolved around two main objectives: first, ensuring greater energy security in the natural gas system by building resilience and the establishment of a single gas market for the EU. The second, addressing climate change concerns by decarbonization, increasing energy efficiency, and increasing support for renewable energy.<sup>427</sup> In 2016, Maroš Šefčovič, Vice President and Commissioner of the Energy Union, reflected the core message of the European Union's strategy adopted by the European Commission in February 2015.<sup>428</sup>

The EU continues to be dependent on importing energy. It imports about 53% of its energy at a cost of around €400 billion annually, making it the largest energy importer in the world. The EU remains vulnerable to external energy shocks no matter what the roots for this are. A fragile international context, combined with overdependence of some Member States on one particular source or supplier, calls for reinforced efforts to reduce its dependency on particular fuels, energy suppliers and routes.<sup>429</sup>

What Vice President Šefčovič highlighted in his statement and is suggested by an analysis of global and European energy trends, European demand for energy, especially for natural gas, is expected to increase over the next few decades. Europe will increasingly be vulnerable to energy shocks, such as the instability in oil and gas exporting countries, man-made or natural disasters, resource nationalism, and geopolitical conflict. Europe, especially the Central and Eastern European countries, and former Soviet republics, will be susceptible to political manipulation due to the high-level dependence on a single source - Russia.

The World Energy demand continues to increase driven by economic development, especially in the Indo-Pacific region. The level of economic activity is one of the key determinants of the energy trends. In the World Energy Outlook 2015 Report, the International

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<sup>427</sup> Yergin, "The New Map," 87.

<sup>428</sup> Šefčovič, "Energy Architecture" 24.

<sup>429</sup> Ibid.

Energy Agency (IEA) identified three core scenarios: The New Policies Scenario; the Current Policies Scenario; and the 450 Scenario.<sup>430</sup> The New Policies scenario, the IEA's central scenario identified in 2015, takes into account climate pledges by countries toward implementing measures in accordance with the Paris Agreement.<sup>431</sup> Article 2 of the Agreement sets a goal aiming to limit global warming compared to the pre-industrial levels in the context of global response to the threat of climate change, thereby reaching global peak of greenhouse gas emissions as soon as possible to achieve climate neutrality by mid-century.

While European energy supply remains stable and the global share of the EU 27's energy supply is around 10%,<sup>432</sup> the new European Green Deal targets net-zero greenhouse gas emissions by 2050. The Commission developed an Action Plan and turned it into a "European Climate Law" that emphasizes its "ambition to make Europe the first climate-neutral continent by 2050."<sup>433</sup> Therefore, climate targets will also bring additional stress to European energy markets and security of supply, as well as relations between Brussels and member nations, in particular on the member nations' policy choices that shape the energy mix of the respective countries. For example, one of biggest energy users in Europe, Germany, will phase-out its nuclear plants in 2022. Germany has also established a target to end coal-fired power generation by 2038, with a potential option to bring it forward by 2035.<sup>434</sup> These policy choices will result in an increase of gas share in energy mix over the mid-term. Germany's gas demand will increase significantly as its domestic production has been in decline since 2004. Russia's role will be growing as Germany is directly linked to Russia via pipeline networks that will be used to import natural gas.<sup>435</sup>

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<sup>430</sup> IEA, "World Energy Outlook," 31-32.

<sup>431</sup> United Nations, "Paris Agreement."

<sup>432</sup> European Commission, "EU Energy," 26.

<sup>433</sup> European Commission, "European Climate Law."

<sup>434</sup> Egenter, and Wehrmann "German Commission."

<sup>435</sup> Wettengel, "Germany's Dependence."



While climate mitigation measures will have significant consequences on European energy demand and European-Russian energy relations by 2050, Europe will continue to remain import dependent on fossil fuels for the foreseeable future. Central and Eastern European countries have similar challenges and depend upon the gas supply from Russia. Grigas highlights that, “Until recently, many countries, especially, Central and Eastern Europe and the Caucasus, have been 100% dependent on a single gas pipeline, a single gas-producing country, and even a single company, such as the Russian gas giant Gazprom...Russia [has] likewise been dependent on a fixed set of pipeline export routes and consumers.”<sup>436</sup>

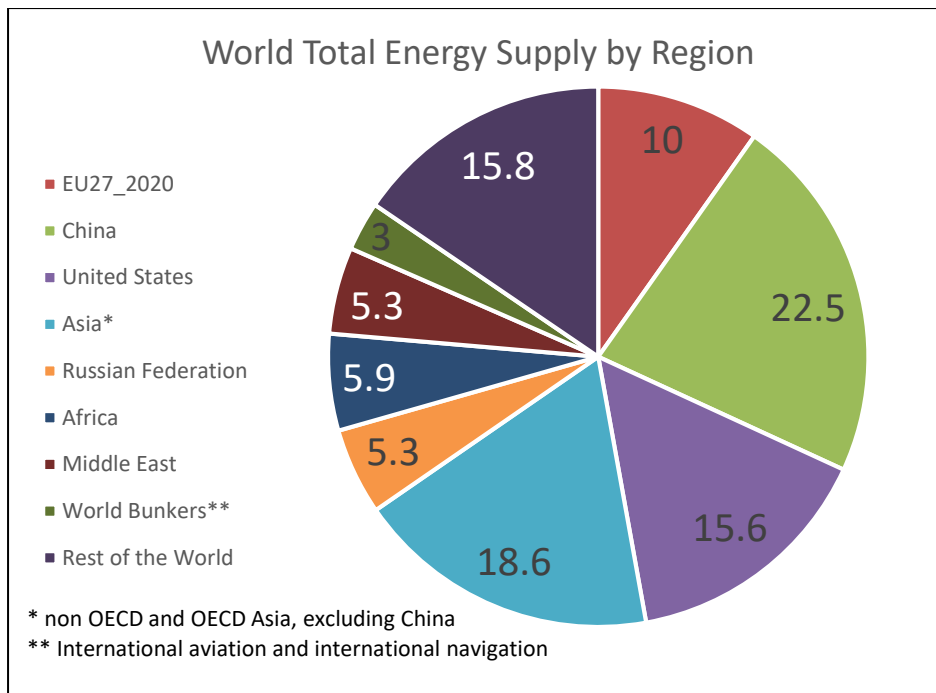
There has been a growing demand for oil and natural gas in Europe while concerns increased dependency on Russia. The EU, together with the countries aspiring to be part of the European Union,<sup>437</sup> has become the largest importer of gas. As a result of depleting European production, the EU 27 natural gas import dependency was more than 80% in 2018, around a 20% increase compared with what it was in 2000.<sup>438</sup> The following figure depicts the world total energy supply by region in 2020.

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<sup>436</sup> Grigas, *The New Geopolitics*, 3.

<sup>437</sup> Current candidate countries are: Albania, Republic of North Macedonia, Montenegro, Serbia, and Turkey. Bosnia and Herzegovina and Kosovo are potential candidates. [https://ec.europa.eu/info/policies/eu-enlargement\\_en#actions](https://ec.europa.eu/info/policies/eu-enlargement_en#actions).

<sup>438</sup> European Commission, “EU Energy,” 24.

Figure 10: World Total Energy Supply by Region<sup>439</sup>

Source: European Commission, Directorate-General for Energy, *EU energy in figures: statistical pocketbook 2020*, Publications Office, 2020, <https://data.europa.eu/doi/10.2833/75283>

### 3.7.2. European Energy Import Dependence

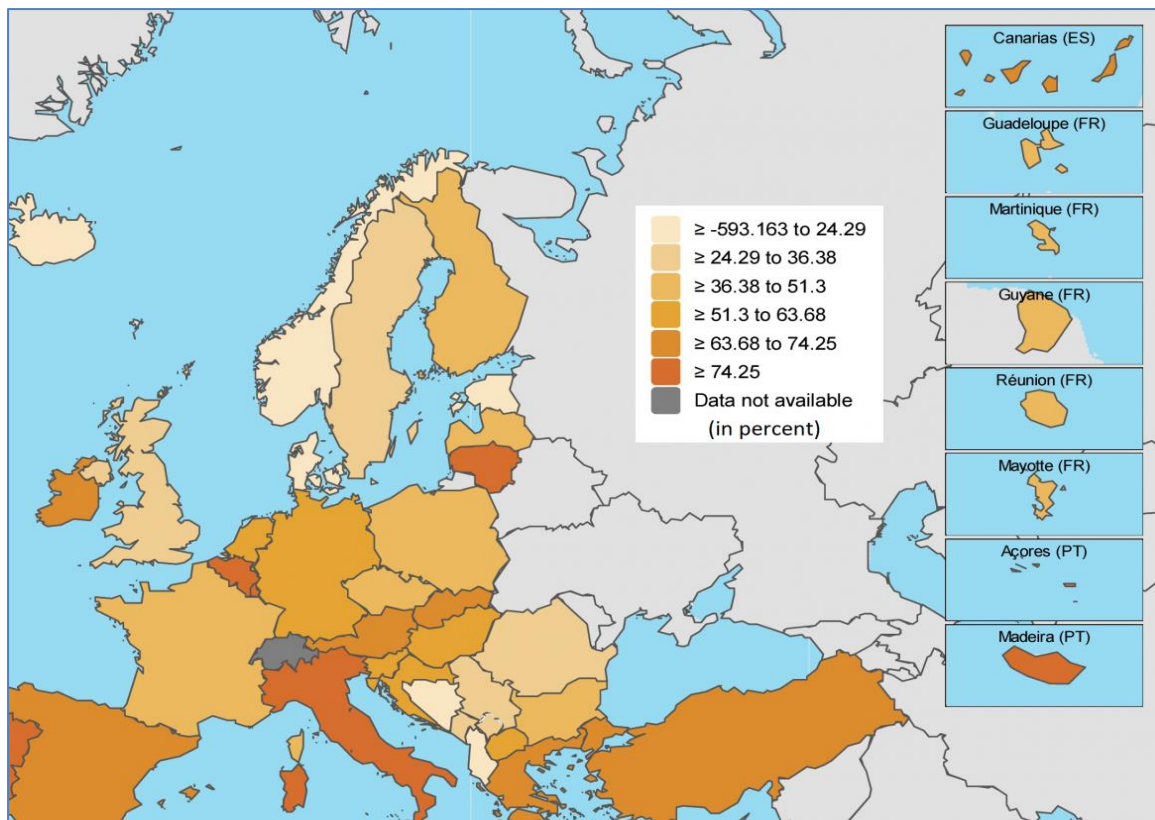
In 2014, EU Energy Security Strategy stated that:

The EU imports 53% of the energy it consumes. Energy import dependency relates to crude oil (almost 90%), to natural gas (66%), and to a lesser extent to solid fuels (42%) as well as nuclear fuel (40%) ...Six Member States depend [on] Russia as single external supplier for their entire gas imports and three of them use natural gas for more than a quarter of their total energy needs. In 2013 energy supplies from Russia accounted for 39% of EU natural gas imports or 27% of EU gas consumption; Russia exported 71 % of its gas to Europe with the largest volumes to Germany and Italy.<sup>440</sup>

The following map shows European energy import dependency by country. Most of Europe is more than 50% dependent at the aggregate level.

<sup>439</sup> European Commission, "EU Energy."

<sup>440</sup> European Commission, "European Energy," 2.

Figure 11: Europe Energy Import Dependence – 2018<sup>441</sup>

Source: Julian Wettengel, *Clean Energy Wire* "Germany's Dependence on Imported Fossil Fuel."

Europe, members of the EU, the UK, and Turkey depend greatly on energy imports "for their energy supply, none of them having a positive energy trade balance...Intra-EU energy flows [are] treated as domestic"<sup>442</sup> Most energy experts' views converge on the EU's 'increased dependency on imports of oil, gas, and coal supplies, while renewable and nuclear power is estimated [as] not being able to meet this shortfall/deficit.'<sup>443</sup>

The European Union's energy dependency on Russia has changed in parallel with the developments of the European political landscape in the post-Cold War era, especially with the EU enlargements in 1995, 2004, 2007, and 2013. With the ascension of former Soviet

<sup>441</sup> Wettengel, "Germany's Dependence."

<sup>442</sup> Hogselius, *Energy and Geopolitics*, 68.

<sup>443</sup> Esakova, *European Energy Security*, 159.

satellites and former Soviet republics into the EU, the level of dependency has increased significantly due to the new members higher rates of energy dependency on both resources and infrastructure, in particular natural gas pipelines. The dependency of the member states is based on not only resources such as oil, natural gas, coal, and electricity, but also on the infrastructure such as pipelines and power lines/grids on which the energy supply is transported. While the EU has taken certain regulatory measures with several Energy Packages including directives to establish an internal energy/natural gas market, Grigas argues, “The differences among EU members will likely to persist in terms of their dependence on Russian gas, as will differences in degrees [of] energy security and energy vulnerability, complicating efforts to develop a common approach.”<sup>444</sup>

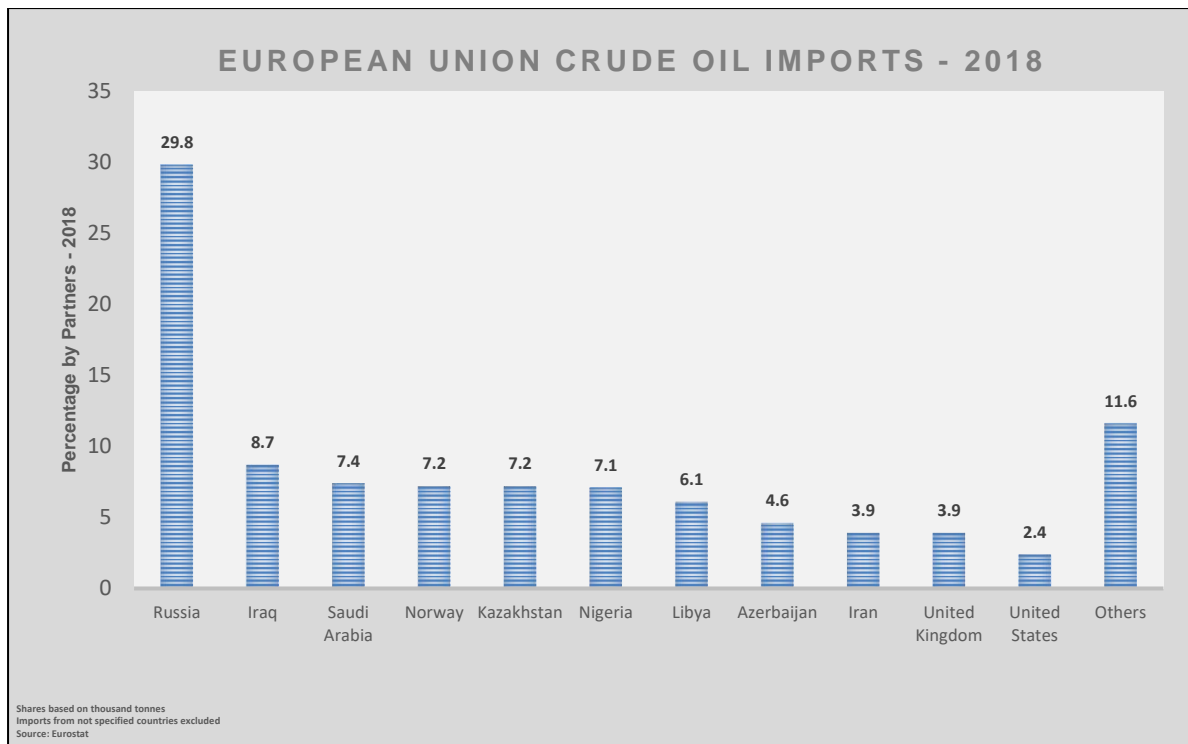
The following figures depict EU imports of crude oil, natural gas, and coal by country. Russia is by far the biggest provider of energy in oil, natural gas, and coal to Europe.<sup>445</sup>

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<sup>444</sup> Grigas, *The New Geopolitics*, 146.

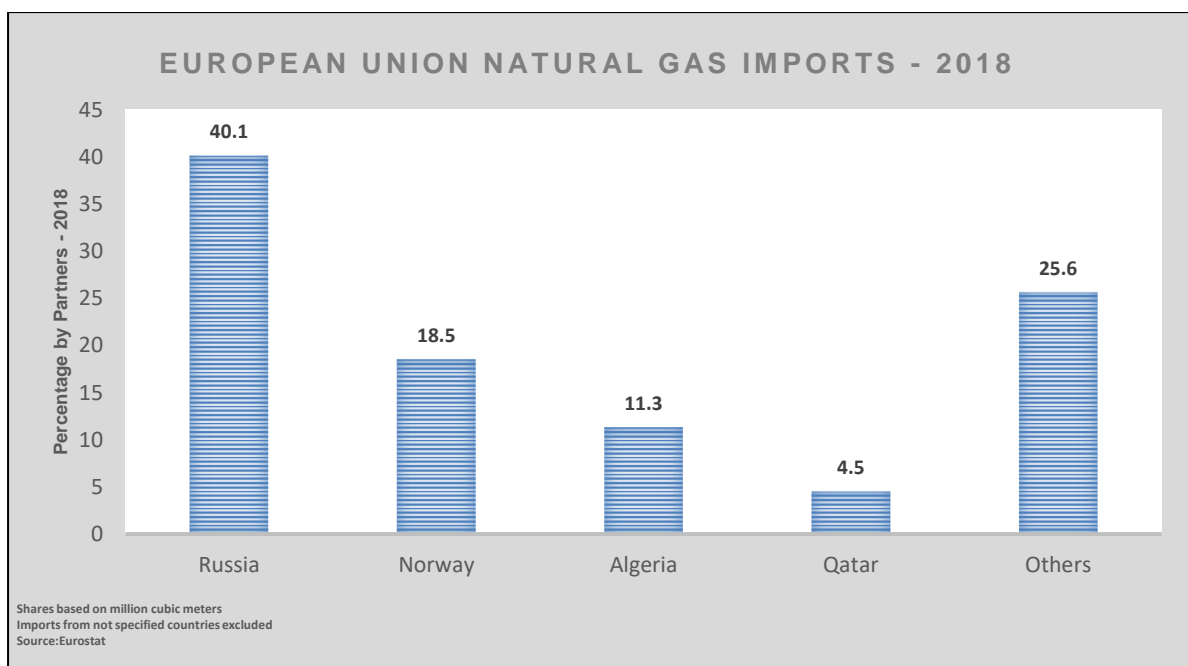
<sup>445</sup> Wettengel, “Germany’s Dependence.”

Figure 12: EU Oil Imports by Country



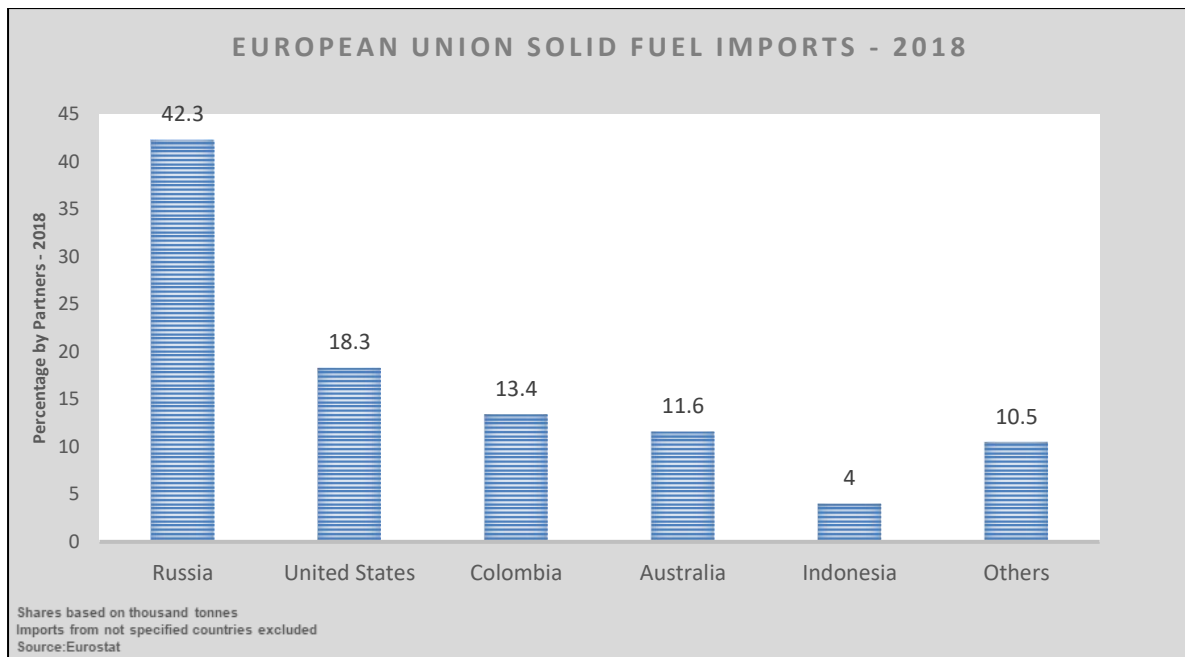
Source: Julian Wettengel, *Clean Energy Wire*, based on Eurostat data

Figure 13: EU Natural Gas Imports by Country



Source: Julian Wettengel, *Clean Energy Wire*, based on Eurostat data

Figure 14: EU Solid Fossil Fuel Imports by Country



Source: Julian Wettengel, *Clean Energy Wire*, based on Eurostat data

While net import dependency aggregate data shows an overall situation of respective countries, detailed distribution of energy mix and usage provide a more complex and troublesome picture. For example, countries that appear to be a net energy exporter, such as the case for the Netherlands in the 1970s due to its vast natural gas reserves, but it was dependent on crude oil imports. As we have seen in the previous chapter, energy is a system and energy exporting countries are also dependent on foreign nations for technology, equipment, processes, and resources that are required to explore, transit, and process energy resources.<sup>446</sup>

Europe, as a net energy importer, depends on raw material but has the technology, equipment, and resources that allow producer countries to extract and make raw materials available for export. This interdependence set the foundation for European-Soviet energy relations during the Cold War. While the situation has changed and technology advancements

<sup>446</sup> Hogselius, *Energy and Geopolitics*, 69.

for conventional resource extraction allow Russia to operate and utilize existing reserves, there are areas such as the Arctic that still require Western technology to explore resources. In other words, the interdependence which has set the initial foundation still survives albeit increased complexity due to changes in the actors and linkages.

As highlighted by Grigas, the EU is a unique entity, neither a nation state nor an international organization. It is an evolving supranational organization that is “primarily an economic union of states, aggregating functions formerly reserved for national governments, with internal politics, foreign policy, and energy relationships continuously evolving.”<sup>447</sup> However, each member state has its own national interests that might be in conflict with the other members. Energy security, especially natural gas relations with Russia, is one of the most evident fissures in the EU between the Western and Central/Eastern European members. While attempts to overcome these differences still occupy the Commission’s agenda leading to the development of the Energy Union under the Junker Presidency, national interests and priorities still prevail over the common European position such as the debate over Nord Stream 2.

### 3.7.3. European Natural Gas Consumption by Country

The European Commission statistics indicate that natural gas gross inland consumption of the EU increased by 4.2% in 2019 compared to 2018. The increases were observed in Spain (14.1%), Greece (9.0%), and Germany (7.7%), while the largest drops were observed in Latvia (-8.4%), Estonia (-8.0%), and Denmark (-6.7%). As depicted in Figure 15 below, natural gas demand is mainly concentrated in North-West Europe. Germany, Italy, and France, followed by the Netherlands, Spain, and Poland, are the main consumers of natural gas in the European Union. The UK and Turkey also import large amounts of natural gas. At the same time, EU domestic natural gas production continued to decrease, falling by 11.0% compared to 2018. The drops in output were observed in the Netherlands, Denmark, Ireland, Croatia, Italy,

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<sup>447</sup> Grigas, *The New Geopolitics*, 138.

Hungary, and Austria, varying from (-25.4%) to (-9.2%). A slight increase of (0.5%) was achieved in natural gas production in Poland.<sup>448</sup>

European domestic gas production is projected to decline. This projection is supported by IHS Markit's most recent analysis in "Outlook for Natural Gas" that also suggests the European natural gas demand is expected to decline over the long-term after 2030, pending "on the progress in electrification, implementation of renewable power generation and the use of renewables to replace fossil fuel emissions."<sup>449</sup> IHS also argued that natural gas pipelines and additional gas infrastructure, such as the Nord Stream 2 pipeline, would be beneficial for Europe. Chief natural gas strategist of IHS stated, "It is in the interest of European consumers to have abundant choice of import infrastructure from both price and security of supply considerations - especially if the infrastructure investments and risks are born by private companies."<sup>450</sup>

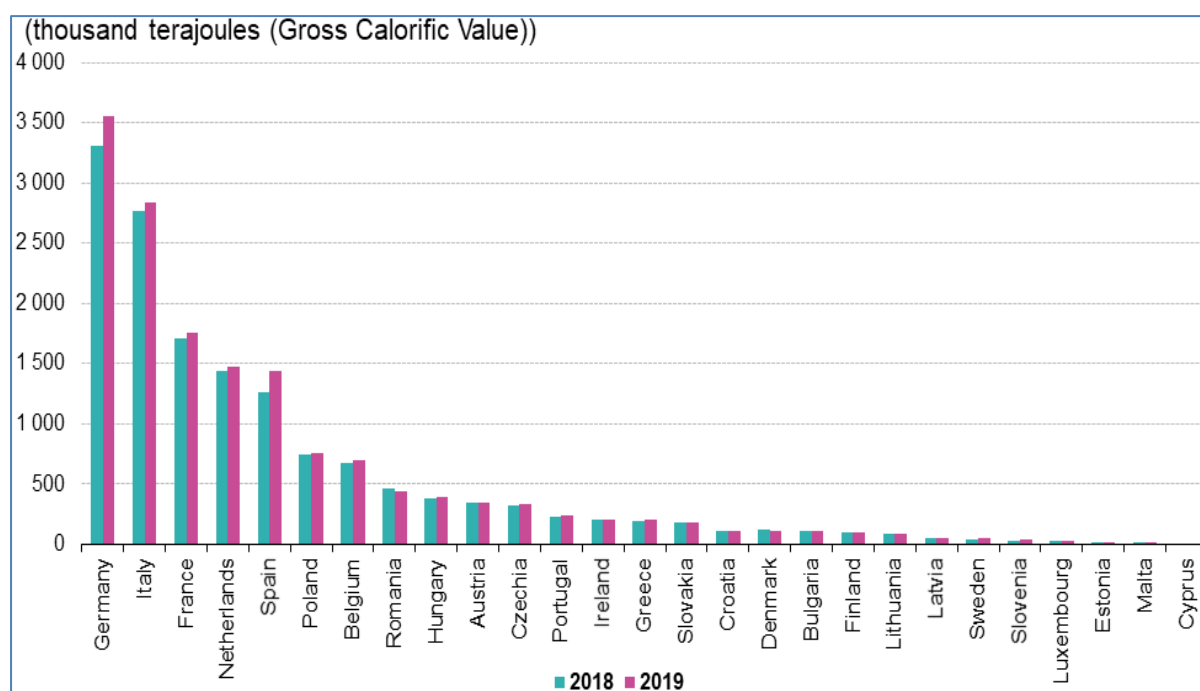
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<sup>448</sup> Eurostat, "Natural Gas Statistics." [https://ec.europa.eu/eurostat/statistics-explained/index.php/Natural\\_gas\\_supply\\_statistics#Consumption\\_trends](https://ec.europa.eu/eurostat/statistics-explained/index.php/Natural_gas_supply_statistics#Consumption_trends)

<sup>449</sup> Nissimov, "Benefits of New European Infrastructure."

<sup>450</sup> Ibid.



Figure 15: Gross Inland Consumption of Natural Gas EU27, 2018-2019<sup>451</sup>

Source: EC, Eurostat, *Gross Inland Consumption of Natural Gas by Country*  
[https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Natural\\_gas\\_supply\\_statistics#Consumption\\_trends](https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Natural_gas_supply_statistics#Consumption_trends)

#### 3.7.4. European Natural Gas Demand – Russian Gas Supply

Since the end of the Cold War, there has been an increasing demand for natural gas in Europe. While the demand is increasing, European domestic production is in decline. While there are diverging views on the future of these two trends, the IEA estimates that natural gas demand at global level could decrease 5% in 2020 due to the COVID 19 pandemic's impact on the global economy and societies. While this change represents the largest drop in consumption since the 2009 financial crisis, European gas demand is expected to recover during the second half of 2021 and remain stable out to 2025.<sup>452</sup>

In a 2014 study, the outlook for natural gas demand in Europe, Honore argued that the future of gas demand is uncertain after the crippling energy demand in 2009. Based on his

<sup>451</sup> Eurostat, *Statistics Explained*.

<sup>452</sup> IEA, "Global Energy Review 2020,"

scenario analysis, demand first falls by 2020 and then picks up and grows between 2020-2030 when the nuclear phase out is completed and coal starts losing its share in the energy mix.<sup>453</sup> This analysis is supported by Grigas who suggested, “the EU’s long-term focus on renewable and efficiency policies is reaping results and contributing to declining gas demand...In addition and in contrast to environmental objectives, since the US shale boom, cheap American coal exports to Europe have also contributed to a decline in gas usage.”<sup>454</sup> While assessments converge on the uncertainty of the future of European gas demand, especially on Russian gas, due to a number of factors affecting not only European-Russian relations but also global concerns such as climate change. One of the most important and increasingly central factors is the political context that will be influenced by Russia-Ukraine relations.

Natural gas has also an increasing share in the energy mix of the EU. While the share of different energy resources varies considerably amongst the member states, petroleum products occupy the largest share (36%), followed by natural gas (21%), and solid fossil fuels (15%). Renewable energy shares have also increased to solid fossil fuel level (15%) and are expected to continue to increase its share in the energy mix. Nuclear energy provides (13%), and its share is expected to decrease with the phasing out of German nuclear plants, but it also occupies the largest share in France and Sweden.<sup>455</sup> The future of natural gas demand should also be considered with several other factors such as the EU transition to a low-carbon economy, decreased economic activity due to the pandemic and associated economic crisis, and the increased share of renewable energy in post-COVID 19 recovery.

There are several factors that will determine the future of natural gas demand in Europe. First, the pace of economic recovery after the COVID 19 pandemic. At the time of writing, COVID variants are affecting Europe and returning to a new normal will significantly vary

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<sup>453</sup> Anouk. "The Outlook." 71-72.

<sup>454</sup> Grigas, *The New Geopolitics*, 172.

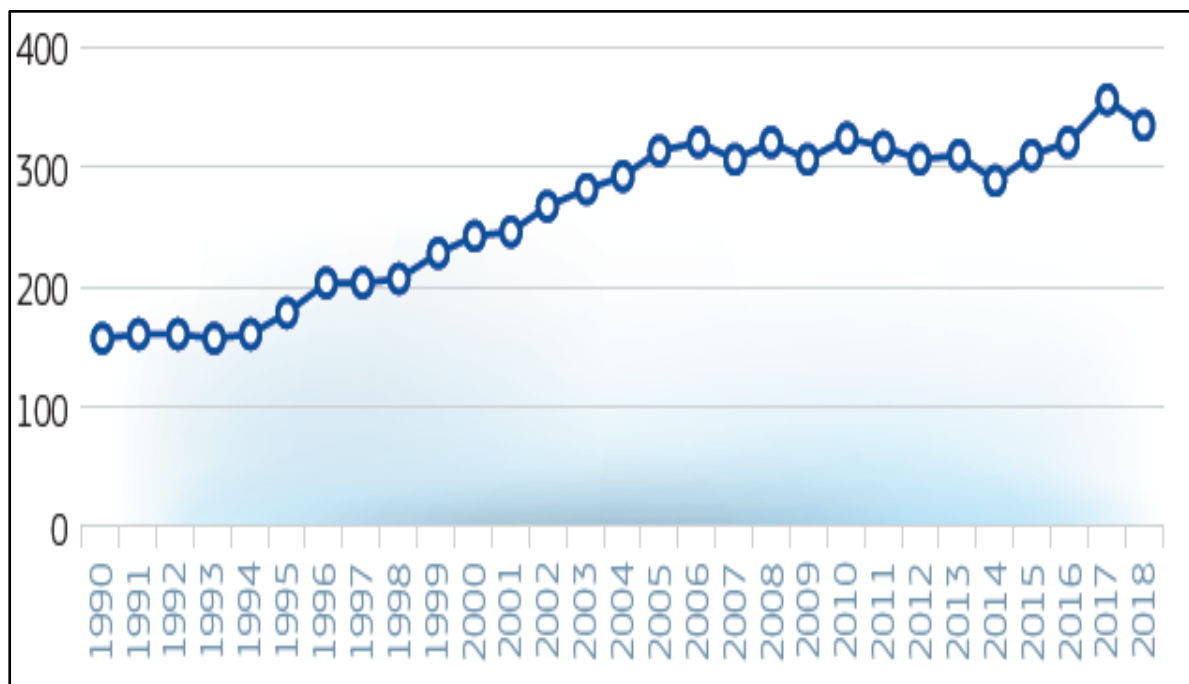
<sup>455</sup> European Commission, “Where Does Our Energy Come From?”

amongst the members of the European Union, depending on the individual countries' economic resilience and strength. The second, changes in natural gas usage in major sectors, such as residential, industry, and power generation, based on the requirements for achieving climate change targets, will influence natural demand. If Europe focuses on achieving a rapid economic recovery, natural gas usage in industry and power generation is likely to increase. However, the Commission's continued focus on green resilience might affect the transition from coal to natural gas and renewables. The third, political considerations, such as Russia-Ukraine relations and Western sanctions led by the US and the EU will shape security and the political landscape and affect natural gas usage. An increasingly assertive Russia will drive EU members to increase their focus on alternative energy resources either by increasing investment to import and using LNG or increasing the emphasis on renewables. Finally, continued change in the energy mix will affect the demand for natural gas. The phasing out of nuclear power plants by 2022 and reducing dependency on coal-fired power generation will affect the amount of natural gas imports. For example, a recent German study outlines how Germany will adapt its power generation to achieve the renewable energy share of 65% by 2030.<sup>456</sup>

The following chart depicts the EU 27's natural gas imports between the 1990s to 2018. The steadily increasing trend between the 1990s and the early 2000s become stable around 2010. While there is an observed growth towards 2017/8, that increase was due to maintenance of other power generation capacity such as nuclear plants in Europe. Therefore, a slight increase is expected due to the phasing out of nuclear and coal-based power generation by 2030, and the demand is likely to remain stable in the 2030s.

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<sup>456</sup> Federal Ministry for Economic Affairs and Energy, "Commission on Growth," 20-21.

Figure 16: EU Natural Gas Imports since the Cold War (1990-2018) EU27<sup>457</sup>

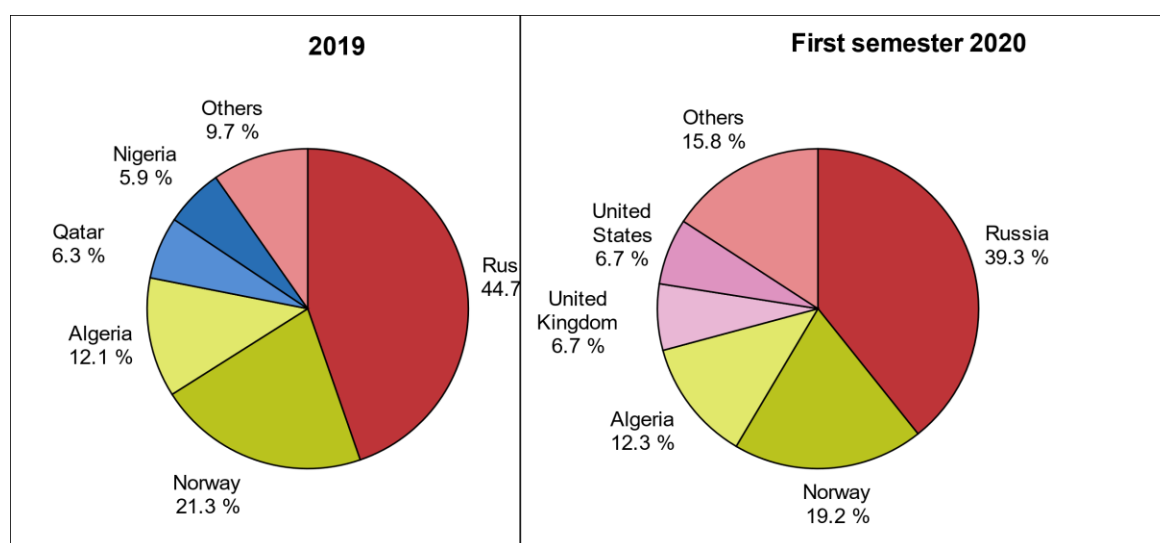
Source: EU Energy in Figures, European Commission, Directorate-General for Energy, *EU energy in figures: statistical pocketbook 2020*, Publications Office, 2020, <https://data.europa.eu/doi/10.2833/75283>

Oil is a fungible commodity, and the oil market is a liquid international market. However, natural gas, excluding LNG, is transported via pipeline networks, “facing more challenges due to the inflexibility of pipelines and risks associated with the transit countries.”<sup>458</sup> Natural gas supplies to Europe are provided a small group of suppliers and the majority of the gas is transported via pipeline networks. The following figure depicts EU natural gas imports by country. The largest share of gas is provided by Russia followed by Norway and Algeria. The share of domestic production is expected to decline. While the percentage of Russia’s share is expected to remain around 40% in overall natural gas imports, the volume of gas imported by the EU is expected to grow modestly by 2025 and remain stable afterwards.<sup>459</sup> The following figure depicts the European Union’s main natural gas trading partners.

<sup>457</sup> European Commission, “EU Energy in Figures.”

<sup>458</sup> Esakova, *European Energy Security*, 161.

<sup>459</sup> IEA, “World Energy Outlook,” 199-200, All Rights Reserved.

Figure 17: Natural Gas Imports from Main trading Partners, EU27, 2019/20<sup>460</sup>

Source: European Commission, Eurostat, October 2020, 4.

<https://ec.europa.eu/eurostat/statistics-explained/pdfscache/46126.pdf>

### 3.7.5. Increasing share of LNG and infrastructure development

LNG is perceived to be an insurance policy against potential natural gas supply disruptions or sudden changes in the energy demand. The delivery of LNG is more flexible compared to the pipelines. The IEA “Gas 2020” estimate suggests that LNG remains the main driver of the international gas trade, and it is becoming increasingly fluid and competitive.<sup>461</sup> LNG imports have become an important source for Europe to diversify gas supplies. While LNG’s share in natural gas imports is still low, European LNG import is expected to surge with a sizeable increase in LNG import volumes by 2030.

The US has become the biggest natural gas producer in the world, owing to the shale revolution. The growing gas production in the US and significant investment increasing LNG export infrastructure would drive natural gas exports to Europe. There are already signs of a huge increase in US exports to Europe. While 10% of the US global LNG exports went to

<sup>460</sup> European Commission, “EU Imports.” 4.

<sup>461</sup> IEA, “Gas 2020.”

Europe in 2017/2018, it jumped to 36% in 2019, and is expected to maintain an upward trend based on the July 2018 Trump-Junker agreement. The increasing export of LNG from the US to Europe, along with other LNG supplies, increased competition with Russian gas. Yergin argues, “European buyers now had multiple options and choices, which meant diversification of supply - the keystone of energy security.”<sup>462</sup> To support increasing LNG imports, there are several LNG infrastructures projects underway.

Esakova highlights the difficulty and higher costs of transporting and storing natural gas compared to oil. Additionally, lack of sufficient regasification capacity due to limited number of terminals, especially in Western Europe, has been identified as a vulnerability.<sup>463</sup> Lithuania opened a liquefied natural gas floating storage and regasification terminal in Klaipeda in 2014, to reduce their dependence and vulnerability against a single supplier. Yergin refers to Lithuania’s energy minister who said, “We have had many historical challenges with Russia. But now, as a result of opening of the country’s LNG importing facility, gas supply has been depoliticized.”<sup>464</sup> The same approach was followed by Poland that inaugurated its new Świnoujście LNG import terminal in 2015/16. While the price of LNG is more expensive than the pipeline gas, LNG competition is helping to keep Russian gas prices low as suggested by Poland and Lithuania.<sup>465</sup>

The EU has a number of LNG terminals; most of them are located in Southern Europe. As a result, most of these facilities are under-utilized at almost one third of the real capacity. European gas distribution networks are not sufficiently integrated to make full use of the LNG capacity. Additionally, pipeline networks have not developed to transport gas from the South to the North where Russian gas is the main source. For instance, “Spain has nearly one-third of

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<sup>462</sup> Yergin, “The New Map,” 73

<sup>463</sup> Esakova, *European Energy Security*, 162

<sup>464</sup> Yergin, “The New Map,” 73

<sup>465</sup> Russell, “Energy Security in the EU’s External Policy,” 6, 7.

the EU's import capacity, but interconnecting pipelines are not sufficient to transport large quantities of gas from Spain to France, and from there to Eastern Europe.”<sup>466</sup> These LNG import facilities will increasingly gain economic and geopolitical importance by 2030 as European imports, in particular German, are expected to peak.

Figure 18: The European LNG Infrastructure<sup>467</sup>



Source: European Commission, 8 Jan 2020, [https://ec.europa.eu/energy/sites/ener/files/eu-us\\_lng\\_trade\\_folder.pdf](https://ec.europa.eu/energy/sites/ener/files/eu-us_lng_trade_folder.pdf)

<sup>466</sup> Russell, “Energy Security in the EU’s External Policy,” 6,7.

<sup>467</sup> European Commission, ‘EU-U.S. LNG Trade,’ Data Source, European Commission, 8 Jan 2020, [https://ec.europa.eu/energy/sites/ener/files/eu-us\\_lng\\_trade\\_folder.pdf](https://ec.europa.eu/energy/sites/ener/files/eu-us_lng_trade_folder.pdf)

As seen on the above map, there are several other LNG projects and supporting infrastructure underway, and several others are planned. While LNG appears as an alternative to pipeline gas, there are some inherent challenges and constraints for LNG to become a real substitute. LNG causes more environmental concerns compared to natural gas transported via pipeline due to additional emissions generated during liquefaction and shipping. LNG transport requires special, expensive, and purpose-built ships for carrying LNG over long distances. Degasification and other land-based infrastructure including pipeline networks for distribution are huge investments, and these new pipelines should be coordinated with several countries.

### 3.7.6 European Natural Gas Imports and Import Dependency

There are a number of fundamental factors that define a country's dependency on imports and suppliers. While the level of dependency to a single supplier is one of the most important factors, the volume of imports from a single supplier is also one of the determinants of defining interdependence between supplier and consumers. In other words, it outlines sensitivity and vulnerability interdependence of EU and member states. The following table is based on 2020 data and depicts Russia's share of European oil and gas imports.

Table 5: Russia's Share in Oil and Gas Imports to EU27, 2020<sup>468</sup>

| Country  | Share (%) of Russia in national extra- EU27 imports |             |
|----------|---|-------------|
|          | Petroleum oils                                      | Natural gas |
| Belgium  | 25-50   | 0-25        |
| Bulgaria | 50-75   | 75-100      |
| Czechia  | 25-50   | 75-100      |
| Denmark  | 0-25  | 0-25        |
| Germany  | 25-50   | 50-75       |
| Estonia  | 75-100  | 75-100      |
| Ireland  | 0-25  | 0-25        |
| Greece   | 0-25  | 25-50       |

<sup>468</sup> European Commission, "EU Imports."



Table 5 (Continued)

| Country     | Share (%) of Russia in national extra- EU27 imports |             |
|-------------|---|-------------|
|             | Petroleum oils                                      | Natural gas |
| Spain       | 0-25  | 0-25        |
| France      | 0-25  | 0-25        |
| Croatia     | 0-25  | 0-25        |
| Italy       | 0-25  | 25-50       |
| Cyprus      | 0-25  | 0-25        |
| Latvia      | 0-25  | 75-100      |
| Lithuania   | 50-75   | 25-50       |
| Luxembourg  | 0-25  | 0-25        |
| Hungary     | 75-100  | 75-100      |
| Malta       | 0-25  | 0-25        |
| Netherlands | 25-50   | 0-25        |
| Austria     | 0-25  | 75-100      |
| Poland      | 50-75   | 50-75       |
| Portugal    | 0-25  | 0-25        |
| Romania     | 25-50   | 75-100      |
| Slovenia    | 0-25  | 75-100      |
| Slovakia    | 75-100  | 75-100      |
| Finland     | 75-100  | 75-100      |
| Sweden      | 0-25  | 25-50       |

Source: Eurostat database (Comext) and Eurostat estimates

The largest importers of oil were Germany, Spain, Italy, and the Netherlands while the share of imports in Estonia, Hungary, Slovakia, and Finland were between 75-100%. Both factors are critical in each countries' assessment of sensitivity and vulnerability interdependence to Russia. The share of Russian oil imports in Spain, France, and Italy was less than 25%. Additionally, ten EU Member States (Bulgaria, Czechia, Estonia, Latvia, Hungary, Austria, Romania, Slovenia, Slovakia, and Finland) imported more than 75 % of their natural gas from Russia. Excluding Austria, Finland, and Slovakia, these countries are either former Soviet satellites or republics and are in close proximity to Russia. In respect to natural gas, the largest natural gas importers were Germany, Spain, France, Italy, and the Netherlands.

However, Russian natural gas imports share was less than 25% for Spain, France, and the Netherlands; for Germany it remains between 50-75%.<sup>469</sup>

The following table depicts the amount of natural gas imports and the share of these imports within the EU members based on a comparison of data between 2000 and 2018. First, an increase in the amount of natural gas imports is noticeable for almost all the main importers, such as Germany's import increased from 61.1 Mtoe to 70.5 Mtoe, while its share in Europe has decreased from 25.4% to 21.4%. Italy remains one of the biggest importers of natural gas, and its share within the EU follows a similar pattern. However, the biggest changes were observed in imports of the Netherlands and Spain.

Table 6: Natural Gas Imports by Country (Top 10) and Their Share in EU27<sup>470</sup>

| Mtoe and %<br>EU27_2020<br>Ranking | 2000 |         |                    | 2018 |         |                    |
|------------------------------------|------|---------|--------------------|------|---------|--------------------|
|                                    | MS   | Imports | EU27_2020<br>Share | MS   | Imports | EU27_2020<br>Share |
| <b>Natural Gas</b>                 |      |         |                    |      |         |                    |
| 1                                  | DE   | 61.1    | 25.4 %             | DE   | 70.5    | 21.4 %             |
| 2                                  | IT   | 47.0    | 19.6 %             | IT   | 55.6    | 16.9 %             |
| 3                                  | FR   | 36.5    | 15.2 %             | FR   | 43.8    | 13.3 %             |
| 4                                  | ES   | 15.5    | 6.4 %              | NL   | 43.6    | 13.2 %             |
| 5                                  | BE   | 13.3    | 5.5 %              | ES   | 30.3    | 9.2 %              |
| 6                                  | NL   | 12.5    | 5.2 %              | BE   | 16.1    | 4.9 %              |
| 7                                  | CZ   | 7.5     | 3.1 %              | PL   | 13.1    | 4.0 %              |
| 8                                  | HU   | 7.3     | 3.1 %              | AT   | 10.8    | 3.3 %              |
| 9                                  | PL   | 6.6     | 2.8 %              | HU   | 10.6    | 3.2 %              |
| 10                                 | SK   | 5.7     | 2.4 %              | CZ   | 6.6     | 2.0 %              |

Source: European Commission, Directorate-General for Energy, *EU energy in figures: statistical pocketbook 2020*, Publications Office, 2020, <https://data.europa.eu/doi/10.2833/75283>

<sup>469</sup> European Commission, "EU Imports"

<sup>470</sup> European Commission, "EU Energy in Figures," 60.

In parallel with the decline in indigenous gas production, the Netherlands has also become a major importer of natural gas. The Netherlands imports have increased from 12.5 Mtoe to 43.6 Mtoe, and Spain has also doubled its imports. They are part of the group of countries whose share within the EU imports have increased significantly. It should also be noted that while the member nations share within the EU was decreasing, the import volume of gas increased. The following table clearly shows the changing trends in natural gas imports and domestic EU production.

The tables above highlight the differences of EU member states in their dependence on Russia's oil and natural gas supplies. The level of dependence has also been influenced by other factors, such as geography - member states proximity to Russia; history - whether they were former Soviet satellites and republics; the level of economic interactions and trade relations; and cultural ties. Esakova highlights the two diverging policy approaches that divides the EU. The first group perceives Russia as a potential partner that could be dealt with within the European rules and norms. They also believe Russian could be drawn into the EU's orbit "involving Russia in as many institutions as possible and encouraging Russian investment in the EU's energy sector and striking bilateral energy deals with Russia, even if Russia sometimes breaks the rules."<sup>471</sup>

The other side of the spectrum, the second group, perceives Russia as a threat.<sup>472</sup> Esakova references Leonhard and Popescu's analysis that defines other group's view that suggests a series of policy actions: "Russian expansionism and contempt for democracy must be rolled back through a policy of 'soft containment' that involves excluding Russia from the G8, expanding NATO to include Georgia and Ukraine, supporting anti-Russian regimes in the neighborhood, building missile shields, developing an 'Energy NATO,' and excluding Russian

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<sup>471</sup> Esakova, *European Energy Security*, 165.

<sup>472</sup> *Ibid*, 165, 166.

investment from the Western European energy sector.”<sup>473</sup> This analysis was conducted before Russia’s aggressive actions in the Caucasus and Ukraine.

The Russia-Georgia war and illegal annexation of Crimea, as well as ongoing intervention in Eastern Ukraine, has moved many countries from the first group to second group. Russia’s G8 membership was suspended after the Ukraine crisis and the illegal and illegitimate annexation of Crimea. Russia’s military posture has increasingly become more assertive. While the EU and Europe supported US led sanctions on Russia, some key members of the EU, such as Germany, Italy, and France, still advocate and encourage bilateral relations with Russia. Under US leadership, NATO has taken certain steps, such as establishing a missile defense system and deploying several battle groups to Eastern Europe and the Baltics, to stop Russian expansionism in particular efforts to increase influence over Central and Eastern Europe, the Baltics, and the Balkans.

### 3.8. EU – Russia Interdependence Analysis

#### 3.8.1. The IEA Model of Short-Term Energy Security (MOSES)

Figures 16-18 and Tables 6 and 7 show to what extent Europe is dependent upon Russian energy, in particular natural gas, as well as transport pipeline networks. The IEA has developed a Model of Short-Term Energy Security (MOSES) that “takes an energy systems approach, dealing with all parts of the energy system from supply to transformation, distribution and end-use energy services.”<sup>474</sup> This model is based on the most prominent and widely cited energy security studies that are reviewed in detail in Chapter 2. This approach allows understanding of vulnerabilities of energy systems by interpreting indicators relevant to the fuel types.<sup>475</sup> MOSES uses the following indicators in the assessment process: net import dependence; political stability of suppliers; number of entry points (LNG ports and pipelines);

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<sup>473</sup> Leonard and Popescu. “A Power Audit,”

<sup>474</sup> Jewell, “The IEA Model,” 7.

<sup>475</sup> Ibid, 6.

diversity of suppliers; proportion of offshore production; daily send-out capacity from underground and LNG storage; and finally, natural gas intensity.<sup>476</sup> These indicators are further categorized based on their origins, external or internal, and their relevance to risks or resilience capacity.

While qualitative analysis is widely used to understand sensitivity and vulnerability analysis, quantifying some of the key variables would allow comparison of different countries. Each factor is quantified from political stability of supplying countries to diversity of suppliers, natural gas intensity, etc. Then each country's energy (natural gas) security profile is developed based on the number of pipelines and/or LNG ports/terminals, supplier diversity, natural gas storage capacity, and their ability to meet over 50% peak-daily demand. Then countries are categorized into three levels of domestic or external risk exposure: low, medium, and high risk. Their resilience capacity is measured by diversity of suppliers and entry points such as pipelines. Doing this level of quantitative analysis is outside of the scope of this paper; the following table shows how these natural gas indicators are reflected in the analysis:

Table 7: Natural Gas - Dimensions of Energy Security Indicators<sup>477</sup>

|                 | Risks  | Resilience   |
|-----------------|--|--|
| <b>External</b> | <b>External risks:</b> <ul style="list-style-type: none"> <li>• import dependency</li> <li>• political stability of suppliers</li> </ul> | <b>External resilience:</b> <ul style="list-style-type: none"> <li>• entry points: Liquefied natural gas (LNG) ports</li> <li>• entry points: pipelines</li> <li>• diversity of suppliers</li> </ul> |
| <b>Domestic</b> | <b>Domestic risks:</b> <ul style="list-style-type: none"> <li>• offshore production</li> </ul>   | <b>Domestic resilience:</b> <ul style="list-style-type: none"> <li>• send-out capacity from natural gas storage</li> <li>• gas intensity</li> </ul>  |

Source: IEA, Jewell, 2011, The IEA Model of Short-term Energy Security (MOSES), *Primary Energy Sources and Secondary Fuels*. All Rights Reserved.

<sup>476</sup> Jewell, "The IEA Model," 11.

<sup>477</sup> Ibid, 25.

According to the IEA, the most important indicator in terms of natural gas supply security is net import dependence. EU member states fall into three categories:

- low import dependency ( $\leq 10\%$ ) and net exporters: Belgium, Denmark, Ireland, Spain, France, Croatia, Cyprus, Luxembourg, Malta, the Netherlands, and Portugal.
- moderate import dependency (30%-40%): Greece, Italy, Lithuania, Sweden
- and high import dependency ( $\geq 70\%$ ): Germany, Poland (50-75%), Bulgaria, Czech Republic, Estonia, Latvia, Hungary, Austria, Romania, Slovakia, Slovenia, and Finland (75-100%).<sup>478</sup>

IEA categorization is not aligned with the way that the EU categorized the level of dependence of its member states. Some of the member states in the low import category might be well over 10% dependent on Russian gas supply. Low import reflects 0-25%, moderate reflects 25-50% dependency, and those whose dependency is over 50% are registered as high import dependent countries.

### 3.8.2. Sensitivity and Vulnerability Interdependence

European-Russia energy relations have multiple dimensions; therefore, it is important to understand not only geopolitical concerns but also economic impediments of these relationships. As a result, a good start for this analysis is to understand their level of dependence, as suggested by Esakova:

Sensitivity and vulnerability interdependence are the starting points for analysis of energy relationships, as such analysis helps to measure the level of dependence of each of the actors and the overall interdependence between the actors. Thus, the study of the characteristics and development of an energy-based relationship should begin with the analysis of the sensitivity and vulnerability interdependence of each of the actors.<sup>479</sup>

In an earlier part of this chapter, energy and natural gas dependency of the EU member states to Russia was reviewed. Future prospects suggest that the EU's dependence on Russia is expected to continue over the short to mid-term albeit other sources of energy will become available over time. The Roadmap to EU-Russia Energy Cooperation until 2050 highlights that

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<sup>478</sup> European Commission, "EU Energy in Figures," 10. Due to national sensitivities data is categorized 0-25%, 25-50%, 50-75%, and 75-100%.

<sup>479</sup> Esakova, *European Energy Security*, 23.

“Natural gas is of immense importance in the energy relationship between the EU and Russian Federation. While it is not as large – in energy and financial terms – as the trade in crude oil and oil products, its importance for many EU member states is greater because of the high level of dependence on Russian gas.”<sup>480</sup> The high-level of dependence on Russia was recognized in the ‘Roadmap’ that was signed by the EC Energy Commissioner and Minister of Energy of the Russian Federation. Based on a 2016 estimate, the European Commission expects that a continued decline in domestic gas production and increasing consumption will drive natural gas demand. The EC forecast suggests that “by 2050, the EU will need to import 87% of its gas needs, compared to 70% at present.”<sup>481</sup>

Using the theory framework provided by Keohane and Nye and indicators identified by the IEA, Esakova argues that the EU’s *sensitivity interdependence* could be defined as high, especially for the short-term supply interruptions. Esakova used the following criteria, based on IEA indicators, to measure the degree of *sensitivity interdependence* for short-term supply disruptions: “the share of oil and gas in the EU energy mix; the import dependence of the EU on fossil fuels and potential substitutes; Russia’s share in EU’s energy imports; EU’s dependence on pipeline supplies, capacity to store large quantities of gas or to substantially increase imports of LNG supplies; and, instabilities in the major European transit countries.”<sup>482</sup>

While the Russia-Ukraine gas disputes will be reviewed in the following chapter, it is important to determine Europe’s readiness for supply interruptions, such as the ones that took place in the early 2000s. There have been three major natural gas supply interruptions in 2006, 2009, and 2014 between Russia and Ukraine that effected natural gas flow to Europe. The 2006 disruption showed Europe was unprepared for such an event; Hungary lost 40% and other Eastern European countries lost around one third of their supplies. France and Italy were also

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<sup>480</sup> European Union. “Roadmap”

<sup>481</sup> Russell, “Energy Security in the EU’s External Policy,” 4.

<sup>482</sup> Esakova, *European Energy Security*, 172.

affected, losing around over one-quarter of their supply. The 2006 disruption was short, only three days, but severe, and Gazprom was quick to restore export levels to sustain supply security.<sup>483</sup>

The similar scenario was repeated in late 2008 and early 2009, “when Russian gas producer Gazprom halted supplies through Ukraine, leaving several Southeastern European countries including Moldova, Bulgaria and Romania with a severe shortage of gas for nearly two weeks in the depths of winter.”<sup>484</sup> It should be noted that all these supply cuts were targeting Ukraine, not Europe or any of its member states. These supply disruptions brought up the key concern of “What will happen if Russian gas supplies are interrupted this winter?”<sup>485</sup> These concerns led the European Commission to conduct a stress test to measure and identify concrete measures to mitigate the impacts of supply disruptions. While the report suggests that cooperation is the key and a market-based approach should be the guiding principle, the EU’s sensitivity interdependence remains high even after the measures taken by the Third Energy Package that further regulated European Natural Gas market dynamics.

Led by Poland and Lithuania, Central and Eastern European countries have been raising concerns over increasing dependency on Russian energy supplies, in particular natural gas. They also raised concerns over the degree of the EU’s growing *vulnerability interdependence* on Russian gas. In a 2012 analysis, Esakova argues that:

The degree of sensitivity interdependence is not as important as the degree of vulnerability interdependence...The vulnerability interdependence of the EU can be measured by looking not only on the proportion of the EU’s needs and costs in case of a cut off of energy supplies, but also at the alternatives to imported energy and the costs of switching to possible alternatives. Thus, the EU’s vulnerability interdependence in the relationship with Russia should be seen in the terms of long-term threats, such as the inability of the EU to provide for a long-term diversification of energy routes and energy supplies, more investments into increased energy efficiency and alternative energy technologies, as well as more market liberalization.<sup>486</sup>

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<sup>483</sup> Gustafson, *The Bridge*, 334.

<sup>484</sup> Russell, “Energy Security in the EU’s External Policy,” 1.

<sup>485</sup> European Commission, “Gas Stress Test.”

<sup>486</sup> Esakova, *European Energy Security*, 172.



Since 2012, the EU has supported development of natural gas interconnectors, such as the ongoing work to connect Lithuania and Poland and has used reserve gas flow from the West to the East to support Central and Eastern Europe, including Ukraine. An example of this is the test in 2014 which pumped gas from Slovakia to Ukraine to reduce dependency on Russia. While these measures have provided relief for a short duration of supply disruption in 2014, it does not change the fact that the EU is highly dependent on natural gas pipeline supplies and does not have sufficient capacity to store large quantities of gas or to substantially increase imports of LNG in the event of a cut-off of Russian supplies.

According to Esakova, the following factors define the EU's energy relations with Russia in terms of *vulnerability interdependence*:<sup>487</sup>

- The IEA long term outlook suggest that the EU energy mix will continue to include a large share of oil and gas;
- The EU energy import dependency will continue, especially for natural gas due to phasing out of nuclear and coal power plants;
- European domestic natural gas production will continue to decline, increasing reliance on Russian natural gas to fill the void;
- Diversification of supply via new pipeline construction has become costly while increasing political instability in the North Africa and Middle East regions are limiting their role as a reliable energy supply source;
- The number of LNG terminals are likely to continue to increase, but they are far from the level they could be substitute pipeline volume.
- The Asia-Pacific region, especially China, Japan and India, will compete for LNG imports. Esakova refers to Stern who argues that increasing LNG trade and exports reduce incentives for long-distance multi-country pipeline projects. The LNG market provides inherent diversity and flexibility which is not possible with a pipeline system. China's energy demand increases competition for Central Asian energy resources, especially for natural gas, thus, reducing the attractiveness of European markets.<sup>488</sup>
- Finally, the IEA estimates that high levels of European dependence on Russian gas will continue until at least 2040.<sup>489</sup>

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<sup>487</sup> Esakova, *European Energy Security*, 173, 174.

