

EUROPEAN UNION POLICY AGAINST ENERGY COERCION:
An Analysis of EU Energy Security Policy

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Abstract

Energy Security is a necessity of modern society and as technology and society evolve so does the requirement to secure energy to provide stability for state governments. Europe is in a transition period of increasing cohesion and integration, and Russia is leveraging its natural resources to conduct disruption campaigns coupled with energy coercion tactics. The EU is developing and has implemented policies conducive of energy security that requires member-states to enhance stability through energy security both through supply and demand. The *European Energy Security Strategy* established a system of pillars that was designed to increase overall energy security through a multidimensional approach. The effectiveness of EU energy policy is a critical issue that must be examined in order to establish that European energy security policy can be used as an effective countermeasure to Russian energy coercion and initiatives.

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General Audience Abstract

This study focused on energy security policies in the European Union as a countermeasure to energy coercion. While this project sought to identify the effectiveness of the EU's current policy, there were two outcomes. First, the thesis provided strong evidence to support that EU energy security policy is an effective countermeasure against energy coercion tactics. The second outcome was a model that enables the analysis of policy implementation in Europe. Topics discussed throughout this thesis include: Russian energy strategy, EU energy security policy, energy efficiency, and policy implementation. This study ultimately focused on the *European Energy Security Strategy*, which established a system of pillars that was designed to increase overall energy security through a multidimensional approach. The importance lies in the effectiveness of EU energy policy as a critical issue that must be examined to establish that European energy security policy can be used as an effective countermeasure to Russian energy coercion and initiatives.

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Chapter 1: An Introduction to the Energy Security Apparatus and Europe

Purpose

The energy industry is a key component of a modernized and globalized society, and securing energy is critical for government stability. The European Commission and International Energy Agency (IEA) define energy security as being the unimpeded access to energy sources at an affordable price (2014b, p. 3). States and their respective political bodies must choose how to use, leverage, and secure energy resources so as to stabilize an evolving society. Energy security has emerged as a mitigation to vulnerabilities such as market fluctuations or foreign energy initiatives that seek to influence other nations. The response to these vulnerabilities is comprehensive energy security policy and effective implementation of that policy. The European Union (EU) has developed a policy and energy security apparatus to provide a framework for stability in the face of energy coercion, which predominantly comes from Russia. The Kremlin is known to leverage national energy assets in order to influence or affect the stability of states across Europe (Stegen, 2011). This presents an important question to the effectiveness of the EU's policy for energy security. Is the EU's energy security policy an effective counter to Russian energy initiatives and coercion tactics? This thesis seeks to answer this question in a threefold manner: (1) by examining the framework of energy security and how it leads to stability and decreased dependence on Russian energy, (2) identifying Russia's energy strategy and intentions, and analyzing the *European Energy Security Strategy*, and (3) conducting a cross-case study examination using Most Different Systems Design (MDSD).

The motivation factor in energy security for European states initiates at the state level. That initial drive to seek out energy security and national energy policy that facilitates state stability through energy starts at the state level. The EU framework brings the step-by-step

instructions on how to get from A to B with the *European Energy Security Strategy*. In most cases, states do not have the resources alone to develop, research, and test methods and systems for achieving energy security. Through the European Union, states are able to lean on the collective benefits of the Commission and utilize the framework and initiatives produced as a road map to energy security and state stability. Therefore, while it is true that without the EU, states would still engage in energy security practices and strategies, they are not as successful as they would be under the guidance of the EU. This also enforces the traditional carrot and stick reference for enforcing policy. In most cases, the EU has not needed to use the ‘stick’ because of the inherent ‘carrot’ benefits that accompany energy security tenets.

The nature of armed conflict is evolving away from direct engagement and toward indirect or nonattributable conflict that involves information, cyber, asymmetric, and energy-related tactics, to name a few. This shift in international security tips the balance of military preponderance and enables states to aggressively influence other states without the use of armed conflict. One significant vulnerability of a technologically advanced and modernized state is energy. Developed countries have complex militaries, sophisticated defensive measures, and geopolitical influence, which are all dependent on energy. Recognizing the gravity of energy supply and demand on the global scale, several states are beginning to identify that foreign energy initiatives can be used as a geopolitical tool or another weapon in their arsenal. Foreign initiatives can be deliberate or subtle based on the desired effect, internal or external constraints, and the capacity to leverage nationalized energy assets. In the winter of 2006, 2009, and 2014, Russia throttled the flow of natural gas to Europe under the guise of price and debt negotiations. While the Kremlin claims no correlation, the annexation of Crimea, the backing of Al Assad in

Syria, and the quarrels with potential placement of the U.S. missile defense systems in central Europe motivated Russia to use energy to indirectly influence the situation.

Blank and Kim (2016) from the U.S. Foreign Policy Council and Hanyang University, respectively, stated in a recent article, “Energy policies operate constantly as a major weapon in Russia's national security strategy and are often utilized together with the other elements of Russia's political warfare to consolidate the Putin regime's domestic power and authority, obtain a neo-imperial sphere of influence in the governments of the former Soviet borderlands and Eastern Europe, and fracture European cohesion and integration” (p. 2). The concept of using energy resources as a weapon or geopolitical tool is a developing issue in security studies literature. Moreover, scholars and military planners understand that, as with all tools or weapons, there are limitations on its use and effects. This implies that vulnerabilities to energy coercion against the developed and technologically advanced class of states can be mitigated and present a structural foundation for the importance of energy security.

The proliferation of technology and the expansion of technological applications across large-scale economies brings an inherent dependence on energy. Energy serves as a conduit for elevating quality of life and propels the evolution of a globalized economy, therein establishing that national policy regarding energy security is central to modern society. Furthermore, security theories have evolved to include non-military dimensions such as energy and information to address the growing dissatisfaction with the realist umbrella of theories, including neorealism and structural realism. Scholars (Buzan, 1983 and 1991; Nye & Lynn-Jones, 1988; Ullman, 1983; Matthews, 1989) in political science and international relations have expanded the scope of security theories and incorporated energy security into existing security theories. States and the international system are the foundation for security theories, and these theories analyze how

states or societies function within the international system. A critical aspect of the existence of international or state systems is the energy resources that are required for sustainment and development.

The purpose of this thesis is to examine the dynamic relationship between the EU and Russia and the intricacies of energy security, initiatives, and policy. The importance of energy security for the EU, is founded in the *European Energy Security Strategy* and *The Global Strategy for the European Union's Foreign and Security Policy*. These policies outline the core priorities for achieving energy security and outline the focus for foreign policy and security of the union. One of the most notable aspects between the two documents is that their priorities are not specific to one state or group of people, but rather the EU focuses on categorical threats such as terrorism, economic volatility, and energy insecurity. Comparatively, the *Energy Strategy for Russia for the period up to 2030* "aim[s] at strengthening Russia's energy supply security, at expanding its role as a global energy supplier, and at ensuring affordable, competitive and increasingly sustainable energy supply and consumption in Russia" (International Energy Agency, 2014, p. 22).

Historical Importance of Energy in Security Studies

In the early 1900s, the British Royal Navy began the conversion of its ships from coal-fueled to oil burning. Oil provided a significant advantage for maritime operations and allowed ships to travel faster and farther. Sir Winston Churchill and Sir John Fisher championed the transition and facilitated an increased advantage of the naval fleet over rivaling powers. The importance of this endeavor in terms of energy security was that England relied on oil imports and offshore production. These energy sources added a potential vulnerability to enemy naval forces or foreign occupations at the site of production. In order to protect these critical assets,

the United Kingdom recognized the importance of energy security as a national policy and incorporated it into their security strategy.

Japan also faced a significant energy security challenge in the years of the imperial expansion throughout the Asian Pacific region. In the 1930s, the nation only produced 7 percent of the oil it consumed and imported 80% of the oil it required from the United States (Yergin, 2009, p. 291). The Japanese Army and Navy understood the importance of maintaining the flow of oil for the campaign through Asia and pressed to absorb territories rich in the resources necessary for the war machine industry. In 1937, conflict erupted between China and Japan which served as a catalyst for the Japanese war industry as it ramped up military production for a sustained conflict. President Roosevelt sought to counteract Japan's action with a "quarantine" or non-military, economic sanctions, but the American political appetite remained in favor of isolationism. In an effort to restrict energy resources from flowing to Japan, the U.S. restricted the sale of aviation gasoline octane 87 or higher to Japan. This ban proved ineffective because Japanese aircraft could operate with fuels below the 87 mark and ingenuity allowed them to increase the octane by adding tetraethyl lead (Yergin, *The prize: The epic quest for oil, money & power*, 2009, p. 296). This technological development aided in the security of energy supply for the military campaign. On September 26, 1940, the U.S. restricted iron and steel exports to Japan, and in July of 1941, froze all Japanese assets and stopped all transfer of oil. Britain and the Dutch East Indies followed suit in a collective movement that severely hindered Japan's ability to produce war materials and mobilize its military. The cutoff of oil to Japan was a blow to the highly industrialized state that was dependent on energy for its economy, military, and society.

Despite the dependence on American energy assets and persistent sanctions from the U.S., Japan continued its campaign in the Pacific. Energy was critical to the sustainment of the empire and therefore a sound energy security strategy was necessary from the start. Early on, Japan stockpiled natural resources from the U.S. including oil, steel, and other materials to fuel the war industry as a precautionary move conducive to an energy security policy. The increase in stockpiles to a two-year supply, prior to the oil shut off arguably enabled the Japanese military to continue the campaign against Southeast Asia and facilitated the attack on Pearl Harbor. Shortly after, Japan invaded the Philippines and portions of the Dutch East Indies as a part of the expansion into the Asia-Pacific region and to diversify natural resources much needed to support the military. Using technology to increase the effectiveness of available energy sources, establishing energy and natural resource reserves, and diversifying energy sources are examples of a successful energy security policy. Japan would be overpowered militarily by the Allied forces, but sound energy security policy enabled the state to adapt and overcome energy security vulnerabilities as another state used energy initiatives as a geopolitical tool.

This case study highlights the similarities between Japan's energy strategy during World War 2 and the EU's current energy security policy. With Japan, the U.S. controlled the majority of the energy resources necessary for the wartime production and the economy. The Roosevelt Administration leveraged energy resources to slow or discourage Japanese expansion in the Pacific. The strategic energy directive affected Japan's advancement but did not deter, stop, or slow imperial expansion. Japan's strategy for the security of vital resources would provide stability and flexibility to overcome the challenges of the oil embargo. Comparatively, the EU faces a strategic energy initiative from Russia albeit with different energy import statistics, technological innovations, and other variables. The *European Energy Security Strategy*

published in 2014 stressed the importance of diversifying sources and supplies, using technology to improve efficiency, and improving reserves of energy supply, to name a few (European Commission, p. 3). These initiatives foster stability and flexibility to counteract the energy strategy that the Kremlin imposes through nationalized energy industries.

Successful Energy Security

Measures of effectiveness are critical to establishing successful policy and implementation and provide a framework for the analysis of energy security policy in the EU. While Russian energy initiatives disrupt and destabilize European states, the policies issued by the European Commission established an effective counter-strategy that must be continuously evaluated. These measures of effectiveness can be broken down into five main areas of focus: (1) the Commission's policy inclusion of the situation, parameters, and challenges in energy security; (2) Methods of implementation and transference to member-state legislation; (3) the pillars of the energy security apparatus; (4) Assurance of policy implementation and forcing mechanisms of the EU and State governing bodies; and (5) the effects of energy security policy on politics, economics, society, and defense. These five categories of analysis provide the architecture to examine the energy security program and policy within the EU.

Energy security is a crucial aspect of stability in the EU, and it is important to understand the pillars that make up the Commission's energy security policy. The cornerstones of the *European Energy Security Strategy* can be grouped into two predominant areas: securing/enhancing supply and reducing demand. Securing and enhancing supply includes the aspects of emergency reserves, diversified sources, alternative energy resources, and secure strategic infrastructure. These tenets work in tandem to reduce the dependency on Russian energy and provide a dynamic framework

to member-states for stable and flexible energy programs. Moderating demand and developing a fully integrated internal market enables member-states to reduce the impact of energy demand and stabilize markets in the face of foreign energy initiatives.

Improving energy efficiencies and decarbonizing economies are two pillars that stretch across supply and demand. Improving efficiency reduces the demand for large amounts of energy resources and decarbonization reduces the demand for fossil fuels, which serve as the main proponent of Russian energy initiatives.

Energy security and effective policy start at the EU level through legislature and Commission directives. The *European Energy Security Strategy* lays out the necessary changes that member-states need to implement in order to see stabilizing factors in energy security. The connections drawn between energy efficiency, securing sources, reducing demand, etc. exemplify the fundamental aspect of achieving energy security. EU engagement of unified efforts to stabilize energy programs at the state-level has fostered an environment conducive of counteracting Russian energy initiatives.

Research Strategy

Christopher Darnton and Trachtenberg highlighted the importance of “architecture of the sources” (Trachtenberg, 2006, p. 59) and established that “qualitative research projects with documentary sources need design, not just depth” (Darnton, 2017, p. 125). These tenets of research methodology point to a design that structures sources through process tracing and more definitively connects ideas and constructs in a qualitative manner. Furthermore, it is imperative to establish a causal relationship between the energy coercion tactics of Russia and the EU’s energy security. The mechanism to that relationship is a combination of energy policy and the

enforcing measures of policy implementation. This causal mechanism is best codified through process tracing.

