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Energy diplomacy between Russia and the United States: An overview of trends and prospects under the Trump Administration

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Finally, I would like to dedicate my work to both my grandmothers and my grandaunt.

Edoardo Corriere

Сейчас люди слабы, но и то преобразовывают поверхность Земли. Через миллионы лет это могущество усилится до того, что они изменят поверхность Земли, ее океаны, атмосферу, растения и самих себя.

Men are weak now, and yet they transform the Earth's surface. In millions of years their might will increase to the extent that they will change the surface of the Earth, its oceans, the atmosphere, and themselves.

Konstantin Eduardovich Tsiolkovsky (*Plan of Space Exploration*)

Introduction

Set against a complex and rapidly changing scenario, the work seeks to outline the impact energy has on the diplomatic relations between the United States and the Russian Federation, especially now at a particularly critical moment in the history of the relations between these two countries. To this end, a brief historical review of the relevant literature is presented, with a view to following the evolution over time of energy policies, and complement it with specific case-studies, which are meant to shed some light on recent and future developments.

In general terms, energy is perceived by both Countries as a powerful diplomatic lever to enhance security, boost growth and affirm influence. Until sanctions were imposed in 2014, the rule of the game was to enjoy a mutually beneficial technological and business cooperation, while monitoring their respective areas of influence in an effort to keep the balance.

Sanctions have drastically changed the status quo, opening the door to unpredictable developments. The Kremlin has added momentum to its actions in the EuroAsian and Asia-Pacific areas, strengthening and consolidating new and old relations in an effort to prove it is still a country to be reckoned with. The overall sentiment, or rather a nostalgia of gone by times is still strong and the government rides the tide. The U.S. has made remarkable advances towards energy independence through what has been defined as a “game changer” - the shale revolution - which has paved the way to the current theory of energy dominance. Securing energy independence would make the U.S. less keen in getting involved in conflicts abroad, as President Trump indicated already stating he intends to withdraw from Syria, and focus on growth and security at home. A power vacuum has taken shape, which is also impacting U.S.-Europe relations, but which can be used to another nation’s advantage.

Relations between Washington and Moscow have been on a critical course for some time now, recently hitting a historical low. Moscow has shared a commitment for peace and security with the U.S., supporting and co-leading diplomatic efforts to get Syrian negotiations finally off the ground, while competing with Washington as a reliable partner and a strong oil and gas supplier. The U.S. is determined to stay focused on ‘America first’, consolidate the current economic growth, maintain its sphere of influence unchanged, and speed up the process which will eventually get it to be the leader of the global oil industry, as the IEA report for the next five years predicts.

Today’s geopolitical landscape is rife with tension and mutual distrust between these two countries, but it is an undisputable fact that stabilizing and reconnecting relations between them is fundamental for global security. New technologies increasingly connect the energy system, whose policy tools need to address a new set of physical and cyber risks to energy supply and infrastructure. U.S.- Russia cooperation is key in several crucial areas, from the Middle East to the Arctic, from energy to countering terrorism.

Taking a closer look at Russia, it appears clear that the current international and national situation is influencing the Kremlin’s diplomatic actions and energy strategy. Several sources of concern have become manifest, such as an increasing dependence of Russia’s state budget on oil revenues, an upward trend in Russian oil prices, and a shrinking global oil market. Through energy, Moscow has developed a “soft power” that has become deeply ingrained in its foreign policy, all the more so since Mr. Putin was elected president, and Russia started its resurgence as an international power. In the two decades that followed the dissolution of the USSR, Russia engaged in a grandiose modernization process, while its role as a super power gradually declined. Relations with post-Soviet countries changed. They started looking west in search of closer relations with Europe. Moscow’s influence and relevance as a trading partner for the majority of those countries markedly shrank, while other economic partners, such as China, came forward. A well-established mesh of interdependence across the vast territory of what was once the Soviet Union was broken

apart, leaving Moscow with the daunting task of re-imagining a new future for itself, first of all at home and in the world, and establish new balance of power and networks, if it wanted not to be excluded from world affairs and keep its foothold in the international community. A situation best defined by what president Vladimir Putin said in his 2005 State-of-the-nation address: "... the demise of the Soviet Union was the greatest geopolitical catastrophe of the century," since it brought about a drastic change in the international system, and major domestic unrest.

Reforms were key then, and are still now. Analysts speculate whether Mr. Putin, now officially in his fourth term as President, will finally put reforms at the top of his agenda and take the country out of the current stagnation. Russia's giant fossil fuel reserves are not a panacea, and to promote growth, the government needs to carry out vast economic reforms and have the country's energy policy grow above and beyond its role as a 'soft power'.

The U.S. economy is large and diversified, with an abundance of both producers and consumers that coexist, which makes a definition of national interest rather difficult, especially in the light of the new Administration's approach to energy and its 'America First' strategy. The typical tradeoffs that come with energy policy, seen as a set of shared objectives to promote economic growth, national security and environmental protection, often are in conflict, as in the case of promoting a new era for the coal industry, which could in turn bring about extensive environmental damage. The same applies to green-lighting the Dakota pipeline project, which could imperil drinking water and jeopardize archaeological and sacred burial sites. Development and prosperity should not be pursued to the detriment of our planet. In 2001, Senator Edward Kennedy said it clearly when commenting on new long-term energy solutions: "I don't think America can just drill itself out of its current energy situation. We don't need to destroy the environment to meet our energy needs. We need smart, comprehensive, common-sense approaches that balance the need to increase domestic energy supplies with the need to maximize energy efficiency."

Modern U.S. energy policymaking has always considered independence as its n.1 priority. Under President Trump the focus has shifted from achieving independence to pursuing energy dominance. The latest IEA report has shown that the U.S. will become the leading oil producer in the world in the next five years, thus bringing new supplies to global markets. At the same time, it is also becoming a major natural gas exporter, rivaling Russian energy dominance over Eastern Europe.

The impact of such a radical change has a major strategic significance for it ensures a supply cushion for the U.S. and its allies at a time when oil supply to markets is threatened by turmoil in several oil-rich nations such as Libya, Nigeria and Venezuela.

However, the ‘America First’ approach may leave the country more isolated, though President Trump took great care to state it would not be so. Under his Administration, the U.S. may be perceived as an inwardly focused superpower, whose international role is defined more narrowly at a time when the world has grown ever more global, and more integrated. Today’s strong drive to independence may be out of joint in a landscape where global commodity markets have emerged, climate change is a global threat, the nature of new energy technologies is increasingly connected, and the nation is about to become an energy superpower. The current scenario points towards more interconnectedness, interdependence, competition, and supply diversity.

The primary research method for this study is literature review and an analysis of both countries’ national energy strategies. Both qualitative and quantitative data are collected and carefully analyzed. Chapter 1 provides a historical review and an analysis of current theories; Chapter 2 focuses on ties between foreign and energy policies and how they shape US-Russia relations. Finally, Chapter 3 outlines a conceptual framework for potential US-Russia energy cooperation through the analysis of several cases and situations.

Chapter 1: A historical review and analysis

1.1 – Energy policing in Russia: a brief review

Engaging in carrying out a literature review to follow the evolution of energy policies in the U.S. and the Russian Federation is quite a learning, and challenging experience, considering the wealth of resources and the in-depth analyses they offer.

Truth be said that both the United States and the Russian Federation attach the uttermost importance to energy, so much so that they use it - at different degrees and in different ways - as a powerful diplomatic lever to strengthen influence, enhance security and economic growth. At a critical time, when relations with the U.S. are deteriorating, Moscow needs to be seen as an energy giant as well as a reliable partner and oil and gas supplier, which is also concerned about international security and stability. The U.S. must counter what may be perceived as a decline in its moral standing, a sense of retrenchment of its power. It must stay on track to keep its promise and achieve a leadership position in the global oil industry in the next five years, while solving crucial trade issues with major partners, such as China and Europe. The U.S. shale revolution has given new momentum to the country's energy industry. Russia's oil and gas industry has been engaged in mitigating the effect of Western sanctions, which followed the annexation of Crimea in 2014. A 400-billion-dollar energy agreement with China was among Moscow's first responses to the wave of sanctions. It was a historical 30-year deal Gazprom signed with Beijing, reaffirming the Kremlin's turn to the East and consolidating an ever-stronger cooperation that in January 2018 recorded a 20.8% increase in trade. However, the current stagnation of the Russian economy makes the two countries unequal players, and motivates Moscow to enhance its support to the Eurasian Economic Union (EAEU), which is also its best tool to stem Chinese increasing influence on Central Asia. The EAEU, which comprises Belarus, Kazakhstan, Armenia, Kyrgyzstan, and Russia, as its strongest

economy, is the world n.1 oil producer accounting for 14.5% of the world's oil production, the second largest natural gas producer with 19.3% of the world's production and the fourth global electric power producer. It represents a customs and economic union, that has felt the blow of the sanctions imposed on Russia. Another open front for Russia is Europe, where its influence as the main oil and gas supplier is ebbing, due to the emergence of other producers, the U.S. included. A case in point is Poland, whose state-owned oil and gas company PGNiG, recently signed a five-year deal to buy American liquefied natural gas.

Several economic reforms, which are urgently needed to overcome the current stagnation, are still on the President's agenda, which he said will be taken care of.

In 2011 the Journal of Eurasian Studies published a paper by Randall Newnham of Penn State University, USA, entitled "Oil, carrots, and sticks: Russia's energy resources as a foreign policy tool." The study develops somehow along the lines of a paper by A.E. Stent, entitled "Restoration and revolution in Putin's foreign policy", published in 2008 in "Europe-Asia Studies". Stent maintained that the resurgence of Russia as an international actor was driven by its economic recovery, and that Russia was assertively going through a process of growth, both politically and economically in order to restore its international status and establish itself as a leading economic power. In his study, Newnham argued that the role of oil and gas reserves as a foreign policy tools increased steadily, since Mr. Putin took office. The energy industry has always represented the backbone of the country's economy, and being fully aware of it, the Kremlin has been focusing for some time on ways to diversify its economy.

Russia's vast energy power has been used to reward its allies or punish countries that defied it, dispensing 'carrots', e.g. abundant supply of oil and gas at subsidized prices, as in the case of Belarus or Armenia, and 'sticks', e.g. cutting energy supply to countries at odds with Moscow, such as Georgia or Ukraine. The study looks at the growing influence of petro-policy of Moscow and other energy-rich states' as a likely cause of concern for oil-

importing countries. But that was true back then. In just about seven years some dramatic changes have occurred globally and since 2014, Russia has been hit by several waves of sanctions imposed by the U.S. and the West, which have penalized its energy industry to a large extent. The latest IEA maintains that the U.S. will soon be independent and surpass Russia as a world energy power. Other energy-rich countries are emerging in the global oil market and geopolitical interests are shifting. The Kremlin's petro-policy has been adjusting to a changing scenario. To better understand the historical, economic and socio-political processes that have characterized the evolution of Russia's energy policy and strategy over time, the following literature review focuses on three works that combined, help to provide a more exhaustive picture.

"Russia's Energy Policy, 1992-2005" focuses on the post-Soviet period. It is a study conducted by a team of Russian policymakers and American analysts, Leonard L. Coburn, Vladimir Milov and Igor Danchenko. The authors set out to identify the limits and key-problems in Russia's oil and gas industry in the relevant period. They argued that Russia gave the false impression of being a unified and well-defined energy actor, whose energy policy was based on the government document "Energy Strategy of Russia for the period up to 2020". Moreover, it showed it could count on a well-structured regulatory system, both for the domestic market, i.e. pricing, licensing, access to transportation infrastructure, and international market, tariffs, customs, export quotas. Russia's energy policy also had to comply with broader economic policies.

In post-Soviet Russia, market forces and competition, private initiative and enterprises were mostly theoretical constructs in the eye of government officials and energy economists, who found it hard to reconcile themselves with the idea of an energy sector independent of centralized management. True to say that an attempt at deregulation and privatization was made between 1992 and 2004, but it was mostly limited to the energy sector. Following the deregulation of oil, oil products and coal prices in 1992-1993, profits grew. Coal companies were de-nationalized in 1999, while the privatization process of oil

companies extended from 1994 to 2004, thus pushing down the government's stake in energy companies to below 10%. It was during President Putin's second term, in March 2004, that the situation was reversed. Those advocating a centralized economic approach to ensure the growth of the energy sector, became very vocal and succeeded in strengthening the government's influence in the most critical segments of the industry, while preserving the centralized structure of energy companies. The energy sector became a 'supporting actor', moved into a sort of a secondary economic sphere, with the task of supporting and serving other sectors of the economy. It was to be the prime contributor to the government's budget. It was hit with high taxes and no policy to reinvest profits in the oil and gas industry.

The government implemented strict balance regulations, and price subsidies for consumers. that in some cases were given energy for free. As much as 85% of end-user energy was sold to final consumers at regulated price rates, and the entire price regulating system was significantly influenced by external macroeconomic, social, and industrial factors. These measures all weighed down heavily on energy companies and contributed to the sector's production crisis. Unlike the rest of the economy, the energy market did not benefit from price liberalization.

The study maintained that the development of the energy sector was slowed down, and the balance and integrity of the energy market disrupted, by state intervention, an increased pressure, and the implementation of a host of restricting regulations. The energy policies and strategies that were promoted and implemented in that historical period, failed to take into account the real market environment. The reason why they failed is to be found in the lack of understanding by the government, and more specifically by those in charge of planned economy, of both the motivations of market agents, and emerging economic realities. The focus was on the drafting of long-term energy production plans, based on forecasts that rarely proved correct for any long stretch of time, rather than identifying and promoting energy policy priorities, and the economic mechanisms needed to achieve them.

Market signals were ignored. The uselessness of energy strategies became all the more apparent when the government was unable to fulfill its goals. The “Energy Strategy of Russia for the period up to 2020,” did not provide clearly for economic incentives and mechanisms indispensable to accomplish and boost growth.

Hence, Russia’s energy policy was fragmentary and contradictory. It was strongly influenced and defined by short- and medium-term interests that slowed down and limited the energy sector. Economy was also impacted, and its growth was conditioned by the industry’s ability to diversify export routes, and exported energy commodities in an effort to mitigate a high-energy intensity economy. The authors thought that both elements were key to achieving economic sustainability and could be easily secured by designing a new energy policy, that promoted further economic liberalization and decentralization, attract private capital and support private initiatives to diversify oil and gas exports.

By focusing on the above study, American analyst, Matthew J. Sagers discussed his personal point of view on this matter in his work entitled “Russia’s Energy Policy: A Divergent View”. As theorized by Leonard L.Coburn, Vladimir Milov and Igor Danchenko, he confirmed the role played by the factors they discussed in their work, which also limited the country’s economic growth. Russia’s policy trend in that period was an “ad hoc set of actions by the bureaucracy to gain new levers of power in the strategically important energy sector”¹. This can be seen, Sagers argued, also in the government’s efforts to use national champions like Rosneft, that already had a privileged position, to increase state control and intervention in the energy sector, while weakening private companies like Yukos (that was dismantled and incorporated by Rosneft). Sager went on to say that broadening economic reforms and promoting economic liberalization could not be a feasible solution, especially since it was at odds with the country’s reversion to statism and an era of greater centralized control under the Putin administration.

¹ Vladimir Milov, Leonard L. Coburn and Igor Danchenko, “Russia’s Energy Policy, 1992-2005,” *Eurasian Geography and Economics* (2013)

Government regulation and state intervention, combined with the lack of diversity in energy export routes and markets and an oil-intensive economy slowed down growth in aggregate oil and gas demand. Crude oil exports were liberalized in 1995 and producers could choose to export their products either via pipeline or via river or rail transport. To diversify export flows, the government launched projects like the Baltic LNG initiative and the East Siberia-Pacific pipeline, while promoting and establishing energy agreements and cooperation with China. However, Milov and co-workers argued that such projects were state-led and not efficiently implemented, and failed to take into account private sector capital and initiatives that were aimed at solving the same problem. In his work, Sagers agreed with Milov and coll., and mentioned YUKO's proposed Angarsk-China oil pipeline, that the Kremlin abrogated in favor of more expensive and less efficient state-controlled projects.

When it comes to Russia's domestic oil product market and the government's approach to domestic oil pricing, Sagers disagreed with the analysis made by Milov's and colleague. He argued that it was the upward pull exercised by international price trends, rather than the already existing regional monopolies, the n.1 cause for the substantial increase in product prices in Russia. Moreover, the gap between retail and wholesale prices could be ascribed to high transportation costs and the small number of existing refineries (due to Russia's geographical characteristics). Sagers criticized the government for focusing too much on crude at the expense of refined products, that were more in demand. He was also critical of the privatization process, which took place in mid 1990s, which put all of the region's infrastructure in the hands of single companies (thus creating regional monopolies and triggering fierce competition in regional retail markets). Finally, Sagers also defined the policies the government implemented in that period as detrimental and limiting for the energy sector, adding that also the rationalization and modernization process greatly suffered from them.

In his work entitled “Russia’s Energy Diplomacy: A Political Idea Lacking a Strategy,” Mr. Andrew Monaghan analyzed the way Russia’s energy policies were designed, while trying to explain the different meanings built in the term “energy superpower”. Monaghan argued that the country’s main goal is to efficiently exploit and profit from its massive energy reserves. However, Russia is faced with several challenges, such as an increasing dependence on mature fields, inefficient extraction techniques and stagnating production. A major source of concern for Russia’s strategic partners and customers, Monaghan pointed out, is the country’s vast energy reserves and their questionable sustainability and stability. Specifically, he raised several questions concerning the cohesion and consistency of Russia’s energy policy, especially the Kremlin’s intention of reasserting and strengthening state intervention and control on the energy sector. Several Russian private energy companies – like Yukos – were taken over or dismantled and later incorporated by state-owned companies, while foreign involvement was carefully reconsidered. As pointed out by one Russian commentator, the ‘most critical step for Russia is to resolutely denounce the colonial style agreements [the Production Sharing Agreements, PSAs] with the global monopolies signed in the early 1990s which either directly violate Russian laws or cause unacceptable damage to Russia’ (Delyagin 2006).

State monopolies, characterized by a low level of efficiency, dominated production leading to stagnation while undermining both Russian and foreign private investment in the sector. Monaghan mentioned the break-up of Yukos, and the pressure exercised on international pipeline projects, such as the Shell-led consortium in the Sakhalin II, as examples that showed the lack of transparency and accountability in the taxation system as well as the property and licensing legislation. As a result, new and rich fields in key strategic areas such as the Arctic and Eastern Siberia regions (that could also represent the solution to Russia’s energy sustainability and stability problems) remain under developed and partially unexplored. Several large international energy companies, such as BP and Exxon, voiced their readiness to enter joint ventures with Russian oil companies and they did contribute

to develop some major fields. But the scope of the investments that would be needed to fully exploit Russia's vast potential was challenging.

Monaghan agreed with Milov and his colleagues in arguing that the government still lacked the necessary mechanisms of influence over independent energy companies and energy giants, because of corruption and personal short-term interests. On top of it, there was a lack of coordinated action and planning. Competition among energy policy actors and between national champions and the state itself further worsened the situation and undermined cooperation. However, Monaghan noted that more state control and intervention in the energy sector could lead to stronger competition among what he identified as the 'main vehicles' of such control: Gazprom and Rosneft (as proven by the struggle over the assets of Yukos as well as the failed attempt to merge the two giants in 2004). National champions often compete to secure their own interests and strategic assets, while increasing profits. According to Monaghan, despite being considered as the government's "number 1 agent" in both its domestic and foreign policy, Gazprom's energy strategy does not always coincide with Russia's. Although powerful interests support Gazprom, others do not.

The way by which Russia's vast energy resources have been exploited was evidence to lack of coordination, transparency and consistency. Monaghan argued that the interests at play in Russia's energy industry were many and diverse, including divergent views between ministries as whether to decrease or maximize production, tilting the domestic energy mix towards coal and nuclear energy, and discussing over investing some of the assets of the Stabilization Fund to develop oil and gas infrastructure. This only contributed to making Russia a strongly divided energy actor.

When discussing the term "energy superpower," Monaghan explained that opinions may differ. Although Putin and Gazprom have repeatedly defined Russia as a reliable supplier, as well as a stable and secure energy source, its record would tell a different story, as

discussed above. Some maintained that Russia was challenging American hegemony through its energy policy, while others, like Milov himself, saw the country's energy empire as a sort of geopolitical revenge and payback for losing the Cold War. Therefore, the term "energy superpower" as applied to Russia has both positive and negative meanings. On one hand, the country is seen as the largest non-OPEC energy producer, that strongly contributes to global energy security and stability, on the other it is read as an energy actor which uses its resources to secure its national interests, dominate its neighbors and strengthen its influence on the international community. Russia's energy super power status entails some discussion about the country's energy policy that has impacted Moscow's relationship with the international community. President Putin has tried to distance himself and Russia from such a terminology. He argued that "energy superpower" was a counterproductive term, since it echoed a Cold War feeling and undermined the country's prestige and relationships with the international community.

Monaghan himself argued that Russia is not a monolithic and unified actor, since it is bound to face the challenging task of managing its diverse energy resources while dealing with several actors that strongly affect the market. He added that Russia strongly suffers from not having a well-structured energy strategy for the development of its oil and gas industry. The author agreed with Milov and coll. in saying that it was "hard to believe that Russia will be able to play a coordinated energy game targeted to achieve specific goals in the international arena."² Monaghan deemed Russian energy diplomacy unpredictable, because it is mainly driven by instinct and short-termism.

² Vladimir Milov, Leonard L. Coburn and Igor Danchenko, "Russia's Energy Policy, 1992-2005," *Eurasian Geography and Economics* (2013)

1.2 – U.S. energy policy: independence v interdependence

American energy policymaking today seems to develop very much in the wake of the same firm belief that has been at the core of the energy agenda of every American President for the past 40 years, i.e. oil import independence. The remarkable results achieved by the shale revolution have given a new meaning to it, and President Trump has taken it one step forward declaring he is working towards energy dominance. As for past policies, a question arises whether U.S. energy policy under President Trump is being designed to meet multiple objectives related to economic, social, and market issues, or is conditioned by political needs to keep and continue to build stakeholder support among several constituencies.

Several of the previous Administrations energy measures have been overturned in favor of a stronger oil and gas industry and to the detriment of the environment. The so-called pipelines politics has picked up again, to the extent of initiating legal proceedings against environmental organizations. Proposals to cut spending by some 70% for solar and wind power industries have been put forward through the Office of Energy Efficiency and Renewable Energy (EERE). President Trump has clearly taken a major step away from the previous presidential administration's vision, which is best represented by his decision, as of June 1st 2017, to withdraw from the Paris Accord. The decision, which will become official in 2020, rests on the belief that the U.S. was given an unfair share of responsibility in meeting global energy goals.

A new era for the coal industry has set in, as promised during the electoral campaign. President Obama's three-tiered proposal, the 2014 Clean Power Plan, which pursued the goal to curb carbon emissions, and move the country to renewable and clean energy faster, was first reviewed under the Trump Administration then repealed by the EPA.

American expert, Arnold B. Baker, in his work “International Economic Interdependence and U.S. National Energy Policy,” reviews key aspects of American energy policy history and outlines policy-making complexity, while carefully analyzing the challenges international economic interdependence may raise. Each new U.S. administration, he maintains, designs and follows its own energy policy approach, often repealing several policies and regulations that prior Administrations implemented. As a result, development is strongly limited, and progress towards achieving clearly stated energy policy objectives is hindered. By not behaving as a unified actor with a coherent and well-defined energy strategy, the oil and gas industry would never flourish.

To prove his point, Baker mentions several comments published in 1981 Atlantic Council Reports. “Throughout this decade, oil will remain the single most important commercial fuel, while such other primary and secondary energy sources as natural gas, coal, nuclear power, electricity, and energy from renewable sources must be relied upon increasingly.”³ And also “Reducing demand for energy and securing access to oil while developing other sources will continue to be the major energy preoccupation of the United States and other governments [...] There will be no significant short-term relief for the United States from dependence upon oil imports, given the lead times required to develop existing resources and alternative energy sources on a sufficient scale, achieve significant conservation, and generally alter the pattern of energy end uses. The strategic implications of this continuing dependence will bear increasingly on U.S. leadership of the alliances [...] Until the United States can clearly demonstrate both the capability and the will to fully develop alternatives to oil, as well as its remaining oil resources, and thus reduce the leverage of the exporters, it is probable that oil exporters will continue to employ oil as a means to achieve political as well as economic objectives.” The author argues that such claims resonates strongly in

³ Arnold B. Baker, “International Economic Interdependence and U.S. National Energy Policy,” International Association for Energy Economics (IAEE)

today's scenario, and that little progress has been made in the past two decades, despite public policy efforts and energy price swings.

