

The Cold Gas War: the Strategies of Russia and the USA in Europe

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Abstract: The main purpose of this article is to analyse the European situation in the field of natural gas supply. The article mainly focuses on the energy behaviour of two countries: Russia and the United States of America. Different countries but with similar purposes, as they both aim to limit the power of control of the other in the old continent, using natural gas (Russia) and LNG (USA) as a weapon. This document, in order to arrive at describing the current situation of the "cold gas war", starts from an historical excursus of how and when the two energy powers began to impose themselves on the world level until today, the current "clash" for the search of dominance over Europe. For the writing of this article, since these are very topical topics, several articles from organizations and journals (e.g. The Economist"), specialized in energy and also geopolitics, have been used. The use of papers from the International Energy Agency (IEA), the Oxford Institute for Energy Studies, was also of fundamental importance in achieving the aim of the article.

Keywords: natural gas, LNG, USA, Russia

Introduction

On 9 November 1992, one of the most significant events of the 20th century took place: the fall of the Berlin Wall. That wall, a symbol of the division of the world into two marked blocks, represented not only a physical border, but also a cultural, economic and ideological division, due to the dominant nations of the two blocks, which were to underline the clear division that had been created in the Western world. The main architects of the division of the globe were two, the two super powers that had won the Second World War: the USSR and the United States of America.

These states aimed to expand their sphere of influence. The implementation of their plan was carried out through the use of "classic" means (economic support, military technology) and less classic means, such as "soft power" (it involved the use of means that had a great emphasis on the population such as cinema, books, sport).

Today, instead, after years of apparent tranquillity from the geopolitical point of view, we are returning to a climate of high tension due to the clash, once again, between the usual two super powers: The United States and Russia. This time, however, the instrument used to increase the power of influence is Gas.

Over the years, natural gas is becoming more and more established as a key element, mainly because of its importance at an energy level (an increasingly decisive energy source) but also because of its weight at a geopolitical level. The twenty-first century is becoming increasingly characterised by an increase in the demand for raw materials, in particular an increase in the demand for gas. This increase is mainly due to the increase in population, but also to the growing production activity that is increasingly concentrated in certain areas of the world.

All these factors necessarily lead states to enter into agreements and contracts with different suppliers, trying to secure a secure supply.

Europe, in particular the Mediterranean area, and the so-called Eurasia are, today, the territories where the new "cold war" is taking place. The main players in this power game are two superpowers that are characterized by a high level of energy independence and have conflicting strategies. (Muratore 2019) On one side of the chessboard we can find the Russia of the "czar" Vladimir Putin, who aims to strengthen and consolidate the strategic role of the Russian Federation as a strategic supplier of the old continent, also looking towards the Eastern market, in particular the flourishing Chinese market. While on the other side we can find the United States, which in recent years, thanks to the surge in shale oil and shale gas, have become the world's leading producers of natural gas. What is more, with the recent decision of the American President to liberalise exports, the conquest of the world energy market has begun. An America first again in the energy field with the preeminent goal of eroding influence in Russia's energy markets. (Bessi 2018)