<sup>488</sup> Ibid.

<sup>489</sup> Russell, "Energy Security in the EU's External Policy," 5.

### 3.8.3. Sensitivity and Vulnerability Interdependence – Differences between EU Members and Implications on EU policy

A European Parliament study emphasized that the “dependence on energy imports is perhaps the EU's main external vulnerability, weakening its position vis-à-vis supplier countries such as Russia.”<sup>490</sup> Both Esakova and the IEA's analyses suggest that the EU's *sensitivity and vulnerability interdependence* in energy transactions to Russia, in particular gas transactions, have increased since the 2000s. As mentioned in earlier parts of this chapter, the EU member states' natural gas import dependency varies considerably as their relations with Russia vary. Esakova argues, “There are significant differences between the levels of *vulnerability and sensitivity interdependence* between Russia and Western European countries, and Russia and Eastern European transit states.”<sup>491</sup> As Yergin highlighted that agreeing on a common policy on energy:

was very hard to come by with twenty-eight different countries, with different interests, different endowments, different needs – and different attitudes toward Russia. West European generally welcomed Russian gas imports. Eastern and Central European countries, much more dependent on Russian gas, saw their reliance as a source of vulnerability, reminding them of their former thralldom to Moscow when they were satellites of Soviet Union.<sup>492</sup>

Additionally, differences exist amongst the Central and Eastern European countries.

In 2017, the EU 27 was the largest importer of energy, including oil, natural gas, and coal), ahead of China and the United States.<sup>493</sup> Russia was the primary supplier of energy to Europe. Esakova suggests, “One of the major concerns for the energy security of the EU is its incoherent external energy policy...bilateral deals with Russia in the energy sphere have undermined the EU's ability to secure key political goal.”<sup>494</sup> While the EU is the world's largest importer of energy, member nations are responsible for the relationships with third parties for

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<sup>490</sup> Russell, “Energy Security in the EU's External Policy,” Executive Summary.

<sup>491</sup> Esakova, *European Energy Security*, 171.

<sup>492</sup> Yergin, “The New Map,” 86.

<sup>493</sup> European Commission, ‘The EU in the World,’ 2020 Edition, 116.

<sup>494</sup> Esakova, *European Energy Security*, 174.

the nature of the contracts, means of distribution, as well as energy price. With the introduction of the Third Energy Package, the EU aims to use its regulatory power and create a common energy market while subsequently reducing differences through bilateral deals. However, Russia continues to engage member states bilaterally, by developing long term contracts/deals including joint natural gas infrastructure projects that undermine the EU's energy security strategy.

Lithuania and Poland made natural gas infrastructure investments to reduce their dependency on a single source-Russia, and single means-pipelines, by establishing LNG terminals and distribution networks. As a result, their dependency level on Russian gas has decreased, allowing them to stand up against Gazprom's price manipulation and cut-off threats. Potential for diversification, albeit limited, has helped in the Baltics and Eastern Europe; "Poland claims that the LNG imported through its new Świnoujście terminal (opened in 2016) is 20-30% cheaper than Russian gas."<sup>495</sup> Poland and Lithuania also get better natural gas prices from Russia, supported Belarusian opposition, and acted as strong advocates for a change in Belarus after the rigged elections in 2020.

The EU energy security policy should address the weakest points that Russia could exploit. Esakova argues that the EU's energy security policy and strategy should also be aligned and be consistent with:

The EU's broader foreign policy objectives such as conflict prevention and resolution, nonproliferation, and promoting human rights...formulating a common external energy policy that draws on the full range of the EU's internal and external capabilities, would substantially reinforce Europe's position when speaking to key suppliers such as Russia or OPEC."<sup>496</sup>

However, as Russell underlined, the EU's high level of dependence and reliance on energy imports constrains its ability to promote interest and values. The EU's top oil and gas suppliers,

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<sup>495</sup> Russell, "Energy Security in the EU's External Policy," 7.

<sup>496</sup> Esakova, *European Energy Security*, 175.

excluding Norway, are authoritarian states that do not meet international democratic standards.<sup>497</sup>

### 3.9. Conclusions

Europe will continue to depend on external energy resources and Russia will remain Europe's main supplier of energy, especially natural gas. Energy has become one of the most existential factors for the European way of life. The critical importance of a stable and abundant supply of energy for European prosperity and security is emphasized in the European Energy Security Strategy.<sup>498</sup> The decline in domestic production compounded by the growing demand for natural gas increased Russian exports to Europe.

The 1973 AOPEC oil embargo, the energy crisis, left enduring legacies: first, it showed how market dynamics could be overturned and be challenged by political instability, how a little-known cartel at the time could affect oil distribution and prices. Second, it started a public policy debate over the role of the state(s) and the markets in ensuring energy security.<sup>499</sup> While the debate over the definition of energy security and concept continued, there were no major supply disruptions until the 2006 and 2009 Russia-Ukraine gas crises that were a wake-up moment for Europe. Since then, energy security has become a source of major concern for the EU and NATO Alliance.

The Normandy Index of 2019 suggests that energy insecurity is perceived as the highest risk for the EU due to the high-level dependency to external suppliers, especially to Russia. Russia's illegal annexation of Crimea and intervention in Eastern Ukraine was a watershed moment with international borders were violated by the use of force Russian aggression in Ukraine shows the return of power politics in Euro-Atlantic region. Using power politics should

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<sup>497</sup> Russell, "Energy Security in the EU's External Policy," 7.

<sup>498</sup> European Commission, "European Energy Security Strategy," 2.

<sup>499</sup> Lewis, Energy Crisis: Unresolved Issues, 1.

be regarded as part of overall Russian efforts to bypass the Soviet legacy pipeline networks in Central and Eastern Europe reducing dependence on transit countries.

The European-Soviet Union/Russian energy relationship was begun in late 1960s, when the pipeline networks were built during the Cold War. Initially, energy trade was based on barter arrangements that started with oil and gas being traded for steel and equipment. Over time, barter arrangements were replaced by long-term contracts based on bilateral relations and market dynamics. The shale gas revolution, increasing LNG trade and competition, and development of spot market and liberalization of pipeline access have together transformed the long-term contracts and the way contracts are designed.

A reduction in the cost of solar panels and wind turbines, driven by technology advancements, have led to a growing share of renewables in the European energy mix. However, concerns over geopolitical influence, a high level of dependency both in terms of volume and a lack of diversity, as well as long-term contract-based energy transactions, remain at the core of Europe-Russia energy relations through private trader-intermediaries to more conventional monetary and commercial relations.

The European approach to energy relations is based on market dynamics as framed by the liberalism school of thought. The role of the European Union and its objective establishing liberalization and marketization of the European gas system originated in the UK and moved to the Netherlands and Belgium. The European Commission led the development of a single energy market. Initially, there were several directives and regulations released by the Commission, which ultimately led to the Third Energy Package, introduced to achieve a single, comprehensive European energy market. The biggest challenge came from Germany and France due to resistance of their energy industry to transform changing business practices, such as breaking down monopolies and moving away from long-term contracts to spot markets. However, the European Commission was successful with the implementation of the Third

Energy Package: unbundling, ensuring independence of regulators, establishment of the Agency for Cooperation of Energy Regulators ACER, increasing cross-border cooperation that benefit energy consumers.

Liberalization of the markets as a trend progressed eastward to Central and Southern Europe. It continued to expand toward Eastern Europe, the Balkans and the Baltics, and finally reached Ukraine, becoming a wave of economic and political reforms.<sup>500</sup> With the legacy long-term contract system, Central and Eastern Europe had been subject to Gazprom's strategy of implementing unfair pricing, interrupting cross-border sales, and obtaining unrelated commitments. With increasing power of the Commission, Europe was able to make progress albeit slow to achieve a single European gas market. While Russia had been accommodating the requirements of the European energy regulations and adopting the changing market dynamics due to liberalization, issues such as exclusive rights, third-party access and unbundling presented challenges to the Russian gas giant Gazprom, specifically its long-term strategy to establish a vertical monopoly to control both upstream and downstream assets.

These issues have not stopped Europe from moving market liberalization and integrating Central and Eastern Europe into a liberalized European natural gas market. The most important step was the Third Energy Package, presenting new measures and regulations that have started to change the status quo by introducing structural and behavioral changes in the energy market. When Europe, the members of the EU, and Russia started to implement these changes presented by the Third Energy Package, the first fundamental challenge originated from the perspective of each party involved on how these regulations were to be implemented. While progress has been achieved, there remain diverging views between Europe and Russia, as well as differences among the members of the EU on certain issues that led the development of new pipelines such as Nord Stream II. Russia, while accepting certain terms of

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<sup>500</sup> Gustafson, *The Bridge*, 403-404.

the Third Energy Package, continues to view energy security through geopolitical lenses. Gazprom uses every means to circumvent and bend the rules of the single energy market established by the Third Energy Package. EU member states are divided on their approaches to energy relations with Russia. Western European members of the EU place economic concerns over geopolitics while Central Europe, Eastern Europe, the Baltic, and the Balkan members are concerned with national security in the context of energy security.

The cooperation mechanism and multilateral frameworks, such as the Energy Charter Treaty (ECT) and EU-Russia Energy Dialogue, have not delivered desired effects for providing multilateral solutions to address increased securitization of energy relations. Russia's withdrawal from the ECT remains one of the biggest setbacks for its full integration into European energy markets. Russia will continue to pursue bilateral approaches and government to government deals that allow development of long-term contracts. This bilateral approach also allows Russia to use energy relations as part of its hybrid warfare toolbox to increase its influence at different levels, from the EU to member states and multinational corporations/companies.

Another major difference between Europe and Russia is the political leadership's involvement in the decisions over energy infrastructure development and other energy security issues. During the Cold War, Chancellor of West Germany Willy Brandt supported establishment of energy relations as part his 'Ostpolitik' and UK's Prime Minister Margaret Thatcher supported construction of pipeline linking Siberia to West Germany albeit the United States' political opposition. Recently, German Chancellors Schröder and Merkel supported construction of Nord Stream I and II pipelines, respectively highlighting that their decisions are based on economic not geopolitical imperatives.

On the contrary, Soviet and Russian leadership have remain ultimately involved in the development of gas relationships at almost every level and used energy relations, in particular

national gas pipelines, as part of its geopolitical toolbox. However, Gustafson argues that while gas provides Russia a leverage and Putin was involved in decisions, gas as a weapon was not used in Ukraine:

The key to understanding the Russian-Ukrainian gas relationship is that gas gives Russia a powerful geopolitical lever, which it has repeatedly used to manipulate Ukrainian politics and to bind Ukraine to its sphere of influence. There is no question but that under President Putin Russia has indeed pursued these objectives. But there is a problem with the gas weapon part of the narrative. Whenever Russia has really sought to influence Ukrainian politics or policy, it has for the most part not used gas as a weapon.<sup>501</sup>

However, there are competing views on Russia's use of natural gas supply cuts against Ukraine to leverage political outcomes. The gas weapon - cutting gas off from Ukraine - was used for a very short period of time in 2006 and 2009, under the guise of debt and pricing conflicts between Naftogaz (Ukraine) and Gazprom. While Gustafson's observations are true, it is also important to recognize that the geopolitical approach followed by Russia to establish new pipelines, Nord Stream I and II, Blue Stream, and Turk Stream, will minimize if not completely eliminate Ukraine's role as the transit country. Transit countries between Europe and Russia not only benefit from transit fees but also gain advantages against Russia. The development of multiple pipelines to circumvent Ukraine will not only prevent transit revenues, but will minimize the leverage Ukraine holds over Russia.

The competition between European Union and Russian control over pipelines will continue. While the European Commission continues to execute measures of the regulations identified in the Third Energy Package and follow-on guidance, Russia, through Gazprom, will continue to establish joint ventures and other means to work around these measures. For the time being, strategic approach allowed Russia to increase its control over pipeline networks by construction of Nord Stream and Turk Stream. We can argue that Russia has gained a position of strength for any future negotiations not only in the area of energy, but also in geopolitics.

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<sup>501</sup> Gustafson, *The Bridge*, 350-351.



We can also argue that Ukraine has become a prey to Russian aggression as it lost the value of the largest transit country that Russia relied on for its exports.

While the European Commission calculates risks and opportunities at aggregate level for the Union, it was obvious that during the 2014 stress test that some members were more vulnerable than others. These member states will continue to conduct cost-benefit analysis in their interaction and relations with Russia. The increased dependency of Europe, specifically the nations, with either high level or high volume of natural gas importers, will securitize energy and view this dependency as a national security concern. Finally, the Kremlin should also conduct a cost benefit analysis in regards to using energy as part of power politics due to high level dependency on energy export revenues that will be covered in the next chapter.

## CHAPTER 4

## RUSSIAN FEDERATION ENERGY STRATEGY AND FOREIGN POLICY

## 4.1. Introduction

As the world's largest country by landmass, Russia holds vast amounts of raw materials and natural resources. These minerals and raw materials include fossil fuels, such as oil, gas and coal; precious metals, such as gold, platinum, polymetallic ores, and diamonds; and rare earth elements.<sup>502</sup> While Russia's oil industry emerged much earlier in the nineteenth century, in Baku, Azerbaijan and on the other side of the Caspian Sea in Kazakhstan, natural gas exploration started later in the early 1920s. The production in the Caspian basin oil fields around Grozny and Baku allowed Russia to become one of the largest producers of oil in the world in 1898, and overtaking the United States. However, "Russian oil production suffered badly in the turmoil of the decade leading up to World War I."<sup>503</sup> The Bolshevik Revolution, the nationalization of the oil industry, a failed energy policy, and purges of the Stalin regime caused dwindling oil production in the 1930s.<sup>504</sup> In the early part of the twentieth century, especially during World War II, the Soviet Union, once an oil exporter, had to import fuel, particularly for aviation, from the United States.<sup>505</sup> Gaddy and Ickes highlight that in the postwar period, the growth of oil and gas revenues began to play a bigger role changing "the structure of the Soviet economy and led to the dependence on resource rents that still dominate the economic system today."<sup>506</sup>

The Soviet Union, then Russia, has been one of the biggest energy suppliers in the world since World War II. As highlighted previously, Russia's latest Energy Strategy documents,

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<sup>502</sup>Valeriy Kryukov. "Energy and natural resources." In *Russia*, p. 205. Palgrave Macmillan, London, 2018.

<sup>503</sup> Revold M. Entov, and Oleg V. Lugovoy. "Growth Trends in Russia After 1998." In *The Oxford Handbook of the Russian Economy*, p. 310. 2013.

<sup>504</sup> Yergin, "The New Map," 71.

<sup>505</sup> Jeronim Perović. "The Soviet Union's Rise as an International Energy Power: A Short History." In *Cold War Energy*, p. 1. Palgrave Macmillan, Cham, 2017.

<sup>506</sup> Clifford Gaddy and Barry W. Ickes. "Russia's Dependence on Resources." *The Oxford Handbook of the Russian Economy* (2013): 309.

natural resources, and the energy sector are critical “to sustain economic growth, improve the quality of life of the population and promote strengthening of foreign economic positions of the country.”<sup>507</sup> In this context, oil and natural gas pipelines have been a central element for the Soviet Union’s energy strategy to ensure long-term foreign policy objectives that are reflected in relations with Western Europe, Central and Eastern European countries, as well as the Caucasus and Central Asian republics.

While energy strategy and foreign policy are closely intertwined, it is also important to recognize that both Soviet Union, and then Russia, achieved separating energy trade and geopolitics when it served their purpose. For example, the first Soviet gas export agreement was signed and deliveries started from Czechoslovakia to Austria on September 1, 1968, despite the Warsaw Pact invasion of Czechoslovakia ten days earlier on 20-21 August 1968.<sup>508</sup> Similarly, construction of the Nord Stream 2 (NS 2) pipeline was discussed and negotiated albeit the illegal annexation of Crimea and the Ukraine crisis were affecting Russian- European and Russian-NATO relations.

The United States and European Union imposed sanctions following the Russian intervention in Ukraine and the shooting down of a Malaysian airliner by the Russian-supported separatists. The sanctions became “the centerpiece of the international response to Russia’s actions in Ukraine.”<sup>509</sup> Russia continued with the NS 2 project while sanctions were supported by Germany with a strong backing of Chancellor Merkel and most business groups.<sup>510</sup> However, the NS 2 pipeline project was not part of the initial EU sanctions until renewed tougher bipartisan US sanctions were introduced in June 2020. While Eastern European

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<sup>507</sup> Russian Federation Decree 1715, 10.

<sup>508</sup> Gustafson, *The Bridge*, 60.

<sup>509</sup> Yergin, “The New Map,” 96.

<sup>510</sup> Gustafson, *The Bridge*, 354-355.

countries led by Poland were very vocal and had valid concerns over Russia's increased assertiveness, construction went ahead when the Biden administration waived the sanctions.<sup>511</sup>

In this chapter, I argue that energy resources, in particular oil and natural gas, have been central to the Soviet Union, then Russia's, national security due to their role on foreign policy and economy. The energy strategy and foreign policy are intertwined and have been used as geopolitical and economic leverage to maintain the unity of the Soviet Union. Following the collapse of the Soviet Union, energy security has remained as a core interest for Russia, enabling its economic recovery, regime survival, and its return to the international scene in the beginning of the 21<sup>st</sup> Century. Russia's energy strategy aims "to maximize the effective use of natural energy resources and the potential of the energy sector to sustain economic growth, improve the quality of life of the population, and promote strengthening of foreign economic positions of the country."<sup>512</sup> While strategy focuses on long-term development for the energy sector, Russia has continued to use oil and natural gas resources against its former satellites in Central and Eastern Europe and the former Soviet Union (FSU) countries for rewarding, punishing, threatening, and coercion.

I will start with the evolution of the oil and natural gas sectors during the Soviet Union's timeframe and then focus on Russian Energy Security Strategy and Foreign Policy as well as how they are intertwined and are implemented holistically. Analysis of the Soviet Union period will cover three different dimensions: domestic politics - competition between the oil and gas sectors; challenges over construction of pipelines and energy relationships with the members of the Council for Mutual Economic Assistance (CMEA); the consequences of the high level interdependence between the Soviet Union and its satellite countries; the effects of increasing dependence of Western European countries on Russian natural resources and resulting concerns

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<sup>511</sup> BBC News, "Nord Stream 2: Biden Waives US Sanctions on Russian Pipeline," <https://www.bbc.com/news/world-us-canada-57180674>

<sup>512</sup> Russian Federation Decree 1715, 10.

over relations within the European Community, NATO and the EU, in particular Germany-US relations. This will be followed by an analysis of Russian Federation Foreign Policy and Energy Strategy using a similar approach that focuses on energy as an instrument of Russian foreign policy, relations with the FSU countries, central and eastern Europe, and Western Europe. The impact of the Russia-Ukraine gas crisis and other political constraints will also be reviewed as an example of how energy resources are being used as part of Russia's hybrid warfare toolbox.

I will provide an overview of Russia's energy reserves, pipeline systems, and potential future projects that have direct impact on the evolution of its foreign and energy policies. Russia is generally concerned with ensuring demand security, which will be further elaborated on to gain insights as to how Russia perceives energy security. Due to the fundamental role of energy income for its economy, Russia will use every asset to reduce any potential competition from European markets. Moreover, Russian efforts to diversify energy markets will be reviewed in its relations with the Asia/Pacific countries and efforts on improving its LNG exports. Russia's efforts to maintain and expand market share in Europe while developing other alternatives, such as exports to China and other countries in South and Southeast Asia, will also be reviewed. Finally, this chapter covers Russia's efforts to undermine Western support on projects that could transport oil and gas from Central Asia and the Caucasus through the Southern Corridor.

#### 4.2. Soviet Union Energy Strategy and Foreign Policy

Soviet energy strategy was a top priority for the political leadership and economic planners. Between World War II until the collapse of the USSR, Soviet leadership used energy resources for developing its industry; gaining hard currency as a main income for the economy; providing fuel to the military activities and operations; supporting foreign policy objectives; establishing relationships with the West, increasing their dependency to Russian energy supplies; and supporting Soviet people by increasing their living standards. Khrushchev

believed that “the country’s oil and gas resources and chemical materials as significant assets for modernizing the Soviet economy and raising the people’s standard of living.”<sup>513</sup>

The Western Europe-Soviet natural gas cooperation started at the end of the 1960s that allowed construction of complex trunk pipelines to deliver gas from Siberia to Austria, West Germany, Italy, and France. These complex long-distance pipeline networks provided Europe an alternative to the energy from unstable regions of the Middle East that was proven to be unreliable following the Organization of Arab Petroleum Exporting Countries (OAPEC) embargo of 1973. The European-Soviet gas deals was based on long-term contracts that enabled the delivery of natural gas at the lowest cost transported via high pressure long-distance large-diameter trunk pipelines. These enormous projects were several thousand kilometers and required multi-billion-dollar investments.<sup>514</sup> Thus, “the Soviet’s early long-term contracts were agreed to between governments and were based on barter exchange. This barter model was rudimentary but effective.”<sup>515</sup> The agreements designed fair risk sharing for investment amongst the parties who were ideologically separated by an “Iron Curtain.” The natural gas trade benefited both sides: providing cheap and clean fuel to Europe, allowing first the USSR then Russia to use export revenues to import European goods and technology while balancing its state budget through revenues.<sup>516</sup>

The Soviet Union’s energy strategy was influenced by several factors from domestic issues to energy and trade relations with its satellites and Western European countries, including global energy players that have large energy reserves, such as the Middle East countries and the US. Perovic argues that “the Soviet Union needed to produce energy in ever-larger quantities, not only to fuel industrialization and modernization, but also to sustain its

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<sup>513</sup> Viacheslav Nekrasov. "Decision-Making in the Soviet Energy Sector in Post-Stalinist Times: The Failure of Khrushchev's Economic Modernization Strategy." In *Cold War Energy*, p. 165. Palgrave Macmillan, Cham, 2017.

<sup>514</sup> Andrei Vavilov and David Nicholls, eds. *Gazprom: An Energy Giant and Its Challenges in Europe*. Springer, 2016, 2.

<sup>515</sup> Ibid, 140.

<sup>516</sup> Ibid, 2.

ambitions as a great power...The various Soviet oil and gas campaigns from Stalin to Brezhnev were designed to support the needs of the country's military and its energy-intensive economy."<sup>517</sup> While this overall direction was clear, domestic competition between oil and natural gas industries delayed the development of natural gas exploration and construction of pipelines due to allocation of resources for oil exports.<sup>518</sup>

Perovic argues that "In East-West relations, Soviet energy was at times a cause of tension and confrontation, but much more a political 'softener'"<sup>519</sup> Energy resources were also a source of competition and conflict between the Soviets and CMEA countries due to diverging priorities, debt issues and increasing demands for subsidies. While energy was used and served as a connecting tissue to attract Central and Eastern European satellites, oil and gas represented main export items to Western Europe for hard currency and were also utilized for transfer of Western technology for modernization of the Soviet industry and development of the economy.<sup>520</sup> This situation resulted in a dilemma for the Soviet leadership, whether to export energy resources to Western Europe or maintain influence over its satellites by providing subsidized oil and natural gas.

Soviet leaders, from Khrushchev to Gorbachev, had given exports to Western Europe a precedence over its satellites and followed a long-term strategy in development of the pipelines. In this regard, between the second half of the 1950s and the first half of the 1960s, Khrushchev's foreign policy concept was based on "the principle of 'peaceful coexistence' and economic competition between capitalism and socialism..."<sup>521</sup> Utilizing massive amounts of natural resources, Khrushchev's "main economic objective [...] to catch up with and overtake

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<sup>517</sup> Perović. "The Soviet Union's Rise," 3.

<sup>518</sup> Gustafson, *The Bridge*, 56-60.

<sup>519</sup> Perović, *Cold War Energy*, Preface, vi.

<sup>520</sup> Gustafson, *The Bridge*, 409.

<sup>521</sup> Nekrasov. "Decision-Making," 181.

the most advanced capitalist countries in the shortest possible time in terms of per capita production.”<sup>522</sup>

While there is no defined energy strategy for the Soviet Union, the approach followed by Khrushchev and following leaders set the foundation of Russia’s energy strategy that aims to use natural resources to acquire hard currency in order to maintain economic development, support technology transfer, finance military capability development, and increase the quality of life for Soviet citizens. Perovic argues that “the Soviet Union was a rather reluctant energy power.”<sup>523</sup> Vavilov and Trofimov highlight the importance of long-term contracts for the early period of gas trade in Europe for the development of pipeline networks that relied on “the parties’ commitments on the terms of trade as a basis for long-term investment upstream and midstream.”<sup>524</sup> The long-term natural gas contracts were especially important for the Soviet energy exports that were dealt at the government level focusing on the exchange of pipes, compressors, and other technical support for gas deliveries that were also essential for domestic pipeline network construction.

Soviet oil and gas exploration, extraction and transport became a success story, and exports to Eastern and Western Europe increased exponentially, making the Soviet Union one of the energy powers in the world. However, Perovic suggests that “the issue of energy was more often a burden rather than an asset.”<sup>525</sup> He also claims that:

The image portrayed in the West during the Cold War about the Soviet Union trying to use energy as a political weapon, as a way to tighten its grip over its Eastern European allies and counter American influence in Western Europe, is at least partly misleading and in need of revision...In East–West relations, Soviet energy was at times a cause of tension and confrontation, but much more often a political “softener.” The Iron Curtain was a dividing line between East and West, but nowhere was this curtain more porous than in the domain of energy flows.<sup>526</sup>

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<sup>522</sup> Nekrasov. “Decision-Making,” 181,182.

<sup>523</sup> Perovic. *Cold War Energy: A Transnational History of Soviet Oil and Gas*, Preface, v.

<sup>524</sup> Vavilov and Nicholls, eds. *Gazprom: An Energy Giant*, 139.

<sup>525</sup> Perovic, *Cold War Energy*, v.

<sup>526</sup> *Ibid.*



These points were brought up several times by other experts such as Gustafson who argues that natural gas symbolizes a bridge between the Soviet Union and the West. He suggests that “over the years the gas bridge has served a shared economic interest that has stood the test of time.”<sup>527</sup> Per Hogselius argues that “economic considerations were always more important than political ones in bringing about and sustaining the gas flow between East and West.”<sup>528</sup> Due to a lack of pipeline capacity and frequent technical failures, Soviet leadership had to give priority to exports for Western Europe over domestic consumers resulting in large scale scarcity in the Soviet Union. Therefore, proving to be a reliable supplier cost domestic sacrifice, human suffering, and diminished industrial productivity.

These different analyses denote that a blanket approach does not address concerns of the Central and Eastern European countries, or those countries that have a higher level of dependency. Per Hogselius argues that East-West natural gas system-building was a political activity; this was true not only as far as the Soviet Union was concerned, but also in terms of West European interests.”<sup>529</sup> Thus, energy relations were a catalyst for German “Ostpolitik,” that led to setting conditions for détente. However, energy relations did not produce the same outcome for Soviet satellites, such as Czechoslovakia. In August 1968, the Warsaw Pact forces invaded Czechoslovakia that provided an initial natural gas bridge to Western Europe through Austria.<sup>530</sup> This two-pronged energy strategy towards Western Europe and Soviet satellites continued throughout the Cold War and was later adopted by Russia with the collapse of the Soviet Union.

#### 4.2.1. Evolution of Oil and Natural Gas Sectors - Domestic Dimension

The real journey of Russia becoming an energy powerhouse started with the Soviet Union during the Cold War in the 1960s. While the Soviet Union was perceived as a middle-

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<sup>527</sup> Gustafson, *The Bridge*, 414.

<sup>528</sup> Hogselius, *Red Gas*, 2013, 7.

<sup>529</sup> Ibid, 8.

<sup>530</sup> Gustafson, *The Bridge*, 60.

level power, the ascendancy of Stalin to leadership led increasing acceptance of traditional power politics in the 1930s. World War II was a major event that “radically altered the structure of international politics”<sup>531</sup> and changed Soviet foreign policy. Possession of large energy resources was one of the pillars of the Soviet’s return to power politics. According to Stern, the Soviet Union was the only self-sufficient major industrialized country in energy resources throughout the 1970s.<sup>532</sup> After the discovery of the super-giant Romashkino field<sup>533</sup> in the Volga Ural region, Grace argues that “the organizational power of a command economy concentrated massive resources...[and] raised oil at an unprecedented rate. Plentiful oil delivered record domestic economic growth and added a strategic new tool to Soviet foreign economic policy.”<sup>534</sup>

New oil field developments in the Volga-Ural region allowed the Soviets to regain market oil market share from the late 1950s and early 1960s that caused concerns over “Moscow’s growing influence over European affairs, prompting the North Atlantic Treaty Organization (NATO) to advise its members to show restraint in purchasing Soviet oil... The aim was to torpedo projects such as the Druzhba (“Friendship”) oil pipeline that was built to transport Soviet oil via the Soviet republics of Ukraine and Belorussia to Poland, Hungary, Czechoslovakia, and the German Democratic Republic (GDR) and, hence, to the borders of Western Europe”<sup>535</sup> The embargo on sale of the larger diameter steel pipes and relevant pipeline technology caused varying reactions from the European allies. This was the first US attempt to influence Western Europe to reduce dependence on the Soviet/Russian energy resources. However, the embargo imposed on the Soviets was lifted a few years later in November 1966,

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<sup>531</sup> Joseph L. Nogee and Robert H. Donaldson, “Soviet Foreign Policy Since World War II,” Pergamon, 1984, 1.

<sup>532</sup> Stern, “Soviet Natural Gas,” 1980, 3.

<sup>533</sup> John D. Grace, *Russian Oil Supply: Performance and Prospects*, 2005, 22. Romashkino Field was the world’s largest field when discovered with 17 billion barrels reserves. Its two decades of production growth largely fueled the Soviet economy through its greatest expansion.

<sup>534</sup> Ibid, 14.

<sup>535</sup> Perovic, “The Soviet Union’s Rise,” 1, 12.

when the debates in the West shifted from the “Red Oil” to increasing concerns over “a possible Soviet oil shortage in the near future, caused by declining growth rates, increasing domestic demand, and existing supply commitments to East European satellites.”<sup>536</sup>

The Soviet attempts to extract natural resources were driven by the need to support military activities and operations as well as funding the development of the industry and support capabilities improving social standards. Perovic argues that “Soviet energy exports also served as an important tool in Moscow’s project to integrate the socialist states of Eastern Europe into a single economic space...energy also served as an important tool in Moscow’s project to integrate the socialist states of Eastern Europe into a single ‘energy space’ through the construction of an extensive pipeline system.”<sup>537</sup> Soviet attempts to create a single economic space were ultimately supported by its energy resources that were used to create dependency. Where possible, The Soviets used hydropower energy that was considered cheap compared to other forms of energy in republics such as Tajikistan.<sup>538</sup> Oil and natural gas pipelines were built like neural networks to support this system, allowing Russia to control resources and their distribution.

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<sup>536</sup> Perovic, “The Soviet Union’s Rise,” 13.

<sup>537</sup> Ibid, Preface and I.

<sup>538</sup> Artemy M. Kalinovsky, *Laboratory of Socialist Development, Cold War Politics and Decolonization in Soviet Tajikistan*, Cornell University Press, 2018, 48.

Figure 19: Soviet Oil Pipelines in the 1960s<sup>539</sup>

Source: Cantoni, R. *Debates at NATO and the EEC in Response to the Soviet "Oil Offensive" in the Early 1960s*

With the discovery of natural gas reserves in the Shebelinka region of eastern Ukraine, a long-distance natural gas pipeline was built to carry the Volga region's resources to Moscow and Leningrad. This was followed by efforts to transport North Caucasus gas to the same destinations, first Moscow, then Leningrad. Pipeline networks were further extended to the Baltic Republics through Belarus. In the second half of the 1950s, the rapid development of the Soviet gas industry took place under Khrushchev, who was a true believer of the future of the natural gas development. However, Khrushchev "had to deal with influential interest and lobby groups representing different sectors."<sup>540</sup> These interest groups included those supported by oil,

<sup>539</sup> Roberto Cantoni. "Debates at NATO and the EEC in Response to the Soviet "Oil Offensive" in the Early 1960s." In *Cold War Energy*. Palgrave Macmillan, Cham, 2017, 136.

<sup>540</sup> Nekrasov. "Decision-Making," 166.

coal, natural gas, nuclear and hydropower. The competition amongst interest groups started during the Soviet Union, and the early gas industry grew out of the oil industry that goes back to the 1930s.<sup>541</sup> The natural gas was introduced during World War II with the discoveries of the reserves near Saratov, southeast of Moscow, and development of the Galicia gas field by the construction of the pipeline from Dashava to Kiev in 1948, then to Moscow in 1951, albeit overall contribution and overall energy production in the Soviet Union remained limited until the early 1960s.<sup>542</sup>

Gustafson highlights one of the most ironic facts of the natural Russia-Ukraine gas issues, considering the current crisis, that “the modern Soviet natural gas industry originated in Ukraine, or to be more precise, in what was at the time Polish Galicia.”<sup>543</sup> Then, the discovery of new gas fields in eastern Ukraine resulted in the construction of the Bratstvo (Brotherhood) pipeline carrying gas from Ukraine to Eastern Europe, then to Austria and Western Europe. While attempts to bring West Siberian natural gas were delayed due to the diverging views of the leadership of the Soviet establishment, this had two major consequences: first, overuse of Ukrainian gas. The second, “a long hesitation in organizing for exports, even though the gas sector badly needed imported pipe and technology.”<sup>544</sup> As a result, the Ukrainian gas fields were the first depleted gas reserves due to support for the Soviet economy and the first gas exports to Europe.<sup>545</sup>

The Soviet Union had to gain hard currency to obtain Western technology and equipment to sustain development of its industry and support modernization of the domestic economy. In that respect, energy exports played a crucial role as a stimulus for economic growth. Stern emphasizes that another area where hard currency was used was in financing

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<sup>541</sup> Gustafson, *The Bridge*, 31.

<sup>542</sup> Hogselius, *Red Gas*, 13, 14.

<sup>543</sup> Gustafson, *The Bridge*, 29, 30.

<sup>544</sup> *Ibid*, 39.

<sup>545</sup> *Ibid*, 31.

grain imports when the Soviet harvest was poor.<sup>546</sup> Therefore, raw material exports, especially oil and natural gas, were central to the Soviet economy and foreign policy. The following table depicts exponential increase in Soviet Oil and Natural Gas production and exports during the Cold War.

Table 8: Soviet Oil and Natural Gas Production and Exports<sup>547</sup>

| Years | Oil production<br>(Millions of Tonnes) | Oil exports<br>(Millions of Tonnes) | Gas production<br>(bcm) | Gas exports (bcm) |
|-------|--|-------------------------------------|-------------------------|-------------------|
| 1950  | 37.9                                   | 0.3                                 | 5.8                     | 0.05              |
| 1955  | 70.8                                   | 2.9                                 | 9.0                     | 0.16              |
| 1960  | 147.9                                  | 17.8                                | 45.3                    | 0.24              |
| 1965  | 242.9                                  | 43.4                                | 127.7                   | 0.39              |
| 1970  | 353.0                                  | 66.8                                | 197.9                   | 3.3               |
| 1975  | 489.3                                  | 93.1                                | 289.3                   | 19.3              |
| 1980  | 603                                    | 159.0                               | 435                     | 57.2              |
| 1985  | 595                                    | 164.9                               | 643                     | 71.0              |

Sources: Andreas Heinrich, and H. Pleines. "Introduction: Export Pipelines in Eurasia." *Reference to Block, Herbert: Energy syndrome, Soviet version*, in: *Annual Review of Energy*, 1977 (vol. 2), pp. 455-497, here pp. 482,486; Bethkenhagen, Jochen: *Soviet energy: rapid rise in output and exports*, in: *Economic Bulletin*, 1988 (vol. 24), no. 12, pp. 7-13, here pp. 8, 11.

While the Soviet Union was one of two global superpowers, it was largely closed to world markets and highly dependent on exports of natural resources for hard currency to sustain its economy. The OAPEC crisis of 1973 shook the western world; however, it was beneficial for the Soviet Union in economic terms, bringing \$2 billion extra in hard currency for a smaller amount of oil.<sup>548</sup> The Soviets benefited from both the change in oil prices and an increase in production. "World oil prices rose from \$1.80 a barrel in current dollars in 1970 to \$36.83 a

<sup>546</sup> Stern, "Soviet Natural Gas," 1980, 6.

<sup>547</sup> Andreas Heinrich, and H. Pleines. "Introduction: Export Pipelines in Eurasia." In *Export Pipelines from the CIS Region Geopolitics, Securitization, and Political Decision-Making*, 2014, 23.

<sup>548</sup> Stern, "Soviet Natural Gas," 1980, 4.

barrel in 1980. Soviet oil exports rose from 1.9 million bpd in 1970 to 3.2 million bpd in 1978.”<sup>549</sup> According to Noguee and Donaldson, the Arab oil embargo resulted in challenges and opportunities: “On the positive side for Moscow were the gaping split in Western unity, the likelihood of increasing nationalization of Western oil interests in the area, and the higher prices that the Soviets were able to get for their own oil exports.”<sup>550</sup> The key concerns could be identified as the increasing role of Saudi Arabia, rather an anticommunist state, leading the boycott against Western powers and “the cutbacks in the delivery of the Mideast oil to Eastern Europe [which] had forced Soviets to divert some of their own exports from Western to Eastern Europe.”<sup>551</sup>

#### 4.2.2. Russian Relations with the Council for Mutual Economic Assistance (CMEA/COMECON) Countries

After World War II, the Soviet oil industry had recovered with the “new production in the Volga-Urals region and then the discovery of vast new supplies in West Siberia.”<sup>552</sup> Therefore, the Soviet oil production base moved from the Baku region to the Volga Urals which represented more than 50% of oil production by the mid-1950s. With this shift in production regions and the substantial increase in oil output, pipeline systems evolved to deliver output from these new fields to the domestic and international markets, namely Western Europe.

The Soviet oil pipeline network doubled between 1950 and 1955, reaching 10,400 kilometers and expanded to 16,700 kilometers within a decade. This resulted in 85% of Soviet oil being transported via pipelines.<sup>553</sup> Around the same time period, the discovery and exploration of the natural gas reserves in the same region made the Soviet Union self-sufficient in energy terms and a major oil and natural gas exporter to Europe. Energy exports connected

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<sup>549</sup> David S. Painter "From Linkage to Economic Warfare: Energy, Soviet–American Relations, and the End of the Cold War." In *Cold War Energy*, Palgrave Macmillan, Cham, 2017, 286.

<sup>550</sup> Noguee and Donaldson, “Soviet Foreign,” 280.

<sup>551</sup> Ibid.

<sup>552</sup> Yergin, “The New Map,” 72.

<sup>553</sup> Heinrich and Pleines. "Introduction: Export Pipelines," 23, 24.

the Soviet Union to world markets, something that characterizes this period.<sup>554</sup> The following table depicts increasing oil production while a corresponding growth of oil exports between 1965 and 1989, the year of the collapse of the Soviet Union.

Table 9: Oil Production and Exports (million tonnes) in the USSR, 1965-1989<sup>555</sup>

| Year | Total Oil Exports | Oil Output | Share of Total Oil Exports in Oil Output (%) |
|------|-------------------|------------|--|
| 1965 | 75.7              | 242.9      | 31.2   |
| 1970 | 111.4             | 353        | 31.6   |
| 1975 | 150.5             | 490.8      | 30.7   |
| 1980 | 182.5             | 603.2      | 30.3   |
| 1985 | 193.5             | 596.7      | 32.4   |
| 1989 | 215.6             | 607.2      | 35.5   |

Source: Sergei Ermolaev. "The Formation and Evolution of the Soviet Union's Oil and Gas Dependence." *Carnegie Moscow Center* 29 <https://carnegieendowment.org/2017/03/29/formation-and-evolution-of-soviet-union-s-oil-and-gas-dependence-pub-68443>

By the end of the 1950s, crude oil was transported via rail and ship to the CMEA countries. In December 1958, the CMEA signed an agreement for construction of the first large oil export pipeline "Druzhba" (Friendship), replacing cost-intensive transport and establishing a trunk pipelines system to carry Volga-Urals crude oil to Poland, East Germany, Czechoslovakia and Hungary. The construction of the Druzhba pipeline network was started in 1960 and completed in 1964.<sup>556</sup> "The completion of the Druzhba oil pipeline also had impacts on energy relations with individual West European countries, because Soviet crude oil could now be transported to the West faster, cheaper, and in greater quantities."<sup>557</sup>

<sup>554</sup> Yergin, *The Quest*, 23.

<sup>555</sup> Sergei Ermolaev. "The Formation and Evolution of the Soviet Union's Oil and Gas Dependence." *Carnegie Moscow Center* 29 (2017). Data source: Structure of Oil Exports Presented in Slavnika, 314, Oil output volumes presented in Global, BP, Statistical Review of World Energy 2006 (2007)

<sup>556</sup> Heinrich and Pleines. "Introduction: Export Pipelines," 24, 25.

<sup>557</sup> Perović. "The Soviet Union's Rise," Preface and 12.



While the USSR was expecting to increase its energy exports to gain hard currency, there was one major limitation – the high-level of dependence on Eastern Europe for Soviet oil and natural gas.<sup>558</sup> Central and Eastern European countries, members of the Council for Mutual Economic Assistance, were highly dependent on subsidized oil and natural gas exports linking their economies in a vulnerable way to the Eastern Bloc. Soviet energy supplies and trade was a key lever to achieve political submission for the Warsaw Pact. Jaffe and Soligo refer to Rosner's argument that "The Soviet energy grid is a tangible manifestation of Soviet energy diplomacy, which found its roots in the Brezhnev doctrine<sup>559</sup> of restricted sovereignty."<sup>560</sup>

The relationships between the Soviet and CMEA were very complex and had multiple dimensions, including competition between the CMEA states for resources as well as their considerations on relations with the West such as the German Democratic Republic's (GDR) concerns over Soviet energy exports to West Germany. Stern highlights that the major concern for these countries, even during the Cold War, had to be greater dependence on the Soviet Union "unless they can import oil and gas from elsewhere."<sup>561</sup> The following table depicts the increasing natural gas dependency of the CMEA members that had become a growing concern for the Soviets, especially for their rising oil and natural gas demand. In order to maintain domestic stability of the CMEA countries, the Soviets had to divert larger quantities of fuel/energy resources to support its allies. These oil and gas supplies could have also been exported to Western European countries for hard currency.

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<sup>558</sup> Stern, "Soviet Natural Gas," 6.

<sup>559</sup> Leon Romaniecki, "Sources of the Brezhnev Doctrine of Limited Sovereignty and Intervention." *Israel Law Review* 5, no. 4 (1970), 527. The Brezhnev doctrine asserts that the Soviet Union's right to intervene in the internal affairs of the states comprising the Socialist Bloc.

<sup>560</sup> Amy M. Jaffe and Ronald Soligo. "Energy Security: The Russian Connection." In *Energy Security and Global Politics*, pp. 120-142. Routledge, 2008, 112. Kevin Rosner. *Gazprom and the Russian state*. GMB Publishing Ltd, 2006.

<sup>561</sup> Stern, "Soviet Natural Gas," 7.

Table 10: Unit prices<sup>a</sup> of Soviet Oil and Gas Exports, 1973-1976<sup>562</sup>

| Year                        | 1973 |      | 1974 |      | 1975 |      | 1976 |      |
|-----------------------------|------|------|------|------|------|------|------|------|
| Fuel Type                   | Oil  | Gas  | Oil  | Gas  | Oil  | Gas  | Oil  | Gas  |
| Bulgaria                    | 14.6 |      | 15.2 | 13.5 | 34.2 | 29.4 | 37.5 | 33.4 |
| German Democratic Republic  | 14.2 |      | 18.8 | 13.4 | 28.2 | 13.4 | 32.1 | 24.6 |
| Poland                      | 17.3 | 12.3 | 20.6 | 12.3 | 39.5 | 24.9 | 42.0 | 28.5 |
| Czechoslovakia              | 16.4 | 13.1 | 16.3 | 13.6 | 30.9 | 22.3 | 34.1 | 30.7 |
| Hungary                     | 17.9 |      | 20.9 |      | 41.0 | 26.6 | 44.7 | 30.2 |
| France                      | 17.0 |      | 61.9 |      | 58.2 |      | 65.0 | 22.8 |
| Federal Republic of Germany | 36.6 | 13.0 | 66.8 | 12.6 | 62.3 | 17.8 | 80.9 | 20.2 |
| 12.5Italy                   | 17.7 |      | 58.2 | 7.0  | 50.7 | 14.6 | 58.2 | 12.5 |
| Aust29.8ria                 | 22.9 | 9.3  | 63.2 | 12.1 | 58,7 | 27.0 | 65.5 | 29.8 |
| Finland                     | 22.1 |      | 67.0 | 42.5 | 61.9 | 41.7 | 66.4 | 42.1 |

*Data Sources: Data Source: Jonathan F. Stern, Soviet Natural Gas Development to 1990, Table 3-2. Calculated from Vneshnyaya Torgovlya SSSR for respective years.*

<sup>a</sup> (rubles per million tons of oil equivalent)

Soviet energy exports, especially oil, to the CMEA countries were part of the overall Soviet strategy to maintain a sphere of influence over Central and Eastern Europe. Romania was the only exception with sufficient oil production capacity. Other central and eastern European countries were critically dependent upon the Soviet Union as their oil and natural gas source for their energy. Stern highlights that in 1965, CMEA countries had no doubts that “Moscow could and would supply the great majority of the oil and gas requirements of the countries of Eastern Europe.”<sup>563</sup> However, CMEA countries had witnessed a change in energy commitment and supply position of Moscow around 1976-1980.<sup>564</sup>

The Kremlin was encouraging Eastern Europeans to seek alternative markets to at least get some of their oil for their consumption from elsewhere, such as the Middle East. One of the main drivers for the change in oil policies of Moscow was a fourfold increase in energy prices

<sup>562</sup> Data in this table is taken from Stern, “Soviet Natural Gas,” 82.

<sup>563</sup> Stern, “Soviet Natural Gas,” 8.

<sup>564</sup> Ibid.

in the aftermath of the oil crisis. To benefit from the increase in oil prices, Moscow intended to discontinue subsidizing CMEA energy supplies. “With skyrocketing world market prices for oil, the existing price system, in place since 1958, had become highly unfavorable to the Soviet Union as the main energy exporter in the CMEA area.”<sup>565</sup> Therefore, Soviet satellites have become an economic liability as Kansikas argued:

On the one hand, Soviet oil and gas financed the economic system of the socialist bloc. On the other hand, however, energy resources also fueled the pattern of interdependency in both East–East and East–West trade. The extent of interdependency created through the energy trade during the 1970s became clear in the mid-1980s.... By the late 1980s, Soviet allies had become hugely indebted to Western creditors, and the Soviet Union was now both unwilling and unable to assist them economically. The empire had become a liability.<sup>566</sup>

The Russians, according to Gustafson, had complaints that the CMEA countries were getting underpriced natural gas and oil exports. The price of energy goods had always been debated between the Soviets and its satellites, such as the argument Ulbricht and Khrushchev had in the 1960s.<sup>567</sup> The result was a widening gap between the Soviets and CMEA countries due to subsidized oil and natural exports traded with Eastern European overpriced and low-quality products. While technocrats such as Kosygin and Baibakov were against subsidized delivery of the energy exports, Brezhnev and members of the Politburo were concerned with de-stabilization of the Eastern European satellites and directed low prices to continue.<sup>568</sup> However, low-priced energy exports to the CMEA countries reduced Soviet hard currency income and might have been one of the key factors that contributed to the collapse of the Soviet economy.

To address Soviet burden sharing concerns, Eastern Europeans were asked “to invest in energy resource and development projects on Soviet soil, which was a further condition for

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<sup>565</sup> Suvi Kansikas. "Calculating the Burden of Empire: Soviet Oil, East–West Trade, and the End of the Socialist Bloc." In *Cold War Energy*, pp. 345–369. Palgrave Macmillan, Cham, 2017, 345, 346.

<sup>566</sup> Ibid, 346.

<sup>567</sup> Gustafson, *The Bridge*, 156.

<sup>568</sup> Ibid, 157.

receiving increased Soviet deliveries.”<sup>569</sup> In 1970, oil and petrochemical export to the Socialist Nations was about 54% of total exports. In 1980, this increased to 65% while total oil export also increased 50% (From 111.4 to 182.5 million barrels). If Kosygin and Baibakov were successful on the cancellation of energy subsidies to allies, Ermolaev argues that “this would diminish the loyalty of these nations and make them start market reforms earlier than they did. As many of their products were not competitive on the world market, production would have started to decrease much earlier.”<sup>570</sup>

On the one hand, oil and natural gas allowed the Soviet Union to create a dependency of the CMEA countries. However, as noted by Kansikas, “energy was not an easy weapon to be used in exploiting or controlling allies...Oil was in high demand in both socialist and capitalist markets.”<sup>571</sup> Soviet efforts to change pricing mechanisms, to request CMEA countries to find alternative energy sources, and to divert oil imports to the Middle East markets caused resistance and discontent on the part of Eastern European allies.<sup>572</sup>

On the other hand, with these current pricing mechanisms and raw material trade with low-quality Eastern European goods, such as machinery, the Soviets experienced significant losses. However, the Soviet Union continued to provide subsidized oil to its allies as long as CMEA countries were important for Moscow and “it considered the alliance to be its number one priority... This ceased to be the case at the end of the 1980s. In a radical change of priorities, the Soviet leadership no longer considered the East European part of its empire to be paramount...The dissolution of the Soviet bloc in late 1989 can partly be explained by the Soviet Union’s decision—due to the external shock created by a drop in oil export revenues—no longer to support its alliance.”<sup>573</sup> Several arguments were made regarding the collapse of

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<sup>569</sup> Stern, “Soviet Natural Gas,” 9.

<sup>570</sup> Ermolaev. “The Formation and Evolution.”

<sup>571</sup> Kansikas. “Calculating the Burden” 346.

<sup>572</sup> Stern, “Soviet Natural Gas” 8, 9.

<sup>573</sup> Kansikas. “Calculating the Burden,” 348.

the Soviet economy such as inefficient central planning, lack of market dynamics, however, subsidized energy prices, low-quality and over-priced Eastern European goods and machinery, and CMEA members' debt from energy sales were a few of the key contributing factors, if not the main factors.

#### 4.2.3. The Role of Energy Strategy on Soviet relations with Western Europe

Before the Bolshevik Revolution, Russia was a leader in crude oil production in the world and energy exporter to Western Europe. Baku, Azerbaijan and the surrounding oil fields had attracted foreign investment, management, and modern industry that allowed export to Europe over the Caucasus, involving companies such as the Nobel and Rothschilds.<sup>574</sup> After the Bolshevik Revolution, the Soviets followed different practices, such as nationalization of all these assets, resulting in reduced efficiency of oil production that was also affected by the World Wars. Declining oil production had become a fundamental issue for the Soviet Union as Western powers such as “the UK, Germany, France, and the US had begun to transition their economies from coal to oil at the beginning of the twentieth century.”<sup>575</sup> The shift in energy mix in favor of oil further accelerated during World War I. While the Soviet leadership recognized the importance of oil for mechanized warfare, Perovic argues that these fundamental changes in Europe and North America did not render a Soviet strategy putting oil at the center of a new energy policy.<sup>576</sup>

With the discovery of large reserves in the Volga-Urals, Soviet oil production had increased from the mid-1950s allowing production of a surplus of oil for export. These oil exports were targeted countries the Soviets had trade relations with before the war, such as Italy, France, the UK, and West Germany. Initial deliveries to large European countries were done in small amounts while smaller countries, such as Finland, Sweden, and Ireland, were

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<sup>574</sup> Grace, *Russian Oil Supply*, 10, 11.

<sup>575</sup> Perović. "The Soviet Union's Rise," 7.

<sup>576</sup> Ibid.

amongst the main recipient of Soviet oil exports. The Soviet approach to individual countries differed significantly from a reliable trade partner to a predator ready to exploit vulnerabilities of the countries. Perovic argues:

The Soviet leadership was anxious to present itself to its major European customers as a reliable trading partner...the Soviet Union regarded these countries as important trading partners and sources of hard currency income. The same did not necessarily apply to the smaller European economies or the countries of the Third World. In this case, the Soviet Union did not hesitate to use oil as a political instrument, even as a means of exerting pressure, when the Kremlin considered it opportune.<sup>577</sup>

The Soviet Union was also ready for the exchange of goods – barter transactions - for oil and natural gas trades with Third World countries. These allowed favorable conditions and provided opportunity for the Soviet propaganda machine that exploited any vulnerabilities. Perovic also suggests that natural gas and oil were used to exert political pressure, especially when there is a high level of dependency. For example, in the 1950s:

Finland imported between 80 and 90 percent of its oil from the Soviet Union and other socialist states in Eastern Europe....When the Soviet Union curbed its oil exports in 1958 because it was unhappy with the composition of the new Finnish government, the government in Helsinki decided to resign and form a new administration. Rather than accepting the offer of economic assistance from the US, and shipments of oil..., Finland opted to accommodate Soviet interests to achieve better relations with its big neighbor to the east.<sup>578</sup>

While the mid-1950s and early 1960s were defined by the Western media, especially in the US, as the first “oil offensive” as Soviet oil flooded Western European markets, albeit the amount was smaller at the beginning but increased over time. Even with this growing amount, 3.7 million tons of oil in 1955 and 85.6 million tons of oil in 1968 – more than a 23-fold increase in 13 years, “the income earned by the Soviet Union from sales was too low to raise any question of dependence, or even interdependence, in Soviet-West European energy relations.”<sup>579, 580</sup>

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<sup>577</sup> Perović. "The Soviet Union's Rise," 10.

<sup>578</sup> Ibid, 10.

<sup>579</sup> Ibid, 11.

<sup>580</sup> Ermolaev. "The Formation and Evolution."

In the early 1970s, Europe was largely relying on oil imports from the Middle East and North Africa. Almost 80 percent of the European imports were from the Middle East and 7 percent of imports were from the Eastern Bloc. There were no concerns over the security of supply. In 1970, during a NATO meeting, when US Ambassador cautioned about the possibility of a global energy crisis and the potential negative consequences for Europe, German Minister of Defense was surprised and did not appear concerned. “NATO Secretary General Manlio Brosio, an Italian, also found the ambassador’s arguments less than convincing and asked whether this was truly a problem for Europe, or rather, an issue for the Americans and the international oil companies.”<sup>581</sup>

This example clearly indicates that European understanding of energy security and consequences of a high level of dependence to a single source, in that case the Middle East, were not aligned with the US views as a real or perceived threat. As a consequence, the Arab oil embargo was a strategic shock and had also unintended consequences such as boosting European attempts at larger imports, both in oil and natural gas, from the Soviet Union<sup>582</sup> which was perceived as a reliable partner. In this context, energy relations between West Germany and the Soviet Union had evolved, encompassing other areas such as softening political relations, especially because “Natural gas was a perfect candidate for both sides, as an economic commodity that was clearly beneficial to both and served as a symbol of détente.”<sup>583</sup> However, Noguee and Donaldson argue that there were several converging factors that were marked the beginning of the détente:

From its inception, détente rested on a distribution of global power that saw the two superpowers as preeminent and in an approximate balance. The balance of power changed...Evidence of Western decline were the oil crises of 1973 and 1979, exposing the economic vulnerability of industrial democracies, the disunity and paralysis of will in the United States caused by the Vietnam War and the Watergate scandals...as well as the steady growth of Soviet military power.<sup>584</sup>

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<sup>581</sup> Perović. "The Soviet Union's Rise," 15.

<sup>582</sup> Ibid.

<sup>583</sup> Gustafson, *The Bridge*, 69.

<sup>584</sup> Noguee and Donaldson, "Soviet Foreign," 303.

However, the Reagan administration opposed the construction of the natural gas pipeline from the Soviet Union to Western European countries that allowed technology transfer and financial support to build a 3,500-mile pipeline between Siberia and Western Europe. Hayward noted, "The pipeline was a classic product of détente—a valuable piece of infrastructure built with Western technology and Western credit...The US had worried that the gas pipeline would make Western Europe partially dependent of the Soviets for energy."<sup>585</sup> Following Moscow's crackdown in Poland, in 1982, "Reagan widened the ban to include not only the sale of US manufactured oil and natural gas equipment but to include equipment produced by foreign subsidiaries and licensees of US companies."<sup>586</sup> While the US imposed further sanctions, the governments of West Germany, Britain, France, and Italy declared that they would proceed with the construction of the natural gas pipeline. The Reagan administration backed down after initiating several penalties and removed sanctions against European companies.<sup>587</sup>

Heinrich argues that "The planning and construction process for oil and gas pipelines in the Soviet Union was bureaucratic and inefficient; political desirability trumped economic considerations...the technological knowledge and industrial capabilities were not sophisticated enough to meet the geographic and climatic challenges that the oil (and later the gas) industry had to cope with since the late 1950s."<sup>588</sup> The increasingly long-distances and larger diameters required Western technology and equipment for the construction of key oil and natural gas pipelines. Thus, the Soviets decided importing Western equipment albeit in most cases this meant they had to deal with Western sanctions, particularly US ones.<sup>589</sup>

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<sup>585</sup> Steven F. Hayward. "The Age of Reagan: The Conservative Counterrevolution: 1980-1989." Crown Forum, 2009, 249.

<sup>586</sup> Nogee and Donaldson, "Soviet Foreign," 314.

<sup>587</sup> Hayward. "The Age of Reagan," 249, 250.

<sup>588</sup> Heinrich and Pleines. "Introduction: Export Pipelines," 21.

<sup>589</sup> *Ibid*, 22.



#### 4.2.4. The Soviet Union – West Germany Energy Relations

In Soviet-European relations, West Germany had a unique position as the largest importer of natural gas in Europe. Europeans viewed the Soviet Union, then Russia-European, energy relations in two distinctly different lenses: the first group argues that economic and efficiency should drive the policy; the second group suggests that this relationship, especially the Russia-German gas trade, is all about geopolitics and security. What makes Germany special is that it accommodates both views in different parts of the government, in think tanks, as well as in industry.<sup>590</sup> Gustafson argues that “Until recently, Germany’s overall post-Soviet policy toward Russia has been predominantly economic, a continuation of the historic Ostpolitik.”<sup>591</sup> However, concerns increased due to growing Russian assertiveness against its ‘near abroad.’ He also suggests that “Russian-German political relations have never been as difficult and uncertain since the end of the Soviet era as they are today; yet on the other hand, the Russian - German gas relationship is booming, causing difficulties in US-German relations.”<sup>592</sup>

This complex nature of German-Russian energy relations was not new. During the initial phase of the Soviet-German energy relations, natural gas development required Western technology and a large diameter pipeline to transport gas from long-distances. In that context, the gas-for-pipes deal was perceived as part of the German Ostpolitik, and concrete cooperation in the economic sphere was expected to set the foundation of “détente and ‘change through rapprochement.’”<sup>593</sup> While on the one hand, the Soviet invasion of Afghanistan, the crisis in Poland, the NATO Double-Track Decision, and the US grain embargo against the Soviet Union were taking place in 1980s, on the other hand German businessmen were negotiating the biggest energy deal ever made between the Soviet Union and a Western state at the time. According to

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<sup>590</sup> Gustafson, *The Bridge*, 356, 357.

<sup>591</sup> Ibid.

<sup>592</sup> Gustafson, *The Bridge*, 354.

<sup>593</sup> Bros, Mitrova, and Westphal, “German-Russian Gas Relations,” 5.