In his analysis of U.S. energy policy, the author starts by defining the term “energy security” and its evolution over time. “Energy security”, in a stricter sense, means the provision of energy supplies needed to sustain and fuel the military system as well as related ones, to better guarantee national security. However, from a practical point of view, energy security is seen as supplying whatever energy the economy requires at a reasonable price, while considering other elements like cybersecurity and green energy, which are gaining momentum because of an ever-growing international interdependence. Such elements strongly affect energy policy actors and producers and create a dynamic and complex paradigm for public policy development and implementation.

Interdependence is the name of the game, since energy-economic interactions between consumers and producers influence other market segments, whose interactions fire back, get amplified, and can create a complexity that may not please public policy makers. Truth be said that even the most well-intended public policies sometimes need to be revised, as in the case of some U.S. energy policies for oil and natural gas, which the author uses to highlight the shortsightedness of the U.S. energy policy over time, arguing that they developed ex post, in response to political, economic, and technological factors, and that energy security as such was not among the top priorities of the country's public policy agenda until 2001.

To argue his theory, he reviews some milestones in the regulatory framework of the oil and natural gas industries. One good case in point is the Railroad Commission of Texas (RRC), which is one of the oldest regulatory agencies in the nation. In 1932 it was given jurisdiction over the oil industry, after legislature passed a law to limit oil production to market demand. Additional state regulations and laws were passed over the years to make the industry comply with the law, but oil production kept on escaping control. In 1935 the

Connolly Hot Oil Act was passed by the federal government to prohibit oil shipments outside of the RRC system, with a view to enhancing national security while maintaining excess U.S. oil production and stabilizing prices. It was in the 1950s when a mandatory oil program was implemented in an effort to contain the growth of oil imports, limit the country's dependence on foreign oil, keeping domestic oil prices, and supporting smaller U.S. refineries. It came to an end in 1973, when oil import pressure could no longer be dealt with through a system that over the years had proven ineffective. The program, supported by President Eisenhower, established quotas and import tickets with a view to limiting U.S. dependence on foreign oil.

U.S. imposition of economy-wide price controls in August 1971 boosted oil demand in the 1970s. Prices controls were in force for ten years, stimulated U.S. oil consumption and contributed to enhancing the global oil market. However, the country felt the blow of the two most-important oil price shocks, which occurred in 1973-74 and in 1979-80, respectively. Several factors contributed to the onset of the crises, Washington's policies towards Israel, the Iran-Iraq war, and the Iranian Revolution. Oil prices quadrupled while significant oil production was taken off the market. As a result, inflation soared and forced the U.S. to cut down on its money supply and quelled double-digit interest rates in the early 1980s.

Looking at the evolution in energy policymaking, mention should be made of what the 1977 Act indicated when establishing the Department of Energy: "to provide for a mechanism through which a coordinated national energy policy can be formulated and implemented," and to present to the U.S. Congress a "National Energy Policy Plan" every two years. A predictive approach that several experts criticized for it would not have been able to counter market effects and develop targeted policies.

The history of policies regulating natural gas starts a few years later than oil's. It was not until the late 1940s, early 1950s that natural gas production and delivery technology

improved, leading the Government to consider supporting it. Previously natural gas was not more than a waste by-product of oil production, which had to be ‘flared’. Jurisdiction over interstate natural gas trade was given to the Federal Power Commission, and in 1954 the Supreme Court established an industry wide wellhead price control to be applied to interstate natural gas trade. When the oil shocks hit, the industry suffered major gas shortages. As a result, the Natural Gas Policy Act was passed in 1978 with a view to gradually bringing together interstate and intrastate (which was unregulated) natural gas market. Price controls on wellhead natural gas prices were lifted in 1985.

According to Baker, developing U.S. energy policy is not easy since it plays out at several levels - federal, state and local. The Administration and the Congress are tasked with crafting new legislation, but interactions between the White House, cabinet officials, and key agencies are also very important. An energy policy is first developed by the Administration, and it is supposed to benefit the national interests. Subsequently it is discussed by the Congress, that acts in the best interests of its constituents. It is not uncommon that the Administration and the Congress hold divergent views, that are hard to harmonize, proving that they may be pursuing their own interests, rather than acting for a ‘common and greater good’.

As a way of conclusion, Mr. Baker believes that in the light of the above, American energy policies lack consistency and vision, especially in terms of what consequences they may have also on other economic and financial sectors. In this respect, the author postulates that specific, user friendly tools should be designed to develop, validate and support a dynamic decision-making process capable to take stock of the sector’s complex interactions of micro- and macroeconomic, energy, and environmental factors at the global and national level. He also calls on providing public policy makers and their constituents with targeted education in finance, energy and the environment, with a view to making better and more informed decision and ensuring an effective communication at all levels.

American energy expert, Peter Z. Grossman, shares Baker's opinion on U.S. energy policy. In his work, "U.S. Energy Policy and the Pursuit of Failure," he discusses how and why American energy policy failed by also analyzing several efforts made by the U.S. Congress as well as the Administration to deal with the continuing energy crises following 1973. As Baker did in his work, also Grossman mentions the oil price shock of 1973 to show that the OPEC oil export embargo on the U.S. had little effect. According to the Energy Information Agency oil imports rose steadily until 1978. In Grossman's opinion, the U.S. public opinion was weary of previous price spikes, and because of it, was strongly opinionated over the oil crises and politicians were asked to act.

As maintained by Baker, also Grossman believes that U.S. energy policy has failed mainly because of the failure of the policy-making apparatus. He explains that the first task in policy making is to successfully and efficiently identify and address the issues at hand. Such assessments, which in this case were market failures, were never clearly made, and consequently they weakened American energy policy. Monopoly power, public goods, information asymmetries, unanticipated risks and search frictions are singled out by the author as the main causes of the energy market failure. Government policies were incapable of successfully dealing with such issues. They mostly limited and redirected demand through quotas and regulation of supply channels. The Corporate Average Fuel Economy (CAFE) standards are a clear example of an effort by the government to this end. CAFE standards were implemented in 1975, following the 1973-74 OPEC embargo, with a view to reducing energy consumption by increasing the fuel economy of light trucks and cars. The government believed that this would improve the country's energy security, and protect consumers. The measure failed to take on the need to reduce the riskiness in supply, which is inherent in the oil markets. Grossman points out how striking it is that both the press and politicians did not attempt to correct the popular view and educate the public out of its perception of crises, while scholars and experts were ignored. Grossman theorized that the law prohibiting oil exports would be abrogated and that the U.S. would become an oil exporter.

In “U.S. energy conservation and efficiency policies: Challenges and opportunities,” authors Robert K. Dixon, Elizabeth McGowan, Ganna Onysko and Richard M. Scheer, take a look at U.S. energy policy from a different perspective. Their focus is on energy conservation and energy efficiency, and the role they played in shaping the U.S. energy policy, in an effort to reduce the country’s energy imports, environmental impact and trade deficit. To this end, the Federal government passed two key laws to strengthen U.S. energy conservation and efficiency policies: the Energy Policy Act of 2005 (EPAct05), and the Energy Independence and Security Act of 2007 (EISA). Energy security, environmental protection and economic development can be considered, in the authors’ opinion, as the main drivers of the push towards energy conservation and efficiency. An important role was also played by pressing issues such as the need to reduce energy imports, increase energy productivity and efficiency, and also cut down air and water pollution, as well as greenhouse gas emissions. As early as 1916, John Burroughs noted in his collection of essays, “Under the Apple-Trees”: “The fuel in the earth will be exhausted in a thousand or more years, and its mineral wealth, but man will find substitutes for these in the winds, the waves, the sun's heat, and so forth.” Many years later, Kenneth Deffeyes in his *Hubbert's Peak: The Impending World Oil Shortage* (2001), echoed Burroughs’ observations by saying: “In a sense, the fossil fuels are a onetime gift that lifted us up from subsistence agriculture and eventually should lead us to a future based on renewable resources.

However, the relevance and influence of energy conservation and energy efficiency has been modulated by market conditions, political priorities, environmental regulations and technological advancement. U.S. energy supply, delivery and end-use involve very different policies, technologies and markets, which constantly change. It is evident that U.S. energy conservation and efficiency policies have tried to catch up with an ever-changing political and economic landscape, and in doing so they have expanded the scope of energy efficiency and conservation provisions to embrace all sectors of the economy across the nation. These efforts have continued through seven Administrations, while the Energy Policy Act, and the Energy Independence and Security Act have come to deal also

with climate change and energy security as well, promoting a host of new initiatives at the regional, state and local levels; contributing to change the country's energy market while also improving energy efficiency and conservation across the nation.

Energy conservation and efficiency represent only one of the three elements that influence and define U.S. energy approach, which also includes traditional energy resources such as oil, gas and nuclear, as well as R & D in the field of renewable power systems and alternative transportation fuels. Both EISA and EPAct05 call for specific biofuels production volumes and stricter fuel economy standards, while promoting several initiatives that could strongly contribute to energy conservation and efficiency, such as technological advancement in electric and hybrid vehicles and smart grid technologies. By revolutionizing the transportation sector, the authors argue, the U.S. could significantly reduce oil consumption and fulfil its energy goals.

All three elements are key in greatly reducing U.S. energy imports that the team classify as the country's number 1 priority. Such technologies, the team argues, will play a major role in both policy development and implementation.

1.3 – Facts and prospects

During the first two consecutive terms of President Putin, Russia has a substantial economic growth, mostly driven by high oil prices and a transition from a socialist planning model to a market approach, which allows for an increase in national and foreign investments. Working to regain the status it lost at the beginning of the 90s, the Kremlin develops a very pragmatic, foreign policy which leverages the country's vast energy assets with great proficiency. Oil and gas and the revenues generated by the industry keep the economy going, with very little resources being re-invested in the sector. Reforms and investments are needed if the industry is to grow and new deposits harnessed even in the

most extreme and prohibitive conditions. The Kremlin needs to keep up with international market trends, modernize its energy industry and attract investments. At the same time, it must diversify the country's economy beyond and despite hydrocarbons. Innovation in the energy sector is gaining momentum, also to compensate for the termination of several JVs with foreign energy companies such as Exxon Mobil.

However, innovation takes time, and does not pay profits overnight. Some progress has been made, but Siberia's very valuable deposits are a daunting challenge which demands huge investments and extremely advanced technologies that may not be available at the moment. Moscow's influence on the Eurasian region has recovered since the end of the 90, and is also actively trying to keep its hold, as a gas and oil supplier, on Europe pressing ahead with the construction of the Nord Stream pipeline. Germany supports it while Ukraine opposes the pipeline, fearing to be bypassed and lose its transfer payments. A very active Russia on the geo-political scene cannot but alarm the U.S. which has gone from preaching energy independence to energy dominance. Thanks to an extraordinary increase in oil production, the U.S. seems bound to counter Russia's energy leverage in Europe and not only. What has been at the core of U.S. energy policies through many different Administrations, i.e. independence, could be within reach, but under President Trump, interconnectedness may be replaced by isolationism, which would not favor the industry in any way.

Chapter 2: U.S.-Russian National Energy Strategies

2.1 – Russian Energy Strategy and its main energy policy actors

Energy strategies and policies set the tone for the development of a country's energy sector. Energy has come to play a key role in the diplomatic relations that countries with substantial energy assets entertain at the international level, so much so that it has become a powerful instrument to be leveraged when negotiating, but it should also have a positive impact on global energy markets. This holds true also for the Russian Federation, which is the world's largest exporter of natural gas and second-largest exporter of oil. The impact of the government's energy strategies can be felt both at the level of national policies, and on the country's foreign policy. In the past decade Russia has increasingly moved back on the world stage as an actor to be reckoned with. A key component of this power is Moscow's ability to use its vast wealth of fossil fuel reserves as foreign policy tools to strengthen and widen its areas of influence, and regain its international prestige. Russia's agenda is ambitious and a focus of interest of the international community, and in particular the US, with which relations are growing ever more tense, after a very promising start at the beginning of the Trump Presidency.

As it would be true for any other energy-rich country, Russia attaches great importance to its energy reserves and policies, especially in a rapidly evolving geopolitical situation such as the current one, where global energy policy and security intersect. With its oil and gas production on the rise, reaching a 30-year high for oil (10.98 million bpd) in 2017, marking the ninth year in a row of an increase in average annual oil production, Russia is more than ever under the spot light, also considering the impact that the new package of sanctions may have on the country's energy industry. Russia's energy diplomacy usually highlights the country's status as an "energy superpower", that uses its resources as a political tool when conducting international affairs. Past decisions like cutting gas supply to the Black

Sea region, thus undermining energy security, and apparently leveraging its assets to regain its influence in the former Soviet Space, may be considered as an example of “petro-stick” policy, punishing those who defy the Kremlin. However, this would be at odds with Moscow’s wish to be seen as a reliable energy supplier that contributes to the strengthening of global energy security. Thanks to its colossal energy reserves, the country has flourished economically, has grown socially and politically while globally strengthening its influence in different parts of the world. To address such a web of tight interrelationships, it is important to take a close look at Russia’s energy policies and strategies on several levels, and understand the mechanisms and criteria that define them, while identifying the actors that help shape them.

It is worth pointing out that several interregional, national and global elements influence Russia’s energy policies. At the interregional level, a major role is played by energy sales Russia makes on the regional markets of Europe, the Caucasus and Central Asia, and also by the relations it has with the countries of the area, and with Eastern European transit states. Moreover, at the regional level, relations between Russia and Europe are characterized by Europe’s heavy dependence on Russian energy supplies. Projects to build new pipelines would question and undermine established agreements between Russia and key transit countries with regard to pipelines, transit fees and energy supply prices. Key transit countries, like Ukraine, play a major role in managing large shares of Russia’s energy traffic and could easily represent a serious problem for Russia. At the national level, Russia’s energy federal and regional politics interfere with national energy policies. Energy companies rise and fall as pieces of a chessboard in a power game played at a federal and regional level, while new energy provinces and energy oligarchs benefit from energy returns. Finally, at the global level, the country’s energy supplies and their political, economic and environmental implications, play a major role and are globally significant. Today more than ever, global energy policies engage in enhancing energy efficiency and energy saving, while striving to make headway in the field of renewable energy to meet the international community’s pressing demand. Demands are driven by global concerns,

first and foremost Climate Change, but also by a limited access to adequate fossil fuel supplies and at acceptable prices. Russia is internationally recognized as one of the strongest facilitators and main players in this century's "green revolution". The country's active participation is crucial for a successful and efficient response to Climate Change, because of its significant exports of fossil fuels, high greenhouse gas (GHG) emissions and energy-intensive economy. By taking on this role, Russia is posed to regain and strengthen its international status, while improving both its economic and social situation by formulating new energy strategies, redressing its energy-intensive economy and solving important issues such as the lack of diversity in oil and gas export routes and markets.

These elements show how Russian energy is as complex as it is crucial.

The overall trend in Russia's oil and gas business until 2010 was towards more state consolidation, restrictions on foreign ownership, intra-sector consolidation and increasing international investments by Russian companies.⁴ According to analysts, the impact of a global economic and political crisis, has gradually driven Russia to open up the oil and gas business to foreign minority investments, allowing foreign businesses to participate in the development of several projects. Until 2014, Russia succeeded in finalizing strategic agreements with major international energy corporations, such as Exxon Mobil, to provide technology and funding to its oil and gas sector with a view to developing its rich deposits in very hard-to-reach areas, such as the Arctic. All through this period, the supervisory and coordinating role of the government in the fossil fuel business has never been questioned. Ever since the U.S. and the West imposed heavy sanctions, that also targeted Russia's priority industry, then followed by another wave of sanctions in 2017, which have been recently supplemented by other blocking sanctions, Russia has been turning to other countries for investment, with a view to strengthening its influence and expanding its economic ties. Suffice to mention China, Venezuela and Vietnam.

⁴ Pami Aalto, "Russia's Energy Policies, National, Interregional and Global Levels," University of Tampere, Finland (2012)

Russia's energy policies are developed accordingly to the general guidelines contained in official documents issued by the government. "Russia's Energy Strategy for the period up to 2020," is proof of the determination and commitment the government has to develop a key sector of its economy by changing its approach towards strategic planning. The government resolved to take on a more market-oriented approach while increasing its production efficiency by assessing several parameters and indicators.⁵ A reform of the energy market infrastructure, i.e. transport infrastructures, market institutions, mechanisms and open trade, was greenlighted. It promoted energy trade and market liberalization, the development of oil refineries and petrochemical plants, while eliminating several administrative barriers that hindered Russian energy companies. It also addressed the socio-economic impact that the growth of energy prices had on the country and established more favorable tax system for both the oil and gas industries.

The document highlighted the high level of production parameter stability for fuel and energy complex in the face of changes in the external environment.⁶ However, forecasts failed to match market changes (world oil prices hit US \$94 per barrel in 2008 up from US \$27 per barrel in 2000 – four times higher than the forecasted indicators – the volume of exported energy resources grew 1.6 times and the gross domestic product grew by 65% deviating respectively by 9.6% and 11%). However, the outcome has fallen short of the initial expectations. The energy sector is still in need of new policies and significant changes. A coherent and nationally accepted legal and regulatory framework must be established while a highly competitive energy market that follows fair trade principles must be created. Related sectors of the economy must be raised to a higher level of energy efficiency and both the fuel and energy complex must become an effective and stable supplier of energy resources to meet the needs of the country's economy and population. In accordance with the official strategy, Moscow decided to stay away from ever changing

⁵ Ministry of Energy of the Russian Federation, "Energy Strategy of Russia for the period up to 2030," (2010)

⁶ Ministry of Energy of the Russian Federation, "Energy Strategy of Russia for the period up to 2030," (2010)

forecasts, to focus more on outlining detailed guidelines and achieving targeted goals, that would greatly benefit the country.

Another key energy document, entitled the “Energy Strategy for Russia for the period up to 2030,” was released by the Ministry of Energy of the Russian Federation in 2010, based on a solid system of phased target indicators of development and provides the mechanisms for the implementation of stated objectives. Its main goals are: maximizing the efficient and effective use of natural energy resources; developing the full potential of the energy sector to better sustain and spur economic growth and improving the quality of life for the Russian population. The document provides the instruments necessary to achieve several national goals and outlines a path towards the fulfillment of long-term energy development goals for the upcoming period without taking into account forecasts about long-term changes in external and internal conditions.

Russia’s latest energy strategy, the “Energy Strategy of Russia for the period up to 2035” was submitted to the Russian Ministry of Energy in 2014. It is the joint work of the Energy Research Institute of the Russian Academy of Sciences, the Analytical Center for the Government of the Russian Federation together with the Institute of Energy Strategy. The document discusses several issues and identifies internal and external challenges.⁷ The former include slow post-crisis economic development; the need for a rapid technological modernization; the increase in energy prices for end-consumers and dependence of the national budget on both the fuel and energy complex. On the other hand, external challenges are represented by a slow-growing or stagnating demand for Russian energy resources; economic and technological sanctions; an increased global competition, including the use of alternative and unconventional energy resources, and the transition from resource globalization to regional energy self-sufficiency. The document is meant to provide the guidelines necessary to improve the people’s quality of life and strengthen

⁷ Vladimir Silantiev, “Russian Federation: Energy Strategy,” Research Gate

Russia's grip on the international market by creating a more innovative and efficient energy sector, that ensures sustainable economic growth. To achieve the established goals, it identifies the need to successfully develop transport, production and social infrastructures in Eastern Siberia and the Far East while also focusing on developing the hydrocarbon potential of the Arctic continental shelf and Northern fields.

According to works published between 2011 and 2014 by well-known experts (Belogoriev et al. 2011; Bushuyev 2014; Gromov 2014; Mastepanov 2014), there are several strategic factors that play a role in the oil and gas industry, starting from the stabilization of oil production to the further development of the eastern region of the country, where to build infrastructure to generate 20-25% of total production and 40% of oil and oil products, as well as 15–20 % of total gas production and 35–40 % of gas exports. Equally important is the development of the Arctic shelf, that relies on the availability of explored reserves, infrastructure, and technologies. Gas production must be increased by 35–45 %, while promoting the deep processing of up to 25–30 % of produced gas. A key role is also played by the many and important projects that have already been planned such as “Nord Stream 2,” “South stream,” “Power of Siberia,” and the creation of LNG plants; the liquefaction (LNG) up to 8–11 % of produced gas; the extension of the Unified Gas Supply Systems to Eastern Siberia and the Far East.

However, it is also very important to acknowledge and carefully consider the diversity of energy policy actors in Russia. They define the policies that form the multi-level and intricate space of Russian energy politics. Such policy formation and implementation processes happen at various levels, comprising the national, interregional and global levels, all of which are closely interrelated to one another. Certain key events at one level could cause actors to alter their perceptions of the policy environment, re-orient their interests and eventually adjust their policies. Relations with international organizations and institutions, consumer and producer states, transit states and foreign companies operating within the country's borders and areas of interest, strongly affect both policy formation and

implementation. Russia is not a monolithic energy policy actor. It faces the challenging task of managing its diverse energy resources, while dealing with several actors that strongly affect the market. It operates in a context of strong interdependence among energy producers, transit states and consumers. It is a scenario that can hardly speak of Russia as an “Energy Superpower.”

Energy policy actors in Russia act on the basis of what they are pursuing, what they observe others to be pursuing, and what others actually do. They are constantly influenced by the wider social, political and material contexts within which they operate.⁸ To better understand the logic that shapes their actions, one should treat their interest as embedded in specific frameworks that would reveal the ration behind certain actions and interests and explain the surrounding policy environment. Energy companies operating in a market environment usually pursue profit, but energy markets usually differ. Russia’s domestic markets present various features: monopolistic (gas), mono- and oligopolistic (oil) and liberalized and unbundled (electricity). Still, companies seek profit and become identifiable actors with well-formulated energy policy interests. Business shapes their actions, which are aimed at profit maximization and follow a rationality approach – i.e. making decisions based on observations and assessments of potential gains, risks and outcomes of the available options at a specific point in time.

Then there is the question of power. State actors often turn to energy policy as a means to become more influential. Major energy projects can be instrumental in increasing Russia’s absolute or relative influence while at the same time contributing to the rise or fall of companies and actors in the energy field. Oil is a “strategic” asset for Russia, and Mr. Putin has regained control over the oil and gas industry, setting its agenda. Experts have discussed at length about the so-called ‘carrot and stick’ energy diplomacy: ‘carrots’ to reward friends by providing them with oil and gas at subsidized prices, as in the case of

⁸ Pami Aalto, “Russia’s Energy Policies, National, Interregional and Global Levels,” University of Tampere, Finland (2012)

Belarus, and ‘sticks’, using resources to punish states which defy the Kremlin, as Georgia and Ukraine.⁹ Oil and gas fields which were in the hands of private companies such as Yukos and TNK, were transferred to state-run giant energy companies like Rosneft. Gazprom acquired Sibneft. However, much of the industry is still independent and privatization is slowly breaking ground as in the case of the long awaited transaction with Glencore and the Qatari fund that Mr. Putin defined as “the largest privatization deal, the largest sale and acquisition in the global oil and gas sector in 2016.”

As noted by several scholars, including Julien Vercueil of the National Institute of Oriental Languages and Civilisations (Inalco), Konstantin Sonin of the University of Chicago and Alexander Libman of the University of Munich, all through his long stay in power, the economy has always been a tool Mr. Putin’s used to strengthen the sovereignty of Russia and its strategic influence. The fortunes of the country’s assets have contributed to improving the people’s living conditions, but the economy is still stagnating and in need of reforms that Putin will have to stand up to in his new mandate. It is a fact that state control over what is considered strategic (such as energy commodities) is increasing to the extent that state-controlled companies account for nearly three-quarters of Russia’s GDP. However, to build a genuinely dynamic economy underpinned by globally competitive industries, Moscow will need a stronger private sector. Therefore, a power-seeking interest can only translate into a kind of ‘energy superpower frame’ that politicizes energy projects, but often remains incapable of unifying all Russian energy actors.