Strategy

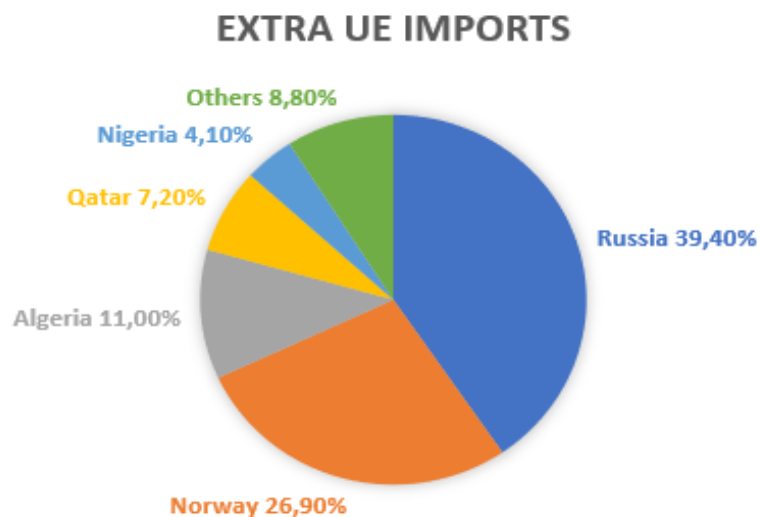
The concept of "energy security" has become increasingly topical in the last decade, as access to energy resources is vital for importing countries, especially to ensure the smooth running of the activities of industrialized companies. Because, in the event of a sudden and prolonged suspension of energy supplies, it would deprive the importing states of the possibility of the normal performance of the fundamental and vital activities of every developed city. Different definitions can be found in the literature regarding the meaning of "energy security". Most of these definitions are accumulated by the basic idea that the availability of energy does not undergo sudden changes with respect to domestic demand. (Winzer 2011) A first group of definitions of energy security is the one that is based on the concept of security as the continuity of the energy good. A first definition of this group is that of the Department of Energy and Climate Change (DECC) which states that "secure energy means that the risks of energy supply disruption are low" (DECC 2009). Following the same logical line, other explanations can also be recalled, such as the one given by Sheepers, which explains energy security as "a security of supply risk refers to a shortage in energy supply, either a relative shortage, i.e. a mismatch in supply and demand inducing price increases, or a partial or complete disruption of energy supplies... A secure energy supply implies the continuous uninterrupted availability of energy at the consumer's site" (Scheepers 2007); or as the Lieb-Dóczy definition that shows us the concept of energy security as "security of supply is fundamentally about risk. More secure systems are those with lower risks of system interruption" (Lieb-Dóczy 2003). One could also cite Wright who, in his paper *Liberalisation and the security of gas supply in the UK*, supports the idea that 'security of gas supply': "an insurance against the risk of an interruption of external supplies" (Wright 2005).

In addition to these definitions which are based on the concept of continuity of energy supply, other "groups of definitions" can also be found in the literature which differ in small nuances. We have the definitions of the "second group" which also introduce the concept of subjective gravity filters to distinguish between safe and insecure energy sources. Of this group the most representative explanation is given by the International Energy Agency (IEA) which states that "energy security is defined in terms of the physical availability of supplies to meet

demand at a given price" (IEA 2001). This concept, wants to reiterate that, raising the extreme case of energy disruption, energy security can only be questioned if energy scarcity compromises the level of prices, bringing them to a level above a certain critical threshold. Again, following the same critical line, in the literature we can find other definitions that follow on the false line that of the International Energy Agency, such as that of Vicini et al. which states that "energy security is defined as the availability of a regular supply of energy at an affordable price. The definition has physical, economic, social and environmental dimensions; and long and short term dimensions" (Vicini 2005). Or as the definition of Le Coq et al. "supply security, usually defined as a continuous availability of energy at affordable prices" (Le Coq 2009). To conclude, we can also cite Jun et al. who in their paper support the thesis that "energy security can be defined as a reliable and uninterrupted supply of energy sufficient to meet the needs of the economy at the same time, coming at a reasonable price" (Jun 2008).

Finally, we have the definitions of "third group". These focus more on measuring the impact of energy. They are therefore based on energy price and energy continuity impact measurement. An example can be made by referring to the definition of Noel and Findlater "security of gas supply (or security of gas supply) refers to the ability of a country's energy supply system to meet the final energy demand contracted in the event of a gas supply disruption" (Noel 2010), where final demand refers to energy services that are used in everyday life. Also of this group's generation, other similar definitions can be found in literary culture such as Patterson which states that "the energy security that worries politicians concerns supplies of imported oil and natural gas, not the secure delivery of energy services, such as keeping the lights on" (Patterson 2008), or Bohi et al. which defines "energy insecurity can be defined as the loss of well-being that can occur as a result of a change in the price or availability of energy" (Bohi 1996). Or again Lefèvre 2009, who in his article states that "energy insecurity can be defined as the loss of welfare that may occur as a result of a change in the price or availability of energy" (Lefèvre 2009).