There is a large body of literature on EU policy, energy coercion, and foreign policy between EU and Russia. The political science and security community rely on both quantitative and qualitative analysis to confirm, challenge, and develop existing and new theories. This thesis focused on the qualitative assessments of government reports and policies, academic journals, aggregate data, and journalistic articles. The research strategy worked as a threefold mechanism to provide both depth and breadth of the subject area and the main argument. After establishing the research question and primary argument, I conducted a targeted search using key terms “energy”, “policy”, “foreign policy”, “coercion”, “state stability”, “oil”, “natural gas”, and “security”. The second mechanism was a broad reading of articles between 2000-2018 across academic journals in international relations, security studies, and political science. Lastly, the search through aggregate databases provided empirical evidence to the process tracing model, which establish that EU energy policy is an effective countermeasure to Russian energy initiatives.

The refined search enabled the depth required for the historical application in the case study of US foreign policy with Japan leading up to World War 2. The work from Yergin and Darnton provided valuable insight into the concept of using policy to influence state stability. Another case study that came up in the targeted searches was the oil crisis and embargo in the late 20th Century, however, this case study involved a conglomerate of states, namely OPEC, seeking to influence the global market. While this situation involved energy coercion, it was less of a concerted, strategic campaign. This was a reactionary move rather than a planned destabilization initiative executed by a single state with the intent to influence another nation.

This targeted search also facilitated the supporting evidence that starts with the EU policy and respective member-state policies. It served to provide both sources for the independent variable and causal mechanisms in the process tracing model. The identification of energy coercion from Russia and the policy vehicle that facilitated the state toward energy security can be easily found via a targeted search. It is important to delineate the use of a targeted search and a broad research strategy. By reading through academic journals and books within a wide range subject area such as security studies and international relations, I was able to examine a comprehensive set of literature. This applied the necessary sources that evidentiary pieces of the dependent variable being the validation of energy security principles or confirmation of continued energy dependence and thereby subsection to the vulnerability to energy coercion.

Process tracing codifies this phenomenon and facilitates the connection of energy coercion to energy security through a causal mechanism. Select sources identify instances of Russian energy coercion against European states, which attributes to the independent variable and validation of Russian energy initiatives. The second stage in process tracing is the causal mechanism that serves as the transitional piece connecting energy coercion to energy security. Energy policy and the EU legislative architecture are the causal mechanism that enables energy security. The final phase of process tracing is the source identifiable with the dependent variable and the degree of energy security established after policy implementation. Darnton clearly identifies that source management and a thoroughly developed research strategy defines the effectiveness of analysis and scholarly work (2017). His work highlighted the critical value placed on defining not only the sources used but the parameter searched and even those sources not used. This process does not diminish the assessment but rather it strengthens the argument and refines it.

Defining Effective Policy

Policy capacity and analysis is a broad and dynamic subject area that presents a significant importance in terms of establishing the effectiveness of a government. Wu, Ramesh, & Howlett (2015) defined policy capacity “from the perspective of the government as affecting ‘the ability of governments to make intelligent choices’ (Painter & Pierre, 2005), to scan the environment and set strategic directions (Howlett & Lindquist, 2004), to weigh and assess the implications of policy alternatives (Bakvis, 2000), and to make appropriate use of knowledge in policy-making (Parsons, 2004)” (p. 165). Policy effectiveness in implementation and conception fall within the purview of policy capacity and governments must face the challenges associated with making and implementing effective policies (ibid., 2015, p. 165). The most direct form of measuring effectiveness in policy is by examining the relationship between objectives within the policy and whether or not those objectives were achieved by the subjects to that policy. In the European Union, the effective energy security policy is established in that the Parliament and Council issue regulatory guidance through legally binding legislation and agreements. If states subject to the EU meet or exceed the objectives or goals within the legal framework and policy, then that policy was effective.

In order to project effective policy in the field of energy efficiency, the European Commission issued the *Energy Efficiency Directive* (EED) in 2012. “The EED puts forward legally binding measures to step up Member States’ efforts to use energy more efficiently at all stages of the energy chain – from the transformation of energy and its distribution to its final consumption” (European Commission, 2012a, p. 2). The EED set a standard requirement for energy efficiency measures to be transposed into national law and governance framework. Moreover, each state reserves the right to apply more stringent control measures that would

enable states to exceed the EED standards or meet the EED goals sooner. Aspects of the EED include energy audits, efficiency obligations, efficiency in heating and cooling, and transmission/distribution. These measures enable states to meet the overall obligation to achieve the goal of “30% binding energy efficiency target for 2030 at EU level” (European Commission, 2016a, p. 2). The European Environment Agency conducted an assessment of the progress towards Member States’ energy efficiency targets and found that “In 2014, 25 Member States had reduced or limited the increase of their primary energy consumption to below the linear trajectories drawn between 2005 levels and the 2020 targets. Only three Member States (Estonia, Malta, and Sweden) had not achieved sufficient savings in primary energy consumption” (2016, p. 78).

The numbers for efficiency have since become more in line with the EED guidelines issued by the EU but several states are facing referrals to the Court of Justice of the European Union over failures to comply with EU Laws relative to energy. The Commission referred Germany to the Court of justice over compliance with the Electricity Directive (Directive 2009/72/EC) and Gas Directive (Directive 2009/73/EC) and Hungary over a failure to comply with networking tariffs under the Third Energy Package. The European Commission also issued “formal notice to Cyprus, Ireland, Malta, the Netherlands, Slovenia, Sweden, and the United Kingdom for failing to correctly transpose or implement certain requirements of the Energy Efficiency Directive (Directive 2012/27 /EU)” (2018). The next steps from the Commission are to issue a reasoned opinion to the infringing state, notifying them of an allotted time to comply with directives and EU Law. This is the second phase in formal infringement proceedings and involves the Commission advising an EU country that it is in violation of its treaty. These

repercussions are a vital part of enforcing policy and strengthen the effects of energy security policy.

The EED is an example of effective policy enforcement in that the Commission presented a directive to the Parliament and Council that was approved and then transposed into national policies. Following the transposition, the states become increasingly involved in the intricacies of energy efficiency as a causal effect of the legally binding directive and political agreements. This also shows the response when states do not transpose or abide by the EU laws and face the legal recourse of noncompliance.

The EU has developed several mechanisms for promoting energy security throughout the union including the Renewable Energy Directive, the Directive on the Energy Performance of Buildings, and the Directive on Energy End-use Efficiency and Energy Services. These directions are the means for the EU to implement policy and project energy security to its member states. Renewables, energy efficiency, and GHG reduction connect to energy security through the securing of supply and shaping the demand of consumers, industries, and governments. Over the last couple decades, EU states have increased the share of renewable energy by 17% from 2005, reduced consumption by 9%, and reduced Greenhouse Gases (GHG) by 22% (European Environment Agency, 2018). While recent statistics show energy consumption rising in 2017, there is still a genuine improvement in renewables, efficiency, and GHG emissions. These three components of energy apply to energy security by enhancing both supply and demand. Moreover, even if the EU's goal of 30% by 2030 is met, the improvements made have bolstered energy security and validate effective policy enforcement (European Environment Agency, 2018). While the challenges associated with the policy implementation

and adjustment at the state-level can be significant, the achievement of energy security is worth the struggle.

Measuring the effectiveness of EU energy security policy should be analyzed through a series of questions: (1) Does the Commission's policy address the situation, parameters, and challenge in a clear and concise manner?; (2) How will member states transpose that policy into national frameworks?; (3) What are the pillars of the *European Energy Security Strategy*?; (4) How does the EU and State governing bodies measure successful implementation?; and (5) What are the effects of energy security policy on politics, economics, society, and defense? By collectively examining these questions and thoroughly answering them, one can determine the effectiveness of policy on energy security. This shows an identifiable purpose for strong policy to serve as the architecture of energy security against a multitude of variables and vulnerabilities.

Case Study Selection

The examination of energy security and successful policy implementation is a dynamic subject that impacts all member-states in the EU and on the European continent. Seven case studies showcase both EU member states and non-member states from several regions throughout Europe. The case studies selected examine the shared energy competencies of the EU and its member states, and how their policies have fostered energy security. These case studies present the energy coercion initiatives that Russia is using against European states and how states not subject to EU policy have been negatively influenced by Russian energy tactics. I reviewed five EU member states subject to the *European Energy Security Strategy*, and three states that are not subjected to EU policies and implementation mechanisms. The comparison identified the legislative measures of the European Commission to establish an energy security apparatus for member-states to follow. The EU's energy security policy did not isolate Russia as

the sole driver for energy security, rather the policy focused on creating an enriching environment for states to reduce instabilities created by energy-related issues. The Commission's work to implement energy policies strengthened the fundamental components, or pillars of energy security. Reinforcing aspects like energy efficiency and source diversification create a strong foundation for states to remain stable when faced with disruption campaigns or energy coercion. By selecting a variety of states across Europe for case studies, I was able to thoroughly analyze EU energy security policy and determine if it is effective in countering Russian energy initiatives.

Daniele Caramani wrote an analytical article that stressed the importance of using MDS and posit that, "The principle of MDS consists of climbing to a higher level of generality and to contrast democratisation to non-democratisation or socialism to non-socialism in order to create a more general variation" (2010, p. 41). In an application to energy security, the MDS method is a prudent means to examine the case studies selected for this thesis. Each of the studies looks at the intricate details associated with energy dependence, energy framework, and policies for the selected states. Examining states from different regions of Europe, and from both within the EU and outside their governance, enables the MDS architecture of comparative research.

The case studies that represent EU member-states are from different regions of Europe, which brings different variables that influence energy security. Poland served as an example from Central Europe, Bulgaria from Southern Europe, the Baltic States from Eastern Europe, and the Nordic states from Northern Europe. Western Europe is farther from the immediate influence of Russian energy initiatives, and while not immune to Russian energy coercion, they are less susceptible to disruption campaigns. These states exemplify the effects of implementing energy

security policy and seeking to reduce dependency on Russian energy assets. Moreover, these member states are subject to Commission directives and the forcing mechanisms that strengthen state-level energy security.

In an analysis of Non-EU member states, I analyzed the effects of Russian energy initiatives against Ukraine, Belarus, and Moldova. These states share a fundamental commonality in that they are not subject to the European Commission's energy security policy, apparatus, and forcing mechanisms. While each of these states integrates elements of energy security into national legislation and strategy, they still lack the collective support that comes with being in the EU and are not accountable to a higher organization to fulfill energy security tenets.

Conclusion

In a world of evolving societies, economies, and technologies, energy security is an issue that must be addressed in the current affairs of security and international relations. The analysis in this chapter confirmed that energy security is a growing aspect of research and policy integration for states and institutions in Europe and Russia. In order to mitigate vulnerabilities created by poor energy security policies, states and international institutions governing such industries must transcend the research and theories of energy security to applicability and effective implementation. The EU has expanded energy security to the degree that there is enough flexibility to overcome disruption efforts from Russia. Russia's strategic energy initiatives will continue to divide EU states and increase dependency on Russian gas and oil. Using energy as a method of geopolitical positioning to achieve strategic objectives, however, erodes the potential for mutually beneficial economic gain and progression. The construct of security requires a comprehensive examination that identifies present and potential

vulnerabilities. Energy security requires a similar approach, and the EU's policy addresses this through internal and external measures.

The EU's Global Strategy identifies the most pertinent threats as "terrorism, hybrid threats, climate changes, economic volatility, and energy insecurity" (European Commission, 2016b, p. 18). These threats present several key vulnerabilities in establishing energy security and require mitigating measures to reduce or remove those vulnerabilities. The Global Strategy elaborates on energy security by highlighting the "integrated effort to work on the internal and external dimensions of European energy security" (ibid, 2016b, p. 22). These efforts include the eight pillars of the *European Energy Security Strategy* and are critical to establishing energy security.

Chapter 2: Russian Energy Coercion and EU Energy Security

The Role of Energy in Russia's Strategy

Since the collapse of the Soviet Union, Russia has refined the use of its natural resources to leverage geopolitical gains and achieve strategic objectives. In 1991, Boris Yeltsin privatized the energy industry but this produced a small group of oligarchists next to a large population of poor workers, which left a void where the bourgeois society could have been. Yeltsin's economic reform ended price controls and privatized the state-owned companies in an effort to develop the economy and revive industries. Decision from the economic reform had reverberating effects that lasted more than a decade; however, the reformations led to the consolidation of the components of energy industries. In an attempt to kick start the economy, Yeltsin sought to liberalize the market, including the Russian energy assets. This strategic vision was successful in gaining support from the Western community but in practice, it created a multitude of problems such as inflation and devaluation of savings and salaries.