However, an excessive actor-centric conceptualization of energy policy formation could lead to an oversimplification or rather simplistic rationalism. This is why it is important to take into account the policy environment, i.e. the structural conditions in which actors live, interact and operate. As mentioned above, actors shape their energy policy interests by

⁹ Randall Newnham, Oil, carrots, and sticks: Russia’s energy resources as a foreign policy tool, *Journal of Eurasian Studies*

thoroughly assessing their policy environment. They do so by relying on information and knowledge that play a crucial role in the energy sector. Actors very often suffer from information asymmetry that strongly affects their decision-making process. From a rigid rational choice perspective, they falsely identify and classify certain policies as sub-optimal choices. This means that socially and culturally produced information and knowledge have a pervasive influence on energy policy formation and are rarely critically assessed. Therefore, the policy environment plays a major role in shaping energy policies by both enabling and constraining the actor.

Policy environments differ throughout the globe and are defined by several factors. Experts talk about four different policy environment, which are assessed and divided into specific dimensions through which actors view energy policy issues.¹⁰ And namely: Resource Geographic, Financial, Institutional and Ecological dimension. In the Resource Geographic dimension, the use of the physical energy resources on the ground is crucial. Considerations such as access and uneven distribution of finite fossil fuels resources that privileges certain Russian actors and characterize the country at the national level, are carefully made. At an interregional and global level, the geographic dimension defines the different forms of transportation and distribution needed, i.e. pipelines, railways, terminals, distribution grids and storage facilities. Scientific research institutions and technical expert state agencies are usually the actors traditionally comprised in this dimension.

The Financial dimension instead, includes all financial transactions, incentives and constraints pertaining to energy. It also comprises energy commodity pricing mechanisms as well as the relationship between the ruble and the US dollar and the size and evolution of Russia's domestic and international energy markets. Core actors in this dimension are business establishments, investment banks, regional actors and IFIs. The Institutional dimension is characterized by several enabling and constraining factors. At the national

¹⁰ Pami Aalto, "Russia's Energy Policies, National, Interregional and Global Levels," University of Tampere, Finland (2012)

level, Russia's energy sector development is defined by its informal and social institutions that shape norms, customs and habits that slowly change over decades and challenge established formal rules. The actors working in this dimension include domestic public bodies, transit and producer states and their representatives. Finally, the Ecological dimension presents a different logic when compared to the other three dimensions. It shows how energy production and technology play a crucial role in fighting global challenges like Climate Change. Its goals go beyond ensuring full and efficient resource use and focus on how to leave a minimal ecological footprint while supporting green and renewable energy. Today a new, greener energy agenda is emerging; it defines energy production, transport and distribution and takes into account environmental side-effects. The new agenda is supported by environmental bodies, academics and NGOs and strongly influences Russian energy policy actors.

Russia is home to sizable fossil, nuclear and renewable energy resources, and is a large energy producer and exporter. But Russia is also an energy importer, a transit state and a large energy consumer.¹¹ Energy is key to national economic growth as well as socio-political stability. This is why the president is very often involved and strongly affects energy policy formation. Legislative assemblies, regional administrations, the presidential administration as well as the government play a major role in this regard. Nevertheless, when it comes to policy funding and implementation, only ministers and governmental agencies take on important responsibilities with regards to permits and strategic planning, while specialized energy and service companies deal with on-the-ground actions. This means that several elements of political economy run parallel to Russian energy policies. Moreover, by carefully looking at the wider social system in which both the government and Russian companies operate that influence the approach to energy questions, it is clear that also elements of cultural politics and political sociology have a bearing on Russian energy policies.

¹¹ Pami Aalto, "Russia's Energy Policies, National, Interregional and Global Levels," University of Tampere, Finland (2012)

Russian energy companies are classified using different criteria. According to company type, i.e. federal monopolies, national companies, regionally or privately owned companies, or to the sector in which they operate, i.e. upstream, downstream, value-added or oil, gas and hybrid. However, very often many companies cut across these categories. Gazprom is seen as both a federal monopoly and a national champion due to its monopolistic features. Through its effective network of domestic gas pipelines and legally guaranteed control of gas export pipelines, it holds a dominant position in Russia's gas production. Gazprom is clearly a strategic organization and plays a central role in defining the country's energy policies. It dominates the energy market especially in Central Asia and Europe since direct access to non-Russian natural gas is only available through Gazprom's Soviet era pipelines. The federal monopoly position of the company can be economically justified. It maximizes the economies of scale as production technology costs cause long- term average total cost to decrease as output expands. Due to the high cost involved, setting up two competing gas distribution systems would be uneconomical.¹² The Russian government owns 51 per cent of total shares, but more than a fifth is owned by international investors that strongly affect and set the company's daily agenda.

The domestic oil giant Rosneft, which grew in the 2000s through acquisitions, auctions and preferential licensing, is the country's No.1 oil company and the world's largest publicly traded petroleum company. The company is included in the list of Russia's strategic companies and organizations and it represents a powerful instrument of Russian foreign policy towards neighboring countries and internationally. It was the last of the Russian oil majors to be privatized. Its IPO was launched in 2006. It has no equity participation by international oil companies, but a total 49% of its shares is owned by private investors, of which 19% was very recently acquired by Swiss commodity trading firm Glencore and the sovereign wealth fund of Qatar. Rosneft's share in oil production accounts for 40% in the

¹² Pami Aalto, "Russia's Energy Policies, National, Interregional and Global Levels," University of Tampere, Finland (2012)

Russian Federation and exceeds 5% globally. The company is also the world's largest holder of hydrocarbon reserves and the key-hydrocarbon liquids producer among other public oil and gas companies.

Rosneft is actively developing production of oils. The basic production sites are Novokuibyshevsk Oils, the Angarsk Petrochemical Company and Moscow Plant Nefteprodukt. The summary capacity of these enterprises exceeds 700 thousand tons per year in commodities, specifically, it makes up over 500 thousand tons of oils per year. Rosneft is also a leader in oil refining in Russia. The company has the largest oil refining capacity in the country. It owns 10 major refineries and several mini-refineries in Russia. The volumes processed at its refineries in the Russian Federation amounted to 84.7 mmt¹³ in 2015. Its distribution network encompasses 59 regions in the country, as well as countries of the near abroad. As a global energy company, Rosneft has major assets located in Russia and a diversified portfolio in promising regions.

Both Gazprom and Rosneft are clearly recognized as Russia's national champions. Hence, the two companies enjoy numerous benefits that facilitate their technological development and economic growth while strengthening their grip on both the domestic and international market. During the government's auctions of the 2000s, both companies seized the majority of the development licenses for several new fields in the Sakhalin region and eastern Siberia. They were also given preference by the government to acquire certain assets from other Russian and international companies during the renationalization process of the fossil fuel business back in 2004.

Lukoil is Russia's second largest oil producer as well as another important energy policy actor. It grew out of the ruins of the Soviet Oil Ministry in 1992 to become, in 1993 Russia's first joint stock oil company. The world's third largest private oil company, Lukoil has

¹³ Million metric tons

long been a flagship of the Russian oil industry both at home and abroad and has acted as a bridge between the government, industry and foreign companies. It accounts for 2.1% of the global crude oil production and operates in over 40 countries in the world.

Lukoil is Russia's leading and most international privately owned oil company. Since the 1990s, Lukoil has successfully attempted to readjust and apply Western corporate structures, technologies and strategies to Russian conditions while carefully taking into account federal priorities. It was as a pioneer in the industry, leading all other companies in the new upstream and downstream areas at a time of substantial changes. Lukoil expanded into the petrochemicals sector and acquired oil processing facilities in Romania, Bulgaria, Ukraine, Finland, Belarus and the Baltic. The company's first foreign assets date back to 1996, when it acquired a stake in a PB-led consortium developing three offshore fields in Azerbaijan. Now Lukoil has diversified business operations that span the globe: the Caspian Sea, the Middle East, Central Europe, North Africa and the Americas. Its unique international portfolio allows Lukoil to serve as an oil ambassador for the Russian government overseas, highlighting what it considers to be its distinctive feature – national loyalty. Loyalty has served the company well and kept it at the top of the oil hierarchy for its entire 25-year history. The company's lobbyist style strongly differed from the approach chosen by other oil companies, such as Yukos, for instance, which was perceived as too brash and radically westernized.

Lukoil is also very active domestically. The company's three production enterprises in West Siberia, Langepasneftegaz, Uralneftegaz and Kogalymneftegaz form the core of its upstream operations. Its proven reserves in the region amount to 8.05 billion barrels which account for 55% of the company's total oil portfolio. In the Timan-Pechora Basin the company's total reserves amount to 3.29 billion barrels. Lukoil also has large refineries in several regions like Perm and Volgograd; they are ahead of the national average due to the quality of their facilities and the level of their performance indicator. Since Russian legislation has evolved towards favoring premium eco-friendly fuels, the company is

focused on operational excellence, by upgrading its refineries, as well as increasing the output of light petroleum products. Lukoil now has a total annual refining capacity of 77.7 million tons of oil.

Together Gazprom, Rosneft and Lukoil account for nearly a third of Russia's total exports. Gazprom and Lukoil in particular often invest significantly abroad, reaching more than US\$ 35 billion, and also attract 90 per cent of foreign investment in the country's oil and gas sector. It is clear how much Russia's oil and gas business is highly concentrated but at the same time internally divided and made up of different groups of actors.

Regional energy actors are stepping up to giants like Gazprom. Turkmenistan, Kazakhstan and Uzbekistan are carefully becoming more energy independent and efficient thus occupying their place on the market. Kazakhstan, Uzbekistan and Turkmenistan opened a pipeline with China back in 2009. The following year, Turkmenistan successfully completed a new gas pipeline to Iran, increasing capacity to 20 billion cubic meters. Regional companies such as Tatneft and Bashneft are also trying leave their mark on the energy market by boosting their economic growth and technological development but have uncertain production prospects and are inexorably left far behind Russia's big corporations.

The discrepancies between Russia's federal and regional energy policies and the agendas of its national champions further confirm that Russia is far from being a unified actor. Although it is not too keen on foreign investors, it has estimated it will need from US\$ 2.4 to 2.8 trillion by 2030 to fund the energy sector. As a result it is allowing the presence of American, European and Asian private companies and national champions, as well as international financial institutions and banks¹⁴ as minority investors, shareholders and technical partners in both onshore and offshore projects in Russia. Russian non-fossil fuel

¹⁴ Pami Aalto, "Russia's Energy Policies, National, Interregional and Global Levels," University of Tampere, Finland (2012)

actors also play a significant role in the new energy agenda and are supported by sound expertise in engineering and basic research in relevant sciences.

As of today, there are several concurrent energy policies in Russia that will likely characterize the country in the coming years. Such policies mainly stem from a business frame perspective. From the point of view of power instead, an idea of Russia as an energy superpower is still questioned.

Ch. 2.2 – U.S. Energy Policy and the shale gas revolution

The United States also acts according to a well-defined national energy strategy, that funds and implements specific policies based on the current socio-political and economic situation, which ultimately shape the policy environment. Potential threats and countermeasures are carefully taken into account and assessed with a view to choosing the best policy option possible.

Achieving energy independence today is among the priorities the US has set for itself. It is a goal that has been fueling several debates on whether it is feasible, and if it is, how it can be achieved.

Changes in US energy production, energy technology, and the way oil and gas reserves are estimated, are raising serious questions about the future US independence on energy imports, and how this would affect the US energy strategy.¹⁵ The Country's dependence on foreign oil imports up to less than ten year ago was a serious source of concern, since it had reached an all-time high and was casting a long shadow on the welfare of the nation in terms of national security and economic well-being. The imbalance between global energy

¹⁵ Anthony H. Cordesman, "American Strategy and Critical Challenges in the U.S. 'Energy Import Dependence,' Center for Strategic and International Studies (CSIS) (2015)

supply and demand had grown substantially since 2001, making natural gas and oil price double. Both energy price and supply strongly affect US production capacity and efficiency as well as its strategic decision making, i.e. how to deal with international crises and who to side with. Some experts maintain that the U.S. will be a perpetual net importer of crude oil, since up until recently its daily crude oil demand was met by imported oil. But data show that despite importing millions of barrels of crude oil per day, since 2005 the U.S. dependence from oil imports dropped from 60% to 39%. The U.S. can export coal and natural gas, but it was its dependence on crude oil and the need to provide the transportation sector with enough energy, which sources other than oil cannot either effectively or easily ensure, that characterized the U.S. strategic dependence on direct energy imports, at least up until the silent shale oil revolution started in 2009.

The growing gap between global energy supply and demand has been for decades the root cause of US dependence on several energy-rich countries, such as Saudi Arabia, Iran, Argentina and Russia. Recent data have told a different story and according to the latest IEA energy report for the next five years, the US will finally be independent. Energy dependence helps explain the rationale behind the US getting involved in conflicts and civil wars ravaging some unstable regions in the world, as in the case of North Africa and the Middle East. The race for energy supplies with Europe and Asia is bound to increase and might cause tensions and undermine alliances. Mr. Trump has singled out the oil industry as one of its priorities ever since its campaign days and has never relented to do whatever he thought was right to support it and expand it with a view to reaching energy dominance. To this purpose the Administration has to consider several critical factors such as the policy environment, market behavior, the interdependencies of world supply and demand, the many political implications and the technological gap. Under President Trump, the U.S. is pressing ahead with innovation, looking to maintain its leadership in developing ever more advanced technology energy solutions that can free the international community from an unstable fossil fuel market and prevent an all-out energy crisis. Alternative and

unconventional energy resources such as nuclear, solar and biofuel power, should continue to be at the center of R&D efforts.

Mr. Trump's response to the country's energy issues, as well as the implied negative consequences, is simple. As he said over and over again both before and after his election, he plans to unleash American energy with a view to better and fully achieving energy dominance. He first elaborated on his new approach to the energy question during the "Energy Week" in June 2017. Mr. Trump is no longer pursuing just energy independence, or energy security, but rather focusing on making the US a dominant player in the world's energy markets. His rhetoric has underpinned a set of policies designed to deregulate and promote oil and gas activity. Several goals have been identified and outlined, and namely: developing and boosting the technology needed to fully and efficiently exploit available national natural resources like oil, gas and coal; dramatically increasing exports of fossil fuels as well as their related products; relying more on energy imports, more specifically oil, from Canada, Mexico and the West, while importing less from Africa and the Middle East; leveraging natural resources, thus shaping a national energy policy around it, to strengthen the US bargaining position in its foreign policy initiatives and on the international stage.

The President has already showed his commitment by practicing some energy leveraging during his last meeting with Indian Prime Minister Narendra Modi, folding India's growing reliance on US LNG imports into his request to lessen the growing nation's import tariffs on US goods. Along with former Secretary of State, Rex Tillerson, the President has played the same tune on the occasion of meetings and negotiations with other countries such as China, Pakistan and Russia. A major achievement was made known in October 2017, when the EIA announced that by exporting almost two million barrels of domestically produced crude oil per day, US producers were ahead of many OPEC members. At the same time Dominion Energy, one of the nation's largest producer and transporter of energy, disclosed that its Cove Point LNG export facility would be going online much earlier than expected,

and precisely during the fourth quarter of 2017. The Administration's efforts to facilitating permits as well as approval processes have greatly boosted and influenced the country's energy policy and agenda.

Hence, energy dominance implies also using this sort of leverage and designing the overall framework of both national energy strategy and policy around it, especially now that the US is growing as an exporter of oil, LNG and coal. Mr. Trump understands very well that the US may always be a net importer of crude oil and has set out to change the import mix so that the US imports mainly from friendly and stable governments. By acquiring new reliable suppliers, the US will have less incentives in using its military might to intervene in civil wars and armed conflicts that affect several unstable countries in regions such as the Middle East, on the one hand, and greater leverage when negotiating with the regions' governments, on the other. It is evident that President Trump believes energy to be key to national security, economic growth and international prestige. He intends to leverage US energy abundance in his foreign policy and international negotiations.

Under President Trump the energy sector has gained significant importance. During his campaign, Trump strongly promoted policies geared to support a healthy oil and gas industry. To this end, Mr. Trump discussed oil-related issues of great significance such as the Keystone XL and Dakota Access pipelines, EPA's Waters of the United States regulatory scheme, the Clean Power Plan and the Bureau of Land Management's (BLM) hydraulic fracturing rule. The energy sector was a centerpiece in his campaign strategy. At a September 2016 rally in Pittsburgh, Mr. Trump gave a speech that illustrated his political views: "I am going to lift the restrictions on American energy and allow this wealth to pour into our communities — including right here in Pennsylvania. The shale energy revolution will unleash massive wealth for American workers and families."¹⁶

¹⁶ David Blackmon, "The Trump Energy Plan: A Sea Change in U.S. Energy Policy," Shale, Oil and Gas Business Magazine (2017)

President Trump was the first candidate in modern times to light the spot on the energy sector as a priority in his political agenda. Once elected, he immediately resorted to a rarely used instrument – the Congressional Review Act (CRA) – which gives Congress 60 working days to overturn new regulations that were put into place during the final months of the Obama administration. The House of Representatives passed resolutions that repealed several Obama regulations that affected and were opposed by the oil and gas industry, such as a BLM and EPA regulation governing venting and flaring of natural gas on federal lands, and methane emissions from upstream oil and gas facilities. Additionally, the regulation finalized by the Office of Natural Resources (ONRR), that strongly increased royalties owed by the industry on oil and gas produced from federal lands, was repealed.

However, the Obama-era EPA rule restricting methane emissions from drilling operations on public lands was rejected by the Senate with three Republicans joining every Democrat to preserve the rule. Nevertheless, it was a clear sign that an epochal change was about to take place for the oil and gas industry, that had grown accustomed to receiving bad news from the nation's capital. President Trump successfully signed fourteen joint resolutions, which overturned Obama-era rules impacting the energy industry. Despite legal hurdles and adverse votes, Mr. Trump found ways to make good of his electoral promises¹⁷ and produce positive results while changing both the tone and direction of federal oil and gas regulations. To this end an administrative solution was found to the question of the ONRR royalties, while EPA was left to deal with the negative impact of the methane regulation.

Within days of taking office, Trump signed two presidential memoranda supporting both the Keystone XL and the Dakota pipelines projects that the Obama administration held up for years. He ordered the US army to perform an Environmental Impact Statement on the former and invited a private company, TransCanada, to reapply for the latter.

¹⁷ David Blackmon, "The Trump Energy Plan: A Sea Change in U.S. Energy Policy," Shale, Oil and Gas Business Magazine (2017)

The Keystone XL runs from the oil sands of Alberta, Canada, to Steele City, Nebraska. The 1,879 km pipeline carries 830,000 barrels of oil per day and mirrors an operational pipe called Keystone, but takes a more direct route, greatly boosting the flow of oil from Canada but also transporting U.S.-produced oil. An increased supply of oil from Canada would have several implications, the most important being a decreased dependency on Middle Eastern supplies as well as lower prices for consumers because of the increased availability of oil. Moreover, as stated by Mr. Trump, the project would create 28,000 construction jobs that would greatly benefit the economy as well as the American people.

However, there have been several controversies over the Keystone XL project. The project was approved by the Canadian National Energy Board in March 2010 but the Obama administration did not issue the presidential permit required in the US. The Environmental Protection Agency (EPA) advised Mr. Obama not to approve the pipeline due to risks of spillage and to the fragility of the Sandhill region. The US State Department also agreed and encouraged TransCanada to explore alternative routes in Nebraska since the pipeline represented a strong commitment to develop Alberta's oil sands. Local communities also opposed the project by suing both the provincial and federal government for damages from 15 years of oil and sands development they were not consulted on including treaty-guaranteed rights to hunt and fish on traditional lands. The Obama administration did not approve the project arguing that it would not benefit the country since it would not lower oil prices, create long-term jobs or contribute to energy independence. It is clear today that Mr. Trump disagrees with such claims and sees the project as highly beneficial. After issuing the required permits, he stipulated only that American steel be used in the work. "We build it in the United States, we build the pipelines, we want to build the pipe," he said. "It's going to put a lot of workers, a lot of steelworkers back to work."¹⁸

¹⁸ "Dakota Pipeline: what's behind the controversy?", BBC News, (2017)

The Dakota Access project instead foresaw a \$3.7bn pipeline and 1,900km long to transport 470,000 barrels of crude oil a day across four states – from North Dakota to Illinois where it is then shipped to refineries. The pipeline would provide a more cost-effective and efficient means of transporting oil. The project was originally designed by a Texas-based company, Energy Transfer Partners (ETP) with the aim of increasing profit margins for oil companies while crude prices are low. Most of the pipeline was successfully built under the Obama administration but the section closest to a native American tribe, the Standing Rock Sioux reservation, was still awaiting federal approval. They argued that the project would contaminate drinking water and damage sacred spiritual camps as well as sacred burial sites. The land used for the project lies north of the reserve but according to the Sioux it was illegally taken from them through a treaty in 1868. Moreover, the tribe accused the government of approving the project without consulting them as required under U.S. law.

Back in December 2016, President Obama postponed the finalization of the project by ordering the US Army Corps of Engineers to perform an Environmental Impact Statement, designed to explore alternative routes that would quell the strong protests conducted by the Standing Rock Sioux Tribe and a raft of outside protest groups. The actions he undertook were a means of avoiding having to make a final decision on the project, bouncing it to the Trump administration. While Mr. Trump does not have the power to approve either the Dakota Access or Keystone XL pipelines, his memos offer significant encouragement. He confirmed his intention of backing up both projects while planning on using exclusively American steel in any and all future pipeline projects. According to him, both projects will greatly benefit the country and “serve the national interest.” On the Keystone XL project, he invited the company involved, TransCanada to resubmit its application for its cross-border permit and instructed the secretary of State to “take all actions necessary and appropriate to facilitate its expeditious review.” He also gave the Department of State 60 days from receipt of TransCanada’s new application to issue a final decision.¹⁹

¹⁹ “Keystone XL Pipeline: why is it so disputed?”, BBC News, (2017)

However, President Trump can only ease the way with such memos, and prompt their advancement, he cannot single-handedly approve them. Additionally, the President may face questions about his personal interest in the Dakota project, as ETP chief executive Kelcy Warren donated \$100,000 to his election campaign. Hence, Mr. Trump holds enough power to strongly influence the country's energy policy and tilt the scale in his favor but he is still accountable for his actions.

Then comes the all-important question of the shale gas, to which the President is very attentive. It is an energy source that looks like a true revolution which would solve the country's problems, ensure a greener future and make a statement of great technological prowess. As other alternative energy resources, the shale gas would enhance energy security, contribute to the stabilization of the energy market and break away from the dependence on fossil fuels.

Shale gas and hydraulic fracturing (fracking) have revolutionized the US energy sector in terms of prices, consumption, and CO₂ emissions. The so-called 'shale gas revolution' together with easier access to new and vast natural gas supplies, has greatly benefitted the country and has led the US shale gas production to soar enormously since 2007. It affected US prices, carbon intensity (it produces more or less half the CO₂ than coal for the same heat output) and global energy security. It also greatly contributed to making the US more energy independent and secure with reserves projected to last for around 100 years. Shale gas altered the US gas market and energy mix, reducing gas prices (currently at a record low, close to their 1976 levels) and lowering energy imports (gas imports have steadily been dropping since 2010). It also facilitated transition from coal-fired to gas-fired power generation (experts say that this could easily bridge fuel to renewables since gas power plants can respond quickly to changes in load and renewable generation) that strongly contributed to reducing CO₂ emissions and greenhouse gas pollution. US emissions fell to 1990 levels and CO₂ is being safely stored in depleted shale gas formations that have

potentially enormous capacity. By using already existing infrastructures like well bores, pipelines and access facilities, the US would greatly reduce both costs and logistics while safely storing CO₂ and swapping it with methane from the formation.

Shale gas is trapped within sedimentary shale rock formations and is extracted through several processes that involve injecting sand, chemicals and water at high pressure. Today, shale gas technology – a combination of horizontal drilling, high-pressure fracturing, multiple fracturing stages, and new working fluids – has opened up numerous reservoirs of shale gas for cost-effective production. Large deposits of unconventional gas are located across the US, the most significant being the Barnett reservoir in Texas and the Marcellus reservoir that stretches across New York, Pennsylvania and most of West Virginia. As a result, the country's economy has greatly benefitted from availability of cheap energy that stimulated prospects for growth. The shale gas revolution created hundreds of thousands of jobs and strongly contributed to a rapid recovery of both manufacturing and industrial activity.