Figure 1. Extra-EU imports of natural gas from main trading partners first semester 2019



Source: https://ec.europa.eu/eurostat/statistics-explained/index.php?title=File:Extra-EU_imports_of_natural_gas_from_main_trading_partners,_2018_and_first_semester_2019.png

Analysing the situation in Europe to date, it can be said that the old continent is at the limits of energy security. Taking into consideration the latest data from Eurostat (European Commission 2018), as far as gas supply is concerned, Europe imports a significant quantity of gas (39.4%) from Russia. In itself, this figure should not cause problems if we were talking about a reliable nation, from the point of view of energy security, but given that we are talking about Russia, this figure could be alarming: this is what history tells us.

In the first decade of the twenty-first century, more precisely from 2000 to 2008, Gazprom was one of the main actresses in the European energy scene, managing well to manage the continuous upward change in the prices of oil and natural gas and to exploit the growing global demand for energy resources. Russia has always been the main energy supplier to the old continent. (Ercoli 2019) With the collapse of the Soviet bloc some states have moved away from the sphere of Russian influence (as was the case with the countries of Central and Eastern Europe in the 1990s), approaching, in some cases, the EU or NATO. This substantial departure from Moscow has had serious repercussions on energy supplies from Russia: in fact, Gazprom applied considerably higher prices to "dissident" countries than the previous cheaper prices. This also had political repercussions between Russia and the governments of the former Soviet bloc. This Russian attitude in the use of "energy diplomacy", using the supply of gas as a real political tool, has always, but especially in the last period, increased the mistrust in the EU towards the Kremlin.

It is enough to remember the gas crisis between Russia itself and Ukraine in 2006, when Gazprom closed the gas taps towards Ukraine, putting in great difficulty the government in Kiev but also Europe itself, as Ukraine represents a fundamental junction for the distribution of natural gas in the old continent. (Ruszel 2019) Other examples can also be given of the blackmailing policy of the Kremlin and in particular of Gazprom, towards European countries, especially those countries that orbited in the Soviet orbit, as we have seen previously with Ukraine. (IEA and KEEI 2019) Another significant case was the "gas war", which took place in 2004, between Moscow and Minsk when Gazprom refused to sign and consequently to renew the supply contract with the Belarusian government, thereby suspending the supply of gas. (Bessi 2019) The basic problem between the Kremlin and Minsk was the pressure on Minsk from Russia to accept higher gas tariffs from the Belarusian government and to sell Beltransgaz, the Belarusian gas pipeline operator, to Gazprom, especially on favourable terms. (Smolinova 2014)

Since the annexation by Europe of the former Soviet states of Central and Eastern Europe, and the consequent disruption of gas supplies, especially through the territories of Kiev, Brussels has increasingly considered the need to diversify energy imports to avoid relying solely on the Russian monopoly power.

