



universität  
wien

# MASTERARBEIT / MASTER'S THESIS

Titel der Masterarbeit / Title of the Master's Thesis

„Understanding the Development of the Fourth Corridor  
Megaproject from Azerbaijan to the European Natural Gas  
Market“

verfasst von / submitted by

Jennifer Privett

angestrebter akademischer Grad / in partial fulfilment of the requirements for the degree of

Master (MA)

Wien, 2018/ Vienna, 2018

Studienkennzahl lt. Studienblatt /  
degree programme code as it appears on  
the student record sheet:

A 067 805

Studienrichtung lt. Studienblatt /  
degree programme as it appears on  
the student record sheet:

Individuelles Masterstudium:  
Global Studies – a European Perspective

Betreut von / Supervisor:

Ao. Univ. Prof. Mag. Dr. Friedrich Edelmayer, MAS

UNIVERSITÄT LEIPZIG



universität  
wien

# MASTERARBEIT / MASTER THESIS

Titel der Masterarbeit /Title of the Master Thesis

## **Understanding the Development of the Fourth Corridor Megaproject from Azerbaijan to the European Union Natural Gas Market**

Verfasser /Author

Jennifer Privett

angestrebter akademischer Grad / academic degree aspired

Master (MA)

Wien, 2018 / Vienna, 2018

Studienkennzahl / degree program-  
me code:

A 067 805

Studienrichtung / degree program-  
me:

Individuelles Masterstudium:  
Global Studies – a European Perspective

Betreuer/Supervisor:

Ao. Univ.-Prof. Mag. Dr. Friedrich Edelmayer, MAS

## Table of Contents

|                                                                                            |     |
|--------------------------------------------------------------------------------------------|-----|
| Acknowledgements.....                                                                      | iii |
| Abstract .....                                                                             | iv  |
| List of Abbreviations.....                                                                 | vi  |
| <b>Introduction</b> .....                                                                  | 1   |
| <b>Chapter 1: Azerbaijan and Caspian Natural Gas Exports</b> .....                         | 8   |
| 1.1 The Caspian: A Geostrategic Region Rich in Resources.....                              | 8   |
| A. The Caspian Basin .....                                                                 | 8   |
| B. Azerbaijani Development .....                                                           | 10  |
| C. Striking Gold: Shah Deniz.....                                                          | 12  |
| 1.2 Foreign Markets .....                                                                  | 14  |
| A. Azerbaijani Exports .....                                                               | 14  |
| B. Europe: The Emerging Market? .....                                                      | 17  |
| 1.3 Geopolitical Uncertainty.....                                                          | 20  |
| A. Caspian Sea Delimitation Disputes .....                                                 | 20  |
| B. Regional (In)Stability .....                                                            | 23  |
| <b>Chapter 2: Natural Gas, the European Union, and Security of Supply</b><br>.....         | 28  |
| 2.1 The European Natural Gas Market.....                                                   | 28  |
| A. Demand for Natural Gas.....                                                             | 28  |
| B. Market Suppliers .....                                                                  | 32  |
| C. Delivery Infrastructure.....                                                            | 33  |
| 2.2 Energy Agenda: Natural Gas .....                                                       | 35  |
| A. Policies.....                                                                           | 35  |
| B. Solidarity.....                                                                         | 38  |
| C. Strategies.....                                                                         | 40  |
| 2.3 The Role of the Black and Caspian Seas.....                                            | 42  |
| <b>Chapter 3: Developing the Megaproject</b> .....                                         | 47  |
| 3.1 Political Pipelines .....                                                              | 48  |
| A. Planned and Proposed Infrastructure Development .....                                   | 49  |
| B. Cancelled Projects.....                                                                 | 52  |
| 3.2 The Southern Gas Corridor.....                                                         | 55  |
| A. Azerbaijan Takes the Lead .....                                                         | 59  |
| B. South Caucasus Pipeline Expansion and the Trans-Anatolian<br>Natural Gas Pipeline ..... | 60  |
| C. Trans-Adriatic Pipeline .....                                                           | 61  |
| 3.3 Fourth Corridor Implications.....                                                      | 63  |
| A. The European Union and Member States .....                                              | 63  |
| B. Azerbaijan .....                                                                        | 66  |

|                                                                                                                                |           |
|--------------------------------------------------------------------------------------------------------------------------------|-----------|
| C. The Black and Caspian Seas .....                                                                                            | 67        |
| <b>Chapter 4: Contextualizing the Southern Gas Corridor Within the<br/>Geopolitical Dynamics of the Black Sea Region .....</b> | <b>69</b> |
| 4.1 Gazprom Games .....                                                                                                        | 71        |
| A. Russian Political Leverage .....                                                                                            | 71        |
| B. South Stream and Turkish Stream .....                                                                                       | 73        |
| C. Nord Stream Expansion .....                                                                                                 | 76        |
| 4.2 Playing Politics – Natural Gas Regulations .....                                                                           | 78        |
| A. Strategic Energy Regulations.....                                                                                           | 79        |
| B. The Third Gas Directive.....                                                                                                | 81        |
| 4.3 The Energy Corridor.....                                                                                                   | 85        |
| A. The Black Sea .....                                                                                                         | 85        |
| B. Russian-Ukraine Relations.....                                                                                              | 87        |
| C. The Emerging Role of Turkey.....                                                                                            | 88        |
| <b>Conclusion .....</b>                                                                                                        | <b>90</b> |
| <b>Bibliography .....</b>                                                                                                      | <b>93</b> |

## Acknowledgements

None of this could have been realized without a fateful autumn day in Amsterdam in 2014 and the encouragement from a woman named Caroline to pursue a graduate degree if I so desired, regardless of my age. I also have to thank my dearest friend and comrade in life, Debra Dee. Without her honesty, strength, support, and encouragement, a Masters degree never would have taken shape. Of course, none of this could have been realized without the emotional and financial support of my parents. Though not entirely on board at the beginning, they still committed to my dreams and without them, a European Masters degree would not have been possible. I owe them *big*. My mother moved omnipotent mountains in my last weeks. Lastly, to my thesis coach Jana Kurpiša. Her tough spirit, intelligence, and compassion helped turn vast incoherent ideas into a Masters of Arts thesis. To my countless colleagues, especially Leah Hansen and Julie Lindell, it was through the sharing of their thesis journey and emotional vulnerability, as well as their grace and support that made me keep going even in my very worst moments.

So much love, joy, and deepest gratitude.

## Abstract

Natural gas supply diversity has been a problem plaguing the European Union for well over a decade. Though the issue of supply security floated the European energy agenda beginning around the turn of the century, it was not until the 2006 and more significant 2009 gas supply crises that natural gas security of supply topped the European energy agenda. With gas dependency remarkably higher than overall energy dependency, in combination with the well-established reputation of their largest supplier in leveraging natural gas supply for foreign policy influence, the European Union shifted from eager to desperate to diversify not only sources and suppliers of natural gas, but also supply infrastructures. From the announcement of the EU-sponsored Nabucco pipeline in 2002 designed to deliver Caspian gas to European markets, paralleled by Russian pipeline projects that undeniably mirrored EU infrastructural diversification strategies, to the selection of the Trans-Adriatic Pipeline in 2013 to complete the natural gas megaproject from Azerbaijan to the European market via Italy, the Southern Gas Corridor represents substantially more than natural gas supply infrastructure. This thesis examines the conceptualization and political evolution of the fourth natural gas supply corridor to analyze the underlying forces and new age power struggle driving its development, which can only be understood within the geopolitical dynamics of the Black Sea region.

Die Europäische Union beschäftigt sich bereits seit ueber einem Jahrzent mit der Problematik der Diversität der Erdgas Versorgung. Obwohl das Thema auf der Agenda Europas bereits um die Jahrhundertwende auftauchte, erlangte die Problematik der Erdgas Versorgungs-Sicherheit erst mit der 2006, und spaeter noch erheblicheren 2009 Versorgungs-Krise oeffentliche Aufmerksamkeit. Um die Abhaengigkeit von Energiezulieferern zu verringern, aber auch um die eigene aussenpolitische Stellung zu verbessern, aenderte die EU ihre energiepolitische Ausrichtung. Das Portfolio der Ressourcen wurden nicht nur diversifiziert, sondern auch wichtige Infrastrukturen neu ausgerichtet um sich so eine unabhaengigere Position von Energieanbietern zu sichern. Direkte Folgen dieser Politik waren etwa die von der EU gefoerderten Nabucco Pipeline aus dem Jahre 2002, die Erdgas vom Kaspischen Meer direkt nach Europa liefert. Die 2013 errichtete Trans-Adriatische Pipeline ergaenzte das Europaeische Energiekonzept durch eine Verbindung von Aserbaidshan bis nach Italien und sorgte so fuer eine sehr viel diversere

Energieversorgung. Diese neue Versorgungsinfrastruktur wurde von Russischer Seite versucht zu spiegeln mit eigens begonnen Diversifikationsstrategien. Diese Masterarbeit untersucht die Konzeption und politische Evolution des vierten Erdgas Versorgungskorridors, um die grundlegenden Kräfte und den Machtkampf im entscheidenden „new age“ zu analysieren. Dieser wichtige Einflussfaktor kann nur anhand der geopolitischen Dynamiken der Schwarzmeerregion verstanden und erklärt werden.

## List of Abbreviations

|               |                                                                            |
|---------------|----------------------------------------------------------------------------|
| AIOC          | Azerbaijan International Operation Company                                 |
| BCM           | Billion Cubic Meters                                                       |
| BCMA (BCM/A)  | Billion Cubic Meters per Annum                                             |
| BOTAS         | Turkish Petroleum Pipeline Corporation                                     |
| BP            | British Petroleum                                                          |
| DEPA          | Public Gas Corporation of Greece                                           |
| DESFA         | National Natural Gas System Operator of Greece,<br>DEPA subsidiary of DEPA |
| EBRD          | European Bank of Reconstruction and<br>Development                         |
| EC            | European Commission                                                        |
| EIA           | Energy Information Administration                                          |
| EIB           | European Investment Bank                                                   |
| ENP           | European Neighborhood Policy                                               |
| EU            | European Union                                                             |
| EU-28         | The 28 Member States comprising the European<br>Union                      |
| FID           | Final Investment Decision                                                  |
| IEA           | International Energy Agency                                                |
| JV            | Joint Venture                                                              |
| LNG           | Liquefied Natural Gas                                                      |
| MCM           | Million Cubic Meters                                                       |
| MS            | Member State                                                               |
| NICO          | Naftiran Intertrade Company                                                |
| OPAL          | Ostsee-Pipeline Anbindungsleitung                                          |
| PCI           | Project of Common Interest                                                 |
| PSA           | Production Sharing Agreement                                               |
| SCP           | South Caucasus Pipeline                                                    |
| SCP(x) / SCPx | South Caucasus Pipeline Expansion                                          |



|          |                                                     |
|----------|-----------------------------------------------------|
| SD       | Shah Deniz                                          |
| SGC      | Southern Gas Corridor                               |
| SGC CJSC | Southern Gas Corridor Closed Joint Stock<br>Company |
| SOCAR    | State Oil Company of the Azerbaijan Republic        |
| TANAP    | Trans-Anatolian Natural Gas Pipeline                |
| TAP      | Trans-Adriatic Pipeline                             |
| TCM      | Trillion Cubic Meters                               |
| TCP      | Trans-Caspian Pipeline                              |
| TPA      | Third Party Access                                  |
| TPAO     | Turkish Petroleum Corporation                       |
| USD      | US-Dollar                                           |



## Introduction

Natural gas pipeline infrastructure is as much about supply as it is about politics bringing together producers, export-dependent economies, infrastructure and transit countries, and import-dependent consumer countries. The geo-significant regions that become energy corridors connecting suppliers and consumers are critical to both countries of the gas trade, whose economies are reliant upon its route. Development of the fourth natural gas supply corridor to the European Union is no different in this regard, but the underlying power struggles that must be considered in its evaluation incorporate layers of complexity. The thesis seeks to ascertain how the geopolitical dynamics of the Black Sea impact and influence Caspian natural gas pipeline infrastructure from Azerbaijan to the European market. This will be achieved firstly identifying the components of its creation, followed by a thorough examination of the multi-segment 3,500 kilometer Southern Gas Corridor project linking six countries from Azerbaijan to Italy, and lastly, applying geopolitical dimensions of the Black Sea to its final realization.

Though energy trade between the European Union and third countries is heavily based on oil and gas, this analysis will strictly focus on the natural gas aspect and more specifically, dry natural gas. As the world's fastest growing major fuel for both energy use and trade, natural gas is seen as a transition fuel to develop a more integrated mix in primary fuel consumption. Furthermore, it acts as an excellent partner in the build up of substantial renewable resources – an important energy objective of the European Union. Globally, natural gas trade is dominated by pipeline; in the European Union, dry natural gas is largely favored with liquid natural gas comprising less than 15% of overall gas trade in the region.<sup>1</sup>

### *Background*

The Southern Gas Corridor is a natural gas infrastructure project designed to bring Caspian gas from Azerbaijan to the European market via the Georgian and Turkish Black Sea corridor. Source and infrastructure diversification goals of the European Union aim to provide a sustainable and secure natural gas supply. Though the EU lightly pursued energy security at the turn of the century, it garnered new support following the first Russian natural gas supply crisis.<sup>2</sup> The second dispute in 2009 and

---

<sup>1</sup> “BP Statistical Review of World Energy 2017,” (London: British Petroleum, 2017).

<sup>2</sup> The acronym ‘EU’ exclusively stands for ‘European Union’ and refers to the EU-28.

resultant supply crisis drove momentum into the energy priorities of the EU to realize a Southern Energy Corridor to deliver Caspian gas to the European market. The massive project fluctuated between stagnation and modification, but consistently had the support of the EU and Azerbaijan. Its economic significance to both countries continued to expand, though for different reasons. Azeri impetus in realizing the stalled infrastructure critical to its economy was highlighted when Azerbaijan and Turkey introduced modifications to the natural gas corridor and transformed the project into the Southern Gas Corridor.

Support of the EU also evolved from energy security to a progressively political agenda. Supply security was increasingly prioritized in legislation and regulation, which heavily impacted the national strategies of its largest supplier – Russia. ‘Systemic polarity’ and ‘national security patterns’ at the Black Sea regional level intensified as the two Black Sea poles simultaneously wagered for power and control through natural gas. The increasingly prevalent dynamics of the geopolitical region persistently intervened in the progress of the EU energy agenda, gradually making the fourth corridor project one of critical *and* political importance to the EU. Russian national strategies were implemented to weaken the regional power of the EU and also to increase Gazprom market share through strategic infrastructural projects. As a result of these factors, the Southern Gas Corridor designed to deliver *non*-Russian gas must first be understood through its conceptualization and realization, and then by its entanglement in the energy geopolitics of the Black Sea region.

The Black Sea region, and wider Black Sea region if the Southern Caucasus states are included, forms an energy “security complex”<sup>3</sup> of states linked together in such a way that their national energy strategies cannot “realistically be considered apart” from other states in the region.<sup>4</sup> The natural gas security environment of the Black Sea region is defined by security of demand for exporters, security of supply for importers, and secure infrastructure through transit countries; and structured by geopolitics that favor the “interests of regional and great powers.”<sup>5</sup>

---

<sup>3</sup> Barry Buzan, *People, States & Fear: An Agenda for International Security Studies in the Post-Cold War Era*, ed. Alan and Vincent Hoffmann-Martinot Ware, 2nd ed. (Colchester: ECPR Press, 2008), 160.

<sup>4</sup> Serban Filip Cioculescu, “Perceptions of Changing Power, Dyadic Rivalries and Security Dilemma Mechanisms in the Wider Black Sea Area,” *Romanian Political Science Review* 16, no. 3 (2016): 378.

<sup>5</sup> Ibid.

*Literature Review*

Geopolitics and energy are closely connected as geographic locations of supply and demand centers, transit routes, and the use of natural resources in national and foreign policy strongly influences State interests, national strategies, and economic vitality.<sup>6</sup> In short, energy resources play a large role in politics. Geopolitics more closely connects politics to geography and the access to resources within that geographical region; it describes the relation between geographic space and political interest, power, and strategy. It is the strategic use of a geographical area to increase power.<sup>7</sup> Energy geopolitics is based on two factors: the State in control of the natural resource will control those who need it, while those who need it will seek control over external supply sources and transit corridors.

Energy security, particularly the security of natural gas supply, entails the security of delivery infrastructure, as well as the diversity of supply and transit. Energy security is understood through a triad of technologic, economic, and strategic dynamics, though it is the latter two that are most prevalent in the literature.<sup>8</sup> Energy flows affect the day-to-day functioning of a society and its ability to advance towards the future, and must be available at reasonable prices. Thus, guaranteeing the lasting survival of a given society is predicated on the availability of ample flows at economic prices; thus, energy becomes a matter of security. Literature varies on the specifics of the concept, though the International Energy Agency describes energy security as “the uninterrupted availability of energy sources at an affordable price.”<sup>9</sup>

As the largest natural gas supplier to the EU and with an economy heavily based on energy export, information regarding Russian natural gas production, supply, and reserves is plentiful and often complimented by its use as a political tool in foreign policy. Any discussion of the European gas market must also include an understanding of the energy dynamics between Russia and the EU, both as supplier and consumer and also as rivals in the wider Black Sea region. Such dynamics are widely discussed in the literature. Discussion and analysis of Russian export infrastructure and impacts to the EU market grew steadily following the supply crisis in 2009. Discourse regarding Russian export infrastructure and political linkage has flourished in recent years, especially with the Nord Stream pipeline

---

<sup>6</sup> Carla Patrício Fernandes and Teresa Ferreira Rodrigues Fernandes, ed. *Geopolitics of Energy and Energy Security* (Lisbon: Instituto da Defesa Nacional, 2017), 23.

<sup>7</sup> Colin Flint, *Introduction to Geopolitics*, 3rd ed. (New York: Routledge, 2016), 16.

<sup>8</sup> Fernandes and Rodrigues, *Geopolitics of Energy*, 11.

<sup>9</sup> “Energy Security,” International Energy Agency, accessed 5 January 2018.

inauguration in late 2011 and early 2012, in addition to proposed subsea pipelines for natural gas delivery to the EU via the Black Sea.

Transparency initiatives in the energy sector, market liberalization, and publication of formal communications amongst EU institutions provide a wealth of data on natural gas legislation and energy policy. Many scholars have also taken to the subject discussing EU import dependency, diversification, and future energy priorities. Energy policy and strategy are critically analyzed among experts who find the energy goals of the EU and their heavy reliance on renewables in the future to be too ambitious and unrealistic. Policies over the years have increasingly focused on source and route diversification to enhance energy security, though the literature largely fails to discuss the gradual politicization of natural gas legislation and externalization of EU energy *acquis*, nor the increasingly deliberate approach of the EU to hinder Russian growth in the European market. The results of which, in tandem with traditional Russian expansionist goals, have transposed the geopolitical power struggle between the two Black Sea poles to the European natural gas market emulated through infrastructure and regulation. A discussion and comparative analysis of such dynamics in parallel to the development of the Southern Gas Corridor defines the impact of these dynamics on the full realization of the infrastructure megaproject.

The growing access of Russian gas to the European market is culminating in the current debate between meeting the energy needs of the European Union and deepening dependence on the political tactics of Russia. Member States and scholars alike clash on the proposed Russian-led Nord Stream 2 expansion project leading to strong politicization of the project. Those in support insist that EU supply security can only be ensured through an additional and direct pipeline to the EU. Accordingly, infrastructure security and stability of supply can only be ensured through pipelines that bypass transit states, such as Ukraine for example. Those opposed to the expansion project assert that increasing dependence on Russian energy supplies will only serve to weaken the EU as Putin exerts political influence in exchange for natural gas security of supply.

On the other side of the pipeline map, the functionality and purpose of the Southern Gas Corridor is also debated as many experts question the legitimacy of the project in EU diversification. Several argue the EU is blinded by the diversification megaproject and energy-hungry interests, which overlook the lack of democratic norms in Azerbaijan and its blatant human rights violations, national corruption, and the authoritarian regime of Ilham Aliyev.

*Relevance*

Understanding the dimensions behind the creation and gradual development of the Southern Gas Corridor, as well as the influences of Black Sea geopolitics on its realization, is of critical value and importance as the power struggle between the two poles becomes more evident. The fourth corridor project illustrates a geopolitical shift in the wider region and an indication of what diversification *away from* Russia is worth. The EU natural gas partnership with the Caspian State is worthwhile as it puts an energy price tag on democracy and extension of EU norms.

The “power and security games” of the Black Sea region are not new as the relevance of the region lies in global gas demand, the current market, and the geopolitical shift occurring from changes in supply geography.<sup>10</sup> The Black Sea is the nexus of convergence between Euro-Atlantic and Eurasian power and politics, and a cornerstone to regional and global energy supply that connects Eurasia, the Middle East, and Europe. A distinct timeline exists of Russian infrastructure projects and EU energy regulations, evident of the direct correlation of EU-Russian rivaling efforts. These two aspects are not analyzed nor discussed in depth in parallel to one another.

The energy geopolitical dynamics in the Black Sea are changing: Ukraine is no longer Russia’s transit country of choice while Turkey, on the other hand, is not only becoming the Ukrainian replacement for energy transit, but also the energy corridor to “supply” Caspian gas to the EU. Russian determination to regain power and influence in the region alongside the expansion of EU legal and regulatory frameworks positions the Black Sea in a geopolitical frontier. Russia’s rash use of natural gas for political subservience at best and foreign policy influence at worst makes this relevant to those impacted by Russian supply and infrastructure.

*Methodology*

Analysis of Caspian natural gas infrastructure to the European market requires an evaluation of Caspian natural resources, regional politics, and Azerbaijani state development based on an energy export economy. Fundamental resources for this topic include Svante E. Cornell’s book *Azerbaijan Since Independence*, a working paper by Gülmira Rzayeva entitled “The Outlook for Azerbaijani Gas Supplies to Europe: Challenges and Perspectives,” and an article from the *Journal of Eurasian Studies* entitled “Mixing Geopolitics and Business: How Ruling Elites in the Caspian States

---

<sup>10</sup> Cioculescu, “Perceptions of Changing Power,” 378.

Justify Their Choice of Export Pipelines” written by Andreas Heinrich and Heiko Pleines, among several others. A thorough investigation into energy legislation and the political direction of the European energy agenda is also required. The research will be centered on EU legislation, specifically the Third Energy Package adopted in 2011 and the 2014 *European Energy Security Strategy*. Data must also be collected on natural gas field reserves, production, consumption, as well as import and export regimes to determine EU natural gas dependency. Such figures will be gathered from “British Petroleum Statistical Review of World Energy,” Eurostat European energy statistics, and the European Commission’s “EU Energy in Figures: Statistical Pocketbook.” Numerical data will cover the last decade and in some instances, the past two decades to provide a point of reference.

The development of the Southern Gas Corridor will be considered next using multiple literature resources such as Luca Franza’s “Developments in Gas Supplies to Europe” and progress reports from lead operators in the project like British Petroleum and Trans-Adriatic Pipeline AG. Research will focus on the progression of EU energy legislation in the 21<sup>st</sup> century, as well as state and economic interests of Azerbaijan. Additionally, proposed and cancelled projects will be considered in order to identify the causal factors leading to the realization of the \$45 billion megaproject. Likewise, shareholders for each component of the project, intergovernmental agreements, and gas purchase agreements will be examined. Lastly, Black Sea geopolitics will be understood through a range of sources including, but not limited to, Barry Buzan’s *States & Fear: An Agenda for International Security Studies in the Post-Cold War Era* and Serban Filip Cioculescu’s “Perceptions of Changing Power, Dyadic Rivalries and Security Dilemma Mechanisms in the Wider Black Sea Area.”

Literature will be gathered from a variety of sources including books such as *Oil and Gas Pipelines in the Black-Caspian Seas Region* by Sergey S. Zhiltsov and Igor S. Zonn, and *The New Politics of Energy Security in the European Union and Beyond: States, Markets, Institutions* by Andrea Prontera, journals such as the *Energy Journal* and *Baltic Region*, working papers from institutes like The Oxford Institute for Energy Studies (OIES) and Clingendael International Energy Programme (CIEP), as well as European Commission energy publications. The research is centered on natural gas supply, Eurasian export infrastructures, European security of supply, technical specifications of the Southern Gas Corridor pipeline project, geopolitics of the Black and Caspian Seas, and the external energy relations of Russia, Azerbaijan, and the EU.



*Thesis Outline*

The impact of the regional geopolitical dynamics of the Black Sea on the Southern Gas Corridor can only be discerned following a comprehensive analysis of the project in its entirety from Azerbaijani production and the initial proposal of the fourth corridor to its current implementation progress and exemption from EU energy regulations. To properly assess the project, such an investigation must also include a critical examination of each component of the Southern Gas Corridor: the second development phase of the Shah Deniz gas field, expansion of the South Caucasus Pipeline, construction of the Trans-Anatolian Natural Gas Pipeline to connect to the European market via the fourth segment of the comprehensive project, the Trans-Adriatic Pipeline. Therefore, the thesis is designed in four chapters with chapters one through three providing a comprehensive exploration of the project, and the final chapter analyzing its realization only through the geopolitical lens of the Black Sea region.

The first chapter will analyze the Azerbaijani natural gas export economy, current role in foreign markets, and political considerations of the geo-significant Caspian Sea region. The second chapter examines the EU energy agenda through policies and legislation, additionally exploring the role of the Black and Caspian Seas States in EU energy priorities. Next, the third chapter introduces proposed infrastructure projects followed by an in-depth discussion of the three pipeline projects taking place from Georgia to Italy. Each segment of the line will be analyzed according to shareholder interest, project financing, and regional impacts. The fourth and final chapter presents the geopolitical nature of EU-Russian relations and resulting power struggle understood through a series of Russian infrastructure projects and EU energy regulations that in tandem directly impact realization of the Southern Gas Corridor.

## Azerbaijan and Caspian Natural Gas Exports

At the crossroads between Europe and Asia, the resource-rich Caspian Basin is of great geo-significance as an energy transit point between the two continents. Its critical role in contemporary energy trade routes developed after the collapse of the Soviet Union. As a result, the region is dense with national and transnational actors, particularly in the political and energy arenas. Aside from extra-regional aspects, the region is often faced with internal challenges, such as the imperialist tendencies of Russia, frozen conflicts, and the on-going dispute of Caspian Sea delimitation. Oil and gas resources of the Caspian Sea are “considered of major geopolitical importance by external powers” because they are neither controlled by ‘OPEC nor the Russian Federation’ and, as a result, they provide external actors the opportunity to ‘diversify energy supplies.’<sup>11</sup>

Few in the region have reached their energy potential in extraction and development partly due to the lack of extant export capabilities. Additionally, offshore development in the Caspian Sea is hindered due to its unresolved legal status. On the western Caspian, Azerbaijan is strategically located for export to western markets while states on the eastern coast like Turkmenistan have met strong opposition from Russia and Iran for western exports. The geopolitical environment of the region is tense at best and many of the tensions are underscored by access to and development of energy resources.

### 1.1 The Caspian: A Geostrategic Region Rich in Resources

#### A. The Caspian Basin

The region itself consists of the Caspian Basin, five littoral States, and Uzbekistan as most of its territory falls within the Basin. Iran presents a particular case because only offshore Iranian resources are considered Caspian as the geological border of the Basin ends at the northern edge of mainland Iran.<sup>12</sup> Like its surrounding states, the Sea holds large volumes of hydrocarbon reserves with estimates of proved and probable reserves as high as 48 billion barrels of oil and 8.7 trillion cubic meters of natural gas.<sup>13</sup>

---

<sup>11</sup> Andreas Heinrich and Heiko Pleines, “Introduction: The Political Economy of the Caspian Oil and Gas States,” *Journal of Eurasian Studies* 6, no. 2 (2015): 89.

<sup>12</sup> *Caspian Sea Region*, Energy Information Administration (Washington, D.C.: U.S. Department of Energy, 2013), 3.

<sup>13</sup> *Ibid.*, 8.

As a result, the region represents an important component of global energy security, and foreign energy exports have significantly increased since the late 1990s.<sup>14</sup>

The Caspian has become a hub for natural gas exploration and development, boosted by the monumental offshore discovery of the Shah Deniz gas field in 1999. Considering the Shah Deniz discovery and the gas reserves of Turkmenistan, estimated as the fourth largest in the world at 17.5 trillion cubic meters, the Caspian region has the ability to eminently increase global gas production.<sup>15</sup> In fact, 2016 natural gas reserves in the Caspian basin, excluding the Russian and Iranian sectors, totaled a staggering eleven percent of *total* global natural gas reserves.<sup>16</sup> Moreover, these estimates are rather conservative as many areas of the sea have yet to be explored and await legal resolution of the sea. Also in 2016, natural gas production in the Caspian basin, excluding Russian and Iranian sectors, totaled 167 billion cubic meters and comprised 4.7% of global production. Azerbaijani natural gas production that year accounted for 10.5% of Caspian natural gas production overall.<sup>17</sup> (Very little of Russia's gas production comes from the Caspian basin and Iran has very little or no offshore natural gas production.)

The formation of the newly independent states following the fall of the Soviet Union and the boom in energy prices starting in the later 1990s brought international attention to the Caspian region, and Azerbaijan in particular. The former-Soviet states were given opportunities for 'economic growth, political stability, and geopolitical relevance' with the opening up of the Caspian to foreign exploration and production.<sup>18</sup> Foreign investments and international energy firms flooded the region and overnight the Caspian became a strategic oil and gas sensation. Moreover, vast offshore mineral deposits lay pristinely untouched due to poor Soviet technology incapable of deep-water exploration and extraction, which further compounded foreign interest.