However, shale gas and hydraulic fracturing still face several challenges such as inefficient extraction and environmental concerns, i.e. induced seismicity, drinking and groundwater contamination and fugitive emissions. Concerns about the scale and scope of the extraction process as well as uncertainty towards long-term productivity of reservoirs and sustainability are also on the rise. Despite being politically supported across the country, shale gas has not been fully accepted by the general public. People are increasingly worried about the impact the boom in extraction of shale gas has on local life. It has affected several areas like Pennsylvania and the metropolitan area around Dallas that were not accustomed to drilling. They believe that numerous social, environmental, regulatory and legal questions have not been fully addressed. Critics say that the shale gas industry has moved too fast and lacks coherent regulation. They argue that there is still no scientific proof that shale gas and the chemicals used in hydraulic fracturing do not contaminate both water and air. Several NGOs and environmental think tanks have called for a stricter regulatory

framework while launching campaigns to increase US public awareness of the health impact of living near oil and gas exploration sites. The Pennsylvania Alliance for Clean Water have reported and encouraged residents in drilling areas to pressure Congress to halt fracking and drilling projects.

A significant improvement in shale gas extraction efficiency has been made possible by technology innovation that many would call disruptive -. high pressure fracturing, horizontal drilling, multiple fracturing stages and improved low-viscosity working fluids. The environmental footprint of shale production has diminished to a great extent thanks to reduced water use, improved disposal practices and fewer infrastructure impacts. Hundreds of thousands of existing shale gas wells across the U.S. are being re-fractured and transformed into high performing wells with the overall production percentage as virgin wells. This significantly reduces the environmental impact and is cost effective because it eliminates the capital costs of new infrastructures. It also might develop future fracturing technologies, such as using non-aqueous working fluids like CO₂ and natural gas, that could be applied to already existing wells that have reached a low level asymptotic production. U.S. authorities are also taking into account and protecting public interest by outlining and developing a legal framework for the industry. Some cities have already banned fracking within their municipalities limits, while lawmakers are considering a moratorium on fracking. Still, some believe that overregulating the industry could damage U.S. competitiveness and energy independence and security.

Hence, shale gas technology is key to unlocking America's vast energy potential while supporting the Country on a path to self-sufficiency in oil and gas, making it not impossible to surpass Saudi Arabia as the world's bigger supplier of hydrocarbons in the near future. This may potentially redefine both the economics and geopolitics of energy across the globe and have a direct impact on several energy-rich countries, such as Russia. Shale gas may be the answer the U.S. is looking for.

2.3 – U.S.-Russia Energy prospects and trends

As discussed in the previous chapters, both Russia and the United States shape their energy policies and strategies in line with current policy environments and socio-political backgrounds. Energy policy actors are influenced by the framework from which they operate (business or power) and of which they are part. Such energy policies redefine their relationships and have significant global consequences. It should be said that energy is becoming an influential political player as other energy-producing countries learn how to leverage their energy resources.

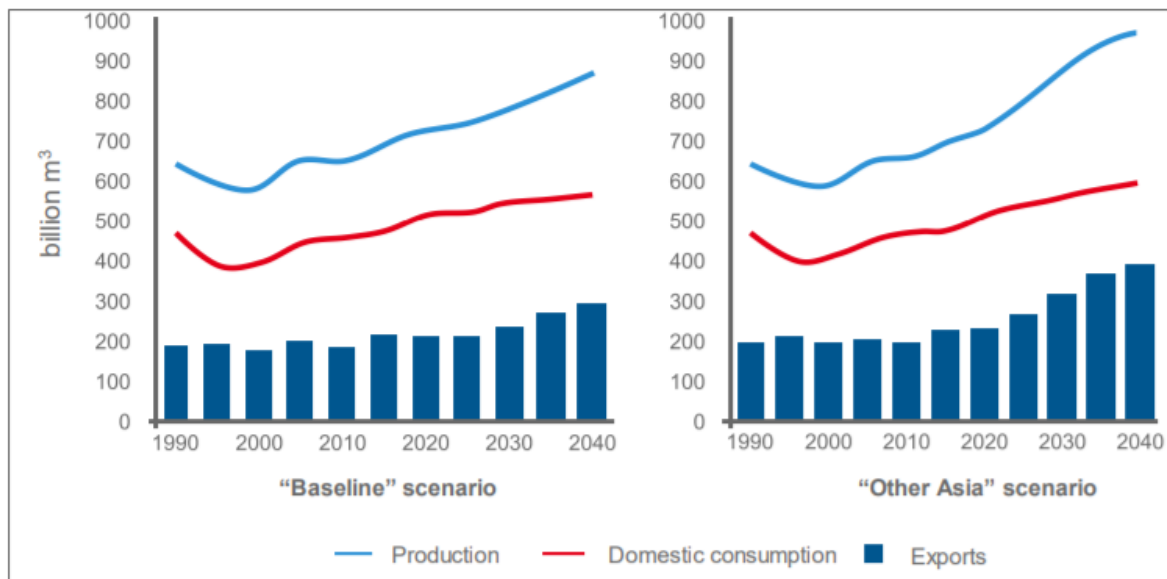
Russia has masterfully honed its energy strategy as an instrument of national power and international influence. Russia is well-known and carefully studied by major energy players. It is the fourth producer of electricity, third producer and second exporter of crude oil as well as fourth producer and first world exporter of refined petroleum products and second producer and first exporter of natural gas.²⁰ Russia has 47,768 billion m³ of conventional natural gas reserves, most of which flows to the EU partially through Belarus and Ukraine. It also has also an LNG terminal (Sakhalin 2) at the Sea of Japan. Overall, the gas and oil industry is still largely concentrated in Western Siberia and in the Urals-Volga Basin, but Moscow has made major efforts to develop an efficient infrastructure system in energy-rich areas with extreme weather conditions, such as the Russian Arctic, Far East and East Siberia, where energy reserves are vast, though 67% of which are hard to extract. Two major projects deserve to be mentioned, the Nord Stream 2 to Germany, with a total annual capacity of 55 billion m³, and the Turk Stream 1 and 2 from Russia via the Black Sea to Turkey with a total capacity of about 32 billion m³. It is expected to become operational by the end of 2019 and it is to supply both the Turkish and the European market. Rosneft led by example. To offset the decline in its core resources in European Russia and in West Siberia, it turned to new areas, such as East Siberia, the Arctic

²⁰ US Energy Information Administration

and offshore fields and invested in technology, while starting to diversify its asset base internationally. Transportation infrastructure is also being developed across the nation to find a way, especially for the furthest away regions, to bring the periphery closer to the center, allowing it to benefit from the economic interaction.

In the Russian Arctic, for instance, plans are being developed to build a unified transport system with a view to using it as a national maritime super highway, connecting several different ports along the Northeast Passage to a system of railroads and rivers in the northern parts of Russia. The Arctic peninsula of Yamal, with over 200 gas and oil fields, is home to a major integrated project, the YAMAL LNG, which encompasses natural gas production, liquefaction and shipping. The gas liquefaction plant, which uses the hydrocarbon resources of the South-Tambeyskoye field, has an output capacity of around 16.5 million tons per year. The South-Tambeyskoye field's proven and probable reserves are estimated at 926 billion cubic meters. The OAO Yamal LNG has shipped the first million tons of LNG produced at its first train at the beginning of March. Additionally, Russia is currently developing several LNG projects related to the Atlantic and Pacific region (going through Vladivostok and the Baltic). Moreover, according to the Energy Research Institute of the Russian Academy of Science (ERI RAS), the export rate, which in 2015 amounted to approximately 35%, can be further increased in the long term, as shown in the following graph.

Expected net exports from Russia



Source: ERI RAS

In terms of export, Russia relies on Europe which remains its biggest client. Countries like Germany and Italy are Russia's both energy partners and clients, with its energy demand on the rise. Back in 2014, 79% of Russia's crude oil export and 81% of its natural gas export went to Europe. The Asia Pacific Region is also very lucrative as well as a very efficient export channel – pipeline deliveries to China, sales in Kozmino and De-Castri ports grew 41% year-on-year. CIS countries are also part of Russia's energy plan. Moreover, Turkey has been increasing its volume of Russian natural gas and pushing for a stronger cooperation in the energy sector.

Demands for more flexibility by producers when it comes to the issuance of export licenses, the arrival of new competitors, and an ever more competitive marketing environment in the gas industry, are unlikely to challenge the market share Gazprom has in Europe. To secure being an active participant in the European gas market, the state-owned oil and gas giant has declared its readiness to operate within the regulatory framework set by Brussels

and to reach a compromise with the European commission regarding the antitrust case launched in April 2017.

Russia's natural gas reserves are massive. Russia's oil and gas industry is central for ensuring economic stability and growth, but it also defines internal stability and geopolitical potential in the region. It is just as evident that Russia's future in the world energy mix may be altered by the recent geopolitical and economic changes, as well as new trends in global gas markets. Attention should also be paid to tight oil developments in the U.S., which could drastically change oil-related price swings. Despite boosting the capacity to export LNG and increasing the pipeline capacity into Asia, Moscow's role as a major oil and gas player, especially in Europe, has been challenged by other sources of supply at the international level (Qatar, Australia and the US). There are great uncertainties on the demand side, especially in China and in India, where natural gas and LNG use is mostly driven by air quality concerns. But such concerns can also be addressed by clean coal technologies. There is also the question of the rebalancing of the LNG market, which shifts the focus on emerging LNG importers, that recently have shown quite a rapid growth. Other elements come into the picture when discussing Russia's place in the global oil market in the years ahead. Low lifting costs, the devaluation of the national currency and cost reductions measures introduced into the oil field service industry, can account for growth of the oil and gas industry, while the adjustments made to taxes on oil have allowed oil companies to remain profitable despite oil price falls and sanctions.

Experts believe that the Russian economy will improve in the near future, though moderately, but stagnation may set in, unless Russia launches major structural reforms. The key question is still economic diversification. Although growth has been recorded in sectors such as consumer electronics, food processing, and automotive parts manufacturing, they are still way too small to drive a much-needed economic recovery. As a result, the oil and gas sector will still be paramount for the Russian economy, conditioning export earnings and government revenues.

It is to be seen what changes will be introduced during Mr. Putin's fourth mandate with regard to energy policies and strategies. As the U.S. seeks energy dominance by enhancing energy security and stability, Russia aims to develop the means necessary to be politically and economically less vulnerable and dependent on its energy sector, as Prime Minister Dmitri Medvedev himself underlined, when saying that a strategy based on exporting energy resources and increasing energy production from well-explored fields, has become ineffective.²¹ Unlike the previous Strategy to be developed up to 2020, "the Energy Strategy of Russia for the period up to 2030," marks a change of direction, calling for lowering the country's dependence on oil and gas. It sets more ambitious goals designed to promote Russia as an energy world leader. The Energy "Strategy of Russia for the period up to 2035," goes beyond it to argue that the oil and gas industry must serve the country as a strong, technologically advanced and stimulating infrastructure that promotes and facilitates economic growth and sustainability. However, it should be said that Russia does not act as a unified actor, with several concurrent energy policies showing evident discrepancies between Russia's federal and regional energy policies and the agendas of its national champions. It is not infrequent that energy policies are defined by profit maximization and implemented by energy policy actors that operate from a business point of view.

To face up to the economic and geopolitical uncertainties and to tensions currently escalating with the West, Russia is very likely to do all it can to rapidly bolster and change its energy portfolio, while strengthening its area of influence by establishing new partnerships and seeking new allies, focusing on exploring new territories and fields, developing breakthrough technologies, and defining a clear legal framework, as well as governmental regulation. If structural energy reforms are carried out and energy efficiency and stability pursued, while preserving energy security, and a homogenous national energy

²¹ Natalia Victorovna Kuznetsova, Ekaterina Vasilievna Kuznetsova, "Energy Strategy of the Russian Federation," (2015)

strategy implemented, Russia could behave as a single energy policy actor and fully deploy its potential in terms of energy resources.

In this respect, Russia has been playing its cards well, and has increasingly focused on the CIS countries and East Asia and wider Asia-Pacific, rapidly promoting and strengthening cooperation with key countries such as Turkey, which is gaining momentum and prestige due to its strategic geopolitical relevance, and China, the fastest growing consumer of oil and Russia is still its biggest oil supplier. Energy and climate policies in China are impacting energy use patterns, with oil consumption growing fast also thanks to low oil prices. However non-fossil energy sources are growing steadily, while coal is declining. LNG would still be an interesting commodity, though Beijing maintains that prices for long-term LNG contracts need to be redressed. Ever since 2013 Moscow, through Rosneft, has been expanding its influence in China, entering agreements, equity deals and infrastructure partnerships with Chinese energy firms. In January 2017 it signed an agreement with CNPC, China National Petroleum Corp, to supply a total of 91 million tonnes of oil to China through Kazakhstan over a 10-year period. Beijing has also shown a keen interest in the Russian oil giant by allowing CEFC China to acquire a 14.2 stake in Rosneft. A landmark event that heralds future joint investments. China has been a key partner for Moscow, which now seems to be courting another unlikely ally, Saudi Arabia. It is hard to say whether this recently formed alliance should be considered a “marriage of convenience” or a strategic alliance. The current rapprochement is driven by a host of factors, besides oil policies, such as Russian interests in the Middle East, the US uncertain commitment to the region and Europe’s inward approach to foreign policy.

Rosneft also entered individual partnerships and joint ventures with specific partners in each country it invested in: Romania, Bulgaria and the US, but also West Africa, Venezuela and Iraq. Russia is clearly promoting itself internationally. It is altering its energy mix, bolstering its energy portfolio and expanding its area of influence by establishing strategic partnerships and investing in energy-rich countries, like Venezuela.

It is in the oil industry of Venezuela that large geopolitical interests are at play. Over this past few years Rosneft, which has been helping the Kremlin promote its foreign policy agenda in the Middle East, Cuba and Africa, as well, has developed a strategic cooperation with the cash-strapped country. In 2016, following an agreement with the country's most important economic engine, Petróleos de Venezuela (PDVSA), Rosneft acquired a 49.9% stake in Citgo, as collateral for a \$1.5 billion loan to Venezuela, thus further strengthening Russia's financial hold on the country. To avoid the risk of major US sanctions, negotiations were started to exchange the collateral stake for a package of key deals, while currently some U.S. private investors are seeking President Trump's approval to assume the lien, so to prevent Moscow from seizing a large portion of the U.S. refiner, in case PDVSA defaults. Moscow is still suffering from the sanctions the U.S. and the international community imposed on the Federation and Venezuela could be an important ally in Latin America, especially one with very large oil reserves. Russia's geopolitical interest in Venezuela is evident. Over the years its presence in the country's economy, especially in the oil industry, has grown larger, becoming one of the two biggest lenders of last resort together with China. Rosneft, Russia's state-funded oil company, has major joint exploration projects with Venezuela's state oil company Petróleos de Venezuela (PDVSA). Venezuela is now Rosneft's second-largest source of crude, after Russia itself, and Rosneft is the largest foreign investors in Venezuela's oil industry. In the past four years or so Russia and Rosneft have provided Venezuela with \$10 billion in financial assistance, helping the Latin American country stave off default. Presently discussions are well advanced as to further develop the Orinoco oil belt, which would imply large investments by Rosneft.

Despite some difficult times in the recent and not so recent past, the Trump Administration has brought about some major changes in the energy sector. Ever since his election, President Trump has emphasized his commitment to making America a dominant player in the world energy markets. An approach that has led President Trump to state his firm

commitment to eliminating what he considers to be harmful and unnecessary policies, to fulfil his promise to increase wages of American workers by more than \$30 billion over the next 7 years. The two major restrictions he has set out to lift concern the Climate Action Plan and the Waters of the U.S. rule. Experts believe that the Paris Agreement will survive America's exit, though truth be said that the instrumental role played by the U.S. in crafting the deal will be missed. They also warn that the long-term de-carbonization goals set in Paris are far from being reached and that a transition away from fossil fuels may cause major disruption in the most important gas- and oil-producing countries, thus endangering supply security.

President Trump intends to revitalize the oil and gas industry, with a view to greatly enhancing economic growth, and prosperity while ensuring international prestige, and security, and to this purpose he plans to stay away from countries 'hostile' to the nation's interests, while working with the allies in the Gulf area to develop a positive energy relationship as part of the anti-terrorism strategy. In the President's Executive Order 13795 of April 28, 2017, it is written that "America must put the energy needs of American families and businesses first and continue implementing a plan that ensures energy security and economic vitality for decades to come." Pursuant to it, the Administration took several actions to shape the Country's energy and environmental strategies, and revitalize the gas and oil industry, along with promoting 'clean coal' and boosting tight oil and LNG production.

Energy dominance is the key word just two years into the new Administration, but Secretary of Energy Perry recently introduced another buzzword, i.e. "energy realism" which he said is underscored by an era of American energy, and innovation. Mr. Perry recently called on industry leaders to embrace a new era of innovation, that has been instrumental also in achieving major advances in the shale oil industry. Streamlining regulations, promoting fossil-fuel development and introducing tax cuts are the keys to the industry's growth. Lower corporate tax rates could easily speed up U.S. oil and gas

development, efficiently supporting both investment and growth in the short- and long-term. Mr. Perry was also quoted saying: “Energy security is a road map to economic prosperity,” in line with President Trump’s belief that by increasing domestic energy production and reducing reliance on imported energy, the Nation’s security is enhanced.

The idea of America’s energy dominance was at the heart of the Secretary of the Interior, Mr. Zinke, when discussing the next National Outer Continental Shelf Oil and Gas Leasing Program (National OCS Program) for 2019-2024, in January 2018. Secretary Zinke stressed the need to press ahead with a responsible development of the OCS, with the goal being that of achieving the right balance between pursuing American energy dominance, and the protection of U.S. coasts. It is a critical issue, which presently seems to resonate well with both the Senate and the House of Representatives. When the Draft Proposed Program (DPP) gets final approval, a very large proportion of the entire U.S. OCS would be up for potential oil and gas lease sales. The Administration believes this puts the nation on a path to achieving an unprecedented access to America’s large offshore oil and gas resources, with a view to strengthening the country’s competitiveness vis-à-vis other oil-rich nations, while remaining a global leader in responsible offshore energy development and producing affordable American energy for the future. Now that the 60-day public comment period for the DPP has expired, and having given due consideration to all public comments received in response, the Bureau of Ocean Energy Management (BOEM), which is the body entrusted with managing development of U.S. OCS energy and mineral resource, will develop a proposed program for public comment later this year, followed by the proposed final program expected in 2019. Pursuant to what reads in Section 2 of the Executive Order 13795 of April 28, 2017: “It shall be the policy of the United States to encourage energy exploration and production, including on the Outer Continental Shelf, in order to maintain the Nation's position as a global energy leader and foster energy security and resilience for the benefit of the American people, while ensuring that any such activity is safe and environmentally responsible.”, the Department of the Interior has finalized a region-wide oil and gas lease sale. Following the announcement made in mid-January

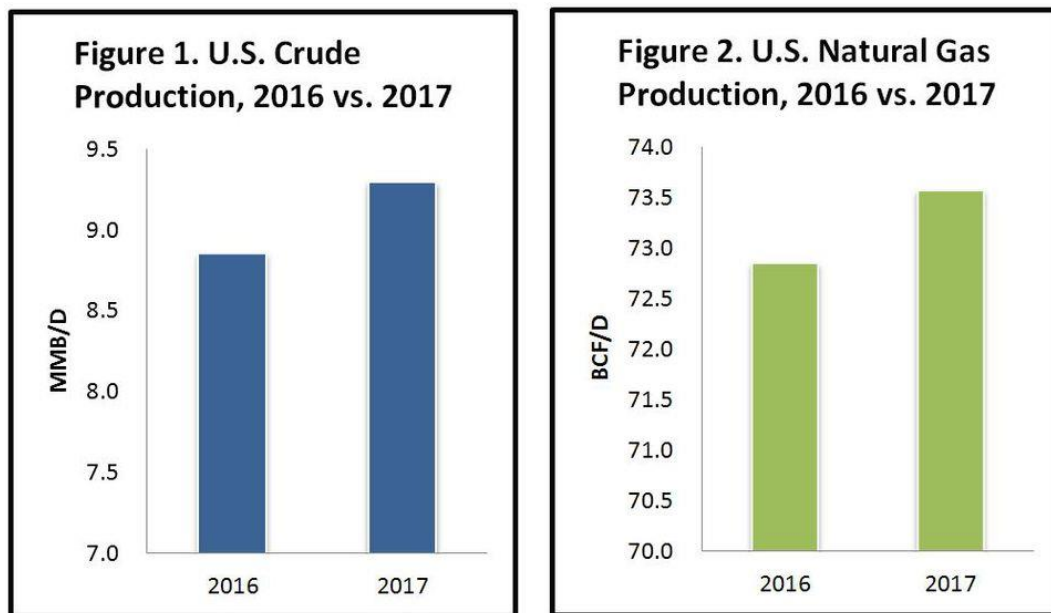
2018, the Department carried out a region-wide Gulf of Mexico Lease Sale 250 at the end of March last, which generated \$124,763,581 in high bids for 148 tracts covering 815,403 acres in federal waters of the Gulf of Mexico.

As it is often the case, there is much more to it than meets the eye. The considerable expansion, which America's oil and gas sector recorded at the beginning of Mr. Trump's presidency, has also been supported by global market dynamics, besides an increase in U.S. crude exports. The building of LNG export terminals contributed to increasing LNG export volumes, while a constant increase in well productivity and a decrease in drilling costs contributed to a more profitable U.S. upstream. Much is being debated at present about the need for new business models, such as fixed prices or equity stakes in new U.S. LNG projects, to unlock new LNG supply. Special attention is being paid to the expansion of the Golden Pass LNG project, which is led by ExxonMobil affiliates and Qatar Petroleum International, to allow the flexibility to import and export natural gas in response to market conditions. It could open the way to a new wave of U.S. LNG.

However, the sector could still feel the impact of Mr. Trump's determination to support coal and nuclear energy, but most of all the industry stands exposed to the Administration's decisions on export restraints, especially if concerning countries that have FTAs with the US. Lower taxes and reduced regulations could lose their strength, if U.S. trade policy were to evolve towards increased protectionism. Mercantilist measures could have serious consequences on the energy sector, i.e. high costs of material, higher import tariffs. Experts seem to believe that this would contribute to spreading a feeling of uncertainty in Europe about dependence on U.S. LNG. Gas import needs in Europe are set to rise swiftly due to the continent's constantly declining gas production. Nevertheless, as regards gas demand in the power generation sector in continental Europe, growth is expected to be very limited, since the phase out of coal is expected to develop at a slower pace than the phase-out of nuclear. Last but not least, there is the question of fugitive methane emission, something which the American industry is trying to stay ahead of. Pressures to measure and mitigate

methane emissions are mounting and Europe is bound to consider them as regards Russian and U.S. imports.

As to the rise in oil production (Fig. 1 and 2), experts seem to believe that it should be ascribed more to a host of factors, such as production cutbacks by the OPEC and Russia, an increase in global demand, and rebounding crude prices (\$43.30 in 2016 vs. at \$50.70 per bbl in 2017 for WTI and \$2.51 vs. nearly \$3.00 per Million Btu for gas), rather than to policy changes.²²



Data Source: US Energy Information Administration (EIA)

Energy is seen today, more than ever, as a key player in American life. The development of U.S. vast and still untapped reserves, the Trump Administration maintains, can generate revenues to be invested for the good of the American people, and contribute to achieving energy independence. Pursuing America's energy dominance may imply, according to some analysts, that the US may want to leverage US energy exports or withholding equal

²² Anna Mikulska, Michael Maher, "U.S. Energy Dominance: Markets Trump Policy in 2017," Forbes (2018)

access to the US market, to gain concessions in trade relations, at least in the short term. It is an approach that some fear may seriously undermine traditional U.S. soft power. Despite the outcry caused by Mr. Trump's statement that the U.S. will withdraw from the Paris Climate Agreement, little has been done so far. The dialing back of federal-level emissions reduction policies will not stop the impact of market forces that are responsible for the strong decline in mining jobs and the closing of many coal-fired plants. Further to it, gas power plants strongly contribute to reducing CO2 emissions and greenhouse gas pollution, while easily bridge fuel to renewables since they can respond quickly to changes in load and renewable generation. The Administration has declared that a responsible stewardship of the environment is among its top priorities, while refocusing the EPA on its fundamental mission of protecting America's air and water. Mr. Trump is committed to ensure a brighter future for the country and that future, he believes, depends on the right energy policies. With this in mind, the Administration has overturned several of Obama's environmental policy regulations, such as the Dakota Access line and the Keystone XL. Innovation, as Secretary of Energy Perry underlined recently, is fully supported by the Trump Administration through, among other things, the streamlining of the federal permitting process and corporate taxes reductions.