Bosch, Chancellor Helmut Schmidt supported continuation of negotiations while recognizing it should be business as usual. The main reason for Schmidt's decision that "the Federal Republic of Germany (FRG) could not afford to get rid of its Soviet energy supplies and regarded joint energy policy making as a chance to restrain the Soviet Union."<sup>594</sup> Bosch argues that there were two key German positions regarding Soviet Union - West German energy relations:

- First, the West German government evidently considered energy trading to be more significant than the ongoing political conflict. In fact, the issue of energy proved so powerful that West Germany chose to risk a massive conflict with its most important ally, the United States.
- Second, energy trading appears to have been politically strategic, including aims to involve the Soviet Union and Comecon States, and to secure the peace.<sup>595</sup>

These two main considerations set the foundation of the German approach and reasoning for the continuation of Soviet Union-European energy relations far beyond the Cold War. While demands for a radical change to diversify energy resources from the Soviet Union were part of major public and political debates, the relationship became stronger and endured external pressures from the US and some other allies. When the Cold War ended, a series of political changes took place between 1989 and 1991, such as the fall of the Berlin Wall and the collapse of the Soviet Union, but "the East-West gas system - and Western Europe's dependence on Russian gas - remained in place and continued to grow."<sup>596</sup> The strength of this relationship based on interdependence causes concerns for the difficulty for Europe to change direction and dependence on Russia. The concerns include, as Hogselius puts it, Russia's ability and potential to use energy weapons goes beyond the supply disruption:

Soviet natural gas, to a certain extent, did function, and was perceived of, as an "energy weapon" and that it continues do so in an age when the gas is no longer red. The relative importance of this political dimension in relation to economic considerations has been greatly exaggerated and the true nature of the 'weapon' misunderstood by many analysts, but this does not mean that it has been non-existent.<sup>597</sup>

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<sup>594</sup> Bosch, "Energy Diplomacy," 166.

<sup>595</sup> Ibid.

<sup>596</sup> Hogselius, *Red Gas*, 7.

<sup>597</sup> Ibid.

Energy allowed the Soviet Union to expand its influence, not only with CEMA countries, but also with much of the Third World countries. In many cases, Goldman argues, “It was almost as important as the development of the Soviet Union’s military capabilities.”<sup>598</sup> While oil was important for obtaining hard currency, natural gas has played a more significant role to influence Soviet relations with Eastern and Western European countries. Discussions over using natural gas as an energy weapon should go beyond supply cuts; otherwise, Russia’s ability to influence decisions and obtain political outcomes will be missed. Finally, it is important to understand why energy strategy is central for Russia, its economy, and foreign policy.

Understanding the role of energy for the Soviet Union could provide insight as to why Russian energy security is intertwined with its foreign policy. Gaddy and Ickes argue, “The collapse of world oil prices in the mid-1980s had a dramatic impact effect on the country’s economic, and ultimately, political fate.”<sup>599</sup> While it is impossible to single out one main cause of the collapse of the Soviet Union, factors such as political policies, economics, defense spending, Soviet involvement in Afghanistan, the Chernobyl nuclear accident, and others are listed.<sup>600</sup> However, according to Painter, there is a lack of interest in examining the role of energy for the Soviets:

Energy resources were potentially an important element in the power position of the Soviet Union...oil and natural gas exports accounted for around 80 percent of the Soviet Union’s hard currency earnings, and the drop in oil prices by two-thirds in real terms between 1980 and 1986 followed by a decline in Soviet oil production beginning in 1989 played an important role in the collapse of the Soviet system.<sup>601</sup>

The Soviet Union-European natural gas relationships were based on long-term contracts between a seller and buyer(s). These relationships were also based on bilateral long-term vision

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<sup>598</sup> Goldman, “Petrostate,” 14.

<sup>599</sup> Clifford and Ickes. “Russia’s Dependence,” 309.

<sup>600</sup> Michael M. Ray, “Why Did the Soviet Union Collapse?” Encyclopedia Britannica. <https://www.britannica.com/story/why-did-the-soviet-union-collapse>.

<sup>601</sup> Painter “From Linkage to Economic Warfare,” 283.

that supports multi-billion-dollar investments, such as building large-diameter trunk pipelines to deliver natural gas to customers in Europe at the lowest-cost compared to other means of delivery. The long-term contracts provided assurance for producer and consumers that certain amount of gas would be delivered to consumers at a designated price, providing a reliable income to sustain energy systems and make investments for new fields and gas transports infrastructure.<sup>602</sup> While increasing natural gas demand between the 1960-1990s justified such large investments, they were also motivated by political considerations, especially between West Germany and the Soviet Union that has been reflected in today's German-Russian relations.

#### 4.3. Russian Energy Strategy and Foreign Policy

The end of the Cold War and the collapse of the Soviet Union was a strategic shock to not only Russia but also to Newly Independent Republics and Soviet satellites. The region, in Russia's view defined as its "near abroad," remains important for security and economic reasons, as well as realizing its claim to being a great power. Russia has "self-proclaimed privileges when it comes to the political and economic fate of the states that compromise its 'near abroad.'"<sup>603</sup> Grigoriev highlights the key issues during the 1990s and early 2000s that shaped Russian energy strategy and foreign policy:

- First, dissolution of the USSR brought about the unbundling of the Soviet integrated pipeline system transiting through all newly independent states (NIS);
- Second, the initial period was marked by low demand and therefore low gas prices on the international markets. It was changes in global demand and thus prices after 2003 that provided a new stimulus to Russia spurring the search for a new strategy;
- Third, income from Gazprom was used by the Russian government as a source of domestic social and economic spending until at least 2004;
- Lastly, during this period the Kremlin imposed politically motivated low gas prices for some CIS countries, leaving Gazprom hostage to Russian foreign policy.<sup>604</sup>

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<sup>602</sup> Vavilov and Nicholls, eds. *Gazprom: An Energy Giant*, 2.

<sup>603</sup> Ryan Maness and Brandon Valeriano. *Russia's Coercive Diplomacy: Energy, Cyber, and Maritime Policy as New Sources of Power*. Springer, 2015, 110.

<sup>604</sup> Leonid Grigoriev. "Russia, Gazprom and the CAC: Interests and Relations." In *Russian Energy Security and Foreign Policy*, pp. 163-185. Routledge, 2011, 147.

These unprecedented social and political developments sent seismic shocks throughout the energy industry. The collapse of the Soviet Union and its central planning directly affected the oil industry. It was broken into pieces, spreading across newly independent republics that wanted to control infrastructure, equipment, and rights over the production, transmission and distribution of energy resources.<sup>605</sup> However, the natural gas sector followed a completely different direction under the leadership of Victor Chernomyrdin, also called the father of Gazprom. While the gas industry was the greatest prize of all state assets when the Soviet system breakup and everything was a “free-for-all-grab...It was never broken up. It was never even fully privatized.”<sup>606</sup>

The nature of gas is different from oil. Although natural gas is relatively easy to produce, “it is difficult and expensive to transport, and worthless unless there is a distribution system in place to consume it.”<sup>607</sup> Gustafson explains these differences between oil and natural gas industries with the following reasons: “The first and underlying one is that gas is inherently a more centralized business than oil...The second reason is the role of a handful of key players during the brief critical months when the old system had melted down and a new one had not yet gelled.”<sup>608</sup> He stresses the role played by Victor Chernomyrdin as the former minister of natural gas who then became the first head of Gazprom. Finally, pricing mechanisms are different. While data is available on the levels of oil and gas produced, there are other considerations, including subsidies and geopolitical considerations. “The market value of oil is the world market price. For natural gas, by contrast, there is no single world price, making the calculation considerably more difficult.”<sup>609</sup>

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<sup>605</sup> Clifford and Ickes. “Russia’s Dependence,” 310.

<sup>606</sup> Gustafson, *The Bridge*, 242.

<sup>607</sup> Ibid, 243.

<sup>608</sup> Ibid, 242.

<sup>609</sup> Clifford and Ickes. “Russia’s Dependence,” 314.

While the consequences of the dissolution of the USSR were different for each republic, it was significant for those countries such as Ukraine, Belarus, and the Central Asian and Caucasian Republics that were part of the Soviet integrated pipeline system. Gustafson highlighted the rapid change and its immediate effects of the collapse of governance structure which resulted in that “Overnight, when the Soviet Union broke up, Ukraine became a transit country and a large importer. Russia has the gas; Ukraine had the pipes.”<sup>610</sup> This development marks the start of the troubled Russia-Ukraine relationship, “in which one side controlled the gas and the other the transit.”<sup>611</sup> Since then Russia has been concentrating on oil and gas industries and controlling transport and distribution infrastructure in its former satellites and in the NIS.

Russia’s attempts not only to increase its market share but also control transport and distribution architecture sounded alarms at the European Commission and in Central and Eastern European countries. As a result, European dependence on Russian oil and natural gas has become a real concern, as Russia started “using this energy dependence as part of a larger effort to limit the sovereignty and pro-Western orientation of vulnerable neighboring countries such as Ukraine, Moldova and Georgia.”<sup>612</sup> According to Woehrel, “Russian firms have tried to purchase a controlling stake in pipelines, ports, storage facilities, and other key energy assets of the countries in Central and Eastern Europe.”<sup>613</sup>

Natural gas pipelines are especially important as they connect producer and consumer(s) in a locked-in bilateral relationship. “Once a gas pipeline is in place, it can’t be moved in search of a better market, nor does it make sense to build a competing pipeline alongside it...Thus, a gas pipeline system...is the classic case of a natural monopoly.”<sup>614</sup>

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<sup>610</sup> Gustafson, *The Bridge*, 318.

<sup>611</sup> *Ibid.*, 317.

<sup>612</sup> Steven Woehrel. "Russian Energy Policy Toward Neighboring Countries." Library of Congress Washington DC Congressional Research Service, 2010, 1.

<sup>613</sup> *Ibid.*

<sup>614</sup> Gustafson, *The Bridge*, 243.

During the Soviet Union period, natural gas planners never experienced market dynamics focusing mostly on production and transport of the gas. Gazprom, as the successor of the Soviet Ministry for the Gas Industry, “inherited domination in the Eastern European countries, both the former Soviet Republics (part of the Soviet Union) and the Communist Bloc (not part of the Soviet Union). These countries had been deeply integrated into the gas supply infrastructure designed for the monopolistic energy-intensive economic system.”<sup>615</sup> However, in the early 1990s, Gazprom did not have a contemporary understanding of how an energy market system worked, supported with modern technology and an information system.<sup>616</sup> Vavilov highlights:

This non-market nature of the European gas trade gave an important role to political instruments in facilitating gas deals. For Russia, with its strong fiscal dependence on energy exports, using foreign energy policy was justified by the desirability of Russia’s integration into the European economic space as the dominant energy supplier. For European states the Russian gas imports contributed to energy security, which justified giving top priority to energy relations with Russia. Implementation of large-scale gas projects required involvement of top-level politicians, both European and Russian, and government-to-government negotiations.<sup>617</sup>

Gazprom’s challenges were not only with the external European market but also with Russian government and domestic consumers. In order to achieve a balance between exports and domestic demand, Gazprom and the Russian government agreed on the following key issues: “The first was that Gazprom would keep Russia supplied with gas...The second was that Gazprom would be a Russian company. These two understanding have shaped the politics of gas ever since, for Putin as for his predecessors.”<sup>618</sup> This agreement provided natural gas with a subsidized price to Russian consumers, including some of the former republics, and maintained the flow of a reliable income from exports to Europe. These exports were not only supported by the Russian government, but also enabled to invest in development of new fields and sustain aging infrastructure while building new ones such as Nord Stream, Turk Stream,

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<sup>615</sup> Vavilov and Nicholls, eds. *Gazprom: An Energy Giant*, 3.

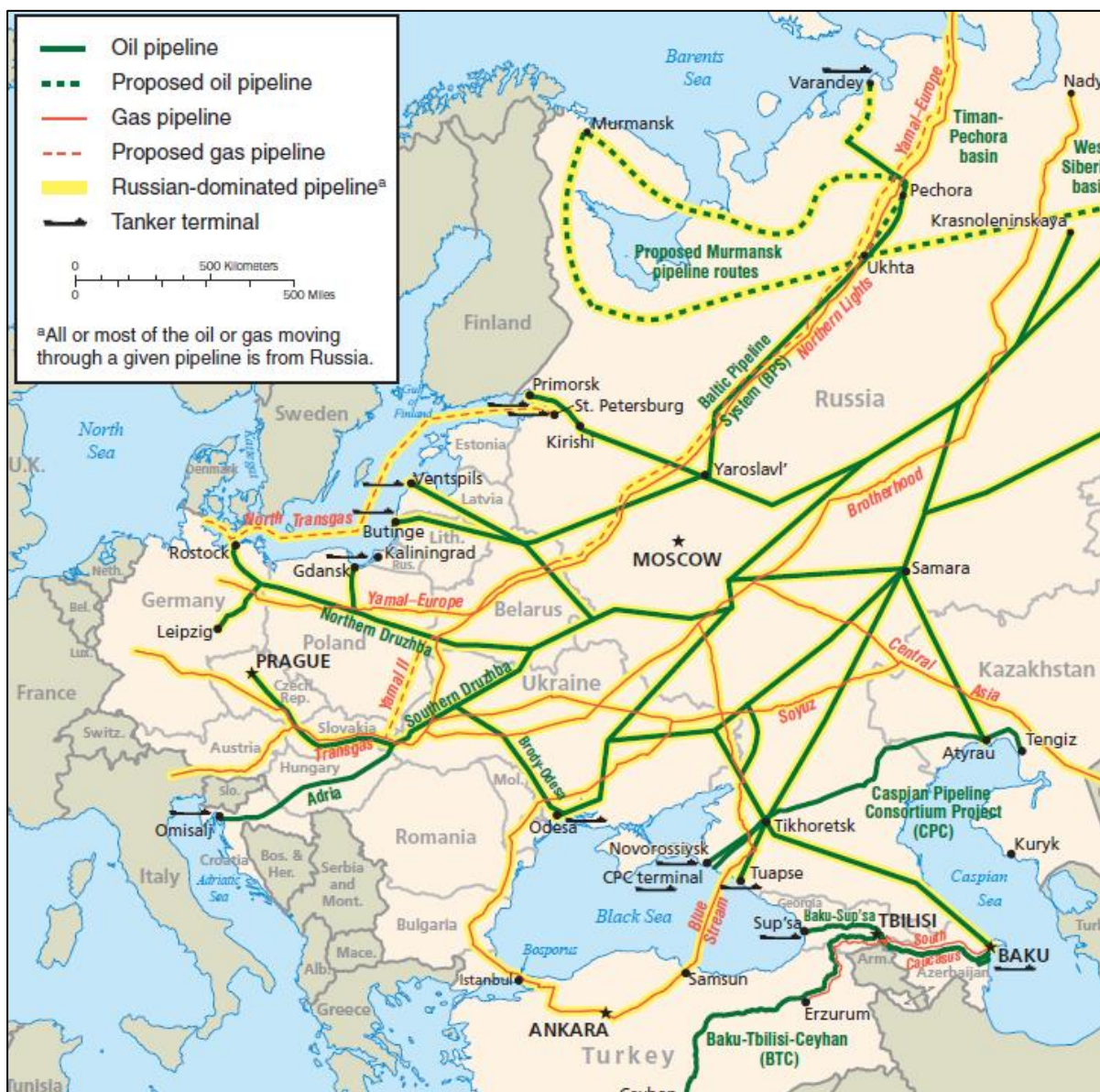
<sup>616</sup> Gustafson, *The Bridge*, 250.

<sup>617</sup> Vavilov and Nicholls, eds. *Gazprom: An Energy Giant*, 4.

<sup>618</sup> Gustafson, *The Bridge*, 253.

and Blue Stream pipelines. The following map depicts the primary oil and natural gas pipelines to Europe. Gazprom will be discussed separately as the biggest energy supplier in Europe as well as the biggest company in Russia.<sup>619</sup>

Figure 20: Primary Russian Oil and Gas Pipelines to Europe<sup>620</sup>



Source: US Department of Energy, Energy Information Agency, Unclassified

<sup>619</sup> Vavilov and Nicholls, eds. *Gazprom: An Energy Giant*, 1.

<sup>620</sup> Woehrel. "Russian Energy Policy," 2



#### 4.3.1. Evolution of Russian Foreign Policy

Since the collapse of the Soviet Union, Russian foreign policy has been transformed significantly. Russia, a country that was once a superpower in a bipolar world, began to doubt its place, status, and role in the international system.<sup>621</sup> Light argues that Russia has released “an unusually large number of official documents on various aspects of foreign policy since 1991.”<sup>622</sup> The first Foreign Policy Concept was issued in 1993, followed by a Military Doctrine. After the sudden breakdown of the Soviet Union, Russia’s initial foreign policy objective was to join and become an integral player in the European affairs while seeking to be recognized as an equal partner by the West, even establishing an alliance with the United States.<sup>623</sup> The ground-breaking nature of this approach to establish relations with the West was supported both by President Yeltsin and Foreign Minister Kozyrev.<sup>624</sup>

President Yeltsin’s focus was “to liberalize prices and trade, achieve economic stabilization, and privatize property, all within a minimum amount of time.”<sup>625</sup> However, Yeltsin failed to execute political reforms that were required and should have been associated with economic measures.<sup>626</sup> As a result, the Yeltsin-Kozyrev reforms and privatization policies did not produce the intended economic and political outcomes, and failed to deliver basic services. In 1998, along with the declining production and export with crude oil prices around \$10-12 a barrel, Russia fell into an economic crisis and “suffered a massive financial collapse”<sup>627</sup> causing, among other things, the resignation of Boris Yeltsin on 31 December 1999. The Foreign Policy Concept and The Military Doctrine were replaced by new versions in 2000 when Vladimir Putin took power.<sup>628</sup>

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<sup>621</sup> Vinod K. Aggarwal, and Kristi Govella, eds. *Responding to a Resurgent Russia: Russian Policy and Responses from the European Union and the United States*. Springer Science & Business Media, 2011, 1.

<sup>622</sup> Margot Light. "Russian Foreign Policy Themes in Official Documents and Speeches: Tracing Continuity and Change." In *Russia's Foreign Policy*, Palgrave Macmillan, London, 2015, 13.

<sup>623</sup> Dmitri Trenin. "Russia's Evolving Grand Eurasia Strategy: Will It Work?" *Carnegie Moscow Center* 20 (2017).1.

<sup>624</sup> Tsygankov. *Russia's Foreign Policy Change*, 18–19, 73.

<sup>625</sup> Michael McFaul. "Yeltsin's Legacy." *The Wilson Quarterly* (1976-) 24, no. 2 (2000), 53.

<sup>626</sup> Ibid, 54.

<sup>627</sup> Goldman, "Petrostate,"14.

<sup>628</sup> Light. "Russian Foreign Policy Themes," 13.

While Russia had no power to veto any NATO enlargement, in 1996, the Clinton administration was seeking some form of Russian acceptance. There were strong Russian objections over the accession of former Soviet countries, such as the Baltics and Ukraine. From the very beginning of NATO expansion has the potential that “would yield a much higher cost per inch.”<sup>629</sup> From Yeltsin-Kozyrev to Vladimir Putin, there are recurring themes that indicate “Russian perceptions of outside world and Russia’s place in that world have changed over the years.”<sup>630</sup>

Light provides an overview of these themes as well as Russia’s perception of threats.

- The primacy of sovereignty, territorial integrity and international law: Since 1993 Foreign Policy Concept document, the 2008 version and 2009 National Security Concept includes statements about assurance that it is based on the principles of international law and that its primary aim is the defence of the sovereignty and territorial integrity of the country.
- Russia’s International Status: While the views of Russia’s status were rather gloomy in the 1990s, Putin, while he was prime minister then acting President, started touting Russia’s existing and potential great power status. While it was included in several documents, 2013 concept doesn’t make a reference to great power status with consideration that is already the case.
- Structure of the international system, unipolarity versus multipolarity: Since NATO launched attacks on Serbia, Russian objections to unipolarity and to unilateral actions have been a permanent theme of Russian foreign policy statement.
- NATO enlargement, especially Ukraine and Georgia accession to the membership, perceived one the biggest threats for Russia’s security. In the similar context, Russian 2000 military doctrine defined deployment of Ballistic Missile System in European members of NATO countries as actions aimed undermining global and regional security and stability.<sup>631</sup>

The 2013 Russian foreign policy concept brings two new issues related to Russia’s position on primacy of sovereignty, territorial integrity, and international law. The Arab Spring, the fall of autocratic regimes from Tunisia, Egypt, and Libya, and the NATO intervention against the Kaddafi regime based on the foundation of the “Responsibility to Protect” pretext caused concerns for Putin. This was almost a similar shock caused by NATO’s intervention in

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<sup>629</sup> Sarotte, “Not One Inch,” 274, 275.

<sup>630</sup> Light. “Russian Foreign Policy Themes,” 15.

<sup>631</sup> Ibid, 15-18.

Kosovo. The 2013 Foreign policy concept highlighted that first, “it is unacceptable that military intervention based on the pretext of implementing the concept of ‘Responsibility to Protect.’”<sup>632</sup> The second key issue was, based on Russia’s perception, the destructive and “unlawful use of ‘soft power’ and human rights concepts to exert political pressure on sovereign states, interfere in their internal affairs, destabilize their political situation, manipulate public opinion, including under the pretext of financing cultural and human rights projects abroad”.<sup>633</sup>

Russia’s illegal annexation of Crimea, its interference and the use of force in Eastern Ukraine, the US and the EU sanctions, the COVID 19 pandemic, and a decrease in energy demand causing a slump in oil prices have had fundamental effects on the development of Russian foreign policy in 2020, such as an increased concentration of power in the Kremlin that strengthened Putin’s power vertical. While Putin’s last constitutional term in office is coming to an end, Russia’s parliament approved constitutional amendments that could allow him to remain in power until 2036.<sup>634</sup> In July 2020, these constitutional amendments were backed by Russian citizens in a public vote and Putin has secured the option for running for President in 2024. Racz argued, “The constitutional reform also emphasized the primacy of Russian law over international law, moving Russia further away from multilateralism. It underscored the primacy of Russia’s domestic agenda and the principle of national self-reliance over foreign policy and engagement with the international system, which is dominated by the West.”<sup>635</sup>

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<sup>632</sup> “Concept of the Foreign Policy of the Russian Federation.” Concept of the Foreign Policy of the Russian Federation - Fundamental Documents.

<sup>633</sup> Ibid.

<sup>634</sup> Dave Lawler, “Axios Search: Lawler,+’Russian+Parliament+Passes+Bill+That+Allows+Putin+to+Rule+until+2036’,” Axios, accessed October 19, 2021, <https://www.axios.com/results?q=Lawler%2C%2B%E2%80%98Russian%2BParliament%2BPasses%2BBill%2BThat%2BAllows%2BPutin%2Bto%2BRule%2Buntil%2B2036%E2%80%99>.

<sup>635</sup> András Rác. “Russian Foreign Policy in 2020: Strengthening Multi-vectorialism.” (2021): 31.,4.

Energy resources have been the strongest link between Russia and the outside world in economic and political terms.<sup>636</sup> Russia-China cooperation has further evolved, not only in the area of energy exports, but also in technology, security, and diplomacy. At the same time, Russia-EU relations are increasingly strained due to sanctions that resulted in “the further multivectorialization of Russian foreign policy.”<sup>637</sup> Racz also argued that “Moscow clearly considers its relations with Europe much less important than it did a decade ago.”<sup>638</sup> The crisis in Ukraine will set the foundation for a “new normal” in Russian-EU relations, thereby energy exports and interdependence will become more important than ever.

#### 4.3.2. Evolution of Russian Energy Strategy

While its foreign policy was evolving, a long-term Russian energy policy and strategy were also developed as Russia became an independent state. The first Energy Policy Concept was followed by “Major Directions of Energy Strategy of Russia for the period up to 2010” that were approved Sep 1992 and May 1995 respectively. Due to its importance for Russia, to monitor and adapt timely changes, a new structure, The State Institute of Energy Strategy (IES), was established under the Ministry of Fuel and Energy in 1998. By law, the document was required to be regularly updated once every five years. IES was tasked to act as “coordinator for complex analysis and long-term forecast of the fuel and energy complex development in connection with the trends of the socio-economic development of the country.”<sup>639</sup> In 2000, a new Energy Strategy Russia for the period up to 2020 was drafted under coordination of the newly established IES, and the document was approved in 2003.

Russian Federation “Energy Strategy up to 2020” outlined several main priorities: “provisions for a secure domestic supply at balanced prices, energy saving and conservation

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<sup>636</sup> Zuzanna Nowak, J. Ćwiek-Karpowicz, and Jarosław Godzimirski. “The Power to Influence Europe? Russia’s Grand Gas Strategy.” *Polish Institute of International Affairs (PISM) Strategic File* 6, no. 69 (2015): 2.

<sup>637</sup> Racz. “Russian Foreign Policy,” 4.

<sup>638</sup> Ibid.

<sup>639</sup> Gromov, Alexey, and Nikolay Kurichev. “The Energy Strategy of Russia for the Period up to 2030.” *Russian Energy and Security up to 2030* (2014), 3.

technologies, financial stability and greater investment potential, and environmental protection.”<sup>640</sup> The most critical change between the first strategy and second strategy was the adaptation of measures to mitigate the negative impacts of the 1998 global financial crisis that affected the energy sector. The document highlights the differences between the strategy and the outlook. It suggests that “The strategy sets a course of long-term development of the energy sector, independent from the wide-field predictions of long-term changes in external and internal conditions...the Russian energy sector holds a sufficiently high potential for internal resistance and inertia, which enable to form a strategic course of its development on the basis of target guidelines, rather than on constantly changing forecasts of external and internal conditions”<sup>641</sup>

The third version of energy strategy was approved by the Russian government in 2009 that covers the period up to 2030 in accordance with the changing domestic and external drivers as well as new objectives and priorities of the country. “The Russian Energy Strategy to 2030 was adopted by the government at the end of 2009 and passed by the State Duma as federal law.”<sup>642</sup> As a result of geopolitical and economic changes, such as the crisis in Ukraine and ensuing economic sanctions, and based on the requirement by law, Russia’s Ministry of Energy developed and submitted a new version of the strategy in 2015 that was approved in April 2020 with almost half a decade delay.

Russia’s Energy Strategy 2030 objectives remain the same as the first and the second editions of the strategy that aim “to maximize the effective use of natural energy resources and the potential of the energy sector to sustain economic growth, improve the quality of life of the population, and promote strengthening of foreign economic positions of the country.”<sup>643</sup> The

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<sup>640</sup> “The Brookings Foreign Policy Studies Energy Security Series,” accessed October 19, 2021, <https://www.brookings.edu/wp-content/uploads/2016/06/2006russia.pdf>

<sup>641</sup> Russian Federation Decree 1715, 6,7.

<sup>642</sup> Mitrova and Yermakov, “Russia’s Energy Strategy,” 9.

<sup>643</sup> Russian Federation Decree 1715, 10.

strategy focuses on the principles, strategic guidelines, the main components and mechanisms of the state energy policy implementation, and determines objectives and goals of the Russian energy sector long-term development covering the following issues:

- The main trends and forecasts of the country socio-economic development, and of the interaction between the economy and energy sector;
- the prospects of demand for Russia's energy;
- the main provisions of the state energy policy and its most important elements;
- the development prospects of the Russian fuel and energy complex;
- the expected results and implementation system of the Strategy.<sup>644</sup>

Long-term development is the key for the Russian energy sector. A review of 2020 objectives suggest that implementation has not been fully achieved for stable and progressive development of the energy sector. The following deviations from the forecast of the Energy Strategy of Russia for the period up to 2020 were observed between 2000 and 2008:

- Oil prices grew from US \$27/barrel in 2000 to US \$94/barrel in 2008, that's almost a fourfold change;
- the actual export volume of energy resources for the same period grew 1.6 times, that's only a 9.6% change;
- the gross domestic product of the country grew by 65% compared to its 2000 level with a 11% change;
- actual growth in production of energy resources amounted to 26% compared to its 2000 level with a 2.6% change.
- domestic consumption of energy resources grew by 10% compared to its 2000 level with a 5% change due to the decrease in demand in 2008 on account of the world economic crisis.<sup>645</sup>

The latest Russian Energy Strategy (ES) 2035 was approved on 2 April 2020, and it provides a new perspective. The ES 2035 not only takes into account Western sanctions followed by the illegal annexation of Crimea but also the impacts of the COVID 19 pandemic. During the introduction to the public, Mikhail Mishustin, Chairman of the Government<sup>646</sup> of the Russian Federation, stated, "Modern energy is a high-tech, science-intensive industry, and the fuel and energy complex is one of the foundations of the national economy; it forms a

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<sup>644</sup> Russian Federation Decree 1715, 2.

<sup>645</sup> Ibid, 13.

<sup>646</sup> Prime Minister

significant part of budget revenues; and it is the largest customer of goods, services, and high technologies.”<sup>647</sup> He also emphasized several key aspects of energy strategy and its expected role for social and economic development of the country as well as the future of the energy sector:

The fuel and energy complex should make the maximum contribution to the socio-economic development of our country, contribute to the strengthening of Russia's position in the global energy sector. This is especially important now, given the high volatility of the oil and gas markets. The global economy is slowing down and, accordingly, the demand for energy is falling. But, like everyone else, this crisis, provoked, among other things, by the spread of the coronavirus, will end. We must work for the future, correctly assess the changes that are taking place in the global energy sector, taking into account the development of technologies, the structure of production, and demand. Plan your actions right now for the recovery period of global markets. And to build up the energy policy of the state.<sup>648</sup>

The role of the energy sector is huge in maintaining living standards, the Russian way of life, social stability, and execution of economic reforms. Should Russia lose this critical source of income, whether through the fall of energy prices or sanctions, the potential for economic collapse like the Soviet Union becomes inevitable. Sukhankin highlights that Russia's ES 2035 implementation will change domestic economy in the following areas: a shift toward “resource-innovative development” and a shifting role of the fuel and energy complex (FEC) from a ‘donor’ to the “locomotive of the Russian economy.”<sup>649</sup> According to Sukhankin, the ES 2035 puts forward five key objectives:

- Modernization of FEC through implementing measures such as new financial transparency among leading players operating on the market, the gradual liquidation of some sectoral subsidies, and greater transparency on tariffs.
- Greater diversification of exports, drawing particularly on investments in liquefied natural gas (LNG), whose production is to increase by 3.4 times by 2024.
- Modernization and development of Russia's FEC infrastructure. This will involve increasing the gasification of the Russian regions, developing energy infrastructure in Eastern Siberia and the Far East and completely integrating them into the wider Russian energy infrastructure system, as well as commercially developing the Arctic region and the Northern Sea Route, in particular.

<sup>647</sup> Russian Ministry of Energy, “The Government of the Russian Federation Approved the Energy Strategy of Russia for the Period up to 2035,” 2 April 2020, <https://minenergo.gov.ru/node/17491>

<sup>648</sup> Russian Ministry of Energy, “The Government of the Russian Federation Approved the Energy Strategy of Russia for the Period up to 2035,” 2 April 2020, <https://minenergo.gov.ru/node/17491>

<sup>649</sup> Sergey Sukhankin, “Russia's Energy Strategy 2035: A Breakthrough or Another Impasse?” Eurasia Daily Monitor, Volume: 17, Issue: 78, June 2, 2020.

- Achieving technological independence and increasing national competitiveness.
- Finally, digital transformation, premised on several essential pillars: the digitalization of the FEC; increasing the role of artificial intelligence (AI), which is to attain 100 percent penetration (by 2035) in some areas of the FEC, such as electricity meters; the introduction of AI-based systems of control of electricity grids.<sup>650</sup>

The ES 2035 went under heavy scrutiny amongst academics and members of the industry. For example, based on review of the draft strategy, Mitrova and Yermakov argue that ES-2035 struggles to remain relevant while several crucial energy related political issues remain unsolved at a time when volatility in the global markets is widespread.<sup>651</sup> They also suggest that some energy related issues should be further addressed such as “...introducing competition and letting market forces in the domestic market. Gazprom’s ownership of the Gas Transportation System (GTS) and its monopoly on gas pipeline exports out of Russia deny the other players a level playing field and create multiple economic distortions,”<sup>652</sup> Sukhankin reiterates Prime Minister Mishustin’s point that “The country’s FEC is a driver of domestic economic growth; therefore, ‘we need to start planning now for how to continue our energy policy once global markets have recovered.’”<sup>653</sup>

FEC remains as the central element of the Russian economy in the upcoming decades. However, implementation of this plan is likely to meet domestic and international obstacles based on the stress test conducted by the Ministry of Energy of the Russian Federation: “the rapid growth of new energy-sector technologies; the globalization of the world energy market; growing competition, primarily posed by LNG and shale oil; increasing non-competitive means of economic competition (a.k.a. sanctions); promotion of green (renewable) energy.”<sup>654</sup> Further analysis of the outcome of the stress test underscores some key concerns regarding effective implementation and the success of the Russian ES 2035:

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<sup>650</sup> Sergey Sukhankin, “Russia’s Energy Strategy 2035: A Breakthrough or Another Impasse?” Eurasia Daily Monitor, Volume: 17, Issue: 78, June 2, 2020.

<sup>651</sup> Mitrova and Yermakov, “Russia’s Energy Strategy.”

<sup>652</sup> Ibid, 12

<sup>653</sup> Sukhankin, “Russia’s Energy Strategy.”

<sup>654</sup> Ibid.



- Russia's perception of any type of external competition to its leading global energy position as existential threats that must be mitigated/eliminated rather than as incentives or potential opportunities for adaptation/innovation. This includes emerging new players as well as structural trends related to the transformation of the global energy market such as implementation of the Third Energy Package.
- Russia's internal competition/transparency issues are key obstacles for successful implementation of the ES 2035. These issues such as pushing for greater state subsidies and earmarking large funds for specific projects developed by Russia's largest energy companies and politically driven projects such as Gazprom's Nord Stream 2 and TurkStream gas pipeline constructions that are clearly of dubious commercial value and grossly overstate their resource potential.
- Lack of clear policies how some of the following concepts such as, 'innovation,' 'effectiveness,' 'social-orientation,' 'development of human capital' and 'eco security' could be turned into action and a real solution is provided to modernize the FEC.
- A lack of consensus whether the gasification infrastructure of the Kamchatka region will go ahead in development of the LNG terminal run by Novatek company.<sup>655</sup>

While these limitations are noted, Russia recognizes the importance of natural resources, especially oil and natural gas, for its survival and natural security. Therefore, Russian Energy Strategy and Foreign Policy are closely intertwined and influence each other. As a result, most of the issues mentioned above are addressed at the highest levels of government involving the presidential level. The concerns related with the Commission's Third Energy Package or building pipelines to bypass Ukraine and other Central and Eastern European countries are reflected in Russia's relations with these countries and its Foreign Policy.

#### 4.3.3. Energy - An Instrument of Russian Foreign Policy

In the early 1990s, Russia's economy collapsed with a GDP decline at almost 40 percent and an economic crisis in 1998, which resulted in changes in the Kremlin. Since Putin took power in 2000, energy exports, especially oil and natural gas, have been critical to Russia's rebound and to maintaining its economic growth at a reasonable rate. Based on US Energy Information Agency (EIA) 2017 data, "Russia is the world's largest producer of crude oil"<sup>656</sup>

<sup>655</sup> Sukhankin, "Russia's Energy Strategy."

<sup>656</sup> Yergin provides more recent data suggests that "Russia is one of the Big Three of world oil production. It is the second-largest producer of natural gas (after the United States) and is still the world's largest gas exporter." "The New Map," 71.

and the second-largest producer of dry natural gas. Russia also produces significant amounts of coal.”<sup>657</sup>

The revenue from energy exports, natural gas and oil, provide 40 to 50% of the government’s budget, 55 to 60% of export revenues, and around 30% of Russia’s GDP that provide a financial foundation for the state and Russian power.<sup>658</sup> Therefore, the energy strategy of Russia is not only important for its economy but also sheer existence of the state and Russia’s national security. Consequently, ES 2035 continues to support Russia’s perception of any obstruction or challenges to its energy exports as an existential threat.

As highlighted by Yergin, “Both Mikhail Gorbachev and Boris Yeltsin had bad luck when it came to oil, with price collapses that sent the economy spiraling downward. By contrast, Vladimir Putin had very good luck, for petroleum prices recovered as he came to power in 2000.”<sup>659</sup> Hill argues that Putin’s principal approach to foreign policy with his statist identity and his main objective “since 1999/2000 to restore Russia as a great and world civilization.”<sup>660</sup> Putin’s arrival signaled a change in policies. Initially, Putin appeared as though he was aspiring to integrate Russia in the group of “civilized nations,” and to join Western institutions, Russia returned to a power vertical, state-centric, strongly nationalistic system.<sup>661</sup>

In 2002, a Pew survey suggested that 71% of Russians answered as dissatisfied when asked about their “satisfaction with state of your country.” Only 24% said they were satisfied. Similarly, 83% highlighted the economic situation as “bad” while only 13% stated it as “good.”<sup>662</sup> The economic conditions and overall situation increased nationalistic sentiment and

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<sup>657</sup> “U.S. Energy Information Administration - EIA - Independent Statistics and Analysis,” International - U.S. Energy Information Administration (EIA), accessed October 19, 2021, <https://www.eia.gov/international/overview/country/RUS>.

<sup>658</sup> Yergin, “The New Map,” 71.

<sup>659</sup> Ibid, 76.

<sup>660</sup> Fiona Hill, “How Vladimir Putin’s World View Shapes Russian Foreign Policy,” *Russia’s Foreign Policy*, 2015, 48, [https://doi.org/10.1057/9781137468888\\_4](https://doi.org/10.1057/9781137468888_4).

<sup>661</sup> Gustafson, *The Bridge*, 404.

<sup>662</sup> “Chapter 2. Global Publics View Their Countries,” Pew Research Center’s Global Attitudes Project (Pew Research Center, December 30, 2019), <https://www.pewresearch.org/global/2002/12/04/chapter-2-global-publics-view-their-countries/>.

the Kremlin placed blame on the West and former Soviet satellites. These tendencies were reflected in Russian foreign policy approaches, especially against former Soviet republics and satellites.

Per Hogselius states, “In his 2005 ‘State of the Nation’ speech, Russian President Vladimir Putin argued that the collapse of the Soviet Union constituted the ‘biggest geopolitical disaster of the [twentieth] century.’”<sup>663</sup> The change in Russian foreign policy approaches became increasingly visible in 2007 when Putin delivered his remarks at the 43<sup>rd</sup> Munich Security Conference.<sup>664</sup> Valeriano argues that “Russia uses coercive diplomacy in post-Soviet space because of past history of disputes in the region, the high salience of issues at stake, issues of Russian great power identity, and because public supports these actions.”<sup>665</sup> These actions, Russia’s use of power politics, result as a direct challenge to the rule-based order established since the end of the World War II.

Changes in Russia’s approach became visible with the second wave of the NATO and EU enlargement in Eastern Europe in 2004. The first signs of trouble started with the first Ukraine gas crisis in 2006. Russia’s changing attitude and direct confrontation with the West became obvious with the breakout of war against Georgia in 2008 and the second gas crisis with Ukraine in 2009.<sup>666</sup> Moscow was extremely concerned with NATO and the EU’s eastward expansion to include Ukraine and Georgia into the Western Bloc. The war in Georgia allowed

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<sup>663</sup> Hogselius, *Red Gas*, 203.

<sup>664</sup> Washington Post, 12 February 2007, Putin stated “This conference's format will allow me to say what I really think about international security problems. And if my comments seem unduly polemical, pointed or inexact to our colleagues, then I would ask you not to get angry with me... Russia - we - are constantly being taught about democracy. But for some reason, those who teach us do not want to learn themselves. I consider that the unipolar model is not only unacceptable but also impossible in today's world. Unilateral and frequently illegitimate actions have not resolved any problems. Moreover, they have caused new human tragedies and created new centres of tension. Finding a political settlement also becomes impossible. We are seeing a greater and greater disdain for the basic principles of international law. And independent legal norms are, as a matter of fact, coming increasingly closer to one state's legal system. One state, and of course, first and foremost the United States, has overstepped its national borders in every way... In any case, I understood that the use of force can only be legitimate when the decision is taken by NATO, the EU, or the UN. If he really does think so, then we have different points of view.” “Putin's Prepared Remarks at 43rd Munich Conference on Security Policy,” The Washington Post (WP Company, February 12, 2007), <http://www.washingtonpost.com/wp-dyn/content/article/2007/02/12/AR2007021200555.html>.

<sup>665</sup> Maness and Valeriano, *Russia's Coercive Diplomacy*, 11

<sup>666</sup> Esakova, 10-11.

the Kremlin to test using power to change borders. Additionally, Russia showed it could pose a direct threat to oil and natural gas pipelines from the Caucasus to Western Europe through Turkey.

The developments between 2000 and 2009 shows Putin's survivalist identity that aims "to ensure that Russia can protect itself against all external threats and is prepared to deploy all the necessary reserves to defend the state."<sup>667</sup> Putin's own experience as a KGB case officer also shaped his approach to execution of state-to-state relations. Putin prefers,

Engaging small, select numbers of people and using trusted intermediaries and informal backchannels to substitute for formal meetings with official counterparts. Intermediaries have included the top leaders of major international companies who have made significant investments in the Russian economy and who have a vested interest in interstate relationships. All of this has translated into a top-heavy focus in Russian foreign policy. Putin has been front and center in interactions and decision-making.<sup>668</sup>

European-Soviet Union, then Russia's, foreign policy and energy relations should also be examined in terms of how decisions were made and what the underlying drivers were for structuring this relationship. On the European side, decisions were generally based on economic incentives, maintaining a western way of life supported by a cheap and reliable energy supply, excluding rare cases such as the German approach of 'Ostpolitik' or Nord Stream pipelines that have both geopolitical and economic aspects. European Union energy strategy is driven by security of supply concerns. Therefore, decisions are based on market dynamics, supply and demand, and key parameters, such as availability, accessibility, and affordability in other words, uninterrupted cheap energy and security of supply.

However, the Soviet Union leaders' involvement was at the highest levels as they considered a geopolitical approach, placing economic considerations to a lesser degree. In other words, geopolitical considerations take precedence over economic requirements. A long-term strategic plan, based on Russia's energy strategy, drives the investment required for pipelines

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<sup>667</sup> Hill, "How Vladimir Putin's World." 49.

<sup>668</sup> Ibid.

and other infrastructure that are very costly investments. Therefore, the decisions were made at the top political levels from Premier Khrushchev to President Vladimir Putin. As a result, geopolitical developments and long-term foreign policy objectives such as Russia's return to its rightful place as a great power were reflected in energy strategy and relations.

Oil and natural gas have especially played a central role that has contributed to the federal budget, not only for the Soviet Union, but also for Russia. Using energy resources allowed "Russia to project power other than with military might"<sup>669</sup> as a foreign policy tool which enabled Russia to return as a resurgent power in international relations. Massive reserves of oil and natural gas provided "Russia with the leverage over the states in the post-Soviet arena that lack these capabilities."<sup>670</sup> Russia has not only been using oil and gas to reward its allies such as Armenia, Belarus, Abkhazia, and North Ossetia with subsidies, but also has been using them to punish countries that turn towards the West such as Ukraine, Georgia, and the Baltic States. The reward-punish approach has aimed to produce a pro-Russian attitude. When failed, punishments become visible "with supply interruptions and higher prices after their governments turned toward the West."<sup>671</sup> In this context, Gazprom, the largest exporter of natural gas, has become a key instrument of Moscow's "petro-power." Newnham uses the analogy of petro-carrots and petro-sticks to describe Russia's use of energy resources as a foreign policy tool.<sup>672</sup> Between 2000 and 2010, Russia had 31 energy disputes with more than 20 countries as identified by Orttung and Overland.<sup>673</sup> In particular, two key transit countries,

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<sup>669</sup> Yergin, "The New Map," 70.

<sup>670</sup> Maness and Valeriano. *Russia's Coercive Diplomacy*, 110.

<sup>671</sup> Randall Newnham, "Oil, Carrots, and Sticks: Russia's Energy Resources as a Foreign Policy Tool," *Journal of Eurasian Studies* 2, no. 2 (2011): 134-135.

<sup>672</sup> Ibid, 134.

<sup>673</sup> Robert W. Orttung and Indra Overland. "A Limited Toolbox: Explaining the Constraints on Russia's Foreign Energy Policy." *Journal of Eurasian Studies* 2, no. 1 (2011): 77.

“Belarus and Ukraine have witnessed many disputes where energy has been used as either an economic or a political tool for coercion.”<sup>674</sup>

According to Sauvageot, Russian foreign policy and energy strategy were driven by different motivations from economic interdependence with European customers to political motivations and utilization of power.<sup>675</sup> Therefore, domestic politics, social dynamics and regime survival determine the mix of political and economic objectives. Orttung and Overland highlight,

Russia is seeking to re-establish some form of empire, while others focus on a ‘Russia, Inc.’-model that emphasizes how the country’s leadership wants to maximize profit. While Russia pursues both political and economic goals, its limited set of foreign policy tools means that it has to make tradeoffs among these goals. Thus, Russia is sometimes willing to sacrifice economic gain to assert political advantage, and vice versa.<sup>676</sup>

This analysis is based on the assumption that “Russia’s political leaders use energy to pursue advantages in other areas, such as protecting their political power from instability at home and expanding Russian influence abroad.”<sup>677</sup> In this context, Gazprom’s economic and political role in implementation of Russian foreign policy and energy strategy carries significant importance.

#### 4.3.4. Gazprom’s Expansion and Energy Conflicts

The collapse of the Soviet Union had devastating effects on the oil industry that “was torn apart and quickly privatized in the first half of the 1990s by eager entrepreneurs, overnight banking tycoons, grasping local politicians, and gangsters—but the gas industry was not.”<sup>678</sup> Natural gas played a significant role in the economy during the last decade of the Soviet Union, and its importance has grown significantly after the collapse of the Soviet Union when other sources of energy, especially oil production, were impacted.<sup>679</sup> Gazprom survived the crises for

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<sup>674</sup> Eric Pardo Sauvageot, “Gas Disputes Between Russia and Ukraine: Patterns of Escalation and Russian Stakes.” *Export pipelines from the CIS region: Geopolitics, securitization, and political decision-making*. Vol. 10. Columbia University Press, 2014, 256.

<sup>675</sup> Sauvageot, “Gas Disputes” 254.

<sup>676</sup> Orttung and Overland. “A Limited Toolbox 75.

<sup>677</sup> Ibid.

<sup>678</sup> Gustafson, *The Bridge*, 242

<sup>679</sup> Ibid, 240.

the following reasons: “Unlike oil, gas is comparatively easy to produce, but it is difficult and expensive to transport, and worthless unless there is a distribution system in place to consume it... large pipelines were built to take gas to major markets... the economics and politics of gas are still largely linked those of pipeline transportation and distribution.”<sup>680</sup> With a huge production capacity (90% of Russia), control over a quarter of the world’s energy reserves and pipeline networks, and a natural gas monopoly, Gazprom has become the biggest firm in Russia.

During the period between 1990 and 2000, the Soviet Ministry for the Gas Industry transformed into a state-owned and controlled company, Gazprom, with certain privileges such as “access to Russian gas fields and exercising monopoly rights in gas transportation throughout Russian territory and -even more important- in gas exports to Europe.”<sup>681</sup> Vavilov highlights that “Gazprom had a dual role. As a joint-stock company it was supposed to operate in the shareholders’ interests by trying to maximize profits. But as a state-controlled enterprise, Gazprom had to fulfill the functions of a state agency in foreign affairs and also carry the burden of providing cheap energy for the domestic economy.”<sup>682</sup> This dilemma has been increasingly apparent since the beginning of the 2000s when Putin had seized power and adapted a more assertive foreign policy to achieve great power status while restoring influence over former Soviet space. Additionally, Gazprom has not been operating in economic terms on the domestic front “since the Russian government uses the company’s vast resources to subsidize the energy needs of Russian households and factories.”<sup>683</sup>

In this context, Gazprom was used as an instrument of Russian foreign policy and energy strategy for an outward expansion with the construction of new natural gas pipelines and attempts to control existing structures including storage facilities. According to Vavilov,

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<sup>680</sup> Gustafson, *The Bridge*, 243.

<sup>681</sup> Vavilov and Nicholls, eds. *Gazprom: An Energy Giant*, 3.

<sup>682</sup> Ibid.

<sup>683</sup> Ortung and Overland. "A Limited Toolbox," 75.

“The Russian authorities formulated the primary goal of Gazprom as taking control of the gas production chain beyond the Russian border and getting access to final-user markets abroad...the evolution of Gazprom from a major energy supplier to an active and prominent energy player in Europe capable of influencing the European energy sector.”<sup>684</sup> Additionally, Russian leadership’s vision for a sustainable economic development solely based on long-term energy revenues and price upsurge have not materialized.

Russian attempts to gain vertical control of the natural gas supply chain from extraction through retail sale increased European concerns over their energy security. Vavilov highlights that while Russia did not intend “provoking international energy conflicts by using the gas levers, but their superpower rhetoric sometimes sounded aggressive, especially when it concerned Russia’s political influence in neighboring countries... European trade partners considered the Russian ambitions a serious threat to, rather than a guarantee of, their energy security.”<sup>685</sup>

At the same time, Gazprom was supposed to meet the increasing domestic energy demand. Natural gas has played an important role for Russian economy as well as societal during the challenging times of economic hardships in the 1990s. The share of natural gas increased from 42% to 54% between 1990 and 2019 in total primary energy consumption. The following table depicts the Russian primary energy consumption trends and increasing importance of natural gas.

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<sup>684</sup> Vavilov and Nicholls, eds. *Gazprom: An Energy Giant*, 4.

<sup>685</sup> Ibid, 5.



Table 11: Russian primary energy consumption by fuel and share of natural gas, 1990–2019 (millions of metric tons of oil equivalent)<sup>686</sup>

| Energy Source                     | 1990   | 1995   | 2000   | 2005   | 2010   | 2015   | 2019   |
|-----------------------------------|--------|--------|--------|--------|--------|--------|--------|
| <i>Natural Gas</i>                | 367.4  | 316.6  | 319.0  | 349.7  | 383.5  | 364.3  | 418.0  |
| <i>Oil</i>                        | 263.8  | 142.7  | 126.1  | 129.2  | 139.1  | 139.2  | 149.5  |
| <i>Coal</i>                       | 191.1  | 129.2  | 119.9  | 112.6  | 105.7  | 115.9  | 124.8  |
| <i>Nuclear</i>                    | 31.1   | 26.2   | 34.4   | 39.2   | 44.7   | 51.3   | 54.8   |
| <i>Biofuels and waste</i>         | 12.2   | 8.5    | 6.9    | 6.9    | 6.9    | 7.7    | 10.2   |
| <i>Hydro</i>                      | 14.3   | 15.1   | 14.1   | 14.8   | 14.3   | 14.4   | 16.7   |
| <i>Wind and Solar</i>             | 0.024  | 0.026  | 0.050  | 0.35   | 0.43   | 0.16   | 0.24   |
| <i>Total</i>                      | 879.93 | 638.32 | 620.45 | 652.75 | 694.63 | 692.96 | 774.24 |
| <i>Natural Gas Share of Total</i> | 42.0%  | 49.6%  | 51.4%  | 53.6%  | 55.2%  | 52.6%  | 53.9%  |

Source: IEA, *World Energy Balances* <https://www.iea.org/data-and-statistics/data-product/world-energy-statistics-and-balances>, Author converted the IEA data from terajoule (TJ) to millions of metric tons of oil equivalent and calculated share of natural gas.

Gazprom has been able to survive dramatic geopolitical changes and economic challenges, including the 2007/8 global economic crises and Western sanctions. In most cases, countries of Western Europe have given precedence to economic benefits and energy cooperation over the political costs of their increasing energy dependence on Russia. These policy choices have been reflected in joint ventures for the development of natural gas pipelines, Nord Stream 1 and 2, as well as Turk Stream and Blue Stream. The differences between Western and Central/Eastern European countries were further exploited as Russia used low-cost natural gas delivery and large-scale natural gas projects involving top-level politicians on both the European and Russian side, for example German Chancellor Schröder's

<sup>686</sup> IEA, 'World Energy Balances' Russia. Total Energy Supply by Source, <https://www.iea.org/countries/russia>, All Rights Reserved.

involvement in the Nord Stream 1 pipeline project. The Polish President criticized the relationship as the “Putin-Schröder Pact” while his defense minister “denounce[ed] the pipeline as comparable to the 1939 Nazi-Soviet Molotov-Ribbentrop Pact that divided Poland and the Baltic Republics.”<sup>687</sup>

Gazprom has affected several developments either driven by economic or geopolitical reasons, such as the disruption of natural gas to Europe due to the gas conflicts between Russia and Ukraine in 2006 and 2009. The Global economic crisis caused significant reduction in natural gas demand while the emergence of LNG produced in the Middle East, Asia, and Africa, as well as in the US, provided an alternative, further tightening the market share of natural gas.

The most important restrictions on Gazprom emerged as the European Commission released its Third Energy Package, bringing issues such as unbundling – stricter rules for separation between transmission and production/supply activities of vertically integrated companies such as Gazprom, third party access to the pipeline system, and new tools to harmonize market and network operations.<sup>688</sup> These measures were against Gazprom’s strategic expansion attempts to gain control over energy assets in the former soviet republic, satellite countries, and some parts of Western Europe where possible. Vavilov and Tromifov highlight the importance of export infrastructure to Western Europe while keeping Central Asia under Russian influence.<sup>689</sup> They argue that “After the Soviet collapse in 1991, Gazprom lost control over energy assets in these countries: the new independent states got control of the extensive gas transportation infrastructure within their borders. This infrastructure served not

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<sup>687</sup> Gustafson, *The Bridge*, 364.

<sup>688</sup> European Commission, “Third Energy Package.”

<sup>689</sup> Andrey Vavilov and Georgy Trofimov. “The Struggle for Pipelines: Gazprom’s Attempts at Strategic Expansion in the ‘Near Abroad.’” *University Park, PA: CRIFES Working Papers Series*, The Center for Research on International Financial and Energy Security, Penn State University (2013), 105.

only domestic gas consumption and distribution but also the transit of Russian gas export to Europe.”<sup>690</sup>

Aligned with the policy shift in the Kremlin after 2000, the Russian government established controlling shares and made changes to top management of Gazprom. Russia’s new leadership, led by Vladimir Putin, started using Russia’s oil and natural gas resources for their political purposes such as “protecting their political power from instability at home and expanding Russian influence abroad.”<sup>691</sup> In this context, Gazprom has been used “as a policy tool in the state’s evolving political relations with the European countries. The essence of the new approach was a merging of active foreign and energy policies, and Gazprom became an important foreign-policy tool of the state.”<sup>692</sup>

Russian energy resources have become a foreign policy tool, other than the military means, to “respond to the expansion of the EU, NATO, and the OECD and to halt the political drift of central and eastern European states away from Moscow. Gas export was viewed as an effective means to restore to Russia a major geopolitical role or at least to strengthen its political influence abroad.”<sup>693</sup> As part of its geopolitical approach, energy power has been used as a hybrid warfare tool in the following areas: to “maintain a sphere of special interest, prolong the existence of military bases, bolster separatist entities, and support the election of sympathetic leaders in the post-Soviet area.”<sup>694</sup>

Gazprom made several attempts to penetrate European markets, not only to control infrastructure, but also to increase its market share and profit margins from lucrative European markets. To achieve this objective, to establish control over natural gas pipelines have been at

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<sup>690</sup> Andrey Vavilov and Georgy Trofimov. "The Struggle for Pipelines: Gazprom's Attempts at Strategic Expansion in the 'Near Abroad.'" *University Park, PA: CRIFES Working Papers Series*, The Center for Research on International Financial and Energy Security, Penn State University (2013),105.

<sup>691</sup> Orttung and Overland. "A Limited Toolbox," 75.

<sup>692</sup> Andrey Vavilov and Georgy Trofimov. "A Phantom Energy Empire: The Failure of Gazprom's Downstream Integration." In *Gazprom*, pp. 72-104. Palgrave Macmillan, London, 2015, 88.

<sup>693</sup> Ibid.

<sup>694</sup> Orttung and Overland. "A Limited Toolbox," 75.

the core of Gazprom's approach. As part of Russia's overall energy strategy and foreign policy, according to Vavilov and Trofimov, "one combining the use of various tools of diplomacy, political lobbying for projects, price leverage and threats of cutoffs, blackmailing in negotiations, and other types pressure."<sup>695</sup> Gazprom implemented an 'active' foreign energy policy: However, there were significant concerns over and resistance to Gazprom's attempts due to "its corrupt dealings through a web of intermediaries to spread Russian influence into a divided Europe that lacks a coherent policy to protect itself."<sup>696</sup> As a result, Gazprom was not able to acquire shares to get control of 5-10% of domestic gas markets in France, the Benelux, and the UK due to political barriers and "Europeans negative image of Gazprom as a strategic tool of Moscow."<sup>697</sup> Having initially failed in France, the Benelux and the UK, Gazprom was able to establish more comprehensive penetration to European markets through Germany with the new pipeline networks that bypass Ukraine, Poland, Belarus, and other Central and Eastern European countries. The initial proposals to create joint venture proposals with Ruhrgas failed "despite the two companies' maintaining a traditional partnership in delivery of Russian gas to Europe."<sup>698</sup>

Wintershall, an oil and gas subsidiary of a German chemical company, BASF, accepted the offer and created an alternative pipeline network to compete Ruhrgas. The agreement between Wintershall and Gazprom set the foundation of Gazprom's strategic cooperation with European companies that started with two joint ventures "WIEH, in which they held equal shares, and Wingas, in which Gazprom held 35% and Wintershall 65%. WIEH's business was cross-border gas trade and intermediation, and Wingas specialized in trading, marketing, and

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<sup>695</sup> Vavilov and Trofimov. "The Struggle for Pipelines: Gazprom's Attempts at Strategic Expansion in the 'Near Abroad.'" 106.

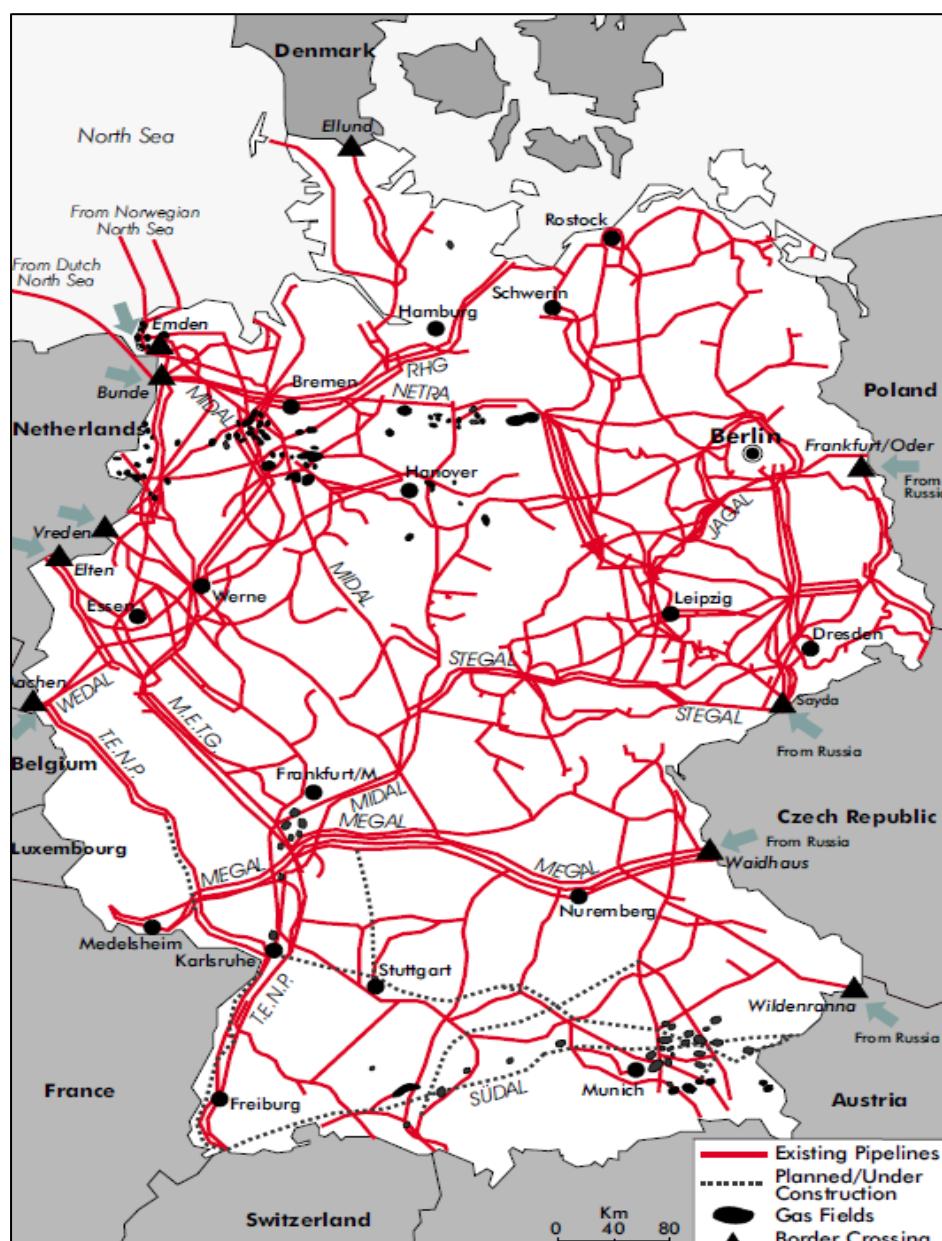
<sup>696</sup> Orttung and Overland. "A Limited Toolbox," 75.