The former-Soviet states have followed different approaches to the development and management of resources, either by state-owned oil companies or by a consortium of foreign energy companies alongside the

---

<sup>14</sup> "Eastern Europe, Caucasus and Central Asia," in *Energy Policies Beyond IEA Countries* (Paris: International Energy Agency, 2015), 2.

<sup>15</sup> "BP Statistical Review 2017."

<sup>16</sup> Based on my analysis and calculations using data from BP Statistical Review 2017.

<sup>17</sup> Ibid.

<sup>18</sup> Heinrich and Pleines, "The Political Economy of the Caspian," 89.

state-owned energy company.<sup>19</sup> For example, Kazakhstan has the most privately held mineral assets in the region and similarly, Uzbekistan and Turkmenistan kept foreign activity out continuing the former ownership system of the Soviets and maintained state ownership and control of energy resources. Azerbaijan was the only former-Soviet state that immediately involved foreign firms in their oil and gas sector and by 2013, had the largest number of Production Sharing Agreements of all former-Soviet states.<sup>20</sup>

The State Oil Company of the Azerbaijan Republic (SOCAR), established in 1992, works in tandem to fully develop its energy assets and consequentially, its economy. Following the opening up of the region, SOCAR and a British Petroleum-led consortium of energy firms signed a 30-year Production Sharing Agreement, since dubbed the “Contract of the Century,” for the exploration and development of offshore Azeri mineral resources. The \$7.4 billion contract signed in 1994 marked the beginning of extensive international investment and development in Azerbaijan. In fact, from 1994 to 2015, the State received an estimated \$60 billion in foreign investments.<sup>21</sup> In 2015, the Senior Vice President of Statoil stated the Norwegian energy firm had invested \$5.6 billion in Azerbaijan’s energy sector.<sup>22</sup> Despite this, British Petroleum remains the largest foreign investor in Azerbaijan mainly due to the discovery of the Shah Deniz gas field in 1999.<sup>23</sup> Not long after the monumental discovery, Azerbaijan began to shift its economy towards natural gas production and export.

#### B. Azerbaijani Development

The extensive quantities of untapped natural gas reserves and strategic location of the Caspian Basin, particularly for Azerbaijan on its western edge, grants the littoral State great geopolitical relevance. Historically, a Caspian leader in oil production, Azerbaijan remains a leader today because of its success in production, supply, and export of natural gas. Energy is critical to the Azeri economy and development of the natural gas sector has

---

<sup>19</sup> *Caspian Sea Region*, 3.

<sup>20</sup> Ibid.

<sup>21</sup> “Azerbaijan, 20 Years after the Contract of the Century,” in *The Oil & Gas Year - The Who's Who of the Global Energy Industry: Azerbaijan* (Dubai: The Oil & Gas Limited, 2015), 15.

<sup>22</sup> “Azerbaijan Has Changed the Energy Map of the Region,” Caspian Oil & Gas Conference, Baku 2015.

<sup>23</sup> *Country Analysis Brief: Azerbaijan*, Energy Information Administration (Washington D.C.: U.S. Department of Energy, 2016), 4.

generated significant economic growth since the mid-2000s.<sup>24</sup> The country successfully transitioned from a former-Soviet state to an independent nation with an economy significantly based on energy, for which the State is largely responsible as the energy sector in Azerbaijan is predominantly government owned.<sup>25</sup> Following independence, the State Oil Company of the Azerbaijan Republic was formed to oversee energy assets “inherited” from the Soviets and owns the majority of Azeri oil and gas fields.<sup>26</sup>

The natural gas market structure in Azerbaijan is vertically integrated and held by state-owned monopolies.<sup>27</sup> For example, SOCAR is involved in the negotiation and implementation of nearly all Production Sharing Agreements for resource extraction, and participates in every aspect of the oil and gas sector. The State-owned company is present in all activities ranging from exploration and production to processing and transportation, including storage of natural gas and management of national pipeline networks, to domestic and foreign sales.<sup>28</sup> AzeriGaz, the SOCAR subsidiary, is responsible for the sale and distribution of Azeri hydrocarbons to domestic and export markets. Furthermore, SOCAR is a member of the Azerbaijani International Operating Company (AIOC), a BP-led consortium composed of eight major petroleum operators in Azerbaijan responsible for the administration and organization of international energy firms contracted in extraction of Azeri hydrocarbons, and has invested in several infrastructure and extraction projects, including the South Caucasus Pipeline.<sup>29</sup>

To consolidate and manage Azeri interests in the comprehensive Southern Gas Corridor project from the Shah Deniz phase two development through the Trans-Adriatic Pipeline, Azerbaijan created the Southern Gas Corridor Closed Joint Stock Company (SGC CJSC), synonymous with SGC Midstream, in 2014. Through the Ministry of Economy, the Republic of Azerbaijan owns 51% of the SGC Joint Stock Company and the remaining 49% is owned by SOCAR, which is fully owned by the Republic of Azerbaijan; thus, Azerbaijan holds operational management throughout the Southern Gas Corridor value chain.<sup>30</sup>

---

<sup>24</sup> “Eastern Europe, Caucasus and Central Asia,” 73.

<sup>25</sup> Ibid., 66.

<sup>26</sup> *Caspian Sea Region*, 6.

<sup>27</sup> “Eastern Europe, Caucasus and Central Asia,” 70.

<sup>28</sup> *Country Analysis Brief: Azerbaijan*, 8.

<sup>29</sup> “Eastern Europe, Caucasus and Central Asia,” 70, 81.

<sup>30</sup> “Southern Gas Corridor: Delivering Azerbaijani Gas to Europe,” Southern Gas Corridor CJSC, May 2016, 3.

### C. Striking Gold: Shah Deniz

Not only the largest natural gas field in the Caspian Sea, but also one of the world's largest fields, the Shah Deniz is located 70 kilometers southeast of Baku on the deep-water shelf of the Caspian Sea. At surface depths of 50-500 meters, the high-pressured gas reservoir is 22 kilometers long and more than 1,000 meters deep with anticipated reserves at over one trillion cubic meters.<sup>31</sup> First production came online in late 2006 and through the end of 2016, had produced 80 billion cubic meters of gas. It is the single largest contributor to Azeri natural gas production, accounting for *half* of total state production from 2006-2016 (total production equal to 160.2 billion cubic meters).

The Shah Deniz Production Sharing Agreement (PSA) was signed in June 1996 and in 2013, coincidentally the year the Shah Deniz consortium contracted numerous long-term gas contracts from European buyers, it was extended to 2048.<sup>32</sup> The Shah Deniz field is being developed in two phases by a BP-led consortium, the first of which came online in late 2006 with first gas deliveries to the Azeri, Georgian and Turkish markets in early 2007. The second phase is still in development and is expected to come online in 2019 with first gas deliveries to the European market expected in 2020. British Petroleum operates the Shah Deniz field and is the largest shareholder (28.8%) in the joint venture. Additional shareholders include Azeri-owned SOCAR and its subsidiaries (16.7%), Malaysian Patronas (15.5%), Russian Lukoil (10%), Iranian Naftiran Intertrade Company – NICO (10%), and Turkish Petroleum Corporation – TPAO (19%).

Phase one development of the Shah Deniz field began in February 2003 and began supplying domestic and foreign markets via the South Caucasus Pipeline in 2007. It continues to do so today and current deliveries average a daily throughput of 20.5 million cubic meters (2017) and 19.9 million cubic meters per day in 2016.<sup>33</sup> From the start of production through the end of 2011, production totaled 29.9 million cubic meters. In 2011, the Shah Deniz field produced around 6.67 billion cubic meters and accounted for 45% of total Azeri natural gas production. In 2013, the field produced

---

<sup>31</sup> Sara Israfilbayova, "SOCAR President Reveals Shah Deniz Gas Output," *AzerNews*, 20 September 2017.

<sup>32</sup> *The Oil & Gas Year - The Who's Who of the Global Energy Industry: Azerbaijan* (Dubai: The Oil & Gas Limited, 2015), 12.

<sup>33</sup> "South Caucasus Pipeline," BP Azerbaijan, accessed 15 March 2018; *Ibid.*, accessed 10 December 2017.

9.8 billion cubic meters, roughly 60% of total Azeri natural gas production. Initial production capacities were shy of 10 billion cubic meters per year. However, after an upgrade to the existing facilities in 2014, the processing capacity increased to approximately 10.9 billion cubic meters annually.<sup>34</sup> Operating and capital expenditures for the field totaled \$4.3 billion that year.<sup>35</sup> In 2014, the field produced 9.9 billion cubic meters of gas, roughly 56% of total Azeri production and 2015 values were nearly identical. In 2016, the field produced 10.7 billion cubic meters, approximately 61% of total Azeri natural gas production. Shah Deniz yearly production average hovers around nine billion cubic meters and accordingly, 2017 production volumes amounted to 10.2 billion cubic meters.<sup>36</sup>

Full field development, or phase two, of Shah Deniz is currently underway and is 96% complete as of February 2018.<sup>37</sup> From the start of production, it is expected to more than double Azeri natural gas exports by 2020, adding 16 billion cubic meters per year to Shah Deniz production volumes.<sup>38</sup> Current reserve numbers for phase two development are 1.2 trillion cubic meters, making this phase groundbreaking for several reasons. First, it is one of the largest gas developments in the world and secondly, phase two production will bring Caspian gas directly to the European market for the very first time. Capital investments upwards of \$30 billion are required for the second stage of field development, as well as the expansion of current infrastructure in order to accommodate increased flows from phase two production. The monumental Shah Deniz venture is both a political and economic achievement for Azerbaijan because it legitimizes the Azerbaijani government, increases its geostrategic importance, substantially develops the Azeri economy, and prompts a shift in global energy flow dynamics. Implications from development and production of the sizeable field to major export infrastructure will be discussed in detail in Chapter Three.

A possible phase three development has been discussed, especially as the success of Shah Deniz can hardly be realized before export demands increase requiring higher production output volumes. Development at a third stage would include new exploration and likely enhanced field

---

<sup>34</sup> “2014 Year End Results,” Shah Deniz, British Petroleum, last modified 19 February, 2015.

<sup>35</sup> Ibid.

<sup>36</sup> “2017 Year-End Results,” Shah Deniz, British Petroleum, last modified 16 February 2018.

<sup>37</sup> “Shah Deniz Stage 2,” British Petroleum, accessed 8 February 2018.

<sup>38</sup> *Country Analysis Brief: Azerbaijan*, 4.

recovery factors to further develop the resources. The PSA allows future exploration and development of the field until the end of 2048 and a third phase can easily be considered a “Probable Development,” one that would likely come online in the 2030s.<sup>39</sup> The sheer size and resource potential of the field make it a priority for Azerbaijan and developers alike.

## 1.2 Foreign Markets

### A. Azerbaijani Exports

#### *Infrastructure*

There are several reasons why Caspian gas has yet to take on a major role in world markets ranging from regional geopolitics to the more pragmatic problem of transporting the gas to foreign markets. Not only are Caspian gas fields somewhat far from export markets, but also the extensive (and expensive) infrastructure needed to deliver a considerable quantity of gas to demanding markets was simply not in place. Regional infrastructure was not needed prior to the collapse of the Soviet Union and such needs were only realized by newly independent States who were establishing national economies based on energy production and export. Thus, natural gas exports had to rely on Soviet-era transmission networks directing Caspian gas flows to Russia, in which some of it may go on to western markets. Caspian producers have historically faced extreme difficulty in boosting exports due to the lack of export infrastructure or the poor condition of existing pipelines.<sup>40</sup>

As of 2006, the only pipeline exporting Caspian gas to the European market was the extensive Central Asia-Center gas pipeline system, two branches of which are controlled by Russian-owned Gazprom, which transported Turkmen gas to Russia where some of it would continue on to the European market.<sup>41</sup> While some countries in the region collaborated in joint ventures for infrastructure development, others aimed to attract enough foreign investment to construct their own export routes. Azerbaijan has done a little of both. Upon their independence, all Azeri natural gas exports were dependent on Soviet transmission systems

---

<sup>39</sup> Gülmira Rzayeva, “The Outlook for Azerbaijani Gas Supplies to Europe: Challenges and Perspectives,” (Oxford: Oxford Institute for Energy Studies, 2015), 50.

<sup>40</sup> *Caspian Sea Region*, 8.

<sup>41</sup> Sergey S. Zhiltsov, Igor S. Zonn, and Andrey G. Kostianoy, *Oil and Gas Pipelines in the Black-Caspian Seas Region*, ed. Damià Barceló and Andrey G. Kostianoy, vol. 51, *The Handbook of Environmental Chemistry* (Switzerland: Springer International Publishing, 2016), 10.



prompting Azerbaijan to establish new export routes that bypassed Russia and eliminated dependence on Russian export infrastructure. But even a decade into independence, Russia was still making attempts to limit the sovereignty of former-Soviet states and sought to control Soviet-era pipeline networks. To thwart the economic independence of Azerbaijan, Russia tried to incorporate Azeri export structures into its national transmission systems to control Azeri export markets and transit countries and maintain political influence, especially in the sector responsible for the economic development of Azerbaijan. It was not until the South Caucasus Pipeline (SCP) that Azeri Caspian gas was able to bypass Russian infrastructure to reach its full domestic market and foreign markets.

*Production, Consumption and Export*

The viability of Azerbaijan as both a source and supplier of Caspian gas is determined by the availability of significant production volumes, as well as gas field reserve potentials. With the first phase completion of Shah Deniz in 2006, Azeri gas production grew from 5.8 billion cubic meters in 2005 to 6.8 billion cubic meters in 2006 according to EIA production numbers.<sup>42</sup> More staggering is the jump to 10.8 billion cubic meters in 2007 when Shah Deniz became fully operational. Azeri natural gas production over the last five years (2012-2016) has averaged production rates of 16.96 billion cubic meters per year.<sup>43</sup> In 2015, Azerbaijan produced *four times* more energy than it consumed and for natural gas in particular, production was 1.69 times greater than domestic consumption.<sup>44</sup> Production that year was 17.9 billion cubic meters. In 2016, production values were 1.68 times higher than consumption values and today, Azeri natural gas production totals 17.5 billion cubic meters.<sup>45</sup> Consumption data shows Azerbaijan consumed 10.4 billion cubic meters of natural gas in 2016, with an average yearly consumption of 9.50 billion cubic meters over the last five years.<sup>46</sup> These data sets point towards annual export volumes around seven billion cubic meters over the last five years.

Azerbaijan is relatively new to the foreign natural gas market. With the help of SOCAR, whose goal is to strengthen Azeri foreign relations by

---

<sup>42</sup> "International Energy Statistics," Energy Information Administration, accessed 10 December 2017.

<sup>43</sup> "BP Statistical Review 2017."

<sup>44</sup> "World Energy Balances: Overview," International Energy Agency (Paris: 2017), 19.

<sup>45</sup> Based on my statistical analysis using figures from BP Statistical Review 2017.

<sup>46</sup> "BP Statistical Review 2017."

linking Azerbaijan in trade and infrastructure with foreign countries, the former-Soviet state has not only entered foreign markets, but also has dramatically increased its natural gas exports over the last ten years – primarily the result of the Shah Deniz field.<sup>47</sup> Azerbaijan transitioned to a net natural gas exporter in 2007 and exports natural gas to Georgian, Turkish, Russian, and additionally Iranian markets. Export volumes in 2007 totaled 1.5 billion cubic meters and increased more than three-fold the following year to 4.8 billion cubic meters, very likely the result of the SCP. In 2010, export volumes were 5.4 billion cubic meters and in 2015, Azerbaijan exported an annual volume of 7.3 billion cubic meters.<sup>48</sup> The two major export routes for Azeri gas are the South Caucasus Pipeline with a capacity of 8.8 billion cubic meters and the bidirectional Gazi-Magomed-Mozdok Pipeline delivering to the Russian market. The latter pipeline delivered gas to Azerbaijan until 2007 and following an agreement between SOCAR and Gazprom, began exporting gas to Russia in 2010 with an annual pipeline capacity of one billion cubic meters.<sup>49</sup> Azerbaijan also exports small amounts of gas to Iran as part of a gas swap agreement that began in 2006.<sup>50</sup>

The majority of Azeri natural gas exports supply the Georgian and Turkish markets, approximately five to six billion cubic meters per year via the SCP, although this will soon be expanded with the inauguration of the fourth corridor. In the past and despite SOCAR objections, the Turkish natural gas distributor BOTAS re-exported an average of 750 million cubic meters of Azeri gas per year to the Greek market via the Turkey-Greece Interconnector. However, in preparation for Azeri exports to the European market, Azerbaijan and Turkey entered into a new arrangement in 2010 ceding the agreement between BOTAS and DEPA – the Greek natural gas supply corporation, to SOCAR thereby allowing Azerbaijan to export gas directly to the European market via transit through the Turkish natural gas network.<sup>51</sup> The opening of the SCP helped position Azerbaijan as a strategic natural gas supplier and especially caught the attention of the

---

<sup>47</sup> Vitaly Baylarbayov, “ACG, Shah Deniz and Beyond...,” *The Southern Gas Corridor* in European Energy, Houston: 2015.

<sup>48</sup> “International Exports,” Energy Information Administration, accessed 9 December 2017. Note: At the time of writing, the most recent data available for annual Azeri exports was 2015.

<sup>49</sup> “Eastern Europe, Caucasus and Central Asia,” 78.

<sup>50</sup> *Country Analysis Brief: Azerbaijan*, 11.

<sup>51</sup> *Ibid.*

European Union who was grappling with natural gas security of supply since the latest Russian gas disruption.

#### B. Europe: The Emerging Market?

After the turn of the 21<sup>st</sup> century, Azerbaijan emerged as a crucial component to European energy security due its abundant natural gas resources. The discovery of the expansive Shah Deniz field and the implementation of the SCP just shy of a decade later gave way to Azerbaijan's rise as a global exporter. Moreover, with the central role of energy in the Azeri economy, their geo-strategic position grants the Caspian State one of the most important export routes to western markets. Foreign energy firms and the EU alike began showing greater attention to Azerbaijan following the collapse of the Soviet Union because its geographic location allowed for access to abundant mineral resources *and* new supply routes. Prior to 1992, the country had little contact with non-Soviet Europe.

Formal relations between the European Union and Azerbaijan began in 1996 with the signing of the EU-Azerbaijan Partnership and Cooperation Agreement, which entered into force in 1999.<sup>52</sup> In 2004, Azerbaijan joined the European Neighborhood Policy (ENP) and in 2006, an Azerbaijan Action Plan was adopted. Priority 8 of the plan called for “strengthening EU-Azerbaijan energy bilateral cooperation and energy and transport regional cooperation, in order to achieve the objectives of the November 2004 Baku Ministerial Conferences” and included critical elements such as infrastructure investment, partial integration of the Azeri economy into the European economy, and energy extraction partnerships for Azeri offshore fields.<sup>53</sup> Azerbaijan also joined the Eastern Partnership upon its inception in 2009. Sharing the same energy agenda and both in support of infrastructure development to deliver Caspian gas to the European market, the relationship between the two began expanding in the mid- to late 2000s. Speaking positively, the relationship is mutually beneficial as Azerbaijan

---

<sup>52</sup> Partnership and Cooperation Agreement between the European Communities and their Member States, of the one part, and the Republic of Azerbaijan, of the other part, 1996, O.J. L 246.

<sup>53</sup> Proposal for a Council Decision on the position to be adopted by the Communities and its Member States within the Cooperation Council established by the Partnership and Cooperation Agreement establishing a partnership between the European Communities and its Member States, of the one part, and the Republic of Azerbaijan, of the other part, with regard to the adoption of a Recommendation on the implementation of the EU-Azerbaijan Action Plan, COM (2006) 637 final [hereinafter *EU-Azerbaijan Action Plan*].

receives EU funding for economic and legislative reform and the EU is able to secure non-Russian sources of natural gas. However, alongside these benefits, there have been ample challenges and conflicts of interest namely in regard to the normative EU agenda of democratic reform.

Azerbaijan is a vital and strategic energy partner for the EU, both as a supplier of natural gas and as a transit country for future Caspian infrastructure. As such, the ENP Action Plan for Azerbaijan centered on establishing an energy partnership and provided significant financial assistance to reform the Azeri energy market and legislative framework.<sup>54</sup> Moreover, the 2006 Memorandum of Understanding for a Strategic Partnership solidified their bilateral cooperation in the energy sector based on four priorities: harmonization of legislation, securing Caspian resources and supply routes from Azerbaijan and the Caspian basin to European markets, development of a sustainable energy policy, and technical cooperation along with the exchange of expertise.<sup>55</sup> Ideally, an Association Agreement would follow the Memorandum of Understanding and Azerbaijan Action Plan, but an agreement was never reached despite negotiations. In the eyes of the EU, the terms of partnership and cooperation established in the aforementioned documents pointed toward increasing Azeri alignment with EU regulatory frameworks. For Azerbaijan, the agreements brought significant funding from various institutional frameworks such as the Eastern Partnership and still today, the EU provides the largest source of foreign funding to Azerbaijani civil society.<sup>56</sup> The failed attempt for an Association Agreement was ultimately the result of lack of interest on the behalf of Azerbaijan and resistance to EU democratic reforms.

Today, EU and Azerbaijani interests are aligned when it comes to strategic energy partnerships to ensure energy security; however, their interests remain challenged in civil rights, political cooperation, democracy, and regional security. Azeri interest for an Association Agreement began to wane in 2013 following persistent insistence from the EU on domestic civil rights obligations and the EU softly retaliated against Azeri disinterest by showing passivity in the Nagorno-Karabakh conflict. Heightening Azeri disdain was EU enforcement of economic sanctions against Russia as a

---

<sup>54</sup> *EU-Azerbaijan Action Plan*, 16.

<sup>55</sup> Memorandum of Understanding on a Strategic Partnership Between the European Union and the Republic of Azerbaijan in the Field of Energy, 2006.

<sup>56</sup> "EU-Azerbaijan Relations," European Union External Action Service, accessed 17 December 2017.

result of the Ukrainian conflict. Azerbaijan viewed this as direct indifference towards the Nagorno-Karabakh conflict as the EU had not sanctioned Armenia for its occupation of Azerbaijani territory. In 2015, tensions peaked when the European Parliament issued a resolution to immediately suspend negotiations for a Strategic Partnership Agreement until the Azeri government scrupulously addressed the advancement of universal human rights.<sup>57</sup> Such approaches by the EU clearly demonstrate their misconception of Azeri desire to join the Union and willingness to “reform” to European standards of democracy, and rather illustrate the increased negotiating position of Azerbaijan in external energy relations.

Azerbaijan argued that its national policy and norms should not be critiqued according to such fine detail, as it has no ambitions to contract an Association Agreement. As a source of natural gas, supplier, *and* transit state, Azerbaijan knew the future of European energy security and power of negotiation lay within its borders. This became increasingly clear after the 2015 Energy Union Package, which expressed EU urgency to “establish strategic energy partnerships with increasingly important producing and transit countries” including Azerbaijan.<sup>58</sup> So, in 2015, Azerbaijan, in an unprecedented move, submitted a draft Strategic Partnership Agreement to the European Commission and, after a year of EU trepidation and Azeri concessions, the EU agreed to start negotiations, which are currently ongoing.<sup>59</sup> If democratic reforms can be shelved, an agreement between the two will likely proceed, as both are aware of the great potential of the bilateral relationship. Azerbaijan can help the EU meet its energy diversification priorities in both supply and infrastructure, and the Union can provide diversification to Azeri natural gas exports and increase energy revenues, as well as provide financial and technical assistance in achieving national energy goals.

---

<sup>57</sup> European Parliament Resolution of 10 September 2015 on Azerbaijan, 2015/2840(RSP) [hereinafter *Azerbaijan Human Rights and the Rule of Law*].

<sup>58</sup> Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee, the Committee of the Regions and the European Investment Bank on A Framework Strategy for a Resilient Energy Union with a Forward-Looking Climate Change Policy, COM (2015) 80 final. [hereinafter *Energy Union*], 6.

<sup>59</sup> Joint Staff Working Document Report on EU-Azerbaijan Relations in the Framework of the Revised ENP, SWD(2017) 485 final [hereinafter *EU-Azerbaijan Relations in the Revised ENP*].

### 1.3 Geopolitical Uncertainty

A small state, located amidst a converging center of geopolitical interests, Azerbaijan is at the juncture of several blocs of interest: the European Union and the West, Russia, and Iran. Their trans-continental position between Europe and Asia, as well as their crux between energy giants and “traditional power-brokers” Russia and Iran, give Azerbaijan a tricky balancing act in both politics and energy.<sup>60</sup> The key alliances they have formed since independence have further positioned the country in the crosshairs of both regional and global geopolitics. Compounding their location and trans-national alliances, the national energy strategy that emerged in the 1990s opened Azerbaijan to several strategic nations around the world – the United States, Russia, Great Britain, and France. Relationships with foreign nations have become critical to both the regional security of Azerbaijan and its economy, as it is heavily dependent on energy exports. Likewise, its increased global attention, strategic location, and rich resources make it a vital state in Eurasian geopolitics.

Unresolved frozen conflicts haunt the Caucasus and geopolitical tensions never quite rest. As a result, economic stability and development has been thwarted. The Nagorno-Karabakh conflict, as well as the Abkhazia and South Ossetia conflicts between Georgia and Russia often have flare-ups threatening security in the region. The conflicts provide Russia an opportunity to increase its regional power by abasing and circumventing any western-oriented government.<sup>61</sup> Geographically, these areas connect the Black and Caspian Seas forming a gateway between Europe and Central Asia, a region hegemonically claimed by Russia. Fueling tensions and insecurities, Azerbaijan perceived European powers to be overly supportive of Armenia until at least the mid-2000s, purportedly because of its large Christian foundation.<sup>62</sup> Nevertheless, Azerbaijan emerged a stable and independent actor in the region, which further increased its geostrategic value in the eyes of the West and consequently transformed Azerbaijan into an integral state for European energy security.

#### A. Caspian Sea Delimitation Disputes

Aside from its mineral resources, the Caspian Sea is quite unique as the largest inland body of water in the world, with several rivers feeding into it

---

<sup>60</sup> Svante E. Cornell, *Azerbaijan Since Independence* (New York: Routledge, 2015), 297.

<sup>61</sup> Ibid.

<sup>62</sup> Ibid., 131.

but no outflows to external bodies of water. The Sea has characteristics of both seas and lakes making delineation and subsequent extraction rights quite challenging. As a result of the decades-long dispute over the legal regime of the Sea, a large portion of its mineral deposits have not been developed or possibly even discovered. Although some demarcation agreements are in place, there is not unanimous consensus among all five littorals. The delimitation dispute is tripartite involving rights to the surface and body of the sea, sovereign seabed rights, and overlapping resource claims, though only the latter two will be discussed here.

Water boundary demarcation has become a complicated matter primarily due to its designation as a 'sea' or 'lake.' The fundamental problem behind such labeling is in its delimitation application and the resultant rights it ascribes for seabed resource extraction. Possessing features of both seas and lakes, determining which international instrument or customary practice should be used for delineation proves exceedingly difficult. As a 'sea,' the United Nations Convention on the Law of the Sea would apply, whereas if it were to be labeled a 'lake,' boundary demarcation would default to international law concerning border lakes.<sup>63</sup> If considered a sea and delimited according the principle of equity and proportionality, the Montego Bay Convention would delineate Kazakhstan 29.9% of the total Caspian Sea area, Turkmenistan 19.2%, Iran 14.6%, Azerbaijan 20.7%, and Russia 15.6%.<sup>64</sup> However, as a lake, the littoral states could only exercise their exclusive rights up to twelve miles from their respective coastlines and extraction beyond that would be open to any Caspian Sea state. Currently, the littoral States operate under a combination of unilateral and bilateral agreements 'based on differing economic and political interests' like sub-seabed resource extraction rights.<sup>65</sup>

To establish any definitive legal ruling, all five littoral States must agree upon the status of the body of water. The lack of consensus has led to regional disputes between Azerbaijan, Turkmenistan, and Iran regarding overlapping resource entitlement claims. If considered a 'sea' and delimited accordingly using the equidistant principle, Turkmenistan and Azerbaijan would have exclusive resource rights to the seabed that Iran would not have access to, leaving Iran with approximately 13% of the sea and its

---

<sup>63</sup> *Caspian Sea Region*, 4.

<sup>64</sup> Brice M. Clagett, "Ownership of Seabed and Subsoil Resources in the Caspian Sea under the Rules of International Law," *Caspian Crossroads* 1, no. 3 (1995).

<sup>65</sup> *Caspian Sea Region*, 5.

resources.<sup>66</sup> Perhaps in light of this, Iran promptly opposed labeling the body of water as a 'sea' following the collapse of the Soviet Union and thus avoided applicable delimitation laws that would leave Iran with the smallest sovereign portion of the Caspian Sea. Though Russia and Iran both initially argued the Caspian was a 'lake,' by the late 1990s, Russia conceded to the necessity of Caspian seabed division.<sup>67</sup>

Iran asserts that pursuant to Treaties signed between Russia and Persia in 1921 and 1940 establishing the sea as a 'lake,' the Soviet Union's portion of the sea should be divided among the four present-day states.<sup>68</sup> This division would result in an overall equal distribution between each littoral, while the current working distribution gives Iran merely an approximate 13% of overall Caspian resources. Moreover, the working distribution allots primarily deep-sea waters to the Iranian sector, resources that generally require significantly larger amounts of capital to explore and develop.<sup>69</sup> Aside from Iran, the littoral States consider the Caspian a 'sea' and agree on delimitation according to the equidistance principle. Furthermore, Azerbaijan, Kazakhstan, and Russia have defined their sovereign boundaries based on median lines with bilateral agreements to this aim entering into force in 2003. The agreements grant resource and development rights to each state respective of the line of delimitation between the two.<sup>70</sup> Though Turkmenistan also agrees on delimitation by the equidistance principle, they differ on the method of application.<sup>71</sup>

Despite calls by Turkmenistan to freeze development, Azerbaijan continues to develop the Kypaz field (as called by Azerbaijan) insisting the 1970 division of the Caspian by the Soviet Ministry of Oil and Gas assigning the Kypaz field to Azerbaijan remains in force.<sup>72</sup> Bilateral talks continue between Azerbaijan and Turkmenistan on demarcation, as well as contested entitlement claims to deposits in the middle of the Caspian.<sup>73</sup> The application method of the equidistance principle remains the point of contention. Both agree to a median delimitation line but disagree on how it should be drawn. The Apsheron Peninsula along the southern coast of

---

<sup>66</sup> "Caspian Sea Region: Legal Issues," International Institute of Khazar Sea Studies, last modified 29 February 2016.