According to the latest IEA's five-year forecast, oil market conditions have improved substantially, after the critical 2015-2016 period, when oil prices collapsed, upstream investments plunged, and industry investments fell by 25%. Strong economic growth around the world will continue to support strong oil consumption until at least 2023. Along with surging output from the U.S., underpinned by several major shale fields, rising production in Canada, Brazil and Norway will make it possible to meet higher demand through 2020. The U.S. oil and gas boom is bound to continue, supported by technological advances, improved efficiency and a fragile recovery in oil prices all of which is encouraging shale companies to increase their drilling.

U.S. tight oil has been under the spot light for some time, being the source of major oil production growth in the past ten years and a potential driver for future growth, with reserves projected to last for around 100 years. Shale gas and hydraulic fracturing (fracking) have revolutionized the U.S. energy sector in terms of prices, consumption, and CO₂ emissions. Some experts have started questioning whether the U.S. shale gas can perform as a highly elastic source of supply, a “swing producer”, maintaining that production efficiency gains and service cost reductions may have been overestimated. However, forecast for the next 5-year period tell a different story. Shale production is going strong (IEA latest report), and if prices remain what they are at the present time, almost 60% of the 6.4 million new barrels of oil that will be pumped every day between now and 2023, will come from the U.S. It is a fact that shale gas has altered the U.S. gas market and energy mix, reducing gas prices, creating hundreds of thousands of new jobs and lowering energy imports. From an environmental point of view, while it seems to be beneficial, since it safely stores CO₂, it also comes with several unanswered questions regarding the real impact it might have on fragile ecosystems, i.e. induced seismicity, drinking and groundwater contamination and fugitive emissions. The IEA Executive Director, Fatih Birol,²³ has pointed out that the shale revolution, which started in 2009, has contributed to placing the US in a very privileged position, so much so that it is expected to be the ‘lead actor’ in the global oil market developments in the next five years. Global oil demand is predicted to show a rapid growth globally and the U.S. will play a major part in it, producing as much as 12 million barrels of oil per day. By 2023 China and India will become the world’s biggest oil importer. In Asia, oil imports are expected to grow by 3.5 million barrels a day through 2023, with China expected to import 10 million barrels of oil per day and expand its petrochemical production. The latter, and an increased domestic refinery activity, will also offer an opportunity for the U.S. to increase its oil shipments to China.

²³ “The United States will dominate the oil industry for the next 5 years, International Energy Agency forecasts,” CNBC (2018)

Under the Trump administration, the U.S. is gaining momentum and is becoming more energy independent. The country now has the potential to radically change the global geo-strategic landscape, testing its engagement with the world and reshaping its relationships with areas like the Middle East, Europe and with Russia. A self-sufficient U.S. will have fewer strategic interest in the Middle East or in other energy-rich countries and will certainly feel less vulnerable to developments beyond its borders. Truth be said that U.S. strategic, political and economic interests will not change overnight. The U.S. will very likely continue to focus on strategic partnerships with certain countries like Australia, which has significant natural gas reserves and holds the necessary technology to lower liquefaction costs. By enhancing both an economic and security collaboration with Australia, the U.S. might also acquire greater influence in the Asia Pacific region, where Russia has been very active in strengthening and expanding its influence, also through the Shanghai Cooperation Organization (SCO), that has somehow replaced Russia–EU summits and the Russia-NATO Council, and by keeping very close relations with the key members of the Eurasian Economic Union, Belarus and Kazakhstan. In this context the dynamics that are at play between Russia and the U.S. are quite interesting.

The current geopolitical environment appears volatile, uncertain, complex, and ambiguous, with relations among nations fragmenting, tensions rising between Qatar and its partners in the Gulf Cooperation Council, U.S. sanctions remaining in place, and the American approach to trade shifting towards a more protectionist stance (levies on imports, FTA restraints etc.). It is an environment where energy and geopolitics intersect quite extensively, generating significant implications for the energy market, energy supply and European energy security.

Russia, currently the world's largest crude producer at about 11 million barrels a day, is bound to feel the blow of the U.S. shale gas revolution, which puts an end to previous notions of resource scarcity, and the changes taking place in market trends and in the world's energy map. The International Energy Agency's latest study shows that the U.S.

will overtake Russia, with a crude output expected to reach a record of 12.1 million barrels a day in 2023, becoming the world's largest oil producer accounting for most of the global growth in petroleum supplies. Along with oil, also American influence on global oil markets is expected to rise. U.S. oil exports are predicted to double to 4.9 million barrels a day by 2023, quite a different picture from the recent past, when exporting crude oil was illegal. Horizontal drilling and hydraulic fracturing have succeeded in generating an abundance of oil from shale rock deep underground, and in 2013 the U.S. produced more oil than it imported opening the way to the lifting of crude export which eventually came into being in 2015. Currently, American drillers are poised to play a bigger role in the export market. The country has shipped as much as 2 million barrels a day in recent weeks, and according to the IEA, it could ship as much as 5 million barrels a day by 2023, after expanding infrastructure, building new pipelines and export terminals.

Eastern Europe, the Caucasus region and Central Asia are all of strategic interest for Russia, and seem determined to play a role in the energy market. They are energy-rich areas located along global transit routes, and are likely to feel the impact of the shale gas revolution. Asian countries like Azerbaijan, Uzbekistan and Turkmenistan hold significant oil and natural gas reserves and are striving to become major suppliers to both the European and the global market. It may not happen in the very near future because they still lack the foreign investment and transport infrastructure required to make a statement in the global energy market. There are other players that should be taken into consideration.

According to the U.S. Energy Information Administration²⁴, the MENA region is rich with unconventional energy resources especially shale gas. Libya has the largest reserves (290 trillion cubic feet of gas) followed by Algeria (231 tcf) that leads the way in exploration. Saudi Arabia, Egypt and Oman also carefully evaluated their energy reserves showing an ever-growing interest in shale gas. Still, the region's energy mix is unlikely to radically

²⁴ "The Shale gas revolution in the United States: Global implications, options for the EU," European Parliament (2013)

change in the near future due to socio-political instability that undermines possible advancement. Moreover, most MENA countries lack well-defined environmental legislation for the exploration and extraction of unconventional energy resources.

Looking at the changing international political economy (IPE) of natural gas,²⁵ it is apparent that liquefied natural gas (LNG) trade increasingly connects regional gas markets and international pricing patterns, which in turn are increasingly reflective of market fundamentals. Established global players such as Russia and Qatar are being challenged by American LNG in a natural gas landscape, where new players are emerging, and power dynamics is shifting. However, it is also important to consider that the role of gas in the future energy mix appears quite uncertain in the light of infrastructure bottlenecks, the climate regime, and national politics. To export LNG, the U.S. currently has to bear high transaction and transportation costs. A case in point may be the debate about the Nord Stream 2 gas pipeline, which some state would undermine EU efforts to diversify its energy supplies and supply routes, while others dismiss it as simply a commercial enterprise. The Nord Stream 2 gas pipeline, which should extend from the Russian coast of the Gulf of Finland to the German coast at Greifswald, is also at the center of a competition between Russian gas and U.S. LNG. Ukraine has a potential to develop its shale gas deposits could develop to the extent of meeting both domestic consumption and exports to Western Europe by 2020. The Nord Stream 2 gas pipeline would cut it out from EU-Russia gas trade. This would be one more reason why the project is opposed by both the U.S. and the European Commission, though it complies with EU existing regulations. The IPE cannot fail to consider the impact that may be caused by the behavior of other energy-rich countries like OPEC, Venezuela, Iran and Mexico, as well as energy demand in least developed and developing countries.

²⁵ Andreas Goldthau, Michael F. Keating, Caroline Kuzemko, "Handbook of the International Political Economy of Energy and Natural Resources"

If Russia were to lose its global leading role in the gas market, its energy policy would have to be reviewed, its influence at the international level would lessen, the Russian gas market would suffer and gas prices would be impacted. However, Moscow can still limit the impact of the U.S. shale gas revolution on its energy sector, thanks to the country's vast conventional gas reserves and an efficient transport system that ensures a dominant position both on global and European energy markets.²⁶ Although Moscow is already developing countermeasures to protect its leadership and is pressing ahead with its projects to build and develop efficient LNG export infrastructures and access new Asian export markets in an effort to capitalize on time, truth be said that the sanctions imposed by the West since 2014, especially at the outset, have made the Federation pay a high price, in terms of foreign financing drying up, and access to modern technology being restricted.

Several foreign companies were forced over the years to put an end to their partnerships with Russian oil companies, thus making it difficult for them to conduct major geological explorations and reach difficult-to-access oil. A recent and exemplary case in point is Exxon Mobil, which felt the brunt of U.S. sanctions on Russia, which specifically targeted the areas covered by Exxon's strategic agreement: the Arctic, shale and deep water. After the annexation of Crimea in 2014, Washington and the West imposed sanctions on Moscow, only to expand them in late 2017, and again in the first weeks of April 2018, pursuant to the Countering America's Adversaries Through Sanctions Act. Exxon Mobil has decided to pull out of some of its joint ventures with Rosneft, with the exception of the Sakhalin-1 project, that is unaffected by the sanctions. Such a high-profile partner would have supplied expertise and financing to develop major projects concerning the Arctic, Black Sea, and shale resources, some of which, like the Trizneft Pilot project involving the Bazhenov shale oil development, have been on hold since 2014. Experts seem to suggest, for instance, that the offshore Arctic deposits are so challenging

²⁶ "The Shale gas revolution in the United States: Global implications, options for the EU," European Parliament (2013)

that they may not be considered viable at the current oil prices. Despite difficulties and limitations, Russian energy companies are determined to press ahead with challenging projects in the oil-rich far north, deploying home-grown technologies, that according to them have contributed to a remarkable increase in the country's average production. Domestic expertise is advancing quickly, as proven by Gazprom Neft and a 1km-long horizontal well 2.3km below ground it drilled at a site in the Bazhenov field.

Faced with the slide of relations with Washington, and a surge in pro-EU, pro-Atlanticist sentiment, Moscow has set its foreign policy priorities to confirm Russia's status as a great power outside the former Soviet space, settle its influence in Asia and in the Middle East, strengthen its relations with non-Western partners, and highlight its 'Eurasian' interests vector'. The evolution of the Sino-Russian entente deserves special attention, since Moscow and Beijing interests and strategies do not always coincide. Russia is very active in keeping close and friendly relations with China, but it is also weary of dealing with an economically dominant partner. Beijing, though currently engaged in a sort of trade war with the U.S., has no interest in estranging the U.S. Mr. Putin has also reached an agreement with China to harmonize the One Belt, One Road (OBOR) project with the Moscow-led Eurasian Economic Union (EEU), looking forward to extend it to ASEAN countries.

Trump's policies will not be immediate and will very likely be affected by both social and market forces. Federal policy is only one among many factors that influence energy development. Moreover, market forces as well as state and local policies play a major role in redefining effectiveness of federal rules. Coal is a clear example. In his State of the Union address in Charleston, Mr. Trump announced that America has "ended the war on beautiful, clean coal." He strongly worked to save this sector, by stepping away from the Paris Agreement and the CPP, but the coal power plants retired in 2017 were on average 10 years younger than those that retired the previous year. Moreover, the inexpensive and abundant U.S. natural gas, and the expansion in renewable energy generation, coupled with

a global drive to use and develop cleaner energy resources, are not helping operators to be very optimistic as to the competitiveness of their coal assets’.

Chapter 3: Energy Diplomacy at work

3.1 – ExxonMobil and Rosneft

This chapter seeks to give an overview of evolving US and Russian energy posture and diplomacy. It is noteworthy to point out that in the 21st century, diplomacy is changing and new actors challenge its traditional state-to state structure, such as civil society and private actors, as well as regions and cities. They are active in the diplomatic space, where energy is a high priority. A brief review of three case studies contributes to adding specific context to a ‘soft power’ both Washington and Moscow leverage with great care and efficiency.

The Kremlin’s approach to energy diplomacy currently focuses on enhancing communication and promoting cooperation as well as competition, while working with major exporting countries to maintain world energy market stability. Information dissemination and sharing is key to a successful energy diplomacy, along with people and organizational structures, institutional behaviors and learning. Moscow is resorting to all of these tools to contributing to fulfil a most important, overarching goal, i.e. being recognized as an equal partner in the international community, in general, and by the U.S., in particular, and affirming its sovereignty. Moscow wants parity on several issues it considers vital for the country’s growth and security, such as global energy policy. Against a backdrop of instability in the global energy industry, and a shifting geopolitical scenario, Russia must consolidate its share of the oil and gas markets and keep the door open to mutually beneficial cooperation in the energy industry with partners around the world, foremost in the Middle East, with a view to fully integrate the country’s energy industry into the global market. Massive oil and gas revenues have allowed Russia to create reserves, which unfortunately are depleting fast pushing Moscow to seek ways to restore

oil prices as well as create a predictable global energy market that would allow it to make long-term financial plans.

In a world that has become multipolar, Moscow finds itself competing for clients in Europe and Asia with several emerging players and with the U.S. It is a turbulent shrinking market, where Moscow intends to stay to keep its flow of revenues, making peace with Turkey to protect its interests in the European gas market, while adjusting its priorities in the region. It has reconsidered opening to Qatar and Saudi Arabia, despite rivalling with them for leadership in the energy market. Russian energy diplomacy has been very active in the Gulf in the past few years, in an effort to boost market interdependence, and countering decreasing European investment levels by attracting Gulf investments. In 2016 Rosneft sold a 19.5% stake to the Qatar Investment Authority (QIA) and commodities trader Glencore. It was the largest energy deal Russia has ever entered with a GCC Country, and its success confirmed the lure of taking a share in one of the world's biggest oil companies despite the risks associated with Western sanctions imposed on Russia over the conflict in Ukraine. Rosneft produces 4.5 million barrels of crude a day, more oil than any other publicly traded company in the world. After quite some time, Abu Dhabi's Mubadala national wealth fund may be succeeding in entering Russia's upstream sector and strike a deal to invest in a Gazprom Neft subsidiary based in Western Siberia. The Kremlin is more than ever looking East and engaging very actively with the ex-Soviet Union space and the Far East. The U.S. instead is stepping back from many areas of influence, where the Kremlin is ready to seize its chance.

While discussing energy policy, the question of energy security is of great relevance. The United States and Russia define it in different ways, whereas security of supply and guaranteed access to hydrocarbons are the pillars on which energy security rests for the U.S., while Russia focuses on security of demand, especially for long-term natural gas contracts with Europe, which currently purchases 82% of all Russian gas exports - representing 40% of Europe's gas imports. Washington is vocally against the controversial

Nord Stream 2 natural gas pipeline project, which Poland, Ukraine and Denmark find it would increase the EU dependency on Russian gas and prevent a much needed energy diversification. Moreover, it could raise some security concerns, as recently stated by the Deputy Assistant Secretary of State for Energy Diplomacy, Sandra Oudkirk, who maintained it could be used to place monitoring and listening devices for surveillance under the Baltic Sea. For Moscow, the pipeline would lessen its dependence on third country transit for its access to the European market. The U.S. is working to increase its exports of liquefied natural gas to Europe and continues to support diversification of energy supplies in Eurasia by promoting the construction of pipelines that bypass Russia. The Baku-Tbilisi-Ceyhan pipeline, that opened in 2006 is a good case in point.

Ever since then secretary of state Hillary Clinton said in her 2012 address at Georgetown University that energy could be used, among other things, to help bring peace to war-torn countries and settle international disputes, promote competition in Europe, and tackle energy poverty and climate, energy has gained an ever growing role in a multifaceted diplomatic relations between states in the United States' foreign policy apparatus. Analysts have it that energy diplomacy within the State Department was developed in general terms to respond to a greater international competition for energy resources, and in particular, to make a statement in a key area such as energy and climate change, while at the same time improving the way energy matters had to be dealt with. It can be argued that through energy diplomacy the U.S. can interact with high-level representatives from other countries and address other broader foreign policy goal besides energy. Shale gas has driven the country from scarcity to abundance, propelling it into an energy superpower future. Energy diplomacy under President Trump is gradually taking shape, expanding on the narrative of the previous Administration and heralding major benefits for friends around the world, to whom fossil fuel exports would be targeted. China, a country of great relevance for Russia's foreign and energy policy, has also come clearly into the picture when on a State visit to Beijing, President Trump announced the signing of MOUs regarding possible Chinese investments into the US energy and chemicals sector in Alaska and West Virginia.

There is no question about the game-changing impact the US oil and gas boom has had on domestic and global markets, with prospects of important geopolitical benefits. However, it remains to be seen how President Trump posturing about free trade can be reconciled with the fact that trade agreements are an essential tool to create rules that encourage energy exports. Moreover, the U.S. withdrawal from the Paris Agreement allows the Administration to be more straightforward in promoting hydrocarbons and reviving the nuclear and coal industry, but success on such a strategy heavily depends on market realities.

The US–Russian relationship is a limited partnership where cooperation and competition co-exist. However, it remains a key partner for the United States, such as Afghanistan, and the Middle East, besides having a strong geostrategic position as the world’s largest continental power.

Russia remains an issue in every US presidential election campaign. In 2008, the George Bush Administration was charged with raising tension with Russia, in 2012, the Barack Obama re-election campaign showcased the accomplishments of the reset policy, and in 2016 Mr. Trump heralded progress was to be made in the relations between the two nations. However, the U.S.–Russia relationship was also a contentious issue for Mr. Putin, especially after the contested December 2011 Duma elections. While President Putin was holding out the prospect of improved relations if Washington agreed to do away with Cold War stereotypes, the concept of primacy of sovereignty gained ever more strength, gradually portraying Russia as a champion of the right of states to absolute sovereignty in a world with emerging power centers that can compete with the United States. A resurgence in Russia’s international influence contributed to the narrative that Moscow could no longer just be party to programs whose agendas were set in the United States. Equality, which Mr. Putin sees intertwined with the concept of respect, has it that Russia’s views should be taken into account and respected. It should be pointed out that the unique structural features of a relationship where security and nuclear issues continue to pay a

substantial role, the number of stakeholders on both sides committed to sustaining and nurturing the bilateral relationship is not large. Unlike the Europe– Russia relationship, where a rather large group of stakeholders from the business sector in both Europe and Russia are interested in promoting commercial and political ties, the United States and Russia are not natural economic partners and the support for bilateral relations comes mostly from resource companies and firms seeking to participate in the growing consumer market. In 2009, the Obama administration created the Bilateral Presidential Commission, a revamped version of the Clinton-era Gore–Chernomyrdin Commission, to tackle the stakeholder problem and building steam for a reset in the relations between the two nations, whose most notable example was the signing, after nearly a year of negotiations, of a long-term strategic cooperation agreement between ExxonMobil and Rosneft in 2011. As a follow-up on the implementation of the agreement, the two companies engaged in numerous deals for cooperation in the Baltic sea, participation by Rosneft in ExxonMobil projects in the United States and Canada, and joint exploration of the Arctic, with access to the Arctic Research and Design Center for Offshore Development. The Joint Center was to pursue the goal of accumulating knowledge, technologies and expertise as well as conduct the whole range of research and development work for offshore projects. It also entailed the transferring of know-how the U.S. partner had in North America to operations in Western Siberia, where Rosneft controls an estimated 1.7 billion tonnes in reserves of ‘tight’ oil, trapped in non-porous rock. In 2013 Rosneft and ExxonMobil announced the achievement of several milestones under their 2011 Strategic Cooperation Agreement, including joint venture formation for the Kara Sea and Black Sea projects, and establishing foundations for joint ventures to explore seven other licenses in the Russian Arctic. Exxon Mobil secured for the U.S. a very challenging and rich set of deals, including the strategic exploration project which fell through with BP. The total amount of investments in exploration projects in the Russian Arctic as well as the shale oilfields in Siberia and the deep water in the Black Sea were approximately \$500bn.

The deals were made possible also by the Kremlin's commitment to reform the country's offshore energy taxation regime by abolishing export duty and slashing mineral extraction tax (MET), as well as to keep taxation stable for 15 years. Recently the government approved a plan to introduce a profit-based tax on the oil industry, as of 2019.

Cooperation efforts resulted in a well-structured partnership, which seemed to do away with historical stereotypes; oil diplomacy was at its best, and triggered growth also by impacting related industries, creating market demand for equipment, knowledge and technologies, thus strengthening ties, with tangible results also at the political level.

At the end of 2014, Exxon Mobil held 14.6 million acres in exploration land in the United States, an exploration position which was surpassed more than four times by 63.7 *million acres* the company held in Russia.

As soon as the sanctions imposed by the U.S. and the West following the annexation of Crimea set in, what looked like a very solid partnership, started showing some cracks. Part of the sanctions leveled on Russia included the prohibition of technology transfers in Russian energy projects in the Arctic, Siberia, and the Black Sea. For over two years, the U.S. oil giant saw its largest single concentration of future oil production remained suspended because of the sanctions. The chain of sanctions gradually made it economically unfeasible for ExxonMobil to keep all of its agreements going. In 2017 the American oil giant announced it would have to formally withdraw from most of its joint ventures with Rosneft in the following year, and it actually did it in February 2018.

According to most analysts there are two faces to the same coin: the decision was an economic blow on the U.S. company's finances, since it lost \$200 million, but from a political point of view it put an end to a difficult strategic agreement that was often questioned in the U.S. and in the West after sanctions were imposed. It was also said that the American company was faced with daunting challenges regarding some of the joint projects, and it was struggling to fulfil its obligations and comply with the deadlines established in the agreement. To put to rest concerns triggered by a whirlwind of news

about President Trump's alleged relationship with President Putin and Russia's interference in the American 2016 election, the White House opted for a hard line and then Secretary of State Rex Tillerson, the man who orchestrated the deal when he was Exxon's CEO, accused Moscow to employ disinformation and carry out cyberattacks to subvert Western democracies. He also stressed that sanctions would stay until Crimea was returned to Ukraine.

Russia needs Western technology especially to develop its large fields in harsh environmental conditions in the Arctic, although the Kremlin has for some time made an effort to invest in R & D. Rosneft has said it would follow up on and strengthen the independent development of both the Arctic and Baltic projects, while working to promote the return of ExxonMobil as a key partner. Rosneft also announced that both companies will continue collaborating on projects that are not subject to any restriction, such as the Sakhalin1 oil joint –venture, which includes also Indian and Japanese companies, and in which Exxon Mobil still retains its stake and leading role. The project operates under a Production Sharing Agreement struck in the mid-1990s and currently produces around 200,000 barrels of oil per day.

There is one final comment to be made when discussing fossil fuel resources and energy diplomacy, i.e. future scenarios related to whether demand will peak. It is a fact that oil is here to stay at least for the next 70 years or more, and its production and consumption will continue. Exxon Mobil, among other oil companies, and the IEA as well believe demand will not peak, but rather rise through 2040 by 20%. In the company's '2018 Outlook for Energy: a View to 2040' it is postulated that the world's energy future is going to be shaped by a major energy transition which is underway, which includes governments' efforts to reduce GHG emissions through nationally determined contributions (NDCs). As a result supply and use of energy across society will be affected by policies adopted to support NDCs. Technology is identified as a major player especially as regards the advances needed to boost renewable resources and enhance energy efficiency, which in turn limits

demand growth. Demand growth will be driven, as mentioned earlier, by non-OECD nations. The opposite front believes that demand will plateau in less than two decades also in light of the Paris Agreement commitments. President Trump's dismissal of the Agreement may undermine what 'peakers' argue, but in turn it may be offset by higher energy efficiency and a mass transformation in transportation, bringing about a cap gasoline consumption which would seriously affect energy-rich states. Major geopolitical unrest would ensue, should oil consumption drop substantially, especially in countries that are already unstable such as Venezuela and Nigeria, but the impact would be felt on the U.S. and Russia, as well. Here it is where China and India can play a decisive role, as key oil importing and consuming countries. Whatever the forecasts indicate, the bottom line is that Russia, just as Saudi Arabia, needs to focus on diversifying its economy and gradually become less reliant on oil exports.

How much economic leverage Russia and the U.S. have on each other when it comes to energy and the spheres of influence it creates? This is a key question when approaching the EU and its energy strategy.

If the future develops along the lines outlined by the latest IEA report, Russia is posed to face a powerful new competitor in Europe, a continent which so far has been heavily dependent on Russian gas, and that has felt – because of it- Moscow's political and diplomatic influence.