In 2000, Vladimir Putin was elected president of Russia and began his own agenda that focused on reforming several aspects of governance. "Shortly after he had come to power, Putin set out to reverse the privatization of Russian energy assets and turn Gazprom and Rosneft into national champions" (Korteweg, 2018, p. 14) that could be leveraged as tools in support of national objectives or strategies. Lauren Goodrich (2013), the Senior Eurasia Analyst at Stratfor, extrapolated on this by stating, "One of the first items on Putin's agenda to help stabilize the country was to consolidate the energy sector under state control...The government effectively nationalized the majority of the energy sector under three state behemoths: Gazprom, Rosneft, and Transneft" (p. 5). This consolidation was the critical marker that Stegen (2011) highlighted as a requirement to weaponize energy policy in order to utilize energy initiatives to influence

other nations. Putin's concept proved successful in that as global energy demand continued to increase so did Russia's revenue stream. Putin and the Kremlin recognized one of the critical tenets of an evolving society, technological advancements and the demands of a growing global middle class require perpetually increasing amounts of energy supplies. Russia possessed a significant energy supply and rather than simply profit from it, the decision-makers in Moscow decided to leverage it as a geopolitical tool to shape and achieve national and strategic objectives.

In the 21st Century, Russia continues to control national energy supplies and tailor domestic energy policy to support the overarching energy strategy. The abundance of energy resources coupled with the demand in Europe enables the Russian Federation to maintain a persistent revenue for use in political, social, economic, and defense improvements. The Kremlin continues to develop energy initiatives to influence other states, but Europe's energy demand is a vulnerable point for the Russian economy. As Gazprom and the other Russian energy companies continue to be used as geopolitical tools, their power is only as strong as the consumer allows it to be. This relationship validates that Russian influence over European states is finite and as the liberalized market develops and state-level policies evolve, the EU states will become less dependent on Russian energy. This characterizes the degree of interdependence between Russia and the EU and points to the theories of Nye and Keohane. Globalization remains a persistent factor in economics, and interdependence theories stand as a critical factor in the success of the energy industry.

Russia holds a certain degree of power in the international energy architecture because of its domestic resources, but it also plays a role with the Organization of Petroleum Exporting Countries (OPEC), which produced 40% of global oil in 2016 (EIA, 2017). As a top producer of

oil and natural gas, it is unquestionable that Russia has a certain degree of power in the international energy architecture. Russia's relationship with OPEC has fluctuated over the last few decades, but overall Russia remains in a position to indirectly influence OPEC without submitting to a full membership. This allows Russia to avoid responsibilities associated with OPEC membership and the perception of the Russian "superpower" banded with a group of developing nations. Jareer Elass (2009) referred to this perception by stating, "Russia sees OPEC in an inferior status since OPEC's member states- as developing nations- are beneath Russia's industrialized, superpower self-perception" (p. 22). Furthermore, so long as Russia can influence OPEC by indirect means, such as debt negotiations, UN Security Council vetoes, and arms deals, it is unlikely that the Kremlin will choose to subject themselves to OPEC's policies. Russia also exhibits control through investments, foreign aid, and the sales of nuclear technology. The methods of using indirect influence have become a staple of Russian strategy and have implications beyond affecting only OPEC.

Putin recognized the potential to use the energy industry for geopolitical gain and laid the foundation necessary to establish an energy strategy that supported the national and strategic goals of Russia. Moreover, Putin recognized an opportunity to use this energy strategy to regain international recognition as a global power. By using nationalized energy assets to protect Russian Diasporas, influence energy markets and transit states, and shape international narratives, the Russian Federation has adopted a flexible but strong energy strategy as a successful means to achieve objectives. There is no evidence to suggest that the Kremlin or decision-makers in Moscow intend to make drastic changes to the existing energy policy, largely because it remains effective for interactions between states. Over time, the EU will continue to develop policies and implementation for energy security to counter Russian energy initiatives.

Moreover, Russia will continue to use its energy strategy to disrupt the EU's energy security framework and destabilize European States.

Russia's Existing Policy and Energy Narratives

In 2009, the Russian Federation published the *Energy Strategy of Russia through 2030*. This strategy established that “the objective of the energy policy of Russia is to maximize the effective use of natural energy resources and the potential of the energy sector to sustain economic growth, improve the quality of life of the population and promote strengthening of foreign economic positions of the country” (The Government of the Russian Federation, 2009, p. 10). The phrase ‘foreign economic positions’ brings up the previously mentioned concept of using nationalized energy supplies to influence or foster the ability to influence foreign nations. Furthermore, it continues to highlight the importance of foreign economic activities and influencing other nations through energy policy. The strategy places emphasis on the “increase in Russia’s strategic presence on high technology markets and energy intellectual services...” and “development of international energy infrastructure hubs in Russia...” (ibid, p. 15). These two goals provide supporting evidence to Stegen’s model of weaponizing energy as a geopolitical tool. Consolidating and improving the energy supply and infrastructure within the state allowed Russia to focus on providing a refined end product to sell to the consumer states. This can be observed as a reaction from the European states attempting to maintain control of energy infrastructure and energy security.

The Kremlin and Putin see energy supplies and strategy as an offensive security measure that provides a protection of state sovereignty and a catalyst to economic development. Hans Morgenthau (1973) captured this principle in *Politics Among Nations*, in that nations with abundant natural resources will use political power, technology, and modern moral ideas for their

ends (pp. 116-118). The Kremlin recognizes the importance of energy policy with the intention to fully integrate energy beyond domestic agendas, extending into strategic plans and military strategies. This highlights how Russia is using energy resources for both internal and external purposes, but for the same end result, state protection.

The *Foreign Policy of the Russian Federation* (2016) encompassed the inherent intricacies of a state with wide-ranging international influence. Putin's refinement of political endeavors possesses an overt rhetoric of cooperation, universal security, and peaceful discourse with the EU and individual regions of Europe; however, the undertones of security concern and destabilization can be found throughout. Section 61 states,

Systemic problems in the Euro-Atlantic region that have accumulated over the last quarter century are manifested in the geopolitical expansion pursued by the North Atlantic Treaty Organization (NATO) and the European Union (EU) along with their refusal to begin implementation of political statements regarding the creation of a common European security and cooperation framework, have resulted in a serious crisis in the relations between Russia and the Western States. The unofficial containment policy adopted by the United States and its allies against Russia, and political, economic, information and other pressure Russia is facing from them undermine regional and global stability, are detrimental to the long-term interests of all sides and run counter to the growing need for cooperation and addressing transnational challenges and threats in today's world. (The Government of the Russian Federation, 2016, pp. 19-20)

This highlights the residual anguish and distain from the policies that isolated Russia from the international system and the democratic community during the Cold War. Section 70 states, "The Russian Federation maintains its negative perspective towards NATO's expansion, the

Alliance's military infrastructure approaching Russian borders, and its growing military activity in regions neighbouring Russia, viewing them as a violation of the principle of equal and indivisible security and leading to the deepening of old dividing lines in Europe and to the emergence of new ones" (ibid, p. 21).

The focus on energy in foreign policy remains neutral in tone and highlights sustainable energy development, and proliferates balanced energy relations with European states. Directives in the Energy Strategy for Russia outline a more detailed approach to energy initiatives and the role energy supplies play both internationally and domestically. The key takeaways from the Foreign Policy and Energy Strategy are that energy is a tool to achieve national objectives and European institutions, such as NATO and the EU, are perceived as creating systemic problems in the region. Putin has resolved to use the political leverage of energy initiatives to counteract the expansions of NATO and the EU. Moreover, the vehicle to which energy initiatives are used as a geopolitical tool is facilitated through economic systems. "Russia uses its energy wealth for three reasons: to gain economic benefits; to maintain, increase and exert its political influence in its perceived sphere of influence, the so-called near abroad; and, should the need arise, to exert political pressure on end-consumers" (Korteweg, 2018, p. 13). There is a geopolitical trend associated with economic and energy-related fluctuations between Russia and European nations (ibid, 2018, p. 13). Korteweg shed light on the pattern between energy policies and geopolitical decision-making in the Kremlin. His assessments expound on the postulates of Stegen's energy weapon and Keohane's interdependence theories, which clearly identify that Russia is leveraging its energy wealth to influence and destabilize consuming states in the European region.

Korteweg captured the depth of the interdependent energy relationship between Europe and Russia toward the end of his report to the European Parliament.

One-third of Russia's natural gas production, roughly 190 bcm is exported. Almost all of which, some 87 percent in 2016, goes to Europe. In addition, Russia shipped 266.7 million tonnes of crude oil and oil products to Europe in 2016. Europe is Russia's most important market, and Russia is Europe's primary energy source. In 2015, 37 percent of the EU's natural gas imports, and 29 percent of its crude oil imports came from Russia. (Korteweg, 2018, p. 29)

This regional interdependence through energy establishes a firm basis for a power struggle, comprehensive energy policy, and deeper analysis of state stability. Russia continues to use energy coercion to disrupt political, economic, social, and security aspects of the states in Europe. In his dissertation on *Coercive Energy Policy*, Ryan Maness focused intricate attention on Russia's use of energy policy as a geopolitical tool. He also pointed to David Baldwin's definition of Russia's coercive energy strategy as,

The process of offering economic rewards in post-Soviet space in the form of reduced natural gas prices, or high purchasing prices by Russia if the countries are exporters, or pipeline transit fees, in return for political subordination to the Russian state; or withholding economic advantages in the form of higher natural gas prices, or lower purchasing prices if the counties are exporters, pipeline transit fees, or competitive pipeline projects, in order to make other international actor(s) in post-Soviet space do what they would not otherwise do; using economics as an instrument of politics by the Russian state. (Baldwin, 1985)

Maness concluded that even with near-term success in forcibly influencing regional states through coercive energy policy, the long-term benefits are limited. While natural gas and crude oil will continue to be a staple to a modern and globalized society, the *European Energy Security*

Strategy and subsequent directives apply a long-term stability campaign to counteract Russian energy coercion.

In 2016, the Center for Strategic and International Studies released an article that outlines a number of concerns that the Western community had in regards to Russia's expanding influence in Europe. One of the most profound statements in this article points to the economic and political goals of the Russian Federation. Conley, Mina, Stefanov, & Vladimirov (2016) stated, "If Russian political influence aims to exploit the weaknesses in Central and Eastern European societies and erode liberal institutions, then the Russian economic influence seeks to manipulate sectoral market dynamics and exploit governance loopholes to generate unfair profits and influence national decision-making...Because the region is disproportionately reliant on Russian oil and natural gas resources, the energy sector has been the main channel through which Moscow's economic influence is exerted in the region" (p. 10). The economic ability to influence political aspects of a foreign sovereignty through energy initiatives is one of the chief concerns in the EU and validates the EU's focus on enhancing energy security.

Conley et al. (2016) elaborated further by examining how Russia is using price determination that is dependent on the state's reliance on Russian supplies as a method to exploit an economic vulnerability (p. 11). "In the natural gas sector specifically, due to its near complete dependence on Russia's Gazprom for supply, Bulgaria has accepted contracts that require it to pay much more for its consumption than Germany does" (ibid, p. 11). In the article, Bulgaria is identified as a "What state capture looks like" model and the statistics show that Russia's economic footprint in the state holds at an average of 24.38% from 2010-2014 (ibid, p. 42). The data that feeds the economic footprint was collected by the Center for the Study of Democracy and encompassed Foreign Direct Investment stock from Russia, operating revenue Russian

controlled companies as a share of Total Operating Revenue for the Economy, oil and gas imports from Russia, and exports to Russia (ibid, p. 42). The economic influence that Russia exhibits extends beyond Bulgaria and the oil and natural gas companies are the vehicle for enabling that influence. Economic influence often manifests into social, political, and military effects as observed in energy-related protests that occurred in Ukraine and Bulgaria that destabilized the government. Putin and Russia have blended the economic influence with military strategy in that energy initiatives can be used to set the conditions of an asymmetric battlefield.

Putin's reforms of the military prioritized the subject of nonattributable tactics blended with asymmetric concepts and conventional warfare. As a part of that reform, he adopted the Chief of the Russian Armed Forces' General Staff, V.V. Gerasimov's "New Generation Warfare" strategy that expands the scope of warfare to encompass everything within the parameters of a society; politics, economics, defense, information, cyber, etc. New Generation Warfare is a concept that highlights the evolution of warfare to a version that is dynamic and encompasses more than just the military/defense related aspects of a state. Gerasimov (2016) stated, "The very 'rules of war' have changed. The role of nonmilitary means of achieving political and strategic goals has grown, and, in many cases, they have exceeded the power of force of weapons in their effectiveness. The focus of applied methods of conflict has altered in the direction of the broad use of political, economic, informational, humanitarian, and other nonmilitary measures applied in coordination with the protest potential of the population" (p. 23). The reformation of military strategies and objectives crossed nearly all domains of governance within Russia and this new conceptualization of warfare enabled the integration of energy as a geopolitical tool.

The Evolution of the EU's Energy Security

The European Union was designed to promote peaceful interaction and coordination, both economically and politically, between states across Europe. The original members consisted of Belgium, France, Germany, Italy, Luxembourg, and the Netherlands. This group would expand throughout the 20th Century to include a total of 16 nations by the year 2000. Today, the EU consists of 28 nations across the European continent and a reported Gross Domestic Product of \$17.28 trillion in 2017 (The World Bank), making it a strong economic player in the international system. The origins of energy security in relation to Europe lies in the responses to energy crises in the 20th Century and England's shift from a coal-powered navy to one fueled by oil. Over the latter half of the 20th Century and into the 21st Century, the EU recognized the critical components of energy security and developed a method for stabilizing the EU in the wake of energy disruptions.