<sup>67</sup> Cornell, *Azerbaijan Since Independence*, 221.

<sup>68</sup> "Middle East: Azerbaijan," *The World Factbook*, accessed 17 November 2017.

<sup>69</sup> Cornell, *Azerbaijan Since Independence*, 331.

<sup>70</sup> "Middle East: Azerbaijan."

<sup>71</sup> "Caspian Sea Region: Legal Issues."

<sup>72</sup> *Ibid.*

<sup>73</sup> "Middle East: Azerbaijan."



Azerbaijan extends far into the Caspian suggesting the median line between the opposite coasts would lie comparatively far to the east. As a result, the median line dividing the Azeri and Turkmen sectors would transverse the center of the Serdar-Kyapaz field. Instead, Turkmenistan defines the median line by ignoring the Peninsula altogether, which undoubtedly establishes the contested field within the Turkmen sector, as well as portions of the massive Azeri-Chirag-Gunashli Deep (ACG) fields off the coast of Baku.<sup>74</sup> No agreement has been made. Meanwhile, Turkmenistan and Kazakhstan concluded a delimitation agreement in 2014.

Currently, no delimitation agreements are in place in the southern Caspian, as Iran also has unresolved delimitation disputes with Azerbaijan. The Araz-Alov-Sharg field lies between the adjacent riparian states and both lay sovereign claims to it. Despite Iranian warnings in 2001, Azerbaijan continued to explore the mineral-rich area only to be met with Iranian hostilities.<sup>75</sup> The project has since been suspended until the legal regime of the Caspian Sea is unanimous. Maritime border disputes like these pose uncertainty, risk, and ultimately the hindrance of both energy investments and geologic exploration in the South Caspian leaving many resource deposits undiscovered and unexploited.

#### B. Regional (In)Stability

Lacking in its own prosperity from hydrocarbons, Georgia has marketed itself as an integral component to westward transit of Caspian resources.<sup>76</sup> Together, Georgia and Azerbaijan have been leaders in creating an energy corridor between Caspian resources and Turkey and Europe, with the mutual hope that hydrocarbon economic development and Western investments in the Caspian region, namely in Azerbaijan, will help to ensure regional security and stability.<sup>77</sup> In addition to shared regional security goals, Georgia's domestic energy needs and national economic interests provide the basis for Georgian interest in energy transit. Both former-Soviet states acknowledge their regional stability and economic security are closely linked. Georgia and Azerbaijan share the desire for territorial integrity and sovereign restoration of their occupied territories, and are firmly united against Russian power aggression. Moreover, the stout Azerbaijani-Georgian relationship has played a crucial role in the Armenian

---

<sup>74</sup> Cornell, *Azerbaijan Since Independence*, 223.

<sup>75</sup> "Caspian Sea Region: Legal Issues."

<sup>76</sup> Cornell, *Azerbaijan Since Independence*, 306.

<sup>77</sup> Ibid.

conflict to Azerbaijan's favor. Regional cooperation, transportation systems, and trade infrastructure have taken place with the direct exclusion of Armenia (thus making it even costlier for Armenia to occupy Azerbaijani territory).<sup>78</sup>

For economic support, most notably in the energy sector, and to foster trade relations, Azerbaijan has repeatedly looked west to Turkey and beyond using its mineral resources and geostrategic location to seek alliances with nations and institutions that could be beneficial in securing independence, economic stability, and territorial integrity.<sup>79</sup> Turkey closed its border with Armenia in 1993 to support Azerbaijan in the Nagorno-Karabakh conflict and surrounding Armenia-occupied territories, a decision that severely affected the Armenian economy. In 2009, Armenia sought rapprochement with Turkey in an effort to re-open their borders, which proved futile. Turkey, claiming its strategic partnership with Azerbaijan and refusal to disrespect Azeri interests, maintained the border will unquestionably remain closed and bilateral relations between the two will not improve until Armenia retreats from occupied Azerbaijani territory.<sup>80</sup> A long-time ally, Turkey was the first country to recognize Azeri independence consistently backing their territorial integrity and sovereignty, and has been a strong supporter of hydrocarbon development for Azeri economic growth. The two countries remain politically and economically close today, with partnerships and contractual agreements in natural gas strengthening these ties.

Building a regional energy triad, Georgia and Turkey forged a strategic partnership in sectors of energy, transportation, and politics in the late 1990s; a partnership that has allowed Georgia and Azerbaijan to actualize an energy corridor connecting the Black and Caspian Seas, and ultimately Europe to Central Asia.<sup>81</sup> The economic development and foreign investments that such a corridor brings can additionally act to enhance regional security and in the case of Georgia and Azerbaijan, ideally aid in the restoration of territorial integrity.<sup>82</sup> Azerbaijan cannot export westward without transiting Georgia and Georgia needs Azeri hydrocarbons for its economic and political security, which in turn raises its geopolitical

---

<sup>78</sup> Ibid., 308.

<sup>79</sup> Ibid.

<sup>80</sup> Ali Mustafayev, "Expert: Turkish-Armenian Border to Remain Closed," *AzerNews*, 25 August 2017.

<sup>81</sup> Cornell, *Azerbaijan Since Independence*, 306.

<sup>82</sup> Ibid.

importance.<sup>83</sup> Together, Azerbaijan and Georgia occupy a strategic trade and transport corridor connecting the Black and Caspian Seas, while geo-significant Turkey catalyzes foreign export capability.

*Azerbaijan and Armenia*

Aside from the major challenges arising from multiple spheres of geopolitical power and energy interests in the Caspian, regional instability remains centered on the Azerbaijani-claimed, breakaway region of Nagorno-Karabakh and the Armenian occupation of surrounding Azeri territory. Despite a 1994 ceasefire agreement, flare-ups between the two are not infrequent and the countries are technically still at war. Territorial integrity and sovereignty is at the forefront of the Azerbaijani political agenda and refusal to participate in bilateral agreements, negotiations, or summits is not uncommon for Azerbaijan if the wording surrounding territorial integrity is too vague. Azerbaijan's close relationship with Georgia has been instrumental in isolating Armenia, closing them off from regional transportation systems and cooperation efforts.<sup>84</sup> The ongoing conflict continues to threaten peace and security in the region. Since independence, Armenia has sanctioned its security and military ties with Russia, relying on Russia to enforce Armenian security. The national government also formed a significant trading relationship with Iran and together, as enemies of Azerbaijan and the growth and prosperity of its economy, the two have close ties. In the late 2000s, they inaugurated a pipeline to deliver Iranian gas to Armenia, thus strengthening ties and helping Armenia to overcome the economic blockade Azerbaijan and Turkey have exacted.

The close relationship between Iran and Armenia also raises political uncertainty in the region. Iran has consistently helped Armenia economically and militarily, providing a transit for weapons to Armenia. Combined with Iranian gas supplies to Armenia, this has ultimately served to increase tensions between Azerbaijan and Iran. Additionally, relations between Armenia and Iran are strengthened by the Iranian interest to preclude Azerbaijan as a strong leader. Yet, and despite regular tensions between Azerbaijan and Iran, the neighboring littoral States found an economic common ground in 2006 rooted in natural gas. Via the bi-directional Hajiqabul-Astara Pipeline, originally used to deliver Iranian gas to Azerbaijan and the Soviet Union, Azerbaijan supplies Iran with natural

---

<sup>83</sup> Ibid., 308.

<sup>84</sup> Ibid.

gas in exchange for Iranian supply to the Azerbaijani exclave of Nakhchivan situated between Iran and Turkey, which is completely dependent on the Iranian-supplied natural gas.<sup>85</sup> Notwithstanding the brokered gas swap, relations between the two are shaky at best with no changes in the foreseeable future due to their considerably varied external policies, domestic political structures, and Azerbaijan's continued relationship with the West in direct contrast to Iran's bitter relationship with the West.

#### *Russia and Iran*

Barring its own disputes with Armenia, Azerbaijan has never been without the "suspicious or directly hostile attitudes from its closest neighbors and historical overlords, Russia and Iran," which hold no restraint in meddling in the domestic politics of Azerbaijan.<sup>86</sup> In terms of mineral resources, Azerbaijan was vehemently against succumbing to dependence on either Russian or Iranian infrastructure to deliver its exports. Azerbaijani energy partnerships with the West and the opening up of the region, particularly to the US, only served to increase tensions between Azerbaijan and the two domineering Caspian powers. Beginning with Azeri independence, Iran has constantly been at odds with the Republic, the least of which is their on-going maritime dispute though political clashes are often played out in the maritime domain. In 2001, for example, Iran began unilateral exploration activities in the southern Caspian in areas that were not definitively in the Iranian sector. The defiance was obviously political as exploration and development of deep-water Caspian resources, where the Iranian activities were taking place, would be considerably uneconomic considering the abundance of Persian Gulf resources that can be extracted for a fraction of deep-water mining costs.<sup>87</sup>

Economic and political tensions are ever present between the adjacent littoral States as the Azeri economy and foreign investments are increasingly of Western origin and, although Western sanctions against Iran have been scaled back considerably, Western hesitance of Iran persists. Furthermore, both Iran and Russia directly oppose a subsea Caspian pipeline, favored by Azerbaijan and Turkmenistan, to export Turkmen gas west. Both Iran and Russia, two of the world's largest natural gas producers and the latter being the largest supplier to the European market, argue

---

<sup>85</sup> *Country Analysis Brief: Azerbaijan*, 9, 11.

<sup>86</sup> Cornell, *Azerbaijan Since Independence*, 297.

<sup>87</sup> *Ibid.*, 331.

“environmental concerns” over the proposed pipeline. With the inauguration of the SCP free from Russian oversight, Azerbaijan has worked hard to maintain friendly relations with Russia while exercising independence from the domineering oligarchy vying for a voice in domestic politics, the economy, and foreign relations.<sup>88</sup>

---

<sup>88</sup> Ibid., 350.

## Natural Gas, the European Union, and Security of Supply

The European natural gas energy market, like any other, is multidimensional and fraught with geopolitical complexities that influence sources of supply and delivery infrastructure. These dynamics are further charged by increasing energy demands in the EU, notably the demand for natural gas, and the steady trend of rising dependency on the resource. Moreover, grave concerns surrounding supply security are ever present as the majority of EU imports are concentrated to only a few suppliers, and the internal and external politics of supply countries has a substantial impact to EU supply *and* delivery. To mitigate and prevent supply challenges and disruptions, the energy agenda of the EU has become more cohesive over the last two decades and particularly so in recent years with comprehensive legislation. The European Commission introduced numerous energy initiatives and policies that stressed security of supply and stability of transit systems within the EU and neighboring countries. The energy priorities outlined by the EU, many of which are specific to natural gas, emphasize diversification in supply source and infrastructure, as well as energy solidarity through an integrated internal energy market. In addition, the EU has developed external energy programs targeted to the riparian and adjacent States of the Black and Caspian Seas in an effort to increase political influence in the region and encourage energy cooperation. This chapter will introduce European natural gas supply and demand, the development of the EU energy agenda focused on security of natural gas supply, and the energy relationships between the EU and members of the Black and Caspian Seas regions to demonstrate the larger political environment leading to a fourth corridor.

### 2.1 The European Natural Gas Market

#### A. Demand for Natural Gas

The European natural gas market has, historically, functioned as a major and distinct market pushed by the regional nature of pipeline infrastructure.<sup>89</sup> However, inter-European markets have transitioned away from individual market structures towards integrated markets including uniform integration of the internal European market. The European natural gas market consists of both domestic and foreign sources, though the large majority of supply is from imports; hence the EU is the largest

---

<sup>89</sup> “World Energy Resources: Natural Gas,” World Energy Council (2016), 19.

inter-regional gas importer in the world.<sup>90</sup> In fact, Europe and Eurasia comprise the largest portion of the global natural gas pipeline trade, exporting 472.5 billion cubic meters of natural gas in 2016, 91% of which was interregional.<sup>91</sup>

In 2016, global consumption of natural gas was 3,542.9 billion cubic meters with EU consumption totaling 428.8 Billion cubic meters – a 12.1% share of the global total.<sup>92</sup> Though this is a five percent increase from 2015, it is an overall decrease from the first decade of the millennium when EU consumption was closer to one-fifth of the global total. Natural gas is the second primary energy source in the EU, behind petroleum, and accounts for 22% of the total energy mix per 2015 data.<sup>93</sup> Individual member states with a considerably higher share of natural gas in the energy mix are the Netherlands at 37.6%, Italy at 35.4%, and the United Kingdom at 32.1% share of natural gas in the overall energy mix.<sup>94</sup>

#### *Dependency*

Of all primary energy consumed in the European Union, over half is imported with some Member States relying exclusively on a single energy supplier. In the case of natural gas, several EU countries (Bulgaria, Estonia, Finland, Hungary, Lithuania, and Slovakia) import nearly all of their supply and some rely *entirely* on a single supplier: Russia.<sup>95</sup> The extent to which the European economy depends on imports to meet its energy needs – its energy dependency rate – can be calculated according to the share of net imports to overall energy consumption. Consumption is determined by the addition of domestic production and net imports. According to the latest data, the energy dependency rate of the European Union was 54.0 in 2015 and their natural gas dependency rate that year was 69.1, marking a significant difference between the two and illustrating the vital nature of natural gas to the European economy.<sup>96</sup> The disparity between energy

---

<sup>90</sup> Ibid., 21.

<sup>91</sup> Based on my statistical analysis using figures from BP Statistical Review 2017.

<sup>92</sup> “BP Statistical Review 2017.”

<sup>93</sup> “Shedding Light on Energy in the EU: A Guided Tour of Energy Statistics,” Eurostat, accessed 10 January 2018.

<sup>94</sup> Ibid.

<sup>95</sup> ANNEX The Energy Union’s Five Dimensions: Policy Observations at Member State and EU Level *to the* Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee, the Committee of the Regions, and the European Invest Bank Second Report on the State of the Energy Union, COM(2017) 53 final [hereinafter *The Five Dimensions of the Energy Union*], 2.

<sup>96</sup> Energy Dependence Statistics, Eurostat, accessed 13 January 2018.

dependence and natural gas dependence was not so discernable in the 1990s or early 2000s. Looking back to 1995 and 2000, energy dependence rates were 43.1 and 46.7, respectively, while natural gas dependency rates were 43.3 and 48.8, respectively.<sup>97</sup> Over the course of the 21<sup>st</sup> century, however, those numbers steadily divaricated and natural gas dependency rapidly increased. Since 2002, EU natural gas dependency rates have been above 50% and continue to rise. It is important to understand natural gas dependency because it is the cornerstone of the energy agenda and illustrates the imperativeness of securing alternate sources of supply and transit routes.

### *Production*

Domestic production of natural gas in the European Union was 118.2 billion cubic meters in 2016, a mere 3.3% of global production. Production volumes in 2015 were negligibly higher and accounted for 3.4% of global production.<sup>98</sup> Energy production varies across Member States but collectively, natural gas production in 2015 accounted for 14.1% of total domestic primary energy production.<sup>99</sup> In the 21<sup>st</sup> century, EU production peaked at 232.8 billion cubic meters in 2001 and has remained below 200 billion cubic meters since 2007, and below 150 billion cubic meters since 2012.<sup>100</sup> While in 2000 domestic gas production equaled approximately half of total inland consumption, it only accounted for 42.9% of consumption in 2005. From 2005-2015, domestic natural gas production fell by 43.5%.<sup>101</sup> In 2010, domestic production accounted for 35.3% of consumption and in 2015, the number dropped to 30.0%. The most recent data available also indicates yet another decline for 2016 with domestic production accounting for less than one-third of total inland consumption. Among producing Member States, the European Commission stated in 2016 (per 2013 figures) that the Netherlands and the United Kingdom are the largest producers of domestic natural gas at 47% and 25%, respectively, distantly followed by Germany (6.7%) and Romania (6.5%).<sup>102</sup> These four Member

---

<sup>97</sup> Ibid.

<sup>98</sup> “BP Statistical Review 2017.”

<sup>99</sup> “Statistics Explained - Energy Production and Imports,” Eurostat (Brussels: European Commission, 2017), 2.

Note: Primary energy includes crude oil, natural gas, solid fuels, renewables, and nuclear.

<sup>100</sup> Based on my statistical analysis using data from BP Statistical Review 2017.

<sup>101</sup> “Statistics Explained – Energy Production and Imports,” 3.

<sup>102</sup> European Commission, “Towards Energy Union: The Commission Presents Sustainable Energy Security Package,” Press Release MEMO/16/308, 16 February 2016.



States have consistently been dominant producers as Romania overtook Italy in natural gas production in 2003.

### *Consumption*

Natural gas consumption in the European Union has varied unsubstantially in the last two decades, ranging from 11-18% of total global consumption; and in recent years, EU share of global consumption has steadied around 11.6%.<sup>103</sup> In the 21<sup>st</sup> century, EU natural gas consumption peaked at 497.9 billion cubic meters in 2010 and then declined steadily until 2015. Both 2015 and 2016 saw increases in consumption, up 4% to 399.1 billion cubic meters in 2015 and up 7% to 428.8 billion cubic meters in 2016. Such recent increases in consumption can largely be attributed to the falling gas prices of late 2014 and the consequent dramatic price drop in 2015. Repeatedly over the last two decades, the largest EU consumers of natural gas are Germany, the United Kingdom, Italy, and France collectively responsible for nearly two-thirds of EU natural gas consumption annually. Traditionally, the United Kingdom was the lead consumer but in 2012, Germany surpassed the UK and remains the largest Member State consumer of natural gas to date, consuming nearly one-fifth of the EU total.<sup>104</sup>

### *Imports*

Natural gas statistical figures are important to note because they indicate the considerable bargaining power of Member States with higher consumption values, who are often the dominant importers as well. As significant consumers, these Member States have a critical interest in energy legislation and policy; as major importers, they develop preferential relationships with leading suppliers, such as Russia. As a result, said Member States have an additional national interest to influence legal and regulatory energy frameworks at the EU-level that could hinder their primary suppliers. As the two largest consumers in the EU, Germany and Italy are also the two largest importers of natural gas. In 2015, the EU imported 409.2 billion cubic meters of dry and liquid natural gas, with dry imports accounting for 361.7 billion cubic meters. Of dry natural gas imports, 28.8% were destined for the German market while another 13.9% supplied the Italian market.<sup>105</sup> Of the 104.0 billion cubic meters imported

---

<sup>103</sup> Based on my calculations using data from BP Statistical Reviews, 2008-2017.

<sup>104</sup> Based on my calculations using data from BP Statistical Review 2017.

<sup>105</sup> "EU Energy in Figures: Statistical Pocketbook 2017," European Commission (Brussels: European Union, 2017), 56.

by Germany that year, 43.5% were from Russia and 33.6% from Norway.<sup>106</sup> Also in 2015, nearly 50% of Italian natural gas imports were from Russia, while 13.9% were Norwegian and 13.1% Algerian.<sup>107</sup>

#### B. Market Suppliers

Supplying one-fourth of global demand on average, Russia is the largest natural gas exporter followed by Qatar (due to its large LNG exports) and Norway. Conversely, the EU is the largest global importer, Germany is the third, and Italy is the sixth largest importer of natural gas.<sup>108</sup> Of total energy imports (petroleum products, natural gas, solid fuels) in the European Union in 2015, natural gas held the second largest share at 23%.<sup>109</sup> Natural gas is imported via three major corridors: the eastern corridor from Russia, the northern corridor importing gas from Norway, and the Mediterranean corridor supplied by Algeria and Libya. Nearly two-thirds of EU natural gas imports in 2015 came from just three suppliers – Russia, Norway, and Algeria supplying 29.4%, 25.9%, and 8.8%, respectively.<sup>110</sup> In fact, since 2005, these three suppliers alone have supplied the EU with two-thirds of their natural gas imports every year, with Russian and Norwegian gas comprising over 50% of EU gas imports.<sup>111</sup> Import trends from 1995 to 2010 demonstrate a decline in Russian shares to overall imports while the share of Norwegian imports increased during this period. In 2000, Russian gas imports accounted for 41.0% of total imports and Norwegian imports comprised a 16.3% share, while in 2005, Russian import shares were 34.9% and Norwegian shares were 20.3%. In 2010, Russian gas accounted for 27.2% of EU imports while Norwegian gas held a 22.9% share; whereas in 2015, Russian market share increased to 29.6% and the Norwegian share increased to 26.0%.<sup>112</sup>

In 2016, Russia and Norway supplied 190.8 billion cubic meters (25.9%) and 109.8 billion cubic meters (14.9%), respectively, of dry natural gas to the global market. The year prior, these numbers were 193.0 billion cubic meters (27.4%) and 109.5 billion cubic meters (11.1%), respectively.<sup>113</sup> For both exporting countries, the EU is consistently the largest importing

---

<sup>106</sup> “BP Statistical Review 2017.”

<sup>107</sup> “EU Energy in Figures,” 56.

<sup>108</sup> “Natural Gas - Imports,” *The World Factbook*, accessed 13 January 2018.

<sup>109</sup> “Shedding Light on Energy.”

<sup>110</sup> “Statistics Explained – Energy Production and Imports,” 6.

<sup>111</sup> *Ibid.*

<sup>112</sup> *Ibid.*

<sup>113</sup> “BP Statistical Review 2017.”

partner and for Norwegian dry natural gas, the EU is its *only* importer.<sup>114</sup> Delivery statistics published Gazprom, Russia's state-owned gas corporation, indicate 178.3 billion cubic meters were exported in 2016, of which 151.2 billion cubic meters (85%) went to the EU.<sup>115</sup> According to Gazprom, Russian gas exports in 2015 were 158.6 billion cubic meters, 86% of which were destined for the European market.<sup>116</sup> British Petroleum *Statistical Review of World Energy*, the global standard in annual energy statistics, indicates Russian export volumes to be higher than Gazprom reports and EU imports to be less than what Gazprom reported. According to the *Statistical Review*, 69.0% and 74.9% of Russian dry natural gas exports were exported to the EU in 2015 and 2016, respectively.<sup>117</sup> Regardless of which set of numbers is taken into account, it is safe to conclude over two-thirds of Russian gas exports are destined for European markets each year, highlighting the grave extent to which the EU depends on Russian gas imports and also the position of the EU in Russia's export economy.

### C. Delivery Infrastructure

The European Union has several major entry points for natural gas import and inter-mainland distribution. From Norway, natural gas enters continental Europe through Belgium, France, and Germany, and additionally supplies the United Kingdom. Russia, on the other hand, has four major pipelines delivering to European markets and numerous entry points. The Brotherhood pipeline, built during the Soviet-era, delivers Russian gas via Ukraine to the major EU entry point in Veľké Kapušany, Slovakia. From there, the majority of gas is directed to the Baumgaraten hub in Austria, from which Italy is the largest off-taker. The Brotherhood pipeline has offshoots to minor entry points in Poland, Romania, and Hungary. Traditionally, Austria, Slovakia, and the Czech Republic received large quantities of gas through the Brotherhood pipeline. However, as Russia is determined to eliminate Ukraine from its export transit schematic, these countries are increasingly importing Russian gas from Germany via the Nord Stream pipeline.

Nord Stream is the newest pipeline for Russian imports with first gas flows in late 2011 and fully operational in early 2012. However, due to EU energy regulations (to be discussed in later sections), the pipeline has not

---

<sup>114</sup> Ibid.

<sup>115</sup> Note: Gazprom statistics do not include exports to the Baltic States.

<sup>116</sup> "Delivery Statistics, Gas Supplies to Europe," Gazprom Exports, accessed 13 January 2018.

<sup>117</sup> "BP Statistical Review," 2016 and 2017.

operated at full capacity since its inauguration. In 2012, yearly throughput of the pipeline was only 33% of total capacity, though this number has gradually increased. In 2016 and 2017, the pipeline operated at 80% and 93% capacity, respectively.<sup>118</sup> The natural gas supply line runs directly from Russia to Germany via the Baltic Sea and is the longest subsea pipeline in the world. The Gazprom-owned and operated export line caused political controversy because not only did it directly connect Russia with its largest EU importer, but it also bypassed Ukrainian transit and domestic revenue systems.<sup>119</sup> Increasingly, and with fewer Nord Stream capacity restrictions, Russia is informally employing Germany as a transit state for Central and Eastern European gas deliveries via the inter-European OPAL and MEGAL pipelines. The Gas-West, or Trans-Balkan, pipeline represents another important Russian transmission line delivering via Ukraine, which enters the internal EU market in Isaccea, Romania then continues to Bulgarian and Greek markets. The fourth major supply line for Russian imports is the Yamal-Europe, or Northern Lights, pipeline transiting first through Belarus, then Ukraine, and on to Central and Western European markets via its EU entry point in Kondratki, Poland.<sup>120</sup>

Because a heavy proportion of natural gas imports are concentrated to just a few suppliers, EU natural gas supply security is vulnerable to the regional and global geopolitical events of its supply and transit countries. Since Russia is the largest supplier to the EU, Russian disputes with transit countries, such as Ukraine, can have detrimental effects to natural gas supply as seen in 2006 and 2009. The Russian-Ukrainian price dispute in early 2006 substantiated the austerity of securing not only supply sources, but also transit routes. Again and more severe in 2009, the supply crisis exposed deep vulnerabilities of the EU to both supply routes and suppliers. It demonstrated the large dependence of the EU on natural gas imports and consequently, its weakened position in negotiations with dominant and politically motivated suppliers.<sup>121</sup> The energy agenda and policy legislation of the EU underwent significant changes as a result, emphasizing diversification and security of supply in the years to follow. For example, the Community Energy Treaty established in 2005 was swiftly put into

---

<sup>118</sup> Nord Stream AG, "Nord Stream Reaches Average Utilization of 93% in 2017 – 51 bcm Delivered to the European Union," Press Release, 16 January 2018.

<sup>119</sup> "BP Statistical Review," 2011-2017.

<sup>120</sup> Luca Franza, "Developments in Gas Supplies to Europe," *CIEP Briefing Paper* (2016), 10.

<sup>121</sup> José María Marín-Quemada and Beatriz Muñoz-Delgado, "Affinity and Rivalry: Energy Relations of the EU," *International Journal of Energy Sector Management* 5, no. 1 (2011): 12-13.

force following the 2006 supply disruptions.<sup>122</sup> More recently in 2014, security of supply concerns were magnified once more with the Russian invasion and annexation of Crimea, and the EU promptly put forth additional energy security measures including the *European Energy Security Strategy*.<sup>123</sup>

## 2.2 Energy Agenda: Natural Gas

### A. Policies

The increasing importance of natural gas to the European economy and the growing reliance on imports within the last decade, and the crises in between, ultimately required security of supply issues to be addressed at the EU level. Energy is indispensable to the security, unity, and future of the European Union and has become a key point of development in terms of supply, stability, and abundance. Therefore, it became imperative to implement a cohesive and comprehensive energy policy at the EU-level designed to address critical energy challenges such as limited source diversification, growing global energy demands, and geopolitical uncertainty in supply and transit regions. Collectively, these issues – security of supply and sustainability of the energy sector – are at the heart of the European energy agenda. Current EU energy policies are cooperative in nature acting in tandem to one another and include Energy Security Strategies, the Energy Union, complete integration of the internal market, and increasing energy efficiency.

The energy agenda and subsequent policies of the European Union underwent fundamental changes commencing with the 2005 approval by the European Council to initiate a cohesive energy policy. Up to this point, the EU had legislated in the energy arena and oversaw the common energy market, but had yet to mandate an EU-wide energy policy. The 2007 Treaty of Lisbon and its 2009 entry into force remedied this by implementing structural changes in energy policy and legally established solidarity in energy supply. Per the Treaty, competencies are shared between the Union and Member States in matters of energy and the internal market, meaning

---

<sup>122</sup> Council Decision of 29 May 2006 on the Conclusion by the European Community of the Energy Community Treaty, 2006, O.J. L 198 [hereinafter *Energy Community*], 15-17.

<sup>123</sup> Communication from the Commission to the European Parliament and the Council European Energy Security Strategy, COM(2014) 330 final [hereinafter *European Energy Security Strategy*].

the EU has jurisdiction over Member States in these policy areas.<sup>124</sup> Prior to the Lisbon Treaty, energy supply policies were the exclusive right of Member States, a so-called ‘energy sovereignty.’<sup>125</sup> Shifting legislative power that directly impacts national energy interests away from Member States consequently granted Parliament a critical role in defining energy security policy and implementation for the 21<sup>st</sup> century. Brussels had gained the power to introduce energy legislation that could directly or indirectly impact the success of a particular supplier or infrastructural project. From this point, the EU energy agenda became increasingly politicized.