A special role in the EU game between these two countries is played by the so-called 'pipeline diplomacy', or 'energy realpolitik', which dates back into the past century and is proof to the power of energy versus ideologies and alliances. A few facts to confirm it: in 1968 Austria started buying gas in ever increasing volumes from the Soviet Union. It was the first European country to turn to Russia to secure its energy supply. Italy, Germany and France followed suit from 1974. At the end of the 70s beginning of the 80s, tensions escalated on both sides of the Iron Wall, with the Soviet Union invading Afghanistan. The

U.S. grew very concerned about the close energy ties between Russia and the EU and when the building of a large pipeline from Siberia's Urengoy gas fields to the West got underway, with the financial backing of European banks, President Reagan stepped in to stop what was considered as a critical source of export earning for Moscow. The Administration called for sanctions to be imposed on the USSR, but clashed against a united front of European leaders, and the sanctions were dropped. Pipeline policy has come back to prominence following the Russian-German commitment to finalize the construction of the controversial Nord Stream 2 pipeline, which according to then Secretary of State Rex Tillerson, would give Moscow yet another opportunity to politicize energy. However, it could be argued that a similarly controversial pipeline has been approved in the U.S. reversing a 2015 decision by the Obama administration. It is the Keystone XL 1,200-mile pipeline, which would carry crude oil from the tar sands region of Alberta, Canada, to Nebraska and ultimately to refineries on the Gulf Coast.

The U.S. has always been supportive of an EU broad energy diversification and last year a first five-year agreement between Poland and the U.S. drove a wedge between Russia and Poland, a country that has been a natural gas customer of Russia for 74 years. Traditionally it bought about two-thirds of its gas from Gazprom PJGSC, but the completion of a liquefied natural gas terminal in 2016 to have an import link to access Norwegian fuel and the 2017 deal between Polish Oil and Gas Company Group (PGNiG) and Centrica LNG Co., for shipments between 2018 and 2022, were a clear sign of a change of heart in Poland and especially in Eastern Europe. Poland has been saying since 2015 that it will not renew a long-term contract with Gazprom that ends in 2022. To this end, the Baltic Pipe (expected delivery date: 2022) and the U.S. are essential elements. It should be considered that challenging Russia's dominance in European gas markets is no small feat, even for the U.S. which by the end of the decade will have as many as five major LNG exports projects operational, thus becoming the third largest LNG exporter after Qatar and Australia.

On August 2, 2017, the Countering America's Adversaries Through Sanctions Act (CAATSA) bill was passed with a bipartisan vote of the U.S. Congress. The provisions of the bill could theoretically affect the Russian energy pipelines, especially the Nord Stream 2 and Turkish Stream pipelines. However, as it happened with the Reagan Administration, the Trump administration was met with sharp criticism by Austria and especially Germany, arguing that such a decision could ill-affect trans-Atlantic relations, since it would entail the threat of imposing penalties on European companies participating in the Nord Stream 2 and other natural gas projects involving Russia.

The E.U. strong drive to expand to the East and NATO strengthening its presence very close to the Russian border have contributed to escalate tensions between Moscow and the EU and urged Russia to accelerate its actions to consolidate its influence on the former Soviet Union areas and in the Far East. The presence of Europe's historical ally, the U.S., coming to the forefront in the present situation where there is much more at stake than gas competition between Moscow and Washington.

3.2 – Russia and the U.S. in Europe

Prior to discussing Europe, as an importer country, and its interactions in the landscape of energy diplomacy with the U.S. and Russia, it is interesting to put fossil fuels in a geopolitical context. Besides being non-renewable, they are located mostly in what can be defined as currently unstable countries, such as Venezuela, Nigeria, Sudan, Syria, Iraq, Libya and Iran. Sometimes petro-states have domestic political developments that can make access to the resources difficult. Figures speak louder than words: 80% of the world's known oil is located in nine countries representing 5% of the world's population, while 80% of the world's known gas resources are found in 13 countries (Sovacool, 2011, p. 21).

Europe's dependence on natural gas from Russia has been a regularly debated topic in foreign policy circles in Washington DC. Since the Reagan administration, policy makers and governmental officials have discussed the benefits and relevance of undermining and reducing Russia's dominant role in the European energy sector. During the 2004 and 2007 EU expansion, the topic became more relevant when confronted with the view and implication energy diplomacy and security had for Central and Eastern European countries as well as the Baltic States, also in the light of past market experiences and complicated historical relations with Russia. Additionally, concerns about Europe's dependence on Russian energy were heightened following two critical disruptions in gas supply in 2006 and especially in 2009. A dispute between Russia and Ukraine, and more specifically between Russia's national champion, Gazprom, and Ukraine's utility company, Naftogaz, brought about the closure of gas pipelines which crossed Ukraine, Poland, Czech Republic and Germany at the beginning of 2009. It was Europe's worst dropout of natural gas supply whose effects – at varying degree- were painfully felt across the Union. Italy, for instance, recorded a 25% drop in its national requirement and was forced to increase imports from Libya, Norway, and the Netherlands.

Doubtlessly, Europe is a very attractive market of 400 million consumers where old and new energy companies compete to gain a slice of the pie. However, it has become a closely regulated field, as Gazprom knows well, especially after the EU added momentum to international regulatory cooperation between EU member states and neighboring countries, in an effort to fulfil its three-pronged approach to energy, which rests on competition, sustainability and security. The EU imports more than half of all the energy it consumes. Its import dependency is particularly high for crude oil (90%) and natural gas (69%). The total import bill is more than €1 billion per day. A scenario that makes it highly vulnerable to any major supply disruption. In response to it, the EU Commission released its Energy Security Strategy in 2014, which entailed the carrying out of security stress tests associated with simulations of potential disruption in Russian gas imports. It also gave the right for the EU Commission to assess the compatibility with EU rules of an agreement

between a Member State and a third country. It seems however that these checks are not binding and individual countries are sometimes reluctant to give more autonomy to the EU when it comes to the energy market. Energy security is such a vital challenge for Europe, that its energy scenario is mapped annually through State of the Energy Union reports. The Energy Union advocates the development of regional and EU-wide frameworks approach to energy with a view to building a single energy union that would increase continent-wide economies of scale, and remove national distortions from the energy market, the goal being securing an uninterrupted flow of energy sources at affordable prices. Its number one priority is, naturally energy security. As it was noted earlier in the paper, interconnectedness and interdependence are essential in this respect, a vision that seems to be at odds with President Trump's current strategy. Europe is a good case in point, for it has become more resilient to gas cutoffs, is better connected to global gas markets, has invested more in new infrastructure to gain access to a variety of supply sources. Much has been done to help diversify resources, also through market liberalization and integration, strengthening the legislative and regulatory framework, and supporting market functioning. Much to Russia's chagrin, Eastern and Southern Europe have started diversifying their supply thanks to LNG imports from the U.S. but also from Norway and Qatar, and the construction of a pipeline from Azerbaijan to the EU is being built.

However, a single energy market is still incomplete. More gas links and electricity interconnectors between countries are needed and the goal now is 2030. Energy demand is largely quelled by external suppliers like Norwegian Statoil, Russian Gazprom, and Algerian Sonatrach, with imports also from Nigeria and Qatar. There seem to be different geopolitical interests among EU member states as regards energy supply. Despite a widespread sense of political and decision-making stalemate, sanctions and an increasingly divergent political posture between the EU and Russia have not stopped the flow of energy commodities or ended the long-term offtake agreements, which in turn bind EU consumers, most likely, to continue relying on Russian energy.

Following the latest flurry of sanctions imposed on Russia, the on-going accusations of interference and cybersecurity attacks against the U.S. and European countries, and above all the interest shown by some EU countries to finalize LNG deals with the U.S., Europe has become a ‘battle field’ where U.S. and Russian energy diplomacy can cross swords. Europe’s strategy to deal with dominant gas suppliers continues to be a work in progress, which the U.S. is actively supporting especially nowadays when its exports are growing and prospects look even more promising.

U.S. energy diplomacy has played a role in furthering the agenda of EU market integration as a tool to enhance the community’s energy security and stability. Opinions differ with regard to the extent U.S. diplomats, energy actors and energy policy makers can take credit for the EU significant progress in terms of increasing access to energy alternatives and market integration. But it is also true that the EU has been working for a long while to achieve energy security and enhance market integration, as discussed earlier.

Achieving supply diversity is not easy and may come at a great cost. A clear example of a politically motivated project to diversify EU energy supplies is the so-called Southern Gas Corridor. Launched in 2008 by the EU Commission, the project was designed to provide energy supplies to countries like Greece, Italy and Albania by going through the Caspian region and the Middle East, more specifically Turkey. Azerbaijan attaches great importance to the project, which however is having financing issues and is confronted with local opposition. Once completed, it could have serious political and economic repercussions on the relationship between the U.S. and Russia. Russia’s energy dominance is put on the line: either minor but ambitious countries like Azerbaijan and Uzbekistan could get more weight in the global energy market, or the U.S. would step in and further expand its sphere of influence. However, it is obvious that Azerbaijan alone would never be able to meet the large EU gas demand that in 2017 was approximately 500 bcm. All in all, Russia would still play a dominant role and to challenge its economic and political status would be counterproductive. The Southern Gas Corridor project remains relevant,

since the addition of 10 bcm per annum of Azeri natural gas might bring some competition to Southeastern Europe, especially if interconnectors between countries like Greece and Bulgaria are constructed.

The U.S. has strongly favored the development of resources to lift economies to the next level and out of the direct influence sphere of Russia (even though supporting the regime in Azerbaijan is very challenging due to its human rights situation). The EU is Russia's biggest customer and by disrupting and diversifying its energy supply, the U.S. is challenging Russia's energy dominance and weakening its sphere of influence as well as its political leverage. If Russia were to lose ground, the U.S. could consolidate its position as a major exporter, further strengthen its sphere of influence and increase its political leverage, while fully developing its energy potential. The end-result would be for the U.S. to establish itself as the main actor on the international stage. Russia on the contrary, would lose its political leverage and bear a huge brunt in terms of economic revenue and stability. Additionally, Russia could be forced to rethink its foreign policy – especially in Ukraine and the Donbass region – and energy strategy to appease the international community, since the new markets in Asia and the Middle East would not be sufficient to compensate for what it would stand to lose.

Being a world LNG player, the U.S. has a good hand to play to step up supply diversification in the EU, but economic considerations must be evaluated, such as direct prices of gas, but also the cost of transportation of US LNG to Europe. Currently, European LNG prices are the highest in the world, and reliance on imports from the US could further increase these prices.

Although it would be inefficient for European companies to acquire LNG from the US, the possibility of other suppliers is extremely important for the Europe's negotiations with Russia. If the European gas market becomes liberalized along with the creation of good

gas connectors between countries, and the appropriate infrastructure is put in place, Europe will have a stronger position when negotiating prices with Russia.

Responding to a fast changing scenario, and in an effort to ensure supply stability, customer retention and a constant flow of revenues, Russia worked to find new supply routes that would bypass key transit countries that could spell trouble, like Ukraine. In 2005 Gazprom embarked in the Nord Stream projects, designed to run directly from Russia to Germany – the largest gas market in the EU – through the Baltic Sea. The project clashed against numerous obstacles: transit countries opposed it for they felt they would lose their revenues, and then environmental issues were raised. In 2015 Russia designed another pipeline directly to Germany, Nord Stream 2, a decision that cannot be discussed without remembering that at the time relations between the EU (and the U.S.) and Russia had gone sour over Russia's annexation of Crimea and the situation in Ukraine.

Both the EU and the U.S. imposed strict and targeted sanctions on Russia to admonish Moscow for its actions and aggressive policies. The vast majority of the international community, especially EU member states, supported the sanctions. Nevertheless, a consortium of five EU companies from four different member states, i.e. France, Austria, Netherlands and Germany, teamed up with Gazprom to build Nord Stream 2. The decision had both economic and political consequences. The new partnership clearly ensured and significantly increased profits for both Gazprom and the EU companies involved in it, as record export volumes of natural gas were reported. However, from a political point of view, the decision showed how much the European community was internally divided. Single member states, through their respective companies, opted to serve their national interests and even if they were at odds with the Union's posture. By teaming up with Gazprom and securing all the assets and benefits that the new project would bring, the four EU member states undermined the community's authority, influence and prestige while empowering Russia. The new project highlighted the relevance and crucial role Russia played in Europe, as well as its political leverage and influence. It was a confirmation of

Russia's resurgent role on the international stage, despite sanctions. The new pipeline caused outrage both in Washington DC and in Brussels. The U.S. followed a non-dialogue and aggressive stance by seeking ways to block the project from moving forward while the EU tried to keep face by repeatedly expressing its reservations with regards to the investment made by the four member states. Former special envoy from the State Department, Amos Hochstein, defined the project as very dangerous and believed that it might "redraw a Cold War line in Europe along economic lines." Several experts argue that the U.S. might have been better off playing the role of honest broker and seeking common ground among key allies instead of following such an aggressive policy.

The Nord Stream 2 controversy has not yet been settled, and representatives of the Trump Administration are actively lobbying against it in Brussels, as the European Commission and European Council discuss on how to structure and define the decision-making process and whether member states will accept the proposed changes to existing legislation. Doubts over Gazprom's financial ability to successfully completing the project are increasing, especially following new U.S. unilateral sanctions imposed on Russia in 2017 that will make it very hard for Western companies party to the project to contribute (due to high political risks).

An alternative to importing more natural gas can be to produce more domestically. After the U.S. shale gas revolution, the federal government, particularly the Bureau of Energy Resources, started promoting the benefits of shale gas development in several countries, especially in the EU. According to rudimentary resource assessments published by the EIA, several EU countries were the next frontier for shale gas production. As a result, U.S. diplomats in EU capitals such as Warsaw, started lobbying and promoting American utility companies that had joined in producing large amounts of oil and natural gas by organizing briefings and conferences with academics and experts, working visits with regulatory authorities at the state level and supporting further research on the environmental consequences of shale gas production. However, shale gas production in Europe turned out

to be rather complicated because of both public and political opposition that seriously undermined meaningful exploration activities in countries like the UK, Germany and France, as well as disappointing initial drilling results and above the ground challenges that prevented states from tapping into their resource wealth.

If a conclusion has to be drawn, it appears clear that Europe is an asset neither Russia, nor the U.S. want to lose. Despite the progress made towards an EU diversification, a booming U.S. LNG production, which in the future may increasingly meet the EU demand, and tension at the international level with Russia and between the U.S. – Europe's most important ally – and Russia, Moscow still retains a prominent role in Europe. Exports from Gazprom to Western Europe are still rising, and Russia is still vying for new supply routes westward, pressing forward with the controversial Nord Stream 2 pipeline, which would concentrate 80 percent of Russian exports to the EU into Germany. Brussels cannot stop the building of the pipeline, but it is slowing it down by updating EU gas rules to apply to pipelines from outside the bloc. Qatar has diminished its exports to Europe, while Algeria has doubled its exports to Italy in 2016. This stands for a very complex web of interdependence involving Europe, Russia, Middle East, Turkey and Northern-African countries which the Eastern Mediterranean gas reserves could geopolitically reshape. But that is still into the future.

Safety of energy supplies to Member States of the EU, and in particular to those which largely depend on imports of Russian oil and gas, will depend on the progress of establishing a single, competitive and free market of the EU, with access to various external and internal sources of supply.

Despite the EU focus on energy and the energy union, for energy strategies to be successfully implemented, they have to be based on a consensus amongst the players and stability present in the sourcing region. This emphasizes the influence that geopolitics and

politics have on energy-related issues, where energy is perceived by supplier states as a political tool, whilst for the EU is an economic tool.

3.3 – U.S.-Russia Sanctions

The United Nations sanctions imposed on Iraq in early 1990s and the heavy humanitarian price paid by the Iraqi population have taught the international community a lesson. Ever since, the very concept of sanctions has evolved into a host of targeted or “smart” provisions designed to lead the country in question to reconsider its behavior and policies and serve as a focal point for policy coordination among key stakeholders. A long-term method does not seem to have a systematic evidence proving that it can yield better policy results vis-à-vis the targeted country. There are studies in literature that call target sanction ‘counterproductive’. Daniel Drezner, a professor of International Politics at the Fletcher School of Law and Diplomacy, Tufts University, argues that sanctions can be used to show that something is being done, but they “do not solve the policy problem of coercing the target state into changing its policies”. With economic effects varying greatly, sanctions’ efficacy depends also on host of s.c. facilitators, such as the degree of support by regional powers. A good case in point of dynamics triggered by sanctions the bloc of President Reagan’s measures against the USSR in an attempt to stop the construction of a gas pipeline. Moreover, the targeted sector/businesses should also be considered for it can make all the difference: energy, in general, and oil in particular, can impact an economy more significantly than arms embargoes. Finally, smart sanctions should be adjusted on a regular basis, their impact monitored and outreach efforts improved. Having said that, and since it is unlikely that a regime and policy change could be expected in Russia as a result of the U.S. and the West imposed sanctions, it is proper to argue that there is a two-purpose goal in U.S. sanctions. First of all, they are a measure of constraint, in terms of aiming to limit Russia’s behavior and power, and secondly, they serve as a signal to flag a violation of international norms and standards.

Russia's annexation of Crimea in 2014 brought to a halt a much-awaited reset process that President Obama and President Medvedev had set in motion. Unlike the response to Russian incursion into Georgia, the U.S. and Europe decided on acting swiftly and in one of the first times in recent history, comprehensive sanctions were imposed on Russia - a formidable target that was also a standing member of the UN Security Council and a nuclear power. A true challenge to policy-makers. Through a series of Executive Orders, several sanctions were put in place, first regarding violations of human rights, Ukraine's territorial integrity (consistent with EOs in place), and corruption in Russia²⁷ Then it was the turn of Russia's energy and defense industries²⁸, allowing also for secondary actions on non-U.S. financial institution. The hardest measure for the Russian oil sector was the ban on Russian energy companies on borrowing from US financial institutions. It should also be pointed out that until the Countering America's Adversaries Through Sanctions Act (CAATSA) was enacted, sanctions benefitted of a strong coordination between the United States and the European Union, driven by the need to enhance internal unity both within the EU and between the EU and the U.S. to reject Russia's actions in Ukraine. U.S. sanctions were designed to hit businesses and individuals operating in key sectors such as finance, energy, and defense. Assets were frozen for selected individuals; imports from Crimea or Sevastopol were banned; access to financial and capital markets was restricted, excluding Russian banks from raising long-term loans. Banks such as Bank Rossiya, that was considered a "personal bank" for Russian oligarchs and members of Mr. Putin's inner circle, Sberbank, (Russia's biggest bank in term of assets) Gazprombank (Gazprom's financial arm) and Vnesheconombank, were black listed and forced to turn to other international banks to get short-term loans. Oil exploration and production, as well as Arctic oil and shale oil projects felt a direct impact of trade prohibition of goods, services and technology destined to the Russian energy industry. A measure that meant damages to

²⁷ H.R.4152/S.2124 - Support for the Sovereignty, Integrity, Democracy, and Economic Stability of Ukraine Act of 2014, 01 April 2014

²⁸ H.R. 5859/S. 2828 – Ukraine Freedom Support Act, 18 December 2014

several U.S. and European companies engaged directly or indirectly in the industry. Sanctions did send a signal to Moscow about the consequences of violating norms about territorial integrity, and the need to choose negotiations over conflicts. They also signaled Ukraine that Europe and the U.S. were supportive and ready to help reaching a solution. As mentioned earlier, the economic outcome of sanctions, in general, is a difficult question to assess, and the scope of the economic impact on Russia, in particular, is still a topic of debate. According to the IMF, combined US and EU sanctions and Russian countersanctions have contributed to a worsening economic situation in Russia, which was further enhanced by external factors such as the devaluation of the ruble, investor unease and a major drop in oil prices. Russia's GDP contracted 3.7 percent in 2015 and Beijing became the biggest lender to Russian companies. Thanks to a coordinated effort, the U.S. was able to heighten the impact of sanctions, and substantially limit the cost it had to pay, for there is always a cost to pay for both the target and the senders of sanctions. U.S.-Russia trade interdependence has always been modest between the two countries, with Russia ranked as a 22nd trade partner for the United States. Sanctions pushed it down to being the U.S. 32nd most important trade partner. A stark difference with Europe for which Russia was the E.U. third largest trade partner. As mentioned earlier, Europe shouldered most of the sanctions' economic costs; it lost 20.7% annually in exports to Russia, for which the EU was traditionally the most important trading partner with 48% of total Russian foreign trade. There was a redistributive impact across the EU, where countries like Germany, Italy and Finland suffered the most as far as exports were concerned, but others, such as Greece, Sweden and Bulgaria, recorded an increase in their exports. The U.S. did show a drop in its exports (mainly machinery, medical equipment, vehicles, prepared food, tobacco, cocoa but also travel financial services as well as technical services) to Russia: goods exports decreased by 18.3% in 2016 and services by 4.8%. Likewise imports from Russia (mainly natural resources like aluminium, iron and steel and other precious metals) contracted- imported goods dropped by 11.2% and services by 1.0%. Sanctions also affected investment both countries made in each other's economies.

Ever since sanctions set in, the U.S succeeded in forging an EU consensus about them. Following President's Obama renewal of sanctions until January 2017, the EU unanimously voted in December 2016 for its Tier III sanctions to remain in place until 31 July 2017. However, tension started to build in Europe, especially in response to the high price paid by several industries in different EU member countries, such as Italy, because of a drop in exports and the suspension of projects which had been under way in Russia, especially in the oil sector. UK's BP was Europe's key energy investor in Russia, with a stake of nearly 20% in Russia's Rosneft. Sanctions forced the UK energy company to decrease its exposure to Russia, from which it gets a third of its global oil production. Following suit, Norway's Statoil scaled back its operations in Russia; France's Total and Royal Dutch Shell suspended their JVs respectively with Russia's Lukoil and Gazprom Neft. However, it should be pointed out that the EU's regime, though largely mirroring that of the U.S., allows for the grandfathering of projects that were agreed before sanctions were imposed. As a result, companies can find legal loopholes and apply for governments' permission to continue work on ongoing projects. This was the case with Royal Dutch Shell, that resumed developing Russia's tight oil formation reserves with Gazprom Neft, and Italy's largest energy company and one of Europe's biggest importers of Russian gas, ENI, that while scaling down its operations in Russia, was able to go ahead with its drilling campaign in the West - Chernomorsky block in partnership with Rosneft.

Historically, Europe has always enjoyed close relations with Russia and the concept of energy security, despite its commitment to promote and achieve energy diversification, has remained high on its agenda. Under the CAATSA, the U.S. President can choose from a list of sanctions and namely: 1) export-import bank assistance for exports to sanctioned persons; 2) export sanctions for any goods or technology); 3) loans from the U.S financial institutions.; 4) loans from international financial institutions; 5) prohibitions on financial institutions; 6) procurement sanctions (on any goods or services); 7) foreign exchange; 8) banking transactions; 9) property transactions; 10) ban on investment in equity or debts of

a sanctioned person; 11) exclusion of corporate officers; and 12) sanctions on principal executive officers.²⁹

As regards the target of sanctions, the U.S. President “in coordination with allies of the United States”, may impose 5 or more sanctions on any person-U.S. or non-U.S. who knowingly a) makes “an investment that directly and significantly contributes to the enhancement of the ability of the Russian Federation to construct energy export pipelines”; or (b) “sells, leases or provides to the Russian Federation, for the construction of Russian energy export pipelines” certain goods, services, technology, information or support that (1) have a fair market value of \$1 million or more, or (2) that, during a 12-month period, have an aggregate fair market value of \$5 million or more³⁰.