In 1951, the "European Coal and Steel Community" was established to "control collectively the two commodities which were essential for warfare and reconstruction alike, thus creating a common political interest and improving cooperation" (Langsdorf, 2011, p. 2). This was the initial energy policy that the EU implemented, and it would evolve along with the technology and energy industries. Several other policies were implemented that would enhance the energy infrastructure, economic trade markets, and environmental regulations that caused energy industries to develop technology making energy use more effective. In 2006, the European Commission adopted the *Action Plan for Energy Efficiency*, which was designed to "mobilize the general public and policy-makers at all levels of government, together with market actors, and to transform the internal energy market in a way that provides EU citizens with the globally most energy-efficient infrastructure, buildings, appliances, processes, transport means

and energy systems.” (p. 4). This communication from the Commission set the conditions for energy-based policy in the EU and laid the foundation for energy security.

In 2014, the European Commission produced the *European Energy Security Strategy* which entailed numerous upgrades, policy mandates, and initiatives including developing internal energy production and reforming security of supply (p. 2). In section 5, the Commission stated that “the Union can reduce its dependency on particular suppliers and fuels by maximizing its use of indigenous sources of energy” (p. 12), and later in section 7 that “accessing more diversified natural gas resources is a priority whilst maintaining significant import volumes from reliable suppliers” (p. 15). This policy has enabled states to reduce dependency on Russian energy resources and focus on strengthening energy security in the dimension of supply and demand.

In the *European Energy Security Strategy*, tenant eight focuses on “improving coordination of national energy policies and speaking with one voice in external energy policy” (2014b, p. 17). This section elaborates further on the complexity of integrating national policies under the EU policies:

Within our closer neighborhood, our goal must remain to engage all partners at all levels in order to enable their close integration into the EU energy market. The Energy Community which aims to expand the EU's energy acquis to enlargement and neighborhood countries should be further strengthened in the light of the EU's security of supply concerns. This should be achieved by promoting energy sector reforms in the participating countries, while also supporting the modernization of their energy system and their full integration in the EU energy regulatory framework. Moreover, the Energy Community institutional setting should be enhanced in the short to medium term with a

view to strengthening the enforcement mechanisms. (European Commission, 2014b, p. 17)

Coordination across regional and international institutions with state-level energy directives is key to the EU successfully reducing energy security vulnerabilities. Unified messaging and a cohesive focus on energy security is critical to policy success. Additionally, by speaking with one voice and abiding by *European Energy Security Strategy*, states bolster stability and protect themselves from energy coercion tactics.

The *European Union Global Strategy* established that “The sovereignty, independence and territorial integrity of states, the inviolability of borders and the peaceful settlement of disputes are key elements of the European security order...Russia’s violation of international law and the destabilization of Ukraine, on top of protracted conflicts in the wider Black Sea region, have challenged the European security order at its core” (2016b, p. 33). It goes on to clarify the concern with Russia in that, “Managing the relationship with Russia represents a key strategic challenge. A consistent and united approach must remain the cornerstone of EU policy towards Russia” (2016b, p. 33). This global strategy defines both the interdependent relationship with Russia and the security concerns presented in that dynamic relationship. The EU established that to counteract Russian energy strategies among other threats, there was an imperative need to establish and implement unified energy policy with thorough energy security principles.

European Energy Security Strategy: An In-depth Look

The “European Energy Security Strategy” produced in 2014 by the European Commission provided the framework for energy security. An accompany to that policy was the Commission Staff Working Document titled *In-depth Study of European Energy Security* (2014a), which established the detailed analysis and empirical evidence connecting energy

security to state stability. Energy security is a multidimensional approach to the stability of the state and involves both the aspects of supply and demand. The pillars defined in the energy security strategy highlight the importance of a dynamic approach to security that posits multidimensional threats must be met with a variety of mitigating measures. Energy efficiency is one of these dimensions whereas it reduces consumer demand and supports several of the other tenets of the energy security strategy. Furthermore, energy efficiency and other pillars serve as mitigating measures to address vulnerabilities to energy security both through supply and demand.

The in-depth study established that “secure energy supplies [are] uninterrupted access to energy sources at an affordable price” and “the [energy] system consists of fuels, transformation, and consumption” (European Commission, 2014a, p. 3). The fuel part of the energy system is a critical security in supply in that diversifying sources, resource type, and transport nodes are fundamental to providing uninterrupted access to the consumer. Any disruption in energy supply results in cascading effects that influence every dimension of a state or society. The study highlighted that the insecurity of fuel supply affects the economic and political stability of both the supplier and consumer states and degrades energy security. The transformation component of an energy system refers to refining power and capacity that translates energy from the supplier to the consumer. Transformation identifies an area that European states are collectively working to develop. Consumers make up the industries and households that use the end product of energy resources; however, this is only one component of energy security.

The energy security aspect of demand includes energy efficiency for the consumer, decarbonization, and a developed integrated market within the EU. The in-depth study associated policy implementation to decreased energy demand across the member-states. While this

decreased demand does positively influence energy security it also affects import dependency, which has increased over the last two decades (European Commission, 2014a, p. 5). This increase is a direct result of decreased domestic energy production on the state-level and increased import of energy resources to meet energy demands. Decarbonization stands as one of the pillars of energy security within the strategy and policies, and the Commission's analysis of empirical data in the in-depth study showed that "import dependency is being reduced through the growth of the use of renewable energy sources" (2014a, p. 11). Enhancing the demand aspect of energy security enables a reduction in energy dependency. Reducing consumption, bolstering renewables, and developing the demand dimension of energy are critical components to overall energy security. The decreased demand associated with energy efficiency policies and other nonrelated variables is also counteractive to energy dependency ratings. Unfortunately, the decreased domestic production is counterproductive to the ground gained by energy policy implementation.

The *European Energy Security Strategy* and associated energy directives issued by the Commission are a reactionary plan to Russian energy coercion, market disruptions, and long-term stability planning. By enhancing and stabilizing both supply and demand, the *European Energy Security Strategy* requires states to regulate and enhance aspects of energy policy. This upholds and strengthens the stability of the state against Russian energy coercion or market disruptions. Supply and demand are undoubtedly critical aspects of economy, and the interconnection between energy and economy bleeds into the other factors of state stability.

Energy dependence is an ongoing discussion with European leaders, which seek to find a balance between energy imports and consumption. "Overall EU import dependency has increased, mostly driven by growth in import dependency of natural gas and crude oil"

(European Commission, 2014a, p. 21). This statement was based on empirical data pulled from 1995-2012, but in order to ensure the policy continues as an enduring document, there must be continuous monitoring procedures set in place. The Commission published the Staff Working Document on *Monitoring Progress Towards the Energy Union Objectives- Key Indicators* (2017). In this document, the Commission stated that “governance should involve systematic monitoring of key indicators of an affordable, safe, competitive, secure and sustainable energy system, facilitate the coordination of national energy policies and foster regional cooperation between member states” (2017, p. 4). Furthermore, the *Regulation on Energy Union Governance COM (2016) 759 Final* dictates that the objectives be reassessed every two years by the Commission. This policy exists as a critical forcing mechanism that publicly identifies deficiencies or shortcomings by member states so that policy implementation and energy security can be accurately measured. At the foreground of this Monitoring Staff Working Document is the construct of net import dependency, which “measures the level of total net imports as a proportion of total gross inland consumption and the energy consumption of maritime bunkers” (European Commission, 2017, p. 10). The 2017 publication of the Staff Working Document confirmed that “the EU imports more than half of the energy it consumes” that stabilized between 52% and 55% from 2005 to 2016 (ibid, p. 31). This net import dependency stands as a key factor in energy security and poses a vulnerability in the face of Russian energy coercion. Despite the statistics on energy imports, the Commission found that “22 member-states’ [national] net import dependency actually decreased between 2005 and 2014, indicating an improvement in energy security” (2017, p. 33).

Natural gas is one of the most critical vulnerabilities of state stability in Europe. The monitoring Staff Working Document also identified that “the EU’s [overall] net import

dependency increased from 57.1% in 2005 to 67.4% in 2014. In this period, indigenous gas production fell by nearly 40%” (ibid, 2017, p. 33). This established a direct correlation between declining domestic energy production and increasing net import dependency. The *European Energy Security Strategy* is designed to counteract these problems in a comprehensive short, medium, and long-term agenda. By following the pillars within the strategy and abiding by the mechanisms in place to require policy implementation on the state level, the European Commission is able to promote energy security at the EU member-states level. Moreover, states are an inherent component of the EU and national energy policies must fully transpose and implement EU guidance in order to build energy security.

The *European Energy Security Strategy* identifies a multidimensional approach to mitigating vulnerabilities and strengthening energy security in the union. The five threats addressed in section 3.1. in the Global Strategy are terrorism, hybrid threats, climate change, economic volatility, and energy insecurity. Terrorism is addressed further in Section 2 of the *European Energy Security Strategy* titled “protecting strategic infrastructure”. This includes terrorist attacks on infrastructure, namely pipelines, and cyberattacks that target energy-related systems. Hybrid threats most closely resemble the threat faced from Russia, but the strategy does not isolate Russian aggression as the only state it is concerned with. Mitigating vulnerabilities from hybrid threats also spans Section 4 of the *European Energy Security Strategy* titled “building an integrated internal market” and Section 7: “diversifying external supplies and infrastructure” (European Commission, 2014b). These two sections develop internal and external security measures that counteract Russian disruption operations while enhancing the EU’s ability to face future hybrid threats.

Climate change is addressed in Section 3: “moderating energy demand”, Section 5: “increasing energy production”, and Section 6: “developing energy technologies” (ibid, 2014b). These measures provide depth in the EU and member state energy portfolio, therein building several more layers in the energy security model. Economic volatility is a systemic problem for every state internationally, and energy plays a critical role in fueling economies. Sections 2, 3, and 4 develop security components that protect the EU from market fluctuations, loss of energy supply, and provide stability in the face of economic volatility. Energy insecurity is an overarching concern throughout the EU, but there is a culmination of the pillars of the Energy Security Strategy that addresses this vulnerability. Ultimately, the *European Energy Security Strategy* provides policy solutions to establish and strengthen energy security.

The State-level Policy Toward Energy Security

The *Consolidated version of the Treaty on the Functioning of the European Union* (2012b) possesses a section on categories and areas of union competence. In Part 1, Title 1, Article 4, the treaty highlights the “shared competence between the Union and the Member States” and includes principal areas such as internal market, environment, and energy (European Commission, 2012b). Shared competence allows the member states to establish laws but loses that competence when faced with EU legislation. This is a critical component to energy policy and implementation because it provides member states the ability to build upon EU energy policy and establish more stringent countermeasures or higher standards. Sharing the decision-making and legislative procedures between the EU and member states enables a double layer of energy policy production and oversight. It also provides the EU with the most opportunity to develop energy policy at both the member state-level and EU level.

It is important to remember that the European Union is a collection of states with a dynamic amalgamation of cultures, languages, heritage, and social values. Furthermore, with differences come varying opinions and the inevitable disagreement. The ability for the European States to settle differences through peaceful and mutually beneficial means is what establishes the strong bonds of the EU. In terms of energy policy, states have varying stances but generally remain unified in the need for energy security on both a state and regional level. This attributes to the vitality of tenet eight in the *European Energy Security Strategy* that referenced coordinated state-level energy policies and a unified voice for external energy policy (European Commission, 2014b, p. 17). Discrepancies in that unified external policy open the respective state to vulnerabilities in their national energy security.

In a brief examination of the current energy policies for Italy (2017), Poland (2009), Romania (Dudău, 2017), and Lithuania (2018), there can be three clear assessments of the national energy security initiatives. First, each of these states places a high priority on enhancing energy efficiency and increasing the development of renewable energy sources. Second, these nations consider having viable alternatives for energy sources a vital aspect of energy security and seek to limit single-source dependency. Third, all these states participate in international organizations such as the IEA and abide by the *European Energy Security Strategy*. These policies identify the efforts at the national level to integrate energy security policy into national frameworks. Furthermore, these four states have placed exceptional emphasis on energy efficiency reform.

Energy efficiency can be examined from several angles, but the predominant highlights from the European Commission are the improvement of emissions standards, household and industrial efficiencies, and establishing energy efficiency from production to final consumption.

This applies to the third tenet of the *European Energy Security Strategy*, which requires modifying energy demand. In support of this initiative, the EU published the *Energy Efficiency Directive* that was designed to achieve an “energy efficiency target of 20% that will result in 371 Mtoe primary energy savings in 2020” (European Commission, 2014b, p. 7). Energy infrastructure improvement was also included in the efficiency project as a means to enhance the production and refinement of energy sources from beginning to end. All the examined states highlighted this portion in their respective national energy strategies. Moreover, the increase in efficiency serves to reduce the number of raw materials required for purchase at the initial phase of energy production. This implies a certain reduction of dependence on energy providers in certain cases. For Romania, increasing efficiency would serve to expand energy support to its neighbors by providing energy sources to the Southern European states as an alternative to Russian natural gas.