Primary goals of the comprehensive policy that followed included security of supply, integration and interconnection of energy networks, a stable energy market, and promotion of energy efficiency and renewable energy sources. Complete integration of the internal natural gas market was an initiative taken following the 2006 gas crisis to allow the diversion of gas resources and excess supply to be shared between Member States. Legislation for market integration was introduced in 2009 with the Third Gas Directive. Collectively, the Directives, designed to liberalize markets and increase competition, provide a regulatory framework for natural gas trade and market structure. When coupled with corresponding Directives for the electricity market, they are known as the First, Second, and Third Energy Packages and entered into force in 2000, 2004, and 2011 respectively.

The Third Energy Package amended the Second Gas Directive to further liberalize internal markets and is the legal instrument for the integrated internal EU market. The package introduced common rules for supply, transportation, and distribution providing a framework for the natural gas trade that allowed wider access to transmission and distribution networks.<sup>126</sup> It also addressed access to infrastructure, capacity allocations, and balancing the supply network. The primary objective of the resultant gas regulation was ownership unbundling of suppliers from transmission and distribution networks to eliminate conflicts of interest arising from

---

<sup>124</sup> Consolidated Version of the Treaty on the Functioning of the European Union, 2012 O.J. C 326/47, Art. 2,3.

<sup>125</sup> Marín-Quemada and Muñoz-Delgado, “Affinity and Rivalry,” 13.

<sup>126</sup> Regulation (EC) 715/2009 of the European Parliament and of the Council of 13 July 2009 on Conditions for Access to the Natural Gas Transmission Networks and Repealing Regulation (EC) 1775/2005, 2009, O.J. L 211 [hereinafter *Regulation of the Third Gas Directive*].

vertically integrated supply and distribution systems.<sup>127</sup> The Directive required ‘structural separation’ of transmission and distribution system operators from producers and/or suppliers of natural gas.<sup>128</sup> Simply stated, it required the division of production and supply ownership from network operations: ownership of gas transiting a pipeline must be separated from ownership of the actual pipeline. The new unbundling requirement directly impacted the largest supplier of natural gas to the EU: Gazprom, the gas monopoly of the Russian Federation.

The EU energy agenda that emerged in the late 2000s also sought to strengthen external energy relations, develop cross-border cooperation with neighboring countries, and implement EU regulatory frameworks with third country partners to collaborate on security of supply. A priority among policy objectives is to considerably increase diversification of supply sources in order to increase supply security. In fact, at a 2010 conference in Brussels, the importance of the Caspian region was reiterated stating Caspian hydrocarbons were a crucial factor in supply diversification.<sup>129</sup> The European Parliament strongly supported diversification of both supply sources and transit routes, particularly stressing strong cooperation with Caspian Sea States and the fruition of a Southern Gas Corridor, as well as transmission system interconnectors and new infrastructure to open up the internal market. Parliamentary resolutions to this effect include cooperation and unity in external energy policies, a fully functioning internal energy market, and the formation of a European Energy Union.<sup>130</sup>

---

<sup>127</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, 2009 O.J. L 211 [hereinafter *Third Gas Directive*].

<sup>128</sup> Commission Staff Working Document Ownership Unbundling The Commission’s Practice in Assessing the Presence of a Conflict of Interest Including in Case of Financial Investors, SWD(2013) 177 final, 2.

<sup>129</sup> Zhiltsov, Zonn, and Kostianoy, *Oil and Gas Pipelines*, 51, 100.

<sup>130</sup> European Parliament Resolution of 15 December 2015 on Towards a European Energy Union, 2015/2013(INI) [hereinafter *Towards a European Energy Union*]; European Parliament Resolution of 10 September 2013 on Making the Internal Energy Market Work, 2013 O.J. C 93 [hereinafter *Making the Internal Energy Market Work*]; European Parliament Resolution of 12 June 2012 on Engaging in Energy Policy Cooperation With Partners Beyond Our Borders: A Strategic Approach to Secure, Sustainable and Competitive Energy Supply, 2013 O.J. C 332 E [hereinafter *Partners Beyond Our Borders*]; European Parliament Resolution 5 July 2011 on Energy Infrastructure Priorities for 2020 and Beyond, 2013 O.J. C 33E [hereinafter *Energy Infrastructure Priorities*]; European Parliament Resolution 25 November 2010 on Towards a New Energy Strategy for Europe 2011-2020, 2012 O.J. C 99E [hereinafter *A New Energy Strategy for Europe*].

## B. Solidarity

It was not until 2011 that the European Commission initiated a unified approach to external energy relations by Member States, stating such a position was imperative “in energy geopolitics to effectively promote both EU and national energy interests beyond EU’s borders.”<sup>131</sup> *Engaging With Partners Beyond Our Borders* was introduced to facilitate a coordinated approach in intergovernmental energy agreements with third countries and in particular, gas purchase agreements.<sup>132</sup> This policy, adopted in June 2012, granted EU oversight in Member State agreements with third countries to ensure the advancement of EU energy objectives, and perhaps political objectives as well. Subsequently, it externally promoted EU regulatory frameworks, casting a wider net for the EU energy agenda. By improving policy coherence in its external energy dimension through the ‘one-voice policy’ strategy, the EU reinforced its energy solidarity and improved its negotiation position with dominant suppliers, such as Russia. This is significant because Member State natural gas needs and resultant supply contracts shifted management to the supranational level, which could be considered a solidarity tactic for secure supply or as strengthening the EU political agenda.

The European Parliament had long supported energy policies aimed at energy security and sustainability, repeatedly pushing for coherent cooperation and solidarity among Member States. Legislation and policy adoption for gas supply security and the development of trans-European natural gas networks emphasized integration and interconnection of the internal energy market. Regulatory measures to safeguard the security of natural gas supply were first adopted in 2010 following the Russian-Ukrainian gas crisis of 2009 and incorporated mechanisms of the interconnected internal market, such as cross-border energy exchange, to prevent and mitigate disruptions to supply.<sup>133</sup> In October 2017, revised Regulation No. (EU) 2017/1938 entered into force, repealing the first security of supply regulation. The regulation presented a more efficient

---

<sup>131</sup> Commission Communication to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions on Security of Energy Supply and International Cooperation “The EU Energy Policy: Engaging with Partners Beyond Our Borders,” COM(2011) 539 final [hereinafter *Engaging with Partners Beyond Our Borders*], 18.

<sup>132</sup> Ibid.

<sup>133</sup> Regulation (EU) 994/2010 of the European Parliament and of the Council of 20 October 2010 Concerning Measures to Safeguard Security of Gas Supply and Repealing Council Directive 2004/67/EC, 2010 O.J. L 295.



approach to safeguarding supply and introduced the solidarity principle requiring Member States to help their neighbors in times of crisis.<sup>134</sup> It also implemented a coordinated, common approach in crisis prevention to ensure that all Member States have appropriate market mechanisms standardized at the EU-level to prevent or mitigate supply disruptions.

As one of the European Commission's Ten Priorities, Parliament adopted a resolution in late 2015 for the formation of a European Energy Union and upon adoption, it was contended that policies of the Energy Union must contribute to ensuring the security of energy supply, notably for natural gas.<sup>135</sup> In fact, the Second Report of the Energy Union stated, "The Energy Union is part of the positive agenda for the European Union ... and cannot be separated from other key European policies."<sup>136</sup> The legislation impetus was largely due to reliance on Russian gas imports and the dire need for cohesive energy legislation was fully realized following the Russian annexation of Crimea in 2014. The Energy Union, centered on resilient infrastructure and securing gas supply, builds upon the *European Energy Security Strategy* and increasingly emphasizes protection of critical infrastructures to ensure a "secure and resilient" natural gas supply for the whole of the European Union.<sup>137</sup> Critical infrastructures are considered those that diversify sources, suppliers, and routes.

Designed to facilitate the flow of natural gas across internal borders, the strategy of the Energy Union aims to secure supply for all Member States to prevent or mitigate the consequences of disruptions to gas supply. Additionally, it requires reinforced energy diplomacy with new and strengthened energy dialogues among third countries, particularly those of importance for EU energy policy, which aim to increase the security of energy supply.<sup>138</sup> In fact, the Energy Union package states that the EU is to "use all its foreign policy instruments to establish strategic energy partnerships with increasingly important producing and transit countries,"

---

<sup>134</sup> Regulation (EU) 2017/1938 of the European Parliament and of the Council of 25 October 2017 Concerning Measures to Safeguard the Security of Gas Supply and Repealing Regulation (EU) 994/2010, 2017 O.J. L 280 [hereinafter *Measures to Safeguard Security of Gas Supply*].

<sup>135</sup> *Towards a European Energy Union*.

<sup>136</sup> Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee, the Committee of the Regions, and the European Invest Bank Second Report on the State of the Energy Union, COM(2017) 53 final [hereinafter *Second Report on the State of the Energy Union*], 2.

<sup>137</sup> *Second Report on the State of the Energy Union*, 9-10; *Energy Union*, 4.

<sup>138</sup> ANNEX Updated Roadmap for the Energy Union to the *Second Report on the State of the Energy Union*.

40           Natural Gas, the European Union, and Security of Supply with Azerbaijan undoubtedly chief among them.<sup>139</sup> It continues, “To ensure the diversification in gas supplies, work on the Southern Gas Corridor must be intensified” to capacitate Caspian gas exports to the European market.<sup>140</sup> In additional communication, the Commission outlines the centrality of the Energy Union stating:

Given the rapidly changing landscape of the global energy sector, energy security is a continuous and dynamic endeavor that must be rigorously pursued in the overall context of implementing the Energy Union Strategy.<sup>141</sup>

The Energy Union aims to coordinate the transformation of European energy supply in order to provide secure, sustainable, competitive, and affordable energy according to five key dimensions. The dimensions of the Energy Union are closely interlinked and can be thought of as a framework strategy to transition to an energy secure economy. The first dimension is *Security, Solidarity, and Trust* designed to diversify sources of energy and ensure energy security through Member State solidarity. This dimension seeks to decrease net import dependency and overall energy demand through diversification of sources, routes, and suppliers such as the ongoing Southern Gas Corridor project. In cooperation with the first, the second policy dimension *A Fully-integrated Internal Energy Market* enables the free flow of natural gas through the use of interconnectors and infrastructure free of technical and regulatory constraints. The third, fourth, and fifth dimensions have a lesser focus on natural gas and rather center on increasing the overall energy security of the EU through *Energy Efficiency*, *Decarbonizing the Economy*, and *Research*.

### C. Strategies

Since the mid-2000s, diversification was rising in importance in the EU energy agenda, but it was not until the second gas crisis that it became a key aspect in European strategies for energy security. *Energy Infrastructure Priorities for 2020 and Beyond* stated the underlying principle of the Southern Gas Corridor strategy was “to promote diversification” and defined the Southern Gas Corridor as the “fourth big axis” for diversification of

---

<sup>139</sup> *Energy Union*, 6.

<sup>140</sup> *Ibid.*

<sup>141</sup> State of the Energy Union 2015 Commission Staff Working Document on the European Energy Security Strategy, SWD(2015) 404 final, 9.

European gas supply, which was key to “enhance security of supply.”<sup>142</sup> Natural gas diversification – the once subtle shift of the EU towards non-Russian gas, became increasingly politicized in energy strategies (in addition to energy policy legislation) as illustrated by the *Energy Infrastructure Priorities* that stated, “Often the defensive attitude of gas producers and incumbent players in monopolistic markets hampers diversification.”<sup>143</sup>

The 2014 Ukrainian crisis intensified debates on European energy security, particularly for gas supplies, and resulted in fast-tracked EU implementation of security strategies. The *European Energy Security Strategy* introduced by the Commission in May 2014 seeks to ensure the ‘stable and abundant’ supply of natural gas and incorporates measures such as the completion of interconnecting infrastructure allowing for bi-directional gas flows and diversions to safeguard supply and mitigate disruptions in times of crisis.<sup>144</sup> The *Energy Strategy* explicitly highlights the importance of diversification, stating:

Accessing more diversified natural gas resources is a priority whilst maintaining significant import volumes from reliable suppliers. Pursuing an active trade agenda in [the Caspian] region is crucial to ensure market access but also for the development of critical infrastructure, the viability of which depends on access to sufficient export volumes.<sup>145</sup>

Additionally, the strategy incorporates neighboring countries into its internal energy market as a means to secure supply and externalize EU energy *acquis* through a policy known as the Energy Community.

Specific energy strategies have been designed to meet the long-term energy targets established by the European Union and are identified by *2020 Energy Strategy*, *2030 Energy Strategy*, and *Energy Roadmap 2050*. Like the *Energy Security Strategy*, these strategies stress diversification, enhancing external relations with energy supply countries, and a fully integrated internal market. Additionally, *A Framework Strategy for a Resilient Energy Union*

---

<sup>142</sup> Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions *Energy Infrastructure Priorities for 2020 and Beyond – A Blueprint for an Integrated European Energy Network*, COM(2010) 677/4 [hereinafter *Energy Infrastructure Priorities*], 11, 32-33. Supply security achieved through diversification of sources, suppliers, and routes is repeated in *Energy Union*.

<sup>143</sup> *Ibid.*, 32-33.

<sup>144</sup> *European Energy Security Strategy*.

<sup>145</sup> *Ibid.*, 15-16.

*with a Forward-Looking Climate Change Policy* introduced in 2015 stresses the imperativeness of compliance with energy purchase agreements from non-member countries in order to ensure natural gas energy security.<sup>146</sup>

In response to the gas crisis of 2006, Parliament acted quickly to adopt the Energy Community Treaty and it entered into force in July 2006. Signed in October 2005 by the EU and countries of southeast Europe, the Treaty was designed to reduce dependence on Russian gas supplies by establishing an integrated energy market – an “energy community” formed by regional interconnecting gas markets.<sup>147</sup> Moreover, the legally binding Energy Community extended EU frameworks to neighboring countries in southeast Europe and the wider Black Sea region.<sup>148</sup> The international organization brings together the EU and its neighbors to create an ‘integrated’ and ‘sustainable pan-European energy market’ for cross-border energy trade to ‘enhance the security of supply.’<sup>149</sup> As a strategy to enhance energy security and access neighboring gas networks through an integrated internal market, the Energy Community also allowed the EU to build partnerships with supply, transit, and consumer countries further reducing security risks. With each additional member to the community, EU energy legislation is externally expanded in whole or in approximation. Today, the Energy Community includes Moldova and Ukraine joining in 2010, as well as Georgia in 2017. Turkey, Norway, and Armenia are observers.

### 2.3 The Role of the Black and Caspian Seas

The Black Sea region holds numerous geo-significant implications for the EU, the most notable of which is energy. The European economy is infamously dependent on natural gas exports from Russia and, in combination with an increasing number of energy agreements with Caspian States, the crucial role of the Black Sea in energy transit is immensely amplified. Furthermore, energy is a cornerstone of the Black Sea region as many riparian States are largely invested in the oil and gas sector: Russia’s large hydrocarbon production and export economy, Ukraine as a former

---

<sup>146</sup> *Energy Union*, “Statistics Explained – Energy Production and Imports,” 9.

<sup>147</sup> Marín-Quemada and Muñoz-Delgado, “Affinity and Rivalry,” 12-13. At the time of signing, southeast European countries included Albania, Bosnia and Herzegovina, Bulgaria, Croatia, Macedonia, Kosovo, Montenegro, Serbia, and Romania.

<sup>148</sup> “Our Mission,” Energy Community, accessed 13 January 2018.

<sup>149</sup> Joint Staff Working Document Black Sea Synergy: Review of a Regional Cooperation Initiative, SWD(2015) 6 final [hereinafter *Working Document Black Sea Synergy Review*], 17; “Our Mission,” Energy Community.

transit country that played a critical role in energy transport to the EU, Turkey's growing prominence as a geo-strategic transit country, and Georgia as a major transit country for Azeri natural gas exports.

The external policy of the European Union in the Black and Caspian Seas region is rooted in energy and began in 1991 with the EU Energy Charter. The Caspian was the closest resource-rich region to the EU, who actively invested in Caspian energy resources following independence from the Soviet Union. The primary objective of the EU was to direct Caspian resources west, thus they inserted themselves in national foreign policy development among Caspian States, primarily in the energy sector, to ensure political support of European energy firms seeking to develop the region. Union funding and energy programs followed, such as TRACECA and TACIS, to foster trade relations and implement transport infrastructure.

#### *INOGATE*

The EU 'institutionalization' of energy relations with Caspian States began with the Interstate Oil and Gas Transport to Europe (INOGATE) program launched in 1996. The EU-funded program was designed to support energy policy collaboration, essentially encouraging EU investment in Caspian development in exchange for energy supply cooperation to EU markets.<sup>150</sup> After the collapse of the Soviet Union and its systematized energy regime in consequence, the program sought to re-establish a centralized production and trading regime, both in the region and with EU markets. INOGATE served as a mechanism to support cross-border oil and gas transport, particularly export pipelines from the Caucasus to the European Union, and provided infrastructural cooperation including improvement to energy delivery infrastructure and market integration through technical and financial assistance.<sup>151</sup> After the 2004 Baku Initiative, the program evolved into a larger energy partnership between the EU and a majority of former-Soviet states, as well as Turkey, and focused on enhancing energy security, market integration, sustainable energy development, and generating investments for regional energy projects of common interest. As one of the longest running technical assistance programs funded by the European Union, INOGATE came to a close in 2016. Its successor program, EU4Energy, became operational just a few months later.

---

<sup>150</sup> Ali Tekin and Paul Andrew Williams, *Geo-Politics of the Euro-Asia Energy Nexus: The European Union, Russia and Turkey*, ed. Stuart Croft, (London: Palgrave Macmillan, 2011), 52.

<sup>151</sup> *Working Document Black Sea Synergy Review*, 18.

*Baku Initiative*

Launched at the Ministerial level in 2004 between the countries of the Black and Caspian Seas, Turkey, and the EU, the Baku Initiative was an international political dialogue initiated by the European Commission to discuss energy relationships between the EU and attending countries.<sup>152</sup> It served to solidify mutual interest in regional market development for achieving EU market integration and extension of EU energy *acquis*. The Baku Initiative established four primary objectives: connect regional energy markets to European markets based on the regulatory framework of the EU, energy security, sustainable energy development, and bolstering investments for projects of common interest.<sup>153</sup> Essentially, the initiative was to provide European funding and technical assistance in exchange for guaranteed energy supply to Europe, much like the INOGATE program. The follow-up Astana Declaration in 2006 established an energy *Road Map* to achieve Baku Initiative objectives of a ‘comprehensive legal and regulatory framework’ for the common EU-Black Sea-Caspian Sea energy market, and goals for the long-term supply of Caspian resources to the European market.<sup>154</sup> Both the Baku Initiative and Astana Declaration stressed the geopolitical importance of the Black and Caspian Seas regions in European energy security and supply diversification.

*Black Sea Synergy*

The Commission proposed the Black Sea Synergy initiative in 2007 and Parliament quickly adopted it stressing the importance of strengthened cooperation among littoral States, as well as between the “region as a whole and the EU.”<sup>155</sup> Formally launched in 2008, the initiative was intended as a flexible framework for regulatory coherence and guidance to encourage incorporation of EU energy *acquis* in external relations and to advance cooperation through a variety of project development areas such as energy and cross-border collaborative partnerships. Since 2009, the European

---

<sup>152</sup> Ibid.

<sup>153</sup> “Conclusions of the Ministerial Conference on Energy Cooperation between the EU, the Caspian Littoral States and Their Neighboring Countries,” in *1st Energy Ministerial Conference* (Baku: INOGATE Programme, 2004).

<sup>154</sup> “Road Map,” *Ministerial Declaration of 30 November 2006 on Enhanced Energy Cooperation Between the EU, the Littoral States of the Black and Caspian Seas and Their Neighboring Countries* Annex 1, Astana 2006; Zhiltsov, Zonn, and Kostianoy, *Oil and Gas Pipelines*, 99.

<sup>155</sup> *Working Document Black Sea Synergy Review*, 1.

Union has invested roughly €140 million (\$150 million USD) in the Black Sea region.<sup>156</sup>

#### *EU4Energy*

The regionally focused four-year EU4Energy technical assistance program began in 2016 led by the International Energy Agency and the European Union in cooperation with the Energy Community and the Energy Charter. The program is funded by the EU and co-financed by the Energy Community and Energy Charter. The €21 million (\$25 million USD) initiative is intended to identify key regional energy infrastructural projects that will enhance security of supply and is centered on eleven countries: six Eastern Partnership countries (Armenia, Azerbaijan, Belarus, Georgia, Moldova and Ukraine) and five Central Asian countries (Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, Uzbekistan).<sup>157</sup> The program aims to support cooperation in regional energy development and improve energy legislative and regulatory frameworks in order to enhance the investment climate for identified projects of interest.<sup>158</sup>

From the early 1990s, the European Union has been involved in the regional and trans-regional energy arenas of the Black and Caspian Seas. Likewise, European energy policy legislation repeatedly underscored the geopolitical importance of the wider Black Sea region for energy security, as well as diversification of supply and transit routes.<sup>159</sup> The EU encouraged regional energy cooperation, development, and investment driven by its internal interests to establish an influential role in the region and redirect hydrocarbon transit, collectively coalescing into the larger objective of natural gas supply security.<sup>160</sup> Regional security for production, supply, and transport of Caspian resources continues to be a priority for the EU with heightened interest since the mid- to late 2000s driven by the impetus to diversify away from Russian-owned infrastructure. Expanding relations between the EU and Caspian Sea States encouraged the 2007 *An Energy Policy for Europe*, which identified the holistic approach of EU policy

---

<sup>156</sup> Ibid.

<sup>157</sup> "EU4Energy," International Energy Agency, accessed 1 February 2018.

<sup>158</sup> "Partners EU4Energy," International Energy Charter, accessed 1 February 2018.

<sup>159</sup> Zhiltsov, Zonn, and Kostianoy, *Oil and Gas Pipelines*, 51, 99-100.

<sup>160</sup> Ibid., 98.

46           Natural Gas, the European Union, and Security of Supply  
towards the region and unified energy diplomacy.<sup>161</sup> The document  
expressed the Caspian as a priority region in EU foreign policy and  
discussed challenges in connecting EU-Caspian energy markets.<sup>162</sup> Through  
energy initiatives and funding, the EU has encouraged joint cooperation  
between riparian States of the Black and Caspian Seas to actively develop  
new sources of energy, enhance intra- and interregional infrastructure, and  
promote access between European markets and producing regions of the  
wider Black Sea area.

---

<sup>161</sup> Communication from the Commission to the European Council and the European Parliament – An Energy Policy for Europe, COM(2007) 1 final [hereinafter *An Energy Policy for Europe*].

<sup>162</sup> Zhiltsov, Zonn, and Kostianoy, *Oil and Gas Pipelines*, 51, 99.



## Developing the Megaproject

Brussels' energy agenda gained prevalence and cohesion in the 2000s, and the multilateral approach of the EU towards natural gas infrastructure became increasingly complex and in recent years, politicized. Around this time, the European Commission became directly involved – politically and diplomatically – in support of 'specific infrastructure projects to diversify gas supply routes' with particular regard to the Southern Energy Corridor and the Nabucco pipeline project.<sup>163</sup> The Southern Energy Corridor envisioned a fourth natural gas supply corridor to the European market in conjuncture with rising energy demands. It was a diversification project that became evermore relevant throughout the decade. Source and route diversification of natural gas for the European Union translated to diversification *away from* Russia and Russian supply insecurity.<sup>164</sup> This chapter will present the multidimensional aspects and progression of the Southern Gas Corridor to provide a holistic understanding of the economically and politically intertwined project.

Following the 2006 disruptions in Russian gas supply, the European Union began purposefully pursuing a fourth corridor to provide an entirely new route and source for European natural gas imports, and the Caspian region provided the best opportunity to diversify in both supply and infrastructure. Conception of the Southern Gas Corridor began around 2007 after the first disruption in Russian gas supplies, and was consecrated in the 2008 *Second Strategic Energy Review*:

A **southern gas corridor** must be developed for the supply of gas from Caspian and Middle Eastern sources, which could potentially supply a significant part of the EU's future needs. This is one of the EU's highest energy security priorities. The Commission and Member States need to work with the countries concerned, notably with partners such as Azerbaijan and Turkmenistan, Iraq and Mashreq countries, amongst others, with the joint objective of rapidly securing firm commitments for the supply of gas and the

---

<sup>163</sup> Andrea Prontera, "Forms of State and European Energy Security: Diplomacy and Pipelines in Southeastern Europe," *European Security* 26, no. 2 (2017): 283.

<sup>164</sup> Radu Dudau and Leonela Lenes, "European Union's Energy Diplomacy in the Wider Black Sea Region," *Eurolimes*, no. Supl. 3 (2011): 85.

construction of the pipelines necessary for all stages of its development.<sup>165</sup>

Designed to bring Caspian gas west while also avoiding Russian territory, a move more heavily encouraged in the later half of the 2000s and still so today due to security of supply concerns, the corridor links Caspian gas fields to the integrated European market. The diversification sentiment to reduce Russian gas dependency was renewed in 2014, and with a dire sense of urgency, when Russia invaded Crimea.

### 3.1 Political Pipelines

Political overtures exist in nearly every aspect of energy projects – sourcing, diversifying, energy agendas, business relations, economics, foreign policy, investments and the Southern Gas Corridor is no different. It has evolved in scope and detail since its conception over a decade ago and illustrates regional dimensions of security and stability, as well as project politicization revealing the vast implications of the project – far beyond that of the physical pipeline. Considering the totality of multi-layered political and economic interests that oft overlap or conflict one another, natural gas infrastructure proposals and projects undergo numerous agreements and modifications or, in many instances, are altogether cancelled. The Southern Gas Corridor, for example, initially included the EU-sponsored Nabucco pipeline project until after years of stalled political and financial progress, Azerbaijan established inter-regional infrastructure agreements of their own accord.<sup>166</sup> Pipeline projects, such as this, are influenced by a variety of factors, largely geopolitical and economic interests including energy security needs, and specific pipeline support is often determined by ‘foreign policy, diversification, and technical

---

<sup>165</sup> Communication for the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions – Second Strategic Energy Review: An EU Energy Security and Solidarity Action Plan, COM(2008) 781 final [hereinafter *Second Strategic Energy Review*], 4. Bolded in original document. Endorsed by the European Council in March 2009.

<sup>166</sup> Pasquale De Micco, “Changing Pipelines, Shifting Strategies: Gas in South-Eastern Europe, and the Implications for Ukraine,” Policy Department Directorate-General for External Policies (Belgium: European Parliament, 2015); Andrea Prontera, *The New Politics of Energy Security in the European Union and Beyond: States, Markets, Institutions* (New York: Routledge, 2017), 125.

feasibility.<sup>167</sup> Supplying natural gas to Europe, both in terms of demand and the EU energy agenda, has been a web of proposals and cancelled pipeline projects worth billions and laden with politics. Though plans for infrastructure development change frequently, it must be considered to accurately assess the political and economic climate for suppliers, transit countries, and the European market. These projects aid in demonstrating the multifaceted dimensions present in every natural gas supply route.

#### A. Planned and Proposed Infrastructure Development

##### *Supply and Transmission Lines*

Numerous pipelines have been proposed in the Caspian region over the last twenty years, with several competing to deliver Caspian gas to the European market. Initial projects in the mid- to late 1990s sought to exploit the vast reserves of Turkmenistan and bring Turkmen gas west, but this was never realized. Brussels and Member States alike long supported the proposed Trans-Caspian Pipeline (TCP) project that saw Turkmenistan as the primary, if not sole, supplier in the region. The project envisioned a direct subsea line from Türkmenbaşy to Baku that continued west to the European market. The proposed line would circumvent the two regional powers, both of which are also rich in natural gas, to open Turkmenistan for western exports and thereby eliminate dependence on Russian or Iranian export infrastructure. Due to regional politics and lack of a Caspian Sea legal regime, combined with the monumental Shah Deniz gas field discovery, the TCP project was put on long-term hold in 2000 with brief reconsiderations in the years to follow. After the Russian-Ukrainian gas dispute in 2006 and again alongside the final investment decision for the Southern Gas Corridor in 2013, the project was revisited with new momentum but ultimately faced the same challenges.

Today, the Trans-Caspian Pipeline is considered a natural extension of the Southern Gas Corridor offering substantial gas volumes for EU diversification, though it still awaits legal determination of the Sea. Settlement may be on the horizon though. According to Russian Foreign Minister Sergei Lavrov, solutions were agreed upon in a draft agreement between the five littoral States in December 2017.<sup>168</sup> The fate of the potential Convention will be determined at a fifth Caspian Summit, which

---

<sup>167</sup> Andreas Heinrich and Heiko Pleines, "Mixing Geopolitics and Business: How Ruling Elites in the Caspian States Justify Their Choice of Export Pipelines," *Journal of Eurasian Studies* 6, no. 2 (2015): 108.

<sup>168</sup> Bruce Pannier, "Russia Says Caspian Legal Status Resolved, Agreement Ready for Signing," *Radio Free Europe/Radio Liberty* (7 December 2017).

is to be held in Kazakhstan in 2018. If the agreement establishes a legal regime in Caspian Sea and is ratified by all five littorals, it could mean reigniting the TCP project. Coincidentally, such a project would significantly disrupt the Russian stronghold on the European market, as Turkmen reserves are quite sizable.

To export the sizable quantities of natural gas Turkmenistan is capable of producing, and assuming the necessary internal infrastructure were in place, would require supplementary pipeline infrastructure or expansion of current pipelines, in addition to the implementation of the TCP. One such possible project, though not on the EU's radar in several years, is the White Stream pipeline proposed in 2005 to connect the SCP to the European market via subsea line crossing the Black Sea to the EU entry point in Constanta, Romania. White Stream was, in theory, intended to compliment the heavily pushed Nabucco line, though it only gained attention following the 2009 Ukrainian-Russian gas dispute.