<sup>697</sup> Vavilov and Trofimov. "A Phantom Energy Empire," 88.

<sup>698</sup> Orttung and Overland. "A Limited Toolbox," 76.

distributing gas and creating gas infrastructure in Germany.”<sup>699</sup> The following map shows how Gazprom’s pipeline network connected to German end users in early 2000s.

Figure 21: Natural Gas Infrastructure in Germany as of 2002<sup>700</sup>



Source: IEA, Energy Policies of IEA Countries, Germany Review 2002, based on data from *Natural Gas Information 2001*, IEA/OECD Paris, 2001, All Rights Reserved.

<sup>699</sup> Orttung and Overland. "A Limited Toolbox," 77.

<sup>700</sup> Vavilov and Trofimov. "A Phantom Energy Empire," 78.

The public joint stock company Gazprom has ultimate ownership<sup>701</sup> of a large number of subsidiaries in Europe and the rest of the world. The geographic footprint of Gazprom through these subsidiaries are depicted on the following table.

Table 12: Number of Gazprom Owned Subsidiaries in Countries<sup>702</sup>

| Country                | Number of ultimately-owned subsidiaries |
|------------------------|---|
| Russia                 | 645                                     |
| Netherlands            | 14                                      |
| Republic of Serbia     | 12                                      |
| Germany                | 11                                      |
| United Kingdom         | 10                                      |
| Switzerland            | 7                                       |
| Belarus                | 5                                       |
| Italy                  | 4                                       |
| Kyrgyzstan             | 4                                       |
| Bosnia and Herzegovina | 3                                       |
| Austria                | 3                                       |
| Romania                | 3                                       |

*Source: Author's compilation from the Orbis Database*

In addition to the list above that includes three or more subsidiaries, Gazprom has two ultimately owned subsidiaries in the following countries: Tajikistan, Republic of Cyprus, the US, and Bulgaria. At least one subsidiary is in the following countries: Slovakia, Armenia, France, Singapore, Luxembourg, Ukraine, Georgia, Spain, Poland, Czech Republic, Canada, Hungary, Belgium, and Turkey.<sup>703</sup> Through these companies and other means, Gazprom attempted to own and control distribution pipeline and networks in transit and consumer countries. Additionally, Gazprom gained 50% or more ownership of the following gas assets

<sup>701</sup> Ultimate Owner definition: The path from the company to its ultimate owner is minimum 50.01%

<sup>702</sup> This data is based on Author's research on Orbis database on 7 July 2021.

<sup>703</sup> Ibid.

in the CIS countries. These levels of ownership allow Gazprom to influence and control of energy related decisions in these countries.

Table 13: Gazprom Ownership of Gas Assets in CIS Countries<sup>704</sup>

| Country    | Name of company | % of Gazprom ownership |
|------------|-----------------|------------------------|
| Armenia    | Armrosgazprom   | 80                     |
| Kazakhstan | KazRosGaz       | 50                     |
| Moldova    | Moldovagaz      | 50                     |
| Belarus    | Beltransgaz     | 50                     |

Source: Orttung and Overland, *A Limited Toolbox: Explaining the Constraints on Russia's Foreign Energy Policy*

Albeit constraint and curbed, vertical control and ownership of large parts of the entire gas energy system from production to distribution gives enormous power to the Kremlin. Orttung and Overland provided a cluster analysis regarding objects of contention in energy conflicts. These are listed as price, volume of sales, asset ownership, allowing construction of a transit pipeline, political goals, and issues such as disputes over non-payment, territorial issues in the Caspian.<sup>705</sup> The distribution of energy conflicts between 2000 and 2010 are depicted below.

<sup>704</sup> Orttung and Overland. "A Limited Toolbox," 82.

<sup>705</sup> Ibid. 78, 79.

Table 14: A Chronological Distribution of Energy Conflicts by Country<sup>706</sup>

| Country        | 2000     | 2001     | 2002     | 2003     | 2004     | 2005     | 2006     | 2007     | 2008     | 2009     | 2010     | Total     |
|----------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-----------|
| Finland        |          |          |          |          |          |          |          |          |          | 1        |          | 1         |
| Norway         |          |          |          |          |          |          |          |          |          | 1        |          | 1         |
| Estonia        |          |          |          |          |          |          |          | 1        |          |          |          | 1         |
| Latvia         |          | 1        |          |          |          |          |          |          |          |          |          | 1         |
| Lithuania      |          |          |          |          |          |          | 1        |          |          |          |          | 1         |
| Belarus        |          |          |          |          | 1        |          | 1        | 1        |          |          | 1        | 4         |
| Ukraine        |          |          |          |          |          |          | 1        |          |          | 2        | 1        | 4         |
| Moldova        |          |          |          |          |          |          | 1        |          |          |          |          | 1         |
| Transdnistria  |          |          |          |          | 1        |          |          |          |          |          |          | 1         |
| Poland         |          |          |          |          |          | 1        |          |          |          |          |          | 1         |
| Czech Republic |          |          |          |          |          |          |          |          | 1        |          |          | 1         |
| Turkey         |          |          | 1        |          |          |          |          |          |          |          |          | 1         |
| Croatia        |          |          |          | 1        |          |          |          |          |          |          |          | 1         |
| Germany        |          |          |          |          |          |          |          | 1        |          |          |          | 1         |
| UK             |          |          |          |          |          |          | 1        |          |          |          |          | 1         |
| Spain          |          |          |          |          |          |          |          |          | 1        |          |          | 1         |
| Italy          |          |          |          |          |          |          |          |          | 1        |          |          | 1         |
| Georgia        | 1        |          |          |          |          | 1        | 1        |          |          |          |          | 3         |
| Azerbaijan     |          |          |          |          |          |          |          | 1        |          |          |          | 1         |
| Turkmenistan   |          |          |          |          | 1        |          |          |          |          | 1        |          | 2         |
| Kazakhstan     |          |          | 1        |          |          |          |          | 1        |          |          |          | 2         |
| <b>Total</b>   | <b>1</b> | <b>1</b> | <b>2</b> | <b>1</b> | <b>3</b> | <b>2</b> | <b>6</b> | <b>5</b> | <b>3</b> | <b>5</b> | <b>2</b> | <b>31</b> |

Source: Ortung and Overland, *A Limited Toolbox: Explaining the Constraints on Russia's Foreign Energy Policy*

Even though the European Commission has been addressing unbundling, third party access, and network operator ownership issues to avoid concentration of power in one company, Russia and Gazprom have certain leverages against potential customers. While this analysis has focused on Gazprom, Rosneft, and other state-owned companies/enterprises are no different. The following is a summary of the tools that Russia has been using to resolve not only energy and economic issues but also political disputes including regaining influence over former Soviet space.

The most powerful tool has been price subsidies since the natural gas deal started. The Soviet Union, then Russia, used price subsidies to solve political as well as energy disputes in their favor. The second tool has been a coercive use of cutting oil and natural gas flowing through pipelines. This might not be a total shut down like in 2006 and 2009 but instead a

<sup>706</sup> Ortung and Overland. "A Limited Toolbox," 78.



reduction of the amount of gas and oil flowing through the network. The third tool is to attack other countries pipeline systems, such as the case in Georgia in 2006 and Turkmenistan in 2009. Orttung and Overland reiterate that “While there is no conclusive evidence to prove that Russia was responsible for these events, there is plenty of circumstantial evidence that points to the use of these extreme measures as a tool of foreign energy policy.”<sup>707</sup> Finally, Russia opted out of building new pipelines such as the Nord Stream, the Turk Stream, and the Blue Stream, to avoid repeated conflicts with transit countries. While Russian hybrid tools to influence political outcomes vary from cyber to energy security, these new pipelines will give excess capability that could turn into political leverage against transit as well as consumer countries.

These pipelines provide important leverage by not only controlling the level of natural gas flow, but also manipulating prices and reducing effectiveness of spot price exchanges. All these powers concentrated in the hands of a single state-owned company. The following is an excerpt of Goldman’s impression during his visit to the Gazprom control center in Moscow:

I felt as if I had wandered into the NASA Space Center... a map with a spiderweb-like maze of natural gas pipelines reaching from East Siberia west to the Atlantic Ocean and from the Arctic Ocean south to the Caspian and Black Seas...Gazprom dispatchers, three men controlling the flow of Gazprom’s gas to East and West European consumers of this Russian natural gas monopoly... With a flick of a switch, those dispatchers sitting in this Moscow room could freeze-and indeed have frozen-entire countries... Should they choose to, those Gazprom functionaries could not only cut off natural gas from the furnaces and stoves of 40 percent of Germany’s homes but also the natural gas that many German factories need for manufacturing a range of products from ammonia fertilizer to plastics. While Germany purchases more natural gas from Russia than any other country in Europe, all of Western Europe is now also hooked up directly or indirectly to the Gazprom pipeline.<sup>708</sup>

Goldman shares this alarming feeling that summarizes the danger and power concentrated on one company that is controlled by the Kremlin and has been used as a foreign policy and energy strategy tool.

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<sup>707</sup> Orttung and Overland. "A Limited Toolbox," 79, 80.

<sup>708</sup> Goldman, “Petrostate,”2.

More than 50% of Gazprom is controlled by the Russian state while Gazprom developed several joint ventures with Western European companies such as those involved in the development of the Nord Stream 1 and 2 pipelines, as well as Blue Stream and TurkStream. The Nord Stream 2 pipeline could be described as a ‘wicked problem’ or a ‘Gordian Knot’ for the Western world, including the EU and NATO, but it certainly represents a culmination of Russia’s long-term strategy to bypass Ukraine, to sow a wedge between the members of the EU, and strain transatlantic relations and NATO’s cohesion. Therefore, the Nord Stream 2 will be further investigated in the next Chapter as a case study.

#### 4.4. Russian Energy Reserves – An overview of Oil and Natural Gas

The Soviet Union was the largest country in the world, and it was the world’s biggest producer of energy resources. “In 1989, total energy production, including oil, natural gas, coal, hydropower, and atomic energy amounted to about 21% of the world’s total production, as opposed to the United States’ 20% share. Gas made up 36% of the total energy output in the USSR; oil comprised 36%; and coal amounted to 20%.”<sup>709</sup> However, oil production plummeted during “the cataclysmic breakup of the Soviet system and the free-for-all grab for the state’s assets that followed... The oil industry was torn apart and quickly privatized in the first half of the 1990s by eager nomenclature entrepreneurs, overnight banking tycoons, grasping local politicians, and gangsters.”<sup>710</sup>

Fossil fuels were the main drivers of the Soviet industrialization and the source for hard currency. The high energy-intensive Soviet economy shaped the national infrastructure of today’s Russia and still influences investment policies and priorities. At the same time, the oil and gas revenues continue to fuel today’s Russian economy, and the high level of oil and gas dependence remain as a key feature of the past. While oil and natural gas provided large sums

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<sup>709</sup> Ermolaev, "The Formation and Evolution."

<sup>710</sup> Gustafson, *The Bridge*, 242.

of hard currencies, natural gas was the main source of energy for the Soviet, then Russian, industry, keeping the houses warm and the lights on, especially after the 1980s.

Hogselius highlights that the transition from oil to natural gas started in the early 1980s as the main export commodity. “Oil was still king, but gas was quickly approaching, its share in overall hydrocarbon exports doubling from 12.8% in 1978 to 24.7% in 1989. On the other hand, due to falling oil and gas prices, the share of hydrocarbons in overall Soviet export earnings decreased from 52% in 1984 to 36% in 1989”<sup>711</sup> Despite a large increase in the volume of natural gas and oil sales, revenues fell in absolute terms, leading to one of the main causes of the Soviet economic collapse.

Natural gas particularly played a fundamental role during the early 1990s when Soviet central planning collapsed, and GDP growth plummeted. Therefore, oil and natural gas means not only fuel for economy, but also the main pillar of the state’s survival and the regime’s stability.

#### 4.4.1. Oil Reserves and Production

According to the US Energy Information Agency (EIA) 2017 data, Russia is one of the major producers and exporters of fossil fuels: the largest producer of crude oil (including lease condensate) and the second-largest producer of dry natural gas after United States. Russia holds the largest proven natural gas reserves in the world.<sup>712</sup> The Russian oil industry was initially privatized in the beginning of the 1990s; however, several joint-ventures with Western companies were later acquired by state-controlled companies in the 2010s. As a result, oil production has been dominated by domestic companies, Rosneft, Lukoil, Surgutneftegaz, Gazprom, Tatneft, Bashneft, Slavneft and Russneft.<sup>713</sup>

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<sup>711</sup> Hogselius, *Red Gas*, 202

<sup>712</sup> “U.S. Energy Information Administration - EIA - Independent Statistics and Analysis.”

<sup>713</sup> Ibid.

Russia's proved and probable oil reserves are around 72 billion barrels; with contingent recoverable oil resources in yet undecided projects, this figure is close to 122 billion barrels, according to the Rystad Energy estimates.<sup>714</sup> Most of Russia's reserves are located in West Siberia, between the Ural Mountains and the Central Siberian Plateau, and in the Volga-Ural region, extending into the Caspian Sea. A recent spike in energy prices will allow Russia to slowly increase oil production level. According to Rystad Energy, "The country is expected to set a new monthly crude and condensate production record of 11.6 million b/d in July 2022...Russian production will further accelerate, reaching a peak of nearly 12.2 million b/d in mid-2023."<sup>715</sup>

In 2013, Rosneft acquired assets of TNK-BP and became the largest public oil company in the world, by output and reserves. The deal provided Rosneft the potential to increase oil production over 4 million barrels a day.<sup>716</sup> Russia's short and medium-term production growth will come from greenfield projects managed by Rosneft and Gazprom. The increase in oil production is a result of OPEC+ group agreement that would allow Russia to move beyond its baseline production of 11 million b/d. Oil & Gas Journal reports suggest:

Rosneft alone will contribute more than half of Russia's spare capacity. The company's greenfield projects will add around 250,000 b/d by 2022 and about 380,000 b/d by 2025... Gazpromneft will be the second-largest contributor to Russia's liquids production growth in 2022, with greenfield projects as the driving force. By 2025, about 40% of Gazpromneft-operated production will come from early producing fields and projects that are currently under development... Other Russian operators-including Lukoil, Surgutneftegas, and smaller players such as Bashneft and Russneft are not expected to contribute much to countrywide liquids production growth.<sup>717</sup>

Russia's oil production comes from three main regions: West Siberia, the Volga-Ural region and East Siberia, and the Far East. There are other smaller regions such as Arkhangelsk,

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<sup>714</sup> "Rystad: World's Recoverable Oil down 9%," Oil & Gas Journal, accessed October 20, 2021,

<https://www.ogj.com/general-interest/economics-markets/article/14206708/rystad-worlds-recoverable-oil-down-9>.

<sup>715</sup> Rystad: World's Recoverable Oil down 9%."

<sup>716</sup> Igor Sechin. "Rosneft Oil Company," *The Oil and Gas Year, Russia*. 2013, 29.

<sup>717</sup> "Rystad: World's Recoverable Oil down 9%."

Komi Republic, and Caspian. The US Energy Information Agency analysis suggests that Russian “Arctic offshore and shale resources are unlikely to be developed without the help of Western oil companies. However, these sanctions will have little effect on Russian production in the short term as these resources were not expected to begin producing for 5 to 10 years at the earliest.”<sup>718</sup> The United States and the European Union sanctions directly affect the Arctic offshore and shale resources development. The following table depicts oil production by region based on 2016 data.

Table 15: Russia’s Oil Production by Region, 2016 Data (barrel/day)<sup>719</sup>

| Region                        | Thousand b/d |
|-------------------------------|--------------|
| West Siberia                  | 6,294        |
| Khanty-Mansiisk               | 4,830        |
| Yamal-Nenets                  | 977          |
| Other West Siberia            | 487          |
| Urals-Volga                   | 2,498        |
| East Siberia and the Far East | 1,338        |
| Krasnoyarsk                   | 426          |
| Irkutsk                       | 364          |
| Sakhalin                      | 344          |
| Yakutia                       | 204          |
| Arkhangelsk                   | 328          |
| Komi Republic                 | 284          |
| Caspian                       | 41           |
| Arctic offshore               | 36           |
| Other                         | 57           |
| Total                         | 10,875       |

Source: US, EIA, [https://www.eia.gov/international/content/analysis/countries\\_long/Russia/russia.pdf](https://www.eia.gov/international/content/analysis/countries_long/Russia/russia.pdf)

<sup>718</sup> “U.S. Energy Information Administration - EIA - Independent Statistics and Analysis.”

<sup>719</sup> Ibid

According to the US Energy Information Agency, “Russia exported more than 7 million b/d in 2016, including about 5.3 million b/d of crude oil and the remainder in products and other liquids... Most Russian exports (70%) went to European countries, particularly the Netherlands, Germany, Poland, and Belarus. About 36% of Russia's federal budget revenue in 2016 came from oil and natural gas activities.”<sup>720</sup> In 2019, oil rents provided 9.2% of the Russian GDP, marking a decrease from 10% delivered in 2018.<sup>721</sup> Russia uses its extensive pipeline networks for domestic distribution and four main ports, Novorossiysk, Primorsk, Ust-Luga, and Kozmino, to export crude oil to global markets. Based on 2016 data, the US EIA analysis suggests that these four ports are used to export 84% of seaborne crude oil. These pipelines and ports deliver more than one third of the crude oil imports of the OECD European countries.<sup>722</sup>

Except for the Caspian Pipeline Consortium, Russia’s domestic and export oil pipelines are owned and controlled by Transneft, a state-owned company. The total length of Russian oil pipelines increased from 48,000 kms to 54,000 kms and the network of pipelines for oil products increased from 15,000 to 17,000 kms.<sup>723</sup> The following table shows the large share of state-owned companies’ contribution to Russia’s oil production.

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<sup>720</sup> “U.S. Energy Information Administration - EIA - Independent Statistics and Analysis.”

<sup>721</sup> D. Elagina, “Russia: Oil Rents Share of GDP,” Statista, September 20, 2021, <https://www.statista.com/statistics/1026640/russia-oil-rents-share-of-gdp/>.

<sup>722</sup> “U.S. Energy Information Administration - EIA - Independent Statistics and Analysis.”

<sup>723</sup> D. Elagina, “Total Length of Russian Oil Pipelines 2000-2020, by Type,” 11 June 2021, <https://www.statista.com/statistics/1030054/russia-total-oil-pipelines-length-by-type/>

Table 16: Russia's Oil Production by Company, 2016 Data (barrel/day)<sup>724</sup>

| Company                          | Thousand b/d |
|----------------------------------|--------------|
| Rosneft                          | 4,021        |
| Lukoil                           | 1,679        |
| Surgutneftegaz                   | 1,225        |
| Gazprom (including Gazprom Neft) | 1,117        |
| Tatneft                          | 570          |
| Bashneft                         | 423          |
| Slavneft                         | 300          |
| Novatek                          | 247          |
| Russneft                         | 150          |
| PSA operators                    | 290          |
| Others                           | 853          |
| Total                            | 10,875       |

Source: US, EIA, [https://www.eia.gov/international/content/analysis/countries\\_long/Russia/russia.pdf](https://www.eia.gov/international/content/analysis/countries_long/Russia/russia.pdf)

#### 4.4.2. Natural Gas Reserves and Production

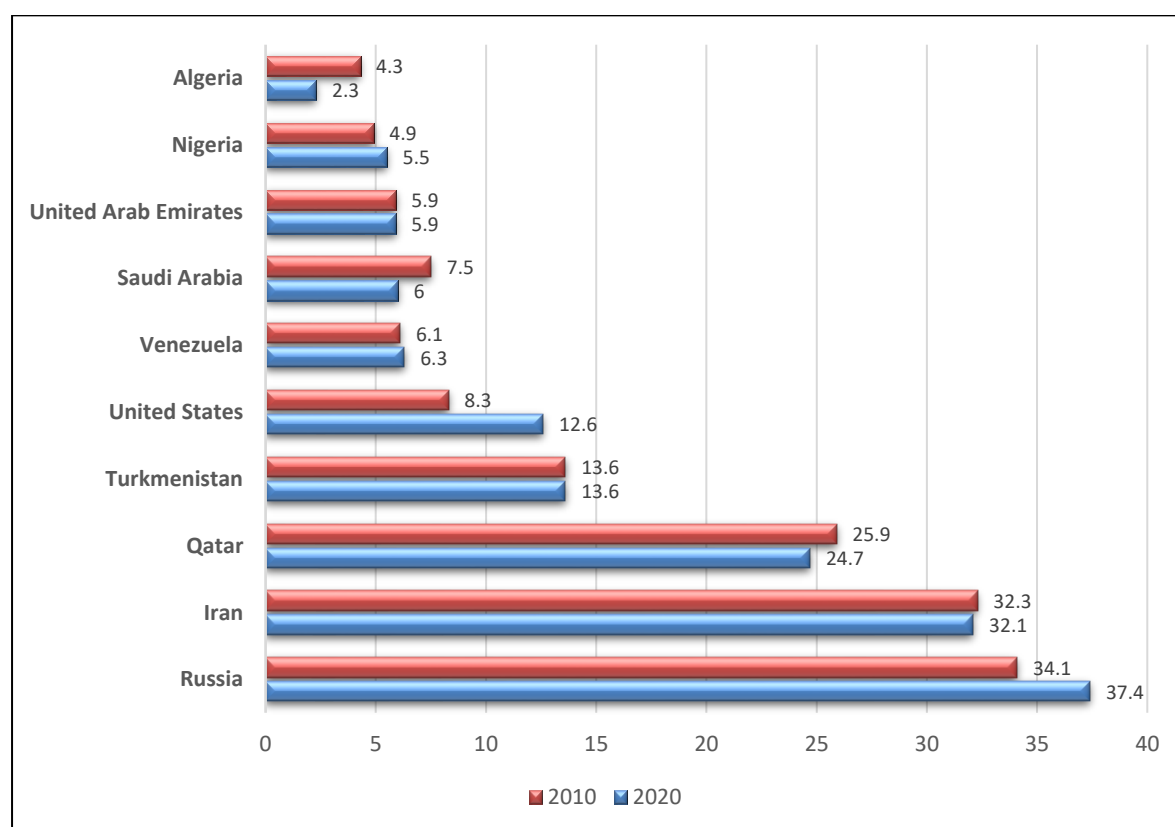
Russia's geography provides a unique dominant position expanding from the Baltic Sea in the West to the Pacific in the East, the Arctic Ocean in the North, and the Black and Caspian Seas in the South with its vast natural gas reserves, extensive pipeline network, and delivery systems. According to the US EIA analysis, "Russia holds the largest natural gas reserves in the world and is the second-largest producer of dry natural gas. The state-run Gazprom dominates the country's upstream natural gas sector, although production from other companies has been growing."<sup>725</sup> The following independent and oil companies, Novatek, Rosneft, Lukoil and Surgutneftegaz, have gained a foothold in natural gas production. However, Gazprom maintains a dominant upstream position, reinforced by its legal monopoly on pipeline gas exports.

<sup>724</sup> "U.S. Energy Information Administration - EIA - Independent Statistics and Analysis."

<sup>725</sup> Ibid.

Russian government representatives and Gazprom chairman Alexi Miller highlighted ongoing Yamal projects and the potential of offshore Arctic oil and natural gas resources for future prospects regarding the size of natural gas reserves.<sup>726</sup> Based on these projections, Gazprom estimates suggest that Russia's natural gas reserves are going to be sufficient for the current level of domestic usage and exports for at least another century. The following table shows worldwide proved natural gas reserves:

Table 17: Leading Countries by Proved Natural Gas Reserves Worldwide in 2010 and 2020 (in trillion cubic meters)<sup>727</sup>



Source: Statista, 'Global Natural Gas Reserves by Country 2020'

<https://www.statista.com/statistics/265329/countries-with-the-largest-natural-gas-reserves/>

<sup>726</sup> Tsvetana Paraskova, "Gazprom: Russia Has Gas Reserves for More than a Century," OilPrice.com, September 17, 2021, <https://oilprice.com/Energy/Natural-Gas/Gazprom-Russia-Has-Gas-Reserves-For-More-Than-A-Century.html>.

<sup>727</sup> Published by N. Sönnichsen and Oct 8, "Global Natural Gas Reserves by Country 2020," Statista, October 8, 2021, <https://www.statista.com/statistics/265329/countries-with-the-largest-natural-gas-reserves/>.



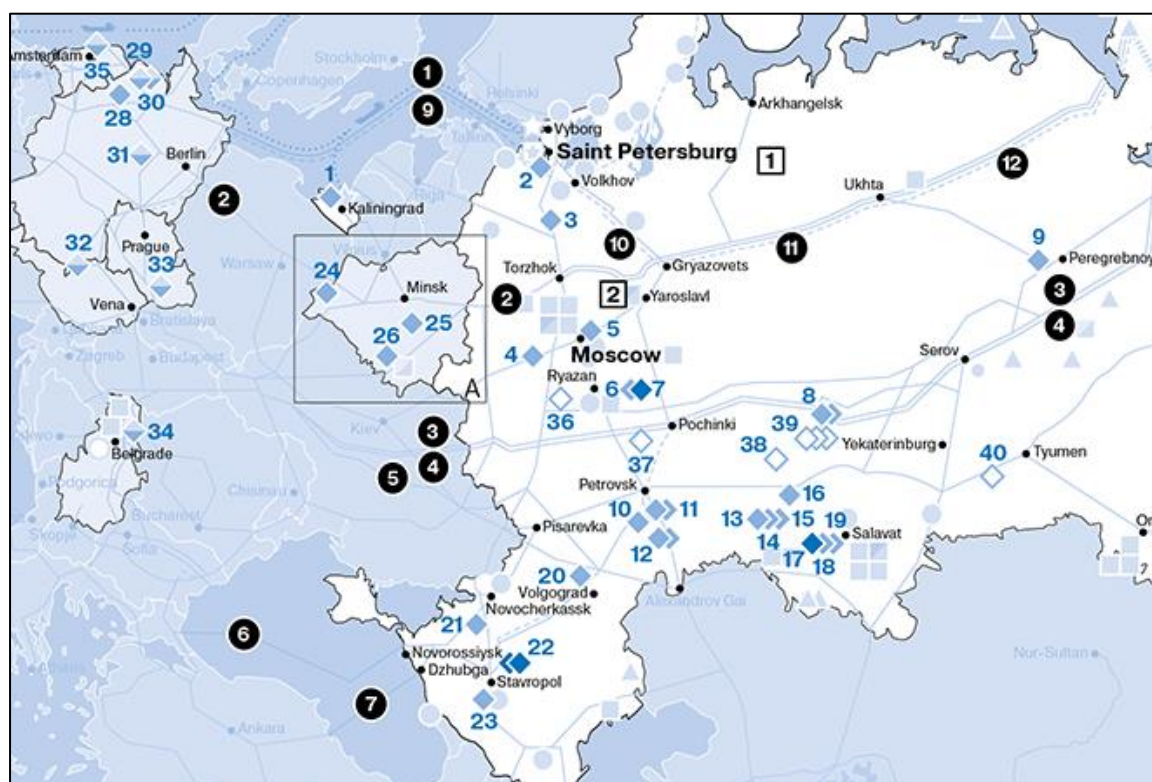
In addition to this vast amount of reserves, Gazprom owns the largest gas transmission network in the world. “The overall length of the gas transmission system in Russia is 176,800 kilometers. Gas transmission is performed using 254 compressor stations.”<sup>728</sup> The Unified Gas Supply System (UGSS) is the backbone of the gas supply chain from “production, processing, transmission, storage, and distribution facilities in European Russia and Western Siberia.”<sup>729</sup> Gazprom suggests that their centralized control and well-structured parallel transmissions routes has a substantial margin that provides reliable, secure, and uninterrupted gas supplies, even during peak seasons. The US EIA highlights that, “Since the late 2000s, Gazprom has been adding major new pipelines to accommodate new sources of supply, including fields in Yamal and Eastern Siberia, and new export routes, including exports to China and new pipelines to Europe that avoid Ukraine”<sup>730</sup> such as Nord Stream 1 and 2, Turk Stream and Power Siberia. Gazprom pipeline export infrastructure is shown on the following maps.

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<sup>728</sup> “Transmission: Unified Gas Supply System of Russia,” *Gazprom*, accessed October 20, 2021, <https://www.gazprom.com/about/production/transportation/>.

<sup>729</sup> Ibid.

<sup>730</sup> “U.S. Energy Information Administration - EIA - Independent Statistics and Analysis.”

Figure 22: Gazprom's Main Transmission Routes (West)<sup>731</sup>

| Key Gas Export Routes              | Gas Transportation Projects  |
|------------------------------------|--|
| 1- Nord Stream 1 gas pipeline      | 9- Nord Stream 2 gas pipeline  |
| 2- Yamal Europe gas pipeline       | 10- Development of gas transportation capacity of UGSS of the North-West region, section Gryazovets - Slavyanskaya |
| 3- Progress gas pipeline           |  |
| 4- Urengoy - Uzhgorod gas pipeline | 11- Ukhta – Torzhok 3 gas pipeline   |
| 5-Soyuz gas pipeline               | 12- Bovanenkovo – Ukhta 3 gas pipeline   |
| 6-TurkStream gas pipeline          |  |
| 7- Blue Stream gas pipeline        |  |

Source: Gazprom, 'Gazprom Group's Main Gas Transportation and Underground Gas Storage Projects and Assets,' The image is taken from the following webpage <https://www.gazprom.com/f/posts/15/301731/map-develop-2020-en.png>

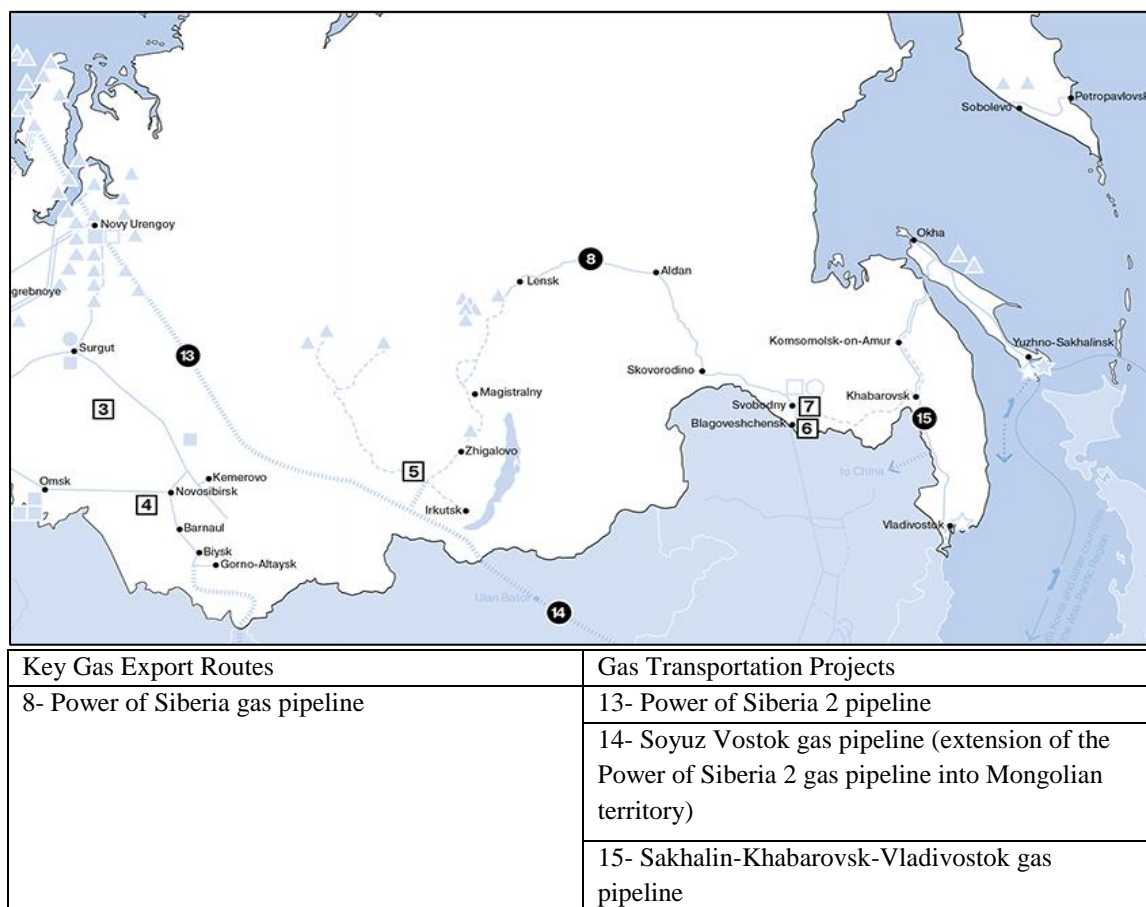
The Russian Eastern Gas Program (EGP) started in 2007. The Russian government directed Gazprom to expand natural gas infrastructure for production, transportation, and supply in eastern Siberia and Russia's Far East.<sup>732</sup> The EGP lays out the major gas production centers in the regions of Irkutsk, Yakutia, Krasnoyarsk, Kamchatka, and Sakhalin to supply

<sup>731</sup> Gazprom, "Gazprom Group's Main Gas Transportation and Underground Gas Storage Projects and Assets," <https://www.gazprom.com/f/posts/15/301731/map-develop-2020-en.png>

<sup>732</sup> "U.S. Energy Information Administration - EIA - Independent Statistics and Analysis."

Russian consumers. It also supports increased gas exports to China. The backbone of the EGP is the Power of the Siberia Pipeline which was completed in December 2019, delivering gas to Russia's Far East and China.<sup>733</sup>

Figure 23: Gazprom's Main Transmission Routes (East)<sup>734</sup>



Source: Gazprom, 'Gazprom Group's Main Gas Transportation and Underground Gas Storage Projects and Assets,' The image is taken from the following webpage <https://www.gazprom.com/f/posts/15/301731/map-develop-2020-en.png>

<sup>733</sup> "Power of Siberia," Gazprom, accessed October 20, 2021, <https://www.gazprom.com/projects/power-of-siberia/>.

<sup>734</sup> Gazprom, "Gazprom Group's Main Gas Transportation and Underground Gas Storage Projects and Assets," <https://www.gazprom.com/f/posts/15/301731/map-develop-2020-en.png>

Russia's natural gas sector is dominated by five large natural gas and oil companies. While Gazprom, the largest state monopoly, leads the gas sector, Novatek is Russia's largest independent natural gas producer. Rosneft, Lukoil, and Surgutneftgas are both oil and natural gas companies. Rosneft is the overall leader of the oil industry in Russia but is also involved in natural gas development from exploration, production to delivery. Lukoil was initially "government-controlled but is now Russia's largest company not controlled by the state and the second-largest company overall, after Gazprom, as of 2020."<sup>735</sup> The following table provides natural gas production by company based on 2016 data.

Table 18: Russia's Natural Gas Production by Company, 2016 data (Tcf)<sup>736</sup>

| Company        | Tcf  |
|----------------|------|
| Gazprom        | 14.8 |
| Novatek        | 2.4  |
| Rosneft        | 2.4  |
| Lukoil         | 0.7  |
| Surgutneftegaz | 0.3  |
| PSA Operators  | 1.0  |
| Other          | 1.0  |
| Total          | 22.6 |

Source: US. Energy Information Agency, <https://www.eia.gov/international/analysis/country/RUS>

Gazprom is the monopoly and sole owner of virtually all of Russia's natural gas pipelines that require independent companies to distribute natural gas through its pipeline networks. However, "Russia's 1999 Law on Gas Supply requires owners of all natural gas systems to provide non-discriminatory access to any available capacity with the aim of

<sup>735</sup> Evan Tarver, "The 5 Biggest Russian Natural Gas Companies," Investopedia (Investopedia, September 13, 2021), <https://www.investopedia.com/articles/markets/082615/5-biggest-russian-natural-gas-companies.asp>.

<sup>736</sup> "U.S. Energy Information Administration - EIA - Independent Statistics and Analysis."

supplying domestic consumers. Separate regulations established rules for third-party access to the UGS system, but no rules have been established for access to pipelines that are not part of the UGS system.”<sup>737</sup> Gazprom claims that it provides independent companies with nondiscriminatory access to its gas pipelines. In 2020, Gazprom’s pumped 129.0 bcm gas for 20 independent companies in Russia.<sup>738</sup> Third party access – Russia domestic transmission - has grown significantly and is better regulated. However, many recent disputes have been over the access for the pipelines that are not part of the UGS system, especially eastern natural gas pipelines.<sup>739</sup>

Russia’s energy sector accounted for 63.2% of exports in 2017 and about 36% of its revenue in 2016.<sup>740</sup> Russia’s assertive foreign policy has been supported by its military modernization program and military spending. According to SIPRI “Russian military expenditure has grown significantly over the past two decades. It increased by 30% in real terms between 2010 and 2019 and by 175% between 2000 and 2019.”<sup>741</sup> This increase is in parallel with the increase in energy exports. Natural gas reserves are critical for Russian exports as an important input to the national budget; they also provide the biggest contribution to Russia’s energy mix as depicted on the following energy consumption data.

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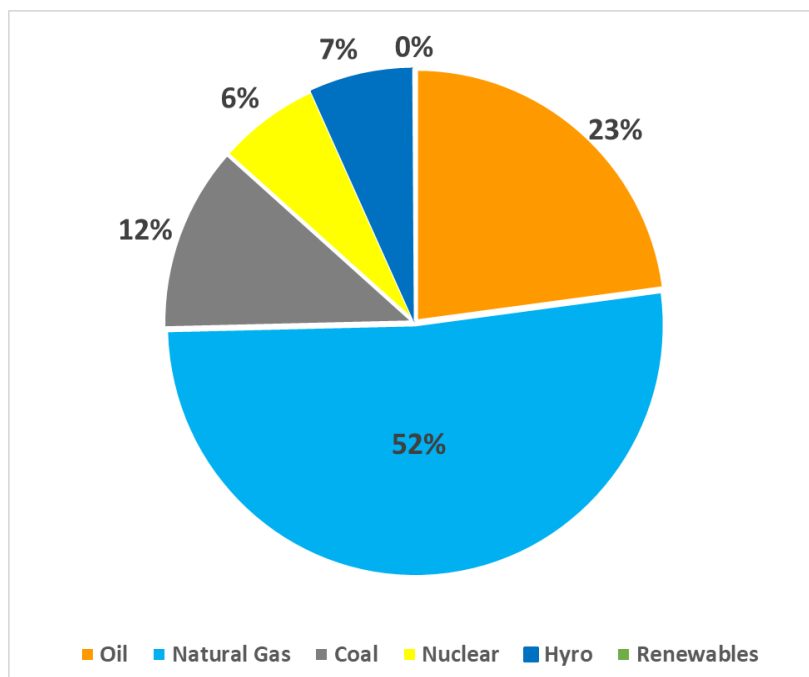
<sup>737</sup> “U.S. Energy Information Administration - EIA - Independent Statistics and Analysis.”

<sup>738</sup> “Transmission: Unified Gas Supply System of Russia,”

<sup>739</sup> “U.S. Energy Information Administration - EIA - Independent Statistics and Analysis.”

<sup>740</sup> “Russian Federation: Energy Resources and Market Structure,” OECD Inventory of Support Measures for Fossil Fuels: Country Notes –, accessed October 20, 2021, <https://www.oecd-ilibrary.org/sites/23fe599b-en/index.html?itemId=%2Fcontent%2Fcomponent%2F23fe599b-en>.

<sup>741</sup> Siemon T. Wezeman, ‘Russia’s military spending: Frequently asked questions’ 27 April 2020, <https://www.sipri.org/commentary/topical-background/2020/russias-military-spending-frequently-asked-questions>

Figure 24: Russia Total Primary Energy Consumption<sup>742</sup>

Source: BP, *Statistical Review of World Energy – 2021*.

<https://www.bp.com/content/dam/bp/business-sites/en/global/corporate/pdfs/energy-economics/statistical-review/bp-stats-review-2021-russia-insights.pdf>

#### 4.4.3. Russia's Completed and Planned LNG projects

Initially, Russian companies focused on developing a “network of small- and mid-scale LNG liquefaction facilities, mainly to serve remote natural gas demand and to serve transportation demand for LNG in Russia and neighboring areas.”<sup>743</sup> Russian gas monopoly Gazprom planners had considered LNG export from the Yamal Peninsula in the mid-1990s. However, until the early 2000s, LNG was not a priority for Gazprom. At the same period, Shell, one of the most experienced offshore production companies in the world, “had created a consortium to develop oil and LNG on Sakhalin Island in which Shell was the majority stakeholder and the operator.”<sup>744</sup> While Putin endorsed foreign investment through production

<sup>742</sup> BP Statistical Review of World Energy, “Russia’s Energy Market in 2020,” 2.

<sup>743</sup> “U.S. Energy Information Administration - EIA - Independent Statistics and Analysis.”

<sup>744</sup> Gustafson, *The Bridge*, 302, 304.

sharing contracts, the principle of equal access and using Russian personnel and equipment was reiterated. Negotiations between Gazprom and Shell lasted two years.<sup>745</sup> In 2006, Gazprom acquired a majority stake of Sakhalin LNG from a Shell-led consortium. The main customers of this project were not only Asia-Pacific markets but also the United States. While Russian leadership was keen to diversify production, the two camps within Gazprom were in constant competition: traditional pipeline gas and LNG.<sup>746</sup> The delay caused this competition, and the US shale gas revolution further slowed LNG investment until independent gas producers made significant progress.

Russia's attempt to access large volumes of natural gas in the Yamal and Gydan Peninsula above the Arctic Circle was only possible using LNG technology. While pipeline networks connected with the reserves in the southern part of the Yamal Peninsula, "It was assumed that the huge reserves in the frozen northern part of Yamal would never be developed because of the remote location and high cost, thus leaving that gas permanently 'stranded.'"<sup>747</sup> In February 2009, Sakhalin saw the launch of the first plant to produce liquefied natural gas in Russia. In the intervening years, industry players have planned a number of new LNG projects.

Table 19: Russia's Large-Scale Liquefied Gas Projects<sup>748</sup>

| Facility              | Area          | Status       | Capacity   | Year   | Owner  |
|-----------------------|---------------|--------------|------------|--|--|
| Liquefaction projects |               |              |            |  |  |
| Sakhalin LNG          | Pacific coast | operating    | 10+        | 2009   | Gazprom, Shell, Mitsui, and Mitsubishi   |
| Yamal LNG             | Arctic coast  | construction | 16.5       | train 1 - 2017<br>train 2 - 2018<br>train 3 - 2019 | Novatek, Total, CNPC, and Silk Road Fund, an investment fund established by the Chinese government |
| Arctic LNG-2          | Arctic coast  | planning     | up to 16.5 | by 2025  | Novatek  |

<sup>745</sup> Gustafson, *The Bridge*, 305.

<sup>746</sup> Ibid, 306, 307.

<sup>747</sup> Yergin, "The Map," 111.

<sup>748</sup> "U.S. Energy Information Administration - EIA - Independent Statistics and Analysis."

Table 19 (Continued)

| Facility                 | Area          | Status       | Capacity | Year      | Owner   |
|--------------------------|---------------|--------------|----------|-----------|---|
| Baltic LNG               | Baltic coast  | planning     | 10       | post 2021 | Gazprom   |
| Far East LNG             | Pacific coast | planning     | 5        | post 2020 | ExxonMobil, Rosneft, ONGC Videsh, and SODECO, a Japanese consortium |
| Sakhalin LNG (expansion) | Pacific coast | planning     | 5.4      | post 2022 | Gazprom, Shell, Mitsui, and Mitsubishi                              |
| Pechora LNG              | Arctic coast  | delayed      | up to 8  | NA        | Rosneft   |
| Shtokman LNG             | Arctic coast  | delayed      | 30       | NA        | Gazprom   |
| Vladivostok LNG          | Pacific coast | delayed      | 10       | NA        | Gazprom   |
| Regasification projects  |               |              |          |           |   |
| Kaliningrad LNG          | Baltic coast  | construction | 2        | 2017      | Gazprom   |

Source: US. Energy Information Agency, <https://www.eia.gov/international/analysis/country/RUS>

The LNG projects, such as Novatek's Yamal LNG, were affected by the US sanction following Russia's illegal annexation of Crimea and intervention in Eastern Ukraine. Novatek's access to Western financial institutions was cut-off, but this situation created an opportunity for China to become a partner with French oil and natural gas company Total. In December 2017, the first cargo of LNG was exported, and Putin stated, "This is not just an important event in our country's energy sector, but also for developing the Arctic and Northern Sea Route...All this is interconnected and secures Russia's future."<sup>749</sup>

In August 2018, Yamal LNG sent its "first cargo ship to China, going east along the Arctic coast, through the ice of the Northern Sea Route...LNG projects for Russia's Arctic gas make clear that Russia will become the fourth major pillar for LNG supply in the 2020s, along with the United States, Qatar, and Australia."<sup>750</sup> The development of LNG, using Arctic resources and the Northern Sea Route have geopolitical consequences. Yergin argues that this

<sup>749</sup> Yergin, *The Map*, 112.

<sup>750</sup> Russian Federation Decree 1715, 113, 114.



development “points to a major geopolitical shift with worldwide impact – ‘the povorot na Vostok,’ Russia’s ‘pivot to the east.’”<sup>751</sup>

#### 4.5. Russian Federation Relations with the Central Asia/Caucasus

Central Asia is generally defined as a single geographic space. However, the countries that emerged after the breakdown of the Soviet Union cannot be approached as a single entity. Each Central Asian country has distinct features in political, social, demographic (ethnic), economic, and energy areas. During the Soviet Union period, gas fields in Turkmenistan and Uzbekistan were connected to major industrial centers of the Soviet Union. The natural gas resources of the Central Asian republics, especially Turkmen gas, were used by Gazprom to meet increasing European energy demand in the second half of the 1990s and early 2000s. During the period energy prices increased, Gazprom focused on building new transportation capacities instead of developing new fields that resulted in falling production. According to Yergin, “In the 1990s, before Ukraine took center stage, Central Asia and the Caucasus had been the regions in which Russia vigorously sought to reassert its primacy in the post-Soviet space. The ‘near abroad,’ as Moscow called it, became the focus of a geopolitical clash - not with China, but rather the United States.”<sup>752</sup>

The newly independent republics of Central Asia, Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, and Uzbekistan, as well as two Caspian countries, Azerbaijan and Georgia, have found themselves in the middle of a great power competition, not only within the regional powers, but also involving the US and the EU. Central Asia has also become a target for Russia’s external expansion efforts. While the Kremlin was given priority, gaining control of the gas infrastructure in the former Soviet space in the West during the late 1990s and early 2000s, Gazprom focused on control over natural gas reserves in Central Asia. Vavilov and Trofimov argued:

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<sup>751</sup> Russian Federation Decree 1715, 114.

<sup>752</sup> Ibid, 125.

Turkmenistan, Kazakhstan, and Uzbekistan also possessed...significant gas fields that were of strategic importance to Gazprom because they served as reserves to make up for falling gas production in Russia itself. Gazprom made several concerted attempts to restore its control of the gas reserves, infrastructure, and markets in all of these countries. It was crucial for Gazprom to maintain control of gas transportation routes linking the Russian gas network with lucrative downstream European markets, on the one hand, and with the vast upstream gas reserves in Central Asia, on the other.

Russia was keen to maintain those newly independent republics under its sphere of influence. However, the United States and Europe supported their independence to build their identity and economy.<sup>753</sup> Russia's early attempts to revitalize relationship with Central Asia and the Caucasus in the area of energy diplomacy was hampered by the loss of central, fiscal, and political control, resulting in a power vacuum in the region.<sup>754</sup> External powers attempted to fill the vacuum in the region left by the collapse of the USSR, while the new republics were struggling to establish their state institutions. A lack of democratic institutions, or a culture of self-governance resulted in newly independent states moving towards autocracy. These domestic challenges were further intensified due to an absence of regional architectures to support nation formation, state building, and establishment of legitimate governance in the newly independent republics. Since the collapse of the Soviet Union,

“The political divisions between and among the Central Asian states have hardened. The borders the states inherited from the USSR in 1991 were created on the principle of divide and rule from Moscow. Without Moscow to play the role of arbiter, these borders have become illogical, contested boundaries—fracturing ethnic groups, rupturing trade and communication routes, and breaking economic and political interdependencies.”<sup>755</sup>

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<sup>753</sup> Yergin, *The Map*, 125.

<sup>754</sup> Adam N. Stulberg, ‘Well-Oiled Diplomacy, Strategic Manipulation and Russia’s Energy Statecraft in Eurasia, 2007, 13, 14.

<sup>755</sup> Fiona Hill, “*The United States and Russia in Central Asia: Uzbekistan, Tajikistan, Afghanistan, Pakistan, and Iran*,” Brookings, August 2002, <https://www.brookings.edu/on-the-record/the-united-states-and-russia-in-central-asia-uzbekistan-tajikistan-afghanistan-pakistan-and-iran/>

Russia's foreign policy approach towards Central Asia after the end of the Cold War could be divided into three phases: the first phase could be defined as "a lack of interest due to ideological, political, economic and even cultural reasons."<sup>756</sup> The first phase ended in the second half of the 1990s, with Russia's acceptance of the Primakov Doctrine.<sup>757</sup> In the second phase, Russia sought to re-establish control over its neighborhood, including the Caucasus and Central Asia. These efforts were partially successful despite a few setbacks such as the Baku-Tbilisi-Ceyhan (BTC) pipeline and increasing Chinese influence in the Central Asia. The third phase started with Putin's move to power and the 9/11 terrorist attacks in the early 2000s and took its final shape with the release of the Russian Foreign Policy Concept.<sup>758</sup>

With increasing US interest and other external actors' involvement in Central Asia, Russian Foreign policy used a prism covering all aspects from political, social, cultural, economic and in particular energy resources and their impacts on all areas including national security. Although Europeans did not support alternative gas routes to Europe due to perceived serious political and geographical disadvantages, Russia used every measure to stop potential projects such as the Nabucco pipeline. Without any outlet to European markets, "Central Asian and Caucasian natural gas had to continue to pass through the Russian trunk-line system to reach any consumers abroad at all, effectively making Russia the sole westward supplier of Eurasian gas."<sup>759</sup>

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<sup>756</sup> Craig Oliphant, "Russia's Role and interests in Central Asia," October 2013, p. 3

<sup>757</sup> Perrier, *The Key Principles of Russian Strategic Thinking*, 20–21. She summarised 'The Primakov doctrine' that was based on three key elements. "The first one is called 'selective partnerships' with the West. It broke with the belief in the West as a 'natural ally of Russia', the notion of selectivity in choosing its partners rendering Russia's international policies more flexible. Furthermore, Russia began to play on the dissensions between the European Union and the United States, constantly trying to strengthen its own positions. Secondly, it promoted a counter-balancing policy against American dominance by developing its ties with Asia and the Middle East. This policy was particularly evident in its efforts to build a flexible strategic triangle between Moscow, New Delhi and Beijing that could offset the American influence. Lastly, it aimed to construct a 'red line' in the west of the country, corresponding to the former USSR border. The 'Primakov doctrine' reaffirmed the notion that the CIS (Commonwealth of Independent States) formed a historic Russian interest area and any expansion by NATO across these borders, including into the Baltic States, would be perceived by Russia as a sign of hostility and would have political consequences."

<sup>758</sup> The Foreign Policy Concept of the Russian Federation, February 2013

<sup>759</sup> Vavilov and Nicholls, eds. *Gazprom: An Energy Giant*, 28.

Whether they are energy producing or transit countries, Russia has had diverging relationships in its neighborhood. During the independence period from the Soviet Union, Central Asian countries were not able to establish a political discourse that built upon cooperation and trust. This condition resulted in “confrontation and clashes with human casualties due to limited access to water and land resources, unresolved problems of border areas and enclaves.”<sup>760</sup>

Putin’s Russia has set an objective to become an energy powerhouse and has been trying to establish effective control over its domestic energy resources, as well as the energy resources and infrastructure located in its neighborhood. Since the collapse of the Soviet Union, Central Asia has emerged as an energy producer and a potential source for the diversification of resources and routes for European energy security. Azerbaijan, Kazakhstan and Turkmenistan constitute producing countries; Georgia and Uzbekistan are the immediate transit countries. Increasing involvement of a multitude of players, both global and regional, including not only states but also international institutions (including the EU and NATO), has been preventing Russia from establishing absolute control over the former Soviet space.

#### 4.6. Russia-Ukraine Relations and Natural Gas Crises

Ukraine has been occupying a pivotal position for natural gas exports from the Soviet Union then Russia since the beginning of European-Russian energy relations in 1960s. While this relationship had ups and downs during the Cold War, the context has changed with the collapse of the Soviet Union, leaving Russia as the gas producer and Ukraine as the main transit country. The concerns increased as Ukraine failed to pay its gas debt. Additionally, Russia started to raise its gas prices to Ukraine that of European levels. While there were several small incidents of supply disruptions to Ukraine, the gas crisis in 2006 was a deliberate action on the Russia/Gazprom side, cutting off gas for Ukraine.

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<sup>760</sup> Somzhurek, Yessengaliyeva, Medeubayeva, “Central Asia and Regional Security,” 161-171.

The Russian approach to the Ukrainian gas crises in 2006 and 2009 brought up the question of whether Russia would use energy as a weapon against the EU. Stegen suggests that “for forty years Russia has been a reliable energy supplier to Western Europe... Despite this track record, suspicions linger that Russia will use disruptions - or the threat of disruptions - to further its foreign policy and national security objectives.”<sup>761</sup> In this context, recent developments to build controversial pipelines (e.g., Nord Stream - II over the Baltics and Turk Stream over the Black Sea) have increased the complexity of the relationships between Russia, Europe, Central Asia and the Caucasus, as well as transit countries in between. Additionally, Russia has increasingly been attempting to develop and control downstream assets in Europe to maintain “its role as the main transit routes for Central Asian gas.”<sup>762</sup>

On the one hand, these developments might allow Russia to act as an energy superpower as Russian foreign and energy policies are aligned to attempt gaining great power status using energy as a tool. On the other hand, Stent argued that “Russian-European energy interdependence would temper any Russia inclination to employ the energy weapon.”<sup>763</sup> Stent also highlighted that energy has become a dominant issue since the 2006 Ukrainian gas crisis due to price disputes and Russia “promotes its interests through the use of ‘soft’ energy power, as opposed to ‘hard’ military power.”<sup>764</sup> Over time, Russia has become either a single supplier or maintains a high-level of control over supplies and critical energy infrastructures of several EU members. Additionally, Russia aims to influence Central Asian states’ gas and oil production and export pipeline networks to reduce competition. Although European dependency to Russian energy resources and associated concerns were highly covered in policy discussions, using Central Asia to diversify the sources has not been sufficiently addressed.

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<sup>761</sup> Stegen, “Deconstructing,” 6505-6513.

<sup>762</sup> Stent, “An Energy Superpower,” 78.

<sup>763</sup> Stegen, “Deconstructing,” 6506.

<sup>764</sup> Stent, “An Energy Superpower,” 77-83.

#### 4.7. Russian Efforts for Diversification – Pivot to the East – China

At the end of the Cold War, Russia and China started development of a new relationship. This relationship has had three phases: “it was characterized as ‘good-neighborly and mutually beneficial’ in December 1992; then, as ‘constructive partnership’ in September 1994; and as ‘strategic partnership of coordination’ in April 1996.”<sup>765</sup> The 1996 declaration by the leaders of Russia and China, Boris Yeltsin and Jiang Zemin, driven by domestic and external factors affecting both countries, has the following features:

- It is not based on the commonality of ideology. Rather, it is free from ideologies. Entirely based on national interests, the relationship is solid and long lasting.
- It is non-allying, non-confrontational and not against any third country. Non-alliance means that the two countries do not form any alliance, nor will they in future.<sup>766</sup>
- The Russia-China strategic partnership is based on a long list of mutual interests: ranging from the need to maintain domestic order and stability in their respective ‘near abroad’ to a common desire to prevent the proliferation of weapons of mass destruction (WMD) and the militarization of space... an aversion to a unipolar world and strive to curb US power... supporting strong state sovereignty and are usually in agreement when defending the principle of non-interference in other countries’ affairs.<sup>767</sup>

Both countries have concerns in their relations with Western countries. They are both against NATO for varying reasons and have increased military cooperation, joint training, transfer of military technology, and arms sales.<sup>768</sup>

However, Russia has several concerns, such as the rapid economic and political rise of China, its increasing economic and energy relations with Central Asian Republics, and asymmetric economic relationship based on “the persistence of the export/raw-materials model of development” that has been perceived as a national security concern by Russian elite.<sup>769</sup> Each one of these areas requires in-depth analysis; however, the focus of this part will be on Russia-China energy cooperation, in particular oil and natural gas projects. Russia has been

<sup>765</sup> Xia Yishan, “China-Russia Energy Cooperation: Impetuses, Prospects and Impacts.” (2000), 5, 6.

<sup>766</sup> Ibid.

<sup>767</sup> Linda Jakobson, Paul Holtom, Dean Knox, and Jingchao Peng, “Chinas Energy and Security Relations with Russia: Hopes.” *Frustrations and Uncertainties, SIPRI Policy Paper*, downloaded from (2011), 4.

<sup>768</sup> Ibid, 6.

<sup>769</sup> Paul J. Bolt and Sharyl N. Cross, Eds. “Energy and the Economic Foundations of the Sino-Russian Relationship,” *China, Russia, and Twenty-First Century Global Geopolitics*, 2018, 74.

seeking demand security while China is after security of energy supply, especially through ways and means that could not be threatened by the United States. Downs highlights the existing foundation for this relationship due to geography and other economic imperatives.

In terms of forging an energy partnership, China and Russia appear to be a perfect match. China, the world's second largest oil consumer and third largest oil importer and a small but growing consumer and importer of natural gas, is seeking "security of supply" and the diversification of its imports away from the Persian Gulf and the sea lines of communication. Russia, the world's second largest oil producer and exporter and the world's top producer and exporter of natural gas, is pursuing 'security of demand' and the diversification of its exports away from Europe.<sup>770</sup>

While Russia has vast energy resources and China is energy hungry, the development of multi-faceted energy ties has been slower than expected due to political challenges and pricing disputes.<sup>771</sup> In 2011, Jakobson et al. argued,

Energy cooperation between China and Russia is modest. Russia's share of China's total crude oil imports was 2 per cent in 2000, seven years after China became a net oil importer. Russia's share of Chinese oil imports grew steadily to 11 per cent in 2006, only to drop to 6 per cent in 2007... The lack of meaningful natural gas cooperation is even more evident. In 2010, China only purchased liquefied natural gas (LNG) from Russia, constituting just 4 per cent of China's total LNG imports.<sup>772</sup>

The first sign of change in fact started in 2006, when Putin agreed to build the China spur to the East Siberia–Pacific Ocean (ESPO) oil pipeline. However, construction did not start until 2009, when "oil for loans" agreement was reached between China Development Bank (CDB) and Rosneft. China provided \$25 billion in loans to Transneft and Rosneft, in exchange for 15 million tonnes of oil annually for 20 years, starting in 2011. While there were many challenges, ESPO spur became operational in January 2011.<sup>773</sup> The following map indicates construction of different phases of the ESPO pipeline.

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<sup>770</sup> Erica S. Downs. "Sino-Russian energy relations: An uncertain courtship." *The future of China-Russia relations* (2010): 146.

<sup>771</sup> Bolt and Cross, Eds. "Energy and the Economic Foundations," 78.

<sup>772</sup> Jakobson, Holtom, Knox, and Peng, "Chinas Energy and Security," 74.

<sup>773</sup> *Ibid*, 29, 30.

Figure 25: East Siberia-Pacific Ocean (ESPO) Oil Pipeline<sup>774</sup>



Source: SIPRI, *China's Energy and Security Relations with Russia: Hopes, Frustrations and Uncertainties*, 2011. <https://www.sipri.org/publications/2011/sipri-policy-papers/chinas-energy-and-security-relations-russia-hopes-frustrations-and-uncertainties>.

In 2013, the ESPO pipeline was further extended to the Pacific coast and “provided real benefits to Russia and China, and to the Asian oil market as a whole.”<sup>775</sup> ESPO has become a success that paved the way for a more economically challenging gas cooperation.