The second assessment of the four national energy policies highlights the necessity of alternative, viable energy sources. This is a critical tenet to energy security and European states face a challenge with maneuvering away from Russian energy preponderance. Each of the examined states highlights the importance of developing alternative energy sources. Lithuania, Italy, and Poland have extensive projects that enable the use of liquid natural gas (LNG), which provides an avenue for North American energy deliveries, namely from the US and Canada. Within the framework of the *European Energy Security Strategy*, this aspect is classified as diversifying energy sources. While the focus of this endeavor is on reducing dependency on Russian energy assets, the additional initiative is that states look for a dynamic energy portfolio. National energy strategies across Europe have diversified energy sources to blend renewables, oil, natural gas, LNG, biofuel, and any other alternatives available. This aspect looks into the

vulnerability and interdependency theories that Nye, Keohane, and Krickovic presented in their recent works.

The third assessment made from these four national policies is the connection of state level energy security to international organizations and adherence to EU policy. One of the principle constructs that provide stability in an anarchical system is that of the institution and adherence to collaborative efforts at the national, regional, and international levels. Nye and Keohane (1989, 1998, 2012) elaborated on the importance of institutions in the international system and the specific role that these organizations play when it comes to security. For energy security, the benefit is twofold in that participation in international institutions enables greater access to raw materials through trade, funding through global banking, collective security through alliances, and economic prosperity through the globalized market. These international institutions often require small concessions in exchange for the large payoffs that are associated with a membership. Moreover, there are inherent energy security benefits that emerge from adherence to EU policy. States that abide by the legislation and regulation that the EU collectively produces have access to a greater network of assets in terms of economy and security. There are measurable benefits to states holding an EU membership and the EU has made considerable advances in energy security through effective policy and strategy.

Conclusion

The EU recognizes evolving global threats such as the threat of Russian energy coercion and responded with prioritizing energy security through shared competence and overarching policy. Shared competence enables the member states to establish legislation that builds upon EU policy while not contradicting the directives from the Commission. These policies laid out by the European Commission are more than words on paper and hold punitive consequences if not

followed. The threat of being ostracized by the EU community coupled with the inherent political, economic, social, and security benefits that could be lost is a powerful tool. This measurable influence that gives weight to the EU Energy Security Strategy and the punitive measures enables the EU to project security theories and practice to its members. Wu, Ramesh, & Howlett's definition of policy capacity and the work of the European Commission establish effective policy measures to counteract Russian energy initiatives. The policy integration into national governance frameworks and quantifiable changes in state-level energy programs exemplify the successful countermeasures against Russian aggression.

Cooperative framework and the liberalized market structure enable a strong foundation of energy security that creates and fosters stability in the EU. The measures established by the European Commission resound in the interoperability theories and wider security constructs. Russian energy initiatives have exerted significant political, economic, social, and defensive pressure on states throughout the European continent. The EU's energy security design allows states to reduce the effects of Russian energy initiatives. Stegen's analysis of 'weaponized' energy initiatives is only one prong to a multidimensional approach and provides a fundamental conditioning element to Russian warfare. The *European Energy Security Strategy* stands as a critical defense against that energy 'weapon' and the effects of energy security policy will only compound over time.

Chapter 3: Cross Case Comparisons

EU Case studies:

Poland.

Poland is increasingly developing diplomatic relationships and is a critical EU member state in the movement toward decarbonization and energy security. It is a state that is dependent on Russian energy imports and produces energy supplies from domestic reserves. In 2014, Poland was subjected to a gas supply reduction from the Yamal-Europe pipeline & Brotherhood pipeline, stating it would receive a 20% reduction in supply exemplifying Russian energy coercion efforts (Krajewski & Wiktor). The *Energy Policy of Poland up to 2050* establish a pathway to provide thorough stability countermeasures and energy security in the face of coercion. Until the new policy enters the implementation phase, the standing policy for Poland is the *Energy Policy of Poland until 2030*, which still addresses a comprehensive approach to energy security. It prioritized six key areas of focus:

(1) To improve energy efficiency; (2) To enhance security of fuel and energy supplies; (3) To diversify the electricity generation structure by introducing nuclear energy; (4) To develop the use of renewable energy sources, including biofuels; (5) To develop competitive fuel and energy markets; (6) To reduce the environmental impact of the power industry. (Poland Ministry of Economy, 2009, p. 4)

These enumerated objectives all point to a fully integrated policy conducive to that of the *European Energy Security Strategy*. These objectives identify that Poland seeks to abide by the obligations presented by the EU Parliament and Council while establishing the framework for each objective.

Poland has a coal-heavy economy but the future energy policy diversifies the energy mix so as to reduce coal and increase efficiency, renewables, and nuclear energy. “92% of electricity and 89% of heat in Poland is generated from coal and according to the official Polish Government Energy Policy Strategy, coal will remain the key element of the country’s energy security until at least 2030” (World Energy Council, 2018). This reliance on coal makes meeting the regulatory requirements for greenhouse gas emissions and the EED difficult for Poland to accomplish. Krzysztof Tchórzewski, Poland’s minister of energy, confirmed plans to reduce coal in electricity to 60% by 2030 and increase renewables in electricity to 27% by 2030 (PKEE, 2018). The transition away from coal and focus on development of renewable energy sources diversifies and strengthens security of supply. Poland is looking at energy security through the EU policy lens and taking a comprehensive approach that not only addresses the dependency on coal, but also the dependency on Russia energy resources.

In terms of oil and natural gas, Poland relies on imports predominantly from Russia. Poland’s natural gas industry is expanding with future developments in shale gas and LNG; however, these projects are still in the initial stages. To provide an alternative to Gazprom’s natural gas, the US is exporting LNG to states within the EU with Poland being one of the first customers. The Polish economy still relies on imports from Russia to meet its natural gas demands, importing “8.9 bcm of pipeline natural gas from Russia in 2014” (World Energy Council, 2018). Poland’s oil imports are also dependent on Russian exports, consisting of 82% of its total crude oil imports in 2016 (Simoes & Hidalgo, 2011). While Russian energy exports are still a high percentage of the respective energy assets, gas and oil make up 41% of the energy mix. Energy dependence on Russian assets is slowly declining, and a successful shale industry coupled with US LNG imports has the potential to drastically reduce the overall dependency on

Russian energy resources (RFE/RL, 2018b). Furthermore, “The ruling Law & Justice party has said since it came to power in 2015 that it won’t renew a long-term contract with Gazprom that ends in 2022” (Martewicz, 2018). This identifies the connection between Russian energy coercion and the EU’s effective countermeasures and energy policy projected to the state-level.

As a part of the implementation assurance measures, the Commission engages in annual assessments of progress toward meeting directives. The “2017 assessment of the progress made by Member States towards the national energy efficiency targets for 2020” (European Commission, 2017) presented data that showed Poland has fully transposed the energy security strategy into its national policy. It also identified that Poland is on track to meet the regulatory benchmarks of 2020 and reduced final energy consumption despite being heavily reliant on coal (ibid, 2017). Poland’s plan to mitigate the vulnerability of Russian energy dependence is to establish energy security in a holistic approach. The Polish Government is addressing both supply and demand dimensions, therefore developing a strategy that provides stability and security from hybrid threats among the other identified threats in the EU’s Global Strategy.

Bulgaria.

This Southeastern European state sits in a strategic position as a connection point between the European continent and Turkey. Its access to the Black Sea and contiguous borders with Romania, Turkey, and Greece provide valuable access to energy resources to fulfill national demand. One of the chief problems is that the state is resource poor and does not have a developed energy sector, but policy implementation can counteract a lack of resources. Bulgaria also has a rocky past with political and economic transition from the Soviet Era. The reliance on legacy infrastructure and economic systems presents a challenge for the Bulgarian government. Conley, Mina, Stefanov, & Vladimirov (2016) highlighted Bulgaria’s susceptibility to Russian

energy coercion and go as far as to classify them as a captured state. The *European Energy Security Strategy* and *Bulgaria's Energy Strategy for 2020* provide some mitigating measures that would reduce the impacts of these transitional challenges and energy dependency thereby leading the state toward energy security through policy.

Bulgaria's Energy Strategy for 2020 begins by defining its vision and priorities highlighting climate change as the top priority with energy efficiency improvement, reducing dependency, and promoting economic growth (Republic of Bulgaria Ministry of Energy, 2011). Furthermore, this strategy focuses on the common discourse from the EU strategy and other regional state-level energy plans. "Maintaining of a safe, stable and reliable energy system", "Focus on clean and low-emission energy", and "Transparent, efficient and highly professional management" (ibid, 2011, pp. 4-5) are the themes of energy strategy throughout the document. Also injected into the strategy are the 20-20-20 goals of the EU, regional cooperation for supply security, and electricity consumption and production management. All these topics, goals, and statements are in line with the EU's overarching strategy and follow some of Bulgaria's neighbors, which shows the desire to follow the policies laid out by higher echelon organizations and partner institutions.

Bulgaria's Energy Strategy for 2020 analyzed the import to production ratios of oil, natural gas, and coal in 2008 to an end that identified that 76% of Bulgaria's energy was imported (ibid, 2011, p. 9). According to the National statistical institute for the Republic of Bulgaria, the energy dependency rate in 2016 was 38.8% (National statistical institute, 2017). This decrease from 76% to 38.8% shows some of the effects of energy policy implementation and the execution of the existing strategy. Other variables do exist in the energy dependency reduction, including the drastic reduction of energy supply through Ukraine after the Russian

occupation of Crimea, but there is an inherent connection between implementing energy policy toward energy security and Bulgaria's reduction in dependency.

Bulgaria still depends on energy imports to fuel a large portion of its economy, whereas 33% of Bulgaria's imports are Crude oil, of which 77% comes from Russia, and 11% of its imports are gas, of which 81% comes from Russia (Simoes & Hidalgo, 2011). Imports from Turkey and Romania have increased but the flow of energy supply from alternative sources, other than Russia, is still in the developing phase. According to the EU Commission, "Bulgaria shows good performance on two dimensions of the Energy Union: With regard to Energy Efficiency and Decarbonisation, Bulgaria is on track to meet its 2020 targets for greenhouse gas emission reductions, renewable energy, and energy efficiency" (European Commission, 2015). The fact sheet continues, "On Energy Security, Bulgaria is among the most vulnerable Member States, as shown in the recent stress tests performed by the European Commission" (ibid, 2015). It is important that the EU recognizes the improvements that Bulgaria has made toward energy security as a show of reaping the benefits of intense policy reform. Moreover, Bulgaria continues to develop its energy industry toward a more secure and stable pillar in its economy highlighting the results of effective policy implementation that initiated from the EU.

The Baltic States.

Energy coercion in the Baltic States began as early as 1991 with oil supply disruption to influence social movements (Collins, 2017), then in 1993 against Estonia, 2003 against Latvia, and again in 2006 against Lithuania (Korteweg, 2018). Collins and Stegen established through analysis of Gazprom export data that Moscow was able to achieve strategic objectives through energy coercion tactics; however, these effects were limited to short-term success. Collins, Stegen, and Korteweg confirmed the existence of energy coercion against the Baltic States.

The *European Energy Security Strategy* provides the causal mechanism for establishing energy security throughout the Baltic States and a countermeasure against energy coercion (European Commission, 2014b). The individual states have transposed the constructs of the EU policy into their own energy policies and have seen measurable success in limiting the vulnerability of energy coercion.

In 1990-91, reactions to the dissolution of the USSR discussions to approach subsequent concerns were a top priority in the region. Much of Eastern Europe had to establish their vision and strategy for moving away from being a satellite state subjected to Russia. The Baltic States encountered several issues with the dissolution of the Soviet Union, one of which was that there were Russian citizens and military forces remaining within the new political boundaries. Additionally, the Baltic States were dependent on legacy energy infrastructure that belonged to Russia or Russian owned energy companies. In 1993, the discourse shifted to geopolitical action with Russia utilizing energy initiatives to achieve the strategic goal of protecting its citizens abroad by stopping all gas supplies to Estonia. Lentransgas, the Russian gas company responsible for the shutdown, claimed the supply disruption was due to unpaid bills; however, the stoppage occurred less than five days after the Estonian government passed the Law on Aliens on 21 June 1993. This proclamation ostensibly discriminated against the Russian people still living in Estonia following the dissolution of the Soviet Union. The connection between the two events is an example of Russia leveraging its nationalized energy corporations to support strategic objectives.

In the late 1990s, Latvia and Russia discussed threats to energy supply disruption, however this time it would involve oil and a focus on economic interdependence. Russia sought to gain greater control of the major ports of Latvia, which was a major transit point for Russian

oil and gas. Energy infrastructure along the Latvian coast also came into the fold of Latvian-Russian relations as the Kremlin made demands of 30% of the shares of the oil terminal Ventspils Nafta. Russia felt snubbed when both its demands and requests were met unfavorably and Latvia, along with the other Baltic States, leaned toward a free market approach to trade. Russian economic sanctions against Latvia and politicized messaging to demoralize and delegitimize Latvian sovereignty was met with strategic alliances and a hard stance against demands made by Russian energy companies. Russia's wavering between demands and requests against the energy transit and infrastructure and mixed strategic messaging against the Latvian people led to the failure of the Kremlin to maintain a unified stance against the Baltic State. This example of Russian energy initiatives shows the shortfalls of the strategy and that alliances coupled with a liberalized market are a recipe that counteracts nationalized energy directives to subvert a nation.