Outside the Black and Caspian Seas region, the active Nord Stream 2 pipeline project incorporates an additional dynamic into EU-Caspian infrastructure projects. The highly politicized project is composed of two side-by-side lines to expand the existing Nord Stream supply line discussed in the previous chapter. The proposed expansion lines are to run parallel to current Nord Stream infrastructure doubling current capacity. Inauguration of Nord Stream was significant because it was the first time Russian gas was delivered to the European market independent of Ukrainian transit. In fact, the line altogether bypasses the Black Sea region to directly connect the EU to its most politicized and largest supplier – Russia. As the EU implements energy legislation and security of supply strategies for natural gas *away* from Russia, the expansion project has made Brussels and several Member States weary fearing EU dependence on Russia will only increase. The pipeline is considered by many as Moscow's tool to 'exert undue political influence on European nations' through natural gas dependence.<sup>169</sup> Contrary to unwavering German support for the project and claims of necessity due to rising demand, the EU does not believe the additional infrastructure designed to cultivate European dependence is of strategic value.

Germany, already infringing on Ukraine's historic role as a transit country with the implementation of Nord Stream, could significantly alter the flow dynamics of inter-European Russian gas deliveries should Nord

---

<sup>169</sup> James Taylor, "Europe Wary of Proposed Russian Natural Gas Pipelines," *Forbes*, 14 November 2017.

Stream 2 become operational. Germany would by and large become the “transit” country for European gas deliveries, a role not foreseen in the EU energy agenda of solidarity, cooperation, and security. Additionally, such a shift in supply geography would be in direct opposition to the EU’s pledge to protect Ukraine from the Russian vehement abolition of Ukraine as an energy transit country. Moreover, the European Commission and many Member States do not consider the offshore pipeline to be compliant with EU energy regulation, leveraging the Third Energy Package to block the Russian project. So, although the expansion pipeline does not directly participate in Caspian gas deliveries to the European market, the geopolitical interests and implications of the project *do* indirectly influence Caspian natural gas export infrastructure.

#### *Interconnecting Lines*

There are several pipeline interconnectors planned throughout Europe, although most are heavily concentrated to Eastern Europe as this is the region most heavily dependent on Russian supply. The interconnectors are envisioned as bi-directional pipeline systems connecting all three seas – the Baltic, Adriatic, and Black Seas to link national transmission networks of Member States. Complimenting the Southern Gas Corridor and other natural gas transmission lines, the interconnectors help to secure the availability of supply for every Member State and are instrumental to the large-scale impacts of the corridor. Essentially, reverse flow interconnectors allow gas that traditionally flowed in a single direction from supplier to importer via a transit country to be reversed so that the original importer can now export to other Member States or back to the transit country if the supply need exists. In addition to constructing new reverse-flow lines, pipeline work is ongoing to convert historically unidirectional lines to bi-directional lines allowing third party access to transmission and distribution networks once held by monopoly suppliers. It is through this interconnecting network that the Energy Union is effective in securing EU gas supplies. The implementation of interconnectors has allowed gas markets previously dependent on Russia for natural gas supplies, in part or in full, to diversify sources of supply increasing supply security and effectually weakening Russian influence. To heighten the impacts of the SGC on natural gas security, several interconnectors are planned to facilitate delivery of Azeri gas to Eastern Europe.

Construction on the Interconnector Greece-Bulgaria (IGB) is to begin this year with completion dates in 2020 to coincide with Shah Deniz phase two production. The interconnector has a capacity of one billion cubic meters per annum to deliver Azeri Caspian gas to Bulgaria, which will

provide the Black Sea State with a new source of supply.<sup>170</sup> Similarly, the Ionian Adriatic Pipeline (IAP) is to connect the Trans-Adriatic Pipeline to Balkan markets for Azeri gas deliveries. Beginning in Fier, Albania, the interconnector will run north through Albania, cross Montenegro and Bosnia and Herzegovina, to end in Croatia. Though Croatia is the only Member State directly affected by the IAP, the interconnector indirectly affects other Member States, as the three non-EU Balkan states served by the IAP are members of the Energy Community. In essence, facilitating ample gas flows to the Balkan helps ensure protection of the EU internal market against supply shortages. Additionally, the proposed bi-directional BRUA project is designed to connect to the Trans-Adriatic Pipeline via the Interconnector Greece-Bulgaria. The interconnecting distribution system between Bulgaria, Romania, Hungary and Austria (BRUA) primarily involves modification to existing single flow lines to facilitate gas flows between the TAP connection point in Greece to the Baumgarten gas hub in Austria.<sup>171</sup>

#### B. Cancelled Projects

For every on-going infrastructure project, there are several suspended projects preceding it that were dismissed for various political, financial, or technical reasons. While some projects are overtly political, others are put on hold indefinitely claiming regulatory or environmental setbacks. The most infamous EU infrastructure project is the Nabucco pipeline and its successor, Nabucco West, which collectively remained on the EU agenda for a decade despite stagnation and lack of viability. Diversification of EU gas supply was first conceptualized through the opening of a fourth energy corridor to be lead by the flagship Nabucco pipeline. Proposed in 2002, the Nabucco project envisioned a new Caspian-Black Sea energy corridor to deliver Caspian and Middle Eastern gas from the South Caucasus and Turkmenistan to the European market via the Baumgarten hub. It was the founding pillar of a so-called southern energy corridor and was expected to deliver 31 billion cubic meters annually to the European market relying in large part, if not entirely, on Turkmen natural gas reserves. The ambitious 3,800-kilometer pipeline project would transit three countries before entering the European Union in Hungary: Turkey, Bulgaria, and Romania. Nabucco was heavily supported by Brussels, which provided significant

---

<sup>170</sup> John Roberts, "Completing Europe: Gas Interconnections in Central and Southeastern Europe—an Update," in *Eurasian Energy Futures Initiative* (Washington, D.C.: Atlantic Council, 2016), 10.

<sup>171</sup> *Ibid.*, 12.

funding, included the pipeline as an EU Project of Common Interest (PCI), and granted the pipeline a 25-year 50% exemption from Third Party Access (TPA) regulations.<sup>172</sup>

Support for the project was not limited to the EU. Turkish national interest to increase its role as an energy transit corridor could be realized through the Nabucco project, and Turkey could emerge as a geo-strategic country to the EU. Despite its long run through Turkish territory, the Commission asserted the natural gas pipeline would be independent from the Turkish transmission network. Its natural gas deliveries were strictly for the European market and within the legal and regulatory frameworks of the EU.<sup>173</sup> This generated hesitance from Turkey, though they maintained general support for the project. However, the Nabucco project never gained significant traction due to its numerous feasibility limitations including Caspian Sea legal challenges and insufficient supply volumes without the unfettered access to Turkmen resources.

From 2002-2005, the Nabucco project remained the only legitimate development option for a fourth corridor despite the lack of solid footing on the TCP. This changed in 2005 when various coalitions of national governments and energy companies began to form. The first competitor for delivery of Caspian gas west was the Italy-Greece Interconnector (Poseidon), a complimenting project to the Interconnector Turkey-Greece that was to start construction that same year. Collectively known as Interconnector Turkey-Greece-Italy (ITGI), the two interconnectors would provide the infrastructure to deliver approximately 10 billion cubic meters of Azeri gas per annum to the Italian market. The Trans-Adriatic Pipeline (TAP) joint venture was formed in 2007 between Norwegian Statoil and Swiss Axpo to pursue the TAP project initially proposed in 2003, and closely mirroring the Poseidon route.<sup>174</sup> Even as additional pipeline competitors came online for Caspian gas export, the European Commission persisted in active support of the Nabucco project. In fact, the Commission supported Nabucco over any and all EU-destined natural gas infrastructure projects crossing the Black Sea energy corridor, including the Russian-sponsored South Stream project presented in 2007. Originally announced between Russia and Italy in mid-2006 as an extension of the Blue Stream line serving the Turkish market, the proposed subsea project

---

<sup>172</sup> Prontera, *The New Politics of Energy Security*, 126.

<sup>173</sup> Ibid., 128.

<sup>174</sup> Ibid., 130.

was modified in 2007 to connect directly to the European market via Varna, Bulgaria.

After regional objections over the Turkmenistan project, Azerbaijan became the chief prospect for Caspian gas sourcing and formally joined the Nabucco project in 2008.<sup>175</sup> Due to concerns over financial and technical viability, the Nabucco project continued to stall and became quasi-inactive for a few years until the 2009 gas crisis, which sparked the re-materialization of Nabucco and other fourth corridor projects. Although interest was renewed, Nabucco still faced technical, economic, and financial hurdles causing it to remain stagnate. As a result, in late 2011, Azerbaijan and Turkey announced the launch of the Trans-Anatolian Natural Gas Pipeline (TANAP) crossing the length of Turkey to deliver Azeri gas to western markets with an annual capacity of 16 billion cubic meters. Azerbaijan's selection of TANAP over Nabucco reaffirmed the consistent infeasibility of the EU project, not the least of which was the lack of secured Caspian resources outside of Azerbaijan.<sup>176</sup> With the announcement of TANAP, the EU quickly modified the beloved Nabucco project and proposed its condensed version, Nabucco West, in 2012. Nabucco West would be supplied entirely by Azerbaijan, not the idealized Turkmen resources, and would commence from the TANAP ending point along the Turkish-Greek border. From there, it would follow the same route as the latter half of the original Nabucco project and end at the Baumgarten gas hub.

Following the announcement of TANAP, three projects were in the pipeline game to continue Azeri gas delivery to EU markets: Nabucco West, IGI-Poseidon, and TAP. Again, the EU strongly supported the Austrian-led Nabucco West consortium and envisioned a southern energy corridor consisting of the SCP, TANAP, and Nabucco West. Individual Member States, however, were proactively working towards the realization of other pipeline projects in coalition with energy companies and in some cases, other Member States. For example, the Poseidon project was strongly supported by the Italian and Greek governments, who remained aligned in defense of the project even after it was rejected in 2012 by the Shah Deniz consortium in favor of TAP.<sup>177</sup> A year later, the EU announced TAP as a Project of Common Interest.<sup>178</sup>

---

<sup>175</sup> Judy Dempsey, "EU Natural Gas Pipeline Project Gets First Order," *The New York Times*, 11 June 2008.

<sup>176</sup> Prontera, *The New Politics of Energy Security*, 126.

<sup>177</sup> *Ibid.*, 130.

<sup>178</sup> "Projects of Common Interest," European Commission (Brussels: 2014).



After the 2012 announcement of Nabucco West, which still faced financial challenges and supply limitations, and dismissal of the Poseidon line, Nabucco West and TAP remained the only contenders to complete the Southern Gas Corridor and deliver Azeri gas to Europe. Throughout the competition for SGC development, Nabucco and Nabucco West remained the only EU-sponsored pipelines.<sup>179</sup> Ultimately, with the TANAP project and exclusive gas supply of Azerbaijan, the EU was conceding its external legal and regulatory regime. In June 2013, the BP-led Shah Deniz consortium selected TAP to complete the European leg of the corridor as it represented the better business decision because it was less expensive, nearly 500 kilometers shorter, and transited fewer countries.

Interestingly, Statoil with a 25.5% share in the Shah Deniz consortium (at the time of TAP selection) is also a co-founder of the TAP joint venture holding a 42.5% share in the project at the time of its selection.<sup>180</sup> Also worth noting, mere weeks before TAP was selected, SOCAR acquired a 66% share in DESFA, a subsidiary company of DEPA that operates transmission systems and distribution networks in the Greek natural gas grid.<sup>181</sup> SOCAR also holds a 10% interest share in the Shah Deniz consortium. With 550 kilometers of TAP pipeline crossing Greek territory, this is an interesting purchase and timing of SOCAR. Moreover, with the acquirement of DESFA shares, SOCAR also acquired a minority share in the IGB project since DESFA held a 50% share for the Greek segment of the project.<sup>182</sup> The interconnector allows Azeri gas from TAP to reach Bulgaria, thus the selection of TAP most benefited the export economy of Azerbaijan. However, following 2016 changes to natural gas legislation in Greece, the purchase was never finalized as the two energy companies no longer agreed on a tender amount within the new natural gas network regulations.

### 3.2 The Southern Gas Corridor

Fundamental to European natural gas delivery, the fourth corridor presents a strategic diversification opportunity for supply security, and

---

<sup>179</sup> Prontera, "Forms of State," 288.

<sup>180</sup> "Shah Deniz Consortium Selects the Trans-Adriatic Pipeline (TAP) as European Export Pipeline," Trans Adriatic Pipeline AG, published 28 June 2013.

<sup>181</sup> "Azerbaijan's SOCAR Buys Greek Gas Operator DESFA," *EURACTIVE*, published 19 June 2013.

<sup>182</sup> "Azerbaijan and the Southern Gas Corridor to Europe: Implications for U.S. And European Energy Security," ed. Margarita Assenova (Washington, D.C.: The Jamestown Foundation, 2013), 15.

undoubtedly has an enormous impact on current and future Black and Caspian Seas connecting infrastructure. As discussed in Chapter Two, Azerbaijan and Turkey are not new to the energy agenda, legal regime or funding of the European Union, but they now emerge in a different role and with an increased negotiation position. Furthermore, as the extensive fourth corridor project requires ‘cooperation and long-term relationships’ between seven governments, eleven energy companies, and ten national natural gas suppliers, new dynamics arise in a tripartite fashion between energy firms, national governments, and the EU.<sup>183</sup>

Upon its expected inauguration in 2020, sixteen billion cubic meters will flow through the corridor, ten of which are destined for the European market. Commonly referred to as the megaproject, the \$45 billion project is one of the most significant oil and gas projects globally as the SGC is the realization of a 3,500 kilometer pipeline from the Caspian Sea to the European Union with a dozen interlinking, multilayered shareholders and governments. The monumental project incorporates four components, which together will alter the energy map of the entire Black and Caspian Seas region. It includes the second development phase of the Shah Deniz gas field, expansion of the existing South Caucasus Pipeline, construction of the Trans-Anatolian Natural Gas Pipeline, construction of the Trans-Adriatic Pipeline, and additionally expansion of the Italian natural gas grid to ensure Shah Deniz deliveries beyond the Italian market.

Aside from its expansive length and sizable cost, what makes the project so groundbreaking is the incorporation of expansion capabilities into its design. The complete SGC pipeline system is capable of modification to expand its initial capacity by twofold should both the demand and production supply volumes warrant future expansion.<sup>184</sup> The following section will discuss each component of the project. For comparison purposes and to establish the intertwinement of stakeholders in the various segments of the megaproject, it is worth noting again the current shareholders of the Shah Deniz consortium. Stakeholders in 2018 are BP (28.8%), TPAO (19%), SOCAR (16.7%), Patronas (15.5%), as well as NICO and Lukoil with 10% shares each.<sup>185</sup>

---

<sup>183</sup> “Shah Deniz 2 and Opening of the Southern Corridor,” (Baku: BP Exploration (Shah Deniz) Limited, 2013), 3.

<sup>184</sup> “The Southern Gas Corridor,” BP Azerbaijan, accessed 15 December 2017.

<sup>185</sup> The 16.7% share of SOCAR in the Shah Deniz consortium and South Caucasus Pipeline consists of the combined shares of SOCAR (10%) and state-owned SGC Midstream (6.7%) created in 2014 to manage Azeri interests in the megaproject. In 2023, SOCAR shares in the two projects will be transferred in full to SGC Midstream.

Upon completion of the corridor and inauguration of its component pipelines, ten gas purchase agreements will go into effect. The 25-year agreements were contracted in 2013 with European buyers with the exception of the BOTAS agreement contracted in 2011 for an annual six billion cubic meters. BOTAS is a fully state-owned Turkish oil and gas pipeline trading company, and a subsidiary of Turkish national TPAO (Turkish Petroleum Corporation). The nine European buyers are to supply 10 billion cubic meters to the European market via existing pipelines, one billion cubic meters of which will supply each the Greek and Bulgarian markets via the Interconnector Greece-Bulgaria, while the remaining eight billion cubic meters will supply market hubs connecting to the Italian transmission network.<sup>186</sup> The agreements totaling approximately \$100 billion made history in Azerbaijan and globally, marking one of the largest deals in the history of the energy industry.<sup>187</sup> The European buyers in increasing order of contracted volume are Italian companies Hera and ENEL, Bulgarian Bulgargaz, British Shell, Spanish Gas Natural (Fenosa), Greek DEPA, Swiss Axpo and German E.ON, and French ENGIE for an annual 2.64 billion cubic meters. In 2016, Uniper separated from E.ON and is now responsible for the gas trading business, thus the Shah Deniz gas contracts belong to Uniper. The purchase of Gas Natural (Fenosa) by Italian Edison was completed in February 2018 with Edison acquiring the Fenosa Shah Deniz gas contracts, putting the Italian market (with total contracted volumes of 1.77 billion cubic meters) second to the French market in terms of Shah Deniz purchase volumes.

#### *Legal & Contractual Framework*

In order for the Southern Gas Corridor megaproject to be fully realized, it needed a strong contractual and legal foundation, thus the projects are underpinned by several overlapping and interdependent legal frameworks. The two development phases of the Shah Deniz gas field are based on a joint venture Production Sharing Agreement between British Petroleum and SOCAR. The South Caucasus Pipeline and its expansion are based on agreements with its host countries, Azerbaijan and Georgia, who in turn share intergovernmental agreements. TANAP is legally obligated to its host country of Turkey, who has intergovernmental agreements with Azerbaijan over the pipeline. Lastly, TAP is based on agreements with its two host

---

<sup>186</sup> British Petroleum, "Shah Deniz Major Sales Agreements with European Gas Purchasers Concluded," Press Release, 19 September 2013.

<sup>187</sup> "Shah Deniz 2," 15.

countries of Greece and Albania who, along with Italy, signed trilateral intergovernmental agreements. Additionally, numerous cooperation agreements are in place between project contractors and operators. As for EU frameworks, TAP was granted certain exemptions from EU structures, particularly the Third Gas Directive, in 2013 for a period of 25 years from the date of operation. For example, the initial capacity volume is exempt from Third Energy Package regulations such as ownership unbundling and Third Party Access, however expansion volumes are not. The project also maintains PCI status and thus, expedited permitting.

### *Financing*

Estimated costs of the project in its entirety often fluttered around the \$45 billion mark, though in October 2017, those estimates were reduced slightly to \$41.5 billion. Azerbaijan is financing \$11.8 billion of the project, with \$7.8 billion already allocated. As of October 2017, through its SGC Midstream company (also called SGC CJSC), Azerbaijan had invested \$7.6 billion in the Southern Gas Corridor project, 62% of its \$12.3 billion required by participating interest shares in the projects.<sup>188</sup> Shah Deniz phase two development is estimated at \$23.9 billion and \$16.4 billion has already been provided, while the project itself is 96% complete. The expansion of the South Caucasus Pipeline, known as SCPx, is to cost \$4.7 billion and \$3.8 billion has already been allocated. The project is 98% complete. The Trans-Anatolian Natural Gas Pipeline, the largest segment of the corridor, is currently estimated at \$8 billion down from previous estimates of \$9 billion, just over half of which has been allocated. The project is 82% complete. Lastly, the TAP project is estimated at €4.5 billion (roughly \$5.5 billion USD), €2.3 billion of which has already been allocated and the project is 53% complete.<sup>189</sup>

The World Bank loaned \$800 million to the TANAP project, Asian Infrastructure Reconstruction and Development \$600 million, and the European Bank of Reconstruction and Development loaned \$500 million.<sup>190</sup> In March 2018, the European Investment Bank approved a

---

<sup>188</sup> "Volume of Azerbaijan's Investments in Southern Gas Corridor Revealed," *AzerNews*, published 24 September 2017.

<sup>189</sup> Ilham Shaban, "Southern Gas Corridor Project's Cost Revealed," *Caspian Barrel*, published 16 October 2017.

<sup>190</sup> "Trans-Anatolian Natural Gas Pipeline Project," World Bank, accessed 8 February 2018. Anton Usov, "EBRD Board Approves Financing for Trans-Anatolian Natural Gas Pipeline," European Bank for Reconstruction and Development, published 18 October

\$1.15 billion loan for the TANAP project.<sup>191</sup> Additionally, Azerbaijan received a \$400 million loan from the International Bank of Reconstruction and Development and \$600 million from the Asian Infrastructure Investment Bank.<sup>192</sup> Funding of the €4.5 billion TAP project hit a milestone in February 2018 when the European Investment Bank approved a €1.5 billion loan (roughly \$1.8 billion USD) for the project, marking the single largest energy loan in the history of the bank.<sup>193</sup> A loan from the European Bank for Reconstruction and Development is pending final review and could provide an additional €500 million to the project.<sup>194</sup> Further investments are expected to follow.

#### A. Azerbaijan Takes the Lead

Rather than direct negotiations with the European Union, Azerbaijan focused on Turkey as an energy hub and integral component to Azeri exports, as evidenced by the joint announcement of TANAP in late 2011. Infrastructurally, Azerbaijan went vis-à-vis with the EU and assertively developed a viable project, one that rivaled Nabucco, in order to best serve *Azeri* economic interests. From this moment on, Azerbaijan took a critical position in western energy expansion projects from the development of TANAP to the selection of TAP over Nabucco West. Not only was Azerbaijan pronouncing export infrastructure to the European market, they were shaping the regulatory and legal regime it would operate under.

A strong point of the Azeri-Turkish TANAP project was financing. Azerbaijan could finance a large majority of the project using its State Oil Fund, which managed \$34 billion in assets in 2014.<sup>195</sup> It was clear Azerbaijan had the reserve potential and economic incentive to develop the Southern Gas Corridor, but their move to initiate infrastructure development projects without the direct cooperation of the EU marked political indifference and strong national interests fueled by energy exports.

From 2002-2011, the Nabucco project never materialized and in consideration of the numerous challenges it faced, Azerbaijan developed a

---

2018. "AIIB Approves \$600 Million to Support Energy Project of Azerbaijan," Asian Infrastructure Investment Bank, published 21 December 2016.

<sup>191</sup> "EIB Approves €932 Million Loan for TANAP Gas Pipeline," *Reuters*, 15 March 2018.

<sup>192</sup> Shaban, "Southern Gas Corridor Project's Cost Revealed."

<sup>193</sup> Dave Keating, "Despite Climate Objections, New Southern Gas Corridor Gets €1.5 Billion in EU Funds," *Forbes*, 7 February 2018.

<sup>194</sup> "Trans-Adriatic Pipeline Project," European Bank of Reconstruction and Development, accessed 8 February 2018.

<sup>195</sup> Prontera, "Forms of State," 286.

viable project to bring projected gas flows west. The announcement of TANAP completely transformed the European-constructed vision of the Southern Gas Corridor. Baku and SOCAR led the major international project, which from its conception was already different than previous projects because the pipeline was a producer-driven bilateral project as opposed to the multilateral consumer-driven Nabucco project. Prior to its announcement, a binding intergovernmental agreement regarding the sale of Shah Deniz gas and development of the TANAP project was signed in October 2011 and following its announcement, Baku and Ankara signed a Memorandum of Understanding creating a consortium to build and operate the pipeline.<sup>196</sup> In June 2012, BOTAS and SOCAR signed a preliminary agreement highly favoring Azerbaijan with an 80% share, though shareholders and participating interests have since changed.

What was once a large-scale multilateral project designed to deliver Caspian gas to the European market became a medium-scale project *with* capital and launched almost immediately, marking a significant turning point in the external relations of Azerbaijan and their international presence in the natural gas sector. Azerbaijan transformed a multi-sourced natural gas export infrastructure project into a singly sourced project supplied in full by Azerbaijan. Moreover, the project would connect the national gas grid of Turkey with Caspian gas flows while additionally providing Turkey, through the state-owned BOTAS transmission system, a geostrategic role in securing EU natural gas supply.

#### B. South Caucasus Pipeline Expansion and the Trans-Anatolian Natural Gas Pipeline

The BP-SOCAR joint-operated South Caucasus Pipeline carries first phase Shah Deniz gas production from the Sangachal processing terminal near Baku to Erzurum, Turkey via Georgia, where it then connects to the Turkish national distribution network. The length of the pipeline totals 692 kilometers, two-thirds of which cross Azeri territory with the remaining one-third crossing through Georgia. The SCP expansion project began in September 2014 as part of Shah Deniz phase two development, and involves laying new pipelines in Azerbaijan and adding additional compressor stations in Georgia. The new pipe will lie parallel to the existing line for a total of 487 kilometers. Upon completion, the expanded capacity volume will total an annual 23.4 billion cubic meters, more than

---

<sup>196</sup> Tina Flegel, *Foreign Actors' Influence on Azerbaijan's Energy Policy: Decisions under Complex Uncertainty* (Mannheim: Springer VS, 2015), 312.

triple its current capacity of 7.4 billion cubic meters. Yearly throughput is also expected to triple to over 20 billion cubic meters. In the third quarter of 2017, BP reported the project to be 98% complete in Azerbaijan and 90% complete in Georgia.<sup>197</sup> The expanded line is expected to have first gas flows in late 2018 and fully operational in 2019. Current shareholders in the project are BP (28.8%), SOCAR (10.0%), TPAO (19.0%), Petronas (15.5%), Lukoil (10.0%), and NICO (10.0%).<sup>198</sup>

Connecting the aforementioned pipeline for eventual entry into the European market is the Trans-Anatolian Natural Gas Pipeline traversing the length of Turkey from east to west for a total of 1,850 kilometers. With an annual capacity of 16 billion cubic meters, six billion cubic meters will serve the Turkish market. The project has a planned expansion to 24 billion cubic meters per annum and then later to 31 billion cubic meters by 2031. Groundbreaking for the ‘Silk Road of Energy,’ as the \$8 billion project is sometimes referred, was in 2015 and first gas deliveries are expected in the third quarter of 2018. Initial gas tests were underway in January 2018 using one billion cubic meters of blue fuel.<sup>199</sup> Current stakeholders in the TANAP consortium are SOCAR-operator (58%), BOTAS (30%), and BP (12%).

### C. Trans-Adriatic Pipeline

The last portion of the Southern Gas Corridor and also its only European segment is the Trans-Adriatic Pipeline, which connects to TANAP at the Greek-Turkish border in Kipoi, Greece. From Kipoi, the pipeline runs westward through Greece and Albania to cross the Adriatic Sea via subsea pipeline and reach its ending point in southern Italy. Pipeline gas flows will then join the Italian gas grid. The landed portion of TAP stretches the length of northern Greece at 550 kilometers, roughly half of that in Albania at 215 kilometers, and eight kilometers in Italy. In Greece and Albania, the onshore portion of the pipeline will have a diameter of 1.2 meters, while the subsea and Italian portions will have a diameter of 0.91 meters. The subsea section of the pipeline is 105 kilometers in length with sea depths as low as 820 meters. It begins near the Albanian coastal city of Fier and the subsea portion in Albania’s territorial waters will add an

<sup>197</sup> “3rd Quarter 2017 Results,” BP Azerbaijan, published 20 November 2017.

<sup>198</sup> As with the Shah Deniz consortium, the SOCAR share is divided between SOCAR (10.0%) and SGC Midstream (6.7%) with SOCAR shares to be transferred in full to SGC Midstream in 2023.

<sup>199</sup> Ilham Shaban, “Azerbaijan Prepares for Gas Tests on TANAP Pipeline,” *Caspian Barrel*, published on 10 January 2018.

additional 37 kilometers of pipeline in Albanian territory. The subsea segment of the line crossing territorial waters of Italy will add 25 kilometers to the Italian length of TAP before entry into continental Europe near Lecce. The total length of the pipeline will be 878 kilometers reaching altitudes of 1,800 meters at its highest point in the Albanian mountains. The Trans-Adriatic Pipeline broke ground in Greece and Albania in May 2016, with expected onshore completion dates in 2019 to be followed by offshore pipe installation and finally, first gas flows in early 2020. For expansion, an additional compressor station in Greece along with a metering station in Albania, which can be converted into a compressor station with relative ease, readily allow pipeline capacity to increase to 20 billion cubic meters should the demand arise.<sup>200</sup>

Interestingly, the landfall entry point in Italy is the *twelfth* chosen location after 11 previous alternatives were refused based on environmental and/or social concerns. As the subsea line approaches the Italian coast, it will pass through a “specially constructed 1.5 kilometer micro-tunnel,” which allows the pipeline to enter mainland Italy 25 kilometers below the ground to ensure the local Posidonia seagrass and onshore Mediterranean Maquis is not affected by the pipeline.<sup>201</sup> There were also challenges with local communities in Greece, though not of this magnitude.

TAP is imperative to the SGC, which is vital to the success of the EU energy agenda and one of the most important aspects of the megaproject is its long-term viability as a natural gas supply corridor. It is a critical project for interregional development, one capable of transforming the energy markets of south and southeastern Europe.<sup>202</sup> With physical reverse flow features, Italy will be able to redirect gas to southeast Europe should supply shortages occur.<sup>203</sup> Moreover, its proactive design capable of readily expansion *and* its geostrategic approach to the European market through bi-directional interconnectors make the fourth corridor project not only economically practical, but also strategically fit to facilitate European natural gas supply security.

To ensure the success of the fourth corridor, it is imperative that Caspian gas reach the wider European market, and the design of TAP

---

<sup>200</sup> “Pipeline Construction in Greece,” Trans-Adriatic Pipeline AG, accessed 8 February 2018; “Pipeline Construction in Albania,” Trans-Adriatic Pipeline AG, accessed 8 February 2018.

<sup>201</sup> “Pipeline Construction in Italy,” Trans-Adriatic Pipeline AG, accessed 8 February 2018.

<sup>202</sup> Roberts, “Completing Europe,” 10.