Russia remains the world’s largest gas exporter as “it opens new routes to Asian markets, but an increasingly integrated European energy market gives buyers more gas-supply options.”<sup>776</sup> Russia-China discussions over natural gas cooperation revived in the mid-1990s. Increase in China’s gas demand helped to overcome the distrust during negotiations in the second half of the 2000s. “In 2006, CNPC and Gazprom agreed to construct a western line from

<sup>774</sup> Jakobson, Holtom, Knox, and Peng, “Chinas Energy and Security,” 29, 30.

<sup>775</sup> Edward Chow, “Sino-Russian Energy Relations: A Match Made in Heaven?” Carnegie Moscow Center, accessed October 20, 2021, <https://carnegiemoscow.org/commentary/83757>.

<sup>776</sup> The International Energy Agency, *World Energy Outlook*, 2018, 27.



Taishet in Russia's Altai Republic to China's Central Asia pipeline in Xinjiang province, along with an eastern line from Sakhalin Island to the north-east of China."<sup>777</sup> However, this project postponed and did not materialize.

In 2014, Russia's illegal annexation of Crimea and intervention in eastern Ukraine, marks a watershed moment for Russia-China natural gas relations. "Gazprom signed a \$400 billion contract with China National Petroleum Corp. (CNPC) to supply 38 bcm of natural gas annually for 30 years. The project is the biggest contract in Gazprom's history."<sup>778</sup> According to Gazprom, "The Power of Siberia" natural gas pipeline (eastern route) supplies gas from the Chayandinskoye field – the basis for the Yakutia gas production center – to domestic consumers in Russia's Far East and in China. In late 2022, Power of Siberia will start to receive gas from one more field – Kovyktinskoye, which serves as the basis for the Irkutsk gas production center.<sup>779</sup> The 'Power of Siberia' pipeline is about 3000 kilometers, with a capacity of 38 bcm began operations in December 2019. It is the first natural gas pipeline to bring Russian gas into China. "The pipeline's initial capacity, 5 billion cubic meters (bcm), would meet 1.3% of China's 2018 natural gas consumption. As the pipeline reaches its full capacity of 38 bcm by 2025, natural gas likely will be able to displace coal in China's northwest region in the long term."<sup>780</sup> The following map shows pipeline network and other natural gas infrastructure.

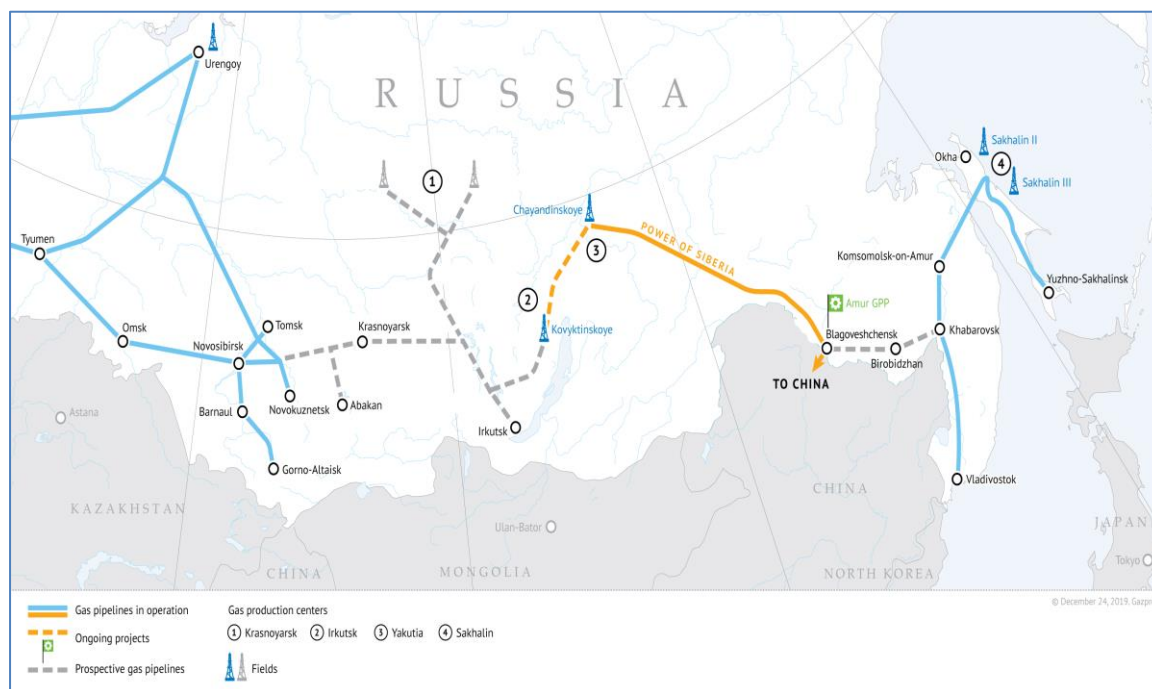
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<sup>777</sup> Jakobson, Holtom, Knox, and Peng, "Chinas Energy and Security," 33.

<sup>778</sup> Michael Ratner and Heather L. Greenley. "Power of Siberia: A Natural Gas Pipeline Brings Russia and China Closer," CRS, 21 April 2021, 1. <https://crsreports.congress.gov/product/pdf/IF/IF11514>

<sup>779</sup> "Power of Siberia," *Gazprom*.

<sup>780</sup> Ratner and Greenley. "Power of Siberia," 1.

Figure 26: Power of Siberia Pipeline Connecting Russia to China<sup>781</sup>

Source: Gazprom, the image is taken from the Gazprom webpage, also cited as in Jirusek-Vicek, 2015

The Power of Siberia Pipeline helped China to further diversify its natural gas supply. China has already connected to Central Asian natural gas resources and 60% of its supplies comes via pipelines while 40% arrives as LNG. According to a CRS report, “70% came from Turkmenistan. China also received gas by pipeline from Kazakhstan, Uzbekistan, and Burma. China has multiple LNG import terminals along its coast to access different suppliers.”<sup>782</sup> This project intensified Russia-China relations at a time when Russia was in desperate need for a reliable long-term market. It also allows China another option to meet its increasing demand, especially when environmental pressures have increased both from domestic and external forces.

<sup>781</sup> “Power of Siberia,” *Gazprom*.

<sup>782</sup> Ratner and Greenley. “Power of Siberia,” 1.

The Power of Siberia project allows Russia to diversify and to increase its share of the natural gas market in Asia. Opening up gas exports to China will mitigate geopolitical risks in the West, especially in worsening relations with transit countries. While it was built to serve Asian markets, “The Power of Siberia should be viewed alongside other major Russian gas pipeline projects, including Nord Stream 2 and TurkStream.”<sup>783</sup> Similar to the projects on the Western front, this project allows Russia to connect directly with the customer, reducing transit country risks. Additionally, it allows Russia to use natural gas reserves in the East that are separate from the Western Siberia fields that supply Europe. This large pipeline project has increased Russia’s self-confidence and provided hard currency when economic pressures were mounting due to Western sanctions and the COVID-19 pandemic.

Russia-China energy relations should be considered along with other mutual areas of interest. Russia allowed China to take part in the Novatek LNG terminal and invest in upstream projects. Additionally, China made investments to access the Arctic and use the Northern Sea Route that is one of Russia’s “sacred” areas. These projects might set a foundation for Russia and China to further economic, energy, and geopolitical cooperation to new levels that might lead to a military alliance on their terms and understanding.

#### 4.8. Conclusions

Soviet Union was one of the main producers and suppliers of the energy in the world. It was the only self-sufficient major industrialized country in the 1970s. Oil, natural gas and other natural resources led a rapid growth, supported the development of the industry and modernization, provided fuel for military activities and increased living standards of the Soviet people. Energy resources were also instrumental for achieving foreign policy objectives, gaining hard currency, establishing relations with the Western countries and increasing their dependency through oil and natural gas supply. Thus, Soviet leaders paid close attention and

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<sup>783</sup> Ratner and Greenley. “Power of Siberia,” 1.

involved in decision-making related with the energy sector and used oil and natural gas as a central element for economic and geopolitical instruments of power.

While reserves were abundant, Soviet oil and natural gas production had its limits. In some instances, Soviet leaders had to make hard choices for oil and natural gas exports between Western countries, its socialist satellites that increasingly became a burden on Soviet economy due to debt and subsidies. Additionally, Soviets and its satellites had diverging priorities. On the one hand, supplying Western countries as the main source of hard currency required for sustaining Soviet economy and transfer of Western technology that were essential for modernization. On the other hand, maintaining political influence over satellites, unity of the Soviet Union and social stability by providing subsidized oil and natural gas and debt forgiveness. Soviet leaders, according to Perovic, gave precedence to Western exports and CEMA countries over domestic consumers. Until mid-1980s, Soviets kept supporting its satellites. This was a policy choice that also indicates geopolitical nature of energy relations between Soviets and its satellites where unity of the Warsaw Pact took priority.

Energy relations between Soviets and the West had a mixed record both being a cause of tension, confrontation and a political softener, paving the way for 'Ostpolitik' and 'détente.' Soviets discovered large oil and natural gas reserves but did not have the technology to transit oil and gas that required large diameter steel pipes and pumping stations. The European side put aside initial suspicions due to increasing demand for energy and Soviet side was desperate for hard currency, large diameter steel pipes, western equipment and technology. The pipe for gas deal was a necessity for both sides and forced parties placing economic considerations ahead of political concerns. That should not be perceived that Soviets did not consider the 'energy as a weapon.' Their approach was pragmatic but driven by realpolitik. They focused on delivery of oil and then natural gas to establish relations with the West, while increasing influence over its satellites by creating high level of dependency. Even if oil and natural gas

used as part of international trade and business, as highlighted by Hogselius, energy was not “purely an economic phenomenon.”<sup>784</sup>

Soviet Union used energy as a weapon for political leverages such as integrating Eastern European socialist states into a single economic and energy space by building an extensive pipeline system.<sup>785</sup> Socialist satellites were integrated into energy system via major pipeline networks: Druzhba (Friendship) linked oil fields in Volga-Ural and Western Siberia and Bratstvo (Brotherhood) and Soiuz (Union) transit natural gas. These pipeline networks were essential for creating interdependence between Soviet Union and its satellites in Eastern and Central Europe. Through these pipeline network, Soviets made a long-term commitment to support its satellites, at the same time creating an asymmetric interdependence with Eastern European countries of today. While Warsaw Pact is disbanded and Soviet Union is collapsed, these Soviet era pipeline networks are still important today as they establish nerves and veins of energy infrastructure and system in Europe.

Soviets were also successful weaponization of energy, especially natural gas, creating a wedge amongst the members of the NATO Alliance. Kremlin gave priority over establishing sphere of economic and geopolitical influence from the very beginning of the energy relationship. Remnants of Soviet era practices are still dominating Russia-European affairs such as long-term contracts, state-to-state relations versus market-oriented trade, subsidies, asset ownership. Most importantly, Soviets were successful creating an asymmetric interdependence that exploited geopolitical purposes at any time of their choice.

Any energy crisis would easily lead to price increases and energy shortages. Soviet Union benefited enormously from the 1973 AOPEC oil embargo. This event not only helped Soviets to create the perception of a legitimate energy provider but also a reliable one compared

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<sup>784</sup> Hogselius, ‘Red Gas,’ 2.

<sup>785</sup> Jeronim Perovic, Eds. ‘Cold War Energy a Transnational History of Soviet Oil and Gas,’ Perovic Chapter, ‘The Soviet Union’s Rise as an International Energy Power: A Short History,’ 2017, 1.

to the Middle East countries. This event allowed Soviets to increase energy exports to Europe and dependency on its resources. Especially, CMEA countries became highly dependent due to price subsidies and extensive pipeline infrastructure that still affects European-Russia energy relations today. However, increasing dependency of the CMEA countries became a burden on Soviet economy that created a dilemma whether to continue to deliver subsidized oil and natural gas. West Germany had a unique position and the most debated relationship with the Soviet Union whether natural gas imports were driven by economics and efficiency or geopolitics and security. It is not either or but both. They were the foundation of Soviet-West German energy relationship that still remain valid for Russia Germany energy relation in the 21<sup>st</sup> century.

The following areas might allow to further in-depth analysis of Soviet era East-West energy relations. First, historical data is lacking on the Soviet understanding of natural gas relations, and the second, what ‘weaponization of energy’ or ‘energy weapon’ means for countries part of energy system. For example, according to Hogselius, until 1991, there is no evidence that could suggest Soviets ever considered energy supply cuts for political blackmail. However, there were other practices such as providing gas to some countries while not to others.<sup>786</sup> Additionally, the concept of energy weapon should be further analyzed with empirical data that includes among others such as price subsidies and debt forgiveness. These analyses would provide insights on better understanding of Russia’s behavior today and the future of European-Russian natural gas relations.

1990s mark a period of plundering of the state’s assets of the Russian energy sector described as the free-for-all grab. Russia inherited large portion of the energy resources when the Soviet Union collapsed. Central Asian Republics, Kazakhstan, Turkmenistan and Azerbaijan had control of oil and gas reserves in their own territory. Russian oil industry was significantly affected, however, natural gas remained untouched as ‘Soviet Ministry for the Gas

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<sup>786</sup> Hogselius, ‘Red Gas,’ 7.

Industry' turned into a state-owned energy giant, Gazprom. While Russia controlled natural gas reserves and production, the transmission through integrated pipeline system was controlled the newly independent states, Ukraine and Belarus owned largest portion of the network that was the key for exports to Europe.

From the collapse of the Soviets, Russia recognizes the importance of natural resources for its economy and survival. Therefore, Russian energy security and foreign policy are closely intertwined and decisions are taken at the highest levels in Kremlin. Energy strategy not only focuses on exports and external dynamics but also prioritize secure domestic supply, energy saving, greater investment capability, environmental protection and financial stability. The Russian energy strategy evolved from 1990s to 2003 and 2009. The latest energy strategy of 2020 focuses on the long-term energy dynamics out to 2035. The strategy takes into account and adapts to the geopolitical and economic realities such as 2008 global financial crisis, the consequences of illegal annexation of Crimea such as US and European sanctions, and the latest restrictions imposed due to COVID 19 pandemic. However, some of the measures highlighted in the Energy Strategy are not likely to be implemented such as executing energy market reform to drive competition and innovation; reducing state subsidies for domestic consumers that allows exploration, investments for upstream and pipeline/LNG terminal constructions.

While late 1980s and 1990s were not favorable for energy sales due to low oil and natural gas prices, 2000 marks beginning of a significant change in revenues as oil prices increased fourfold between 2000 and 2008. Russia's GDP grew 65% during the same period. These windfalls of money encouraged Putin to seek his principal foreign policy objective to restore Russia as a great power. Kremlin's approach former Soviet republics and satellites in the Eastern and Central Europe have become increasingly assertive as economic conditions in Russia improved. Putin's foreign policy actions driven by increased nationalistic sentiments such as war in Georgia, illegal annexation of Crimea, and involvement in Syria have received

wider public support. Energy resources were used to supplement Russia's use of power politics and attempts to challenge rules-based international order.

Energy resources have also used to project non-military power especially over the Central and Eastern European countries to exploit their high level of dependency. Russia used price manipulation to reward its allies such as Armenia, Belarus, Abkhazia and North Ossetia but punish Georgia, Baltic States and Ukraine when it turned its alignment towards the West. Punishments were in the forms of price increases, supply interruptions, such as 2006 and 2009 gas crises, and most importantly developing alternative pipeline systems to prevent them to get transit revenues. These actions were controlled and directed at the top level from the Kremlin. While Western Europe was not targeted for any direct natural gas cutoffs, oil sector in the West had experienced cut of oil deliveries when Lukoil had an ownership and price dispute with a German refinery. These actions, whether directed from the top level from Kremlin or over a price dispute with a Russian provider, indicate that the control of gas and oil delivery especially pipeline networks provide Russia to power to use energy to leverage political and economic outcomes.

Energy trade sets the foundation of economic relationship with Europe and increasing bonds with China.<sup>787</sup> Oil and natural gas revenues played the most important role to contribute to the federal budget and economy recovery in the early 2000s. However, increasing reliance on energy revenues sources of a major concern. "Former finance minister and deputy prime minister Alexei Kudrin and others have argued that Russia is overly dependent on oil and natural gas, hindering the development of a more balanced and dynamic economy."<sup>788</sup> As highlighted by Yergin, these debate and concerns are not new. Russian economy continues to depend on the income from the energy and raw material sales, albeit export dependent model and a lack of economic diversification was identified as a national security concern in the

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<sup>787</sup> Yergin, *The Map*, 79.

<sup>788</sup> *Ibid.*



Energy Strategy 2020. Economic development and defence expenditures are directly correlated with the level of energy prices securitizing trade relations. Therefore, energy sales are not only important for economic development but also Russia's national security and military strength.

Russian state is deeply involved in the energy sector as decisions are taken by the Kremlin involving President Putin and leadership to ensure both internal and external aspects of 'energy security' issues are addressed. Energy security Russian perspective means demand security and uninterrupted access to the international markets, especially lucrative Western European consumers. Therefore, Russian attempts to bypass transit countries such as Ukraine, Belarus, Poland and other central and Eastern European states, should be perceived not only reducing transit fees but also providing uninterrupted flow of supplies to certain markets. Russian point of view bypassing Ukraine makes sense since Russia also sees Russia-Ukraine geopolitical relations will be challenging. On the other hand, Russia will have little constraints to cut energy supply to these countries without any concerns to upset Western European markets. Additionally, Russia will gain upper-hand to use hard and soft power to increase its influence over the so called its near abroad.

Russia, similar to the Soviet Union, has a long-term strategy regarding access to markets and diversification of customer markets. In this context, 'Power of Siberia' pipeline is extremely important that connects Russia to Chinese and other Asian markets. Russian energy sales to China will give Gazprom leverage with Europe on energy prices, and a turn to the Eastern markets, China and other Asia Pacific countries, would provide relief from the Western sanctions. Oil and natural gas pipeline networks linking Russia and China would have strategic political consequences.

Russia has been investing LNG production and exports especially by using the Arctic resources. These are all strategic long-term moves that enables Russia not only maintain and increase its market share but also sustain its economy and continue to invest in defence

modernization. Russian investment on natural gas exploration, production and exports will remain important as natural gas is perceived as a 'Bridge Fuel' and environmentally friendly compared to the coal. While Russia continues to expand its market share, it also focuses to eliminate competition from the Central Asian and Caucasian producers. While Commission prevented Bulgaria to partner with Russia in the development of the South Stream pipeline, Russia immediately approached Turkey to circumvent Central Asian/Caucasus attempts to access to the European markets. The details of these of Russia Central Asia/Caucasus relations will be reviewed in Chapter 6.

Natural gas pipelines are the most important elements of Russia's long-term strategy that allows weaponization of energy as a tool to induce political outcomes. These pipeline networks allow Russia to use natural gas an economic tool since pipeline gas is much cheaper and competitive to the LNG. Gazprom expansion has not been successful in every country to control transit and downstream infrastructure. These attempts have fueled energy security concerns in the West and has proven initial concerns raised by Reagan in 1980s were legitimate. Russia's use of energy as a weapon has not produced desired outcomes in Ukraine. However, it is difficult to determine those were successful since neither side will accept the fact that Russian energy tool box from price subsidies, manipulation, creating alternative routes to supply cuts were effective. Energy, natural gas pipelines, are not only a vital aspect of economic and geopolitical consideration, it is one of the core elements of national power.

## CHAPTER 5

## CASE STUDY: NORD STREAM (NS) 2 PIPELINE CONTROVERSY

## 5.1. Introduction

The Soviet Union's natural gas supply to Europe, including the Russian Era, has been increasingly debated, and the Nord Stream 2 (NS 2) pipeline has caused a geopolitical clash not only in Europe within the EU, but also between the US and Germany, challenging NATO's solidarity and Transatlantic relations.<sup>789</sup> A review of the European-Russian energy relations was provided in Chapters 3 and 4 that shed light on how natural gas supply to Western Europe came into fruition. Construction of natural gas pipelines take years to build and required long-term relationship to ensure cost effectiveness. They create mutual dependence by not only connecting producer countries to consumers but also establishing a strategic relationship. However, Nord Stream 1 and 2 pipelines not only involve Russia and Germany but also European Union and other countries around Baltic Sea. Thus, a multi-stakeholder analysis from markets/local governance structures to state actors and supranational and international organizations such as the EU and NATO would allow in-depth understanding of the interdependence between Germany and Russia while providing potential consequences when the controversial NS 2 pipeline is materialized.

In this case study, I will review why building direct natural gas pipelines (NS 1 and NS 2) from Russia to Germany, especially NS 2, has become so controversial amongst exporting, transit, and consumer countries and how other powers such as the U.S. and the EU got involved? Why opposition against NS 2 has been so incredibly strong compared to the opposition against NS 1? Why did the EU change its position for NS 2 albeit supported NS 1? If completed, what would be the impact of the NS 2 on the future of transatlantic relations as well as on the cohesion of the EU and its relations with Ukraine?

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<sup>789</sup> Yergin, "The New Map," 87.

## 5.2. Facts and Figures

### 5.2.1. Nord Stream (NS) 1

The NS 1 Pipeline project was initiated in 2006, bypassing the transit countries in the Central and Eastern Europe. It was completed by 2012, connecting Vyborg, Russia to Lubmin near Greifswald, Germany, bypassing former Soviet satellites and republics such as Ukraine, Belarus, Poland, Slovakia and the Czech Republic.<sup>790</sup> With the construction of this pipeline, Russia established a direct link to Germany and increased its capability to cut gas to Ukraine and Eastern/Central Europe without interrupting German and other Western European supplies. During the project development phase, the debate was harsh, especially between Germany and Poland as the latter perceived this transnational gas pipeline as a direct threat to its national security. The concerns were reflected in official statements, such as when the Polish Defence Minister likened the German-Russian pipeline agreements to the Ribbentrop-Molotov (Hitler-Stalin) Pact.<sup>791</sup>

While other Central and Eastern European countries also highlighted concerns and argued that Nord Stream 1 is a politically motivated project and threatening European energy security, the project went ahead albeit these security related objections as well as environmental and economic concerns. While Polish authorities were making implicit references to counter the Nord Stream project, a range of negative aspects were widely covered such as “A substantial degradation of Poland’s energy security; a high risk of an ecological catastrophe in the entire Baltic Sea; a limitation of maritime traffic for Polish civilian and military vessels during the construction and operation of the pipeline, including chiefly the limitation of the

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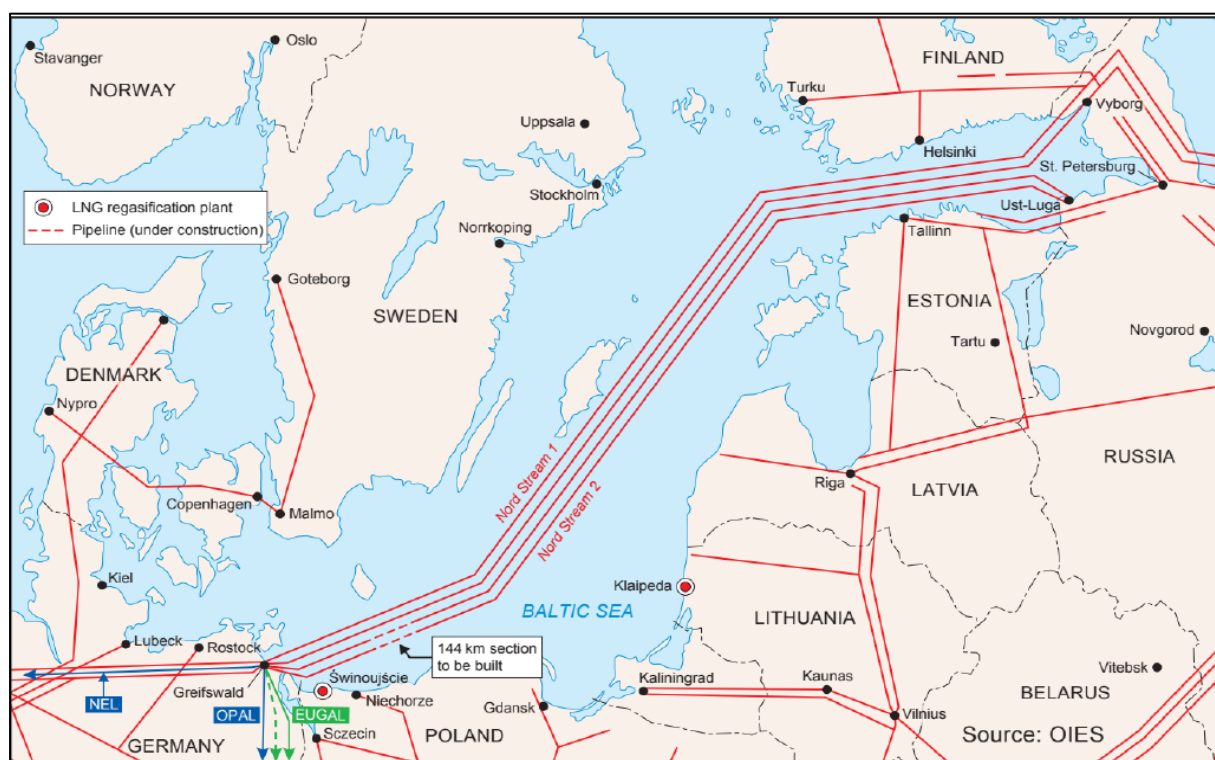
<sup>790</sup> Nord Stream AG, “Nord Stream - The New Gas Supply Route for Europe,” Nord Stream AG, accessed June 13, 2021, <https://www.nord-stream.com/the-project/pipeline/>.

<sup>791</sup> Szulecki and Kacper Eds. *Energy Security in Europe*, 62.

fishing area.”<sup>792</sup> They also stated their position as such that “Any participation of Poland in its construction in any form is completely unacceptable.”<sup>793</sup>

The NS 1 Pipeline passes through the Exclusive Economic Zones (EEZ) and/or territorial waters of Russia, Finland, Sweden, Denmark and Germany. Along the way, the Baltic Sea littoral states are considered as “Affected Parties” due to transboundary environmental considerations.

Figure 27: Nord Stream 1 and Nord Stream 2 Pipelines<sup>794</sup>



Source: Pirani, Sharples, Yamifava, and Yermakov, OIES.

<https://www.oxfordenergy.org/publications/implications-of-the-russia-ukraine-gas-transit-deal-for-alternative-pipeline-routes-and-the-ukrainian-and-european-markets/>

<sup>792</sup> Szulecki and Kacper Eds. *Energy Security in Europe*, 65, 67.

<sup>793</sup> Ibid, 68.

<sup>794</sup> Pirani, Sharples, Yamifava, and Yermakov, OIES, “Implications,” 2.

The 1224 kilometers twin pipeline system carries 55 bcm Siberian natural gas to Europe, and this project was supported by an international consortium of five major Russian and Western European companies: Gazprom (Russia) that owns the largest share (51%) followed by Wintershall (Germany) and PEGI/E. ON (Germany) (15.5% each), Gasunie (The Netherlands) and Engie (France) (9 % each).<sup>795</sup>

### 5.2.2 Nord Stream (NS) 2

The NS 2 pipeline follows almost the same route NS 1 that meets the Baltic Sea at Ust-Luga near St. Petersburg and reaches landfall near Greifswald extending 1230 kilometers. Gazprom started the NS 2 pipeline with the following shareholders: Gazprom (Russia) (50 percent), BASF Wintershall (Germany), Uniper (Germany), OMV (Austria), Shell (Netherlands), and ENGIE (France) (10 percent each). However, the initial agreement signed in 2015 was terminated in 2016 due to Polish anti-monopoly authority's refusal to approve the agreement. Therefore, Gazprom owns one hundred percent of the NS 2 pipeline.

While the project started in 2012, and gained momentum in 2015, construction permits were issued in 2018, and "The majority of pipe-laying took place between September 2018 and October 2019."<sup>796</sup> However, due to the US sanctions, pipe-laying activities were stopped 121 kilometers short of completion. On May 19, 2021, the Biden administration announced that it will waive the application of sanctions on Nord Stream 2 AG while maintaining US opposition to the construction of the NS 2 pipeline that undermines European energy security.<sup>797</sup> With these developments in mind, NS 2 is likely to be completed by the end of 2021 or early 2022. Albeit its construction is delayed, NS 2 is comprised of twin pipelines that will have the capacity to carry 55 bcm when it is completed.

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<sup>795</sup> Nord Stream AG. "Nord Stream - Who We Are." Nord Stream AG. Accessed June 14, 2021. <https://www.nord-stream.com/about-us/>.

<sup>796</sup> Pirani, Sharples, Yamifava, and Yermakov, "Implications," 21.

<sup>797</sup> "Nord Stream 2 and European Energy Security" (U.S. Department of State, May 20, 2021).

To avoid any public reaction and tame objections, NS 2 pipeline proponents deliver an extensive information campaign via traditional and social media to influence public opinion in Germany and the EU. They focus on the main themes, justifying construction of the pipeline and arguing that this project aims to “enhance European security of supply, support climate goals and strengthen the internal energy market...To meet demand, the EU needs reliable, affordable and sustainable new gas supplies.”<sup>798</sup>

The following table depicts the information campaign provided by the NS 2 AG company. All these points mentioned below are debatable and depend extensively on the eye of the beholder. The views expressed by Nord Stream to AG are supporting construction of the pipeline and are generally aligned with German and Russian positions as well as those companies involved in the development of the pipeline such as Gazprom. Therefore, the excerpts taken word by word from the Nord Stream 2 webpage aims to justify construction of the pipeline that circumvents central and eastern European countries, especially reduces Gazprom’s dependence on Ukraine.

Table 20: Nord Stream 2 AG Company Information Campaign<sup>799</sup>

| Serial | Myths   | Facts  |
|--------|---|--|
| 1      | Germany undermines EU energy solidarity by supporting NS 2. | <i>Gas imported through NS 2 will be delivered to customers throughout Europe, not just to Germany.</i>  |
| 2      | NS 2 increases Germany’s dependence on Russia.              | <i>The German gas market is already well diversified and infrastructure continues to be developed.</i>   |
| 3      | NS 2 increases Europe’s dependence on Russia.               | <i>Russia and Europe are interdependent, and competition with LNG will set the share of Russian gas in the EU market.</i>  |
| 4      | NS 2 threatens Europe’s energy security.                    | <i>Europe can rely on a functioning internal energy market in which natural gas competes with other energy sources, and gas-exporting countries compete with each other.</i> |

<sup>798</sup> “Nord Stream 2 – Rationale.”

<sup>799</sup> “Nord Stream 2 - Facts & Myths.” These points represent the arguments and official lines used by proponents of the Nord Stream 2 pipeline. These are exact words used by the source to defend their position.

Table 20 (Continued)

| Serial | Myths   | Facts   |
|--------|---|---|
| 5      | NS 2 does not comply with the EU's Energy Union.  | <i>NS 2 is an additional supply route that contributes to greater diversification and security of supply for consumers, in line with the goals of the EU's energy policy.</i> |
| 6      | NS 2 does not comply with EU law.   | <i>NS 2 is being built in line with national, EU and international law.</i>   |
| 7      | NS 2 is a political project.  | <i>NS 2 is a privately-financed project that has acquired a political dimension, in that attempts are being made to influence or stop it for political reasons.</i>           |
| 8      | NS 2 is being used by Russia as a political weapon.                                       | <i>NS 2 is a commercial pipeline project that is being attacked for political purposes.</i>   |
| 9      | The EU does not need another pipeline like NS 2.  | <i>Gas production is declining in the EU, and new imports are needed to compensate for this.</i>  |
| 10     | Gas production is declining in the EU, and new imports are needed to compensate for this. | <i>The EU gas market is already well diversified, and NS 2 will help further increase competition and diversification.</i>  |
| 11     | NS 2 compromises the EU's climate goals.  | <i>NS 2 will provide competitive supplies of natural gas, helping replace coal and providing back-up for renewables.</i>  |
| 12     | NS 2 will cause a \$2 billion loss to Ukraine.  | <i>NS 2 alone will not be able to meet all demand for gas, let alone replace existing transit capacity in Ukraine, which will continue to play a role.</i>                    |

Source: Nord Stream 2 Webpage, Accessed June 14, 2021. <https://www.nord-stream2.com/company/rationale/>.

### 5.3 Russia's Natural Gas Export and Pipelines Networks

Russia is the second largest natural gas producer in the world following the US. In 2019, Russia produced 679 bcm natural gas, 17% of the global total, compared to the 921 bcm, 23% of the world's total production that was delivered by the US.<sup>800</sup> Gazprom is the main provider of the gas via pipelines to Europe. In 2019, almost 200 (198,7) bcm of Russian gas was delivered to Europe. Most of these exports (77%) went to Western European countries including Turkey.

<sup>800</sup> Fawthrop, "Profiling the Top."



Table 21: Russian Natural Gas Supplies (bcm) by Country 2019<sup>801</sup>

| Country              | 2019  |
|----------------------|-------|
| Germany              | 57.01 |
| Italy                | 22.10 |
| Turkey               | 15.51 |
| France               | 14.07 |
| Finland              | 2.46  |
| Austria              | 16.28 |
| Greece               | 2.41  |
| Netherlands          | 8.87  |
| Switzerland          | 0.27  |
| Denmark              | 1.67  |
| UK                   | 10.32 |
| Belgium              | 2.42  |
| Hungary              | 11.26 |
| Poland               | 9.73  |
| Slovakia             | 7.27  |
| Czechia              | 8.11  |
| Romania              | 0.99  |
| Bulgaria             | 2.39  |
| Serbia               | 2.13  |
| Slovenia             | 0.34  |
| Bosnia & Herzegovina | 0.24  |
| North Macedonia      | 0.30  |
| Croatia              | 2.82  |

Source: Gazprom webpage, 'Delivery Statistics,' Gazprom Natural Gas Supplies in 2019 to the Western European Market (including Turkey) and The Eastern and Central European natural gas market.

The largest importers of the gas were Germany, Italy, Austria, Turkey, and France. The rest of the supplies were provided to Central and Eastern European countries that accounted for 23% of the imports. Based on 2019 data, the following table clearly depicts the Natural Gas Supplies to respective European countries. Germany is by far the largest importer of natural

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<sup>801</sup> "Delivery Statistics," Gazprom Natural Gas Supplies in 2019 to the Western European Market (including Turkey) and The Eastern and Central European natural gas market. Data taken from the following webpage <http://www.gazpromexport.ru/en/statistics/>.

gas in Europe and this trend is likely to continue if not slightly increase over the next two decades.<sup>802</sup>

Pipeline networks are the main medium for transporting natural gas, and their importance has grown significantly over the last 60 years, aligning with the expansion of utilities, heating services, and gas turbines used in energy generation plants. During Soviet period, export pipelines, pump stations and other infrastructure were designed to support European customers. As a result, most of 2018 gas exports via pipelines were destined towards European markets. On the other hand, LNG exports were directed to Asia-Pacific markets in competition with the Middle East, Australia and the US. The following Table shows Russian natural gas exports in 2018 by destination.

Table 22: Russian Natural Gas Exports (bcm) by Destination<sup>803</sup>

| Transport means | Europe | CIS  | Asia-Pacific | Other |
|-----------------|--------|------|--------------|-------|
| Pipeline        | 193.8  | 29.2 | -            | -     |
| LNG             | 6.8    | -    | 17.2         | 0.9   |

Source: Vladimir Kutcherov, Maria Morgunova, Valery Bessel, Alexey Lopatin, *Russian natural gas exports: An analysis of challenges and opportunities*, <https://www.sciencedirect.com/science/article/pii/S2211467X2030064X>

Soviet then Russian natural gas exports have been continuously increased since the beginning of 1970s but have stabilized around 190-200 bcm since 2017. The following table depicts the Gazprom's natural gas exports' trend to countries outside the former Soviet Union since the beginning of the 1970s.

<sup>802</sup> "Delivery Statistics," Gazprom Natural Gas Supplies in 2019 to the Western European Market (including Turkey) and The Eastern and Central European natural gas market.

<sup>803</sup> Vladimir Kutcherov, Maria Murgonava, Vallery Bessel, Alexey Lopatin, 'Russian natural gas exports: An analysis of challenges and opportunities,' *Energy Strategy Reviews*, 2020, 3.

Table 23: Gazprom Natural Gas Export (bcm) via Pipelines<sup>804</sup>

| Year  | 1973 | 1975 | 1980 | 1985 | 1990 | 1995 | 2000 | 2005 | 2010 | 2015 | 2016 | 2017 | 2018 | 2019  |
|-------|------|------|------|------|------|------|------|------|------|------|------|------|------|-------|
| Total | 6.8  | 19.3 | 54.8 | 69.4 | 110  | 117  | 130  | 154  | 138  | 158  | 178  | 192  | 200  | 198.9 |

Source: Gazprom webpage, 'Delivery Statistics,' compiled by Author from the following webpage <http://www.gazpromexport.ru/en/statistics/>.

Natural gas has to be transported long distances either via pipelines or LNG tankers that require large amounts of upfront investment and cross-border coordination between producer, consumer and transit countries. Therefore, construction of pipelines has been subject to careful long-term planning involving not only availability of the natural gas reserves but also economic, technological, environmental, and geopolitical considerations between producers, transit countries and consumers. For example, in the 1960s and 1970s, the beginning of Soviet natural gas export to Western Europe had a political dimension, not only on the Soviet side but also on the German side. "The Soviet-German gas-for-pipes deal was embedded into the German Ostpolitik. Concrete cooperation in the economic sphere was perceived as a major element of détente and 'change through rapprochement.'"<sup>805</sup>

The following Table depicts existing and planned pipeline routes to export Russian natural gas to Europe since the first natural gas pipeline network was established during the Soviet Union period. Pipeline capacities are varied due to differences in source data. However, the pipelines could exceed the capacity of their nameplates, such as the case for the Nord Stream 1 which transported over 58.8 bcm in 2018 and finally 59.2 bcm in 2020.

<sup>804</sup> Gazprom, "Delivery Statistics."

<sup>805</sup> Bros, Mitrova, and Westphal, "German-Russian Gas Relations," 5.

Table 24: Russia's Europe-Bound Natural Gas Export Pipelines<sup>806</sup>

| Pipeline  | Route  | Year of Commission          | Designed Cap. (bcm)      | Operator                     |
|---|--|-----------------------------|--------------------------|------------------------------|
| Ukraine Corridor (Gas Transit System -GTS)                                    | "Brotherhood" pipeline system Northern Branch including Soyuz (Ukrainian GTS has 178.5 bcm capacity from which 146 bcm can be used to transport gas to Europe) | 1967                        | 146 (142) <sup>807</sup> | Gazprom                      |
| Yamal-Europe  | Torzhok-Minsk-Wlocawek-Mallnow, through Belarus and Poland   | 2000                        | 33                       | Gazprom, EuRoPol GAZ, Wingas |
| Nord Stream 1   | Vyborg, St. Petersburg, through the Baltic Sea, Greifswald   | 2011                        | 55                       | Gazprom                      |
| Blue Stream   | Dzhugba (Staropol krai), through the Black Sea, Durusu term. (Samsun)  | 2005                        | 16                       | Gazprom                      |
| TurkStream  | Anapa (Krasnodar krai), through the Black Sea, Kiyikoy   | 2020                        | 31.5                     | Gazprom, BOTAS               |
| Direct Pipeline to Finland  | St. Petersburg-Helsinki  | 1974                        | 5 (8)                    | Gazprom                      |
| Northern Lights   | Vuktyl'-Ukhta-Torzhok-Smolensk-Minsk-Uzhgorod (Lithuania and Poland only)  | 1969                        | 15                       | Gazprom                      |
| Total Export Capacity without Nord Stream 2                                   |  |                             | 301.5                    |                              |
| Nord Stream 2   | Vyborg, near St. Petersburg, through the Baltic Sea, Ust-Luga, Greifswald  | Completed – not operational | 55                       | Gazprom                      |
| Total Russian Europe-Bound potential Natural Gas Export Capacity via pipeline |  |                             | 356.5                    |                              |

Source: Heinrich, *Export Pipelines*

<sup>806</sup> Heinrich, *Export Pipelines*, 37, 45., Naumenko. "Russian Gas Transit," 6,7. Table used by permission of Dr Heinrich and information in parenthesis added from Vatansever.

<sup>807</sup> Vatansever, "Is Russia," 5, 6.

Figure 28: Major Russian European-bound Gas Pipelines<sup>808</sup>

<sup>808</sup> Assenova, "Europe and Nord Stream 2," 11. Please note that Map Credit to Samuel Bailey, please also note that South Stream project was cancelled and replaced with TurkStream project landfalls Kiyikoy, Turkey.

#### 5.4. Diverging Viewpoints on the Nord Stream 2 Pipeline

An initial analysis suggests that important state actors, Germany, Poland, Russia, Ukraine and the US, have diverging viewpoints based on their interests and perception of the NS 2 pipeline project. From the very beginning of the Soviet energy exports to Western Europe, to the construction of the NS 2 pipeline, there have always been major differences within understanding of the energy relationship within both Western and Eastern Europe. After five decades, the viewpoints and fundamental framework establishing the European-Russian natural gas trade have changed little albeit the roles of pipelines have become increasingly more complex with the dissolution of the Soviet Union and the end of the Cold War, the EU and NATO enlargement, and Russia's illegal annexation of Crimea. Additionally, the complexity and challenges are compounded by Russia's global ambitions to restore itself as a great power and to increase its influence in its "near abroad." Under Vladimir Putin's leadership, Gazprom reverted to its Soviet form and became an instrument of Russian foreign policy.<sup>809</sup>

It is difficult to define any stakeholders' position one hundred percent as either geopolitical or economic. These high-level projects are complex, and stakeholder positions reflect a combination of all relevant factors involving environmental, social, economic, technology and political issues. For example, neither the German position is completely economic, nor the Russian position is entirely geopolitical. They are a combination of the two albeit a varying degree of proportionality.<sup>810</sup> Each party involved in this project has a similar dilemma varying between long-term strategic, political and economic gains, geopolitical implications, and environmental risks. While the German position is weighted heavily on economic and environmental issues, the Russian position is based on Putin's long-term geopolitical objectives "to restore Russia as a great power globally, build new alliances, and

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<sup>809</sup> Gustafson, *The Bridge*, 275.

<sup>810</sup> Bros, Mitrova, and Westphal, "German-Russian Gas Relations," 7.

push back against the United States. And whether Russia is partially responsible or not, Putin can point to outcomes that fit his objectives - NATO divided, the European Union in disarray, and America's politics fragmented, nasty, and polarized.”<sup>811</sup>

While proponents of the NS pipelines argue that NS 1 and 2 are mutually beneficial economic projects supporting European energy security, opponents voice concerns over increasing natural gas dependency to Russia that will allow the Kremlin to use energy power to leverage political outcomes, undermining European solidarity and efforts on a more sustainable energy system; threatening European energy security; and, challenging the norm-based liberal political and economic order as well as the EU integration process.<sup>812</sup> Whether NS 2 will be allowed to operate or not, this project has already divided Europe causing friction between Eastern and Western European countries, in particular between Poland and Germany. Additionally, US opposition and the introduction of sanctions to stop construction of the pipeline in its final stages caused negative sentiments in Germany and at the European Union albeit the Commission was not in favor of the construction of the pipeline. Positions of the key actors, discussed in the aforementioned domestic and international debates, will be reviewed and identified below.

## 5.5. Key Actors for Construction of the Nord Stream 2

### 5.5.1. Germany

Before reviewing Nord Stream 2, it is important to understand the key issues that were raised in the development of the NS 1 pipeline. The following concerns were debated during the NS1 discussions in the German parliament: “the environmental risks involved in the pipeline's construction, the harm to relations with Poland and the Baltic States, which strongly oppose the pipeline, and the increasing dependence on Russian gas deliveries.”<sup>813</sup> However,

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<sup>811</sup> Yergin, "The New Map," 80.

<sup>812</sup> Bros, Mitrova, and Westphal, "German-Russian Gas Relations," 5.

<sup>813</sup> Szulecki and Kacper Eds. *Energy Security in Europe*, 73.

members of the coalition government and parts of the opposition were in fact supporting the project. Heinrich highlights that there was little debate in the German Parliament that was centered around the environmental concerns and the political, economic, and technical risks involved.<sup>814</sup> These discussions were focused on the risks instead of security concerns and resulted in large support for the NS 1. The following justification was cited as an example:

The dependency [on gas supplies from Russia,] will probably rise to more than 40 percent. The import dependency for natural gas in the European Union is currently 57 per cent (from countries outside the EU) and it is expected to increase to more than 70 per cent. However, the dependency from Russia is not problematic for Europe or Germany, respectively; it is a problem that 80 per cent of the gas is transported through pipelines crossing Ukraine. Thus, we will be constantly involved in the unresolved conflicts between Russia and Ukraine and so at risk of being held hostage every winter. (Deputy Manfred Grund, CDU/CSU)<sup>815</sup>

In the early 2000s, the natural gas relationship between Germany and Russia was defined as part of a “new Ostpolitik,” succeeding the historical example based on “the idea of ‘rapprochement through interdependence.’”<sup>816</sup> This comprehensive optimistic approach was one of the reasons for both large support from the government and opposition as well as from the public. While Russia-Ukraine gas disputes in 2006 and 2009 strained this relationship, the “EU needs gas” and “Nord Stream is an important contribution to security of supply”<sup>817</sup> argument prevailed both in Germany and the EU. Proponents of the NS 1 also argued that this pipeline is an attempt to diversify European energy supply routes. In 2014, illegal annexation of Crimea resulted in Germany leading EU sanctions against Russia. However, Bros et al highlights that “The gas sector has not been a target of EU sanctions so far, but it is indirectly affected by the individual and financial sanctions.”<sup>818</sup>

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<sup>814</sup> Szulecki, Eds. ‘Energy Security in Europe, Heinrich, Chapter ‘Securitization in the Gas Sector, 2018, 73.

<sup>815</sup> Szulecki, Eds. ‘Energy Security in Europe, Heinrich, Chapter ‘Securitization in the Gas Sector, 2018, 74. Refence to Deutscher Bundestag (2009) *Stenografischer Bericht*, 230. *Sitzung*, Plpr-Nr. 16/230, 2 July, pp. 25699–25700.

<sup>816</sup> Bros, Mitrova, and Westphal, “German-Russian Gas Relations,” 5.

<sup>817</sup> Whist. “Nord Stream: Not Just a Pipeline,” 9.

<sup>818</sup> Bros, Mitrova, and Westphal, “German-Russian Gas Relations,” 35.



In development of the NS 2 pipeline, Western Europeans led by Germany continued to argue that this “is a commercial project, claiming Gazprom and its Western corporate allies support the project because it is in their legitimate commercial interest.”<sup>819</sup> Germany’s gas industry followed a similar line suggesting that “additional natural gas import infrastructure such as the NS 2 pipeline is essential for keeping competition in Europe up and prices low.”<sup>820</sup> While consistently presenting a more cautious approach, German chancellor Angela Merkel supported the NS 2 project and stated, “It is first and foremost an economic project.”<sup>821</sup> On another occasion, she said, “It was a commercial project, and up to the companies<sup>822</sup> involved - Gazprom and its European partners.”<sup>823</sup> In December 2015, at the conclusion of the EU Summit, she stressed that “In any solution Ukraine must continue to play a role as a transit country.”<sup>824</sup> It should be noted that Chancellor Merkel has always emphasized the importance of safeguarding Ukrainian interests. This might have forced Russia to make a compromise to extend the gas transit deal between 2020-2024.

In 2020, Germany’s domestic gas production declined around 16 percent.<sup>825</sup> As one of the largest importers of the natural gas in the world, the NS 1 and 2 pipeline networks provide a reliable energy source that supports the overall German energy market transformation by increasing competition. German industry also argues that “flexible gas-fired electricity generation is the perfect partner for fluctuating renewables... Gas could indeed help to reduce emissions in heating, power production, industry, and transport.”<sup>826</sup>

NS 1 and NS 2 also allows Germany to become an energy transit hub and increases its economic and political power in Central and Eastern Europe. The NS 2 pipeline is important

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<sup>819</sup> Riley, “Nord Stream 2,” 8.

<sup>820</sup> Wettengel, “Nord Stream 2 Saves European Industry “

<sup>821</sup> Gustafson, *The Bridge*, 380.

<sup>822</sup> Ibid, 378. “Nord Stream 2 is backed by five major European energy companies: Shell, Engie, OMV, Uniper and Wintershall.”

<sup>823</sup> Yergin, “The New Map,” 110.

<sup>824</sup> Gustafson, *The Bridge*, 380.

<sup>825</sup> Nijhuis, “Domestic Natural Gas Production.” Around 94 percent of German gas consumption is met by imports.

<sup>826</sup> Wettengel, “Industry Bets on Gas.”

for Germany to ensure its security of supply and reduce the potential for interruptions due to any crisis between Russia and its “near abroad.” It also reduces cost for gas due to increased competition and lowering tariffs. Germany’s view could be summarized as Yergin puts it that NS 2 is perceived “as part of a larger complementary relationship involving markets, trade, and investment, a relationship that was made inevitable by geography. Moreover, while they may have depended on the Russians for gas, the Russians depended on them for markets and for revenues.”<sup>827</sup> Therefore, the NS 2 pipeline is not only an economic, social, or environmental project, but also, a political one. In the spring of 2018, Chancellor Merkel stated, “The pipeline was not ‘just an economic project,’ ... ‘Of course, political factors must also be taken into account.’”<sup>828</sup> For that reason, this project is likely to be completed albeit it is delayed due to US sanctions. Germany follows a more pragmatic realist approach while focusing on potential incremental, yet slow, progress on the political side, emphasizing “the value of economic cooperation as one pillar of a dual strategy of containment and cooperation.”<sup>829</sup>

#### 5.5.2. Poland

In the analysis of Soviet gas natural gas development and exports to Western Europe, Stern suggested that “Any assessment of the Soviet Union as an energy supplier must ultimately depend on an individual perception of Soviet political and strategic objectives in Western Europe.”<sup>830</sup> This analysis, dated 1980, very well suits the current debate on the Nord Stream 1 and 2 pipelines. In Poland, the perception of NS 1 was very negative in both public and political circles, including the government. NS 1 was perceived “as politically motivated and a threat to Poland’s energy security. It has been argued that Russia would be able to

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<sup>827</sup> Yergin, “The New Map,” 97.

<sup>828</sup> Ibid, 113.

<sup>829</sup> Bros, Mitrova, and Westphal, “German-Russian Gas Relations,” 6.

<sup>830</sup> Stern, “Soviet Natural Gas” 139.

interrupt gas deliveries to Poland, without harming Germany and the other West European consumer countries, as soon as the pipeline construction is finished.”<sup>831</sup>

The concerns were not limited to the political domain, but also included potential environmental damage and loss of transit fees from the Russian gas flow through the Yamal-Europe pipeline (33 bcm/year). Since 2006, the transit flow through the Yamal-Europe pipeline has been stable, around 30 bcm/year. In recent years, Poland remained one of the largest buyers of Russian gas in Europe, about 10 bcm/year.<sup>832</sup> “Natural gas supply to Poland and transit via its territory are covered by Long-Term Contracts concluded under an Intergovernmental Agreement of 25 August 1993.”<sup>833</sup> While the Polish authorities are not satisfied with the transit fees for Russian gas to Germany, the construction of the NS 2 will strengthen Gazprom’s position to negotiate a new long-term gas transit contract for the transit fees between Russia and Poland. The Yamal-Europe transmission also depends on Russia’s relations with Ukraine and whether or not Gazprom requests additional transit capacity through the Brotherhood network.<sup>834</sup>

There were other concerns such as “the blockage of the harbor entrance in Świnoujście for larger vessels which in turn would hamper Poland’s diversification of energy supplies through the import of liquefied natural gas... the omission of the construction of the Yamal II pipeline [through Poland]”<sup>835</sup> Poland argued that building the Nord Stream pipeline would likely increase dependency to Russian natural gas and threaten the energy security of Lithuania, Latvia, Ukraine, Belarus, the Czech Republic, and Slovakia. Then, Polish authorities suggested counter measures either to diversify natural gas resources or building an onshore pipeline through Central and Eastern Europe.<sup>836</sup> Baltic countries led by Poland suggested other counter-

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<sup>831</sup> Szulecki and Kacper Eds. *Energy Security in Europe*, 65.

<sup>832</sup> Pirani, Sharples, Yamifava, and Yermakov, “Implications,” 11.

<sup>833</sup> Yermakov and Sobczak, “Russia-Poland Gas Relationship,” 7.

<sup>834</sup> Sabadus, “Gazprom Shuns Ukraine.”

<sup>835</sup> Szulecki and Kacper Eds. *Energy Security in Europe*, 65.

<sup>836</sup> *Ibid.*, 66, 67.

measures that are varied from “solidarity-based EU Energy policy to an ‘Energy NATO.’”<sup>837</sup> This has resulted in further securitization of the NS pipeline development.

Poland has been one of the most vocal advocates of raising energy security concerns and pushing for the establishment of the European Energy Union as mentioned in previous chapters. Poland has been opposing construction of the NS 2 pipeline while adamantly advocating reducing dependency on Russian gas by “construction of gas connections from Norway via Denmark (the Baltic Pipe) and implementation of energy cooperation with the United States in the field of import LNG and the development of nuclear power.”<sup>838</sup> By its successful efforts in development of the European Energy Union and leading Central and Eastern European countries’ opposition to the NS 2 pipeline, Poland “has employed several political, regulatory, and economic levers to weaken Gazprom’s dominant supply position.”<sup>839</sup>

After completion of the NS 2 and the Turk Stream, Russia will use the Polish transit corridor as “the balancing route that would act as a shock absorber.”<sup>840</sup> Both the Yamal-Europe pipeline and the Ukraine gas transit corridor will mostly become under-utilized. This change is likely to undermine Polish energy security and reduce transit fees although they were relatively small based on the terms of the 1993 agreement. To counter development of the NS 2 pipeline, Poland could continue its plans to import Norwegian gas via the Baltic pipe and to expand its Swinoujscie LNG terminal to further diversify natural gas imports away from Russia.

### 5.5.3. United States

Since the beginning of the Soviet energy exports, increasing German and Western European dependency on Russian energy resources caused concern in Washington, and the pipelines were perceived as a threat in the context of the Cold War competition. During the

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<sup>837</sup> Lesourne, Keppler, Goetz, and Van der Linde. *The External Energy Policy*, 64.

<sup>838</sup> Yermakov and Sobczak, “Russia-Poland Gas Relationship,” 15.

<sup>839</sup> Ibid.

<sup>840</sup> Ibid, 19.

Cold War in the 1960s, a surge of oil exports to Europe shaped the US news headlines that reported the fissure in the transatlantic relations: “Soviet Oil Feeds Dispute in the West” and “Oil, a New Soviet Weapon.”<sup>841</sup> As a result, the Reagan administration imposed an embargo to block construction of a new Soviet pipeline that would carry natural gas exports. These sanctions targeted heavy economic costs and denied the hard currency that the Soviet Union “desperately needed to import commodities on which its moribund economy depended, especially consumer and high-technology goods.”<sup>842</sup>

However, Western Allies, including the British prime minister, Margaret Thatcher, were surprised by the unilateral US sanctions and criticized Washington. These differing perceptions were based on precedence of economic and trade relations with the Soviets over potential energy security concerns. During that period in Europe, the Soviet Union was perceived as a reliable energy supplier and European energy security concerns were directed towards unstable regions of the Middle East. Gotz argues that “In the 1970s, gas from Russia had been regarded as a safe alternative to the precarious energy imports from the Middle East.”<sup>843</sup>

According to Yergin, the Reagan Administration was concerned “that dependence on Russian gas, especially in Germany, could help Moscow generate fissures in NATO and provide a major pressure point if East-West tensions worsened.”<sup>844</sup> However, as Lies argued, the European allies “had never been enthusiastic about punitive sanctions, seeing East-West trade as a stabilizing force and the Siberian pipelines as an opportunity to diversify Europe’s energy supply in order to prevent a repeat of the oil crisis of the 1970s.”<sup>845</sup> Eventually, as Yergin reported, “The sanctions had proved to be what Secretary of State George Schultz called

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<sup>841</sup> Yergin, “The New Map,” 96.

<sup>842</sup> Miles. *Engaging the Evil Empire*, 78.

<sup>843</sup> Lesourne, Keppler, Goetz, and Van der Linde. *The External Energy Policy*, 56.

<sup>844</sup> Yergin, “The New Map,” 97.

<sup>845</sup> Miles. *Engaging the Evil Empire*, 79.

‘a wasting asset.’... they motivated the Soviets to seek to develop their own technological capabilities to substitute homemade equipment for what was embargoed.”<sup>846</sup>

In the beginning of the 21<sup>st</sup> Century, all forecasts suggested that European domestic natural gas production would decline while demand would continue to increase. A 2006 study suggested that imports from Africa and the Middle East were considered as alternatives to the Russian gas supply. North and South American natural gas exports to Europe in the 2020-2030 timeframe were expected to be around 6 bcm/year.<sup>847</sup> Neither the US shale gas revolution nor the Central Asian and Caucasus regions’ export potential was in sight as potential sources for diversification. However, the US shale revolution has changed this paradigm and the US has become a net energy exporter, including LNG. The exponential increase in LNG exports to international markets, including Western Europe, are covered in previous chapters.

When the Trump administration-imposed sanctions against NS 2 started, “Both Germany and the European Union expressed outrage at what they saw as extraterritoriality and America’s illegally intervening in Europe’s domestic affairs.”<sup>848</sup> Highlighting the importance of the project, Chancellor Merkel stated that NS 2 “has been legitimated by the new Europe law. We need to carry it through.”<sup>849</sup>

There are two main drivers defining the US approach to the NS 2 pipeline. First, to counter an increasingly rouge and assertive Russia that is threatening European security and US interests. Reducing income for Russia from energy resources that have been used to support its great power ambitions and other activities including defense investments that threatening the members of the NATO Alliance. Income through energy sales will also be used to support the Kremlin’s other malign activities, such as dissemination of fake news or interference in Western elections. The second, to gain a market share for US LNG that could also help to

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<sup>846</sup> Yergin, "The New Map," 97.

<sup>847</sup> Lesourne, Keppler, Goetz, and Van der Linde. *The External Energy Policy*, 48.

<sup>848</sup> Yergin, "The New Map," 115.

<sup>849</sup> Ibid.

increase European energy security by diversifying energy imports while reducing dependency on Russian natural gas. While the US position is largely supported by Central and Eastern European members of the EU and the NATO Alliance, the NS 2 pipeline provides much cheaper natural gas, reducing competitiveness of LNG exports, maintaining Russia's market share, and continuing to resource its military modernization.

The Biden administration relaxed sanctions on the Nord Stream AG while opposing the NS 2 pipeline construction and increasing pressure in Western Europe, in particular on Germany, to establish LNG terminals and supporting infrastructure, in case a long-term cut off threatens European energy security. With the relaxation of the sanctions, NS 2 pipeline was completed in September 2021.

#### 5.5.4. Russia

During the Cold War, the rapidly growing Soviet gas industry required larger diameter pipelines that required Western technology to produce. These huge pipelines from West Siberia to Europe relied heavily on “Western loans and technology due to both the cost of building a 5,000-kilometer pipeline across inhospitable terrain and the advanced technology needed to extract natural gas from the permafrost.”<sup>850</sup> However, Siberian gas production and transmission “was hampered by a much-debated Western embargo instituted by NATO in response to construction of the Berlin Wall and the Cuban missile crisis.”<sup>851</sup> Siberian gas that was projected to replace Ukrainian gas production was delayed.<sup>852</sup> Therefore, the initial Soviet Union gas export was based on the production of the Shebelinka fields that positioned Ukraine as the main gas provider to Europe in the 1960s and early 1970s. This resulted in the development a high-capacity Ukrainian natural gas transmission network starting with the Bratstvo (Brotherhood) pipeline reaching out to Czechoslovakia and Austria which was later extended to the German

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<sup>850</sup> Miles. *Engaging the Evil Empire*, 77.

<sup>851</sup> Högselius. *Red Gas*, 33.

<sup>852</sup> Heinrich and Pleines Eds. *Export Pipelines*, 33.

Democratic Republic, West Germany, and Italy.<sup>853</sup> As a result, Ukraine has become an energy transit hub not by Soviet choice, but as a geographic imperative due to availability of natural resources and a lack of technology to explore and connect Siberian gas. Russia-Ukraine relations and the Ukraine approach toward Russian bypass policies will be covered in the next chapter.