Lithuania encountered Russian energy initiatives in 2006 when the oil pipelines were shut off in association with the sale of the Lithuanian oil refinery to Poland rather than Russia. This highlights the importance that Russia places on energy infrastructure as a nexus in the national energy strategy framework. Stegen (2011) deconstructed the "energy weapon" in an article published by *Energy Policy* and analyzed the key requirements of leveraging energy initiatives as a means to influence other nations and their policies. One of those critical elements was control over transit infrastructure and routes, thereby implying that in order to maintain an effective campaign of energy initiatives, Russia must be able to influence and/or control pipelines and the subsequent infrastructure (Stegen, 2011, p. 6508). When Lithuania decided to sell its sole refinery to Poland rather than Russian investors, it created dismay in Moscow, which

resulted in the reaction to turn off energy supplies albeit under the veil of technical problems or other unattributable circumstances (ibid, p. 6509).

Examining the statistics of imports and consumption, the Baltic States have achieved measurable success in effective counter policy and energy security, chiefly through persistent implementation. All three of the Baltic States inherited energy infrastructure from the legacy Soviet system, which made them inherently dependent on Russian energy sources. In collaboration with EU policy on energy security, there is a multitude of efforts to reduce this dependence. The Lithuanian government, “leased a floating gas storage and regasification vessel from the Norwegian shipping company Høegh LNG for ten years at a cost of 430 million euros and constructed the onshore infrastructure necessary to connect the floating terminal to Lithuania’s gas network for 131 million euros” (Hoellerbaue, 2017). Additionally, the Baltic States are complying with the EU’s policy to unbundle gas markets and construct pipelines that connect the states to EU energy sources.

These initiatives exemplify a counteractive means to the Russian energy strategy and highlight the importance of effective policy implementation in energy security. By following the guidelines set forth by the EU Commission and instilling those policies within national frameworks, the Baltic States exemplify successful policy implementation. Moreover, although Russian energy initiatives persist, the Baltic States have limited the influence that Russia has via energy assets. As evidence of progression toward energy security, Hoellerbaue highlighted the importance of LNG and the initiative to diversify energy supply sources by type and origin. Holland best captured the effectiveness of energy policy in his article, which showed the progress away from dependence on Russian energy.

Both electricity and natural gas interconnections are either being upgraded or new ones put in place as part of an EU Baltic Energy Market Interconnection Plan. The three Baltic states are a part of a joint electricity grid with Russian and Belarus, but their dependence on Russian electricity is declining. Lithuania utilizes predominantly gas for electricity production, ever since it decommissioned its Soviet-era nuclear power plant in 2009. Latvia is fortunate to have three large hydroelectric plants to power its country. Estonia utilizes domestic shale oil reserves for power, but has an achievable plan to deliver half of its electricity and 80% of its heat from renewable resources by 2030; in 2017, 17% of its electricity came from renewable energy. Together, the Baltic states are building interconnectors that will allow gas and electricity to flow more smoothly between the three states, and to the broader EU through Poland or Finland. (Holland, 2018)

Holland and Hoellerbaue established the effectiveness of energy policy measures that create stability through the pillars of the *European Energy Security Strategy*. Efficiency, interconnected energy systems and markets, infrastructure, and diversified sources have enhanced energy security in the Baltic states and enabled the decline in energy dependence from Russia.

The EU Member Nordic States.

The EU member Nordic States include Finland, Denmark, and Sweden. These states rely on a different strategy of energy security, especially for those states that border Russia. The Nordic States have well-developed energy policies and infrastructure coupled with natural resources that enable them, in most cases, to export energy and electricity to their neighbors. Additionally, “the Nordic states have by and large been spared energy coercion by the Kremlin”

(Dahl & Järvenpää, 2014, p. 43) and while there are a number of variables associated with this, these states are still vulnerable to energy coercion tactics. The assessments applied by Korteweg, Dahl, and Järvenpää highlight the vulnerability and likelihood of energy coercion against the EU Member Nordic states. According to Nordic Energy Research, “Over a third of the Nordic region’s energy supply comes from renewable sources. The largest of these is biomass and waste, which are used to generate electricity, heat and transport fuels in Sweden, Finland, and Denmark” (Nordic Energy Research, 2015). The diverse and dynamic energy industry across the Nordic States facilitates energy security on a level that energy producing countries hold. This characteristic allows the Nordic States to avoid pressure campaigns from Russia that are based on energy initiatives and price disputes.

“A common interest in developing a reliable, sustainable and affordable energy system was the main driver for the Nordic energy policy cooperation since the creation of the Nordic Council of Ministers” (Joergensen, 2016, p. 2). Nordic energy policy cooperation served as the causal mechanism that facilitated energy security in the Nordic states. Throughout the evolution of society in this region, economic development, and political endeavors, the most consistent theme has been cooperation. Cooperative energy policy, technology sharing, knowledge-sharing, and educating populations on energy consciousness were critical issues to the Nordic Council of Ministers. Energy policy cooperation “was characterized by an incremental development of the cooperation based on consensus, mutual understanding and trust facilitated through the exchange of experiences, work groups, seminars, educational activities and mobility schemes for energy policy officials” (Joergensen, 2016, p. 2). The unified goals of decarbonization, clean and shared energy, and efficient production enabled the Nordic States to achieve a cohesive energy security policy. The principal difference between this case study and the rest of the EU is that these

nations bring energy production and domestic energy resources to the table. There are several states within the EU that simply do not have the ability to produce energy from organic reserves or raw material. Moreover, the Nordic States continue to focus on energy security and cooperative policy in a systematic manner. Examinations of the five states' current energy policies show a common theme of efficiency, renewable resources, decreased demand, and enhanced production (Nordic Energy Research, 2017). By continuing to apply political effort to the energy policy, the states promote long-term energy security.

Denmark is a critical part of the Baltic Sea and the energy infrastructure that runs through its offshore territory. The Danish Straits are a key chokepoint for all products and transportation leaving the Baltic Sea and are an important node for Germany in particular. "An estimated 3.2 million b/d of crude oil and petroleum products flowed through the Danish Straits in 2016" (EIA, 2017, p. 17). Moreover, the "Danish Straits are likely to become an important route for Russia in near future. This will result in an escalation in the importance of the position of Danish Straits' in the global energy security" (Biresselioglu, Demir, & Dönmez, 2014, p. 237). Biresselioglu et al. analyzed the importance of the chokepoints for energy trade and how they impact Russia. Their work highlighted how vital the Danish straits are to the Russian economy and European energy security. Additionally, Denmark is one of the world leaders in renewable energy production and efficiency, encompassing a reported 30% of its final energy consumption (Danish Energy Agency, 2015). Denmark sets a high standard for energy security in national policy and provides an important aspect of overall security for the EU by controlling the Danish Straits.

Finland is a balanced state in terms of energy policy and security. This Nordic State relies on Russia for its oil, natural gas, and coal importing 10.74 Mtoe crude oil, 2.5 bcm natural gas,

and 2.51 Mtoe of coal in 2016 (IEA). It's important to also note that Finland imports 71% of its uranium, 88% of its coal, 89% of its crude oil, 100% of its natural gas, and 70% of its biomass from Russia (Tynkkynen, Pynnöniemi, & Höysniemi, 2017). Finland's electricity generation in 2016 consisted of 36% nuclear sources and 47% Renewable sources and imported 17.39 TWh of electricity from Sweden (IEA). While this Nordic State has a diverse energy mix, it does not have a dynamic set of energy sources. Tynkkynen et al posited that the dependence on Russian energy sources has largely been attributed to the profitability and economic prospects of the situation and that the relationship could shift if Finland sought to join NATO (2017). Finland is an example of a resource-poor yet technologically advanced nation that is persistently developing an energy security strategy and policy. The cooperative efforts with the Nordic Council of Ministers and the EU enable it to build energy security as a counterbalance to its energy dependence on Russia.

The empirical data from IEA, Nordic Energy Research, Tynkkynen et al., and Biresselioglu et al. validate the effects of the energy security policies laid forth by the EU. While Norway is an energy-rich state in Northern Europe and Iceland is a critical partner in the Nordic states, they are not member-states to the EU and therefore not subject to EU policies, however, they do hold political/economic agreements with the EU. The European Economic Area (EEA) agreements are the most significant of these and guarantee the free movement of goods, services, and capital throughout the 28 EU member states and Norway, Iceland, and Liechtenstein. All the Nordic States are a party to the Schengen Area, which enables the unrestricted travel across Europe. These states recognize the importance of the ideologies and structure associated with the EU and maintain a strong energy partnership with the member states and European Commission.

These states indeed play a significant role in energy security for the EU and the region but their purpose exceeds the scope of this paper.

Non-EU Case Studies

Ukraine.

In 2014, the instability in Ukraine reached a critical point as Russian forces moved to occupy Crimea with military forces while supporting pro-Russian separatists operating throughout Ukraine. This is not the venue for digressing into the military aspects of the Ukraine Crisis, but it is critical to note that the synchronized operations in information, military, politics, and energy significantly destabilized Ukraine. These operations set the conditions for occupation and enabled the Russian military forces to annex Crimea without sparking a large-scale war. Ukraine is central to European energy security and serves as a transit state for natural gas to 15 European states. Gazprom alone delivers natural gas via pipelines through Ukraine to Poland, Romania, Moldova, Slovakia, and Hungary, highlighting the volume and importance of the pipelines moving energy resources through the Eastern European state.

Ukraine is still contesting the illegitimate annexation of Crimea and is fostering relations with pro-Western institutions such as NATO and the EU. Ukraine is an aspiring member of NATO and has made significant steps to become a member of the EU. The geopolitical implications of these pro-Western moves are resounding in that Russia sees Ukraine as one of the last buffer states between western institutions and the Kremlin. Additionally, the Ukrainian moves to seek out international support from the EU and NATO serve as calls for assistance to regain stability in the state and in the Eastern European region. Ukraine's position as a transit state is critical to both sides of the Eurasian community highlighting Keohane's concept of interdependence (1989, 1998, 2012). Russia needs Ukraine to continue transiting natural gas and

oil until the Nord Stream 2 pipeline comes online, but to remain unstable enough to manipulate. The EU needs Ukrainian pipelines to continue delivering energy resources to fuel economies and European societies.

Ukraine has been a fundamental aspect of European energy over the last two decades. The fluctuations in price and quantity coupled with the conflict between Russia and Ukraine have resounding effects throughout the EU and arguably served as the catalyst for promoting energy security. In 2006, 2009, and 2014, price disputes lead to the shutoff of gas to transit pipelines in Ukraine and impacted every state that received energy assets from Russia through Ukraine. In 2014, Russia moved military forces to occupy Crimea and supported separatists in a destabilization campaign throughout Ukraine. After two drastic price increases on natural gas “Gazprom cut gas supplies to Ukraine, claiming that Ukraine had an outstanding debt of USD4.5 billion” (Korteweg, 2018, pp. 17-18). Korteweg elaborated on the Ukrainian situation of energy coercion and his work identified the demand for energy security policy as a countermeasure to Russian energy coercion tactics.

Gazprom put its decision in commercial terms. According to the firm, the gas price hike took place because two earlier discounts no longer applied. The first concerned a 2010 discount to access the Sevastopol naval base. Moscow reasoned that Sevastopol was now part of Russia and so it needs no longer pay for access to the base. The second discount was the one negotiated in December 2013 with President Yanukovich as part of the agreement to join the Eurasian Union. This discount was reversed as Yanukovich had left and been replaced by the pro-Western Petro Poroshenko. In June 2014, Poroshenko signed Ukraine’s association agreement with the EU which is incompatible with membership of the

Eurasian Union, providing the geopolitical context for Russian gas cuts.

(Korteweg, 2018, p. 18)

These and other geopolitical, economic, and military situations can be attributed to a phenomenon where the former Soviet Union states that begin to lean toward western ideals incur aggressive actions from Russia. In terms of energy security, Ukraine has faced this phenomenon numerous times and despite efforts to revise policy and seek out western assistance, has been largely unsuccessful in fending off Russian energy initiatives.

Apart from the concept of Ukraine as a transit state, the nation has systemic problems with its domestic energy program. “Ukraine clearly stands out against the rest of Europe, but perhaps not surprisingly many of the countries showing the highest European energy intensity are located in Eastern Europe and were former communist allies of the Soviet Union, with Cyprus being a notable exception” (Sendich, 2014). This energy intensity has serious implications highlighted by Antonenko, Nitsovych, Pavlenko, & Takac in their article in Carnegie Europe. They posited that “this creates a massive headwind that drags down national welfare, crowds out economic growth and job creation, and leaves the country vulnerable to political pressure from energy suppliers” (Antonenko et al., 2018). One of the most significant steps in a positive direction for the reformation of the energy industry in Ukraine came in 2011 when they joined the Energy Community. This “required both legislative work to implement the entire *acquis communautaire*—the body of laws governing network energy systems in the EU—and institutional changes such as the unbundling of different functions in the electric power and gas industries” (Antonenko et al., 2018). Adhering to regulatory requirements and providing transparency to the regional institutions enabled the process of revising energy policy in Ukraine.

Furthermore, it provides much needed external support, both politically and economically, for the destabilized state.