<sup>203</sup> Stefan Buerkle and Charlotte Huebner, “The Role of the Southern Gas Corridor,” *World Pipelines* August 2015.



makes that possible. For example, the pipeline allows various connection options along the entirety of its route and both the IGB and IAP projects can be easily connected to extend Caspian gas flows. Furthermore, once connected to the Italian transmission network, the gas will have access to numerous European markets throughout Central and Western Europe via the Trans-Austria Gas (TAG) and Transitgas pipelines.

Shareholders in the project have grown since Statoil and Axpo founded the joint venture over a decade ago. E.ON joined the consortium in 2010, followed by BP, SOCAR, Total and Fluxys in late 2013, and finally by Snam Rete Gas who bought out Statoil. Current stakeholders in 2018 are BP, SOCAR, and Snam with 20% shares, Belgium Fluxys at 19% shareholder interest, Spanish Enagas 16%, and Axpo with a 5% share.<sup>204</sup>

### 3.3 Fourth Corridor Implications

The Southern Gas Corridor presents a new facet in European energy security as it provides an additional supply corridor *and* a new source of natural gas supply. Consequently, established energy dynamics from the sub-national to the supranational begin to shift altering the political landscape of energy relations and supply security. The implications of the project to Azerbaijan, host countries, and Member States are manifold; its compilation of pipelines, intergovernmental agreements, and energy contracts provides more than supply security or strategic partnerships. It represents a political shift in supply dynamics, the regulatory architecture of the EU, and external energy relations from the Caspian to Brussels.

#### A. The European Union and Member States

##### *European Union*

The fourth corridor project has given the European Union an opportunity to strengthen security of supply and more poignantly, to diversify source and supply routes. It offers a pathway to reduce reliance on Russian gas supplies and provides additional sources to southeastern European countries who are heavily (or exclusively) dependent on Russian exports. Moreover, the EU hopes to increase capacity of the corridor to possible volumes of 80-100 billion cubic meters as Caspian, and potentially Middle Eastern, reserves become more accessible.<sup>205</sup> The diversification that the fourth corridor brings is both political and economic; in terms of

---

<sup>204</sup> "TAP's Shareholders," Trans-Adriatic Pipeline AG, accessed 8 February 2018.

<sup>205</sup> "Gas and Oil Supply Routes," European Commission, accessed 25 August 2017.

initial supply volumes, the project serves as a political symbol to its dominant supplier. Hence, EU efforts to bolster external relations with members of the Caspian region and to cultivate strategic energy partnerships are ongoing and in parallel to strengthening established ties with transit countries. For example, the EU has intensified efforts to integrate energy relations into its foreign policy with Azerbaijan and relentlessly continues to negotiate for the realization of a Caspian subsea pipeline, which could potentially exponentiate supply volumes of the corridor.<sup>206</sup>

The economics of the Southern Gas Corridor in terms of supplying the European market are nil, and rather serve to strengthen the political argument for the project. Though the fourth corridor is aimed at enhancing security of supply, annual pipeline deliveries will provide less than 3% of EU consumption. Considering EU consumption rates from 2014-2016, the Caspian export infrastructure will satisfy just a mere 2.6%, 2.5%, and 2.3%, respectively, of total consumption. Extrapolating import data from the same period, the share of fourth corridor imports to total natural gas imports will be just as minimal.<sup>207</sup> In this respect, and also without consideration of expected expansion volumes, one must differentiate between diversification to increase the security of natural gas supply and diversification *away from* Russia to increase the supply security of natural gas. Because as a legitimate source of diversified supply, the meager volumes simply do not provide any substantial security. The supply security of the SGC is not in the gas volumes it is set to deliver upon its 2020 inauguration but rather, what the supply corridor represents to the European market and its wider implications in EU geopolitics.

### *Italy*

The decline in Italian gas consumption in the late 2000s combined with increases in renewable sources of energy left the Italian gas market at a bit of a standstill. This stagnation coupled with emerging developments to supply infrastructure worked to undermine the strategies of both energy companies and the Italian government alike, eventually leading to reconstruction of Italian energy security and a transformation in Italian energy policy.<sup>208</sup> Historically ‘specialized in the gas sector,’ Italy combined

---

<sup>206</sup> Prontera, *The New Politics of Energy Security*, 134.

<sup>207</sup> Based on data obtained from BP Statistical Review 2017.

<sup>208</sup> Andrea Prontera, “Italian Energy Security, the Southern Gas Corridor and the New Pipeline Politics in Western Europe: From the Partner State to the Catalytic State,” *Journal of International Relations and Development* (2015): 19-20.

their geostrategic position and expertise in energy infrastructure to transition into an energy hub for southern and northern European markets.<sup>209</sup> The SGC allowed realization of the Italian national strategy to transform the country into an interregional gas hub for the EU. Theoretically, Italy stands to gain the most with the new corridor, though the Italian market is already well established with diverse sources of supply.

Not initially in support of the Trans-Adriatic Pipeline, Greece and Italy favored the Poseidon project instead. After the cancellation of Poseidon and considering that the SGC infrastructure project would bring Caspian gas directly to their domestic markets, Italy and Greece soon joined in support.<sup>210</sup> In fact, the Italian government strongly promoted the fourth corridor project and led a coalition with the Balkan states including Croatia to ensure concurrence of the SGC with EU energy security objectives and additionally secure their strategic position in the project. Spearheading endorsement for the megaproject, Italy linked TAP to the Ionian Adriatic Pipeline and opened the prospect for Azerbaijani gas deliveries to the Balkans.<sup>211</sup>

#### *Greece and Albania*

With the majority of TAP transiting Greece, the country not only gains supply diversification, but additionally becomes geostrategic in supplying natural gas to the Balkans and beyond via existing infrastructure and the planned Interconnector Greece Bulgaria. In line with national interests of economic development, Greece potentially emerges as a regional natural gas hub with the successful completion of the TAP project.

On the other hand, the most significant implication of TAP for Albania is in the development of a national gas grid. Though not an EU Member State, the implementation and growth of a domestic market in Albania, as well as an inter-Balkan network, is of strategic value to the EU as the Balkan states are participants of the Energy Community. With Albania on the integrated gas grid, supply solidarity can be reinforced and extended throughout the Balkans and wider EU market. It represents yet another dimension of the Southern Gas Corridor, one that indirectly abets diversification away from Russia.

---

<sup>209</sup> Ibid., 20.

<sup>210</sup> Prontera, *The New Politics of Energy Security*, 131.

<sup>211</sup> Ibid.

### B. Azerbaijan

Capitalizing on its geostrategic position and crucial role in the EU diversification agenda, Azerbaijan has secured the infrastructure projects necessary for export. Economically, Azeri exports are set to double according to Shah Deniz production forecasts and contracted gas sales agreements. Politically, EU impetus to diversify has considerably raised the negotiating power of Azerbaijan. Certain democratic values of the EU have been overlooked and normative policy dimensions in foreign relations with Azerbaijan have weakened as the EU strives to move the energy corridor forward.<sup>212</sup> Besides its role as the *exclusive* supplier, Azerbaijan is also a shareholder in each component of the megaproject, with shares ranging from 10-58%. As supplier and shareholder, Azerbaijan possesses a certain degree of leverage in EU foreign relations. In light of this, the Caspian producer is able to negotiate agreements tailored to national interests, notably in the security and energy arenas. Despite the lack of compliance with EU norms or in respect to universal human rights regarding freedom of the press, Azerbaijan continues to maintain an energy-based business relationship with the EU.

The geo-significance of Azerbaijan in the Eurasian natural gas market has allowed Azerbaijan latitude in EU frameworks; in exchange for providing an EU energy solution, Azerbaijan expects full cooperation in the Armenian conflict. Baku sees the two issues – security and energy – as the cornerstone to its strategic ‘partnership of equals’ with Brussels, knowing Azerbaijan holds one key to the partnership and the EU holds the other.<sup>213</sup> The implications of this “exchange” will be seen very clearly in the coming years as first gas comes online and cements Azeri commitment to the partnership. Securing an energy partnership with the EU has larger implications than the economic propensity of energy exports; it forms a pillar in the Azeri long-sighted goal to restore territorial integrity.

With the TANAP groundbreaking in March 2015, Azerbaijan saw its geostrategic position come to life and its near immediate increase in negotiating power for a strategic partnership. Shortly thereafter, Azerbaijan presented a draft agreement to the EU. The equal partnership draft agreement emphasizes direct EU involvement in the Nagorno-Karabakh conflict based on UN Security Council resolutions. In February 2018, the EU-Azerbaijan Cooperation Council met for the first time in over three

---

<sup>212</sup> Gela Merabishvili, “The EU and Azerbaijan: Game on for a More Normative Policy,” *CEPS Policy Brief*, no. 329 (2015): 1.

<sup>213</sup> *Ibid.*, 3.

years. As negotiations for a new agreement are underway and ideally to be decided before inauguration of the corridor, Azerbaijan will underscore its role in EU energy security in exchange for EU support in regional security issues. Thus, the corridor may mark the beginning of a geopolitical shift in the Caspian region, one that unfolds in parallel to changing natural gas supply dynamics.

### C. The Black and Caspian Seas

#### *Turkey*

Turkey has long hoped to become a strategic energy partner to the European Union, and TANAP allows the Black Sea littoral to actuate its national interest to develop into a regional energy hub for the EU market. As a transit corridor situated between energy producers and energy consumers, Turkey holds a key position in the EU energy security agenda, one that is further enhanced by its ability to transport non-Russian gas. The SGC raises geopolitical importance of Turkey as an energy partner to the EU.

#### *The Caspian*

The opening of the Caspian region to such extensive export infrastructure development considerably changes western export outlook for other littoral States. The success of this project will create a foundation for the wider development of Caspian resources and export infrastructure. Proposing such a project is likely a decade out at least, but with Caspian delimitation talks progressing for the first time in over two decades and plans for a Trans-Caspian Pipeline project already conceived, transformation of the region into an economically viable supplier to the European market may be realized in parallel to the expansion of the Southern Gas Corridor. Furthermore, a post-sanctioned Iran, with 10% shares in both Shah Deniz and the South Caucasus Pipeline through state-owned NICO, could open the corridor to Middle Eastern gas (though probably the least likely scenario). Regardless of where Caspian gas export growth originates, the infrastructural connection provided by the SGC establishes a fundamental pillar in advancing the western export of Middle Eastern and Central Asian natural gas.

#### *Russia*

Though the fourth corridor project only satisfies a minute share of EU natural gas demand, it symbolizes the EU diversification commitment and energy security strategies to decrease Russian natural gas imports. In efforts to secure market share, gas flows from the SGC could prompt Russia to

heavily lobby for Nord Stream 2 and in the process, solidify ties with Germany to create a wedge between Brussels and Berlin in matters of national and supranational energy policy agendas. Such a maneuver would cause further political friction between Russia and its largest importer, consequentially weakening EU energy security. Additionally, Russia may hasten construction of subsea natural gas pipelines transiting the Black Sea in attempts to increase Turkish and European market share and flood the market with cheaper-priced Russian gas. Such a move could lead to either a decreased demand for Azeri gas or the reduction of natural gas prices altogether, which subsequently decreases Azeri gas prices. The implications of Russian involvement and influence in Caspian natural gas sourcing or delivery mechanisms to the European market will be discussed in detail in the following chapter.

## Contextualizing the Southern Gas Corridor Within the Geopolitical Dynamics of the Black Sea Region

*There was a time when Russia could manipulate other countries with gas supplies.*<sup>214</sup> Of course, they still have quite an ascendance at times, but their political influence in foreign policy is now waning. For years, Russia used its position as a supplier and provider of export infrastructure as a means to maintain regional control and earn a wider international influence. One such example of Russia leveraging natural gas for political power, and perhaps the most prominent, is the frequent gas disputes between Russia and Ukraine. However, it was less about the supply of natural gas and much more about the supply *routes* of natural gas. The Russian use of energy in matters of foreign policy is not new, though it became concentrated on natural gas around the turn of the century. As the largest global exporter, Russia found itself in a lucrative political position, as a growing number of economies were shifting towards larger shares of natural gas in their overall energy mix. In the last few decades, Russia has come to possess a systematic architecture over the European natural gas market through strategic networks of supply pipelines and related infrastructures. The energy exporter has exploited its supplier position particularly with Ukraine and Member States of southern and southeastern Europe largely or entirely dependent on the dominant supplier.

As Russia increasingly politicized natural gas, the EU repeatedly asserted de-politicization tactics, most notable of which are diversification and the establishment of an integrated internal market. Tangible measures can be seen with the fourth corridor megaproject that exemplifies EU diversification goals in both infrastructure and sourcing. Intangibly, the Third Energy Package, the Energy Union, and the Energy Community collectively create comprehensive legal and regulatory frameworks de-politicizing natural gas and facilitating supply security among Member States. Though the natural gas dimension of the ensuing political struggle between the European Union and Russia is founded in energy, it is actuated geopolitically in the Black Sea region. The geo-significance of the region as an energy transit corridor connecting Europe to Central Asia and the Caucasus further exacerbates the geopolitical energy dynamics between the two littoral powers. The strategic region is fundamental to current and future EU supply, and is the most visible space from which natural gas

---

<sup>214</sup> “For Russia, Natural Gas Is Losing Its Potency as a Political Weapon,” *Stratfor Worldview*, published 9 June 2016.

geopolitics unfold. As such, it is crucial to understand the impact of these dynamics and continued influence on the development of the Southern Gas Corridor. Initially, the drastic acceleration of diversification to the top of the EU energy agenda was primarily due to supply disruptions resulting from Russian-Ukrainian price disputes, as discussed in Chapter Two. Prior to 2006 and 2009, diversification strategies remained on the agenda without impetus; however, after the 2009 supply crisis, the strategies gained immediate and extensive momentum eventually leading to the construction of a fourth natural gas corridor.

The entangled intersection of politics and energy in the Black Sea region is further complicated by its role as an energy transit corridor. Natural gas supply and demand interdependence between Russia and the EU coupled with the disparate political, economic, and energy strategies of the two power centers fuels rivalry in the region and is a cornerstone of EU-Russian geopolitics. Russia's political use of natural gas reserves and the high dependence of the EU allows Russia "too much influence over domestic policies, especially in Eastern and Central Europe" where Russia is the single supplier.<sup>215</sup> It is here that the geopolitical dynamics of the Black Sea take root and begin influencing EU sourcing of Caspian gas and export infrastructure to the European market. For more than a decade, the Black Sea region has been the forefront for multiple strategic natural gas infrastructure projects 'designed to alter the supply routes of European natural gas imports.'<sup>216</sup> Conflicting pipeline projects, first that of Nabucco and South Stream followed by TANAP/TAP and Turk Stream, emerged from 'differing strategies between the two Black Sea poles' and the role of the region in achieving national goals.<sup>217</sup> In our area of interest for this thesis, we see the power struggle between the EU (through diversification goals) and Russia (with its desire for dominance over both the market and Black Sea region) ensue through a series of EU energy regulations and Russian infrastructure projects in the Black Sea and beyond.

The Southern Gas Corridor is particularly fascinating in this respect because the Azerbaijani export infrastructure elicits a transformative shift in European supply geography and market dynamics, effectually weakening Russian influence in the EU and, to a lesser degree, the Caspian region. The

---

<sup>215</sup> Anna Mikulska, "The Changing Geopolitics of Natural Gas in the Black Sea Region," Black Sea Strategy Papers (Philadelphia: Foreign Policy Research Institute, 2017).

<sup>216</sup> Anna Dimitrova, "The Future of the Energy Sector in the Black Sea Region Beyond the Pipeline Knot," in *Unrewarding Crossroads: The Black Sea Region Amidst the European Union and Russia*, ed. Anahit Shirinyan and Louisa Slavkova (Sofia: Sofia Platform, 2015), 192.

<sup>217</sup> Ibid.



opening of a new supply corridor through the Black Sea region underscores the geo-significance of the region as an 'axis' for European natural gas diversification and supply security.<sup>218</sup> Although the resulting change in market share that initial capacities of the corridor will generate is minor, it is enough to raise economic and political concerns in Moscow. The addition of a fourth natural gas corridor naturally influences trade relations between the global leaders of the trade and power centers of the wider Black Sea region, and additionally crosses the shared frontier between the two rivals. Therefore, the Southern Gas Corridor must be understood within the larger geopolitical context of the Black Sea that propelled its development.

#### 4.1 Gazprom Games

##### A. Russian Political Leverage

The foreign policy of Russia is inexorably tied to its national energy strategy; the global supplier has long converted energy trade into foreign policy influence evidenced by its relation with the EU and leverage of natural gas supply security to influence EU policy. Attempts to hamper EU infrastructure diversification, which is largely designed to minimize Russian influence, are demonstrated through Russia's infrastructural projects to the European market. The motives of the Black Sea littoral power to undercut the EU energy agenda are twofold. First, EU diversification strategies do not serve to maintain Russia's majority share of the market. Secondly, as Russia struggles to regain power and influence in the wider Black Sea region, contempt over the agenda of its geopolitical rival is amplified. Undermining the EU energy agenda, especially in regard to EU cooperation efforts in the Black and Caspian Seas, subsequently weakens their regional power allowing Russia to increase its position in the region. In other words, by undercutting the EU energy agenda, Russia is able to safeguard its national interests and energy export economy, and any hindrance of EU efforts translates to wider regional control for Russia.

Increasing supply infrastructure has been the primary defense against EU diversification measures, though Russia has employed other strategies as well. For example, when the EU first began looking east to Central Asia for natural gas supply and initiated negotiations with Turkmenistan, Russia objected. Considering Russia's monopolistic stronghold over Turkmen

---

<sup>218</sup> Bogdan Aurescu, "The Role of the European Union in the Wider Black Sea Region," *Turkish Policy Quarterly* 10, no. 1 (2011): 41.

exports at the time, as well as their dominant supply position in the EU market, Russia's objections seem dubious. The objection over maritime legal status seems unfounded since delineation between Russia and adjacent littorals had been previously agreed upon and was not based on maritime law. Furthermore, claimed 'environmental concerns' over the subsea line also seem calculated as such concerns were not present in the Blue Stream project, which includes a 396-kilometer subsea pipeline through the Black Sea. Rather, with the installation of subsea export infrastructure such as the TCP, the vast Turkmen resources would pose a serious threat to Russia's share of the European market. Moreover, the TCP would have drastically reduced Russia's geopolitical power in the Caspian, particularly its political influence in Turkmenistan as Turkmen exports to western markets would no longer be bound by Russian infrastructure. Russia's historic influence in the Caspian region thwarted first attempts by the EU at source diversification. For Russia, this was a particularly simplified and certainly less expensive venture to undermine the EU than implementing infrastructural projects. Nevertheless, it will be considered the starting point of the natural gas geopolitical power struggle between the two.

When the Nabucco pipeline project was announced in 2002 envisioning the delivery of Caspian gas to the European market and later rebuked by the 2011 announcement of a technically and economically viable fourth corridor project, Russia considered the pipeline projects a continuous and direct threat to its economic interests. From the conceptualization of a southern corridor to the progression and development of the Southern Gas Corridor, Russia has responded over the course of a decade with three pipeline projects to thwart its success and hinder EU diversification: South Stream, Turkish Stream, and Nord Stream 2. The political assertiveness of Russia displayed through natural gas exports was more pronounced after the 2006 and 2009 gas crises, and particularly apparent in its refusal to transit gas through Ukraine and altogether bypass the Black Sea State.

### *Gazprom*

Established in 1989, Russia's state-owned oil and gas production and supply company, Gazprom, is vertically integrated from production and supply to transmission and distribution of natural gas. The energy company holds a "Soviet-era monopoly on gas exports" and since 2006, a 'legal export monopoly' that requires other producers to use Gazprom

processing facilities and transmission networks.<sup>219</sup> The company is majority-owned by the Russian Federation through which Russia possesses 90% control over natural gas production and complete control over natural gas exports.<sup>220</sup> The Kremlin has played a heavy role in the economy – in the mid-2000s, there was a strong push for nationalization and many pillars of the Russian economy, including the energy sector and other key assets, returned from private to state ownership.<sup>221</sup> Moscow ‘took an interest in running’ private firms, particularly those in “strategically important” industries like hydrocarbon resources.<sup>222</sup> Gazprom is a national champion for Russia promoting national interest over “profit maximization,” such as refusal to supply countries that do not support Russian foreign policy or interests.<sup>223</sup> The Kremlin encourages Gazprom to “dominate” foreign markets and President Vladimir Putin stated in 2006 that Gazprom’s rise to ‘dominant international corporate player’ was “the result of a carefully planned action by the state.”<sup>224</sup>

#### B. South Stream and Turkish Stream

Russian power schemes in the region are blatantly obvious in recent years, but natural gas power projections have been occurring much more subtly through subsea Black Sea export infrastructure projects since 2007. Gazprom and Italian ENI announced the South Stream pipeline project designed to carry 63 billion cubic meters annually through four parallel pipelines from Russia to eastern and southeastern Europe via Gazprom-owned subsea lines transiting the Black Sea.<sup>225</sup> The project garnered support from Austria, Hungary, Bulgaria, Greece, and Slovenia following the 2009 supply crisis and bilateral transit intergovernmental agreements were signed with Russia in support of the project.<sup>226</sup> The proposed pipeline, together with Nord Stream (construction launched in 2010 and fully operational in early 2012), created the pillars of the Russian energy strategy

---

<sup>219</sup> David Szakonyi, “Governing Business: The State and Business in Russia,” Russia Political Economy Project (Philadelphia: Foreign Policy Research Institute, 2018), 12.

<sup>220</sup> Tekin and Williams, *Geo-Politics of the Eur-Asia Energy Nexus*, 55.

<sup>221</sup> Szakonyi, “Governing Business,” 11.

<sup>222</sup> Ibid.

<sup>223</sup> Marshall I. Goldman, *Petrostate: Putin, Power, and the New Russia* (Oxford University Press, 2008), 99, 174.

<sup>224</sup> Ibid., 99, 142, 174; President Vladimir Putin, Annual Address to the Federal Assembly, Moscow 2006.

<sup>225</sup> Nadia Rodova, “Russia, Bulgaria Sign Final Investment Decision on South Stream Gas Pipeline,” S&P Global Platts, published 15 November 2012.

<sup>226</sup> Prontera, “Forms of State,” 289.

to remove transit country dependence, particularly Ukraine, from its export schematic.

Understanding South Stream within the energy and geopolitical dynamics of the Black Sea region as a Russian political strategy to both maintain market share and undermine EU diversification efforts, the SGC can be analyzed in a similar context. When South Stream was announced, it was to directly compete with the Nabucco and subsequent Nabucco West projects that laid the foundation for the fourth corridor concept. The legal status of the Russian-proposed Black Sea line came into question as the EU was drafting anti-trust legislation prohibiting suppliers from owning and operating transmission lines without allowing access to third party suppliers, legislation that later became the Third Energy Package. When the Shah Deniz consortium selected TAP over the Nabucco West project in 2013, South Stream lost its geopolitical luster. Moreover, the EU was never keen on the Russian project, as it was a direct competitor to the prized Nabucco line and non-Russian gas supply. After the Crimean crisis, the EU permanently delayed talks over the legal status of the proposed South Stream line. Following the regulatory setbacks and clear resistance from Brussels under the guise of energy policy legislation, as well as its primary reason for development being eliminated, Russia cancelled South Stream in December 2014 to immediately replace it with a project that quite closely mirrored the Southern Gas Corridor project.

On its announcement, Turkish Stream was formalized with a Memorandum of Understanding between BOTAS, Turkey's state-owned transmission system operator, and Gazprom for construction of a subsea natural gas pipeline from Russia to Turkey. Originally, Russia proposed the line to run parallel to Blue Stream, however, Turkey strongly preferred the chosen route as it entails a much shorter onshore segment of the line, the portion which is to be financed by BOTAS.<sup>227</sup> The offshore segment of the chosen route is 910-kilometers as opposed to the 396-kilometer offshore originally proposed by Russia.<sup>228</sup> The initial Turk Stream project envisioned four pipelines to supply 63 billion cubic meters annually, though it was later scaled back to two lines and roughly 31 billion cubic meters. Like South Stream, the driving force of Turk Stream was purely geopolitical and

---

<sup>227</sup> Jonathan Stern, Simon Pirani, and Katja Yafimava, "Does the Cancellation of South Stream Signal a Fundamental Reorientation of Russian Gas Export Policy?," *Journal of Self-Governance & Management Economics* 3, no. 2 (2015).

<sup>228</sup> Luca Franza, "From South Stream to Turk Stream: Prospects for Rerouting Options and Flows of Russian Gas to Parts of Europe and Turkey," ed. Deborah Sherwood (The Hague: Clingendael International Energy Programme, 2015), 21.

designed to reach the European market before competing infrastructure projects, the Southern Gas Corridor in this case. The project marked a strategic refocus for Gazprom from direct European gas sales to gas delivery along the external border of the EU and illustrated the long-term strategic priorities of Gazprom over immediate profits.<sup>229</sup> Turk Stream differed from South Stream in that it would also supply the growing Turkish market, just as TANAP would. Less than a year after its announcement, Turk Stream was halted due to embittering Turkish-Russian relations after the Turkish downing of a Russian jet. The project remained cold until the failed coup attempt in Turkey eight months later, and the post-coup authoritarian regime reached to Moscow to rekindle relations. Shortly thereafter, Ankara issued offshore construction permits to Gazprom and in October 2016, Ankara and Moscow signed an intergovernmental agreement for the project. As owner and operator of the Turk Stream pipeline, Gazprom is financing the offshore portion of the project while Turkey will share the financing responsibility with Gazprom for the Turkish onshore segment.<sup>230</sup> Project construction began in May 2017 and the line is expected to be operational in December 2019, allowing Russian exports to beat first gas flows from the Southern Gas Corridor to market.

The strategic planning of this project is significant in several ways. First, it relieves Russia of all EU energy regulations as no part of the line is within EU jurisdiction and Gazprom is still able to maintain their vertically integrated monopoly. More poignantly, it removes the political hurdles of the EU that are so often applied through regulation, yet still manages to deliver gas to the EU border and with less financial burden. From its ending point at the Turkish-Greek border, there are several options to connect Turk Stream gas flows to the European market. The most likely of which is to reignite the ITGI-Poseidon project previously granted streamlined permitting and financial priority as an EU Project of Common Interest, as well as TPA exemption. Furthermore and quite cleverly, Poseidon would comply with the Third Gas Directive, as Gazprom would not own the portion of the pipeline transiting EU territory. Turk Stream is the Russian solution to bypass the energy regulations of the EU that seek to limit Gazprom.

---

<sup>229</sup> Ibid., 9, 14.

<sup>230</sup> Theodoros Tsakiris, "The Energy Parameters of the Russian-Ukrainian-Eu Impasse: Dependencies, Sanctions and the Rise of 'Turkish Stream'," *Southeast European and Black Sea Studies* 15, no. 2 (2015): 216.

The most critical aspect of Turk Stream lies not in its skirting of EU frameworks, but in its destination. Most relevant to the Southern Gas Corridor, the ending point of the Gazprom-owned and operated line is in Ipsala, Turkey along the Turkish-Greek border. Ipsala is located less than ten kilometers from the intersectional point of TAP and TANAP in the Greek-Turkish border town of Kipoi, Greece. Further provoking the geopolitical pipeline competition between the SGC and Turk Stream (hence, EU and Russia), Gazprom signed a Memorandum of Understanding in 2016 with Greek DEPA and Italian Edison for a subsea pipeline from Russia via the Black Sea and a 'third country' to Greece and on to Italy via a resurfaced ITGI-Poseidon. A year later, a cooperation agreement was signed further detailing Turk Stream implementation and its continuation on to Greek and Italian markets via the Poseidon line. The Russian supply line is double the initial capacities for the Turkish segment of the SGC fourth corridor project. Quite strategically, Russia has designed export infrastructure that both safeguards Gazprom market share and reduces market share availability for competing infrastructure projects, as well as for potential suppliers such as those from the Caspian region. Bare in mind, this is all speculation until Turk Stream is operational and furthermore, is dependent on the development of Poseidon or similar project.

Turk Stream would not only facilitate Russia's stronghold on the European market, but also undermine the European energy agenda by forming strategic natural gas partnerships playing to the national interests of Member States such as Greece and Italy – *key partners* in the Southern Gas Corridor. Russia is able to use the soft power of Turk Stream to encourage economic and political cooperation with countries of southeast Europe; and any Member State forming energy cooperations with Russia to ensure national energy security interests, is a point of weakness for the European Union political agenda.

### C. Nord Stream Expansion

The second highly controversial Russian-sponsored pipeline project is expansion of the Nord Stream subsea pipeline, commonly referred to as Nord Stream 2. The expansion project is to provide an additional pipeline capacity of 55 billion cubic meters. If completed, the project stands to give Gazprom over half of German market share and an overall increase in the wider EU market. Nord Stream 2 would allow Russia the opportunity to

supply 70% of its European exports through a single route.<sup>231</sup> Additionally, the export capacity of the line gives Russia the ability to render Ukraine obsolete as a transit country. It is no surprise there is heavy EU opposition to the project. Eastern European states fear national supply security will be jeopardized if Russia no longer needs them to transit gas to its largest importer *globally* – Germany. There are also grave concerns regarding Moscow’s underlying foreign policy objectives, which will only be strengthened by the expanded line.

Brussels’ objections to the project are centered on its energy objectives, stating infrastructure to increase dependence on Russian gas exports is not in line with the energy goals of the EU. In fact, as will be discussed shortly, the Commission has moved to block the Nord Stream 2 project citing non-compliance with EU energy legislation. Moreover, leaders from nine Member States expressed their concern over the expansion project in a March 2016 letter to the Commission stating the proposed project violates energy *acquis*, and the Polish government blocked the proposed infrastructure a few months later. Additionally, the Danish government objects to the line passing through its territorial waters, and recently passed a law potentially allowing banishment of the pipeline based on security reasons.<sup>232</sup>

Germany, on the other hand, fully supports the project and Angela Merkel deems the project as critical to the future of the German economy, stating: “We think this is an economic project. We are also for energy diversification. We also want Ukraine to continue to have transit gas traffic, but we believe Nord Stream poses no danger to diversification.”<sup>233</sup> The Netherlands, France, and Austria are also in support of the commercial and economic value of the project.<sup>234</sup> The resulting opposition between Member States serves the Russian national strategy to weaken the EU and regain its geopolitical power in the Black Sea region.