The collapse of the Soviet Union changed Russia-Ukraine energy relations as Russia was increasingly concerned with price subsidies, theft, and supply interruptions.<sup>854</sup> The early 1990s presented huge challenges but also opportunities for Russia, such as exporting more gas to Europe and meeting the urgent demand for hard currency.<sup>855</sup> In 1994, Russian gas transiting through Ukraine was as high as 91 percent of total European exports.<sup>856</sup> Russia was forced to extensively rely on existing pipeline networks through Ukraine, placing this newly independent troublesome former Soviet state in a unique position as a transit hub.

Pipeline gas between producers and customers could be transported directly or through transit countries. Transit pipelines through Central and Eastern Europe have created a transit problem for Russia and Gazprom. Gotz argues that “authorities in transit countries make unjustified gas withdrawals in response to quarrels over the price of gas for domestic consumption.”<sup>857</sup> As a result of unauthorized withdrawals due to arguments on gas prices or debt payments, gas transit from Russia to Western Europe was affected. Therefore, Russia has been investing extensively in a number of pipeline systems to bypass Ukraine since the collapse of the Soviet Union. Gotz also highlights the Russian geopolitical approach that “aims to diversify its export routes in two ways: on the one hand, by building ‘direct’ offshore pipelines,

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<sup>853</sup> Heinrich and Pleines Eds. *Export Pipelines*, 32-33.

<sup>854</sup> Victor, Jaffe, Hayes, “Natural Gas and Geopolitics,” 123.

<sup>855</sup> Ibid, 137.

<sup>856</sup> Gustafson, *The Bridge*, 378.

<sup>857</sup> Lesourne, Keppler, Goetz, and Van der Linde. *The External Energy Policy*, 59.



Gazprom is attempting to create alternatives to the transport routes through transit countries; on the other hand, it intends to export more to the east as an alternative to supplying Europe.”<sup>858</sup>

Additionally, Russia has developed a surplus capacity that allows shaping its relations with not only Central and Eastern European transit countries such as Poland and Ukraine, but also with Western Europe. This surplus export capacity provides both economic and political leverages to Russia.<sup>859</sup> Gazprom delivered 153.39 bcm to the Western European market (including Turkey) in 2019. Germany was supplied with more than one third (57.01 bcm) of this amount. As the new pipelines, NS 2 and Turk Stream, become operational, Gazprom’s dependency on transit countries in Central and Eastern Europe will be reduced significantly, allowing Russia to leverage gas supply for political outcomes as supply cuts have little or no effects on the gas delivery to Western Europe. Direct access to Western European markets increases Russia’s ability to maintain a competitive pricing as well as market share at a time that European energy demand is increasing albeit undermining energy security for respective countries that are vulnerable due to lack of diversification.

Finally, the large scale and abundance of energy resources allowed Putin to drive its ambitions to return Russia as a global power. “The earnings from oil and gas exports provide the financial foundation for the Russian state and Russian power—in normal times, 40 to 50 percent of the government’s budget, 55 to 60 percent of export earnings, and an estimated 30 percent of GDP. Much more than anything else, these resources make Russia a major player in the world economy.”<sup>860</sup> Energy exports and income through oil and natural gas sales for Russia to accomplish its ambition will continue to drive relations with Europe and the rest of the world, including China and the Asia-Pacific region.

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<sup>858</sup> Lesourne, Keppler, Goetz, and Van der Linde. *The External Energy Policy*, 59.

<sup>859</sup> Vatansever, “Is Russia,” 1.

<sup>860</sup> Yergin, “The New Map,” 79.

## 5.6. Conclusions

Since the collapse of the Soviet Union, Russia, the largest exporter of the natural gas, pursued a strategy to build pipelines directly linking Western Europe and Germany, one of the largest importers of natural gas in the world. Construction of the NS 2 pipeline could represent the last step of this long-term strategic plan. Nord Stream pipelines, especially the NS 2 pipeline, represent an apex of three decades of Russian planning that is based on foreign policy and energy strategy objectives to maintain market share in Western Europe, increase German/Western European dependence on natural gas, and continue the flow of hard currency to support its GDP. The NS 2 pipeline construction is completed albeit temporary delay caused by US sanctions. Russia's goal to bypass transit countries goes well beyond the energy domain. It serves Russian foreign policy objectives to divide Europe, increase its influence over former Soviet space, and support great power ambitions while maintaining the Kremlin's power vertical and suppression at home.

Russia has been planning to bypass transit countries not only for economic reasons, but also to accomplish its geopolitical ambitions to return to great power status. The NS 1 pipeline was opposed by Central and Eastern European countries; however, the EC was not against the pipeline on the grounds that it would strengthen European security of energy supply. On the contrary for the NS 1 pipeline, the EC sided with Central and Eastern European countries that have opposed the NS 2 pipeline project and voiced their concerns due to changing strategic context in Europe. Russia's use of power in Ukraine and illegal annexation of Crimea was a watershed moment for the NATO and EU decision-makers. For example, President of the European Council, Donald Tusk, warned that "Excessive dependence on Russian energy makes Europe weak."<sup>861</sup> While Maroš Šefcovic, EU's Vice President, considered Nord Stream 2 as part of Russian "hybrid threats."<sup>862</sup>

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<sup>861</sup> Yergin, "The New Map," 110.

<sup>862</sup> Ibid.

However, bypassing gas routes via Belarus-Poland and Ukraine has caused reactions from transit countries and got other powers involved such as the U.S. and the EU. Each stakeholder has a combination of economic, social, environmental, and geopolitical considerations that support its point of view and arguments regarding necessity and the future of the NS 2 pipeline project. Therefore, a simplified approach and securitization of the issue along the lines of energy security would not sufficiently explain this complex problem. Current attempts to find an acceptable solution fail to deliver a compromise that could satisfy all European/NATO nations involved.

While economically construction of a direct pipeline makes sense for Germany and Western European countries that contributes in their energy security, NS 2 represents the final step for Russia to bypass Central and Eastern European countries, significantly reducing Ukraine's role as a transit country. This will allow Russia to increase its influence over its "near abroad" without any concerns over energy relations with Western Europe that provides large revenues through natural resource sales. Therefore, I argue that the NS 2 pipeline will increase both sensitivity and vulnerability interdependence of Germany to Russian gas. This asymmetric dependency is likely to increase the wedge between the Western European and Central/Eastern European members of the EU while weakening the transatlantic link and undermining European energy security.

The NS 2 pipeline will be the most important step for Russia's geopolitical approach to bypass legacy transit routes, reduce transit costs, and maintain a competitive gas price. NS 2 will also allow Russia, to secure its dominant position and to maintain market share in the European gas market. With completion of the NS 2, Russia's strategic geopolitical approach will be successful, and Putin will be rewarded with outcomes that are aligned with his political objectives - the European Union divided and in disarray, America's politics fragmented, and NATO polarized. At the same time, Russia would gain a freer hand for utilizing its hybrid

warfare tools and military operations in its “near abroad,” presenting a clear threat to NATO and Euro-Atlantic security.

Gustafson summarizes changes in Russia-Ukraine gas relations over the last 30 years: “Gas rents have shrunk...barter has vanished as the gas trade has moved to money...since 2008, Turkmen gas has disappeared as an alternative source of gas for Ukraine...Russia’s interest in acquiring control of the Ukrainian export pipeline system has disappeared...lastly, the introduction of gas reforms in Ukraine may ultimately change the basis of the Russian-Ukrainian gas relationship.”<sup>863</sup> As Assenova highlighted, “The most significant impact of the NS 2 will be on Ukraine...stripping Ukraine of its role as a major gas transit country.”<sup>864</sup>

Central and Eastern Europe will also lose their leverage to influence the Russian decision to cut off gas to Europe while diminishing transit income that is especially vital for Ukraine. In 2017, Ukraine earned about \$3 billion from transit gas revenues, not only a significant contribution to Ukraine’s budget, but also a resource to maintain the Ukraine Gas Transit System (GTS). Decreasing revenues may reduce Ukraine’s ability to maintain GTS efficiently allowing Russia to use any incident as part of its disinformation campaign. A weakened Ukraine will be much more prone to Russia’s hybrid attacks and any assertive military actions.

With the Biden administration’s relaxation of US sanctions, the NS 2 pipeline was completed in September 2021, however, European Commission’s legal challenge continue operationalization of the pipeline. Figure-23 depicts the existing NEL, OPAL and prospective EUGAL pipelines<sup>865</sup> that will further distribute Russian gas to European markets. These pipelines will also be subjected to EU regulations established with the Third Energy Package. The European Energy Union Strategy, Policy, and the measures of the Third Energy Package

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<sup>863</sup> Gustafson, *The Bridge*, 349, 350.

<sup>864</sup> Assenova, “Europe and Nord Stream 2,” 29.

<sup>865</sup> NEL: Nordeuropäische Erdgasleitung, OPAL: Ostsee-Pipeline-Anbindungsleitung, EUGAL: Europäische Gas-Anbindungsleitung.

will remain the most effective tools in the European toolbox to reduce Russia's ability to use energy as part of its power politics. However, the implementation of court decisions will also continue to divide Europe. For example, Germany's appeal lifting the cap on Gazprom's use of OPAL prompted a Polish challenge to the General Court, which subsequently decided in favor of Poland in 2019.<sup>866</sup>

While Gazprom/Russia have used an extensive information campaign as covered at the beginning of this case study, the US approach, similar to Polish objections, focused on the sanctions for stopping materialization of the project. However, it would have been a public affairs disaster for the German government if they have had cancelled this project due to an external pressure. A more successful result could have been achieved by a much stronger public affairs/information campaign. Additionally, US support to alternative routes from the Caucasus and Central Asia, such as the case for TAP and TANAP as well as contributing LNG terminal construction, would have changed the way the project is handled and public support for the project could have reversed.

Russia's aggression is not limited with its assertive behavior in Ukraine, Central and Eastern Europe, but also in the Caucasus, Syria, Libya and Africa that have increased since Putin's return to the presidency in 2012. Income through energy revenues will continue to support Putin's great power objectives, challenging European and Alliance security. This concern was the foundation of the Reagan administration's imposition of sanctions in the 1980s. Removal and relaxation of sanctions will also allow technology transfer to Russia as well as strengthen the German business community's relations and investments in Russia. Currently, Gazprom has a number of joint venture investments with the German energy industry.

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<sup>866</sup> Chee, "European Court."

There are diverging views on Russia's use of natural gas relationships as a geopolitical lever. For example Gustafson argues along the lines that while Putin has attempted to influence Ukrainian politics, he used other means such as "coercion, ranging from political technologists to covert military support, and including disinformation, computer hacking, financial pressures, trade sanctions, weapons transfers, and simple blackmail and bribery...the gas weapon as a geopolitical instrument has been ineffective in Ukraine."<sup>867</sup> Gotz suggests that "Gazprom is vitally dependent upon its reputation as a reliable supplier, and it is not prepared to jeopardize that reputation for any short-term advantages or a (unspecified) Russian external energy policy."<sup>868</sup> Finally, the next chapter will provide an in-depth analysis on whether or not Ukraine could be used as an example for Russia-German energy relations; whether relying on a direct pipeline network, the NS 1 and 2 pipelines, creates a single point of failure for Europe; and whether energy interdependence will be used as a deterrent and Russia will get a freehand to use energy power to influence Western decision-making at the time of its choosing.

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<sup>867</sup> Gustafson, *The Bridge*, 351.

<sup>868</sup> Lesourne, Keppler, Goetz, and Van der Linde. *The External Energy Policy*, 56.

## CHAPTER 6

## CENTRAL ASIA AND THE CAUCASUS ROLE IN EUROPEAN ENERGY SECURITY

## 6.1. Introduction

The disintegration of the Soviet Union not only marked the end of an empire and the failure of its guiding ideology to fulfil its promises, it also signified the final dissolution of the bipolar international system, which had lasted for about half a century.<sup>869</sup> The dissolution of the Soviet Union created uncertainties in the Baltics, Central and Eastern Europe, Central Asia and the Caucasus with the emergence of 15 new republics including Russia.<sup>870</sup> In the western part of the former Soviet space, aspirations to be part of Western institutions, NATO, and the European Union (EU) were running high, and that desire to re-unite with the West tempered the political situation as well as calmed the reactions of the masses against the sudden disruption of their system.<sup>871</sup> However, the rapid collapse of the Soviet Union caused a phenomenal shock when Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, and Uzbekistan in Central Asia and Armenia, Azerbaijan and Georgia in the Caucasus gained their independence in 1991. This strategic surprise is described by Olcott when she writes, “Few peoples of the world have ever been forced to become independent nations.”<sup>872</sup>

Central Asia is strategically situated in the crossroads of the Eurasian landmass between Asia and Europe. The collapse of the Soviet Union has brought the geopolitical importance of the region into the limelight with its hugely untapped natural resources and geostrategic leverages.<sup>873</sup> However, Central Asia and the Caucasus were not prepared for such a significant paradigm shift and lacked the regional institutions where republics in the western Soviet space

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<sup>869</sup> Peimani, *Regional Security*, 1.

<sup>870</sup> Alie and Gizewski. *Strategic Shock*, 3. “The effects of this shock are still being felt today. Indeed, given its unprecedented scope, speed and far-reaching consequences, the impact of the collapse of the Soviet state system must be included in any discussion of shocks that have reshaped the international system.”

<sup>871</sup> Garthoff, “Western Efforts,” 14.

<sup>872</sup> Martha Brill Olcott. “Central Asia’s Catapult to Independence,” *Foreign Affairs* 71 (1991): 108.

<https://www.foreignaffairs.com/articles/kazakhstan/1992-06-01/central-asias-catapult-independence>

<sup>873</sup> Ramakrushna Pradhan, *Geopolitics of Energy in Central Asia, India’s Position and Policy*, Routledge, 2021, 214.

aspired to join. These new republics, under the Soviet Union, were completely isolated from the rest of world, especially from the West and western institutions. Their social and political structures, economies, and natural resources were shaped to function as a part of the wider Soviet system including critical infrastructure from telecommunication to transport, natural gas, and oil pipeline networks.

The oil and natural gas networks were created to support overall Soviet demand and industrial development. These systems, especially natural gas and oil pipelines from Central Asia, were directed toward Moscow and other industrial regions that were controlled by central planning. Even after the collapse of the Soviet Union, Turkmen gas exported to Europe was transferred through the pipeline system controlled by Russia. The legacy Soviet pipelines were used by Western companies like Chevron to reduce the cost of new infrastructure. “That’s why all the Central Asian countries rely on Russia to transfer their oil and gas through Russian pipelines, enabling Moscow to maintain a stronghold in the region and to generate transit fees out of it.”<sup>874</sup>

This chapter focuses on the question of whether Central Asian and the Caucasus energy resources could present a viable alternative to reduce dependence on Russian natural gas. I argue that Central Asia and the Caucasus have sufficient oil and natural gas reserves, and these energy resources could present a viable alternative to Russian sources. Thus, large reserves in Central Asia and the Caucasus countries could reduce European dependence on Russian natural gas. However, there are important hurdles in the way such as the region’s landlocked geography; legal and geopolitical constraints, such as the status of the Caspian Sea; social and political dynamics; and most importantly, Central Asia and the Caucasus countries’ relations with Russia.

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<sup>874</sup> Pradhan, *Geopolitics of Energy*, 216.



Additionally, to transfer these resources to European markets and consumers continues to be a challenge due to the high costs of constructing long-distance pipeline networks. While there are significant challenges, I also argue that a long-term strategic approach for diversification of the EU energy supply dictates development of alternative resources, including additional natural gas pipelines from the Caspian/Central Asia region to European markets. This is only possible with the European political and financial commitment, as well as support from the United States. These conditions could encourage Central Asia and the Caucasus countries to turn their direction to the West and allocate resources accordingly.

## 6.2. Geography and Regional Characteristics

### 6.2.1. Geography

Central Asia is located at the heart of Eurasia, extending from western China to the Caspian Sea without any outlet to the international waters. This landlocked region has always been “identified as a crossing point, due to its geographical position between Europe, Middle East and Asia.”<sup>875</sup> Central Asia connects the large economies of China, the EU, India, Japan, South Korea, and Russia. It stretches from the Russian steppes in the North to the Caspian Sea in the West, and from the Tien Shan, Hindu Kush, and Himalayas in the South and East, and connects to Iran, Afghanistan, Pakistan, India and China.<sup>876</sup> While “Central Asia” represents a single geographical entity, it typically refers to the five former Soviet Republics of Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, and Uzbekistan. Central Asia is also mentioned as “Turkestan,” because of the Turkish influence in the region. Finally, regional countries are also defined as “the ‘stan’ countries meaning ‘land of,’ a common suffix for country names in Central Asia.”<sup>877</sup>

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<sup>875</sup> Pier Paolo Raimondi, “Central Asia Oil and Gas Industry – The External Powers’ Energy Interests in Kazakhstan, Turkmenistan and Uzbekistan,” 2019, 3.

<sup>876</sup> Michael Mandelbaum, ed. *Central Asia and the World: Kazakhstan, Uzbekistan, Tajikistan, Kyrgyzstan, and Turkmenistan*. Council on Foreign Relations, (1994), 2-3.

<sup>877</sup> Royal Berglee, “Regional Geography of the World: Globalization, People, and Places,” 2016, 571  
<https://2012books.lardbucket.org/books/regional-geography-of-the-world-globalization-people-and-places/s11-07-central-asia-and-afghanistan.html>

The term “Central Asia” typically refers to the five former Soviet Republics of Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, and Uzbekistan. These countries and the relationships amongst them are important to comprehend regional dynamics; however, in order to understand geopolitical characteristics and relationships between all stakeholders, regions bordering Central Asia should also be taken into consideration. Allison and Johnson define the “wider Central Asian region” to include the areas of Russia, China, and Afghanistan, which border the core Central Asian states and share sizable ethnic minorities with them.<sup>878</sup> In this context, “wider Central Asian region” and global stakeholders are included in the analysis for their role to empower or challenge the transfer of Central Asian resources to Europe.

Central Asia borders two major nuclear states. One of which, Russia, is seeking to restore its lost global pre-eminence; and the other, China, is aspiring to just such a status, enjoying a seemingly unstoppable economic growth and is now the world’s second-largest economy.<sup>879</sup> The unique political position and natural resources of the regional countries and their relations with the bordering great powers, especially after western withdrawal from Afghanistan, have increased uncertainty. While a “wider Central Asia” may include parts of Russia, China, and Afghanistan, the focus of this paper on the five Central Asian republics and the Caspian region.<sup>880</sup> Azerbaijan as one of the major oil and gas producers of the Caspian region is central for Trans-Caspian energy production. The Caspian region is also important for its potential role as a bridge between Central Asia and European markets.<sup>881</sup> The main concern for the energy-rich countries stems from their geography, the landlocked region making them rely heavily on former Soviet complex infrastructure. According to Paradhan, “The

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<sup>878</sup> Jonson and Allison, *Central Asian Security*, 1.

<sup>879</sup> Peimani, *Conflict and Security*, 4.

<sup>880</sup> Jonson and Allison, *Central Asian Security*, 23.

<sup>881</sup> Alexandros Petersen and Katinka Barysch, *Russia, China and the Geopolitics of Energy in Central Asia*, Centre for European Reform, (November 2011), 4.

geographical positioning of Central Asia in the middle of Eurasia has created problems for its much-needed transportation of energy resources.”<sup>882</sup>

Geography is one of the key aspects of a country’s destiny, geopolitics, and economy. A landlocked region presents the greatest challenge for the Caucasian and Central Asian oil and natural gas producing countries. Paradhan summarizes logistics problems caused by the geographic location of the region for transporting energy resources from the Caucasus and Central Asia to the global markets:

There is no easy route linking Caspian oil and gas with maritime shipping lanes leading to the world’s major energy consumers...To head directly westward necessitates skirting the Caspian, greatly increasing the length of any pipeline, or building an underwater pipeline which greatly increases the cost of the project...Heading east towards the Pacific Ocean is technically feasible from Turkmenistan through Uzbekistan and Kazakhstan...Running south-east towards the Indian Ocean through Iran, Afghanistan and Pakistan is also feasible but the Hindu-Kush Mountain, trouble-torn Afghanistan and terror-prone Pakistan emerge as troublesome.<sup>883</sup>

In addition to the challenges presented by geography, “regulatory obstacles and political repression often inhibit the free flow of people, goods, services and ideas.”<sup>884</sup>

Russia dominated Central Asia for several centuries starting from the Tsarist period. Russia justified its interests and occupation of Central Asia on the grounds of security and what the Russian Empire called a “civilizing mission,” which continued in a similar context during the period of the Soviet Union.<sup>885</sup> Therefore, the Central Asian republics have “twice been integrated in single economic zones: first that of the Russian empire, then that of the Soviet Union.”<sup>886</sup> The map below depicts the strategic geographic position of Russia over Central Asian Republics and the Caucasian countries, as well as other regional players.

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<sup>882</sup> Pradhan, *Geopolitics of Energy*, 215.

<sup>883</sup> Ibid.

<sup>884</sup> Martin Russell, “Connectivity in Central Asia Reconnecting the Silk Road,” European Parliamentary Research Service, April 2019, 1.  
[https://www.europarl.europa.eu/RegData/etudes/BRIE/2019/637891/EPRS\\_BRI\(2019\)637891\\_EN.pdf](https://www.europarl.europa.eu/RegData/etudes/BRIE/2019/637891/EPRS_BRI(2019)637891_EN.pdf)

<sup>885</sup> Arun Kumar, “Role of Russia in Central Asia Since 1991,” 1999, 1,2, 16.

<sup>886</sup> Vladimir Paramonov and Aleksey Stokov. *Russia and Central Asia: Current and Future Economic Relations*. Defence Academy of the United Kingdom, Conflict Studies Research Centre, (2006), 1.

Figure 29: The Caucasus and Central Asia<sup>887</sup>

Source: University of Texas Library,

[https://maps.lib.utexas.edu/maps/commonwealth/caucasus\\_cntrl\\_asia\\_pol\\_2003.jpg](https://maps.lib.utexas.edu/maps/commonwealth/caucasus_cntrl_asia_pol_2003.jpg)

### 6.2.2. Regional Characteristics

The region was inhabited by Turko-Mongols and Iranians.<sup>888</sup> In the beginning of the 20<sup>th</sup> Century, Russia was moving toward socialist ideology while Central Asia was still a nomadic and tribal society struggling to adapt to the effects of capitalist and nationalist ideologies increasingly influencing the region.<sup>889</sup> Remained under oppressive Russian and Soviet rules for a long time, at the end of the 20<sup>th</sup> Century, independent states of the region were described as the least successful of those countries emerging from communist rule. Central Asian republics have not achieved a successful transition from communist rule to

<sup>887</sup> "Maps.lib.utexas.edu," accessed December 29, 2021, [https://maps.lib.utexas.edu/maps/commonwealth/caucasus\\_cntrl\\_asia\\_pol\\_2003.pdf](https://maps.lib.utexas.edu/maps/commonwealth/caucasus_cntrl_asia_pol_2003.pdf).

<sup>888</sup> Rashid, *The Resurgence of Central Asia*, 21.

<sup>889</sup> *Ibid*, 25.

democracy, and ineffective market economy development has been closely linked with the history of the region, in particular in relations with Russia.

Central Asian countries share a common history and generally are referred to as a single region; however, they have different aspirations, and ethnic, cultural, and economic foundations.<sup>890</sup> Hill argues that “The stability and development of the states of Central Asia and the Caucasus are threatened by their extreme domestic fragility... Although each state suffers from its own specific problems, they also share a common set of challenges...Ethno-linguistic and religious groups are spread across the regions, with Russia, Turkey, Iran, China, and Afghanistan all sharing groups with Central Asian and Caucasus states.”<sup>891</sup> Domestic fragility of the Central Asian countries is a result of a combination of weak institutions, widespread corruption, poorly developed and unstable economies, and authoritarian regimes.

As highlighted by Raimondi, “Despite the century under Russian control, the region has been always an area where different cultures, languages and religions coexisted together.”<sup>892</sup> The Russian occupation of Central Asia created multi-ethnic societies and fostered a relationship of dependency between Russia and regional countries. For example, the largest Russian population is located in Kazakhstan. While Kazakhs make up 58.9% of the population, Russians are 25.9%, Ukrainians 2.9%, Uzbeks 2.8%, Uighur, Tatar and German 1.5% each, and other groups are represented at 4.3%.<sup>893</sup> The ethnic distribution of Central Asian republics is depicted on the map below.

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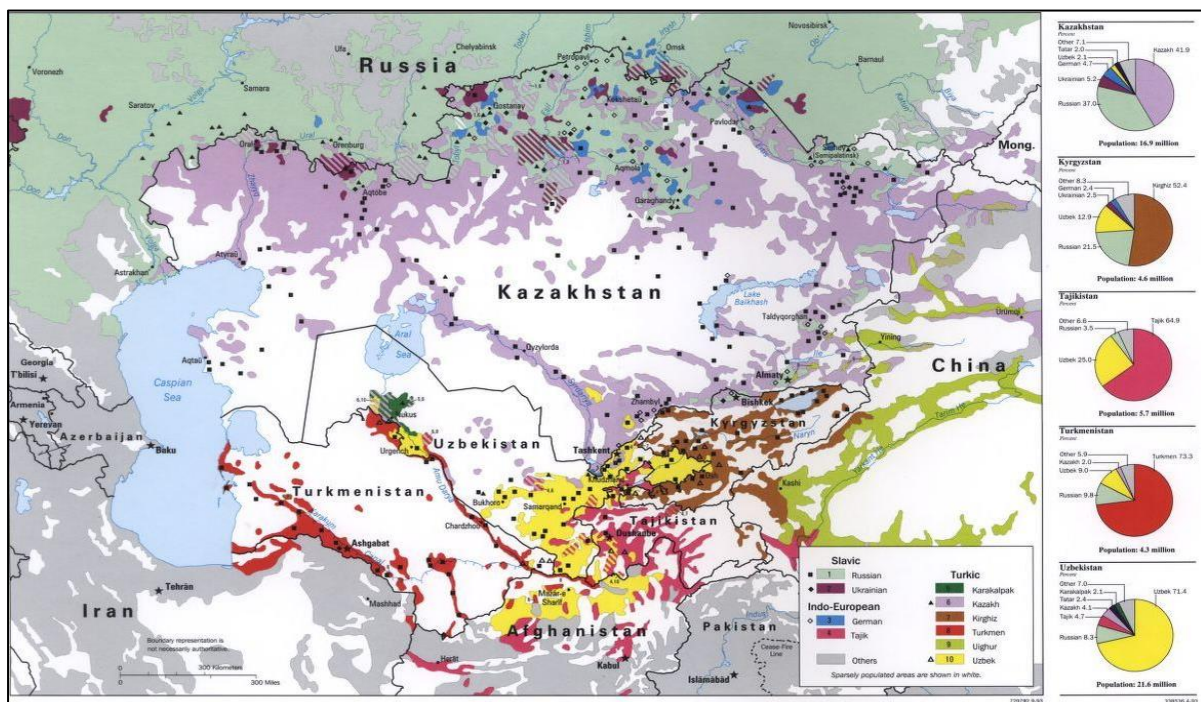
<sup>890</sup> Uuriintuya Batsaikhan and Marek Dabrowski, “Central Asia-Twenty-Five Years After the Breakup of the USSR,” *Russian Journal of Economics* 3, no.3 (2017), 9.

<sup>891</sup> Fiona Hill, “Areas for Future Cooperation or Conflict in Central Asia and the Caucasus,” 19 September 2002. <https://www.brookings.edu/on-the-record/areas-for-future-cooperation-or-conflict-in-central-asia-and-the-caucasus/>

<sup>892</sup> Raimondi, “Central Asia Oil and Gas,” 3.

<sup>893</sup> “Ethnic Groups,” Embassy of Kazakhstan in Washington, D.C., accessed December 29, 2021, <https://kazakhembus.com/about-kazakhstan/culture/ethnic-groups>



Figure 30: Major Ethnic Groups in Central Asia<sup>894</sup>

Source: Library of Congress, <https://www.loc.gov/item/93686639/>

The Russian population has not been fully integrated in the social fabric of Central Asian countries. There has been increasing friction between ethnic Russians and local populations. In a recent statement, Foreign Minister Lavrov argued that “Nationalist incidents against Russian-speaking citizens of Kazakhstan are often the result of propaganda fomented by foreign powers seeking to sabotage relations.”<sup>895</sup> Russia has always used the existence of ethnic minorities or the Russian-speaking population for political leverage from the Baltics, to Ukraine, to Georgia and in Central Asian Republics such as Kazakhstan.

While new Central Asian states are distancing themselves from Russia, they are also considering their choices against threats to their survival. Their approaches to Russia follow

<sup>894</sup> “Major Ethnic Groups in Central Asia,” The Library of Congress, accessed December 29, 2021, <https://www.loc.gov/item/93686639/>.

<sup>895</sup> “Lavrov Says Outside Forces Trying to Drive Wedge between Russia, Kazakhstan,” Tass, Russian News Agency, n.d., <https://tass.com/politics/1359229>.

different patterns under different circumstances and have been used as a tool to leverage against each other. Particularly, Kazakhstan and Uzbekistan have observed and balanced against each other albeit maintaining friendly relationships. They also developed military capabilities to acquire a leadership position. In addition to their relation to Russia, Central Asian republics have the following main concerns: countering terrorist threats, addressing border disputes, and maintaining access and/or control of water sources, including border-crossing rivers.

The following table depicts the population, demographic, and economic indicators for Central Asian Republics that have changed significantly over the last three decades:

Table 25: Central Asian Republics Population, Demographic and Economic Data

| Country      | Population (millions) |                   | Urban (%) <sup>b</sup> | Ethnic Composition (%) <sup>b</sup>  | Per Capita GNP (US\$) |                     |
|--------------|-----------------------|-------------------|------------------------|--|-----------------------|---------------------|
|              | 1991 <sup>a</sup>     | 2018 <sup>b</sup> |                        |  | 1991 <sup>a,c</sup>   | 2018 <sup>b,c</sup> |
| Kazakhstan   | 16.800                | 18.745            | 57.4                   | Kazakh (63.1),<br>Russian (23.7),<br>Uzbek (2.9)<br>Ukrainian (2.1)<br>German (1.1)<br>Other (7.1) | 2,470                 | 26,300              |
| Kyrgyzstan   | 4.500                 | 5.849             | 36.4                   | Kyrgyz (71.4)<br>Uzbek (14.4)<br>Russian (9)<br>Other (5.2)  | 1,550                 | 3,700               |
| Tajikistan   | 5.500                 | 8.604             | 27.1                   | Tajik (84.3)<br>Uzbek (12.2)<br>Other (3.5)  | 1,050                 | 3,200               |
| Uzbekistan   | 20.900                | 30.023            | 50.5                   | Uzbek (83.8)<br>Tajik (4.8)<br>Kazakh (2.5)<br>Russian (2.3)<br>Other (8.1)                        | 1,350                 | 6,900               |
| Turkmenistan | 3.800                 | 5.411             | 51.6                   | Turkmen (85)<br>Uzbek (5)<br>Russian (4)<br>Other (6)  | 1,700                 | 18,200              |
| Azerbaijan   | 7.100                 | 10.046            | 55.7                   | Azerbaijani (91.6)<br>Russian (1.3)<br>Armenian (1.3)<br>Other (4.4)                               | 1,670                 | 17,500              |

Sources: <sup>a</sup> World Bank, *Statistical Handbook: States of the Former USSR, 1992* (Washington, D.C.: World Bank, 1992); Michael Mandelbaum Eds, *Central Asia, Kazakhstan, Uzbekistan, Tajikistan, Kyrgyzstan, Turkmenistan and the World, 1994*

<sup>b</sup> CIA the World Fact book, accessed 23 December 2018

<sup>c</sup> Purchasing Power Parity (PPP)

The rich mineral and natural resources of the region have played a significant role for some of the Central Asian republics to overcome the economic and political challenges during the transition from Soviet central planning to liberalization. Since gaining their independence, Central Asian and the Caucasian states have worked very hard to use natural resources for their economic development, but have not been able to develop the necessary energy infrastructure and political environment to benefit from existing reserves. Each country pursued different paths away from the defunct central planning model. One of the main reasons for them choosing different paths is that natural resources, particularly energy assets, are not homogenously distributed within those states.

In the early 1990s, Central Asian republics lost economic support provided by the Soviet system that were essential for their budgets, households, and inputs for regional industries. However, oil and natural gas rich countries recovered much faster as depicted in the table above. Resource-poor countries such as Tajikistan and Kyrgyzstan have experienced significant economic and social problems.<sup>896</sup> Additionally, border disputes between Tajikistan and Kyrgyzstan resulted in clashes amongst villagers that escalated to military skirmishes in 2014 and 2020. Kyrgyzstan has also had border disputes with Uzbekistan albeit they resolved more peacefully.<sup>897</sup> These disputes and other challenges have reduced trust and cooperation amongst the new states and exacerbated social, economic, and political problems.

The Caspian region, the Caucasus, provides an outlet to international markets for energy transport. In the Caucasus, the situation has been more complex due to the conflict between Azerbaijan and Armenia over the Nagorno Karabakh.<sup>898</sup> Historical grievances shadowed potential areas of collaboration and cooperation. Thus, the region has witnessed several military

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<sup>896</sup> Hill, "Areas for Future Cooperation."

<sup>897</sup> Temur Umarov, "Are There Any Winners of the War on the Kyrgyz-Tajik Border?" Carnegie Moscow Center (Carnegie.ru), accessed December 29, 2021, <https://carnegiemoscow.org/commentary/84569>.

<sup>898</sup> Thomas de Waal, "Unfinished Business in the Armenia-Azerbaijan Conflict," Carnegie Europe, February 11, 2021, <https://carnegieeurope.eu/2021/02/11/unfinished-business-in-armenia-azerbaijan-conflict-pub-83844>.



confrontations between Azerbaijan and Armenia, resulting in military build-up. As highlighted by Buzan, “Military security concerns include the offensive and defensive capabilities of state and the state’s perception of the intentions of other states.”<sup>899</sup> Countries in the Central Asia and the Caucasus are looking forward to an outlet to international markets that could support their social and economic development. However, a lack of efficient cooperation reduces regional countries’ ability to address economic challenges as well as to use natural resources for regional development.

### 6.3. Involvement of Regional and Global Stakeholders

#### 6.3.1. The New “Great Game”<sup>900</sup>

Since the collapse of the Soviet Union, external powers’ interest has grown significantly due to abundant natural resources, especially oil and natural gas. While it has vast energy resources and is located between the crossroads of Russia, China, Afghanistan and Iran, until the collapse of the Soviet Union, this remote landlocked region has not carried strategic significance. Central Asia was completely isolated from even its immediate neighbors, outside the former Soviet space. However, in the early 1990s, the region was proliferated with external actors from international organizations such as NATO, the EU, and OSCE to individual states such as Russia, China, the US, India, Iran, Afghanistan, Pakistan, Japan, and Turkey.<sup>901</sup> The Western interests and competition over the region’s vast resources continue to be defined as the new ‘Great Game.’

There are many potential customers for rich natural resources; however, very few have the capability to influence energy geopolitics of the region. Additionally, non-state actors such as major oil companies, brought new opportunities and challenges to the region.<sup>902</sup> The recent

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<sup>899</sup> Buzan, *People, States & Fear*, 19.

<sup>900</sup> Pradhan, *Geopolitics of Energy*, 54.

<sup>901</sup> Emilian Kavalski, ed., “The New Central Asia: The Regional Impact of International Actors, World Scientific,” (2010), 3-11.

<sup>902</sup> Pradhan, *Geopolitics of Energy*, 235.

inclusion of new players into the new “Great Game” have not only increased regional complexity, but also have created a great power competition over control of oil and gas, transportation links, and transit infrastructure.

While the situation has changed during the late 1990s and early 2000s with the US involvement and increasing EU interest, the main influencers remain China and Russia. China’s most recent ambitious attempt to establish economic corridors through Central Asia as part of its “Belt and Road Initiative (BRI)” is expected to change regional dynamics. Chinese involvement has increased the complexity of the relationships amongst Central Asian and the Caspian countries, as well as their relationship with external stakeholders such as Russia, Iran, and the United States.

In the early 1990s, Russia’s status was described as a “declining hegemon,”<sup>903</sup> and involvement of external actors brought up a historical competition called the “Great Game” that was used to describe great power politics in the region and complex problems associated with their involvement. In order to counterbalance the influence of external international organizations such as the EU and NATO, and states such as the United States and Turkey, Russia used every means to convince regional countries to establish institutional frameworks. These multilateral Russia-friendly frameworks are used to expand influence over the region such as the Commonwealth of Independent States (CIS), the Eurasian Economic Community (EAEC), and the Collective Security Treaty Organization (CSTO). There are other regional organization such as the Shanghai Cooperation Organization (SCO) that also involves China, Kazakhstan, Kyrgyzstan, Russia, Tajikistan, and Uzbekistan. Russia remains the main influencer of the region; however, China has been steadily increasing its investment and involvement in the energy sector. Central Asian countries are also part of a regional structure

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<sup>903</sup> Kavalski, ed., “The New Central Asia,” 10.

of the Economic Cooperation Organization (ECO) that includes Afghanistan, Azerbaijan, Iran, Pakistan, and Turkey as member states.

### 6.3.2. Central Asia and Russia

#### 6.3.2.1. Central Asia - Under The Russian Empire and The Soviet Union

The Russian Empire's influence and dominance increased in Central Asia in the second half of the 19<sup>th</sup> Century. Attempting to integrate Central Asia into their own imperial realm, the Russians invested heavily in transportation infrastructure and agriculture. Russian expansion southeast toward India and attempts to dominate the trading routes made the British suspicious. Interplay between these two empires became known as the "Great Game."<sup>904</sup> The Great Game continued as Russia struggled with the British Empire for greater strategic influence in Central and South Asia.<sup>905</sup>

Under the Soviet Union, "integration and absorption advanced with new vigor."<sup>906</sup> During the Soviet period, the region's republics supplied resources, served as places of exile, and hosted sites for nuclear testing, the development of biological weapons, and space launches.<sup>907</sup> According to Holzman and Legvold, the following features of the Soviet Union decision-making system had an overarching impact on the current affairs of the Central Asian republics. The Soviet Union followed the main framework for its policies for the Central Asian region as a whole as it:

- Enforced greater centralization – concentration of decision-making power;
- Maintained deeper differentiation – role specializations of institutions and individuals;
- Allowed much less participation – access to the decision-making process.<sup>908</sup>

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<sup>904</sup> Pradhan, *Geopolitics of Energy*, 54.

<sup>905</sup> Alisher Ilkhamov. "Russia Lures Uzbekistan as its Strategic Satellite in Central Asia." *Russia's Foreign Policy: Key Regions and Issues*, Forschungsstelle Osteuropa an der Universität Bremen 87 (2007): 8.

<sup>906</sup> Ibid.

<sup>907</sup> Marat Ersainovic Shaikhutdinov. "Central Asia: Developing the Region in the Vortex of the Geopolitical and Geoeconomics Antagonisms of the World Powers." *American Foreign Policy Interests* 29, no. 1, 2007, 46.

<sup>908</sup> Kumar, "Role of Russia," 21.

The major reason for the Central Asian State's economic underdevelopment is explained by their relations with Russia both during the Russian Empire and the Soviet Union years. Kumar argues that, "Russia has been the core of the Central Eurasian regional state system for about 300 years."<sup>909</sup> Central Asian republics were always in the periphery and received less resources to support development and industrialization. Although this complex relationship has evolved over time, it is best explained by the "dependency theory" as argued by Kumar. Once growth started in the center (a favored location for the USSR was Russia) of a market economy, labor, skills, capital, and commodities started flowing naturally into it from the periphery (Central Asian republics). This process perpetuated growth in the prosperous regions at the expense of growth elsewhere. Thus, in relation to the periphery, cores fared better in good times and fared not as poorly in hard times.<sup>910</sup>

As explained in Chapter II, the dependence of Central Asian republics to Russia could be categorized as vulnerability interdependence. There would be not only economic but also security consequences should any of the republics attempt to break up the relationship with Russia during the period of the Russian Empire as well as the Soviet Union years. This relationship could also be defined as complex interdependence as it has the three main characteristics:

- Multiple channels to connect societies exist, such as but not limited to, informal ties between governmental, non-governmental, international and business elites. In addition to a systemic Soviet division of labor to enable production of material dependent upon Russia and other republics, there is a large Russian population in Central Asia, though with varying numbers from republic to republic. Ethnic Russians are generally in a position to influence the key decision-making systems of Central Asian societies.<sup>911</sup>
- There are multiple issues that dominate the agenda of interstate relations; however, for Russia, energy security is one of the most important priority items in its agenda. These issues could be categorized into three main areas:
  - high-level political relationships;
  - security co-operation in the region; and

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<sup>909</sup> Kumar, "Role of Russia," 118.

<sup>910</sup> Ibid, 118-119

<sup>911</sup> Keohane and Nye, *Power and Interdependence*, 21.

- its range of investment in energy projects in these countries. Therefore, military security does not dominate the agenda.<sup>912</sup>
- During the annexation of Central Asia, the Russian empire used military force to control Central Asia. Although coercion might be part of Russia-Central Asia relations during the Soviet period, use of military force was not part of the relationship during the Cold War. Since the end of the Cold War, Russian attempts to establish security frameworks similar to the Warsaw Pact have not been successful.<sup>913</sup>

As a result of this complex relationship, when Central Asian Republics gained their independence almost three decades ago, Russian influence was expected “to continue in varying degrees over time and over a specific issue such as terrorism, military cooperation, transport, and energy security”<sup>914</sup> due to the level of interdependence between Russia and Central Asia. However, these expectations have not entirely materialized, and Russian attempts to establish an economic and security community that is dependent upon Russia have not achieved the desired effect. For example, according to Krivosheev, the Collective Security Treaty Organization (CSTO), a military alliance of Russia, Belarus, Armenia, Kazakhstan, Kyrgyzstan, and Tajikistan, involving Russia and three Central Asian Republics, “has never enjoyed great popularity, either among its six member states or beyond.”<sup>915</sup>

#### 6.3.2.2. Central Asia – Russia Relations Independence to Date

In 1991, leaders of the Central Asian republics declared independence from the Soviet Union, resulting in the termination of a fifty-year attachment.<sup>916</sup> The sudden collapse of the Soviet Union created a vacuum and left no time for the new independent states to be prepared for the new security environment. Although the clear preference of the United States and most Western powers was for a renewed voluntary union, which stemmed primarily from control

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<sup>912</sup> Keohane and Nye, *Power and Interdependence*, 21, 22.

<sup>913</sup> Ibid, 22-23.

<sup>914</sup> Joseph McMillan, Eugene B. Rumer, Phillip C. Saunders, Stephen J. Flanagan, and James A. Schear. “Engaging Other Major Powers,” *Strategic Challenges: America’s Global Security Agenda*, ed. (Washington, DC: National Defense University Press, 2007), page 177, 197 <http://www.ndu.edu/inss/Books/sc.pdf>.

<sup>915</sup> Krill Krivosheev, “Does the Collective Security Treaty Organization Have a Future?” 8 Jul7 2021. <https://carnegiemoscow.org/commentary/84923>

<sup>916</sup> Ilkhamov, “Russia Lures Uzbekistan,” 8.

over the dispersed Soviet nuclear arsenal and concerns over instability in the region, they supported independence of the Central Asian republics.<sup>917</sup>

The independence of the Central Asian republics provided the opportunity for these newly formed states to disassociate themselves from the Russian/Soviet security complex of which they had been a part for about two centuries.<sup>918</sup> Their search for a new international and structural identity resulted in their participation in the North Atlantic Cooperation Council – a forum for dialogue established by the NATO Alliance in December 1991. Each country's relations with external regional and global players varied differently based on their requirements. Although there had been a growing nationalism in several of the Central Asian republics, and a growing desire for decentralization of authority from the center, they faced extraordinary challenges to reduce their dependency on Russia and focused on their economic survival. As a result, Central Asian countries were also part of other regional economic and security organizations led by Russia and/or China.

Russia-led multilateral frameworks have not been successful in bringing prosperity and security to the region. Russia has not been able to use its initial advantage to effectively establish economic and security institutions to maintain the legacy of the Soviet Union such as the CSTO and the Eurasian Economic Union. Growing economic power allowed China to increase its grip over the region, not politically or with security concerns, but economically. Pradhan states that the UNDP report can be used to understand “the predominant position of China in Central Asia as far as investment is concerned both in the energy and non-energy sectors thereby sidelining any other country including the United States from influencing the region.”<sup>919</sup>

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<sup>917</sup> Garthoff, "Western Efforts," 16.

<sup>918</sup> Peimani, *Regional Security*, 2.

<sup>919</sup> Pradhan, *Geopolitics of Energy*, 236.

Russia expected these relatively young nations to assume the position of “client states in respect to their former master” even though they are “wary of Moscow’s neo-imperial ambitions.”<sup>920</sup> Regional experts attributed Russia’s lingering influence more to the mixture of proximity, history, and shared culture than to adept foreign policy. Thus, the interdependence between Russia and Central Asia dates back well before the Soviet period. Kumar argues that “The Russian empire was a geographically contiguous entity with much stronger demographic, cultural and economic links.”<sup>921</sup> As a result, despite the collapse of the Soviet Union, initially, Russia was able to assert its colonial power to maintain significant advantages over the Central Asian republics.<sup>922</sup> However, Russia unsuccessfully attempted to exploit this opportunity to establish and shape the economic and political landscape.

Anti-Russian rhetoric, often criticizing some aspect of the colonial past or present-day Russian hegemonic behavior, appeared frequently in the Central Asian media in the years immediately leading up to and following independence.<sup>923</sup> The statement of Uzbek President Karimov in April 2013 is an example of the fluctuating relationship between Russia and the new republics.<sup>924</sup> Although Russia and Uzbekistan have had a bumpy relationship in recent years, Karimov stated that the “planned exit of NATO troops from Afghanistan will create dangerous conditions in Central Asia, and Russia’s presence will help maintain peace in the region.”<sup>925</sup>

Following the crisis in Ukraine and illegal annexation of Crimea on the grounds of protecting the rights of the Russian speaking population, Central Asian republics are concerned about their relations with Moscow and have increased their interactions with China to balance

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<sup>920</sup> Ilkhamov, “Russia Lures Uzbekistan,” 8.

<sup>921</sup> Kumar, “Role of Russia,” 19.

<sup>922</sup> E. C. Chow and L. E. Hendrix. “Central Asia’s Pipelines: Field of Dreams and Reality (NBR Special Report 23).” *The National Bureau of Asian Research Program* (2010), 31.

<sup>923</sup> Graham Smith, Vivien Law, Andrew Wilson, Annette Bohr, and Edward Allworth. *Nation-Building in the Post-Soviet Borderlands: The Politics of National Identities* (Cambridge University Press, 1998), 159.

<sup>924</sup> “Russia Stabilizes Central Asia,” *The St. Petersburg Times*, 17 April 2013.

<sup>925</sup> “Ibid.

against Russia. A good example is Nazarbayev’s visit to Beijing in May 2014, which sought to increase cooperation between China and Kazakhstan not only in the area of energy, but also “aircraft production, telecommunication, and mining.”<sup>926</sup> This sea change in the political landscape has also been reflected in trade relations between Russia and Central Asia.

According to Raimondi, while “Russia remains one of the main trade partners of the region; in the last decade, trade volumes and values have decreased due to international challenges.”<sup>927</sup> The global financial crisis in 2008 and Russia’s illegal annexation of Crimea have affected Russia’s trade volume with the region. In 2017, “Russian trade relations amounted to almost \$23 billion, while China’s amounted to almost \$36 billion.”<sup>928</sup> Russian trade with the Central Asian republics is depicted on the table below:

Table 26: Russia - Central Asia Trade<sup>929</sup>

| Year | Trade volume in \$ million |
|------|----------------------------|
| 1996 | 8.169                      |
| 1999 | 3.825                      |
| 2000 | 6.472                      |
| 2005 | 12.681                     |
| 2008 | 26.752                     |
| 2010 | 21.497                     |
| 2012 | 31.987                     |
| 2014 | 29.983                     |
| 2016 | 18.551                     |
| 2017 | 22.860                     |

Source: Raimondi, *Central Asia Oil and Gas Industry-The External Powers’ Energy Interests in Kazakhstan, Turkmenistan and Uzbekistan*.

<sup>926</sup> Ernesto Gallo, “Kazakhstan Pivot to China?” Institute for Security & Development Policy, No 154, 4 June 2014.

<sup>927</sup> Raimondi, “Central Asia Oil and Gas,” 6.

<sup>928</sup> Ibid.

<sup>929</sup> Ibid, 7.



Although Central Asian republics and Azerbaijan were amongst the early participants to NATO's Cooperation Council, Russia was able to continue to maintain its influence over the region albeit its relative economic and military decline.<sup>930</sup> The Soviet economic infrastructure, transportation network and trade relations were organized between Russia and other Soviet Republics and outside connections from Central Asia were very limited. Additionally, Russia maintained control of most of the oil and gas infrastructure, in particular pipelines, in Central Asia, and the Caucasus until the last decade of the 20<sup>th</sup> Century. Pradhan argues that

The whole pipeline transport and communication network was integrally connected with Russia. The Soviet pipelines were used by Western companies like Chevron to reduce the cost of new infrastructure. That's why all the Central Asian countries rely on Russia to transfer their oil and gas through Russian pipelines enabling Moscow to maintain a stronghold in the region and to generate transit fees out of it. Any Western presence in the region would be a spoilsport for the Russian interests in its backyard.<sup>931</sup>

According to Raimondi, "Until 1997, all pipelines were directed toward Russia and under the monopolistic control of Gazprom... The Central Asia-Centre (CAC) delivered gas to Russia from Turkmenistan via Uzbekistan and Kazakhstan during Soviet times with a total annual capacity of 90 Bcm. However, in 2009, the CAC's capacity dropped to about 44 Bcm."<sup>932</sup>

Between 2013 and 2017, the Gazprom Group purchased over 111.4 Bcm of gas from Central Asia. Gazprom bought this gas to resell it to more lucrative European markets instead of developing Russian oil and natural gas fields. This allowed Russia to maintain its energy relations with the Central Asian republics by reducing intervention of external players. Gazprom also gained economic benefits through these energy deals as well as maintained its market share in Europe.<sup>933</sup> However, Central Asian gas has a new destination as the focus shift

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<sup>930</sup> NATO Cooperation Council became the Euro Atlantic Partnership Council (EAPC) in 1997. "The 50-nation EAPC is a multilateral forum for dialogue and consultation on political and security-related issues among Allies and partner countries. It provides the overall political framework for NATO's cooperation with partner countries in the Euro-Atlantic area, and for the bilateral relationships developed between NATO and individual partner countries under the Partnership for Peace (PfP) programme." Jun 2017, [https://www.nato.int/cps/ic/natohq/topics\\_49276.htm](https://www.nato.int/cps/ic/natohq/topics_49276.htm)

<sup>931</sup> Pradhan, *Geopolitics of Energy*, 216.

<sup>932</sup> Raimondi, "Central Asia Oil and Gas," 7.

<sup>933</sup> Ibid.

from the west to the east. China has become the main export destination replacing Russia. In 2018, Central Asian natural gas exports to China were 46.8 Bcm while 16.1 Bcm to Russia and 5.7 Bcm for intra-regional trade. According to Pirani, “Due to strong gas demand in China, in the early 2020s, the Central Asia-China pipeline corridor will be used close to its 55 Bcm/year capacity.”<sup>934</sup>

Russia’s long-term strategic objectives to maintain influence over Central Asia could be summarized along the following lines:

- Building and institutionalizing relations with Central Asian states by using legal and commercial means;
- Ensuring Russian firms participate in the region’s natural oil and gas development projects that maintains dependence on Russian pipeline networks for exports;
- Constraining involvement of external powers, in particular the US and EU as well as Western companies in joint ventures formed with regional counterparts;
- Discouraging potential alternative pipeline projects by constructing new pipelines that maintain dependence on Russian gas and/or natural gas pipeline networks;
- Creating a wedge amongst the Western countries through energy diplomacy, disinformation, and price manipulation;
- Focusing on maintaining market share to ensure the EU that energy dependence continues;
- Developing multilateral and selective bilateral relations with Central Asian countries to ensure its role as a security provider for the region.<sup>935</sup>

Barry Buzan’s concept of “security complex” offers an appropriate analytical tool for the study of Central Asia. According to Buzan, security complex is a complicated concept and “is defined as a group of states whose primary security concerns link together sufficiently closely that their national securities cannot realistically be considered apart from one another.”<sup>936</sup> Political security concerns could not be detached from economic and societal security concerns. Thus, natural resources are part of overall considerations especially stability of states and legitimacy of governments are concerned. Buzan goes on to say:

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<sup>934</sup> Simon Pirani, “Central Asian Gas: Prospects for the 2020s,” *Oxford Institute for Energy Studies*, December 2019, iii.

<sup>935</sup> Pradhan, *Geopolitics of Energy*, 218.

<sup>936</sup> Boris Rumer Ed., *Central Asia: A Gathering Storm?* Chapter by Rustam Burnashev, “Regional Security in Central Asia: Military Aspects,” reference Barry Buzan “The Interdependence of Security and Economic Issues,” *Political Economy and the Changing Global Order*, (1994), 2002, 114.

Political security concerns the stability of states and their systems of government as well as their legitimizing ideologies. Economic security concerns the accessibility to the state of major economic factors such as the resources, finances, and markets that are necessary to sustain the state's desired levels of welfare and power. Societal security concerns the sustainability of factors that form the identity of a state: language, culture, religion, custom, and national identity.<sup>937</sup>

All these aspects of security are intertwined within the Central Asian security complex.

Williams argues that "Security involves the ability to pursue cherished political and social ambitions. It is therefore best understood as what Ken Booth (2007) has called, 'survival-plus,' the 'plus' being some freedom from life determining threats, and therefore some life choices."<sup>938</sup> While the new Central Asian states are distancing themselves from Russia, they are also considering choices against threats and dangers to their survival. Energy reserves are not only a critical factor for their economic and social development and security, but also their national security and survival.

### 6.3.3. Central Asia and the United States

After the collapse of the Soviet Union, in early 1990s, the overall US commitment was limited to Central Asia in scope, and the region was not considered as part of its vital interests such as the Middle East. However, the US involvement in the region increased steadily. From a strategic point of view, analysts and officials in the West have attached increasing importance to Central Asia's location at the crossroads of Eurasia.<sup>939</sup> For example, in 1997 Brzezinski called for a US strategy to "consolidate and perpetuate the prevailing geopolitical pluralism on the map of Eurasia" in order to shape a new "cooperative trans-Eurasian security system."<sup>940</sup>

The US interest in the region could be divided into three distinct periods since the independence of the Central Asian Republics in 1991. The first phase was between the independence to September 11, 2001 terrorist attacks; the second phase ended with the closure

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<sup>937</sup> Buzan, *People, States & Fear*, 116.

<sup>938</sup> Paul D. Williams, ed. *Security Studies: An Introduction*. Routledge, (2010), 6.

<sup>939</sup> Frederick S. Starr, "Making Eurasia Stable," *Foreign Affairs*, vol. 75, (1996) and Ali Banuazizi, and Myron Weiner, eds. *The New Geopolitics of Central Asia and its Borderlands*. Indiana University Press, 1994.

<sup>940</sup> Zbigniew Brzezinski, "A Geo-Strategy for Eurasia," *Foreign Affairs*, vol. 76, no. 5 (Sep/Oct 1997), 50-64.

of the last US military airbase in Manas, Kyrgyzstan in June 2014. It could be concluded that the hasty withdrawal of the US and NATO forces from Afghanistan in August 2021 marks the end of the third phase. While the collapse of Afghanistan to Taliban control in August 2021 may mark the end of the third phase, Pillalamarri argues, “The resurgence of Russian influence in the region was the key factor in the departure of the U.S. from Manas...Kyrgyzstan is largely dependent on Russia’s economy.”<sup>941</sup>

The US policy during the first period from independence to the 9/11 terrorist attacks focused on three priorities:

...securing the legacy of Soviet weapons of mass destruction; helping the Central Asian countries attain and defend their newly won sovereignty, independence, and territorial integrity against a potential resurgence of Russian neo-imperialism; and breaking up Russia’s monopoly over pipelines and transit routes for Central Asian oil and gas as a means of ensuring the region’s independence from Russia.<sup>942</sup>

While targeting these objectives, the US followed a long-term approach for establishment of democratic governance and free-market economies for the region. Central Asia was perceived as a region with low geostrategic importance for the United States. However, the US supported exploration and development of the Central Asian and the Caucasus energy resources. Additionally, the US provided political and financial support to the projects such as the Baku-Tbilisi-Ceyhan (BTC) pipeline. These projects focused on reducing Russian influence in Central Asia and the Caucasus and enabled regional countries to diversify their markets and export energy resources to international markets.

The second phase started immediately after Al-Qaeda attacked the World Trade Center and the Pentagon on September 11, 2001.<sup>943</sup> Taliban controlled Afghanistan was known to be providing safe heaven to Al-Qaeda terrorist groups. The US initial force deployment to Central

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<sup>941</sup> Akhilesh Pillalamarri, “The United States Just Closed its Last Base in Central Asia,” *The Diplomat*, 10 June 2014.

<sup>942</sup> Eugene Rumer, Richard Sokolsky, Paul Stronski, *U.S. Policy Toward Central Asia 3.0*, Carnegie, 25 January 2016.  
<https://carnegieendowment.org/2016/01/25/u.s.-policy-toward-central-asia-3.0-pub-62556>

<sup>943</sup> Rajan Menon, “The New Great Game in Central Asia,” *Survival*, Vol 45. No 2, (Summer 2003), 188.

Asia started as early as October 2001.<sup>944</sup> The Central Asia region became a higher priority for the United States due to the Global War on Terrorism and following US and NATO operations in Afghanistan. During this period, military and security affairs took precedence over democracy promotion, human rights, and the creation of a free-market economy.

Although political, social, and economic problems of the region were known by regional and global external actors, the US involvement has significantly altered regional geopolitical dynamics. The US followed a carefully crafted strategy and balanced approach to the region. While increasing relations with the region by promoting peace and democracy and reducing Russia's influence, the US maintained cooperative relations in the initial stages of the Afghan War.<sup>945</sup> Changes in US strategy and priorities resulted in increased cooperation with the regional countries. According to Rumer et al., the first two phases had common characteristics. "The region's significance to the United States was largely derivative of interests that were not indigenous to Central Asia itself but rather were functions of U.S. policies, priorities, and relationships with countries around the region."<sup>946</sup>

The third phase started with the closure of US bases in Central Asia following a drawdown of US troops in 2013 when NATO handed over "lead in security responsibility" to the Afghan National Army and security apparatus. In May 2014, President Obama announced a timetable for the withdrawal of most of American forces by the end of 2016.<sup>947</sup> The US and NATO involvement in the region continued, albeit in a dwindling commitment, until the collapse of the government in Kabul. The return of the Taliban resulted in a hasty withdrawal of US/NATO troops in August 2021. Under these circumstances, along with the increased

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<sup>944</sup> Shahram Akbarzadeh, "Keeping Central Asia Stable," *Third World Quarterly*, Vol 25, no. 4 (2004), 689.

<sup>945</sup> Angela Stent, "The Impact of September 11 on US-Russia Relations," Brookings, 8 September 2021. <https://www.brookings.edu/blog/order-from-chaos/2021/09/08/the-impact-of-september-11-on-us-russian-relations/>

<sup>946</sup> Rumer, Sokolsky, and Stronski, *U.S. Policy*.

<sup>947</sup> "Timeline: U.S. War in Afghanistan," Council on Foreign Relations (Council on Foreign Relations), accessed December 30, 2021, <https://www.cfr.org/timeline/us-war-afghanistan>.

Chinese and Russian influence as well as domestic and geopolitical trends of the region, Rumer et.al. suggest that “Future opportunities to advance American interests will be limited, and U.S. relations with Central Asian countries will be challenging.”<sup>948</sup>

The US withdrawal from the region does not mean its importance is decreased since the interest from other countries such as India, Pakistan, Japan, and South Korea remains high. This region has become an area of shared interest for China and Russia albeit potential for competition between these powers still exist. Additionally, the US still needs a footprint in Central Asia in order to carry out “over the horizon” strikes against terrorist organizations.<sup>949</sup> Therefore, Central Asia is becoming, not only the energy, but also the geopolitical heartland of Asia as the number of energy deals and construction of pipelines allows China and Russia to increase their influence.