When the U.S. Congress passed the CAATSA, a major divide became apparent and transatlantic relations tensed. Germany and Austria were the first EU countries to speak up and respond quite strongly to the decision of the White House to target its provisions on Russian export pipelines. They sided with European companies that were involved in pipeline building projects with Russia, as in the case of Nord Stream 2, in an effort to expanding Europe’s energy supply network. They also postulated that the U.S. provisions would promote the selling of U.S. LNG gas with a view to reducing Russian gas supply to Europe³¹. Further to that, the EU Commission’s President, Jean-Claude Juncker, argued that President Trump’s ‘America First’ could in no way be allowed to go to the detriment of Europe’s interests. In particular, he voiced the EU concerns that the U.S. provisions could introduce extraterritorial measures that would penalize EU companies and undermine the Union’s energy security: “The U.S. bill could have unintended unilateral effects that impact the EU’s energy security interests.”³² Before the Senate passed the

²⁹ Session of the 115th Congress of the United States of America

³⁰ Session of the 115th Congress of the United States of America

³¹ Press Release, 15 June, 2017 – Federal Foreign Office, <https://www.auswaertiges-amt.de/en/Newsroom/170615-kern-russland/290666>

³² Statement issued on 26 July, 2017 at a meeting of the College of Commissioners at the EU Commission, in Brussels, Belgium

CAATSA on 25 July 2017, the College of Commissioners of the EU Commission forwarded to Washington a list of eight projects that would be affected by the sanctions. They were: Baltic Liquefied Natural Gas (Shell and Gazprom); Blue Stream (Eni and Gazprom); CPC Pipeline (Shell, ENI and Rosneft); Nord Stream 1 (various European firms and Gazprom); Nord Stream 2 (various European companies and Gazprom); Shakhalin 2 expansion (Shell and Gazprom); Shah Deniz and South Caucasus Pipeline (BP and Lukoil); and Zhor Field (BP, ENI and Rosneft).³³ The State Department's guidance reads, "The Department of State is committed to fully implementing sanctions authorities in the Countering America's Adversaries Through Sanctions Act (CAATSA or the Act). We continue to call on Russia to honor its commitments to the Minsk agreement and to cease its malicious cyber intrusions."³⁴ It provides some necessary clarifications indicating that sanctions would target energy export pipelines *that (1) originate in the Russian Federation, and (2) transport hydrocarbons across an international land or maritime border for delivery to another country*. Moreover it specifies that such provisions would focus on persons *that (1) made an investment that meets the fair market value thresholds in Section 232(a) and directly and significantly enhances the ability of the Russian Federation to construct energy export pipeline projects initiated on or after August 2, 2017, or (2) sells, leases, or provides to the Russian Federation goods or services that meet the fair market value thresholds in Section 232(a) and that directly and significantly facilitate the expansion, construction, or modernization of such energy export pipelines by the Russian Federation*.³⁵

In response to European lobbying, the bill was amended and reads "the President, in coordination with allies of the United States, may impose five or more of the sanctions described in section 235." A concept which was reinforced by the State Department's guidance dated 31 October 2017. As a result, the imposition of sanctions requires

³³ Eight European projects to be hit by US sanctions on energy sector, Euractiv, 9 August, 2017

³⁴ CAATSA/CRIIEA Section 232 Public Guidance, U.S. Department of State, <https://www.state.gov/e/enr/275195.htm>

³⁵ CAATSA/CRIIEA Section 232 Public Guidance, U.S. Department of State

coordination between the Secretary of State and Secretary of the Treasury on one hand, and the allies of the United States, on the other. The guidance specifies that “*Any implementation of Section 232 sanctions would seek to avoid harming the energy security of our partners or endangering public health and safety. Consistent with the Act (Section 257), it remains the policy of the United States to “work with European Union Member States and European institutions to promote energy security through developing diversified and liberalized energy markets that provide diversified sources, suppliers, and routes.”*”³⁶

The controversy over Nord Stream 2 continues to date, and the interpretation of the sanction as to the pipeline is still a topic of debate. The language “in cooperation with allies” reverberates strongly, and Germany has been quite outspoken in opposing the implementation of sanctions on the pipeline. The reason of Germany’s staunch defense of Nord Stream 2 is many-faceted. A closer look at Germany’s energy supply shows that Russia is its N. 1 supplier, accounting for 35% of Germany’s gas imports in 2016, a figure that is expected to increase in the near future. There are geo-economic interests at play, which are relevant in defining the country’s security interests, and its access to energy and minerals, as well as the need for steady relations with energy-rich countries. However, there is a mutual dependence between the two countries - Germany is Russia’s single-largest export market, accounting for 22.1% of gas exports from Russia in 2016, with a large portfolio of gas supply contracts that covers the next 15 years. It is a strong interdependence that plays out especially in the energy sector, which encompasses also a host of joint ventures regarding projects in the field of gas extraction, transport, sales, processing, deposits and storage. BASF and Gazprom are the main actors in this scenario, with the latter operating in Germany’s mid- and downstream market, acquiring and expanding its presence across the whole value chain, i.e. transporting, trading, marketing, storage. German energy companies participate in JVs targeting Russia’s upstream sector, in exploration and production projects. German companies are also involved, as shareholder and financial investors, in major infrastructure projects, Nord Stream 1 and

³⁶ CAATSA/CRIIEA Section 232 Public Guidance, U.S. Department of State, October 31, 2017

Nord Stream 2. Following an asset swap deal, Wintershall that has shares in OJSC Severneftegazprom, which operates one of the largest gas fields in the world, Yuzhno-Russkoye, transferred to Gazprom its shares, among others, in Astora Company, which is among Europe's largest operators of gas facilities. Gazprom's strong presence in the mid-downstream sector in Germany, that has the largest gas storage capacities in the EU, enhances its ability to deal with large volumes.

The State Department's guidance explicitly says that sanctions must not harm energy security of the U.S. partners, and that the U.S. policy is to work with the EU to further promote energy security through supply and route diversification and liberalization of energy markets. Germany's opposition has deterred the U.S. unilateral imposition of the sanctions and there seems to be room to believe that the United States would likely not apply CAATSA's sanctions on pipelines in a way that could undermine EU's cooperation on all the other sanctions against Russia, while exacerbating trans-Atlantic divisions.

A Press Release issued on 9 June 2017 by the EU Commission, raises several questions. It asks for "a mandate to negotiate with the Russian Federation the key principles for the operation of the Nord Stream 2 gas pipeline project", to "ensure that, if built, Nord Stream 2 operates in a transparent and non-discriminatory way with an appropriate degree of regulatory oversight, in line with key principles of international and EU energy law". However it clearly states that "the Nord Stream 2 project does not contribute to the Energy Union objectives of giving access to new supply sources, routes or suppliers and that it could allow a single supplier to further strengthen its position on the European Union gas market and lead to a further concentration of supply routes."³⁷ Further to it, the project is met with a strong opposition by several Eastern European countries, especially Poland, and Ukraine. However, it seems that the Nord Stream 2 is potentially excluded from sanctions implementation for it originates in Kingiseppsky, in Russia and according to what the

³⁷ EU Commission Press Release, 9 June, 2017, http://europa.eu/rapid/press-release_IP-17-1571_en.htm

United Nations Convention on the Law of the Sea (UNCLOS) will cross a territory under the sovereignty of the Russian Federation. It will transport natural gas across a maritime border but it will transit through the Russian territory. The pipeline's onshore part is about 3.7 km long and the offshore part is about 114 km long within the territorial waters of Russia. Also, the main project's funding agreement was signed on 24 April, 2017 between Nord Stream 2 AG and ENGIE, OMV, Shell, Uniper and Wintershall.

Russia is clearly in violation of international law, as well as of bilateral commitments, and of several principles and norms such as the non-intervention in the internal affairs of other States and the prohibition of the use of force. By using force and coercion, Russia has violated the fundamental norms set out in Article 2, paragraph 4, of the UN Charter. Russia's actions also violated the principles of regional European security enshrined in the Helsinki Final Act and the Charter of Paris foundations of the OSCE. Western countries like the UK and France as well as the U.S. are very critical of Russia's foreign policy, especially with regards to Ukraine and the Donbass region. To ensure and balance the world order, as well as preserve the authority and prestige of the international community, the P3 countries strongly support the imposed sanctions on Russia as a clear example of the international repercussion any country might run into because of its actions. By adhering to such a hard-line, the U.S. is taking the stage and strengthening its grip on the international community/showing the international community how it strongly upholds and protects key- principles like national sovereignty, democracy and freedom. Russia instead is reaffirming its role on the international stage by proving to the international community to what extent it is willing to go to protect its national and strategic interests. Both countries do not want to lose power and influence in the international community and a rapprochement is unlikely at the moment.

For both the U.S. and the international community the ongoing militarization of the peninsula as well as the current human rights situation is a source of deep worry and strongly affects the security situation in the Black Sea region. The military build-up that

also includes Russian military exercises that do not meet internationally set transparency and accountability standards, goes hand-in-hand with a steady increase of army and navy bases in Crimea.

Russia's response to the imposed sanctions was firm and immediate. Mr. Putin decided to impose strong countersanctions. He had hoped that the Trump administration would have ushered in an era of friendlier U.S. and Russia relations, and was looking forward to greatly improving the economy through strategic partnership and highly profitable joint ventures. Russia's response to sanctions recalls the Cold War era, during which both the U.S. and Russia ordered cuts and expulsions in diplomatic staff. U.S.-Russia relations are currently at an all-time low and it seems quite evident that President Putin's hopes have been shattered. However, for Russia to reaffirm itself as the great country it is, and have sanctions lifted, it should take the initiative, be more transparent and accountable when dealing with the international community, work at designing an agreement with it and allow a free and unhindered access to the peninsula to international humanitarian organization. It should uphold its obligations under applicable law as an occupying power as well as under international law (Budapest memorandum of 1994).

Conclusions

4.1 – U.S. and Russian approach to energy strategy

Energy has come to play a major role in today's interconnected world - a soft power that can acquire a strong geopolitical relevance. This holds true for today's geopolitical landscape, which appears volatile, uncertain, complex, and ambiguous, where relations among nations are fragmenting, U.S. sanctions have been expanded; the American approach to trade has taken on a more protectionist stance, and Russia is moving ever more decisively to the East. It is an environment where energy and geopolitics intersect quite extensively, significantly impacting the energy market, energy supply and European energy security. The U.S. and the Russian Federation, face each other in a game of power and influences at the international level, and in particular in given areas of the planet in particular, like Europe and Asia-Pacific where their energy-related interests may overlap and compete.

Energy has always been a high priority on both countries' agendas. For over 40 years energy independence has driven American energy policy and still influences the political sphere. When there was abundance of energy supplies, energy policy was of little concern, but then the first oil shock hit in 1973, oil prices quadrupled and the energy landscape changed forever. 'Interdependence' is now the rule of the game, rather than independence, which the Trump Administration has the challenge to reconcile with its 'America First' strategy. Russia's vast energy resources have always been a source of power to be leveraged, but it is only under President Medvedev first (who before taking office was at the helm of the state gas monopoly, Gazprom), and especially under President Putin, that the country's oil and gas reserves have become powerful foreign policy tools, contributing to the resurgence of Russia as a major international player, and supporting its economic

growth and influence with a growing attention to the post-Soviet area and the Asia-Pacific region.

Russia is displaying political assertiveness, promoting its image as a soft power in the resolutions of conflicts, securing new strategic alliances and partnerships, and achieving military and diplomatic goals, like the Iran Deal. By following such a political and energy strategy, Russia is promoting the reintegration of former soviet states while securing a strong foothold in Eurasia vis-à-vis the EU enlargement strategy to the East, and working to reassert Moscow's role as a major regional player.

Trump's new approach to energy prioritizes and enhances the country's national interests. Shifting from energy independence to energy dominance the U.S. is gearing up to becoming the leading oil producer in the world, as well as a major natural gas exporter, in the next five years, thus challenging Russia's energy dominance in Eastern Europe. The radical change has a major strategic significance for it ensures a supply cushion for the U.S. and its allies at a time when oil supply to markets is threatened by turmoil in Libya, Nigeria and Venezuela. The U.S. could become an attractive alternative option to Russia. Nevertheless, some argue that the 'America First' approach may leave America more isolated, an inwardly focused superpower, whose international role is defined more narrowly at a time when the world has grown ever more global, and more integrated. Today's strong drive to independence may be out of joint in a landscape where global commodity markets have emerged, climate change is a global threat, the nature of new energy technologies is increasingly connected, and the nation is about to become an energy superpower. The current scenario points towards more interconnectedness, interdependence, competition, and supply diversity. With regards to diversification, it is worth remembering that the U.S. has always supported Europe's drive for energy sources and routes diversification. To this purpose it promoted the Baku-Tbilisi-Ceyhan oil pipeline, which became operational in June 2006. It carries oil from the Azeri-Chirag-Deepwater Gunashli field across Azerbaijan, Georgia and Turkey. It links Sangachal

terminal on the shores of the Caspian Sea to Ceyhan marine terminal on the Turkish Mediterranean coast and has throughput capacity of 1.2 million barrels per day. Once again energy is being leveraged to try and contain Russia's political influence especially in the Post-Soviet space, while bringing new resources to the global energy market through non-Russian pipelines.

Russia is extremely aware of the way global energy policy and security intersect and as a result has been attaching an ever-increasing importance to its energy reserves and policies. Long-overdue structural reforms and new policies should get under way to reach a higher level of energy efficiency and security, as well as stability. Moscow also wishes to be seen as a reliable energy supplier that contributes to the strengthening of global energy security, but it must be said that Russian energy is as complex as is crucial. It is affected by several factors on the interregional, national and global level, that shape its energy policies. They follow the Government general guidelines which are illustrated in official documents, but are also strongly influenced by Russian energy policy actors that define the policies that form the multi-level and intricate space of Russian energy politics. Energy actors may change their perceptions of the policy environment, re-orient their interests and eventually adjust their policies following the occurrence of given key events. Russia is not a monolithic energy policy actor and faces the daunting task of managing its diverse energy resources, dealing with several actors that strongly affect the market while operating in a context of strong interdependence among energy producers, transit states and consumers.

The overall trend in Russia's oil and gas business until 2010 showed the consolidation of the role played by the state, restrictions on foreign ownership, intra-sector consolidation and increasing international investments by Russian companies.³⁸ Analysts argue that the impact of a global economic and political crisis has gradually driven Russia to open up the oil and gas business to foreign minority investments. Until the Crimean Crisis, Russia

³⁸ Pami Aalto, "Russia's Energy Policies, National, Interregional and Global Levels," University of Tampere, Finland (2012)

signed strategic agreements with major international energy corporations and U.S. big oil companies to provide technology and funding to its oil and gas sector. After sanctions set in, relations deteriorated, tensions rose and Russia enhanced its relations with Asia as well as turning to other countries for investment, with a view to strengthening its influence and expanding its economic ties. To face up to the economic and geopolitical uncertainties and to tensions currently escalating with the U.S. and the West, Russia is very likely to do all it can to rapidly bolster and change its energy portfolio, while consolidating its area of influence by establishing new partnerships and seeking new allies. It intends to focus on exploring new territories and fields, develop breakthrough technologies, and define a clear legal framework, as well as governmental regulation. Russia has doubled its efforts in East Asia and wider Asia-Pacific, rapidly promoting and strengthening cooperation with key countries, including Turkey. Relations with Ankara are gaining momentum due to its strategic geopolitical relevance

As of today, Russia faces both internal and external challenges that are affecting its energy sector. External challenges are represented by a slow-growing or stagnating demand for Russian energy resources; economic and technological sanctions; an increased global competition and the transition from resource globalization to regional energy self-sufficiency. Internal challenges include slow post-crisis economic development; the need for a rapid technological modernization; the increase in energy prices for end-consumers and dependence of the national budget on both the fuel and energy complex. Though trying to enhance the coherence and consistency of its energy policy, and working towards the establishment of a highly competitive energy market based on fair trade principles, the situation is such that in the coming years Russia will find it difficult to behave as a unified energy policy actor. Sanctions targeting the financial sector have made access to capital and financial markets difficult, and necessary funding for major projects, especially in the oil and oil infrastructure sector are not easy to find, despite the possibility of legal loopholes that allow for certain joint-venture onshore and offshore projects to continue, and financing

to be secured. Minority stakes are now in the hands of European and international stakeholders and technical partners.³⁹

Under the Trump Administration, the U.S. is looking past energy independence to achieve energy dominance. By implementing several policies designed to deregulate and promote oil and gas activity, the U.S. hopes to develop and boost the technology needed to fully and efficiently exploit available national natural resources like oil, gas and coal; dramatically increase exports of fossil fuels as well as their related products; rely more on energy imports from reliable countries like Canada, Mexico and the West, while importing less from and unstable areas of the world, like the Middle East and Africa; leverage natural resources to strengthen the U.S. bargaining position in its foreign policy initiatives and on the international stage. Energy dominance implies using this sort of leverage and designing the overall framework of both national energy strategy and policy around it. Mr. Trump understands very well that the U.S. may always be a net importer of crude oil and aims at bolstering and diversifying the country's energy portfolio and import mix. By importing from friendly and stable governments and acquiring new reliable suppliers, the U.S. will have less incentives in using its military might to intervene in civil wars and armed conflicts, while obtaining greater leverage when negotiating with the regions' governments. As it was the case with previous Administrations, the Trump Administration considers energy a priority in terms of national security, economic growth and foreign policy.

Today, U.S. oil and gas industry is rapidly growing especially because of the shale gas revolution. Shale gas and hydraulic fracturing (fracking) have revolutionized the U.S. energy sector in terms of prices, consumption, and CO₂ emissions. It also greatly contributed to making the U.S. more energy independent and secure with reserves projected to last for around 100 years. It altered the U.S. gas market and energy mix,

³⁹ Pami Aalto, "Russia's Energy Policies, National, Interregional and Global Levels," University of Tampere, Finland (2012)

reducing gas prices and drastically lowering energy imports. The new energy source could be key also to ensuring a greener future and advancing state-of-the-art technologies. The shale gas revolution could potentially redefine both the economics and geopolitics of energy across the globe and have a direct impact on several energy-rich countries, especially Russia.

However, pursuing and achieving energy dominance could entail leveraging U.S. energy exports or withholding equal access to the U.S. market, to gain concessions in trade relations. Some experts argue that such approach could have serious consequences and undermine traditional U.S. soft power. According to the latest IEA's five-year forecast, oil market conditions have significantly improved and strong economic growth around the world will continue to support strong oil consumption until at least 2023. The U.S. oil and gas boom is bound to continue, supported by technological advances, improved efficiency and a fragile recovery in oil prices all of which is encouraging the U.S. to further focus on developing the shale gas.

The U.S. now seems to be in a position to reshape its relationships with several areas of the world, from the Middle East, to Europe and Asia-Pacific, where could acquire greater influence also through the enhancement of relations with countries like Australia. Another area where the U.S. and Russia could be opposite each other. Russia is keeping very close relations with the countries of the Shanghai Cooperation Organization (SCO), and the members of the Eurasian Economic Union.

4.2 – US-Russia cooperation – the way forward

Despite the currently deteriorating trajectory of bilateral relations, the United States and Russia have mutual spheres of interest where they need to find ways to cooperate. Recently they have joined forces to find a solution for the Syrian crisis and dialogue has extended to

other crucial areas in the Middle East. U.S.-Russia relations have always been and will continue to be a key determinant of global politics and stability regardless of the Trump Administration's challenges to multilateral agreements and the ever growing populism and internal division of the West. Tensions are escalating again.

The U.S. and the West have charged Russia with violating international law when it invaded Crimea, an affront to the spirit of the United States' long commitment to Europe's unity and peace. Recently Russia was charged with several other offences such as poisoning a former agent, launching cyber-attacks, promoting disinformation campaigns and interfering in sovereign nations. The international community responded by imposing a new wave of sanctions. Since 2014 NATO has increased its presence right at the border with Russia, which has made Moscow consider the alliance as a threat to its national security. Responding to such a concern, Moscow chose to deploy sophisticated anti-air and anti-ship defenses in Kaliningrad and other key strategic points such as its ports in Crimea and Tartus. Unlike what was the standard format of contacts and interactions during the Cold War years, contacts today have been reduced to a minimum: arms control is stalling, the Agreement on Intermediate Nuclear Forces is in a critical situation, no major progress has been made regarding the Minsk Agreements, the conflict in Syria is still far from being solved and stabilization is still elusive.

The U.S. has imposed smart sanctions on Russia, whose purpose are constraint and signaling. Until the "Countering America's Adversaries Through Sanctions Act" (CAATSA) was enacted in 2017, the U.S. worked closely with the EU to coordinate the sanctions regime on Russia. Due to a rather modest level of investment and trade between the two countries, sanctions imposed by the U.S. alone would have been far less effective. When disclosed, the bill alarmed the EU which voiced its criticism and some countries, like Germany and Austria, stated their opposition, defending Europe's efforts to achieve energy security and defending EU companies involved in major Russian energy projects. The Union's firm stance has deterred the U.S. unilateral imposition of the sanctions and

led to the introduction of changes in the wording and scope of parts of the CAATSA that directly concerned EU and Russian projects, as for instance Nord Stream 2 and TurkStream. Coordination with the EU is essential and the U.S. has shown its willingness to compromise to ensure a common approach to the Russian question.

During his electoral campaign, Mr. Trump said he was looking to improve relations with Russia, but in his second year as President of the United States of America, Mr. Trump is facing an entirely different scenario, which seems to be advancing on a perilous course. Lifting sanctions without a political agreement on the many sensitive issues on the table would entail a loss of leverage and influence vis-à-vis Russia, as well as raise serious doubts over U.S. commitment towards key principles like sovereignty and the inviolability of territorial integrity, but also the rule of law and respecting internationally set standards. Moreover, it could significantly undermine U.S. leadership, at a time when sanctioning powers are susceptible to varying kinds of domestic pressures to avoid perceived negative ramifications of such measures, and could also see the U.S. facing legal liabilities for the firms involved and bound by European sanctions in the event of a lifting of measures without coordination with the EU.

Today's geopolitical landscape is rife with tension and mutual distrust between these two countries, but it is an undisputable fact that stabilizing and reconnecting relations between them is fundamental for global security. However, scenarios can incorporate swift changes and some of them may be in the pipeline right now when this dissertation is being written. President Trump took everybody by surprise when, approaching the G7 Summit in Canada, called for Russia's readmission to the Group of 7 nations. A policy clearly at odds with both Republicans and Democrats in the Congress, as well as the members of the G7 group - a diplomatic forum from which Russia was ousted, when it violated international norms by annexing Crimea. With the exception of Italy, the leaders of Europe, Japan and Canada responded angrily to President Trump's statement. Donald Tusk, the president of the European Council, said: "The rules-based international order is being challenged, quite

surprisingly, not by the usual suspects, but by its main architect and guarantor, the U.S.” It is a comment that seems to reinforce the feeling of some difficulty in terms of moral status. Russia has feigned indifference to a potential change of scene. President Putin was in visiting China on a meeting of the Shanghai Cooperation Organization, of which he has been a very active member.

New technologies increasingly connect the energy system, whose policy tools need to address a new set of physical and cyber risks to energy supply and infrastructure. U.S.-Russia cooperation is key in several crucial areas, from the Middle East to the Arctic, from energy to countering terrorism.

4.3 – Future Prospects

Russia is bound to feel the blow of the U.S. shale gas revolution and the changes taking place in market trends and in the world’s energy map. The International Energy Agency’s latest study shows that the U.S. will soon overtake Russia, becoming the world’s largest oil producer accounting for most of the global growth in petroleum supplies. Along with oil, also U.S. influence on the global energy market is expected to rise. True to say that emerging petro- nations are fighting to secure a place for themselves in Europe and in the international energy market, but infrastructure and investment issues, along with a stronger American role may somehow dampen the enthusiasm of Central Asian energy-rich countries like Azerbaijan, Uzbekistan and Turkmenistan. Moreover, Europe is also a source of concern for Moscow since its influence on that market as the main oil and gas supplier is ebbing, due to competition from the U.S., Norway and Qatar, among others. Poland, for instance, recently signed a five-year deal to buy American liquefied natural gas.

If Russia were to lose its global leading role in the gas market, its energy policy would have to be reviewed and its influence at the international level would lessen. The Russian gas market would suffer and gas prices would be impacted. Although Moscow is already developing countermeasures to protect its leadership, building and developing efficient LNG export infrastructures and access new Asian export markets in an effort to capitalize on time, sanctions imposed by the U.S. and the West, are making Russia pay a high price, in terms of foreign financing drying up, and access to modern technology being restricted. Because of the worsening of relations with Washington, and a surge in pro-EU, pro-Atlanticist sentiment, Moscow is aiming at confirming its status as a great power outside the former Soviet space, settling its influence in Asia and in the Middle East, strengthening its relations with non-Western partners, and highlighting its ‘Eurasian interests vector’. It is worth noting that Moscow can still limit the impact of the U.S. shale gas revolution on its energy sector, thanks to its vast conventional oil and gas reserves and an efficient transport system that to date guarantees a dominant position both on global and European energy markets.⁴⁰

The U.S. must counter an alarming feeling at the international level that it may no longer be regarded as the guarantor of peace and stability, while at the same time it has to solve crucial trade issues with major partners, such as China and Europe. Moscow is well aware that Mr. Trump’s policies will not be immediate and will very likely be affected by both social and market forces since federal policy is only one among many factors that influence energy development (market forces, state and local policies play a major role in redefining effectiveness of federal rules). A 400-billion-dollar energy agreement with China was among Moscow’s first responses to the wave of sanctions. It was a historical 30-year deal Gazprom signed with Beijing, reaffirming the Kremlin’s turn to the East and consolidating an ever-stronger cooperation that in January 2018 recorded a 20.8% increase in trade. However, the current stagnation of the Russian economy makes the two countries unequal

⁴⁰ “The Shale gas revolution in the United States: Global implications, options for the EU,” European Parliament (2013)

players, and motivates Moscow to enhance its support to the Eurasian Economic Union (EAEU), which is also its best tool to stem Chinese increasing influence on Central Asia. The EAEU, which comprises Belarus, Kazakhstan, Armenia, Kyrgyzstan, and Russia, as its strongest economy, is the world n.1 oil producer accounting for 14.5% of the world's oil production, the second largest natural gas producer with 19.3% of the world's production and the fourth global electric power producer. It represents a customs and economic union that has felt the aftermath of the sanctions imposed on Russia.