Unfortunately, these measures are still limited in effectiveness because of the statement associated with the correlation between western leaning policy and Russian responses. Each time Ukraine sought to increase relations with the EU, NATO, or the US, the Kremlin responded with significant pressure through one of the multifaceted approaches that destabilized Ukraine. Ukraine's ability to ineffectively manage its domestic programs, resources, and infrastructure highlight both the importance of effective policy and how ineffective policy implementation can be exploited. Ukraine's energy program has been examined by scholars and researchers who found that "Among the main problems are the deterioration of energy assets and a lack of investment, low energy efficiency and environmental acceptability, and high dependence on foreign supplies" (Chumak & Prokip, 2018). These are all fundamental areas of vulnerability that Russia has subjugated to disruption tactics, and it shows that the forcing mechanisms of the EU governance architecture enable energy policy toward energy security for its member-states. Without the support of the EU through integrated markets, policy, and infrastructure, Ukraine's energy policies remain limited in counteracting Russian energy coercion.

Russian energy initiatives served as the spearhead to disruption campaigns in Ukraine and the occupation of Crimea. By persistently destabilizing the economy through gas price disputes and supply disruption, the Kremlin set the conditions of the battlefield. The Ukrainian government, in turn, displayed their ineptitude in policy implementation and maintaining political control of the country. Additionally, the pro-Russian separatists facilitated the aggressive strategy against Ukraine whereas, similar to the Russo-Georgian War, asymmetric entities disrupted the energy sector. In terms of security of supply, the separatists gained control

over the Donetsk and Luhansk regions, which supply a large portion of the A-grade coal used in electricity production (Antonenko et al, 2018). If Ukraine can find a way to move past the annexation of Crimea, develop a strong domestic energy policy implementation strategy, and reduce the influence of Russian energy initiatives, there is a chance the Eastern European state can stabilize. *BP Statistical Review of World Energy* (2018b) shows the empirical data that Ukraine remains heavily dependent on Russia energy both as a consumer and a transit state. More importantly, however, this case study highlights the effectiveness and implications of Russia's energy initiatives as a means to undermine the sovereignty of another state.

Belarus.

The Belarusian case study is similar to Ukraine, and the importance of energy security as a policy and national strategy is spreading across Europe to include states outside the organizational structure of the EU. Belarus is a transit state for energy supplies from Russia to Europe and is also dependent on Russian energy companies for its resources. Korteweg (2018) and Conley et al. (2016) examined the relationship between Belarus and Russia through the lens of energy and dependence. Their publications identify the concerns with energy coercion tactics and the leverage that Belarusian energy dependence gives the Kremlin.

According to the *BP Statistical Review of World Energy* (2018b), Belarus imported 18 BCM of natural gas from Russia, nearly 40% of its total energy imports (pp. 26-35). Consumption and production are not increasing, and there is a concern within the Belarusian government that without alternative energy sources, the state is too dependent on Russian energy companies. Belarus does not have a strong production capability or large natural resource stockpile, which exacerbates the dependence on other countries for its energy supply. The Belarusian government has recognized the vulnerability created by energy dependence, however,

consumption statistics from the last five years show no significant signs of decreasing fossil fuel demand. There are initiatives to develop the renewable energy sector and reduce dependence on Russia, but the energy dynamic of Belarusian-Russian relations has caused significant turmoil in the region.

In 2010, Gazprom and Belarus engaged in a price negotiation dispute that resulted in gas disruptions to European states reliant on the transit pipelines flowing through Belarus. Gazprom reported that Belarus failed to pay \$192 million in debt for energy resources supplied and Belarus countered that Gazprom failed to pay \$260 million in transit fees. In the same year, Belarus sought to close the gap with the EU and strengthen the ties with the western community. Dzianis Melyantsou (2017) summed the geopolitical actions that were a likely cause of the disruption in Belarusian-Russian relations, “The first serious attempt to normalize relations between Belarus and the European Union took place in 2008–2010, when after the Russian Georgian war Minsk did not recognize as independent the separatist Georgian territories of Abkhazia and South Ossetia; released all political prisoners; decreased the level of repression against domestic opposition forces; and softened its rhetoric towards the West” (p. 190). In a cross-examination of case studies and existing security literature, there is a noticeable connection between geopolitical affairs and Russian energy initiatives against states within the Russian sphere of influence. As states seek to strengthen ties with the EU or the western community, Russia and its nationalized energy companies leverage energy dependence to influence geopolitical issues within specific states. This strategy maintains state loyalty for those nations within the immediate vicinity of Russia.

In 2010, Belarus adopted the *Law on Renewable Energy Sources*, which served as a mechanism to open the energy market to outside investors and develop alternative sources of

energy. This law and other energy policies continue to be revised and implemented, especially in the pursuance of renewable alternatives. In 2017, Regulation No. 305 under the *Law on Renewable Energy Sources* expanded ‘renewable energy’ to include geothermal sources and adjusted the composition of the committee that determines electricity quotas for power plants (Schimanowitsch). Belarusian decisionmakers continue to look at policy reform and alternative energy sources as a means to reduce dependence on Russian energy; however, the Kremlin’s energy strategy will remain in effect. Despite Belarusian rhetoric against Russia’s price demands and activity in Ukraine, Belarus is deeply intertwined with Russian energy with no alternative in the near future. Their strategy toward energy security is limited in its capacity to be effective largely because it lacks the extended infrastructure and integrated market that the EU provides and lacks the mechanisms to force a change in the energy industry and associated policies. In this case study, there is a distinct difference in the comparison of causal mechanisms associated with the EU member states and non EU member states.

The energy outlook from the *Economic Complexity Observatory* and *BP Statistical Review Belarus* identifies some key statistics in the Belarusian economy. Refined Petroleum imports from Russia decreased from 97% in 2011 to 93% in 2016, displaying some of the effects of reducing energy dependence on Russia. In contrast, imports of Petroleum Gas remain at 100% from Russia, showing no variation from 2011 to 2016. Crude Oil imports actually increased from 80% in 2011 to 99% in 2016 (Simoes & Hidalgo, 2011). A key variable of import is demand and consumption. Oil consumption in Belarus decreased from 175 Mtoe in 2011 to 152 Mtoe in 2016 and Natural Gas consumption decreased from 16.5 Mtoe in 2011 to 15.3 Mtoe in 2016 (BP, 2018b). These figures show that despite a decline in consumption, Russia continues to supply a

large portion of Belarusian energy supply. This relationship will not change in the near future and the dependence on Russian energy will leave Belarus vulnerable to coercion tactics.

Moldova.

This Balkan State is nestled between Romania and Ukraine with limited access to the Black Sea for port access. Moldova is a state that dealt with, and still deals with, the legacy systems of the Soviet Union and has worked through considerable political and economic turmoil. Evidence of energy coercion in Moldova is highlighted by Korteweg's analysis, which focused on the gas price hike in 2006 associated with pressure against Ukraine and the Transdnistria region. Korteweg captured the degree of dependence on Russian energy and validates the demand for cohesive energy security policy. In terms of energy reserves, Moldova has minimal oil and natural gas reserves in its southern region and the exploration of these locations has been limited to date. The inadequate domestic energy supply points to a high import rate for Moldova and a reliance on Russian energy resources to fuel its economy and population. Moldovan imports over 90% of its energy resources from Russia by way of transit from Ukraine. These implications affect the overall energy security of the Balkan State and while the *Energy Strategy of the Republic of Moldova to the year 2030* is a robust policy, there are still challenges and vulnerabilities.

The Energy Strategy for Moldova is the causal mechanism that attempts to transition the state from a victim of energy coercion to a stable nation with sound energy security and is broken down into near-term and long-term priorities that range from 2012 to 2030. In the near-term, the priority of efforts focuses on the security of energy supply, integration into the European market, and developing the institutional framework for the energy industry. The policy highlights the importance of security in supply by stating, "the diversification of supply sources

has two facets to consider: enhancement of transmission interconnectors in order to provide alternative supply routes and a higher number of alternative suppliers” (Republic of Moldova , 2012, p. 6). The strategy goes on further to examine the potential suppliers, whereas both neighboring states could be prospective suppliers to Moldova but are not there yet (2012, p. 30). Romania and Ukraine are working to develop domestic energy production, which would assist Moldova by offering an alternative energy supply. The other two focuses for the near-term are critical in developing market integration and competition. This liberalized market combined with the institutional framework enables the economic aspects of energy security.

The long-term strategic elements for Moldova dynamically approach renewable energy sources efforts and energy efficiency to supplement energy security over the next two decades and beyond. Moldova’s energy strategy varies from other national strategies in that the focus on developing renewable energy sources and increasing energy efficiency is projected out rather than an immediate goal. Additionally, there is a fundamental problem with Moldova’s energy security associated with the reliance on Russian energy and lack of domestic production. Domestic production is limited to the proven reserves that lie within the geographic and political boundaries of the Republic of Moldova. The reliance on Gazprom and Russian energy is something that can be mitigated by alternative sources. Gazprom also holds an alleged \$6 billion debt for natural gas and would be poised to leverage that debt against Moldova in the event the Balkan State begins to lean toward to West (Najarian, 2017). Moldova is making progress in reducing energy consumption and increasing efficiencies. “Moldova has been a member of the Energy Community since 2010 and signed an Association Agreement with the European Union on 27 June 2014. It therefore has until December 2017 to make its legislation conform to the EU *acquiscommunautaire*, which is the core EU energy legislation related to electricity, oil, gas, the

environment, competition, renewables, efficiency and statistics” (IEA, 2017). Despite these improvements, Moldova is still dependent on energy resources that pass through Ukraine and must work with Gazprom for natural gas supplies. Until Moldova can dramatically adjust its security supply and establish stable supply from other nations, it will continue to be susceptible to Russian energy initiatives. The integration into the EU framework and integrated systems does fortify the state against Russian energy coercion campaigns, but the lack of EU architectural support still hinders the ability to develop advanced energy security.

Another variable to consider for Moldovan energy security is the territory of Transdnister, which is a portion of the country which is predominantly Russian-speaking citizens and declared independence from Moldova. As of August 2018, “Some 1,400 Russian troops remain in Transdnister guarding Soviet-era arms depots, and Moscow has resisted numerous calls over the years to withdraw its troops” (RFE/RL, 2018a). This scenario appears to mirror the examples in Crimea and Abkhazia, whereas the Russian state moved by means of military force to protect Russian Diasporas in the Soviet-era territory. In terms of energy security, natural gas and oil for Moldova traverse the disputed Transdnister territory. There are no alternative pipelines to deliver energy resources to Moldova and should Gazprom or Russia engage in energy initiatives against Moldova there would be little the state could do. Moreover, Russia backs the separatists in Transdnister by way of political, economic, and military support which exacerbates the instability in the region. Moldova is a highly vulnerable state in terms of energy security. Until it can integrate into the EU energy security peripheries, seek out alternative sources and delivery routes, and resolve the internal political issues in Transdnister, the state will continue to be a victim of Russian energy initiatives and disruption campaigns.

Conclusion

Putin drastically reframed how energy policy fits into the greater system of governance in the Russian Federation. He expanded the role of energy initiatives to influence domestic agendas and external state affairs across the international system. Natural gas and oil companies are not simply variables in the economy or global market but are geopolitical tools that the Kremlin can leverage to achieve strategic or national objectives. There is often a difference between policy and practice, and Russia will utilize its energy program to maintain the security of the state as well as destabilize the states within its sphere of influence. While oil and natural gas are critical to modernizing society, the energy strategy that Russia uses is not a “one-size fits all” response to all European States. The methods that were effective against Belarus and Ukraine, were not as effective against the EU member-states. This is largely due to the EU policy and implementation of that policy as a means to establish a strong energy security apparatus. Russia’s energy strategy has exemplified measurable success in certain instances, whereas leveraged energy assets and policy has been weaponized and influenced the political decision-making in target nations. Energy security provides a counterbalance to Russia’s energy coercion strategy and the EU seeks to stabilize the region by using effective policies.

The cross examination of these case studies identifies the benefits to EU membership and adherence to EU energy security strategy or policy. States across Europe are subject to energy coercion and disruption campaigns from aggressive nations, not just Russia. The EU has an opportunity to establish a strong framework for addressing energy security concerns on a regional level. The work of the European Commission and energy-related institutions show that policy reform and comprehensive energy security strategy can effectively counteract energy coercion and foreign energy initiatives. The EU member-states reviewed in this case study

analysis show the progress made over the last three decades toward energy security under the direction and forcing mechanisms of the EU. Furthermore, states that are not required to adhere to strict reporting policies on data such as energy consumption, imports, and research and development are showing an unstable approach to energy security. Overall, the cross case examination establishes the trend that states outside the regulatory periphery of the EU are having a difficult time instituting and strengthening energy security. While there are additional variables that influence this assessment such as proximity to Russia and political or social instability, the energy security strategy applied by the EU coupled with the forcing mechanisms of the EU's governance framework provide a strong foundation for energy security and give a distinct advantage to member-states.