The shale revolution allowed the United States to produce most of its natural gas and oil. The Energy Information Agency (EIA) reports that in 2020, “The US imported about 7.86 million barrels per day (MMb/d) of petroleum from about 80 countries...exported about 8.50 MMb/d of petroleum to about 174 countries and 4 US territories.”<sup>950</sup> The top five countries in oil imports are Canada, Mexico, Russia, Saudi Arabia, and Colombia. The top five destinations of gross petroleum exports are Mexico, Canada, China, Japan, and India. In the area of natural gas, the EIA reports that “Most of the natural gas consumed in the US is produced in the US.”<sup>951</sup> The US imports a small amount of natural gas from Canada via pipelines while most of the LNG is imported from Trinidad and Tobago. The US LNG exports are directed to Europe and

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<sup>948</sup> Rumer, Sokolsky, and Stronski, *U.S. Policy*.

<sup>949</sup> “Tilting at Windmills: Washington's Quest for Bases in Central Asia,” Tilting at windmills: Washington's quest for bases in Central Asia, accessed December 30, 2021, <http://www.cacianalyst.org/publications/analytical-articles/item/13694-tilting-at-windmills-washingtons-quest-for-bases-in-central-asia.html>.

<sup>950</sup> U.S. Energy Information Administration (EIA), “Frequently Asked Questions (FAQs) (U.S. Energy Information Administration (EIA), accessed December 30, 2021, <https://www.eia.gov/tools/faqs/faq.php?id=727&t=6>.

<sup>951</sup> U.S. Energy Information Administration - EIA - Independent Statistics and Analysis, “Natural Gas Imports and Exports” (U.S. Energy Information Administration (EIA), accessed December 30, 2021, <https://www.eia.gov/energyexplained/natural-gas/imports-and-exports.php>.

Asia. Therefore, the US interest in the energy resources of Central Asia is not based on its energy demand. It is rather centered on geopolitical and strategic considerations focusing on reducing Russian influence and the monopolization of energy resources while facilitating free flow of oil and natural gas to Europe and Asia.<sup>952</sup>

#### 6.3.4. Central Asia and the European Union

After the independence of Central Asian republics, the European Union has pursued a normative approach to the region focusing on the “progress towards, greater stability and rising levels of economic, democratic and human development and human security throughout Central Asia.”<sup>953</sup> While Central Asian republics, such as Kazakhstan, developed direct relations with some of the EU member states in mid 1990s, cooperation remained limited at the technical level including development of the transport infrastructure. However, the terrorist attacks on September 11 and the following military intervention in Afghanistan changed EU/NATO member states relations with the regional countries, as they required establishing military bases, troop deployments, and logistic support. At the same period, between 2001-2007, the EU’s interest in regional countries natural resources also increased.

However, it was the United States, not the EU, that decided to challenge Russia’s dominant position by establishing oil and pipelines from Central Asia and the Caucasus. The first oil pipeline from Baku, Azerbaijan through Tbilisi, Georgia to Ceyhan, Turkey (Baku-Tbilisi-Ceyhan (BTC) - 1099 mile) established and opened in 2006. The BTC pipeline was going to be accompanied with a gas pipeline starting from Turkmenistan through Azerbaijan-Georgia-Turkey to Europe, transferring Turkmen, Central Asian, and Azeri gas. Due to challenges getting gas from Central Asia and Turkmenistan, the initial direction of the Nabucco

<sup>952</sup> Pradhan, *Geopolitics of Energy*, 220.

<sup>953</sup> European Parliament Report, A6-0503/2007, dated 11 December 2007, 4. [https://www.europarl.europa.eu/doceo/document/A-6-2007-0503\\_EN.pdf](https://www.europarl.europa.eu/doceo/document/A-6-2007-0503_EN.pdf)

gas pipeline was changed to start from Baku through Turkey-Bulgaria to reach Austria, in order to support European energy security by providing an alternative natural gas source.

In 2007, an institutional strategy, “European Union and Central Asia: Strategy for a New Partnership” was only adopted by the European Council, almost more than one and half decades after the independence of regional countries.<sup>954</sup> The EU strategy continues to highlight the commitment of the EU to the development of open societies and adherence to the international norms offering expertise and support for “good governance, the rule of law, human rights, democratization, education, and training.”<sup>955</sup> While some of these reforms are welcomed, especially the ones supporting economic development and encouraging investment, others that are related with the democratization or rule of law that inhibits the power of authoritarian leaders were not utilized and implemented, thus, further delaying the political and economic transformation of the region.

The EU and Central Asia interests on security and stability of the region also converge in the area of energy security. The European Union’s partnership strategy highlighted, “The development of resources in oil and gas has significantly increased the role of Central Asian States as an energy producers and transit countries. Increasing oil and gas exploitation will contribute to better world market supplies and will be conducive to diversification. Gas deliveries from the region are of special importance.”<sup>956</sup> It is important to note that these developments increased the following of the Russia-Ukraine natural gas crisis of 2006. Thus, it could be argued that this partnership strategy was the initial reaction from the EU to diversify its energy resources to ensure security of supply.

A follow-on parliamentary report also recognized the importance of the region for European energy security. A European Parliament report highlights that “Central Asia can

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<sup>954</sup> Council of the European Union, “The EU and Central Asia: Strategy for a New Partnership,” 31 May 2007, 2.  
<https://data.consilium.europa.eu/doc/document/ST-10113-2007-INIT/en/>

<sup>955</sup> Ibid.

<sup>956</sup> Ibid.



contribute, with their significant energy resources and by their efforts towards diversification among trading partners and supply routes, to meeting the European Union's need for energy security and energy supply."<sup>957</sup> The EU Strategy for Central Asia was based a series of previous engagements and an action plan involving the Caucasus and Caspian region countries:

- the EU's Action Plan for an Energy Policy for Europe (March 2007) and to the energy cooperation between the EU, the littoral states of the Black and Caspian Seas, and their neighbors;
- European foreign policy resolution on energy dated 26 September 2007;
- the Baku Initiative for the development of energy cooperation and transport between the EU and the countries of the Black Sea and Caspian region; and
- the Memoranda of Understanding concluded with Azerbaijan and Kazakhstan in the context of developing a foreign policy at the service of Europe's energy interests.<sup>958</sup>

The 2007 strategy focused on improving human rights and democracy, maintaining peace and stability, and cultivating prosperity. While achieving stability and reforms in select countries, this strategy produced poor performance in other countries and areas such as continuation of authoritarian regimes, high level corruption, and a lack of basic freedoms. Thus, the progress continues to remain uneven in achieving identified priorities. According to Raimondi, "[The] EU failed to exert concrete influence in the region, because of the strong influence of Russia and China over the region...the European approach to the region produced more obstacles than benefits for the strengthening of bilateral relations."<sup>959</sup> The key challenges originated from the factors beyond the EU's control such as relations between Central Asian countries, growing clout, and the influence of Russia and China while decreasing US attention towards the region in parallel with the withdrawal from Afghanistan.

The EU released a new strategy in 2019 as China's "Belt and Road Initiative" gained momentum. Russell suggests that "Recognizing growing potential, the EU is gradually stepping up its engagement."<sup>960</sup> Partnership and Cooperation Agreements (PCAS) are in effect

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<sup>957</sup> European Parliament, "EU Strategy for Central Asia," dated 11 December 2007, 4. [https://www.europarl.europa.eu/doceo/document/A-6-2007-0503\\_EN.pdf](https://www.europarl.europa.eu/doceo/document/A-6-2007-0503_EN.pdf)

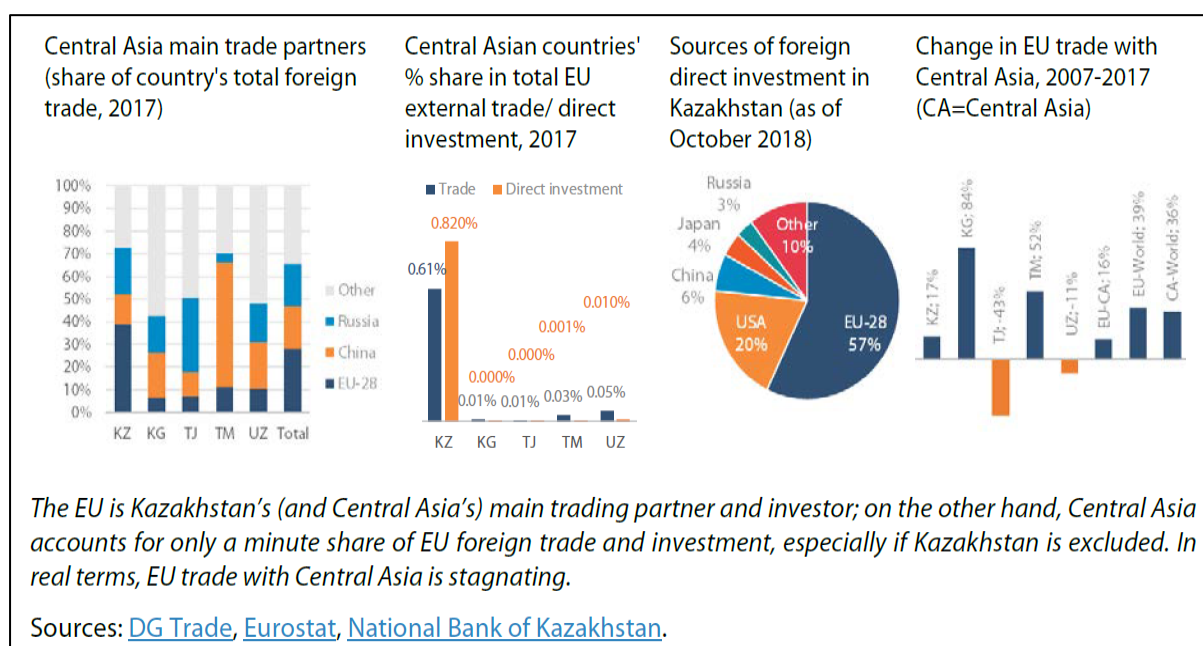
<sup>958</sup> Raimondi, "Central Asia Oil and Gas," 3.

<sup>959</sup> Ibid, 18.

<sup>960</sup> Martin Russell, "The EU's New Central Asia Strategy," European Parliament Research Service, January 2019, 2.

with regional countries excluding Turkmenistan. Only Kazakhstan has signed enhanced PCAs while other countries, Kyrgyzstan, Tajikistan, and Uzbekistan, are negotiating the terms of the new agreement. The EU's performance as a trading partner with the region has improved significantly, albeit it mostly centered on Kazakhstan. China has become the main trading partner of Turkmenistan, Kyrgyzstan, and Uzbekistan. Overall, the EU remains the main trading partner followed by China and Russia. The following Figure depicts the EU's trade and investment in Central Asia.

Figure 31: EU Trade and Investment in Central Asia<sup>961</sup>



Source: European Parliament, 'The EU's new Central Asia strategy,'

[https://www.europarl.europa.eu/RegData/etudes/BRIE/2019/633162/EPRS\\_BRI\(2019\)633162\\_EN.pdf](https://www.europarl.europa.eu/RegData/etudes/BRIE/2019/633162/EPRS_BRI(2019)633162_EN.pdf)

While the EU is likely to remain as an important trading partner of the region, "During the launch of the new strategy, High Representative of the EU for Foreign Affairs and Security

<sup>961</sup> Martin Russell, "The EU's New Central Asia Strategy," European Parliament Research Service, January 2019, 3.

Policy Federica Mogherini stressed that the EU did not intend to engage in a geopolitical game in Central Asia.”<sup>962</sup> The EU approach to the region is not based on a zero-sum game. Its latest strategy highlights normative issues while focusing on regional development and domestic reforms. While the EU continues to seek new energy sources, Central Asia will remain as an alternative. However, as Raimondi stated, “[The] EU has carefully moved in the geopolitical landscape of the region, where Russia is still a relevant player with a certain degree of influence. Since Russia is the main gas supplier of European States, any European attempt to alter the structure of the export routes must be carefully decided, in order not to provoke Russian supply cut-offs.”<sup>963</sup> Thus, the EU will continue to follow a balanced approach toward the regional countries as well as observing other key players in the region. Especially, the developments related with the China’s BRI and Russia’s Eurasian Economic Union initiatives are going to shape geopolitical, economic, and energy relations, as well as US engagements in the region. Finally, the EU will also involve other regional countries such as Turkey, Iran, India, Japan, and Korea as potential areas of cooperation emerge.<sup>964</sup>

The EU focused on diversification by importing gas from the Middle East and North Africa (MENA); increasing cooperation with Central Asia and the Caucasus, in particular Azerbaijan, Kazakhstan, and Turkmenistan over the southern corridor; and importing gas from the US, Australia and East Africa. Due to terrorist threats, civil unrest, and increasing domestic energy consumption, the MENA countries were considered as unreliable suppliers (e.g., Italy’s imports from Libya were down by 11.9% in 2013, supplies from Algeria were down by 40%). Alternatives included construction of a natural gas pipeline to carry Central Asian and Caucasus gas to Europe.

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<sup>962</sup> Emilbek Dzhuraev, Nargiza Muratalieva, “The EU Strategy on Central Asia,” March 2020, 6.

<sup>963</sup> Raimondi, “Central Asia Oil and Gas,” 19.

<sup>964</sup> Dzhuraev, Muratalieva, “The EU Strategy,” 7.

### 6.3.5. Central Asia and Other Countries

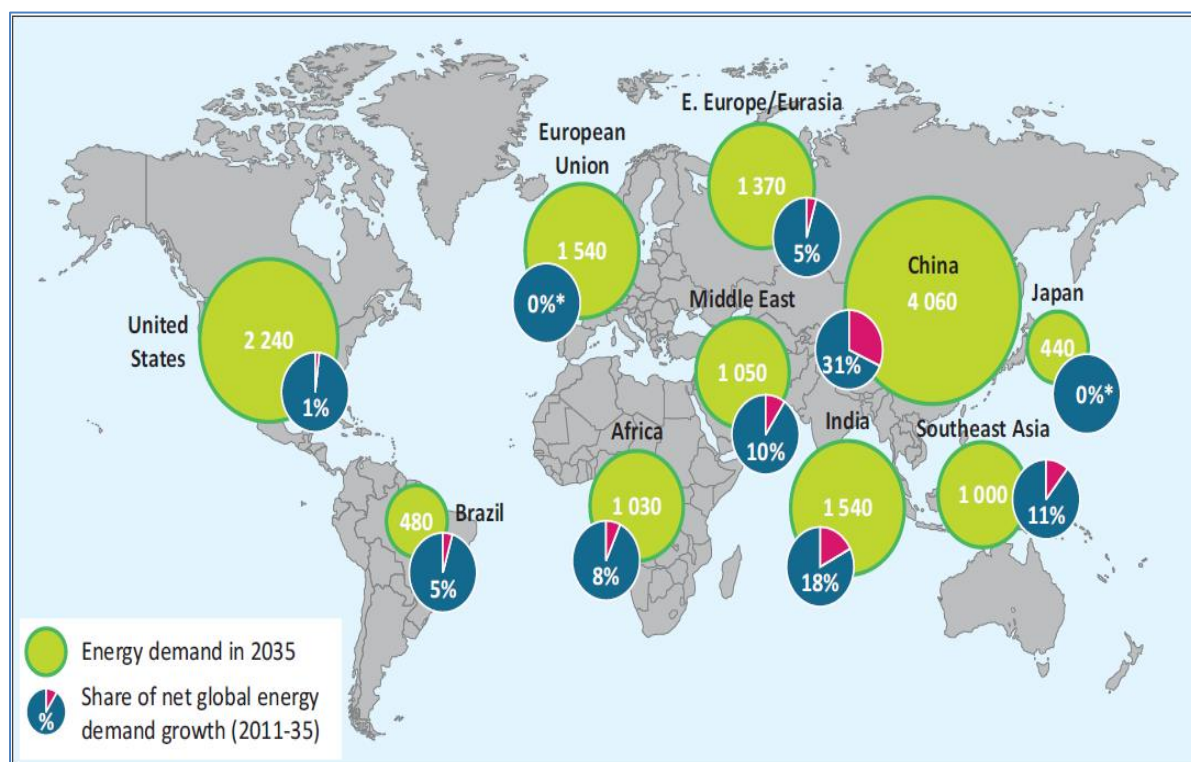
The International Energy Agency (IEA) forecast suggests that China is the main driver of increasing energy demand in the current decade. However, India is poised to take over in the 2020s as the principal source of rise. China and India combined are likely to account for more than 50% of total world energy demand growth.<sup>965</sup> This change accounts for 60% of world oil, 20% of natural gas, and 85% of world coal demand growth. China has become the largest importer of oil in 2016. China and India are the largest consumers neighboring Central Asian natural resources.<sup>966</sup> Central Asian natural gas export to China will remain around 55 Bcm in the early 2020s but may increase to 85 Bcm by construction of a new pipeline from Turkmenistan via Uzbekistan, Tajikistan and Kyrgyzstan to China in the late 2020s. According to Pirani, “The main source of additional volume to China will be Turkmenistan; Kazakhstan has committed to 10 bcm/year until 2023, after which its exports to China will fall; Uzbekistan will probably contribute around 10 Bcm/year.”<sup>967</sup>

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<sup>965</sup> IEA Global Energy Outlook 2013.

<sup>966</sup> Pradhan, *Geopolitics of Energy*, 192.

<sup>967</sup> Pirani, “Central Asian Gas,” iii.

Figure 32: Global Energy Outlook – Primary Energy Demand by Region out to 2035<sup>968</sup>

Source: IEA World Energy Outlook 2013, Global Energy Trends to 2035, 67. All Rights Reserved.

The global natural gas demand is expected to increase around 47%, driven by China, India, Japan, South Korea, and the Middle East. Alongside the global shift of economic power, an increase in global energy demand moving from Western economies to a developing Asia is resulting in a major shift of global energy markets and geopolitics. Herberg argues that “Asia has become ‘ground zero’ in global energy markets as demand has accelerated to fuel urbanization and transportation, power, petrochemical and industrial growth.”<sup>969</sup> With Kazakhstan having large oil and coal stocks, and Turkmenistan and Uzbekistan possessing considerable natural gas reserves, Central Asia is expected to witness a race among regional powers to secure access and control over future oil and gas supplies.

<sup>968</sup> IEA World Energy Outlook 2013, Global Energy Trends to 2035, 67. All Rights Reserved.

<sup>969</sup> Mikal E. Herberg, “Pipeline Politics in Asia: Energy Nationalism and Energy Markets,” 2010, 3.

In addition to existing pipelines connecting Central Asia and Russia to China, other potential export projects such as Turkmenistan-Afghanistan-Pakistan-India (TAPI) pipeline to India and the Trans Caspian pipeline to Azerbaijan, Turkey, and Europe will continue to be discussed as part of future energy competition.<sup>970</sup> When operationalized, TAPI's capacity would allow export up to 33 Bcm while the Trans Caspian pipeline would transport up to 30 Bcm.<sup>971</sup>

The most recent energy agreements between China-Russia and China-Central Asian Republics have highlighted the levels of existing reserves in Russia and Central Asia, as well as this region's capacity to meet the increasing demand of Southeast Asia and Europe. For example, after more than a decade of negotiations between Russia and China, this \$400 billion natural gas deal should not be perceived as a coincidence. It is an important shift that supports Russia's diversification of export markets. With construction of this pipeline, "Russia will supply China [with] 38 billion cubic meters of gas per year via the eastern 'Power of Siberia' pipeline, which crosses Siberia and reaches China's populous northeast regions."<sup>972</sup> This agreement represents a major step not only in the global energy landscape but also in geopolitics. Under pressure from Western sanctions, the China energy deal provides Putin a political and economic maneuver space.

While Central Asian republics continue to deliver a decreasing volume of natural gas to Russia, China's demand will increase. At the same time, Russian export to China continues to grow as the two countries' strategic relations deepened. China has gained advantageous position to negotiate price of natural gas due to Western sanctions as well as increasing natural gas exports from the Central Asian republics. So far, China and Russia relations have not been affected due to potential competition for increasing Chinese influence in Central Asia.

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<sup>970</sup> Pirani, "Central Asian Gas," iii.

<sup>971</sup> Pradhan, *Geopolitics of Energy*, 107.

<sup>972</sup> Zachary Keck, "China and Russia Sign Massive Natural Gas Deal," *The Diplomat*, 21 May 2014.  
<https://thediplomat.com/2014/05/china-and-russia-sign-massive-natural-gas-deal/>

However, pipeline politics will continue to play out to determine the future of the regional countries' relations with potential customers and stakeholders, including the US, China, the EU, India, Japan, Israel, Iran, Turkey, Afghanistan, and Pakistan while "There are very few states that possess the capability to influence Central Asian energy geopolitics at the global level."<sup>973</sup>

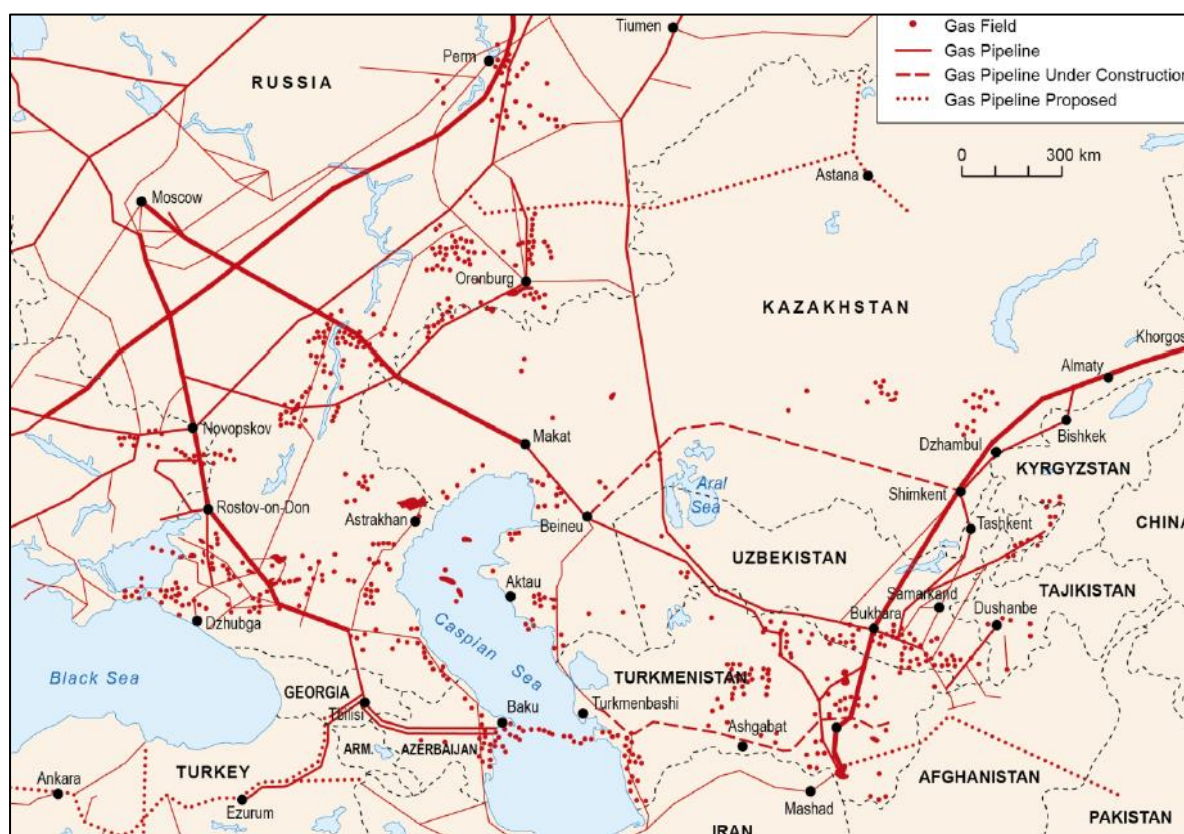
#### 6.4. Central Asia Natural Gas Reserves and Pipeline Networks

Owing to its abundant energy reserves, Central Asia and the Caucasus countries have drawn the interest of regional and global players including Russia, China, Iran, India, Turkey, the United States, and European Countries, as well as international organizations such as the European Union. These interested parties have been involved in energy sectors at different levels and for different purposes. Central Asia and the Caucasus region have abundant proven and potential natural resources, especially fossil fuels, oil, and natural gas. Pradhan refer to the US EIA's 2001 study that suggests the Caspian Region possessed about 34 billion barrels of oil and 235 billion barrels of possible oil reserves that equals to one fourth of the Middle East oil reserves. The proven natural gas reserves of Central Asia and the Caucasus are about 243-248 trillion cubic feet.<sup>974</sup> These oil and gas resources are located in the four countries of the region: Kazakhstan, Turkmenistan, Uzbekistan, and Azerbaijan. While there are large oil reserves and production has existed in the region, this part focuses on natural gas reserves and transport networks. Tajikistan, Kyrgyzstan, Georgia, and Armenia are either transit and/or consumer countries. The following map provides an overview of natural gas fields and existing/planned pipelines networks.

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<sup>973</sup> Pradhan, *Geopolitics of Energy*, 214.

<sup>974</sup> *Ibid*, 6.

Figure 33: Central Asia and Caspian Region Natural Gas Fields and Pipelines<sup>975</sup>

Source: Simon Pirani, OIES, [https://www.oxfordenergy.org/wpcms/wp-content/uploads/2012/12/NG\\_69.pdf](https://www.oxfordenergy.org/wpcms/wp-content/uploads/2012/12/NG_69.pdf)

Pirani highlights that the confirmation of large reserves in Turkmenistan “has refocused the international gas industry’s attention on the Central Asian and Caspian region.”<sup>976</sup> In parallel to the increasing natural gas demand as a transition fuel, a number of new markets emerged in the beginning of the 2000s. In the East, China has become the largest natural gas market as one of the key drivers of the increased global demand. In the West, the completion of Azerbaijan’s Shah Deniz II project started delivering gas to Turkey and Western Europe albeit at limited scale. In the North, Russia continues to be an export market with demand fluctuating year to year. South India and other Asian countries remain as potential markets for

<sup>975</sup> Simon Pirani, “Central Asian and Caspian Gas Production and the Constraints on Export,” The OIES, December 2012, 1.

<sup>976</sup> Pirani, “Central Asian Gas,” 1.



export. Iran is also one the export destination albeit it has one the largest natural gas reserves at global scale.

#### 6.4.1. Turkmenistan

Turkmenistan has large proven reserves of oil and natural gas. Based on 2016 Oil and Gas Journal data, Turkmenistan owns an “estimated 600 million barrels of proven oil reserves”<sup>977</sup> Its proven natural gas reserves reaches about 265 trillion cubic feet (Tcf). It is “the sixth largest natural gas reserve holder in the world, and was among the top 15 dry natural gas producers in 2015...Turkmenistan owns several of the world’s largest natural gas fields.”<sup>978</sup>

Russia and former CIS countries were the main customers for Turkmenistan natural gas exports. The graphics shows the decline of Russian imports due to rapid collapse of Russia’s GDP and economic crisis of 1997/98. In the beginning of the 2000s, export to/through Russia picked up as the main destination reaching around 40 bcm/year by the mid- 2000s. After the peak of 2008, 42.3 bcm/year, there was a rapid decrease to 11.8 bcm/year in 2009, and levels continued around the same point in the 2010s. Over the last decade, China replaced Russia as the largest export market, and China has become the main trading partner of Turkmenistan since 2011. This shift has had “significant commercial and political consequences across the region, as well as influencing Sino-Russian energy relations.”<sup>979</sup> The following graphic depicts Turkmenistan Dry Natural Gas Production since the end of the Cold War.

According to Pirani, the Turkmenistan natural gas sector experienced two fundamental changes: First, it “relies on two foreign companies - Chinese National Petroleum Corporation (CNPC) and Petronas - for more than one quarter of its gas output...Second, after years of plans and promises, last year Turkmenistan commissioned a major petrochemicals plant, at

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<sup>977</sup> U.S. Energy Information Agency, “Turkmenistan, Analysis,” <https://www.eia.gov/international/analysis/country/TKM>

<sup>978</sup> Ibid.

<sup>979</sup> Pirani, “Central Asian Gas,” ii.

Kiyanli, which could become a significant source of revenue.”<sup>980</sup> Pirani cautions that the data presented on the table below due to the unreliability of official statistics that are used as the basis.<sup>981</sup> Even if the data is overstated, Turkmenistan has become a leading natural gas exporter of the region. While the Russian share is decreasing and other destinations remain minute, China gets the lion’s share of Turkmenistan production. The following table shows natural gas production, domestic consumption, and export trends.

Table 27: Turkmenistan Natural Gas Balance, 2010-2018<sup>982</sup>

| Bcm                    | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 |
|------------------------|------|------|------|------|------|------|------|------|------|
| Production (Sales Gas) | 40.1 | 56.3 | 59.0 | 59.0 | 63.5 | 65.9 | 63.2 | 58.7 | 61.5 |
| Total Gas Balance      | 40.1 | 56.3 | 59.0 | 59.0 | 63.5 | 65.9 | 63.2 | 58.7 | 61.5 |
| Domestic Consumption   | 18.9 | 20.7 | 17.6 | 18.7 | 20.0 | 27.0 | 25.5 | 22.9 | 24.5 |
| Export (Total)         | 21.2 | 35.6 | 41.4 | 40.3 | 43.5 | 38.9 | 37.7 | 35.8 | 37.0 |
| To/through Russia      | 10.7 | 11.2 | 10.9 | 10.9 | 11.0 | 3.1  | 0    | 0    | 0    |
| To Iran                | 7.0  | 10.0 | 9.0  | 5.0  | 6.0  | 7.0  | 7.0  | 0    | 0    |
| To Azerbaijan*         | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 1    | 1    |
| To Kazakhstan          | 0    | 0.3  | 0    | 0.3  | 1    | 1    | 1.3  | 1.5  | 1.5  |
| To China               | 3.5  | 14.1 | 21.5 | 24.1 | 25.5 | 27.8 | 29.4 | 33.3 | 34.5 |

Source: Simon Pirani, *Central Asian Gas: Prospects for the 2020s*

Turkmenistan has several production-sharing agreements (PSA) with Western, Russian, Belarusian, Malaysian and Chinese companies that provide technical solutions to the offshore exploration and production problems. Contribution from foreign companies has boosted the production. According to US EIA:

Foreign companies are allowed to participate in Turkmenistan’s oil and gas sector only when they partner with the state-owned Turkmenneft, the largest oil producer in the

<sup>980</sup> Pirani, “Central Asian Gas,” 2.

<sup>981</sup> Ibid.

<sup>982</sup> Ibid.

country, or Turkmengaz, the state-run natural gas company. Foreign partnerships often take the form of production-sharing agreements (PSA) and are generally for offshore resources. China's CNPC is the only foreign company that has an onshore natural gas PSA with Turkmenistan.<sup>983</sup>

However, Pirani highlights that other foreign companies from Germany, Turkey, Russia, and Belarus reported difficulties in getting paid for their working with state-owned enterprises in the country.<sup>984</sup> China's CNPC and Malaysian Petronas have increased their output from one tenth to one quarter of total Turkmen production.

Turkmenistan is highly dependent on hydrocarbon exports to support its economy. The rapid decline of exports to Russia in 2009 and lower natural gas prices had a negative impact on the economy. A lack of reliable data extends to the economic and fiscal sectors. The data available is based on IMF estimates and may not reflect the real state of the economy, especially on the exchange rate, manat to USD, trade balance, and public investment. Due to a decrease in energy export revenues, Pirani argues that "Turkmenistan is suffering a grave economic crisis that could indeed be sorely aggravated by the inflexibility of its political system, and in turn produce a political crisis. But this is not the only prospect. A recovery in gas prices, and even a gradual increase in exports to China and Russia, could stabilize the trade balance, or at least prevent its further deterioration."<sup>985</sup>

Turkmenistan signed several agreements with China that provide framework for the development of natural gas fields and has signed contracts delivering almost 70% of its total output through "a network of parallel gas pipelines running through Central Asia called the Central Asia-China Pipeline (CACP)."<sup>986</sup> Pirani argues that exports to China could reach 85 bcm/year from 55 bcm/year depending on the construction of the fourth string of the CACP.

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<sup>983</sup> U.S. Energy Information Agency, "Turkmenistan, Analysis."

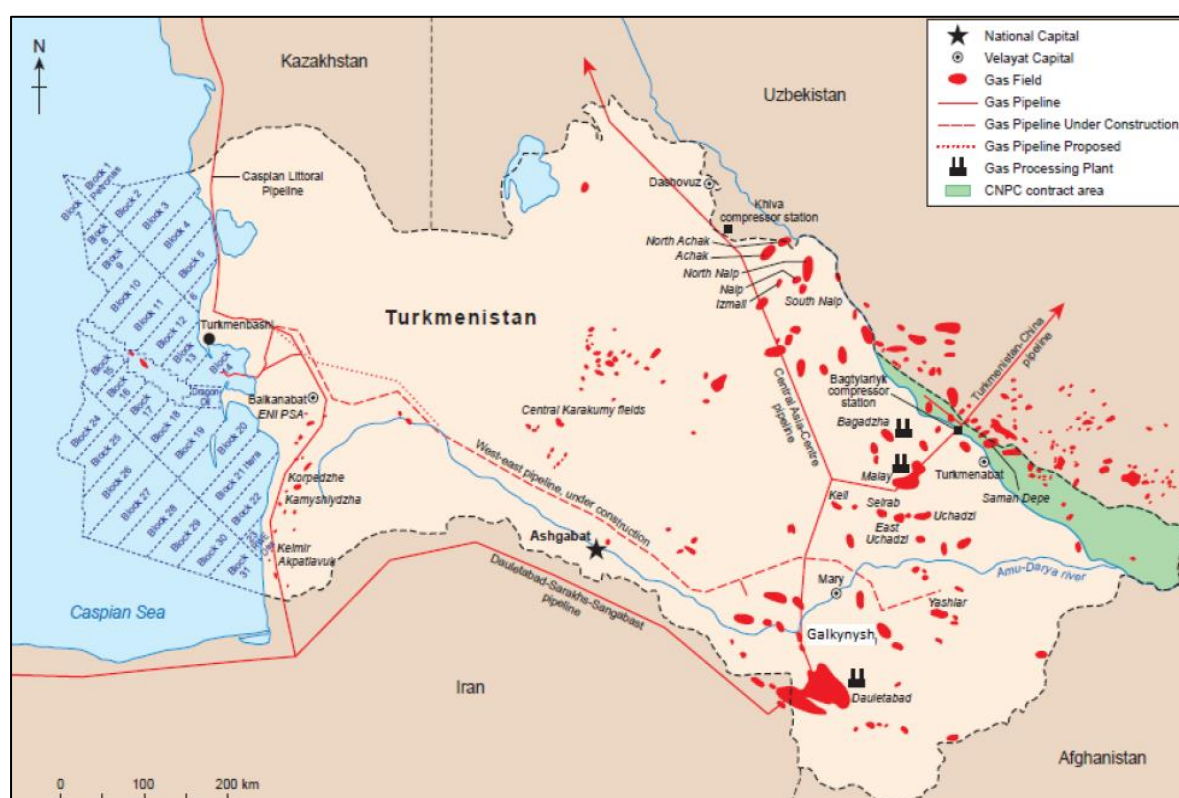
<sup>984</sup> Pirani, "Central Asian Gas," 5.

<sup>985</sup> Ibid.

<sup>986</sup> U.S. Energy Information Agency, "Turkmenistan, Analysis."

Turkmenistan built the East-West pipeline that links the Galkynysh and other fields in the southeast part of the country to the eastern coast of the Caspian Sea. The East-West pipeline was completed in 2015, and has the capacity to carry 30 bcm/year.<sup>987</sup> This pipeline would link Turkmenistan to Azerbaijan via the Trans-Caspian Pipeline (TCP) and would “provide an outlet for Turkmenistan’s natural gas to reach the European market by connecting to existing pipelines in Azerbaijan. Political issues have prevented construction of the TCP.”<sup>988</sup> Additionally, the construction of Turkmenistan-Afghanistan-Pakistan-India Pipeline (TAPI) started in 2015, connecting Galkynysh field of Turkmenistan to India. However, security and political challenges have prevented completion of the pipeline.

Figure 34: Turkmenistan Natural Gas Infrastructure<sup>989</sup>



Source: Simon Pirani, 'Central Asian Gas: Prospects for the 2020s,' OIES, <https://www.oxfordenergy.org/publications/central-asian-gas-prospects-for-the-2020s/>

<sup>987</sup> Pirani, "Central Asian Gas," 7.

<sup>988</sup> U.S. Energy Information Agency, "Turkmenistan, Analysis."

<sup>989</sup> Pirani, "Central Asian Gas," 3.

Turkmenistan natural gas exports to China has a potential to increase pending LNG prices and China's imports from other countries. This development is aligned with the geopolitical and economic trends in the region that suggests decreasing power and influence of Russia while China continues to increase its energy relations and economic clout. Natural gas exports to the North to/through Russia using existing pipelines will depend on the level of Russian production and exports to the European markets. Kazakhstan, Iran and Azerbaijan represent other opportunities for exports. Pirani argues that "large-scale deliveries to Europe via a Trans Caspian pipeline, or to Pakistan and India via the TAPI project, look extremely unlikely: the transport costs mean that Turkmen gas simply cannot reach these markets and compete with other supplies."<sup>990</sup> While these projects are supported by Turkmenistan, markets and geopolitics will define their destiny.

#### 6.4.2. Uzbekistan

According to the US EIA, based on 2016 data, Uzbekistan had 594 million barrels of proven crude oil and 65 Tcf of proven natural gas reserves.<sup>991</sup> While in the 2000s Uzbekistan was the largest producer of natural gas, its production level was slightly lower than Turkmenistan, and a large portion has been delivered to the domestic market since 2010. Uzbekistan uses 43-46 bcm/year of natural gas, more than three quarters of the current level of output of 53-60 bcm/year gas production.<sup>992</sup> In addition to its large population compared to the data other regional countries, its energy intensive Soviet era infrastructure drives domestic demand. The following table shows natural gas production, domestic consumption, and export trends.

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<sup>990</sup> Pirani, "Central Asian Gas," 14.

<sup>991</sup> U.S. Energy Information Agency, "Uzbekistan, Analysis," <https://www.eia.gov/international/analysis/country/UZB>

<sup>992</sup> Pirani, "Central Asian Gas," 14.

Table 28: Uzbekistan's Natural Gas Balance, 2010-2018<sup>993</sup>

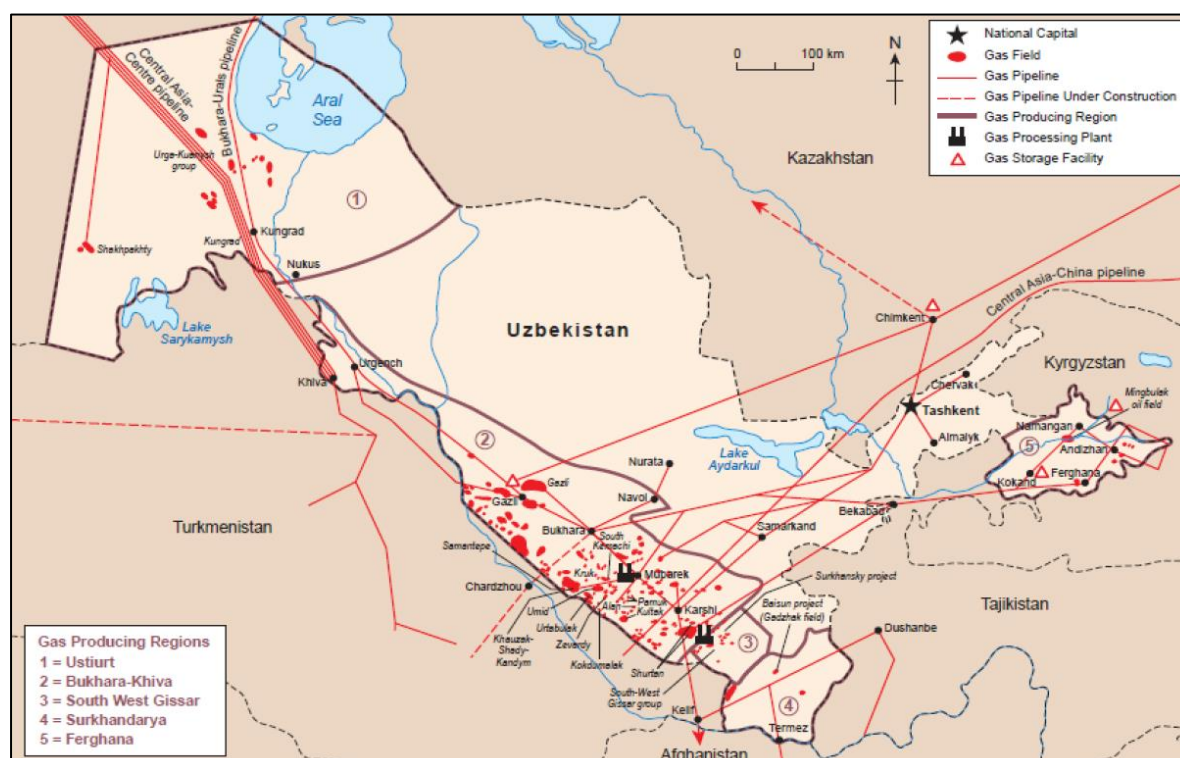
| Bcm                          | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017  | 2018  |
|------------------------------|------|------|------|------|------|------|------|-------|-------|
| Production (Sales Gas)       | 59.2 | 56.6 | 56.5 | 55.9 | 56.3 | 53.6 | 53.1 | 53.92 | 57.34 |
| Total Gas Balance            | 59.2 | 56.6 | 56.5 | 55.9 | 56.3 | 53.6 | 53.1 | 53.92 | 57.34 |
| Domestic Consumption         | 45.1 | 46.0 | 44.8 | 43.8 | 46.5 | 45.7 | 42.6 | 43.2  | 44.1  |
| Export (Total)               | 14.1 | 10.6 | 11.8 | 12.2 | 9.8  | 8.0  | 10.5 | 10.8  | 13.3  |
| To/through Russia            | 11.4 | 8    | 8.7  | 5.6  | 3.6  | 3.5  | 4.3  | 5.5   | 3.8   |
| To Kazakhstan                | 2.5  | 2.4  | 2.7  | 3.7  | 3.7  | 2.9  | 1.9  | 1.7   | 2.9   |
| To Kyrgyzstan and Tajikistan | 0.2  | 0.2  | 0.2  | 0    | 0.04 | 0.02 | 0.02 | 0.02  | 0.02  |
| To China                     | 0    | 0    | 0.2  | 2.9  | 2.4  | 1.5  | 4.3  | 3.5   | 6.5   |

Source: Simon Pirani, *Central Asian Gas: Prospects for the 2020s*

In addition to its production capacity, Uzbekistan serves as an important transit country for Turkmenistan gas deliveries to China and Russia. Uzbekistan exports to China show an increasing trend while Russia and Kazakhstan remain as other export destinations. The role of export revenues is expected to increase to support reforms and structural economic changes since 2016. Energy sector reforms, in particular with natural gas, are identified as a priority, moving away from large state-owned enterprises. These reforms also include measures “to break up Uzbekneftegaz, the state-owned vertically-integrated oil and gas company... to bring foreign companies into the energy sector.”<sup>994</sup> Russian companies Gazprom and Lukoil are already operating in the country and contributing to rising output.

<sup>993</sup> Pirani, “Central Asian Gas,” 15.

<sup>994</sup> Ibid.

Figure 35: Uzbekistan Natural Gas Infrastructure<sup>995</sup>

Source: Simon Pirani, 'Central Asian Gas: Prospects for the 2020s,' OIES, <https://www.oxfordenergy.org/publications/central-asian-gas-prospects-for-the-2020s/>

Similar to Turkmenistan, “Uzbekistan currently has a gas export agreement with China through the third line of the Central Asia-China gas pipeline.”<sup>996</sup> Uzbekistan exports to China has gradually increased to 6.5 bcm/year in parallel with the overall increase in the volume of total exports to 13.3 bcm/year. The increase in export volume is a result of a combination of two major changes: domestic market reform and Lukoil’s production that allows it to sell output to China. However, the struggle between exports and domestic consumption has already started.

The high-level government subsidies on natural gas prices will present challenges not only to exports but also overall fiscal balance of state-owned enterprises and their relations

<sup>995</sup> Pirani, “Central Asian Gas,” 15.

<sup>996</sup> U.S. Energy Information Agency, “Uzbekistan, Analysis.”

with foreign companies.<sup>997</sup> While the state-owned company Uzbekneftegaz's production has fallen each year since 2015, Lukoil, also state-owned, has increased its production reaching up to 18 bcm/year and driving exports to China. Pirani argues that natural gas exports to China will continue to remain as a priority while "There is no public information on how the export volumes are split between Uzbekneftegaz and Lukoil."<sup>998</sup> Exports to other regional countries, Kazakhstan and Kyrgyzstan, are likely to remain very limited or stop completely. Exports to Russia, will depend on level demand, especially for areas that are closer to the Central Asian supply sources compared to Russian Siberian gas fields. Pirani highlights that "Uzbekistan's gas exports will always be constrained by its unfavorable geographical position. During the 2020s, it should be able to raise its exports to China to 10 bcm/year; its exports to Russia may also be maintained at the level agreed in 2018, of 4 bcm/year."<sup>999</sup> There are neither the capacity nor the prospects for Uzbekistan natural gas supply for Western markets.

#### 6.4.3. Kazakhstan

Kazakhstan is the largest energy, oil, and natural gas producer and exporter in the Central Asian and Caucasus region. According to the US EIA, "Kazakhstan, an oil producer since 1911, has the second-largest oil reserves and the second-largest oil production after Russia among the former Soviet republics."<sup>1000</sup> Kazakhstan has the same challenges presented by its landlocked geography being far from access to international markets. The oil and natural gas reserves are concentrated around the giant Tengiz, Karachaganak, and Kashagan fields. Located off the shore of the Caspian Sea, "The Kashagan field is the largest known oil field outside of the Middle East and the fifth-largest field in the world in terms of reserves."<sup>1001</sup>

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<sup>997</sup> Pirani, "Central Asian Gas," 14.

<sup>998</sup> Ibid.

<sup>999</sup> Ibid, 22.

<sup>1000</sup> U.S. Energy Information Agency, "Kazakhstan," <https://www.eia.gov/international/analysis/country/KAZ/background>

<sup>1001</sup> Ibid.



Kazakhstan, unlike Uzbekistan and Turkmenistan, is a large oil producer, and its economy relies on oil exports. While large discoveries were made during the 1970s, the development of these fields were not possible due to lack of western technologies to develop the deep and high-pressure reservoirs. These large oil fields also contain natural gas reserves. Kazakhstan natural gas production comes from these oil fields while one third of it is reinjected to increase oil production. One of the other major constraints on natural gas exports is the increasing domestic demand. Additionally, Kazakhstan geography presents other challenges that make natural imports from Russia, Turkmenistan, and Uzbekistan a rational choice. In 2018, Kazakhstan increased its delivery to China to 5.8 Bcm/Year while domestic consumption reached 22.6 Bcm/year, requiring 7.7 Bcm/year in imports.<sup>1002</sup>

Kazak government prioritizes raising oil production and export over natural gas. Pirani highlights that “The importance of oil means that gas has a secondary position in the energy sector.”<sup>1003</sup> Since oil revenues are the main source of its economy, Kazakhstan has a strong relationship with oil producing international companies that intend to use natural gas production to reinject to enhance oil output. The total gas output and potential exports depend on the reinjection ratio that is also linked with the balance between oil and natural gas prices.<sup>1004</sup>

Table 29: Kazakhstan Natural Gas Balance, 2010-2018<sup>1005</sup>

| Bcm  | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 |
|--|------|------|------|------|------|------|------|------|------|
| <i>Production (prior to reinjection and flaring) *</i> | 37.3 | 39.5 | 40.1 | 42.4 | 43.2 | 45.3 | 46.4 | 52.9 | 46.3 |
| <i>Reinjected and flared*</i>                          | 18.7 | 21.0 | 18.9 | 19.6 | 21.9 | 12.3 | 11.4 | 13.4 | 13.0 |
| Production (Sales Gas)                                 | 18.6 | 18.5 | 21.2 | 22.8 | 21.3 | 21.3 | 28.5 | 31.6 | 33.3 |
| Import   | 4.5  | 3.7  | 3.7  | 4.7  | 6.1  | 5.7  | 6    | 6.3  | 7.7  |
| From Russia  | 2.0  | 1    | 1    | 0.7  | 1.4  | 1.8  | 2.8  | 3.1  | 3.3  |

<sup>1002</sup> Pirani, “Central Asian Gas,” 22.

<sup>1003</sup> Ibid, 24.

<sup>1004</sup> Pirani, “Central Asian Gas,” 23.

<sup>1005</sup> Ibid.

Table 19 (Continued)

| Bcm                        | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 |
|----------------------------|------|------|------|------|------|------|------|------|------|
| From Turkmenistan          | 0    | 0.3  | 0    | 0.3  | 1    | 1    | 1.3  | 1.5  | 1.5  |
| From Uzbekistan            | 2.5  | 2.4  | 2.7  | 3.7  | 3.7  | 2.9  | 1.9  | 1.7  | 2.9  |
| Total Gas Balance          | 23.1 | 22.2 | 24.9 | 27.5 | 27.4 | 27.0 | 34.5 | 37.9 | 41   |
| Total Domestic Consumption | 10.4 | 10.0 | 12.9 | 15.1 | 15.9 | 13.8 | 21.1 | 22.7 | 22.6 |
| Domestic consumption**     | 10.4 | 10.0 | 10.5 | 10.9 | 12.5 | 12.1 | 13.1 | 13.8 | 15.1 |
| Other consumption***       | 0    | 0    | 2.4  | 4.2  | 3.4  | 1.7  | 8.0  | 8.9  | 7.5  |
| Export (Total)             | 12.7 | 12.2 | 12.0 | 12.5 | 11.5 | 13.2 | 13.4 | 15.2 | 18.4 |
| To/through Russia          | 12.4 | 11.9 | 11.6 | 11.9 | 10.9 | 12.6 | 12.7 | 13.8 | 12.3 |
| To Kyrgyzstan****          | 0.30 | 0.33 | 0.43 | 0.40 | 0.23 | 0.23 | 0.27 | 0.30 | 0.30 |
| To China                   | 0    | 0    | 0    | 0.2  | 0.4  | 0.4  | 0.4  | 1.1  | 5.8  |

\* Most gas is associated with oil, and large volumes are reinjected for oil production purposes. These rows are included to illustrate the importance of this factor for Kazakh gas production

\*\*End-of-pipe consumption is the total volumes that reach consumers, as reported by Kaztransgaz and Kazmunaigaz.

\*\*\*The row "other consumption" is described by Kazenergy as "domestic disappearance, including field use (including for on-site power generation) and processing losses, pipeline use, changes in stocks, etc.

\*\*\*\*The exports to Kyrgyzstan include Kazakh gas bought by Gazprom and supplied to Kyrgyzstan, plus small residual volumes (all less than 0.2 Bcm in any year) that are on Kyrgyzstan's gas balance and are presumed to be imported from Kazakhstan.

Source: Simon Pirani's compilation from Kazakh statistical agency, energy ministry, Kaztransgaz, Kazenergy, and his estimates.

While natural gas plays a secondary role, the Kazakhstan government desires to increase its production and exports. However, according to Pirani, "The decisions about how gas will be produced to meet the demand, investment priorities, etc. are to a large extent subordinated to decision on oil production."<sup>1006</sup> Therefore, Kazakhstan and the international oil companies, both Western and Chinese, have been negotiating to increase gas production and to invest in natural gas infrastructure. The following table depicts Kazakhstan natural gas production projections out to 2040.

<sup>1006</sup> Pirani, "Central Asian Gas," 44.

Table 30: Kazakhstan Government Projections of Gas Output, 2015-2040<sup>1007</sup>

| Bcm  | 2015** | 2020 | 2025 | 2030 | 2035 | 2040 |
|--|--------|------|------|------|------|------|
| Gross Gas Production (Pragmatic Scenario)    | 44.2   | 62   | 61   | 59.8 | 80.3 | 87.9 |
| Reinjection                                  | 24     | 37.4 | 38.8 | 38.8 | 51.9 | 51.5 |
| Sales  | 20.2   | 24.6 | 22.2 | 21   | 28.4 | 36.4 |
| End-of-pipe consumption (Realistic Scenario) | 12.1   | 16.3 | 17.6 | 18.1 | 21.4 | 25.6 |
| Other Consumption*                           | 1.7    | 2    | 2    | 2    | 2    | 2    |
| Net Export*                                  | 6.4    | 6.3  | 2.6  | 0.9  | 5    | 8.8  |

\* *Simon Pirani's estimates that are based on the following source, 'Ob utverzhdenii Kontseptsii razvitiia gazovogo sektora RK do 2030 goda' p 8 and p17'*

\*\* *Actual data*

Kazakhstan's geography and position has an impact on its role as a gas exporter. While it is "slightly closer to Russia, European, and Chinese markets than Turkmenistan and Uzbekistan, it also shares the problem with these countries that the export infrastructure built in Soviet times takes gas to or through Russia."<sup>1008</sup> This allows Russia to dominate the markets, especially exports to the West to European markets. Pirani argues that "Central Asian exports will struggle to compete with Russia-produced gas – and opening up new routes is difficult and expensive."<sup>1009</sup> The following map depicts the key developments related with the natural gas infrastructure.

<sup>1007</sup> Pirani, "Central Asian Gas," 25.

<sup>1008</sup> Ibid, 43.

<sup>1009</sup> Ibid.

Figure 36: Kazakhstan Natural Gas Infrastructure, 2012 Data<sup>1010</sup>.



Source: Simon Pirani, 'Central Asian Gas: Prospects for the 2020s,' OIES, <https://www.oxfordenergy.org/publications/central-asian-gas-prospects-for-the-2020s/>

Kazakhstan natural gas production has increased over the last decade, and projections support Kazakhstan's gasification program. This program will enable three more regions access to natural gas pipeline infrastructure by early-mid 2020s. Thus, 12 out of 14 regions will have access to pipeline gas.

#### 6.4.4. Azerbaijan

Azerbaijan has been one of the cradles of the oil and gas industry starting from the late 19<sup>th</sup> Century and early 20<sup>th</sup> Century. While the growth has had ups and downs, the oil and gas industry maintained its role for the economy and development of the country. According to the US EIA, "Energy exports are central to Azerbaijan's economy and government

<sup>1010</sup> Pirani, "Central Asian Gas," 42.

revenues...Natural gas accounts for over two-thirds of Azerbaijan's total domestic energy consumption."<sup>1011</sup> While natural gas has been considered less important than oil as an export commodity, it has gained importance over the last decade, especially with the construction of the pipeline connecting Caspian Sea natural gas to Europe. Azerbaijan has a vital role, both as a producer and a transit country, to connect Central Asia and the Caucasus region to European markets.

Natural gas imports from non-Russian sources have gained importance over the last decades, driven by the Russia-Ukraine natural gas crisis following the illegal annexation of Crimea. Although initial exploration attempts in development of offshore areas in the Caspian failed, Shah Deniz I and II have been successful in producing significant amounts of natural gas to support government ambitions and draw the attention of Turkey and European consumers. The discovery of the giant Shah Deniz reserves supports Azerbaijan's long-term prospect to replace oil revenues with increasing natural gas sales. There are several stages planned to increase production incrementally as pipeline networks are connecting gas to the Turkish and European markets. Shah Deniz production of 9 Bcm/year will increase 17 Bcm/year, then 26 Bcm/year.<sup>1012</sup>

As shown on the table below, gas production in the Shah Deniz I gas field will decline and Shah Deniz II will be overtake Azerbaijan's natural gas output, delivering 6 Bcm/year to Turkey and 10 Bcm/year for sale in Europe as contracted. According to Pirani, "It was on the basis of these flows that the Southern Gas Corridor from Azerbaijan to Italy was planned, financed and commissioned. It comprises the South Caucasus Pipeline through Georgia, the Trans Anatolian Pipeline (TANAP) through Turkey, and the Trans Adriatic Pipeline (TAP) to

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<sup>1011</sup> US Energy Information Agency, "Azerbaijan," <https://www.eia.gov/international/analysis/country/AZE>

<sup>1012</sup> Gulmira Rzayeva, "The Outlook for Azerbaijani Gas Supplies to Europe: Challenges and Perspectives," *The Oxford Institute for Energy Studies*, (June 2015), 1.

Italy.”<sup>1013</sup> The following table depicts the Azerbaijan natural gas production and projections over time.

Table 31: Azerbaijan Natural Gas Balance and Illustrative Projections<sup>1014</sup>

|  |                         | Actual |       |       |      | Provis<br>ional | Illustrative Projections |      |      |      |
|--|-------------------------|--------|-------|-------|------|-----------------|--------------------------|------|------|------|
|  |                         |        |       |       |      |                 | 2025                     |      | 2030 |      |
|  |                         | 2016   | 2017  | 2018  | 2019 |                 | 2020                     | low  | high | low  |
| Production: Total                        |                         | 18.7   | 18.2  | 19.2  | 24.5 | 26.1            | 30.9                     | 38.5 | 28.8 | 47.2 |
| SOCAR                                    |                         | 5.25   | 5.5   | 5.41  | 5.6  | 5.8             | 5.4                      | 8    | 6    | 9    |
| ACG associated gas                       |                         | 2.75   | 2.88  | 2.3   | 2.1  | 2.2             | 2                        | 3    | 2    | 3    |
| ACG non-associated gas                   |                         |        |       |       |      |                 | 0                        | 0    | 0    | 5    |
| Shah Deniz I (SD I)                      |                         | 10.7   | 10.2  | 11.5  | 11   | 10              | 6                        | 7    | 4    | 4.2  |
| Shah Deniz II (SD II)                    |                         | 0      | 0     | 0     | 5.8  | 8.1             | 16                       | 16   | 13.8 | 14   |
| Absheron phase 1                         |                         |        |       |       |      |                 | 1.5                      | 1.5  | 1.5  | 1.5  |
| Future<br>Projects                       | Abshoren phase 2        |        |       |       |      |                 | 0                        | 1.5  | 0    | 5    |
|  | Karabagh and Ashrafi    |        |       |       |      |                 | 0                        | 1.5  | 1.5  | 1.5  |
|  | Shafag-Asiman           |        |       |       |      |                 | 0                        | 0    | 0    | 4    |
| Other/Stock Change                       |                         | 0.22   | -0.57 | 0     | -0.1 | 0               | 0                        | 0    | 0    | 0    |
| Imports: Total                           |                         | 0.3    | 2.11  | 1.8   | 0    | 0               | 0                        | 0    | 0    | 0    |
| Import from Russia                       |                         | 0      | 0.35  | 1     | 0    | 0               |                          |      |      |      |
| Import from Iran /Turkmenistan****       |                         | 0.3    | 1.76  | 0.8   | 0    | 0               |                          |      |      |      |
| Total Gas Balance                        |                         | 19.2   | 19.7  | 21.0  | 24.4 | 26.1            | 30.9                     | 38.5 | 28.8 | 47.2 |
| Consumption Total                        |                         | 19.2   | 19.7  | 21.0  | 24.4 | 26.1            | 32                       | 32   | 32   | 32   |
| Azerbaijan                               |                         | 11.19  | 10.87 | 11.08 | 12.5 | 12.7            | 13.5                     | 32   | 32   | 32   |
| Exports                                  | Georgia                 | 1.57   | 2.32  | 2.4   | 2.22 | 1.85            | 2.5                      | 2.5  | 2.5  | 2.5  |
|  | Turkey SD I &<br>II (*) | 6.48   | 6.54  | 7.53  | 9.58 | 11.55           | 6                        | 6    | 6    | 6    |
|  | Europe SD II            | 0      | 0     | 0     | 0    | 0               | 10                       | 10   | 10   | 10   |
| Residual available for Turkey and Europe |                         |        |       |       |      |                 | -1.1                     | 6.5  | -3.2 | 15.2 |

Source: Simon Pirani, AzStat and companies (actual); illustrative projections belong to Simon Pirani.