The U.S. could follow a different strategy and maintain sanctions until a settlement or a political understanding is achieved. In this case, it could be very beneficial for policy makers to focus on constraining Russia's financial room of maneuver, rather than cutting trade, and carefully consider potential secondary impacts on global financial markets. Still, they should also consider the possibility that Russia might continue to adapt and alter its economy to soften the impact of sanctions by boosting domestic production and provide domestic alternatives to sanctioned goods, creating parallel financial mechanisms and relying on import substitution. Moreover, both legal and humanitarian risks should be carefully taken into account while close coordination with the EU as well as wider mediation efforts should be promoted.

The atmosphere in Washington is tense especially considering the upcoming elections, that many experts fear could be the target for Russian piracy attempts. Another source of great friction between the U.S. and Russia is President Trump's decision to withdraw the U.S. from the Joint Comprehensive Plan of Action (JCPOA) nuclear deal and reinstate sanctions. Russia, as well as the EU, continue to be consistent in its position on keeping the Iran deal viable.

Recently the U.N. Secretary General, Antonio Guterres, sounded an alarm about the deterioration of U.S. Russian relations, stating that they seem to be conducive to a situation ““similar, to a large extent, to what we lived during the Cold War.” In particular, he called

for safeguards to be put in place since, as mentioned earlier, mechanisms of communication and control to prevent incidents to escalate have been dismantled.

Some say that the steps to achieve a future U.S.-Russia cooperation are the following. And namely, realistically acknowledging Russia's stronger nationhood and accept its exercise of influence within its sphere of interest (especially in the post-Soviet space). The studies conducted by John Mearsheimer provide a well-structured conceptual framework. In cases when Russia's actions cannot be accepted morally or ethically, structures of dialogue may allow mutual understanding to be advanced and differences narrowed in some areas.

In today's dangerous situation, both the U.S. and Russia will have to carefully revise their strategies. The U.S. will have to boost its deterrence by including cyber defense and action against interference in domestic politics but at the same time it must make a broader effort to revitalize diplomacy on its central conflicts with Russia. And namely the Syrian crisis, sanctions and the Ukraine crisis and the arms control dialogue. Russia on the other hand should complement its policy of defense, adaptation and deterrence through efforts towards cooperation and détente with the U.S. Communication and contact between the military but also societal and academic institutions must be promoted. This would be very conducive for both Russia and U.S. global political, economic and security interests.

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Summary

Set against a complex and rapidly changing scenario, the work seeks to outline the impact energy has on diplomatic relations between the United States and the Russian Federation, especially now that they are at a particularly critical moment. To this end, a brief historical review of the relevant literature is presented, with a view to following the evolution over time of energy policies, and complement it with specific case-studies, which are meant to shed some light on recent and future developments.

The primary research method for this study is literature review and an analysis of both countries' national energy strategies. Both qualitative and quantitative data are collected and carefully analyzed. Chapter 1 provides a historical review and an analysis of current theories; Chapter 2 focuses on ties between foreign and energy policies and how they shape US-Russia relations. Finally, Chapter 3 outlines a conceptual framework for areas of potential US-Russia energy cooperation through several case studies.

Energy has come to play a major role in today's interconnected world - a soft power that can acquire a strong geopolitical relevance. This holds true for today's geopolitical landscape, which appears volatile, uncertain, complex, and ambiguous, where relations among nations are fragmenting, U.S. sanctions have been expanded, the American

approach to trade has taken on a more protectionist stance, and Russia is moving ever more decisively to the East. It is an environment where energy and geopolitics intersect quite extensively, impacting significantly the energy market, energy supply and European energy security. The U.S. and the Russian Federation, face each other in a game of power and influences at the international level, and in particular in given areas of the planet, such as Europe and Asia-Pacific where their energy-related interests may overlap and compete.

In general terms, energy is perceived by both Countries as a powerful diplomatic lever to enhance security, boost growth and affirm influence. Until sanctions were imposed in 2014, the rule of the game was to enjoy a mutually beneficial technological and business cooperation, while monitoring their respective areas of influence in an effort to keep the balance.

Sanctions have drastically changed the status quo, opening the door to unpredictable developments. The Kremlin has added momentum to its actions in the Euro-Asian and Asia-Pacific areas, strengthening and consolidating new and old relations in an effort to prove it is still a country to be reckoned with. The overall sentiment, or rather a nostalgia of gone-by times is still strong and the government rides the tide. The U.S. has made remarkable advances towards energy independence through what has been defined as a “game changer” - the shale revolution - which has paved the way to the current theory of energy dominance. Securing energy independence would make the U.S. less keen in getting involved in conflicts abroad, as President Trump indicated already, stating he intends to withdraw from Syria, and focus on growth and security at home. A power vacuum has taken shape, which is also impacting U.S.-Europe relations, but which can be used to another nation’s advantage.

Relations between Washington and Moscow have been on a critical course for some time now, recently hitting a historical low. Moscow has shared a commitment for peace and security with the U.S., supporting and co-leading diplomatic efforts to get Syrian

negotiations finally progress, while competing with Washington as a reliable partner and a strong oil and gas supplier. The U.S. is determined to stay focused on ‘America first’, consolidate the current economic growth, maintain its sphere of influence unchanged, and speed up the process which will eventually lead it to be the leader of the global oil industry, as the IEA report for the next five years predicts. In the meantime, the new Administration is at work to solve trade and tariff-related tension with its historical allies.

Russia is displaying political assertiveness, promoting its image as a soft power in the resolution of conflicts, securing new strategic alliances and partnerships, and achieving military and diplomatic goals, like the Iran Deal. By following such a political and energy strategy, Russia is promoting the reintegration of former soviet states while securing a strong foothold in Eurasia vis-à-vis the EU enlargement strategy to the East, and working to reassert Moscow’s role as a major regional player. Trump’s new approach to energy prioritizes and enhances the country’s national interests. Shifting from energy independence to energy dominance the U.S. is gearing up to becoming the leading oil producer in the world, as well as a major natural gas exporter, in the next five years, thus challenging Russia’s energy dominance in Eastern Europe. This radical change has a major strategic significance for it ensures a supply cushion for the U.S. and its allies at a time when oil supply to markets is threatened by turmoil in Libya, Nigeria and Venezuela. The U.S. could become an attractive alternative option to Russia.

Today’s geopolitical landscape is rife with tension and mutual distrust between these two countries, but it is an undisputable fact that stabilizing and reconnecting relations between them is fundamental for global security. New technologies increasingly connect the energy system, whose policy tools need to address a new set of physical and cyber risks to energy supply and infrastructure. U.S.-Russia cooperation is key in several crucial areas, from the Middle East to the Arctic, from energy to countering terrorism.

Taking a closer look at Russia, it appears clear that the current international and national situation is influencing the Kremlin's diplomatic actions and energy strategy. Several sources of concern have become manifest, such as an increasing dependence of Russia's state budget on oil revenues, an upward trend in Russian oil prices, and a shrinking global oil market. Through energy, Moscow has developed a sort of "soft power" that has become deeply ingrained in its foreign policy, all the more so since Mr. Putin was elected president, and Russia started its resurgence as an international power. In the two decades that followed the dissolution of the USSR, Russia engaged in a grandiose modernization process, while its role as a super power gradually declined. Relations with post-Soviet countries changed. They started looking west in search of closer relations with Europe. Moscow's influence and relevance as a trading partner for the majority of those countries markedly shrank, while other economic partners, such as China, came forward. A well-established mesh of interdependence across the vast territory of what was once the Soviet Union was broken apart, leaving Moscow with the daunting task of re-imagining a new future for itself, first of all at home and in the world, and establish new balance of power and networks, if it wanted not to be excluded from world affairs and keep its foothold in the international community. A situation best defined by what president Vladimir Putin said in his 2005 State-of-the-nation address: "... the demise of the Soviet Union was the greatest geopolitical catastrophe of the century," since it brought about a drastic change in the international system, and major domestic unrest.

Reforms were key then, and are still now. Analysts speculate whether Mr. Putin, now officially in his fourth term as President, will finally put reforms at the top of his agenda and take the country out of the current stagnation. Russia's giant fossil fuel reserves are not a panacea, and to promote growth, the government must carry out vast economic reforms and have the country's energy policy grow above and beyond its role as a 'soft power'.

Russia is aware of the way global energy policy and security intersect, and this is shown in the ever growing role played of its energy reserves and policies. Long-overdue structural reforms and new policies should get under way to ensure a higher level of energy efficiency and security, as well as stability. Moscow also wishes to be seen as a reliable energy supplier that contributes to the strengthening of global energy security, but it must be said that Russian energy is as complex as is crucial. It is affected by several factors on the interregional, national and global level, that shape its energy policies. They follow the Government general guidelines, which are illustrated in official documents, but are also strongly influenced by Russian energy policy actors that define the policies that form the multi-level and intricate space of Russian energy politics. Energy actors may change their perceptions of the policy environment, re-orient their interests and eventually adjust their policies following the occurrence of given key events. Russia is not a monolithic energy policy actor and faces the daunting task of managing its diverse energy resources, dealing with several actors that strongly affect the market, while operating in a context of strong interdependence among energy producers, transit states and consumers.

After sanctions set in, relations deteriorated, tensions rose and Russia enhanced its relations with Asia as well as turning to other countries for investment, with a view to strengthening its influence and expanding its economic ties. To face up to the economic and geopolitical uncertainties and to tensions currently escalating with the U.S. and the West, Russia is very likely to do all it can to rapidly bolster and change its energy portfolio, while consolidating its area of influence by establishing new partnerships and seeking new allies. It intends to focus on exploring new territories and fields, develop breakthrough technologies, and define a clear legal framework, as well as governmental regulation. Russia has doubled its efforts in East Asia and in the wider Asia-Pacific region, rapidly promoting and strengthening cooperation with key countries.

It is noteworthy to point out that in the 21st century, diplomacy is changing and new actors challenge its traditional state-to state structure, such as civil society and private actors, as

well as regions and cities. They are active in the diplomatic space, where energy is a high priority. The Kremlin's approach to energy diplomacy currently focuses on enhancing communication and promoting cooperation as well as competition, while working with major exporting countries to maintain world energy market stability. Information dissemination and sharing is key to a successful energy diplomacy, along with people and organizational structures, institutional behaviors and learning. Moscow is resorting to all of these tools to contributing to fulfil a most important, overarching goal, i.e. being recognized as an equal partner in the international community, in general, and by the U.S., in particular, and affirming its sovereignty. Moscow wants parity on several issues it considers vital for the country's growth and security, such as global energy policy. Against a backdrop of instability in the global energy industry, and a shifting geopolitical scenario, Russia must consolidate its share of the oil and gas markets and keep the door open to mutually beneficial cooperation in the energy industry with partners around the world, foremost in the Middle East, with a view to fully integrate the country's energy industry into the global market. Massive oil and gas revenues have allowed Russia to create reserves, which unfortunately are depleting fast pushing Moscow to seek ways to restore oil prices as well as create a predictable global energy market that would allow it to make long-term financial plans.

In a world that has become multipolar, Moscow finds itself competing for clients in Europe and Asia with several emerging players and with the U.S. It is a turbulent shrinking market, where Moscow intends to stay to keep its flow of revenues, making peace with Turkey and adding momentum to its relation with Ankara to protect its interests in the European gas market, while adjusting its priorities in the region. It has reconsidered opening to Qatar and Saudi Arabia, despite rivalling with them for leadership in the energy market. Russian energy diplomacy has been very active in the Gulf in the past few years, in an effort to boost market interdependence, and countering decreasing European investment levels by attracting Gulf investments. The Kremlin is more than ever looking East and engaging very

actively with the ex-Soviet Union space and the Far East. The U.S. instead is stepping back from many areas of influence, where the Kremlin is ready to seize its chance.

The U.S. economy is large and diversified, with an abundance of both producers and consumers that coexist, which makes a definition of national interest rather difficult especially in the light of the new Administration's approach to energy and its 'America First' strategy. The typical tradeoffs that come with energy policy, seen as a set of shared objectives to promote economic growth, national security and environmental protection, often are in conflict, as in the case of promoting a new era for the coal industry, which could in turn bring about extensive environmental damage, as well as greenlight the Dakota pipeline project, which could imperil drinking water and jeopardize archaeological and sacred burial sites.

Under the Trump Administration, the U.S. is looking past energy independence to achieve energy dominance. By implementing several policies designed to deregulate and promote oil and gas activity, the U.S. hopes to develop and boost the technology needed to fully and efficiently exploit available national natural resources like oil, gas and coal; dramatically increase exports of fossil fuels as well as their related products; rely more on energy imports from reliable countries like Canada, Mexico and the West, while importing less from unstable areas of the world, like the Middle East and Africa; leverage natural resources to strengthen the U.S. bargaining position in its foreign policy initiatives and on the international stage. Energy dominance implies using this sort of leverage and designing the overall framework of both national energy strategy and policy around it. Mr. Trump understands very well that the U.S. may always be a net importer of crude oil and aims at bolstering and diversifying the country's energy portfolio and import mix. By importing from friendly and stable governments and acquiring new reliable suppliers, the U.S. will have less incentives in using its military might to intervene in civil wars and armed conflicts, while obtaining greater leverage when negotiating with the regions' governments. As it was the case with previous Administrations, the Trump Administration

considers energy a priority in terms of national security, economic growth and foreign policy.

The latest IEA report has shown that the U.S. will become the leading oil producer in the world in the next five years, thus bringing new supplies to global markets. At the same time, it is also becoming a major natural gas exporter, rivaling Russian energy dominance over Eastern Europe.

However, the ‘America First’ approach may leave the country more isolated, though President Trump took great care to state it would not be so. Under his Administration, the U.S. may be perceived as an inwardly focused superpower, whose international role is defined more narrowly at a time when the world has grown ever more global, and more integrated. Today’s strong drive to independence may be out of joint in a landscape where global commodity markets have emerged, climate change is a global threat, the nature of new energy technologies is increasingly connected, and the nation is about to become an energy superpower. The current scenario points towards more interconnectedness, interdependence, competition, and supply diversity.

Pursuing and achieving energy dominance could entail leveraging U.S. energy exports or withholding equal access to the U.S. market, to gain concessions in trade relations. Some experts argue that such an approach could have serious consequences and undermine traditional U.S. soft power. According to the latest IEA’s five-year forecast, oil market conditions have significantly improved and strong economic growth around the world will continue to support strong oil consumption until at least 2023. The U.S. oil and gas boom is bound to continue, supported by technological advances, and the relentless drive of the shale gas sector.

The U.S. now seems to be in a position to reshape its relationships with several areas of the world, from the Middle East, to Europe and Asia-Pacific, where could acquire greater

influence also through the enhancement of relations with countries like Australia. Another area where the U.S. and Russia could be opposite each other. Russia is keeping very close relations with the countries of the Shanghai Cooperation Organization (SCO), and the members of the Eurasian Economic Union.

When discussing energy policy, the question of energy security is of great relevance. The United States and Russia define it in different ways, whereas security of supply and guaranteed access to hydrocarbons are the pillars on which energy security rests for the U.S., while Russia focuses on security of demand, especially for long-term natural gas contracts with Europe, which currently purchases 82% of all Russian gas exports - representing 40% of Europe's gas imports. Washington is vocally against the controversial Nord Stream 2 natural gas pipeline project, which Poland, Ukraine and Denmark find it would increase the EU dependency on Russian gas and prevent a much needed energy diversification. Moreover, it could raise some security concerns, as recently stated by the Deputy Assistant Secretary of State for Energy Diplomacy, Sandra Oudkirk, who maintained it could be used to place monitoring and listening devices for surveillance under the Baltic Sea. For Moscow, the pipeline would lessen its dependence on third country transit for its access to the European market. The U.S. is working to increase its exports of liquefied natural gas to Europe and continues to support diversification of energy supplies in Eurasia by promoting the construction of pipelines that bypass Russia. The Baku-Tbilisi-Ceyhan pipeline, that opened in 2006 is a good case in point.

Through energy diplomacy the U.S. can interact with high-level representatives from other countries and address other broader foreign policy goal besides energy. Shale gas has driven the country from scarcity to abundance, propelling it into an energy superpower future. Energy diplomacy under President Trump is gradually taking shape, expanding on the narrative of the previous Administration and heralding major benefits for friends around the world, to whom fossil fuel exports would be targeted. China, a country of great relevance for Russia's foreign and energy policy, has also come clearly into the picture

when on a State visit to Beijing, President Trump announced the signing of MOUs regarding possible Chinese investments into the U.S. energy and chemicals sector in Alaska and West Virginia. There is no question about the game-changing impact the U.S. oil and gas boom has had on domestic and global markets, with prospects of important geopolitical benefits. However, it remains to be seen how President Trump posturing about free trade can be reconciled with the fact that trade agreements are an essential tool to create rules that encourage energy exports. Moreover, the U.S. withdrawal from the Paris Agreement allows the Administration to be more straightforward in promoting hydrocarbons and reviving the nuclear and coal industry, but success on such a strategy heavily depends on market realities.

Despite the currently deteriorating trajectory of bilateral relations, the United States and Russia have mutual spheres of interest where they need to find ways to cooperate. Recently they have joined forces to find a solution for the Syrian crisis and dialogue has extended to other crucial areas in the Middle East. U.S.-Russia relations have always been and will continue to be a key determinant of global politics and stability regardless of the Trump Administration's challenges to multilateral agreements and the ever growing populism and internal division of the West.

But tensions are escalating again. The U.S. and the West have charged Russia with violating international law when it invaded Crimea, an affront to the spirit of the United States' long commitment to Europe's unity and peace. Recently Russia was charged with several other offences such as poisoning a former agent, launching cyber-attacks, promoting disinformation campaigns and interfering in sovereign nations. The international community responded by imposing a new wave of sanctions. Since 2014 NATO has increased its presence right at the border with Russia, which has made Moscow consider the alliance as a threat to its national security. Responding to such a concern, Moscow chose to deploy sophisticated anti-air and anti-ship defenses in Kaliningrad and other key strategic points such as its ports in Crimea and Tartus. Unlike what was the

standard format of contacts and interactions during the Cold War years, contacts today have been reduced to a minimum: arms control is stalling, the Agreement on Intermediate Nuclear Forces is in a critical situation, no major progress has been made regarding the Minsk Agreements, the conflict in Syria is still far from being solved and stabilization is still elusive.

The U.S. has imposed smart sanctions on Russia, whose purpose are constraint and signaling. Until the “Countering America’s Adversaries Through Sanctions Act” (CAATSA) was enacted in 2017, the U.S. worked closely with the EU to coordinate the sanctions regime on Russia. Due to a rather modest level of investment and trade between the two countries, sanctions imposed by the U.S. alone would have been far less effective. When disclosed, the bill alarmed the EU which voiced its criticism and some countries, like Germany and Austria, stated their opposition, defending Europe’s efforts to achieve energy security and defending EU companies involved in major Russian energy projects. The Union’s firm stance has deterred the U.S. unilateral imposition of the sanctions and led to the introduction of changes in the wording and scope of parts of the CAATSA that directly concerned EU and Russian projects, as for instance Nord Stream 2 and TurkStream. Coordination with the EU is essential and the U.S. has shown its willingness to compromise to ensure a common approach to the Russian question.

During his electoral campaign, Mr. Trump said he was looking at ways to improve relations with Russia, but in his second year as President of the United States of America, Mr. Trump is facing an entirely different scenario, which seems to be advancing on a perilous course. Lifting sanctions without a political agreement on the many sensitive issues on the table would entail a loss of leverage and influence vis-à-vis Russia, as well as raise serious doubts over U.S. commitment towards key principles like sovereignty and the inviolability of territorial integrity, but also the rule of law and respecting internationally set standards. Moreover, it could significantly undermine U.S. leadership, at a time when sanctioning powers are susceptible to varying kinds of domestic pressures to avoid perceived negative

ramifications of such measures, and could also see the U.S. facing legal liabilities for the firms involved and bound by European sanctions in the event of a lifting of measures without coordination with the EU.

The U.S. is also faced with a new challenge generated by its own inward-looking attitude, a retrenchment that could bring about a feeling of its moral standing declining. Moscow understands that Mr. Trump's policies will not be felt immediately and that are likely be affected by both social and market forces since federal policy is only one among the many factors that influence energy development along with market forces, state and local policies. A 400-billion-dollar energy agreement with China was among Moscow's first responses to the wave of sanctions. It was a historical 30-year deal Gazprom signed with Beijing, reaffirming the Kremlin's turn to the East and consolidating an ever-stronger cooperation that in January 2018 recorded a 20.8% increase in trade. However, the current stagnation of the Russian economy makes the two countries unequal players, and motivates Moscow to enhance its support to the Eurasian Economic Union (EAEU), which is also its best tool to stem China's increasing influence on Central Asia. The EAEU, which comprises Belarus, Kazakhstan, Armenia, Kyrgyzstan, and Russia, as its strongest economy, is the world n.1 oil producer accounting for 14.5% of the world's oil production, the second largest natural gas producer with 19.3% of the world's production and the fourth global electric power producer. It represents a customs and economic union, that has felt the aftermath of the sanctions imposed on Russia.

The U.S. could follow a different strategy and maintain sanctions until a settlement or a political understanding is achieved. In this case, it could be very beneficial for policy makers to focus on constraining Russia's financial room of maneuver, rather than cutting trade, and carefully consider potential secondary impacts on global financial markets. Still, they should also consider the possibility that Russia might continue to adapt and alter its economy to soften the impact of sanctions by boosting domestic production and provide domestic alternatives to sanctioned goods, creating parallel financial mechanisms and

relying on import substitution. Moreover, both legal and humanitarian risks should be carefully taken into account while close coordination with the EU as well as wider mediation efforts should be promoted.

The atmosphere in Washington is tense especially considering the upcoming elections, that many experts fear could be the target for Russian piracy attempts. Another source of great friction between the U.S. and Russia, is President Trump's decision to withdraw the U.S. from the Joint Comprehensive Plan of Action (JCPOA) nuclear deal and reinstate sanctions. Russia, and the EU, continue to be consistent in supporting the viability of the Iran deal.

Recently the U.N. Secretary General, Antonio Guterres, sounded an alarm about the deterioration of U.S. Russian relations, stating that they seem to be conducive to a situation "similar, to a large extent, to what we lived during the Cold War." In particular, he called for safeguards to be put in place since, as mentioned earlier, mechanisms of communication and control to prevent incidents to escalate have been dismantled.

Some say that the steps to achieve a future U.S.-Russia cooperation are the following, and namely: realistically acknowledging Russia's stronger nationhood and accept its exercise of influence within its sphere of interest (especially in the post-Soviet space). The studies conducted by John Mearsheimer provide a well-structured conceptual framework. In cases when Russia's actions cannot be accepted morally or ethically, structures of dialogue may allow mutual understanding to be advanced and differences narrowed in some areas.

In today's dangerous situation, both the U.S. and Russia will have to carefully revise their strategies. The U.S. will have to boost its deterrence by including cyber defense and action against interference in domestic politics, but at the same time it must make a broader effort to revitalize diplomacy on its central conflicts with Russia, i.e. the Syrian crisis, the Ukraine crisis, and the arms control dialogue. Russia on the other hand should complement its policy of defense, adaptation and deterrence through efforts towards cooperation and

détente with the U.S. Communication and contact between the military but also societal and academic institutions must be promoted. This would be very conducive for both Russia and U.S. global political, economic and security interests.