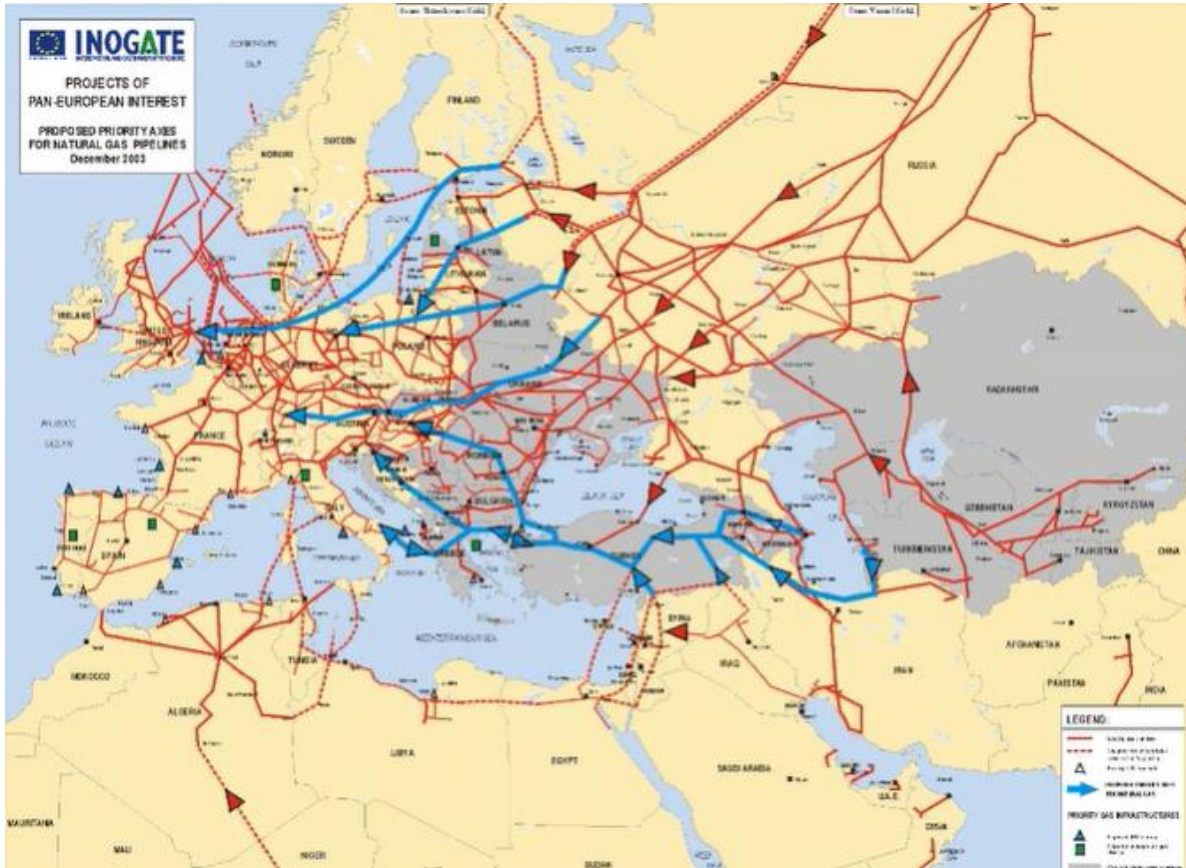
For this reason, the European Commission in recent years has launched a number of different projects with the aim of expanding the possibilities of energy supply, such as the TAP project (which aims to import gas from Azerbaijan) and East-Med (which aims to import gas from the Caucasus). (Ercoli 2019) The European Commission has always fought in favour of the use of LNG as an essential source for energy diversification: in fact, Brussels has repeatedly reiterated its intention to guarantee each member state direct or indirect access to LNG.

Russia

Russia has the largest natural gas fields in the world. The total capacity of these fields is 48 trillion cubic metres which are mostly concentrated in the fields of Eastern Siberia. The maximum expansion of Russian gas production began in the 1980s, when the use and distribution of natural gas outstripped that of oil, mainly due to the lowering of gas extraction costs compared to oil. In fact, in that period, although oil was always the most produced energy resource, the production of natural gas grew by 50% during the eighties. (Grigas 2017) After the collapse of the wall, and the subsequent dissolution of the USSR, there was a change of course in the production of gas and oil. With the dissolution of the Soviet Union, there was a marked collapse in oil production, while gas production remained almost stable and even grew during the nineties. This situation was made possible by the greater stability in the gas market that occurred after the former Ministry of Gas was converted into the current state-owned company Gazprom.

As mentioned earlier, the "glorious history" of Russian gas domination began in the 1980s, but the important role of gas supplier began in the late 1960s: in fact from that date the Soviet Union began to export its gas to the "satellite" countries. (Austvik 2015) The first supply was of 3 billion cubic meters of gas, divided between Poland, Czechoslovakia and Austria. Starting in the 1980s, natural gas exports reached 56 billion cubic metres to be divided between, in addition to the countries mentioned above, Western Germany, Romania, Hungary, Bulgaria and Yugoslavia, but also managed to expand its export range to Western European countries (Italy, France and Western Germany). (Grigas 2017) The production and export of Russian natural gas continued to increase, reaching a peak of 248 billion cubic metres of gas in 2008.