Despite the opposition from Member States and lack of support from Brussels, Russia has not slowed construction on the project and Germany issued construction and operation permits for its territorial waters in

---

<sup>231</sup> My analysis of EU demand alongside the annual capacities of the Nord Stream 1 and 2 lines using data from the BP Statistical Review 2017.

<sup>232</sup> Lefteris Karagiannopoulos, “Update: Danish Stance Seen Rerouting Nord Stream 2 Gas Pipeline - Contractor,” *Reuters*, 6 February 2018.

<sup>233</sup> Joseph Nasr and Noah Barkin, “Merkel Sees No Threat in New Gas Pipe to Russia, Poland Disagrees,” *Reuters*, 16 February 2018.

<sup>234</sup> Marco Siddi, “The EU’s Gas Relationship with Russia: Solving Current Disputes and Strengthening Energy Security,” *Asia Europe Journal* 15, no. 1 (2017): 112.

January 2018. As steadily as the project incurs opposition, it also maintains momentum perhaps the result of ties between Berlin and the Nord Stream 2 joint venture, a subsidiary of Gazprom. To many, it is a conflict of interest but to Gerhard Schröder and Gazprom, it is a business arrangement. Shortly after his seven-year tenure as the Chancellor of Germany, Gerhard Schröder became the Chairman of the Board for Nord Stream AG in 2006 and remains there today. Gazprom is the exclusive operational shareholder of the venture financing half of the project while German energy firms Uniper and Wintershall, Royal Dutch Shell, French Engie, and Austrian OMV collectively provided the rest.<sup>235</sup> If Nord Stream 2 is to continue, it will require energy regulation exemptions like its predecessor Nord Stream was granted.

Though the first Nord Stream supply line proved to be a successful venture satisfying the EU, Russia, and Germany, its expansion will drastically deepen reliance of the German economy on Gazprom natural gas imports and presents significant risks to EU supply security. Undoubtedly, expanding the line grants Russia increased political leverage and decreases security of supply for the wider European market. Moreover, Germany is an economic pillar of the European Union and deepening German dependence on Russian natural gas could have substantial political and economic impacts to the vitality of the European Union. As a powerful and influential Member State, and a leader in energy, further entanglement of the German economy in the Russian political natural gas matrix would have larger implications, particularly as the country emerges as an inter-European transit hub for surrounding Member States. The Nord Stream 2 project is arguably contrary to the energy goals of the Union and its diversification agenda. As a result, the Russian project has led the EU further towards politicization of natural gas infrastructure tying the political agenda directly to the implementation and success of the Southern gas Corridor.

#### **4.2 Playing Politics – Natural Gas Regulations**

Regulations regarding natural gas supply and infrastructure during the 2010s are particularly interesting as the EU makes a clear move to diversify its natural gas suppliers. The strategic and increasingly political application of gas regulations to Russian pipeline projects begins to take shape and can be seen in both South Stream and Nord Stream 2 projects. The Third

---

<sup>235</sup> “Shareholder and Financial Investors,” Nord Stream 2 AG, accessed 26 February 18.



Energy Package is arguably aimed at Gazprom and deliberately intended to weaken its stronghold on the European market and the Russian political arsenal attached to it. From the introduction of South Stream to present, Russian pipeline proposals and EU energy regulations have gone head-to-head in a new age power struggle over natural gas infrastructure and resultant market share, a power struggle that originates in the geopolitical region of the Black Sea. The struggle for geopolitical power is illustrated through a series of EU diversification and security initiatives underscored by the fourth corridor project and the subsequent development of competing Russian pipelines to destabilize the efforts of the EU. The struggle culminates with the EU adoption of tailor-made regulations that deem Russian infrastructure proposals invalid due to legal non-compliance. This section will examine various strategies and lax use of the Third Energy Package as tactics to advance energy security and diversification to secure Caspian gas for the European market via the Southern Gas Corridor. Typically, EU regulations are applied uniformly, however in the case of energy and particularly the fourth corridor project, this is not the case. The EU enacts legislation to counter each geopolitical move of Russia devised to marginalize the progress of the SGC. In return, the EU must exempt its projects from newly adopted regulations introduced in large part to retaliate against Russian market share growth.

#### A. Strategic Energy Regulations

Energy actions of the European Union are widely considered external governance tactics rather than characteristic of energy diplomacy, as EU external application of legal and regulatory frameworks has historically been the *modus operandi* in energy relations in place of the traditional approach of bilateral agreements. However, with the diversification agenda, and especially the Southern Gas Corridor, the EU shifted its approach to directly participate in pipeline politics.<sup>236</sup> The Third Energy Package, the bulldog of the European Union against its Black Sea rival and geopolitical supplier, has been ceaselessly present to defeat Russian-backed infrastructure and halt advancements in Russian market share. The regulation is astounding with its chameleon-like behavior and perfect adaptability to Russian supply projects, allowing the EU to apply the gas regulation per its political agenda. When the European Council deemed the Commission's application of the Gas Directive on a particular project as legally unfounded, the Commission simply modified it to apply to the

---

<sup>236</sup> Prontera, "Forms of State," 274.

Russian pipeline project currently on the chopping block. Even more, when Russian natural gas trade increases, the Commission simply introduces new energy strategies to prevent Russian encroachment on the trade of natural gas.

The pipeline politics of the Commission clearly begin to take shape with the South Stream project announced in June 2007, the first competing project to the fourth corridor. By September, the Commission had introduced a proposal for the Third Gas Directive that intended to unbundle energy suppliers and distributors, obviously a direct impact to Gazprom. The gas proposal remained in legislation for two years until its swift adoption following the second Ukrainian gas crisis. During this time (2008-2010), Russia had signed bilateral intergovernmental agreements with five Member States for construction of the South Stream line. The Third Energy Package entered into force in March 2011. However, it was not until December 2013 that the Commission announced the intergovernmental agreements to be in breach of EU law, namely the Third Energy Package. Uncoincidentally, the *European Energy Security Strategy* was introduced five months later to put forward the ‘one voice’ policy in energy agreements with third countries.<sup>237</sup> In the case of South Stream, Russia maneuvered around EU project resistance by appealing to national energy security interests of Member States. Rebuking the Russian divide and conquer ploy, the Union introduced new policies to prevent its recurrence.

South Stream presents a key component to understanding the Southern Gas Corridor within the larger context of Black Sea geopolitics. The project never gained status as a Project of Common Interest, a clear sign of EU impassivity, though the EU also did not dismiss the project outright until six years after its announcement. As the fourth corridor developed coherence from the Nabucco pipeline in 2002 to the announcement of TANAP in late 2011 and the selection of TAP in 2013, it is arguable that the EU never intended to participate in the South Stream project and rather used it as a “last resort” should the fourth corridor project lose momentum. The development of the Southern Gas Corridor advanced considerably in 2013 with intergovernmental agreements signed between Italy, Greece, and Albania for the TAP project, exemption of the pipeline from Third Energy Package regulations, nine European gas purchase agreements, and a Memorandum of Understanding for the Ionian Adriatic Pipeline interconnector signed between Greece and four Balkan governments.

---

<sup>237</sup> *European Energy Security Strategy*.

As the SGC project became more than a pipe dream, Commission disapproval of South Stream became more pronounced until it was directly criticized in December 2013. Despite the substantial increase in momentum for the SGC in 2013, it was not until South Stream was denounced that the Final Investment Decision (FID) for full field development of Shah Deniz was finalized. In less than two weeks time, the EU had denounced South Stream and the entirety of the fourth corridor project that had been resting on the FID gained final approval. To increase its energy and diversification agenda, and advance its position in the geopolitical power struggle, Brussels has been keen on resisting sequential Russian infrastructure projects, including Turk Stream barely shy of EU jurisdiction. The design and application of the Third Gas Directive to the South Stream project is fundamental because in response, Russia designed Turk Stream to end mere kilometers from the external border of the EU and its politico-regulatory reach.

#### B. The Third Gas Directive

The Gazprom-focused pragmatic application of EU energy regulations is most prominent in the Third Gas Directive. Addressing ownership practices of natural gas pipelines in order to reduce conflicts of interest and ensure a competitive market, the Gas Directive directly targets Gazprom imports. A component of the unbundling regulation is Third Party Access to pipeline supply networks, meaning Transmission System Operators (TSO) and Distribution System Operators (DSO) must allow access to natural gas transmission networks by any third party gas supplier under regulated tariffs and conditions of access. This again targets Gazprom as all pipelines in which Gazprom is the majority shareholder forbid third party suppliers. In light of their seemingly political natural gas regulations, exemptions from the regulatory regime are possible for “major new gas infrastructure” under certain conditions. The package sets out the following conditions in order to apply for exemption: the infrastructure must increase supply competition and security of supply; the financial risk level of the project must be great enough that the project would not take place if the exemption were not granted; and the exemption “must not be detrimental to competition” nor the functioning of the internal natural gas market.<sup>238</sup>

For the fourth corridor project, the Commission granted TAP a 25-year exemption from ownership unbundling, third party access, and regulated tariffs for the initial capacity of the pipeline provided that Shah Deniz

---

<sup>238</sup> *Third Gas Directive*, Art. 36, para. 1-2.

remains the only source of supply. Should expansion occur, the exemption will no longer apply. Commission-granted exemptions illustrate the positive application of energy regulations when in favor of the EU. Exemptions have been granted to the TAP project, though it is questionable if the SGC supply line meets the conditions required for exemption. For example, ‘enhancement of competition and security of supply’ is difficult to argue as Italy represents one of, if not the most, diverse markets in the EU.

The Commission qualifies TAP as major new infrastructure, which is described as interconnectors or storage facilities, noting that the ‘interconnector’ concept is defined as a transmission line crossing a border between Member States exclusively to connect the national gas grids of those States.<sup>239</sup> The ‘interconnector’ concept, which allows TAP to fall under “major new gas infrastructure,” is not strictly applied to the project as a narrow interpretation of the concept “would exclude pipelines that connect Member States, but happen to start, end, or cross a third country.”<sup>240</sup> In theory, this is a practical application of the regulation; in practice, however, such loose application of the concept contradicts its strict application to Russian-backed infrastructure projects. For the exemption of TAP, the Commission instead focuses on the connection to new sources of gas, which “typically” increases supply security.<sup>241</sup> It undeniably increases Greek security of supply, but the Commission’s assertion that it will do the same for Italy based on diversification and resilience is simply untrue.

Regulatory compliance or exemption from the Third Energy Package can easily be understood as a political ploy to further the EU energy agenda. Though these exemptions seem reasonable enough, it is rather the strict application of regulations to Russian pipelines – first to South Stream, which never secured exemptions, and later to the Nord Stream expansion project. The economic and political goals of the SGC are intertwined and seek to enhance the security of natural gas supply in the EU while simultaneously weakening the Russian geopolitical agenda.<sup>242</sup>

---

<sup>239</sup> *Third Gas Directive*, Art. 2 (17), 36 (1).

<sup>240</sup> Commission Decision of 16 May 2013 (TAP Exemption), para. 59.

<sup>241</sup> *Ibid.*

<sup>242</sup> Marco Siddi, “The Scramble for Energy Supplies to South Eastern Europe: The EU’s Southern Gas Corridor, Russia’s Pipelines and Turkey’s Role,” in *Turkey as an Energy Hub?: Contributions on Turkey’s Role in EU Energy Supply*, ed. Mirja Schröder, Marc Oliver Bettzüge, and Wolfgang Wessels, (Baden: Nomos Verlagsgesellschaft, 2017), 2.

*Political Application to Nord Stream 2*

Opposition to the controversial Russian expansion project is quite clearly politically motivated, as there are no legally founded objections that *prohibit* Nord Stream 2 expansion. Nevertheless, Parliament conveyed clear mistrust of the project in an 25 October 2016 resolution that expressed concerns over doubling the capacity of the current infrastructure and the counterproductive impact such an expansion would have on diversification, security of supply, and Member State solidarity.<sup>243</sup> The resolution further stated that the expansion pipeline would provide one company with a prevailing lead on the European gas market and such a position should be avoided.

Undeniably political, the Commission is desperate to prevent the expansion pipeline, even applying regulations of the *internal gas market* to the offshore line arguing the offshore section of the line is within the territorial waters of Member States and thus, within EU jurisdiction. The attempt by Brussels to block Nord Stream 2 using an ambiguity of the Gas Directive demonstrates the politicization of energy *acquis* to curb Russian pipeline projects and the ensuing power struggle over supply infrastructure and market access. Russian advancement of the expansion project despite EU resistance was perceived as a direct rejection of the EU energy security agenda.

Responding to the Russian infrastructure “threat,” Brussels is intent on applying the ownership unbundling regulation to offshore pipelines entering the EU. Currently, the regulation does not define the technicalities of applicability or pipeline classification as onshore or offshore, nor does it mention third country pipelines entering or exiting EU jurisdiction. If Brussels were successful in the offshore application of the regulation, then unbundling would apply to the fully owned Gazprom pipeline, which supplies natural gas also produced by Gazprom. Such application would be a major defeat for Russia in its political power struggle over natural gas supply.

To legally extend, albeit indirectly, ownership unbundling to offshore lines, the Commission submitted a Draft Recommendation (mandate) to the Council in June 2017 for the negotiation of an agreement between the EU and Russia to establish a legal and regulatory framework for the Nord

---

<sup>243</sup> European Parliament Resolution 25 October 2016 on EU Strategy for Liquefied Natural Gas and Gas Storage, 2016/2059(INI), para. 32.

Stream 2 expansion line.<sup>244</sup> The mandate implies a formal agreement is necessary since the pipeline is not in compliance with EU energy regulations, insinuating regulations of the Third Gas Directive apply to the offshore line. In September, the Council responded that internal energy regulations, particularly those of the Third Energy Package, do not apply to Nord Stream 2 based on the intent and current wording of the Directive.<sup>245</sup> Such a decision was not surprising given the legal assessment by the Commission one year prior had the same finding.<sup>246</sup> Keen on rejecting the Russian infrastructure, and after two legal assessments determining the non-applicability of the Directive to offshore lines, the Commission set forth to amend the 2009 Gas Directive. The Commission's decision to pursue the matter, despite its own legal assessment and that of the Council, is highly suggestive of political intent. In fact, the Council made clear that the mandate seemed unrelated to the legal aspects of the pipeline and rather based on political choice.<sup>247</sup>

The purpose of the amendment was to provide the legal rationale necessary for its offshore applicability, though the Commission stated the Third Gas Directive would be amended based on aspects of solidarity. In October 2017, the amendments were presented to Parliament and fast-tracked so that if approved, they would enter into force before the end of 2018. In the proposal, the Commission asserts that internal natural gas market regulations should also apply to third party pipelines entering or exiting the EU in order to establish a consistent regulatory regime.<sup>248</sup> The Proposal for Amendment of the Gas Directive further states its purpose is not to target the Nord Stream 2 project, but rather to provide legal clarity on gas pipeline operations. The proposed amendments will apply only to new offshore infrastructure and will not be retroactive. As of 31 March 2018, the legislative proposal is still awaiting the decision of the committee.

Strategic application of the Third Energy Package to the Nord Stream expansion line allows the EU to undercut Russian geopolitical interests

---

<sup>244</sup> Katja Yafimava, "The Council Legal Service's Assessment of the European Commission's Negotiating Mandate and What It Means for Nord Stream 2," in *Energy Insight* (Oxford: Oxford Institute for Energy Studies, 2017), 1.

<sup>245</sup> *Ibid.*, 3.

<sup>246</sup> "Legal Opinion Undermines EU's Ability to Block Nord Stream Pipeline," *Politico*, 7 February 2016.

<sup>247</sup> Opinion of the Legal Service of the Council of the EU, available in "Council's Legal Arm Shoots Down Nord Stream 2 Mandate Request," *Politico*, 28 September 2017.

<sup>248</sup> Proposal for a Directive of the European Parliament and of the Council amending Directive 2009/73/EC Concerning Common Rules for the Internal Market in Natural Gas, 2017/0294 (COD).

satisfied by the pipeline such as increased market share, undermining the EU agenda, and further rendering Ukrainian transit routes obsolete. Not only does EU resistance to the project act to weaken Russia's political leverage, it also serves to advance energy objectives by ensuring market availability for new sources of supply, as well as the successful implementation of the expansion-ready Southern Gas Corridor. The European and Russian projects are scheduled to be operational around the same time in 2019, with the Russian infrastructure completing just ahead of the fourth corridor project, proving the critical timing of the political reading of EU natural gas regulations.

As increases to supply and infrastructure diversification inch closer to operational status symbolizing reduced EU dependence on Russian gas imports, Russia's political leverage also weakens. One must question, was this not the strategy and intent of the EU all along, especially considering the minimal volumes the corridor will provide in terms of overall demand.

### 4.3 The Energy Corridor

#### A. The Black Sea

Geopolitical tensions are intrinsic to regions serving as energy corridors and the Black Sea serves not only as an 'East-West corridor' linking the Caspian region and Central Asia with continental Europe, but also as a 'North-South Corridor' connecting Russia to Turkey via the subsea Blue Stream pipeline.<sup>249</sup> Large-scale and regional competition is inherent to these two corridors, or 'axes,' and takes on many forms ranging from geopolitics to economics to technical considerations.<sup>250</sup> For the EU, the Black Sea represents a gateway to energy security and diversification where regional cooperation is imperative. Within the strategic region, Turkey serves the European interest as an energy access point to the rest of the world.<sup>251</sup> The Southern Gas Corridor along with its Russian-led competitors, South Stream and later Turk Stream, "play a defining role in the current energy security environment of the Black Sea region."<sup>252</sup> The pipeline race to supply, and thereby control, natural gas to southeastern Europe is one of

---

<sup>249</sup> Fabrizio Tassinari, "A Synergy for Black Sea Regional Cooperation: Guidelines for an EU Initiative," *CEPS Policy Brief* no. 105 (2006): 11.

<sup>250</sup> Ibid.

<sup>251</sup> Aureescu, "The Role of the European Union," 35.

<sup>252</sup> Dudau and Lenes, "European Union's Energy Diplomacy," 98.

the principle dynamics of Black Sea geopolitics.<sup>253</sup> Regional infrastructure developments between the two poles are changing established geopolitical order between the traditional supplier and import-dependent European Union, a change that will largely impact Russian foreign policy.<sup>254</sup> In tandem with infrastructure developments, the natural gas regulations of the EU are arguably aimed to hinder the Russian monopoly and weaken its political leverage in the Black Sea region and beyond. Assessing the geopolitical climate of the Black Sea in the 21<sup>st</sup> century, particularly in the last decade, one can argue these dynamics led to the creation and realization of the Southern Gas Corridor.

The Black Sea energy transit corridor can be defined as the geographical area that lies between the Caspian and the European Union; it is the point of convergence between several energy-bound states as consumer, supplier, or transit country: Ukraine, the Eastern Balkans, Russia, the Caucasus, and Turkey. The region itself acts a decisive juncture for the future of European gas trade by providing a 'pipeline bridge' to the natural gas resources of the Caspian region.<sup>255</sup> The Black Sea corridor is altering natural gas trade and infrastructure, hosting not only the fourth corridor to the largest global natural gas market, but also simultaneously hosting its largest infrastructural competitor, Turk Stream. As the epicenter of politics and natural gas supply routes between Europe, Russia, and Central Asia, many Black Sea littorals in the "geopolitically sensitive" Eurasian corridor must balance their potential role as a regional provider of 'continental energy security' alongside national energy security interests.<sup>256</sup>

The region holds both strategic value and vulnerability for the European Union. The European market, and to a lesser extent SGC infrastructure, is at the will of geopolitical dynamics which feed regional instability in the supply and transit countries of the wider Black Sea region. For example, potential vulnerabilities are evidenced by Russian power projections in Georgia and the separatist regions of Abkhazia and South Ossetia. The larger vulnerability of the EU, however, lies in the frozen

---

<sup>253</sup> Arnaud Dubien, I. Vaquer and J. Fanes, "Security and Energy Security in the Black Sea Region," Policy Department Directorate-General for External Policies (Belgium: European Parliament, 2010), 4.

<sup>254</sup> Agnia Grigas, "How Putin Is Losing His Grip on Pipeline Politics," *EURACTIVE*, 2 November 2016.

<sup>255</sup> Zhiltsov, Zonn, and Kostianoy, *Oil and Gas Pipelines*, 51, 168.

<sup>256</sup> Plamen Pantev, "The Black Sea: A Forgotten Geostrategic Realm," Center for Security Studies, ETHzürich (2011); Behlül Özkan, "New Geopolitics of Energy in the Black Sea Region," in *The Black Sea Region Countries and Prospective Relationships with European Union* (Tbilisi: 3rd International Silk Road Symposium, 2006), 43.



conflict between Armenia and Azerbaijan. If the conflict were to reignite or escalate, it could have significant impacts to Caspian exports as the Armenia border lies less than ten kilometers from the South Caucasus Pipeline. An exemplary example of past vulnerabilities that critically affected the EU is in the Ukrainian-Russian disputes, which halted European gas flows.

The geopolitical layers of natural gas and foreign policy in the Black Sea region are increasingly complex as both the EU and Russia turn to Turkey to secure national agendas of natural gas supply and demand security, as well as to extend political influence in the region. Moreover, as Russia works to dismantle the Ukrainian economy while the EU extends its legal and regulatory frameworks through the Energy Community, traditional energy dynamics are in flux. Natural gas market factors and regional geopolitics are paramount to the (in)stability of EU-Russian relations and the degree of involvement of intermediary states plays a fundamental role in supply and infrastructure dynamics.

#### B. Russian-Ukraine Relations

The role Ukraine played to the Russian natural gas export economy was critical to both their economic and political relationship. Ukraine benefited from significantly cheaper gas prices, supply security, and transit revenues while Russia was able to securely transport natural gas to its largest import partner. Ukraine was aligned with Russia and increased the Russian sphere of influence and power in the Black Sea region. However, when Ukraine began leaning west after the Orange Revolution, Gazprom raised Ukraine's gas prices and when price disputes between the two escalated, Gazprom cut off supply. The resultant supply disruptions, especially in 2009, severely affected the European economy and consequentially, the European natural gas political agenda.

As Russian refusal to transit via Ukraine mounted, it became increasingly obvious that through Nord Stream, Turk Stream, and potentially Nord Stream 2, Russia is capable of eliminating Ukraine from its export infrastructure regime and significantly alter supply dynamics of the Black Sea corridor. The announcement, development, and forecasted operation of Turk Stream in 2019 has influenced the EU-Caspian fourth corridor project, though initially minimal. The implications of Turk Stream on the Southern Gas Corridor are not in the development of the corridor, but rather in its expansion possibilities for both infrastructure and additional sources of supply. If connected to the European market, Turk Stream gas flows will compete for market share. Considering the long-term nature of gas purchase agreements, Turk Stream could have disparaging

effects to the political and economic feasibility of SGC expansion. Politically, Caspian States may not want to compete with Russia for European market share weary of regional ramifications from the dominant supplier. Economically, if export volumes are not secured in the projected market(s), neither SGC expansion nor additional regional infrastructure for adjacent Caspian sources, such as the Trans-Caspian Pipeline, would be feasible.

### C. The Emerging Role of Turkey

Souring relations between Russia and Ukraine prompted closer relations between Russia and Turkey, situating the geostrategic littoral as a key transit state for Russian exports, increased political influence in the region, and implementation of infrastructure to undermine EU energy policy objectives. Strengthened ties and similar energy interests between the two Black Sea States are altering the geopolitical energy dynamics of the region, which directly affects the European gas trade. For example, Turkey's long-time desire for EU accession has waned considerably and now relations between the two are at a low point. Meanwhile, economic and political relations with Russia, though oscillating, have increased underscored by Turk Stream. The hot and cold relations between Russia and Turkey illustrate an additional geopolitical dimension of the Black Sea region. When political relations are high, the SGC has an infrastructural competitor and Russia achieves its national interests to weaken the EU agenda and increase its regional power. However, when relations are low, competing infrastructure projects are frozen and construction of the Southern Gas Corridor accelerates to propel the natural gas supply security of the European Union.

As Turkey is projected to play a critical role in European energy security through Caspian and Russian supply sources, the country must carefully construct its national relations with the rivaling power centers. Though EU- and Russian-sponsored pipeline projects differ in their political and economic intent, both indicate that Turkey will supersede Ukraine as the major natural gas transit country to supply southeastern Europe.

The European Union has recognized Turkey as both a 'secure and independent route' for the delivery of non-Russian gas to the European market.<sup>257</sup> Moreover, it realizes the geo-significance of Turkey located in the vicinity of globally resource-rich regions of the Caspian, Persian Gulf, and Russia, as well as its vital role "in the realm of energy security" for the

---

<sup>257</sup> Tekin and Williams, *Geo-Politics of the Eur-Asia Energy Nexus*, 145.

EU.<sup>258</sup> Turkey is an integral component to the EU diversification agenda, thus a prime target for Russia seeking to advance its power and influence and illustrated by the proximity of the Turk Stream ending point just across the Turkish-Greek border from the ending point of TANAP. The full effect of this political planning will likely come to fruition when the need for fourth corridor expansion arises.

Turkish national interests are facilitated by the SGC for several reasons, chief among them being economic and political gain. As a transit country, Turkey is not only set to receive transit revenues, but will additionally be supplied by TANAP. Politically, hosting such a geostrategic pipeline for the EU increases Turkey's negotiation power, as well as their international significance. Turkish national interest envisions development of the country into a Eurasian energy hub to deliver natural gas to the European market, and exploiting its corridor position to become an instrumental gas flow crossroads and "supplier" of EU energy security. The same geostrategic benefits hold for Turk Stream and increase the negotiation power of Turkey assuming success in its balancing act with the rivaling powers.

The changing landscape of EU natural gas supply actuated by the SGC is redefining geopolitical aspects of the Black Sea region. Turk Stream and the TANAP segment of the Southern Gas Corridor will go head-to-head for European market share in the next decade and continue the geopolitical power struggle of the Black Sea region defined through natural gas infrastructure and market supply.

---

<sup>258</sup> Carl Bildt and Massimo D'Alema, "It's Time for a Fresh Effort," *International Herald Tribune*, 31 August 2007.

## Conclusion

The European Union has long wanted to offset its Russian natural gas dependence through diversification from non-Russian sources, and the 2014 Ukrainian crisis in combination with deteriorating EU-Russian relations generated new political drive for the Southern Gas Corridor. The crisis spurred EU elaboration for the *European Energy Security Strategy*, as well as the Energy Union, emphasizing the imperative nature of the SGC and the need to develop a sound partnership with Azerbaijan. The corridor satisfies a shared desire of both the European Union and Azerbaijan: a gas-trading regime independent of Russia. The EU is able to obtain, even in small part, an additional non-Russian source of supply and Azerbaijan is able to export natural gas to western markets independent of Russian infrastructure.<sup>259</sup> However, income from the project and contracted gas sales have worked to further corrupt the Caspian State and increase the authoritarian power of Azerbaijani President Ilham Aliyev. Neither of which are compatible with EU values and norms, nor characteristic of traditional EU trading partners. The acquiescence of the EU to form energy partnerships with authoritarian countries such as Azerbaijan and increasingly Turkey shows the overzealous drive of the EU in its quest for non-Russian sources of natural gas supply. Controversy over these issues was raised in 2015 when the European Commission harshly criticized Azerbaijan's human rights record stating the supplier "has suffered the greatest decline in democratic governance in all of Eurasia over the past ten years."<sup>260</sup> Nevertheless, the energy security needs of the democracy-promoting EU are too great to dismiss the substantial value of Azerbaijan in supplying natural gas security to the EU.

The move of the European Union towards Azerbaijan despite the lack of traditional EU values is indicative of the political and economic complexity associated with intertwinement of the Union with their Black Sea pole. "The relationship between the two political structures is far more diversified than the simple status of supplier that Russia has for the EU."<sup>261</sup> Infrastructure and natural gas supply are at the core of EU energy politics and security of supply. The SGC exemplifies the political determination of the EU to diversify its natural gas supply away from Russia, even at the cost of \$40 billion and a 2-3% increase in supply diversity. The rivalry between

---

<sup>259</sup> Siddi, "The Scramble for Energy Supplies," 2.

<sup>260</sup> *Azerbaijan Human Rights and the Rule of Law*, para. K.

<sup>261</sup> Francesco Ruggiero et al., "Energy Cooperation - the Strength of the EU's Economic Development," *Amfiteatru Economic* 17, no. 40 (2015): 1087.

the Black Sea poles and geopolitical power struggle are exemplified through natural gas source diversification, supply infrastructure, and control of the European market. Initial considerations by the EU for additional sources of natural gas supply around the turn of the century and subsequent intergovernmental agreements between the EU and four littoral States of the Caspian and Black Seas with subsequent Russian opposition marked the dominant supplier's emergence as a rival to European energy security interests. When the EU moved to Azerbaijan for market supply, Russian national strategy became defined by undermining the EU energy agenda, and ensuring its economic and political prosperity in the wider Black Sea region. Russia viewed actions of the EU as direct threats to its export economy, and encroachment of the EU into the region through energy programs, technical assistance, or funding was considered political provocation.