Chapter 4: Capturing Effective Energy Security

Conceptualizing Energy Security Effectiveness

The EU faces a persistent campaign of disruption and destabilizing initiatives from its Eastern neighbor, Russia. This campaign is dynamic and complex with energy playing a strong role in destabilizing the EU and member states. In an era where technology and energy fuel societal evolution and economic development, energy security must be a prioritized initiative to counteract Russia's leveraging of energy resources as a weapon against the EU. The framework of successful energy security as a comprehensive security apparatus starts with policy development. Security must be evolving to address vulnerabilities that emerge overtime and must be comprehensive to counteract any threats or disrupting variables, which pertains equally to energy security. This highlights the importance of developing an energy security design that goes beyond the focus of Russian energy coercion and hybrid warfare. The European Commission developed an intricate understanding of the role that energy plays in societies and state-level affairs. This understanding was then translated into measurable goals toward enhancing efficiency, diversifying sources, reducing demand, increasing producing, and developing a dynamic blend of energy types and infrastructure. These goals would be implemented in overarching policy and supported by legally binding obligations with tangible repercussions. Furthermore, states that choose not to comply with EU policy would face the consequences associated with being ostracized from the liberalized market and economic benefits of the EU.

EU member states are motivated to abide with energy policy implementation through economic prosperity, improved quality of life for citizens, and the prospect of energy independence from Russia. The latter of these three incentives is especially attractive for states in

the former Soviet Union territory. As states integrate the EU policy for energy security into their own national legislation and strategies, there are noticeable changes in overall political and economic stability. However, the overarching directives from the European Commission enable member states to implement the guidance through state-level policy and legislation, which in turn establishes a foundation for energy security.

Energy security is an evolving and dynamic construct and must be flexible in its definition and characteristics because energy and geopolitics are persistently evolving. For the EU and Russia, energy security is a balancing force to stabilize the union against Russia's disruption campaign and strategies designed to subjectify European states. Energy coercion allows Putin and the Kremlin to influence the decision-making process of consumer states and therein compromise the sovereignty of those states. Capturing the effectiveness of energy security in policy and practice is a critical component in measuring the success of EU policy and strategies to counteract Russian aggression.

Measurable Policy Effectiveness

The following five questions posit five measures of effectiveness in energy security and counter policy: (1) Does the Commission's policy address the situation, parameters, and challenges in a clear and concise manner? (2) How will member states transpose that policy into national frameworks? (3) What are the pillars of that policy? (4) How does the EU and State governing bodies measure successful implementation? (5) What are the effects of energy security policy on politics, economics, society, and defense? By answering these five questions, one can affirm that the energy security program and policy within the EU has been and remains an effective course of action to counter Russian energy initiatives.

First, the *European Energy Security Strategy* and *European Union Global Strategy* highlight the present situation between Russia and the EU. There are a number of issues ranging from Crimea to cyber-attacks against European states that are addressed in these two strategies, but most importantly is the pinpointing of a systemic problem in the region: Russia's disruption tactics. Both strategies also prioritize energy as a critical vulnerability being exploited by Russia, which concentrates the demand for promoting energy security. The *European Energy Security Strategy* document clearly and concisely frames the issues and vulnerabilities in the energy sector and presents a definitive path toward limiting those vulnerabilities. Overall, the answer to the first question is yes and the European Union poses a strong establishment of the principle problem that energy security seeks to alleviate.

Second, member states are required to incorporate EU law and directives into national legislation by a pre-established date which is determined by the European Commission. The EU then monitors the implementation of its directives in order to assure they are incorporated and done so accurately. "If this is not the case the Commission opens an infringement procedure for 'noncommunication'. The Commission may also initiate an infringement procedure in the case of incorrect transposition of directives" (European Commission, n.d.). This statement highlights the requirements associated with implementing EU policies into state-level legislation. It also confirms and validates that states subordinate to the EU must follow and abide by EU directives, including those within the parameters of the energy security strategy.

Third are the pillars that make up functional energy security in practice. The European Commission wrote into the *European Energy Security Strategy* the following fundamental elements that comprised energy security.

1. Immediate actions aimed at increasing the EU's capacity to overcome a major disruption during the winter 2014/2015; 2. Strengthening emergency/solidarity mechanisms including coordination of risk assessments and contingency plans; and protecting strategic infrastructure; 3. Moderating energy demand; 4. Building a well-functioning and fully integrated internal market; 5. Increasing energy production in the European Union; 6. Further developing energy technologies; 7. Diversifying external supplies and related infrastructure; 8. Improving coordination of national energy policies and speaking with one voice in external energy policy. (European energy security strategy (52014DC0330), 2014b, p. 3)

These pillars are the critical components that the Commission has prioritized and that will yield the measurable results in terms of changing the energy industries on a state level. Establishing these goals was the first step in developing a balanced policy toward achieving or improving energy security, but the construct of energy security must be continuously evolving. The European Commission's webpage identifies a consolidated list of priorities for energy union and climate. These are a development of "security, solidarity, and trust", "fully integrated internal energy market", "energy efficiency", "climate action- decarbonizing the economy", and "research, innovation, and competitiveness" (European Commission, 2018).

The strong focus on improving these elements is what leads the EU to strengthen overall energy security and protect vulnerable aspects of energy from Russian or other foreign energy initiatives. Moreover, the EU can concentrate on all these priorities without directly confronting or isolating Russia. One of the most beneficial aspects of energy security is that it focuses on internal posturing and improvements that project external defense measures. This energy security apparatus aids in balancing geopolitical tensions between the Western powers and Russia.

Furthermore, these pillars go beyond strengthening energy security by enhancing political stability, economic production, and quality of life for the population. The goals set forth in the energy efficiency directives, for example, act as a forcing mechanism to promote decarbonization, improve environmental conditions, and further develop efficiencies.

The fourth measure of effectiveness revolves around the EU's ability to measure successful policy implementation. EU law is clear on this construct in that if a member state does not transpose the EU legislation into state-level legislation, then there will be repercussions. As previously discussed, EU laws are legally binding and states that fail to comply will be recommended to the Court of Justice. Furthermore, successful policy implementation can be observed in energy industry statistics. The case studies from previous chapters showed empirical evidence of improvements, or failures to improve, by member states on issues laid out in the pillars of the *European Energy Security Strategy*. In some cases, states not compliant with energy directives are already being recommended to the Court of Justice for noncompliance adding to the assurance of successful policy implementation. The combination of examining state-level policies and long-term energy statistics provide the evidence necessary to establish if a member state has successfully implemented an energy security policy. As a whole, the EU has considerable success in ensuring EU policies are transposed to state-level legislation, which gives weight to the fourth measure of effectiveness in energy security.

The final question resolves to examine the effects of energy security policy on politics, economics, society, and defense. These four aspects make up the majority of considerations when it comes to analyzing the overall stability of a state. Energy plays such a pervasive role in nearly every aspect of a state that the concept of energy security resounds throughout politics, economy, social science, and defense. In order to consider the effectiveness and effects of energy

in these aspects, there must be an established definition associated with an assessment of energy's effect on that definition.

Claude Ake (1975) posit that "Political stability is the regularity of the flow of political exchanges" (p. 273). This established that provided there is a smooth transition of authority between leadership through a political structure then the political atmosphere is relatively stable. By this account, the influence of Russian energy initiatives on European leaders is a direct implication of a strategy to politically destabilize another nation. Energy's effects on the economy, social trends, and defense are relatively well known to the general public and therefore influence the voting decisions of citizens. Moreover, consider the events that transpired in Ukraine with their political collapse and the timely events associated with the gas shut offs. There are several other variables involved in the Ukraine Crisis, but the degraded energy security situation enabled political instability. The energy security policies and framework for policy implementation within the EU facilitate the transition of policy between political leaders. Policy and energy security extend on a long-term scale with most European state policies extending to 2030 or 2050. This long-term goal of stable energy sourcing, production, and use improves upon a stable political environment.

The International Monetary Fund (IMF) defines economic stability as "a matter of avoiding economic and financial crises, large swings in economic activity, high inflation, and excessive volatility in foreign exchange and financial markets" (IMF, 2018). Energy security serves as a stabilizing effect on markets and financial systems throughout Europe and the global economy. The language that supports energy security in relation to economic stability is written into the *European Energy Security Strategy* and Commission's directives. The importance of maintaining and fostering economic prosperity resounds throughout the multilateral framework

of the EU and member states. In cases where states produce energy resources, energy drives the economy, and in all cases where states import energy resources, the market impacts the economy. Furthermore, maintaining and implementing energy security policy enables economic stability, therein establishing economic stability through energy security.

Social unrest projects instability in politics, economy, and nearly all issues relative to state governance and affairs. The World Economic Forum defines profound social instability as “major social movements or protests that disrupt political or social stability, negatively impacting populations and economic activity” (Marsh & McLennan Companies, Zurich Insurance Group, 2018, p. 61). This captures the concept of how social unrest is connected to energy security in that as fluctuations in energy affect a state, they affect households and populations on an individual or family level. One example of this is in the Ukraine Crisis, where several of the natural gas shut-offs occurred in the winter when families rely the most on energy as a heating source. Through decarbonization policies and environmental regulations, the European Commission is enhancing the air and water quality. Energy efficiency directives improve affordable energy for households and provide families the ability to save money on energy costs. The EU’s policies and development of energy security have enabled the improvement of social stability in conjunction with the improvements to the stability of politics and economy therein validating the measures of effectiveness in social stability.

Stability in defense should be examined from two directions; internal and external defense measures. Internal defense stability is controlled by civil defense authorities and the law enforcement architecture. External defense stability is established and maintained by state military authorities and NATO, which protects interests against foreign threats. The stability of civil defense as it pertains to energy security is interconnected to the degree of social unrest in

current affairs. Again, referring to the Ukraine situation, the local police force could not control the civil unrest that occurred in the midst of the turmoil and political disruption. While energy security was not directly connected to the Ukraine riots of 2014, it was a compounding variable. External defense stability is directly connected to energy security in that militaries depend on energy for mobility and movements. Military organizations depend on energy as a fundamental fighting force component that fuels command and control, vehicles, and combat support infrastructure. Energy security in terms of defense is two-fold in an offensive and defensive manner, whereas militaries need to protect or secure domestic energy supplies and will target or disrupt enemy energy supplies. The EU's energy security policy solidifies the much-needed energy supply for NATO and establishes a protected infrastructure for the military for exercises or if an armed conflict should occur.

Case studies Assessments

After analyzing the case studies from this thesis, there were two that stood out the most as clear examples of success in implementation and positive traction toward energy security. The Baltic States and the Nordic States have shown that while it is important to strive and move toward the development of energy security, there may be cases where it is not cost effective at this time or there are no other alternatives to Russian energy. For the Nordic States, Finland still relies heavily on Russian oil and natural gas, yet it is not entirely dependent on those Russian sources. The framework of the *European Energy Security Strategy* does not imply that states immediately sever all connections to Russia, rather it posits a multidimensional approach to achieving energy security. Establishing reserve supplies, increasing efficiency, and developing renewables sources of energy as a means to create stability for the state to lean on.

In understanding these principles, cases where European states continue to purchase large quantities of Russian energy are not necessarily undermining the integrity of the *European Energy Security Strategy*. It is possible that these states simply have no other options or that they are using the cost savings from the cheap Russian energy to develop other pillars of energy security from the *European Energy Security Strategy*. Southern European States such as Greece and Bulgaria are good examples of energy security initiatives in constrained environments. Greece has been experiencing significant economic issues over the last decade and is limited in its choices for energy supplies. Bulgaria is situated on a critical junction point between the European continent and Asia through Turkey, yet it still is heavily dependent on Russian energy assets. Both states, despite struggling economies and dependence on foreign energy, are making significant strides in developing renewable energy and integrating with the European market. In recent years, the Balkan States have established plans for energy sharing through pipelines and other means.

These statements draw the conclusion that the *European Energy Security Strategy* provides an effective design for energy security toward state stability throughout the Union. Beyond the EU, states such as Belarus and Ukraine remain outside the fray and support of the EU energy framework. The measures of effectiveness established in this thesis need only slight modifications to still apply to these states. After rephrasing the key questions for measuring effectiveness of the *European Energy Security Strategy*, it is possible to visualize national policies toward energy security and their effects on state stability without the oversight of the EU. The conclusion from the assessments of the case studies in this thesis were that the non-EU states exhibited the ability to produce energy security policy, but absent the EU's strategy and

design, these states have been largely unsuccessful in developing state stability and energy security.

Closing

Putin, the Kremlin, and Russia are undoubtedly undermining the sovereignty of states through Europe and are executing a disruption and influencing campaign to destabilize the EU and member state governments. Energy is pervasive throughout modern society and exists in politics, economics, societal stability, and defense. Moreover, energy security is a critical tenet to maintaining overall state stability, and the EU has recognized this importance through extensive research and policy implementation. Member states have transposed these EU policies into state legislation and implementation of Commission directives are ongoing. Energy security is a shared competence, allowing for both EU and member states to enact legislation for energy so long as member states do not contradict or negate EU policies. This provides a compounding effect toward establishing and strengthening energy security. These improvement and implementation measures strengthen the effectiveness of the energy security program in the EU. Furthermore, the energy security plan hardens the EU and reduces the vulnerabilities that Russian energy initiatives seek to exploit. Reducing dependency on Russian energy, decarbonizing, enhancing efficiencies and the other pillars of energy security will remain a priority to the EU for the near- and long-term future.

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