Figure 2. Natural Gas pipelines from Russia into Europe.



Sources: https://www.reddit.com/r/MapPorn/comments/1zhlnw/natural_gas_pipelines_from_russia_into_europe

However, from the mid-2000's, Russian gas exports to the old continent suffered a sharp slowdown mainly due to two factors: the drop in energy demand, due to increasing energy efficiency, and the increased use of renewable energy (wind, solar) and also of energy sources at sufficient cost such as coal (Grigas 2017).

Gas and politics, especially in the case of Russia, are two elements that move on the same track: one cannot ignore the other. Indeed, since the beginning of the gas trade with European countries, the Kremlin has always demanded something in return. For example, during the Cold War, Moscow demanded, in exchange for Russian gas, technological materials and industrial items. (Hogselius 2013)

The commercial and, above all, political influence on exporting countries has always characterised the commercial exchange of gas between the Kremlin and other countries. Thanks to its dominant and monopolistic position in the gas market, Gazprom could afford this aggressive attitude towards European states (Melchiorre 2006).

Russia's gas is also used as a geopolitical tool: in fact, it is used as a "soft power" to manipulate and influence the geopolitical choices of importing governments. To affirm and confirm this attitude are the same Russian politicians and administrators: in fact, in 2003, on the occasion of the tenth anniversary of the state-owned company Gazprom, President Putin states that: "Gazprom is a powerful political and economic lever of influence on the rest of the world if the leaders of this or that country decide to show goodwill towards the Russian Federation, then the situation with gas supplies, pricing policy and the previous debt changes on a note much more favourable to the buyer".

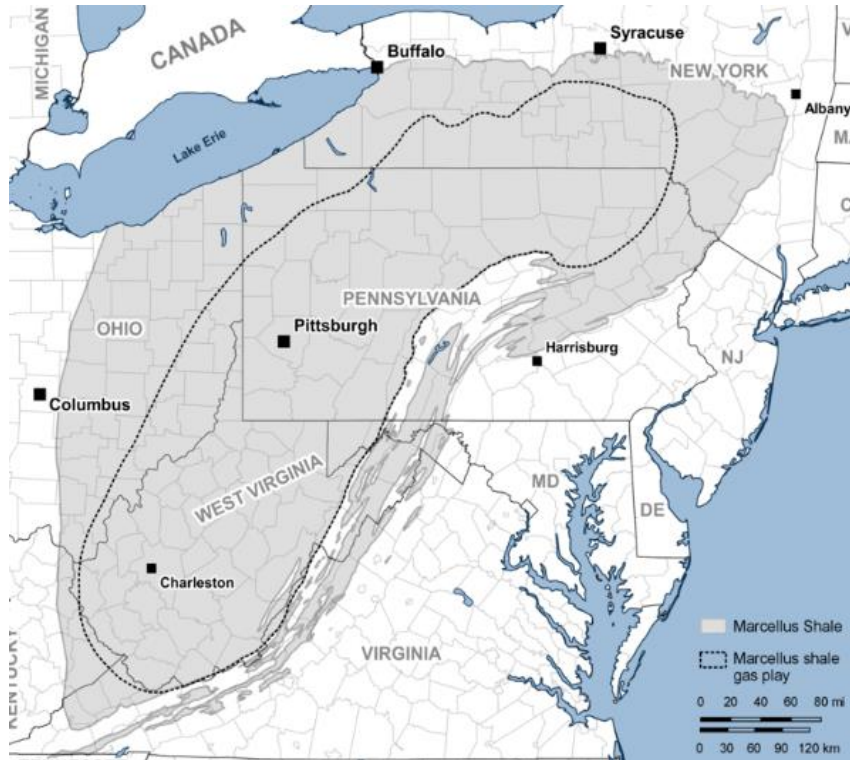
Gazprom has often found itself lobbying, especially in its monopoly markets (Belarus, Ukraine and Armenia), for political concessions in exchange for lowering the price of gas. (Ruszel 2019) However, all the commercial and pressure manoeuvres carried out by Gazprom are actually dictated by the central government in Moscow. (Bessi 2019) Therefore, it can be said that Gazprom's decisions marry the political lines with the objectives of the Kremlin. Very often, Russia has distinguished itself in having carried out energy interruptions towards those nations that, with their behaviour, did not "cooperate" to reach the objectives set by the Kremlin. Suffice it to mention the cases of Belarus, Ukraine or Latvia. (Smolinova 2014)