To intercept European threats and to regain its dominant role in the region, Russia implemented infrastructure projects to saturate the EU market as illustrated by the announcement of South Stream in the mid-2000s followed by Turk Stream and the Nord Stream 2 expansion project. Pipeline for pipeline, Russia engages in an infrastructural power struggle with EU diversification projects, which transpires in the wider Black Sea region and beyond. Fundamental to the geopolitical natural gas power struggle is the regulatory arsenal of the EU, which became increasingly politicized with the announcement of South Stream. The critical point in EU energy legislation occurred in 2011 when the Third Energy Package entered into force. The struggle for supply control and market share became understood as ownership unbundling and Third Party Access regulations. Outside of the political regulatory reach of the EU, Russia introduced Turk Stream to directly compete with the fourth corridor project and if connected to the EU internal market, will be in direct geopolitical competition with both the TAP and TANAP supply lines.

Russian introduction of the Nord Stream expansion project illuminated the natural gas political agenda of the European Union. The determination of the Commission for a Nord Stream 2 negotiation mandate illustrates their political position towards Russia and its willingness to advance its agenda through tailor-made energy regulations. When existing energy *acquis* has not proved strong enough against the rival, the Commission simply modifies existing legal and regulatory frameworks or introduces new policy legislation that directly affects Gazprom – clearly illustrating the political will of the Commission. However, not wanting to appear overtly political in EU-level energy legislation nor in matters pertaining to Russian natural gas imports, the Commission has created the legal rationale for the negotiating

mandate by expanding EU internal market energy regulations to offshore lines.<sup>262</sup> The Commission's proposal to amend the Third Gas Directive exemplifies the continued use of energy regulation as a geopolitical tool against Russia. While Russia uses natural gas to influence foreign policy, the EU uses legal policy to influence natural gas supply infrastructure and advance its geopolitical energy agenda. Likewise, Commission politics are also evidenced in the support and development of natural gas diversification projects, such as the Southern Gas Corridor with priority status, expedited permitting processes, and exemption from Gazprom-targeted regulations. More so, EU funding alone has provided over \$3 billion USD to the SGC project through the European Bank of Reconstruction Development and the European Investment Bank with another \$500 million from the EBRD pending review.

The most significant aspect of the Southern Gas Corridor is its entanglement in Black Sea geopolitics. As a defining energy transit corridor and the epicenter of regional power polarity, external influence, and energy security, the Black Sea holds great political and economic value. It is through this lens that we must understand the development of Caspian natural gas infrastructure from Azerbaijan to the European market. The Southern Gas Corridor is defined by the geopolitical dimensions of the Black Sea and is evidenced by the strategic, though perhaps not initially political, partnership with Azerbaijan overlooking the lack of democratic norms, continued perseverance through projects that were infeasible, acquiescence to TANAP though outside EU frameworks, the design and strict application of tailor-made regulations to thwart Russian increases in market share, and the glaring truth that the \$45 billion non-Russian megaproject will supply less than 3% of European demand.

---

<sup>262</sup> Katja Yafimava, "The Council Legal Assessment," 4.

## Bibliography

- Asian Infrastructure Investment Bank. "AIIB Approves \$600 Million to Support Energy Project of Azerbaijan." Published 16 December 2016.  
[https://www.aiib.org/en/news-events/news/2016/20161222\\_001.html](https://www.aiib.org/en/news-events/news/2016/20161222_001.html).
- Assenova, Margarita, ed. "Azerbaijan and the Southern Gas Corridor to Europe: Implications for U.S. And European Energy Security." Washington, D.C.: The Jamestown Foundation, 2013.
- Aurescu, Bogdan. "The Role of the European Union in the Wider Black Sea Region." *Turkish Policy Quarterly* 10, no. 1 (2011): 35-45.
- "Azerbaijan Has Changed the Energy Map of the Region." Caspian Oil & Gas Conference, Baku, 2015.
- Baylarbayov, Vitaly. "ACG, Shah Deniz and Beyond...." Paper presented at the The Southern Gas Corridor in European Energy, Houston, 2015.
- Bildt, Carl and Massimo D'Alema. "It's Time for a Fresh Effort." *International Herald Tribune*. Published August 31 2007.
- BP Azerbaijan. "3rd Quarter 2017 Results."  
[https://www.bp.com/en\\_az/caspian/press/businessupdates/third-quarter-2017-results1.html](https://www.bp.com/en_az/caspian/press/businessupdates/third-quarter-2017-results1.html).
- . "South Caucasus Pipeline." Accessed 10 December 2017.  
[https://www.bp.com/en\\_az/caspian/operationsprojects/pipelines/SCP.html](https://www.bp.com/en_az/caspian/operationsprojects/pipelines/SCP.html)
- . "South Caucasus Pipeline." Accessed 15 March 2018.
- . "The Southern Gas Corridor." Accessed 11 December 2017.  
[https://www.bp.com/en\\_az/caspian/operationsprojects/Shahdeniz/SouthernCorridor.html](https://www.bp.com/en_az/caspian/operationsprojects/Shahdeniz/SouthernCorridor.html).
- British Petroleum. "2014 Year End Results." Shah Deniz. Last modified 19 February 2015.  
[https://www.bp.com/en\\_az/caspian/press/businessupdates/2014-year-end-results.html](https://www.bp.com/en_az/caspian/press/businessupdates/2014-year-end-results.html).
- . "2017 Year-End Results." Shah Deniz. Last modified 16 February 2018.  
[https://www.bp.com/en\\_az/caspian/press/businessupdates/2017-year-end-results.html](https://www.bp.com/en_az/caspian/press/businessupdates/2017-year-end-results.html).
- . "BP Statistical Review of World Energy." London. 2010-2017.

- . “Shah Deniz Major Sales Agreements with European Gas Purchasers Concluded.” Press release, 19 September 2013.  
[https://www.bp.com/en\\_az/caspian/press/pressreleases/Shah-Deniz-sales-agreements-European-purchasers.html](https://www.bp.com/en_az/caspian/press/pressreleases/Shah-Deniz-sales-agreements-European-purchasers.html).
- . “Shah Deniz Stage 2.” Accessed 8 February 2018.  
[https://www.bp.com/en\\_az/caspian/operationsprojects/Shahdeniz/SDstage2.html](https://www.bp.com/en_az/caspian/operationsprojects/Shahdeniz/SDstage2.html).
- Buerkle, Stefan and Charlotte Huebner. “The Role of the Southern Gas Corridor.” *World Pipelines*, August 2015, 25-28.
- Buzan, Barry. *People, States & Fear: An Agenda for International Security Studies in the Post-Cold War Era*. Edited by Alan and Vincent Hoffmann-Martinot Ware. 2nd ed. Colchester: ECPR Press, 2008.
- Central Intelligence Agency. “Middle East: Azerbaijan.” In *The World Factbook*, 2017. Accessed 17 November 2017.  
<https://www.cia.gov/library/publications/resources/the-world-factbook/geos/aj.html>.
- . “Natural Gas - Imports.” In *The World Factbook*. Accessed 13 January 2018.  
<https://www.cia.gov/library/publications/the-world-factbook/rankorder/2252rank.html>.
- Cioculescu, Serban Filip. “Perceptions of Changing Power, Dyadic Rivalries and Security Dilemma Mechanisms in the Wider Black Sea Area.” *Romanian Political Science Review* 16, no. 3 (2016): 377-407.
- Clagett, Brice M. “Ownership of Seabed and Subsoil Resources in the Caspian Sea under the Rules of International Law.” *Caspian Crossroads* 1, no. 3 (1995): 3-12.
- Commission Communication. To the European Council and the European Parliament – An Energy Policy for Europe. COM(2007) 1 final.
- . To the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions – Second Strategic Energy Review: An EU Energy Security and Solidarity Action Plan. COM(2008) 781 final.
- . To the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions Energy Infrastructure Priorities for 2020 and Beyond – A Blueprint for an Integrated European Energy Network. COM(2010) 677/4.



- . To the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions on Security of Energy Supply and International Cooperation. “The EU Energy Policy: Engaging with Partners Beyond Our Borders.” COM(2011) 53 final.
- . To the European Parliament and Council on European Energy Security Strategy. COM(2014) 330 final.
- . To the European Parliament, the Council, the European Economic and Social Committee, the Committee of the Regions, and the European Invest Bank on Second Report on the State of the Energy Union. COM(2017) 53 final.
- . To the European Parliament, the Council, the European Economic and Social Committee, the Committee of the Regions, and the European Invest Bank on Second Report on the State of the Energy Union. COM(2017) 53 final. ANNEX 1. Updated Roadmap for the Energy Union.
- . To the European Parliament, the Council, the European Economic and Social Committee, the Committee of the Regions, and the European Invest Bank on Second Report on the State of the Energy Union. COM(2017) 53 final. ANNEX 1. The Energy Union’s Five Dimensions: Policy Observations at Member State and EU Level.
- “Conclusions of the Ministerial Conference on Energy Cooperation between the EU, the Caspian Littoral States and Their Neighboring Countries.” *1st Energy Ministerial Conference*. Baku: INOGATE Programme, 2004.
- Consolidated Version of the Treaty on the Functioning of the European Union. O.J. C 326/47, 2012.
- Cornell, Svante E. *Azerbaijan since Independence*. New York: Routledge, 2015.
- Council Decision of 29 May 2006 on the Conclusion by the European Community of the Energy Community Treaty. O.J. L 198, 2006.
- De Micco, Pasquale. *Changing Pipelines, Shifting Strategies: Gas in South-Eastern Europe, and the Implications for Ukraine*. European Parliament, Directorate-General for External Policies, Policy Department. Brussels, 2015.
- Dempsey, Judy. “EU Natural Gas Pipeline Project Gets First Order.” *The New York Times*, 11 June 2008.
- Dimitrova, Anna. “The Future of the Energy Sector in the Black Sea Region Beyond the Pipeline Knot.” In *Unrewarding Crossroads: The Black Sea Region Amidst the European Union and Russia*, edited by Anahit Shirinyan and Louisa Slavkova. Sofia: Sofia Platform, 2015.

- 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. O.J. L 211, 2009.
- Dubien, Arnaud, I. Vaquer and J. Fanes. "Security and Energy Security in the Black Sea Region." European Parliament, Directorate-General for External Policies, Policy Department. Brussels, 2010.
- Dudau, Radu, and Leonela Lenes. "European Union's Energy Diplomacy in the Wider Black Sea Region." *Eurolimes*, no. Supl. 3 (2011): 83-101.
- "EIB Approves €932 Million Loan for Tanap Gas Pipeline." *Reuters*. 15 March 2018.
- Energy Community. "Our Mission." Accessed 13 January 2018.  
<https://www.energy-community.org>.
- Energy Information Administration. *Caspian Sea Region*. Washington, D.C.: U.S. Department of Energy, 2013.
- . *Country Analysis Brief: Azerbaijan*. Washington D.C.: U.S. Department of Energy, 2016.
- . "International Energy Statistics." Accessed 10 December 2017.  
[https://www.eia.gov/beta/international/data/browser/index.cfm#/?pa=g0g&c=001&ct=0&tl\\_id=3002-A&vs=INTL.3-1-AZE-BCF.A&cy=2015&vo=0&v=H&start=2000&end=2017](https://www.eia.gov/beta/international/data/browser/index.cfm#/?pa=g0g&c=001&ct=0&tl_id=3002-A&vs=INTL.3-1-AZE-BCF.A&cy=2015&vo=0&v=H&start=2000&end=2017).
- . "International Exports." Accessed 9 December 2017.  
<https://www.eia.gov/beta/international/>.
- "EU-Azerbaijan Relations." European Union External Action Service. Accessed 17 December 2017.  
[https://eeas.europa.eu/headquarters/headquarters-homepage\\_en/4013/EU-Azerbaijan%20relations](https://eeas.europa.eu/headquarters/headquarters-homepage_en/4013/EU-Azerbaijan%20relations).
- EURACTIVE.com. "Azerbaijan's SOCAR Buys Greek Gas Operator DESFA." Published 19 June 2013.  
<https://www.euractiv.com/section/energy/news/azerbaijan-s-socar-buys-greek-gas-operator-desfa/>.
- European Bank of Reconstruction and Development. "Trans-Adriatic Pipeline Project." Accessed 8 February 2018.  
<http://www.ebrd.com/work-with-us/projects/psd/trans-adriatic-pipeline-project.html>.
- European Commission. A Framework Strategy for a Resilient Energy Union with a Forward-Looking Climate Change Policy. COM (2015) 80 final.

- . Decision of 16 May 2013. On the Exemption of the Trans Adriatic Pipeline From the Requirements on Third Party Access, Tariff Regulation and Ownership Unbundling laid down in Articles 9, 32, 41(6), 41(8) and 41(10) of Directive 2009/73/EC. C(2013) 2949 final.
- . “EU Energy in Figures: Statistical Pocketbook 2017.” Brussels: European Union, 2017.
- . “Gas and Oil Supply Routes.” Accessed 25 August 2017. <https://ec.europa.eu/energy/en/topics/imports-and-secure-supplies/gas-and-oil-supply-routes>.
- . Joint Staff Working Document Black Sea Synergy: Review of a Regional Cooperation Initiative. SWD(2015) 6 final.
- . Joint Staff Working Document Report on EU-Azerbaijan Relations in the Framework of the Revised ENP. SWD(2017) 485 final.
- . “Project of Common Interest.” Brussels, 2014.
- . Proposal for a Directive of the European Parliament and of the Council amending Directive 2009/73/EC Concerning Common Rules for the Internal Market in Natural Gas. 2017/0294 (COD).
- . Staff Working Document Ownership Unbundling The Commission’ Practice in Assessing the Presence of a Conflict of Interest Including in Case of Financial Investors. SWD(2013) 177 final.
- . State of the Energy Union 2015. Staff Working Document on the European Energy Security Strategy. SWD(2015) 404 final.
- . “Towards Energy Union: The Commission Presents Sustainable Energy Security Package.” Press Release, 16 February 2016. MEMO/16/308.
- European Parliament. Resolution 25 November 2010 on Towards a New Energy Strategy for Europe 2011-2020. O.J. C 99E, 2012.
- . Resolution 5 July 2011 on Energy Infrastructure Priorities for 2020 and Beyond. O.J. C 33E, 2013.
- . Resolution of 12 June 2012 on Engaging in Energy Policy Cooperation With Partners Beyond Our Borders: A Strategic Approach to Secure, Sustainable and Competitive Energy Supply. O.J. C 332, 2013.
- . Resolution of 10 September 2013 on Making the Internal Energy Market Work. O.J. C 93, 2013.
- . Resolution of 10 September 2015 on Azerbaijan. 2015/2840(RSP).
- . Resolution of 15 December 2015 on Towards a European Energy Union. 2015/2013(INI).

- . Resolution 25 October 2016 on EU Strategy for Liquefied Natural Gas and Gas Storage. 2016/2059(INI).
- Eurostat. “Energy Dependence Statistics.” Accessed 13 January 2018.  
[http://ec.europa.eu/eurostat/tgm/graph.do?tab=graph&plugin=1  
 &pcode=tsdcc310&language=en&toolbox=data](http://ec.europa.eu/eurostat/tgm/graph.do?tab=graph&plugin=1&pcode=tsdcc310&language=en&toolbox=data).
- . “Shedding Light on Energy in the EU: A Guided Tour of Energy Statistics.” Accessed 10 January 2018.  
<http://ec.europa.eu/eurostat/cache/infographs/energy/index.html>.
- . “Statistics Explained - Energy Production and Imports.” Brussels: European Commission, 2017.
- Fernandes, Carla Patrício and Teresa Ferreira Rodrigues, ed. *Geopolitics of Energy and Energy Security*. Lisbon: Instituto da Defesa Nacional, 2017.
- Flegel, Tina. *Foreign Actors’ Influence on Azerbaijan’s Energy Policy: Decisions under Complex Uncertainty*. Springer, 2015.
- Flint, Colin. *Introduction to Geopolitics*. 3rd ed. New York: Routledge, 2016.
- Franza, Luca. “Developments in Gas Supplies to Europe.” *CIEP Briefing Paper* (2016).
- . “From South Stream to Turk Stream: Prospects for Rerouting Options and Flows of Russian Gas to Parts of Europe and Turkey.” Edited by Deborah Sherwood. The Hague: Clingendael International Energy Programme (CIEP), 2015.
- Gazprom Exports. “Delivery Statistics, Gas Supplies to Europe.” Accessed 13 January 2018.  
<http://www.gazpromexport.ru/en/statistics/>.
- Goldman, Marshall I. *Petrostate: Putin, Power, and the New Russia*. Oxford University Press, 2008.
- Grigas, Agnia. “How Putin Is Losing His Grip on Pipeline Politics.” *EURACTIVE*. Published electronically 2 November 2016.  
<https://www.euractiv.com/section/energy/opinion/how-putin-is-losing-his-grip-on-pipeline-politics/>.
- Heinrich, Andreas, and Heiko Pleines. “Introduction: The Political Economy of the Caspian Oil and Gas States.” *Journal of Eurasian Studies* 6, no. 2 (2015): 89-90.
- . “Mixing Geopolitics and Business: How Ruling Elites in the Caspian States Justify Their Choice of Export Pipelines.” *Journal of Eurasian Studies* 6, no. 2 (2015): 107-13.
- International Energy Agency. “Eastern Europe, Caucasus and Central Asia.” In *Energy Policies Beyond IEA Countries*. Paris, 2015.

- . “Energy Security.” Accessed 5 January 2018.  
<https://www.iea.org/topics/energysecurity/>.
- . “EU4Energy.” Accessed 1 February 2018.  
<https://www.eu4energy.iea.org/about>.
- . “World Energy Balances: Overview.” 2017.
- International Energy Charter, “Partners EU4Energy.” Accessed 1 February 2018.  
<https://energycharter.org/partners/eu4energy/overview/>.
- International Institute of Khazar Sea Studies. “Caspian Sea Region: Legal Issues.” Last modified 29 February 2016.  
[http://www.iikss.com/en/index.php/route/news\\_det/MTMx/\\_Caspian\\_Sea\\_Region:\\_Leg\\_al\\_Issues\\_](http://www.iikss.com/en/index.php/route/news_det/MTMx/_Caspian_Sea_Region:_Leg_al_Issues_).
- Israfilbayova, Sara. “SOCAR President Reveals Shah Deniz Gas Output.” *AzerNews*, 20 September 2017.
- Karagiannopoulos, Lefteris. “Update: Danish Stance Seen Rerouting Nord Stream 2 Gas Pipeline - Contractor.” *Reuters*. Published electronically 6 February 2018.  
<https://af.reuters.com/article/africaTech/idAFL8N1PW6N0>.
- Keating, Dave. “Despite Climate Objections, New Southern Gas Corridor Gets €1.5 Billion in EU Funds.” *Forbes*. Published electronically 7 February 2018.  
<https://www.forbes.com/sites/davekeating/2018/02/07/despite-climate-objections-new-southern-gas-corridor-gets-e1-5bn-in-eu-funds/-3a70a0b5552e>.
- “Legal Opinion Undermines EU’s Ability to Block Nord Stream Pipeline.” *Politico*. Published electronically 7 February 2016.
- Marín-Quemada, José María and Beatriz Muñoz-Delgado. “Affinity and Rivalry: Energy Relations of the EU.” *International Journal of Energy Sector Management* 5, no. 1 (2011): 11-38.
- Memorandum of Understanding on a Strategic Partnership Between the European Union and the Republic of Azerbaijan in the Field of Energy, 2006.
- Merabishvili, Gela. “The EU and Azerbaijan: Game on for a More Normative Policy.” *CEPS Policy Brief*, no. 329 (2015).
- Mikulska, Anna. “The Changing Geopolitics of Natural Gas in the Black Sea Region.” *Black Sea Strategy Papers*. Philadelphia: Foreign Policy Research Institute, 2017.  
<https://www.fpri.org/article/2017/05/changing-geopolitics-natural-gas-black-sea-region/>.
- Mustafayev, Ali. “Expert: Turkish-Armenian Border to Remain Closed.” *AzerNews*, 25 August 2017.

- Nasr, Joseph and Noah Barkin. "Merkel Sees No Threat in New Gas Pipe to Russia, Poland Disagrees." *Reuters*. Published electronically 16 February 2018.  
<https://www.reuters.com/article/us-germany-poland/merkel-sees-no-threat-in-new-gas-pipe-to-russia-poland-disagrees-idUSKCN1G01DJ>.
- Nord Stream AG. "Nord Stream Reaches Average Utilization of 93% in 2017 – 51 bcm Delivered to the European Union," Press Release 16 January 2018. Accessed March 29, 2018.  
<https://www.nord-stream.com/press-info/press-releases/nord-stream-reaches-average-utilisation-of-93-in-2017-51-bcm-delivered-to-the-european-union-500/>.
- Nord Stream 2 AG. "Shareholder and Financial Investors."  
<https://www.nord-stream2.com/company/shareholder-and-financial-investors/>.
- Opinion of the Legal Service of the Council of the EU. Available in *Politico*. "Council's Legal Arm Shoots Down Nord Stream 2 Mandate Request." Published 28 September 2017.
- Özkan, Behlül. "New Geopolitics of Energy in the Black Sea Region." In *The Black Sea Region Countries and Prospective Relationships with European Union*, 43-50. Tbilisi: 3rd International Silk Road Symposium, 2006.
- Pannier, Bruce. "Russia Says Caspian Legal Status Resolved, Agreement Ready for Signing." *Radio Free Europe/Radio Liberty* (7 December 2017).
- Pantev, Plamen. "The Black Sea: A Forgotten Geostrategic Realm." Center for Security Studies, ETHzürich (2011). Published electronically October 12, 2011.
- Partnership and Cooperation Agreement between the European Communities and their Member States, of the one part, and the Republic of Azerbaijan, of the other part. O.J. L 246, 1996.
- Prontera, Andrea. "Forms of State and European Energy Security: Diplomacy and Pipelines in Southeastern Europe." *European Security* 26, no. 2 (2017): 273-98.
- . "Italian Energy Security, the Southern Gas Corridor and the New Pipeline Politics in Western Europe: From the Partner State to the Catalytic State." *Journal of International Relations and Development* (2015): 1-31.
- . *The New Politics of Energy Security in the European Union and Beyond: States, Markets, Institutions*. Routledge, 2017.

- Proposal for a Council Decision on the position to be adopted by the Communities and its Member States within the Cooperation Council established by the Partnership and Cooperation Agreement establishing a partnership between the European Communities and its Member States, of the one part, and the Republic of Azerbaijan, of the other part, with regard to the adoption of a Recommendation on the implementation of the EU-Azerbaijan Action Plan. COM (2006) 637 final.
- Putin, President Vladimir. Annual Address to the Federal Assembly, Moscow 2006.
- Regulation (EC) 715/2009 of the European Parliament and of the Council of 13 July 2009 on Conditions for Access to the Natural Gas Transmission Networks and Repealing Regulation (EC) 1775/2005. O.J. L 211, 2009.
- Regulation (EU) 994/2010 of the European Parliament and of the Council of 20 October 2010 Concerning Measures to Safeguard Security of Gas Supply and Repealing Council Directive 2004/67/EC. O.J. L 295, 2010.
- Regulation (EU) 2017/1938 of the European Parliament and of the Council of 25 October 2017 Concerning Measures to Safeguard the Security of Gas Supply and Repealing Regulation (EU) 994/2010. O.J. L 280, 2017.
- “Road Map.” *Ministerial Declaration of 30 November 2006 on Enhanced Energy Cooperation Between the EU, the Littoral States of the Black and Caspian Seas and Their Neighboring Countries*. Annex 1. Astana, 2006.
- Roberts, John. “Completing Europe: Gas Interconnections in Central and Southeastern Europe—An Update.” In *Eurasian Energy Futures Initiative*. Washington, D.C.: Atlantic Council, 2016.
- Rodova, Nadia. “Russia, Bulgaria Sign Final Investment Decision on South Stream Gas Pipeline.” *S&P Global Platts*. Published electronically 15 November 2012.  
<https://www.platts.com/latest-news/natural-gas/moscow/russia-bulgaria-sign-final-investment-decision-8916177>.
- Ruggiero, Francesco, Liviu Bogdan Vlad, Gheorghe Vlasceanu, Alexandru Gavris, and Dragos Vasile. “Energy Cooperation - the Strength of the EU's Economic Development.” *Amfiteatru Economic* 17, no. 40 (2015): 1080-94.
- Rzayeva, Gülmira. “The Outlook for Azerbaijani Gas Supplies to Europe: Challenges and Perspectives.” OIES Paper: NG97. Oxford: Oxford Institute for Energy Studies, 2015.

- Shaban, Ilham. "Azerbaijan Prepares for Gas Tests on Tanap Pipeline." *Caspian Barrel* (2018). Published electronically 10 January 2018. <http://caspianbarrel.org/en/2018/01/azerbaijan-prepares-for-gas-tests-on-tanap-pipeline/>.
- . "Southern Gas Corridor Project's Cost Revealed." *Caspian Barrel*. Published electronically 16 October 2017. <http://caspianbarrel.org/en/2017/10/southern-gas-corridor-project-s-cost-revealed/>.
- "Shah Deniz 2 and Opening of the Southern Corridor." Baku: BP Exploration (Shah Deniz) Limited, 2013.
- Siddi, Marco. "The EU's Gas Relationship with Russia: Solving Current Disputes and Strengthening Energy Security." *Asia Europe Journal* 15, no. 1 (2017): 107-17.
- . "The Scramble for Energy Supplies to South Eastern Europe: The EU's Southern Gas Corridor, Russia's Pipelines and Turkey's Role." In *Turkey as an Energy Hub?: Contributions on Turkey's Role in Eu Energy Supply*, edited by Mirja Schröder, Marc Oliver Bettzüge, and Wolfgang Wessels. Baden: Nomos Verlagsgesellschaft, 2017.
- Southern Gas Corridor CJSC. "Southern Gas Corridor: Delivering Azerbaijani Gas to Europe." May 2016.
- Stern, Jonathan, Simon Pirani, and Katja Yafimava. "Does the Cancellation of South Stream Signal a Fundamental Reorientation of Russian Gas Export Policy?" *Journal of Self-Governance & Management Economics* 3, no. 2 (2015): 30-49.
- Stratfor Worldview. "For Russia, Natural Gas Is Losing Its Potency as a Political Weapon." Published electronically 9 June 2016. <https://worldview.stratfor.com/article/russia-natural-gas-losing-its-potency-political-weapon>.
- Szakonyi, David. "Governing Business: The State and Business in Russia." In *Russia Political Economy Project*. Philadelphia: Foreign Policy Research Institute, 2018.
- Tassinari, Fabrizio. "A Synergy for Black Sea Regional Cooperation: Guidelines for an EU Initiative." *CEPS Policy Brief* no. 105 (2006): 1-16.
- Taylor, James. "Europe Wary of Proposed Russian Natural Gas Pipelines." *Forbes.com*. Published 14 November 2017. <https://www.forbes.com/sites/jamestaylor/2017/11/14/europe-wary-of-proposed-russian-natural-gas-pipelines/#1ed18093704d>.



- Tekin, Ali and Paul Andrew Williams. *Geo-Politics of the Euro-Asia Energy Nexus: The European Union, Russia and Turkey*. New Security Challenges. Edited by Stuart Croft London: Palgrave Macmillan, 2011.
- The Oil & Gas Year - The Who's Who of the Global Energy Industry: Azerbaijan*. Dubai: The Oil and Gas Year Limited, 2015.
- Trans-Adriatic Pipeline AG. "Pipeline Construction in Albania." Accessed 8 February 2018.  
<https://www.tap-ag.com/pipeline-construction/building-the-pipeline/in-albania>.
- . "Pipeline Construction in Greece." Accessed 8 February 2018.  
<https://www.tap-ag.com/pipeline-construction/building-the-pipeline/in-greece>.
- . "Pipeline Construction in Italy." Accessed 8 February 2018.  
<https://www.tap-ag.com/pipeline-construction/building-the-pipeline/in-italy>.
- . "Shah Deniz Consortium Selects the Trans-Adriatic Pipeline (TAP) as European Export Pipeline." Published 28 June 2013.  
<https://www.tap-ag.com/news-and-events/2013/06/28/shah-deniz-consortium-selects-the-trans-adriatic-pipeline-tap-as-european-export-pipeline>
- . "TAP's Shareholders."  
<https://www.tap-ag.com/about-us/our-shareholders>.
- Tsakiris, Theodoros. "The Energy Parameters of the Russian–Ukrainian–EU Impasse: Dependencies, Sanctions and the Rise of 'Turkish Stream'." *Southeast European and Black Sea Studies* 15, no. 2 (2015): 203–19.
- Usov, Anton. "EBRD Board Approves Financing for Trans-Anatolian Natural Gas Pipeline." European Bank for Reconstruction and Development. Published electronically 17 October 2017.  
<http://www.ebrd.com/news/2017/ebrd-board-approves-financing-for-transanatolian-natural-gas-pipeline.html>.
- "Volume of Azerbaijan's Investments in Southern Gas Corridor Revealed." *AzeriNews*, 24 September 2017.
- World Bank. "Trans-Anatolian Natural Gas Pipeline Project." Accessed 8 February 2018.  
<http://projects.worldbank.org/P157416?lang=en>.
- "World Energy Resources: Natural Gas." World Energy Council, 2016.

- Yafimava, Katja. "The Council Legal Service's Assessment of the European Commission's Negotiating Mandate and What It Means for Nord Stream 2." In *Energy Insight*: Oxford Institute for Energy Studies (OIES), 2017.
- Zhiltsov, Sergey S., Igor S. Zonn, and Andrey G. Kostianoy. *Oil and Gas Pipelines in the Black-Caspian Seas Region*. The Handbook of Environmental Chemistry. Edited by Damia Barceló and Andrey G. Kostianoy, Vol. 51. Switzerland: Springer International Publishing, 2016.