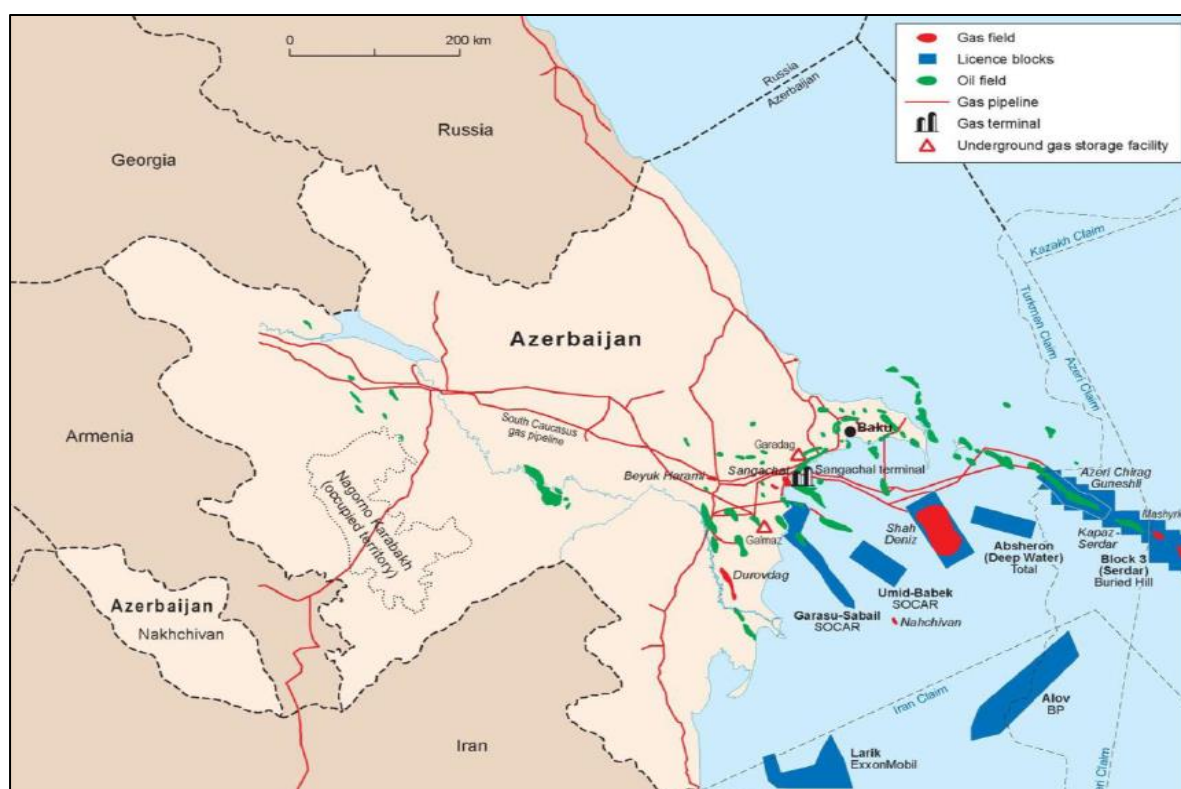
(\*) Simon Pirani highlights that the illustrative projections in this row only include the Shah Deniz II contract (2018-33). The Shah Deniz I contract, currently under renegotiation, is excluded.

<sup>1013</sup> Pirani, “Azerbaijan’s “Gas Sales,” 2.

<sup>1014</sup> Ibid, 6.

While the pipeline network has become operational in the beginning of 2021, there are still marketing issues even though the amount is much smaller compared to Russian gas exports to Europe. The following map depicts Azerbaijan's oil and natural gas fields and pipelines:

Figure 37: Azerbaijan Oil and Natural Gas reserves and Pipeline Infrastructure<sup>1015</sup>



Source: Gulmira, Rzayeva, 'The Outlook for Azerbaijani Gas Supplies to Europe – Challenges and Perspectives,' OIES, <https://www.oxfordenergy.org/publications/the-outlook-for-azerbaijani-gas-supplies-to-europe-challenges-and-perspectives/>

There are several important considerations for expansion of the Southern Gas Corridor from Azerbaijan to Europe: first increasing production and/or finding swap/import options from the Central Asian republics; second, finding resources to increase the capacity of TANAP from 16 Bcm/year to 31 Bcm/year; third, aligning with the increased capacity of TANAP,

<sup>1015</sup> Rzayeva, "The Outlook for Azerbaijani Gas" 12.

improving the capacity of TAP from 10 Bcm/year to 20 Bcm/year.<sup>1016</sup> However, these investments require not only fiscal but also political support for the allocation of resources for these large projects. Pirani argues that “Azeri gas production would reach the necessary level, in the best case, only at the end of this decade; and in any time-scale, conditions in the Turkish and European gas markets would have to change, in order to underpin the necessary investment.”<sup>1017</sup>

One of the biggest obstacles to gain support for such an investment is to establish a competitive natural gas price compared to the European netback prices. Using May 2021 data, Pirani compares Azerbaijan’s domestic prices that are “set by the regulator at 75 manat/mcm (\$44/mcm or €3.41/MWh) for wholesale sales, 100 manat/mcm (\$4.55/MWh) for retail sales to households and 200 manat/mcm (€9.10/MWh) for retail sales to industry.”<sup>1018</sup> However, these domestic prices are very low in comparison with the sales to the European markets and the gap met by Socar and/or the Azeri treasury. Additionally, Russia continues to provide alternatives to potential markets with the construction of new pipelines. In order for Caucasian and Central Asia natural gas to be competitive, the netback price must be lower, especially for European consumers. According to Pirani:

Assuming a production cost of \$50-60/mcm, and transport costs of \$50/mcm via the South Caucasus Pipeline, \$103/mcm for TANAP, and \$70-80/mcm via TAP, the cost of delivery to Italy is \$273-293/mcm. These costs are lower than current wholesale gas prices, but substantially higher than the cost of delivery of gas from Algeria, Libya, Russia and Norway – as shown by recently-published estimates, which put the delivered cost of Azeri gas to Italy at nearly twice that of Russian gas and nearly three times that of Algerian gas.<sup>1019</sup>

Pirani’s May 2021 price analysis summarized above suggests that Azerbaijan natural gas to Turkey remains competitive compared to Russian gas, but the cost of transfer gas from the Caspian Sea to Europe makes Russian gas more attractive. However, the increase in the

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<sup>1016</sup> Pirani, “Azerbaijan’s “Gas Sales,” 5.

<sup>1017</sup> Ibid.

<sup>1018</sup> Ibid, 4.

<sup>1019</sup> Ibid.



volume of natural gas and long-term contracts might allow more favorable conditions for investment. European requirements to diversify and political support of the European Commission could also expedite the decision for further investment in the development of the Southern Gas Corridor to European markets.

While considerations are given to expand Azerbaijan resources, Turkmenistan and potential Kazakhstan natural gas have been taken out of the equations due to China's increasing economic influence and Russia's objection to build pipelines through the Hazar Sea. Analysis of the natural gas picture of the Southern corridor suggests that Russia follows a strategic approach to minimize competition while maintaining market share and high level of dependency of regional countries. In this regard, Russia supports large investments such as the Turk Stream project with a long-term realist view. On the other hand, China uses its economic power to access natural resources while reducing its concerns over the sea lines of communications through the Malacca Straits and South China Sea where the United States might enforce measures to threaten China's energy supply.

## 6.5. European Attempts for Diversification and the Russian Response

### 6.5.1. Nabucco Pipeline Project

The requirement for diversification of European energy resources has been widely recognized by the European Union as well as producers in the Caucasus and Central Asia, transit countries. The Nabucco pipeline project, started in the early 2000s and received strong political support from the European Commission and the United States. This strategic and politically supported commercial initiative, later called the "Southern Corridor," focused on bringing gas from the Caspian Sea to Europe. The Nabucco pipeline was intended to reduce dependence on Russia for natural gas by transporting 31 Bcm of gas a year from Azerbaijan to the gas hub in Baumgarten, Austria. Nabucco project partners, including Turkey, Bulgaria,

Romania, Hungary, and Austria, “aimed at building a pipeline from Turkmenistan, across the Caspian Sea, via Azerbaijan, Georgia, and Turkey to south-eastern Europe.”<sup>1020</sup>

Figure 38: The Proposed Nabucco Pipeline Project<sup>1021</sup>



Source: European Dialogue, “The Proposed Nabucco Gas Pipeline,” from the following webpage, <http://eurodialogue.org/Nabucco-Pipeline-Map-2>

The Nabucco pipeline was one of the most ambitious projects, 3300 kilometers long with an estimated cost of almost 8 billion Euros, to create an alternative source for European energy supply, thereby increasing energy security. However, there were several concerns, such as “the limited European demand for gas, the high price of construction, and competition from rival projects.”<sup>1022</sup> First, there were a lack of contracts to provide sufficient raw materials from the Caspian to Europe. In other words, the level of gas reserves in Azerbaijan was not sufficient or large enough to attract investment. Azerbaijan could provide only about 10 Bcm of gas,

<sup>1020</sup> Stern, et al. “Reducing European Dependence,” 24.

<sup>1021</sup> European Dialogue, “The Proposed Nabucco Gas Pipeline,” <http://eurodialogue.org/Nabucco-Pipeline-Map-2>

<sup>1022</sup> Micco, “Changing Pipelines,” 6.

while natural gas deposits that are located on the other side of the Caspian Sea in Turkmenistan were not committed due to political disputes over the Caspian Sea gas pipeline. Russia and Iran, the “two largest littoral states, had no interest in resolving legal disputes.”<sup>1023</sup>

Second, there was a lack of European solidarity to engage and negotiate with the Caspian region. Although the EU Energy Commissioner, Günther Oettinger, stated that “Europe needs to look beyond its borders to ensure the security of energy supplies and act together and speak with one voice,”<sup>1024</sup> member countries preferred bilateral deals with main suppliers such as Russia. Finally, Russia’s Gazprom announced its rival project targeting the same market. The Nabucco pipeline project remained as an expression of political desire rather than a commercial reality.<sup>1025</sup> The EU initially delayed, then cancelled construction of the pipeline.

#### 6.5.2. South Stream Pipeline Project

While the Nabucco pipeline project development continued, in 2006, Gazprom announced it was building a pipeline, South Stream, under the Black Sea coast from Anapa to Varna in Bulgaria. The South Stream project involved Gazprom (Russia) and European investors ENI (Italy), Wintershall (Germany), and EDF (France). This project was a continuation of Russian long-term strategy to bypass Ukraine while maintaining market share and influence in south-eastern Europe, rivalling the Nabucco pipeline project. The project proposed to transport Russian gas to Bulgaria, linking it with Italy and Europe. This project was also part of the overall Russian objectives to undermine the EU’s cohesion and interrupt the development of an Energy Union. The EU was divided with some transit countries supporting the project, such as Bulgaria, Serbia, and Hungary, and others against it.

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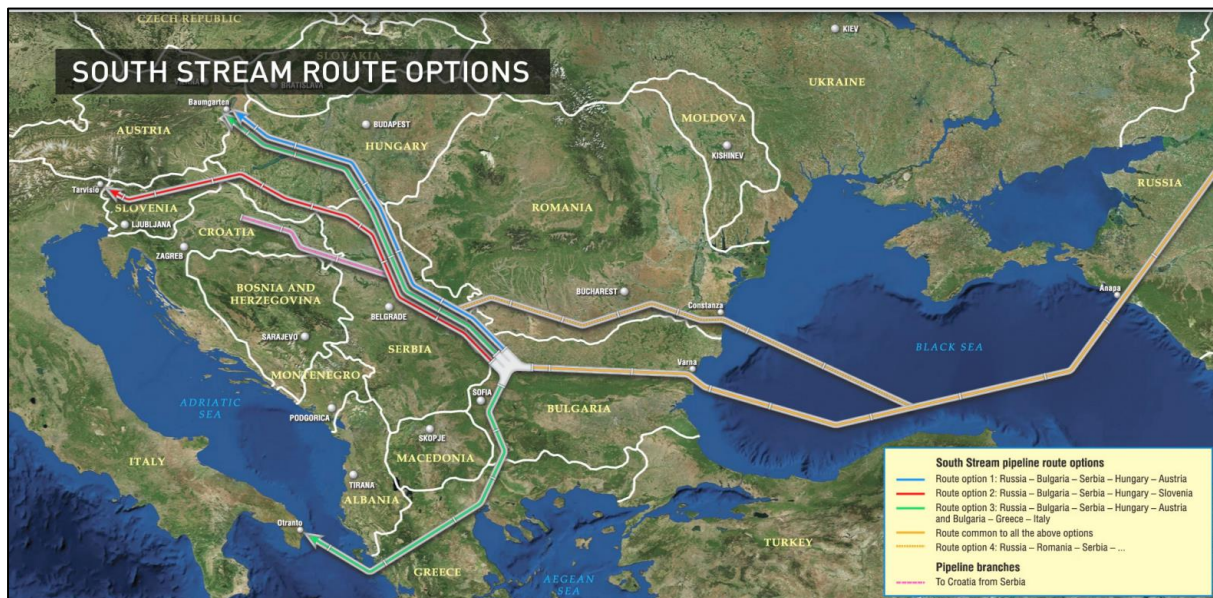
<sup>1023</sup> Stern, et al. “Reducing European Dependence,” 24.

<sup>1024</sup> Kanter, “European Union,”

<sup>1025</sup> Stern, et al. “Reducing European Dependence,” 24.

The initial pipeline, two parallel lines, was 2250 Kilometers in length and planned to carry 31 Bcm/year. The initiation of this pipeline project coincided with the first Russia-Ukraine gas crisis in 2006. According to Stern, et al, “Following the January 2009 Russia-Ukraine crisis, this was then expanded to four lines and 63 Bcm/year. The plan was to flow gas through the first pipeline in the 4th quarter of 2015, with full capacity of the first two lines to be reached by the end of 2017 and four lines by 2020.”<sup>1026</sup>

Figure 39: Proposed South Stream Route Options<sup>1027</sup>



Source: Gazprom, ‘South Stream: Energizing Europe,’ the image taken from the following webpage, <https://www.gazprom.com/f/posts/24/102293/presentation.pdf>.

This pipeline was intended to reduce transit risks by linking European customers directly to Russian gas. Boersma argues that “From a Russian point of view, South Stream was the final piece in a decade-long tug-of-war with unreliable transit state Ukraine, which

<sup>1026</sup> Stern, et al., “Does the Cancellation,” 2.

<sup>1027</sup> “South Stream: Energising Europe,” May 25, 2011, <https://www.gazprom.com/f/posts/24/102293/presentation.pdf>.

repeatedly blackmailed both Russia and its European clientele.”<sup>1028</sup> Along the same lines, Stern, et al argues that “It would never be possible to establish political and commercial relations with Kiev which would allow secure gas flows to Europe across Ukraine and, given the size and importance of export revenues for Gazprom and the Russian government, the only option was to eliminate this transit dependence.”<sup>1029</sup>

Russia’s illegal annexation of Crimea increased tensions between the West and Russia that were followed by the US and EU sanctions. These were not the only reasons driving the Putin announcement of the cancellation of South Stream during his trip to Turkey on 1 December 2014. The measures introduced with the European Commission’s Third Energy Package (TEP), required “gas pipeline operators to open up their networks to all suppliers, so investors [would] no longer have priority in reserving gas transportation capacity according to their stake in the pipeline.”<sup>1030</sup> The TEP created a long-term legal battle for Gazprom “to utilize full capacity of the onshore extensions of the Nord Stream pipelines - OPAL and NEL.”<sup>1031</sup>

To avoid a similar legal battle, Gazprom based the South Stream project on a set of Inter-Governmental Agreements (IGAs). However, the European Commission challenged Russia’s position by highlighting that the IGAs were also in breach of the TEP. At the same time, there were political tensions between Russia and the West due to the Ukraine crisis, illegal annexation of Crimea, and sanctions imposed by the EU and United States. As a result, the debacle between the Commission and Russia led to the suspension of the pipeline construction in Bulgaria.<sup>1032</sup> Thus, it didn’t make political and economic sense to connect the pipeline to Bulgaria where European law was enforced and the TEP would have constrained Gazprom’s 100% access to the pipeline. On 9 December, Gazprom confirmed that the decision was final,

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<sup>1028</sup> Tim Boersma, “The Cancellation of South Stream Is a Pyrrhic Victory, at Best,” Brookings (Brookings, July 29, 2016), <https://www.brookings.edu/blog/up-front/2014/12/18/the-cancellation-of-south-stream-is-a-pyrrhic-victory-at-best/>.

<sup>1029</sup> Stern, et al., “Does the Cancellation,” 3.

<sup>1030</sup> Hélène Richard, “Why Russia Cancelled South Stream,” *Le Monde Diplomatique* (2015).

<sup>1031</sup> Stern, et al., “Does the Cancellation,” 3.

<sup>1032</sup> Ibid, 4.

and a new pipeline would be directed to Turkey. According to Boersma, the cancellation decision highlights the following key points:

- Cancellation of the South Stream project does not affect the flow of natural gas to South Eastern European customers. Gazprom has sufficient storage facilities in Italy and other parts of Europe should the natural gas flow through Ukraine be interrupted.
- Putin's move was rational as the South Stream project had become a financial and economic liability. This situation allowed Putin also to send a clear message to Europe "that he has had enough of Europe's continued complaints and critiques about its [Russia's] role in Ukraine, an issue that both sides continue to be divided over."<sup>1033</sup>
- Finally, in a few weeks, Putin declared the decision on the Russia-China natural gas pipeline deal and replaced South Stream by constructing a pipeline to Turkey.<sup>1034</sup>

While the European Commission still sought to maintain natural gas flow through Ukraine, the new pipeline project, called the Turk Stream, gained support from Hungary, Serbia, Northern Macedonia, Bulgaria, and Greece. At the time, this might have appeared as a success story for the Commission, but it did not deter Russia from its long-term objectives to bypass Ukraine, to maintain its market share in southeastern Europe while disrupting potential rival projects. In other words, Russia was able to maintain its influence and the high level of dependency of southeastern members of the EU.

### 6.5.3. Turk Stream Pipeline

Russia had limited options, either to scrap the project completely or to change the landing location of the pipeline from Bulgaria to Turkey, a non-EU member state. After cancellation of the project, the European Commission and European investors of the South Stream project (ENI, Wintershall, and EdF) kept a low profile. Gazprom bought their shares, and by the time the project was cancelled, it "had already spent \$4.7 billion on the offshore and European sections, most of which would have been for the offshore pipe and the charter of the barge; and a similar amount was spent on pipe and compressors for the Russian Southern Corridor. This represented approximately 40% of the \$20 billion of capital investment required

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<sup>1033</sup> Boersma, "The Cancellation of South Stream."

<sup>1034</sup> Ibid.

for the first two lines.”<sup>1035</sup> Therefore, landfall to Turkey was a rational choice that could allow saving large amounts of capital at a time that the Russia economy was struggling due to sanctions and declining oil prices.

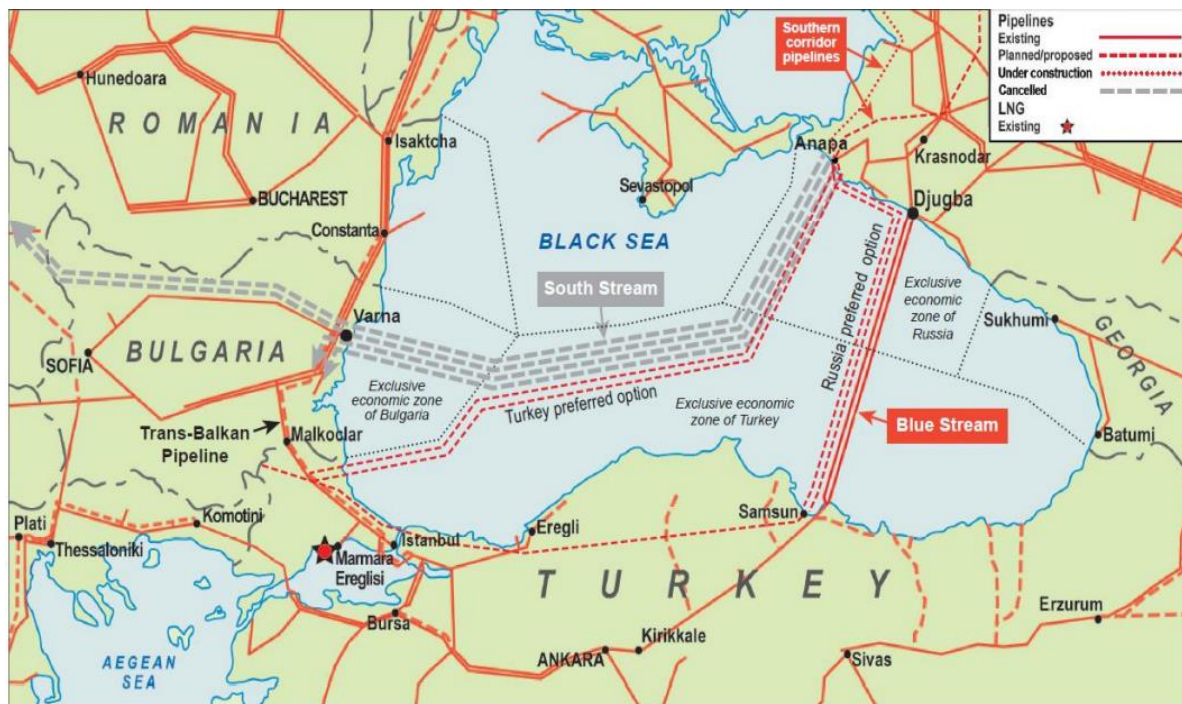
When the Turk Stream was announced, the landing site for the project was still debated between Russia and Turkey. According to the Turkish side, landfall should be in Western Turkey, closer to the Turkish-Greek and Turkish-Bulgarian borders. Russia’s Gazprom preferred option was to build a new pipeline parallel to the existing Blue Stream pipeline with landfall in Samsun. The latter option would reduce undersea survey requirements and would be easier to build under the Black Sea albeit substantial on-shore infrastructure would be required. However, the former would allow a relatively short connection with the Trans-Balkan pipeline near the Bulgarian border while there would be additional undersea surveys for the areas connecting the Turkish shore from the Bulgarian Economic Zone that was studied earlier.<sup>1036</sup>

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<sup>1035</sup> Stern, et al., “Does the Cancellation,” 5, 6.

<sup>1036</sup> Ibid, 6.



Figure 40: Turk Stream Pipeline Route - Russian and Turkish Preferred Options<sup>1037</sup>

Source: Jonathan, P. Stern, OIES, *Does the cancellation of South Stream signal a fundamental reorientation of Russian gas export policy?* <https://www.oxfordenergy.org/publications/does-the-cancellation-of-south-stream-signal-a-fundamental-reorientation-of-russian-gas-export-policy/>

The project went ahead with the Turkish preferred option, connecting the pipeline from the Russkaya compressor station (CS) near Anapa, Russia, to the coast of Kiyikoy, Turkey. Two string pipeline's (15.75 Bcm/year each), more than 930 kilometers, current capacity would allow transporting 31.5 Bcm/year. The construction of the pipeline was started on 7 May 2017, and on 19 November 2018, pipe-laying was completed. The first gas started to flow through Turk Stream in January 2020.<sup>1038</sup>

With the completion of the Turk Stream pipeline, Russia successfully completed another key step to bypass Ukraine as part of its grand strategy. The Nord Stream 2 pipeline caused fierce debate between the United States and Germany, both members of the NATO

<sup>1037</sup> Stern, et al., "Does the Cancellation," 7.

<sup>1038</sup> "TurkStream Gas Pipeline," Gazprom, accessed January 1, 2022, <https://www.gazprom.com/projects/turk-stream/>.



Alliance. While US sanctions delayed construction of the Nord Stream 2 Pipeline, Turk Stream was completed with little attention from the EU and the US. There was little debate on the implications of adding a new non-Ukrainian natural gas supply line via Turk Stream. Jirusek argues that the Turk Stream “pipeline is about to pose a legal challenge to the European Union (EU), its Internal Energy Market (IEM) rules, and the EU’s energy policy more broadly.”<sup>1039</sup> The EU declared that Turk Stream will also be scrutinized in accordance with the rules set in the TEP. However, this project has already gained support from Hungary, Serbia, Bulgaria, North Macedonia, and Greece. Gazprom will exploit the divisions between the members of the EU.

Natural gas started flowing to Greece, Bulgaria, and North Macedonia that would increase Russia’s ability to compete with potential projects such as LNG terminals in Greece and Croatia, the Southern Gas Corridor bringing gas from the Caucasus and Central Asia or the Eastern Mediterranean. The successful completion of this project also indicates that Russia will continue to take necessary measures to bypass Ukraine while competing any rival projects to maintain its European market share. As highlighted by Jirušek, a lack of common internal energy policy, diverging energy priorities, and a variety of energy mixes of member states will challenge European unity.<sup>1040</sup>

#### 6.5.4. The Trans Anatolian Pipeline (TANAP) and the Trans-Adriatic Pipeline (TAP)

Even though the Nabucco was cancelled, another project bringing Caucasus natural gas went ahead, the Trans Anatolian Pipeline (TANAP), funded by Azerbaijan and Turkey, was completed in 2018.<sup>1041</sup> The aim of the TANAP Project, along with the South Caucasus Pipeline (SCP) and the TAP, is to transfer natural gas produced from Azerbaijan’s Shah Deniz-II gas

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<sup>1039</sup>Martin Jirušek, “Turk Stream Is South Stream 2.0-Has the EU Done Its Homework This Time?” Atlantic Council, February 21, 2020, <https://www.atlanticcouncil.org/blogs/energysource/turkstream-is-south-stream-2-0-has-the-eu-done-its-homework-this-time/>.

<sup>1040</sup> Ibid.

<sup>1041</sup> “Turkey Opens Natural Gas Pipeline from Azerbaijan,” Reuters (Thomson Reuters, June 12, 2018), <https://www.reuters.com/article/%20energy-turkey-tanap-idAFL8N1TE5BE>.

field, and other areas of the Caspian Sea, primarily to Turkey, but also to Europe through Greece to Italy. This whole system is called the Southern Gas Corridor.<sup>1042</sup> Initial capacity will be 16 billion cubic meters, and with additional investment, this capacity is expected to rise to 24 and 31 billion cubic meters, respectively. Only 6 billion cubic meters will be used by Turkey, and the rest of the gas will be provided to Europe, which has the potential for diversification of resources. The first commercial gas delivery from Azerbaijan, through the Trans-Adriatic Pipeline (TAP) to Greece, Albania, and Italy started in December 2020, reaching 5 Bcm natural gas in September 2021.<sup>1043</sup> A detailed study is provided in the Azerbaijan resources and pipeline section above.

To materialize construction of a long-distance pipeline project requires not only cooperation amongst producing countries and other regional powers such as Iran, Turkey, and Russia, but also support from global players including the EU and the United States. So far, European governments have not demonstrated political support and financial commitment for these large projects, avoiding competition with Russia. Particularly, Turkmenistan's rich natural gas resources are being increasingly exploited by China and Russia whenever a shortfall emerges. The EU's cautious and normative approach has not lent itself as an efficient means to solve the problems in the region, i.e., over the Caspian Sea legal issues.

On the other hand, in the early 2000s, the United States facilitated construction of the Baku-Tbilisi-Ceyhan (BTC) pipeline and used its leverage to overcome problems. BTC could set an example for any future cooperation that could help the EU to emerge as a reliable partner which could support regional countries against Russian pressure and Chinese economic coercion. With limited resources, supported by international energy companies, regional countries, Turkey, and Azerbaijan have developed the Trans-Anatolian Pipeline (TANAP) that

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<sup>1042</sup> The Trans-Anatolian Natural Gas Pipeline (TANAP) official site, <http://www.tanap.com/tanap-project/why-tanap/>

<sup>1043</sup> Trans Adriatic Pipeline, "TAP Transports First 5 Bcm of Natural Gas to Europe," 15 September 2021. <https://www.tap-ag.com/news/news-stories/tap-transport-first-5-bcm-of-natural-gas-to-europe>

connects Azerbaijan's Shah Deniz gas field to Europe through the Trans Adriatic Pipeline (TAP) linking Turkey, Greece, and Albania to Italy. The following Figure depicts the pipeline route. While it has limited capacity compared to the Russian pipeline networks, TANAP/TAP nevertheless delivers 10 bcm to Italy.

Figure 41: The Trans-Anatolian Natural Gas Pipeline and Trans-Adriatic Pipeline<sup>1044</sup>



Source: Report News Agency, the image taken from the following webpage, <https://report.az/en/energy/president-of-socar-iran-s-participation-in-tanap-and-tap-projects-is-possible-in-future/>

The key for a competitive TANAP-TAP pipeline system that carries Central Asian natural gas is to bring Turkmenistan gas across the Caspian Seabed to Azerbaijan. This route, called the Trans-Caspian Gas Pipeline (TCGP) has been under discussion since the late 1990s. With the discoveries of Shah-Deniz I and II, Turkmenistan gas increased the competitiveness of the Southern Corridor through Georgia and Turkey, with a connection to TAP. The total

<sup>1044</sup> "SOCAR President: Participation of Iran in TANAP and TAP Is Possible in Future," Report News Agency <https://report.az/en/energy/president-of-socar-iran-s-participation-in-tanap-and-tap-projects-is-possible-in-future/>.

volume would allow southern and central European members to reduce their level of dependency to Russian gas. It would also increase Ukraine's energy security by providing reverse flow using Central Asian/Caucasus resources. TCGP has not materialized due to Russia's alternative projects, Blue Stream, South Stream that has become Turk Stream, cancellation of the Nabucco pipeline, and Russian-Iranian opposition to construction of a subsea pipeline.<sup>1045</sup>

While one of the key obstacles, legal limitations over construction of a subsea pipeline through the Caspian Sea, has been lifted by the Convention on the Caspian Sea's Legal Status, approved by Azerbaijan, Kazakhstan, Russia, Iran, and Turkmenistan in Astana in August 2018.<sup>1046</sup> Additionally, Turkmenistan is also in need of diversifying its export markets, and Europe is seen as a promising, lucrative market for natural gas exports at least over the next two decades. However, China has emerged as a more reliable partner with less normative concerns such as human rights, democratization, and improving the rule of law which have all been key parameters for the EU's relations with Central Asian Republics. Thus, Turkmenistan might remain less committed to TCGP compared to Azerbaijan.

## 6.6. Conclusions

The Central Asia region has always drawn interest from external powers due to its geographic location, ethnic and religious composition of the countries, and its natural resources. The extraction and transportation of natural resources, in particular oil and natural gas, have the potential to provide economic development for the region and prosperity for the people. Due to the vast energy resources and important geostrategic position, Central Asia has also become a zone of competing interests for many global players, including Russia, China,

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<sup>1045</sup> Ilgar Gurbanov, "Caspian Convention and Perspective of Turkmenistan's Gas Export to Europe." *Caucasus International* 8, no. 2 (2018): 159-179.

<sup>1046</sup> Ilgar Gurbanov, "The Perspective of Trans-Caspian Gas Flow to Europe," *The Perspective of Trans-Caspian Gas Flow to Europe*, October 25, 2018, <https://www.cacianalyst.org/publications/analytical-articles/item/13538-the-perspective-oftrans-caspian-gas-flow-to-europe.html>.

the United States, the European Union, as well as Turkey, Iran, South Korea, India, and Japan. Politics and economics have been closely intertwined in the region's rich history.

The rapid collapse of the Soviet central system left all Central Asian republics in search of new markets and drew global attention from Europe and the United States due to existing large energy reserves. The high-level dependence on Russian exports, using Soviet legacy networks, has changed with China's access to natural resources in the region. Azerbaijan also has obtained access to Western markets. However, the landlocked geography and a lack of infrastructure for Central Asia has limited access to the international energy markets and interactions with countries and institutions that could have supported the development of governance structures for a successful political transition. As a result, those newly emerged Central Asian states that achieved varying degrees of independence from Russia entered into diplomatic and commercial relations with the outside world; however, "due to its centralized planning and energy distribution system, Central Asia remained dependent on Moscow."<sup>1047</sup> Although there had been a growing nationalism in several of the Central Asian republics and a growing desire for decentralization of authority from the center, they faced extraordinary challenges to reduce their dependency on Russia and focused on their economic survival.

The Central Asian economy and the location and positioning of Soviet legacy infrastructure, especially oil and natural gas pipeline networks, make alternatives to Russian energy resources difficult and costly. Before China's influence increased last decade, high-level dependency on Russian oil and gas transportation has been a common challenge for almost all of the Central Asian republics. Moscow pursued its political and economic objectives through energy relations with the regional countries. The energy relationship between Russia and Central Asian Republics is an example of how Russia uses energy companies, such as

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<sup>1047</sup> Pradhan, *Geopolitics of Energy*, 216.

Gazprom, to achieve its political and economic objectives. It also shows how Russia's political and economic objectives are woven into its energy strategy.

The collapse of the Soviet Union in 1991 allowed the United States to expand its influence gradually over the region through its Allies such as Turkey or involving NATO during the ISAF campaign in Afghanistan. The great power competition between the United States, Russia, and China resulted in growing concerns in Moscow and Beijing as American influence increased over the Central Asia and the Caucasus. The shift in American geopolitical priorities and lessened support for war in Afghanistan resulted in a reduced footprint and subsequent US withdrawal from the region.

The US interest in Central Asia and Caucasus has not been based on its energy demand rather centered on strategic and geopolitical imperatives to check and reduce Russian influence over the former Soviet states. In late 1990s, the United States played a facilitator role for the export of Central Asian and Caucasus energy resources such as the construction of the Baku-Tbilisi-Ceyhan (BTC) pipeline. This allowed regional countries to stand against Russian assertiveness as the US provided them access to international markets and reducing their dependency on Soviet legacy systems.

European interest in Central Asia has remained at a bilateral level with member states such as France, the United Kingdom, and Germany establishing diplomatic missions. As a result of this reserved and cautious approach, the EU, at the multilateral level, has been lagging behind the US, China, and other regional powers in the early 1990s. The EU's 2007 Strategy, *The EU and Central Asia: Strategy for a new partnership*, focused on establishing foundations for good governance, the rule of law, human rights, democratization, education, and training. These reforms would also allow development of security and stability that create conditions for energy investments to the region. The EU's strategy stated that "the development of resources in oil and gas has significantly increased the role of Central Asian States as an energy

producers and transit countries. Increasing oil and gas exploitation will contribute to better world market supplies and will be conducive to diversification. Gas deliveries from the region are of special importance.”<sup>1048</sup>

As covered in the previous chapters, European dependence on natural gas from Russia could be reduced to some extent by alternative sources such as by increasing liquefied natural gas (LNG) imports from the USA, the Middle East, North Africa, and the Eastern Mediterranean. Additionally, using new technologies to explore shale gas in Europe could provide an alternative. However, these potential new sources have inherent constraints such as environmental concerns over shale gas production and a lack of sufficient LNG degasification terminals for accommodating increased imports. Therefore, the growth through LNG imports and shale gas production is not likely to materialize in the short term to meet the increasing European natural gas demand. While natural gas continues to be widely accepted as a transition fuel between coal to renewables to address climate change requirements and to reduce greenhouse gas emission targets, the European dependency on Russia increases.

Russian natural gas supply appears to be the only viable source in the short-term. However, large reserves in Central Asia and the Caucasus could still play an important role for the energy security of Europe as this region can provide non-OPEC/non-Russian oil and natural gas resources. Thus, prior attempts from regional countries and/or western partners to develop pipelines have encountered strong competition and political coercion from Russia. This region’s potential for being an alternative source of supply would explain the underlying reason why Russia has increasingly become more assertive in the Black Sea and the Caucasus. Russia not only challenges and competes with the pipeline projects through the Black Sea and/or Turkey that transit energy to international markets, but it also uses political and military means to discourage western investments.

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<sup>1048</sup> Council of the European Union, “The EU and Central Asia: Strategy for a New Partnership,” 31 May 2007, 2. <https://data.consilium.europa.eu/doc/document/ST-10113-2007-INIT/en/>.

The EU failed to establish an enduring headway over Central Asia due to increasing influence of Russia and China. Focusing on norms and regulations especially on democratic values and rule of law resulted in more obstacles than improving EU member states' bilateral relations. As the first natural gas crisis between Russia and Ukraine unfolded in 2006, the security of reliable future energy supplies became a major concern for the EU. The search for potential alternatives to Russian gas started immediately.

China has become the main export destination, and has an increasing role in energy relations between Central Asian republics and Russia. China's natural gas demand will increase, while Central Asian export to Russia will continue to decline. In addition to existing pipelines connecting Central Asia and Russia to China, other potential export projects such as Turkmenistan-Afghanistan-Pakistan-India (TAPI) pipeline to India and the Trans Caspian pipeline to Azerbaijan will affect the future of energy relations as well as geopolitical dynamics of the region.

Central Asia has sufficient energy resources that could present an alternative source for Europe. However, current end-of-pipe natural gas prices are not competitive against Russian gas in Central and Eastern Europe. In order to reduce costs, the amount of gas needs to be increased to include Turkmen gas through Trans-Caspian Gas pipeline. There are no projects underway to carry Turkmen gas to Azerbaijan, and then to Europe. It is not known if Russia would allow such a project that could threaten not only its market share but also geopolitical influence in Europe. Therefore, we could conclude that the amount of gas needs to be large enough to be price competitive against Russia.

Other challenges include region's landlocked geography and huge distances that require large investments to build pipeline networks. Additionally, geopolitical and social situation of the regional countries that cause concerns for western energy companies and financial institutions to support construction of large-distance pipeline networks. While Russia and



China can make such commitments to projects to ensure energy security and make investments in areas where there is potential for instability, the European Union does not have a common energy security strategy that dedicates resources to allow construction of costly projects where economic investments need to be secured by military instrument of power. Most importantly, a lack of US interest in Central Asia and support for large energy projects reduces European appetite to take the risks on its own.

## CHAPTER 7

### CONCLUSIONS

The main question this paper seeks to answer is to what extent Russia could use natural gas/energy supplies to leverage political outcomes. In other words, under what conditions can Russia leverage energy power to support its foreign policy objectives? Europe is in need of exported energy while Russia has vast energy resources. Central Asia/Caucasus has emerged as a potential source of energy for Europe to diversify and reduce its dependence on Russia. Therefore, Russia-Europe, Russia-Central Asia, and Central Asia/Caucasus-Europe energy relationships are interconnected, and developments in one region have implications to other regions.

Energy Security is a widely discussed and debated subject in literature, academic circles, governments, and international organizations. However, there is no agreed definition of energy security, and views differ significantly based on one's place in the supply chain from production to transit and receiving. Energy security is also a highly politicized, multifaceted, contested, and disputed issue in international relations. This different understanding of a complex relationship between states is a source of inter-state cooperation and/or conflict that also involves non-state actors, such as international and national energy companies, international and supranational organizations (i.e., the International Energy Agency [IEA] and European Union [EU]), and financial institutions. As it continues to evolve, the most distinctive difference in understanding of the energy security concept is between energy importers and exporters; the former focuses on the security of supply while the latter is concerned for the security of demand and its market share.

There are also competing theoretical frameworks that aim to explain energy relations and the concept of energy security. Realist and liberalist approaches represent main frameworks in the way the concept of energy security is perceived. On the one hand, a realist

approach suggests that energy security is a zero-sum game, linking it with the balance of power dynamics. On the other hand, a liberal approach, based on complex interdependence theory, suggests energy trade and international economic cooperation have a positive influence on international relations, highlighting the importance of market dynamics, global governance structures, and the role of international organizations, and norms. The competing views could be summarized as follows:

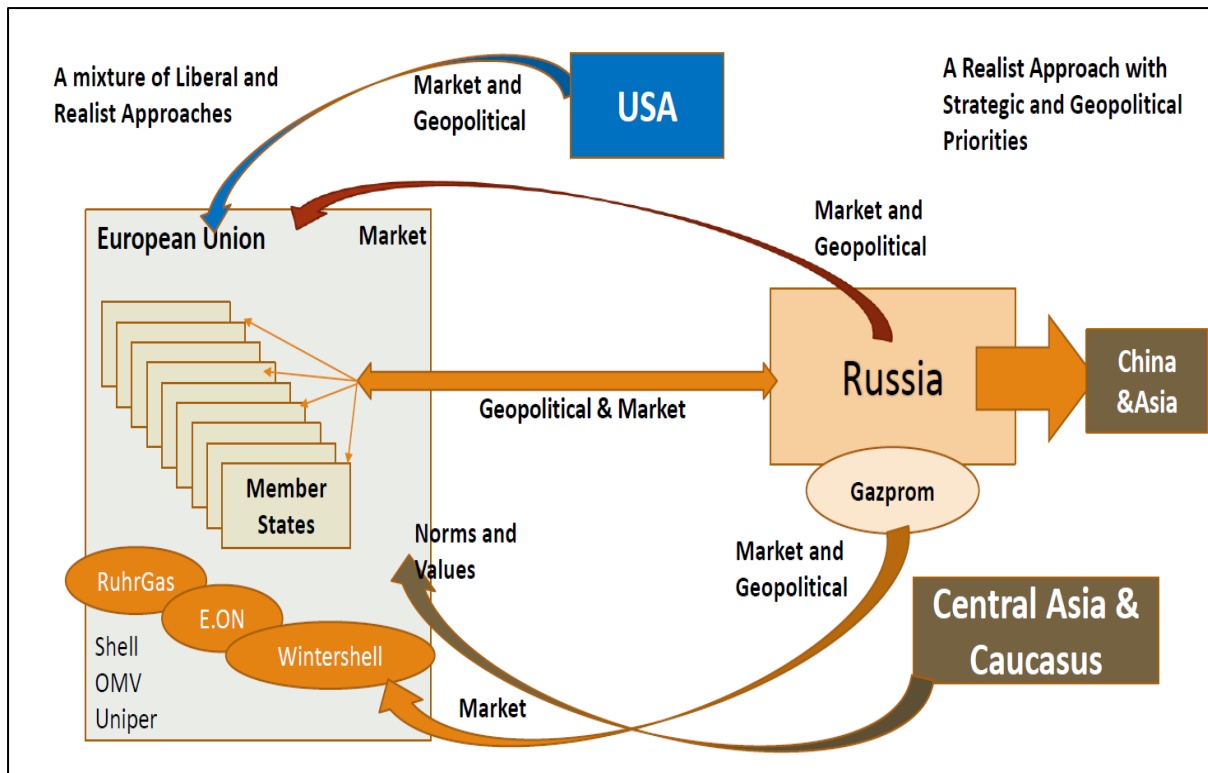
- The realist: energy relation is a zero-sum game, linking it with national security of the countries involved and balance of power dynamics between producing, transit, and consumer countries.
- The liberal: market-driven, pluralist approach that suggests interdependence and economic relations will contribute stability, which would allow an uninterrupted flow of natural gas.

Figure 42 depicts the complexity of securing the energy supply to Europe. While Russia uses energy as a geopolitical tool based on its realist worldview, Europe follows a market-driven pluralist approach. The European view of energy relations is based on market dynamics as framed by the liberalism school of thought. Additionally, Europe has not been represented as a homogenous entity, with diverging national interests of the member states, differences between major European powers, such as Germany and France, and the European Commission, and national energy industries. Especially, different priorities and competing interests of the European stakeholders create a very complex picture.

The US liquid natural gas (LNG) exports and other sources of natural gas could also provide short-term relief, but these sources could not meet the level of European demand for the long-term. The Central Asia and Caucasus region has the potential to become an alternative energy source for Europe to reduce its dependence on Russia. Russia, Europe and Central Asia and Caucasus regions create an energy triangle with competing and overlapping interests. To counter Russian assertiveness and potential Chinese competition, the US has a strategic role

and responsibility to support the European efforts for ensuring energy security. These efforts need to go beyond LNG exports.

Figure 42: Russia-Europe-Central Asia and Caucasus Energy Relations



Source: Author's depiction of Energy Triangle between Russia, Europe, and Central Asia and Caucasus.

The findings of the study suggest that European domestic production will continue to decline and consumer demand will likely grow, thus resulting in an increase in EU member states' dependency on Russian natural gas and pipeline networks. The high-level of dependence of certain European countries makes them more vulnerable against Russian coercion, ensuring to a more assertive Russia. The 2020 Eurostat data highlights the high-level of dependence on natural gas imports from Russia: Czech Republic, Latvia, North Macedonia, Bosnia Herzegovina, and Moldova %100, Hungary 95%, Slovakia 85%, Bulgaria 75%, Serbia 69%,

Finland 67%, Germany 65%, Poland 55%, Estonia 46%, Romania 45%, Italy 43%, Greece 39%, and Turkey 34%. While the level of dependency of Germany and Italy (65% and 43%, respectively) appears at a lower rate compared to several Eastern European countries, the volume of gas they import from Russia makes any policy modification, change in their relations, or reshaping of their energy mix extremely costly.

Climate change will continue to affect the energy mix of the European countries. While achieving climate neutrality targets by 2050 under the European Commission's green resilience objective requires reducing dependency on fossil fuels, natural gas demand is expected to increase to bridge the transition from coal to renewables. Thus, the high level of European energy dependency, especially on natural gas, over the next two decades allows Russia to use energy power to influence political outcomes. Europe should not be perceived as a single entity as the European Commission and member states aren't completely aligned in their view of energy relations and energy security itself. Liberal worldview dominates western European countries and to some extent the European Commission, while Eastern Europe perceives energy issues as a geopolitical concern. Central and Eastern members of the EU perceive their vulnerability as a vital security concern that brings the securitization aspect into the discussion.

Europe needs energy, so the security of energy supplies remains one of the most critical aspects for maintaining the western way of life, as well as for the national security of concerned countries. Since the early 2010s, the EU has become a net energy importer of crude oil, natural gas, uranium, and solid fossil fuels. A sudden disruption of a high proportion of the energy flow, in particular natural gas, would have tremendous economic, social, and political setbacks for the European countries that are members of the European Union and NATO. The Normandy Index of 2019 suggests that energy insecurity is perceived as the highest risk for the EU due to its high level of dependency on external suppliers, especially Russia. Thus, Russia exploits

European energy vulnerability to leverage political outcomes and uses energy as a deterrent, as in the case of the illegal annexation of Crimea in 2014.

The inability of European countries to diversify energy supplies, especially those highly dependent on Russian natural gas via pipeline networks, creates vulnerability interdependence that should be considered as a national security threat. In 2006, the first Russia-Ukraine crisis, resulting in a significant disruption of natural gas flow, was a wake-up call for Europe. The following crisis in the beginning of 2009 caused a humanitarian emergency in the Balkans and major economic problems in the Eastern European countries that rely on gas flowing through Ukraine. However, concerns over geopolitical influence, a high level of dependency both in terms of volume and a lack of diversity, as well as long-term contract-based energy transactions, remain at the core of Europe-Russia energy relations.

The European Commission's efforts to create a regulated European Energy Market has been effective to ensure Gazprom's attempts to control the energy system from upstream to downstream assets. More than 50% of Gazprom is controlled by the Russian state while Gazprom developed several joint ventures with Western European companies, such as those involved in the development of the Nord Stream 1 and 2 pipelines, as well as Blue Stream and Turk Stream. Gazprom attempts to control natural gas transport and delivery systems, and pipeline networks. The Third Energy Package has been the most significant step to curb Gazprom's efforts to control pipelines and reduce its influence over European natural gas market. However, Gazprom's uses other means such as joint ventures and subsidiaries to expand its geographic footprint around the globe.

The European gas market should not be perceived as a homogeneous entity. With the introduction of the Third Energy Package, the EU aims to use its regulatory power to create a common energy market. The Third Energy Package consists of the separation of energy supply and generation from the operation of transmission networks (unbundling), non-discriminatory

access to energy infrastructure (third party access), and the establishment of the independence of national energy regulators, increasing cross-border cooperation that benefit energy consumers. While the European Commission continues to execute measures of the regulations identified in the Third Energy Package and the follow-on guidance, Russia, through Gazprom, will continue to establish joint ventures and other means to work around these measures.

The competition between the European Union and Russia to gain control over pipelines will continue. The EU's level of natural gas dependency has allowed Russia to gain a position of strength for any future negotiations not only in the area of energy, but also in geopolitics. The findings of the study suggest that Ukraine has become prey to Russian aggression as it lost the value as the largest transit country that Russia relied on for its exports. The Western perception of a market-driven, pluralist approach that suggests interdependence and economic relations contribute to stability, has allowed Russia to circumvent Ukraine with the construction of several new pipelines since the end of the Cold War.

The findings of the European Commission led natural gas stress test in 2014 suggest that Eastern European and Balkan members were more vulnerable than others. These vulnerable member states will continue to conduct cost-benefit analysis in their interaction and relations with Russia. From the European point of view, the increased dependency of Europe, specifically the nations, with either high level of dependency or high volume of natural gas importers from Russia, will securitize energy and view this dependency as a national security concern. It is also important to note that Germany has a central and historical role in Europe that dates back to the Cold War. The more German energy and foreign policy are aligned with the Commission's objectives, the easier the development of a common approach to address Russian assertiveness would be.

Russian actions reflect a realist world view. As with the Soviet Union, Russia has been one of the biggest energy suppliers in the world. Oil and natural gas pipelines had been a central

element of the Soviet Union's energy strategy. The same worldview continues to shape Russia's energy strategy, which aims to ensure long-term foreign policy objectives that are reflected in relations with Western, Central and Eastern European countries. Russian attempts to increase influence over its near abroad should also be regarded in this context, with Ukraine perceived as a core national interest for Russia's security. Russia maintains security and energy relations with the Central Asia and the Caucasus region that is also viewed as part of its sphere of influence. Russia and China promote multilateralism in Central Asia region to address concerns over terrorism, religious extremism and separatism. Russia-China cooperation continues albeit Chinese economic relations have increased with regional countries over the last decade. While Russia uses energy as part of power politics, the Kremlin carefully conducted a cost-benefit analysis due to its high-level dependency on energy export revenues from Western Europe and China.

Russia, even from the Soviet Union era, has been searching for export access to Western markets to meet Europe's need for energy resources. During the Cold War, the West Germany-Soviet gas deal was part of a larger geopolitical approach called 'Ostpolitik' which remained the foundation of German foreign policy that led to setting conditions for détente. During the Cold War, the Soviet Union had a two-pronged approach towards Western Europe and Soviet satellites. Western European market was given the highest priority while COMECON countries was perceived as a secondary market due to heavily subsidized energy prices. With the end of the Cold War, this approach was initially adopted by Gazprom that has followed two different approaches towards Western Europe and the former Soviet space, including satellites.

Gazprom established a joint venture agreement with the German company BASF-Wintershall, which was perceived as a strategic partnership that became a 'New Ostpolitik' in the early 2000s. However, there was a problem from the Russian point of view. With the independence of former Soviet Republics and increased Western economic relations, Russia



has become increasingly dissatisfied and would like to increase its influence over the former Soviet-space or its 'near abroad'. Ukraine has a special role in this plan, due to its geographic location and the existence of Soviet-legacy natural gas pipeline infrastructure.

When the Soviet Union collapsed, Russia had the gas, Ukraine had the pipelines and around 80% of Russian gas used to flow through Ukraine. To reduce dependency on the transit countries such as Ukraine, Russia has pursued a strategic approach by building pipelines to bypass Central and Eastern European countries. In this context, the Nord Stream 1 and 2 pipelines caused one of the worst controversies in the European Union by creating a wedge between Western European members and Central Eastern Europeans, including the Baltic States. Nord Stream 2 not only further increased the divide in the EU, but also strained Transatlantic relations between the US and the EU, especially with Germany due to US sanctions. While European dependence on energy resources, especially natural gas, is expected to increase, Nord Stream 2 will also deliver Russian gas directly to Germany, bypassing the transit countries of Central and Eastern Europe.

The Russian energy strategy is not limited to Nord Stream 1 and 2; there are other pipelines, Turk Stream and Blue Stream, that will allow Russia to deliver natural gas to Western European markets, bypassing Ukraine and other Central and Eastern European countries. This geopolitical and strategic approach, providing natural gas directly to Western European consumers, enables Russia to use energy as a source of power against Europe, albeit driven by different objectives and creating varying effects on Western, Central, and Eastern Europe. With the completion of the Nord Stream 2 and Turk Stream pipelines, Russia will no longer rely on transit countries for export to Western Europe. Thus, Russia would exploit European energy dependence to coerce or to leverage political outcomes without any constraints.

The Russia-Ukraine energy relations are also influenced by geopolitical concerns driven by both cooperation and conflict. While Russia and Ukraine had disputes in 2006 and

2009 over gas prices, payments, and tariffs for the transit of Russian gas to Europe, the following Ukrainian conflict resulted in Russia's illegal annexation of Crimea in 2014, which was about power not energy. Gazprom's attempts to control Ukrainian natural gas pipeline networks have failed. Russian geopolitical coercion, manipulation and punishments took place in the forms of price increases, supply interruptions, such as the 2006 and 2009 gas crises, and most importantly developing alternative pipeline systems to prevent them from getting transit revenues. These actions indicate that the control of gas and oil delivery, especially pipeline networks, provide Russia the power to use energy to leverage political and economic outcomes. However, Russia was not successful, neither gaining control of the natural gas pipeline network nor establishing a Russia-friendly government in Ukraine, which led to large-scale invasion of Ukraine by military means.

The Soviet Union, then Russian leadership, had been deeply involved in energy-related decisions to ensure that both domestic and international aspects are considered, especially access to lucrative Western European markets. Thus, Russian attempts to circumvent Ukraine and other Central and Eastern European countries should be perceived not only as reducing transit fees but also as providing an uninterrupted flow of supplies to certain markets. Russia will have little constraints to use power against Ukraine and coerce former Soviet space without any concerns to upset Western European markets. This approach would allow Russia to gain the upper-hand by using hard and soft power to increase its influence over the so-called near abroad countries, while maintaining cash flow to support its economy and while chasing military adventures in Syria, Libya, and other areas.

While Europe was not able to diversify its energy resources, Russia, continuing in the Soviet footsteps followed a long-term strategy to diversify its markets. In this context, development of LNG production and exports, especially by using the Arctic resources and construction of the 'Power of Siberia' pipeline, are extremely important. These new pipeline

and energy projects are game changers that connect Russia to Chinese and other Asian markets. Energy sales to the Indo-Pacific region will give Russia the leverage in its relations with the European markets. Energy sales and access to the markets of China and other Indo-Pacific countries, would provide relief from the Western sanctions. Thus, oil and natural gas pipeline networks linking Russia and China would have strategic political consequences.

Natural gas pipelines are the most important elements of Russia's long-term strategy that allows weaponization of energy as a tool to induce political outcomes. These pipeline networks allow Russia to use natural gas an economic tool since pipeline gas is much cheaper and competitive to the LNG. Notably, Gazprom expansion has not been successful in every country to control transit and downstream infrastructure. These attempts have fueled energy security concerns in the West and have proven that initial concerns raised by Reagan in the 1980s were legitimate. Russia's use of energy as a weapon has failed to produce desired outcomes in Ukraine. However, energy via that natural gas pipelines is not only a vital aspect of economic and geopolitical consideration, it is one of the core elements of Russia's national power.

While other pipelines were a source of concern and resistance, the Nord Stream 2 (NS 2) pipeline has caused a geopolitical clash not only within the EU, but also between the US and Germany, challenging NATO's solidarity and Transatlantic relations. As covered earlier, construction of natural gas pipelines are expensive investments. It takes years to build them and require long-term relationship to ensure cost effectiveness. It can be argued that natural gas pipelines create a mutual dependence by not only connecting producer countries to consumers but also result in the establishment of a strategic relationship.

NS 2 will not bring additional Russian gas to Western Europe but it will reduce Russia's dependence on Ukraine and other central eastern European countries. It will be shorter, cheaper and in fact much more secure against any interruptions, whether for technical or security

reasons. It ensures Germany and Western Europe have an increased level of reliable security of natural gas supply. Additionally, as highlighted by former German Chancellor Merkel, the NS 2 pipeline is not only an economic, social, and environmental project that allows security of energy supply, but also is a political one. This political aspect of energy relations is oftentimes defined as the New Ostpolitik. In this regard, Germany has a pragmatic realist approach while developing economic cooperation that has strategic long-term aspects leading to European sanctions on Russia after the illegal annexation of Crimea. This is an example of its dual strategy of cooperation and containment.

The NS 2 has few implications on Polish energy security albeit the Yamal-Europe pipeline is likely to be less utilized, thus reducing transit fee revenues. However, Russia's reliance on Polish and Ukrainian transit corridors will be decreased significantly, increasing their vulnerability against Russian coercive activities. As during Soviet times, Russian energy exports have caused significant concerns in Washington due to increasing European dependency on an adversary that could use hard currency/revenues for military spending against the West and NATO Allies. In this regard, the US has imposed sanctions that were not wholeheartedly supported by European allies. When President Trump introduced sanctions on NS 2, both Germany and the EU expressed frustration as they perceived these measures as an American intervention in Europe's domestic affairs. The US, however, has been focusing on countering an increasingly rouge and assertive Russia while gaining a market share for the US LNG exports.

The NS 2 pipeline represents the final step of the three decades of Russian planning that bypass Ukraine and minimize its dependence on the Soviet-legacy Brotherhood pipeline network. The development of this pipeline is based on the effective implementation of Russian energy strategy in support of its foreign policy objectives while maintaining market share in Western Europe, increasing German/Western European dependence on natural gas, and

continuing the flow of revenues to support its GDP. Russia has been planning to bypass transit countries not only for economic reasons, but also to accomplish its geopolitical ambitions to return to Soviet-level great power status. While economically construction of a direct pipeline makes sense, the NS 2 pipeline will increase both sensitivity and vulnerability interdependence of Germany to Russian gas. This asymmetric dependency is likely to increase the wedge between the Western European and Central/Eastern European members of the EU while weakening the transatlantic link and undermining European energy security. The most important effect of the NS 2 is that it will create the impression that Russia doesn't need Ukraine as a transit country, leaving it as prey to Russia's great power ambition.

While the LNG supply from the US, Qatar, and other sources from the Middle East could provide short-term relief, there is no alternative energy source to meet European energy demand unless Europe allows shale gas extraction or makes significant changes to energy policies. It is hardly likely that Europe would go back to coal plants, Germany would return to nuclear power, or European environmental restrictions would allow fracking. Under these circumstances, this energy gap could only be met by natural gas to some extent through LNG but mainly through new pipelines from other regions such as Central Asia and the Caucasus. The newly independent states in Central Asia and Caucasus, especially Azerbaijan, Turkmenistan, and Kazakhstan, have sufficient oil and natural gas reserves to present an alternative to Russian sources.

The Central Asian republics are in search of new markets, but the landlocked geography and the high-level dependence on Soviet legacy pipeline networks controlled by Russia limits their ability to access Western consumers. The geostrategic position of the Central Asia /Caucasus region could allow it to influence the complex interdependence between Russia and Europe, as regional countries represent non-OPEC Non-Russian energy providers. The region has drawn interest of external actors from international organizations such as NATO, the EU,

and OSCE to individual states such as Russia, China, the US, India, Iran, Afghanistan, Pakistan, Japan, and Turkey. The vast energy resources have increased western interests and competition continues to be defined as the new 'Great Game.' While China has emerged as an alternative market, Central Asian countries are highly dependent on the Russian natural gas pipeline network for exports to European markets, including Ukraine.

The EU has followed a normative approach that focused on establishing foundations for good governance, the rule of law, human rights, democratization, education, and training. As a result, European interest in Central Asia has remained at a bilateral level with member states such as France, the United Kingdom, and Germany establishing diplomatic missions. The EU's 2007 Central Asia Strategy for Partnership included references to the development of oil and natural gas resources of the region and their potential for diversification of European energy sources. This strategy, covering promises for European-Central Asia energy relations, was an initial reaction to the Russia-Ukraine natural gas crisis in 2006. However, the EU failed to fulfil its initial ambitions to create an enduring headway over Central Asia. Focusing on norms and regulations, especially on democratic values and the rule of law, resulted in more obstacles than improving EU member states' bilateral relations.

China has become the main export destination for Central Asian energy, and has an increasing role in energy relations between Central Asian republics and Russia. In addition to existing pipelines connecting Central Asia and Russia to China, other potential export projects such as the Turkmenistan-Afghanistan-Pakistan-India (TAPI) pipeline to India and the Trans-Caspian pipeline to Azerbaijan will affect the future of energy relations as well as geopolitical dynamics of the region. Following Russia's unprovoked war against Ukraine, European focus might shift to the Central Asia and Caucasus region once again as a reliable source for energy supplies. However, the amount of natural gas should be large enough to ensure building a natural gas pipeline would be cost-effective and the end-of-pipe natural gas prices would be

competitive against LNG or other sources of supply. To overcome regional challenges, including landlocked geography and huge distances, require Europe and United States allocate upfront financial and political investment. In this regard, the US leadership as a facilitator would help Europe to take the risks and address potential challenges presented by Russia and competition from China.

Further research topics include the future of LNG exports to Europe and their capacity to meet increasing energy demand; the level of cooperation and competition between China and Russia in the development of Kazakhstan's oil and natural gas resources; the security situation in Afghanistan and its effects on the TAPI pipeline; the potential of Turkmenistan natural gas exports to Europe through Azerbaijan pipeline networks; and finally, the effects of Turkish-Greek cooperation or competition to develop natural gas resources in Eastern Mediterranean.

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