It can be said that the way Gazprom, and therefore the Kremlin, has acted has been to offer more fragile countries, politically and economically, such as Armenia, Belarus or Kyrgyzstan, gas at low prices. At the same time, however, these countries were indebted to the Russian company. At the same time, the Russian company, strengthened by its credit position, was able to obtain, as compensation for debts, at very low prices, the energy structures of the debtor countries or by making political concessions. In this way, both the Kremlin and Gazprom were able to emerge as winners, increasing in both cases their influence and control over their importers (Cornot-Gandolphe 2016).

The United States of America

The United States has always played a major role in the production and extraction of primary energy. The U.S.'s focus on primary energy began with the end of the Cold War, as the Washington government was able to focus more on its national interests (such as procurement of raw materials) rather than worrying about maintaining useful alliances during the Cold War period with the aim of containing the advance of the Soviet Union's overwhelming power. (T.Klare 2002) But it was only at the end of the 10's of the 2000's that they began to establish themselves internationally. The domestic energy markets, especially the gas market, were highly unstable with great price volatility. They tended to peak at the beginning of the 2000s, until they collapsed year after year at the end of 2011. (Pustišek e Karasz 2017) The main cause of this instability in natural gas prices is mainly to be found in the large production of gas by American companies. The great expansion of natural gas in recent years, also due to new techniques of extraction of the raw material, has led to the modification of the internal market for gas. (Grigas 2017)

Figure 3. Marcellus Ground



Sources: https://en.wikipedia.org/wiki/Marcellus_natural_gas_trend#/media/File:Marcellus_shale_revised_map_2019.png

The exponential production of natural gas in the United States has been characterized by the greater exploitation of the large gas fields present in the American soil. The main U.S. gas formations are respectively Marcellus (located in Utica in the Appalachian Basin). This formation reaches a depth of 8500 feet, and its size is such that it can "touch" 4 states: New York, West Virginia, Pennsylvania and Ohio. Given the size of this deposit, it manages to produce 18 BCF of gas per day and Haynesville located between East Texas and West Louisiana. These are the fields that will supply the largest amount of natural gas from 2014 onwards. With the US gas revolution, many foreign energy companies decided in 2013 to make massive investments in projects that aimed to export gas outside the US, and to obtain a preferential channel for gas sales. Exports of gas, not via pipelines, would not be possible without liquefaction and regasification plants. The former serves to allow the transport of gas in particular containers. (Barlaam 2019) There are several liquefaction plants in the USA to date: the Sabine Pass plant in Cheniere, on the border between Louisiana and Texas, the Cameron LNG plant in Hackberry, Louisiana Kenai in Nikiski, Alaska, the Freeport LNG plant in Freeport, Texas, and the Dominion Cove Point plant in Cove Point, Maryland. (The Economist 2018) All these plants give us the total export capacity of the United States, which is about 3 billion cubic feet at the beginning of 2019. While the latter are essential for the reception of imported gas, which allow the same gas to return to the gaseous state. (IEA and KEEI 2019)

The cold (gas) War

Today in Europe, a new "cold war" is taking place in the field of energy, which is not fought militarily or through the use of ideologies, as in the past, but through the use of gas. The "Gas States (Russia and the USA), the main actors of this war, clash on European territory with

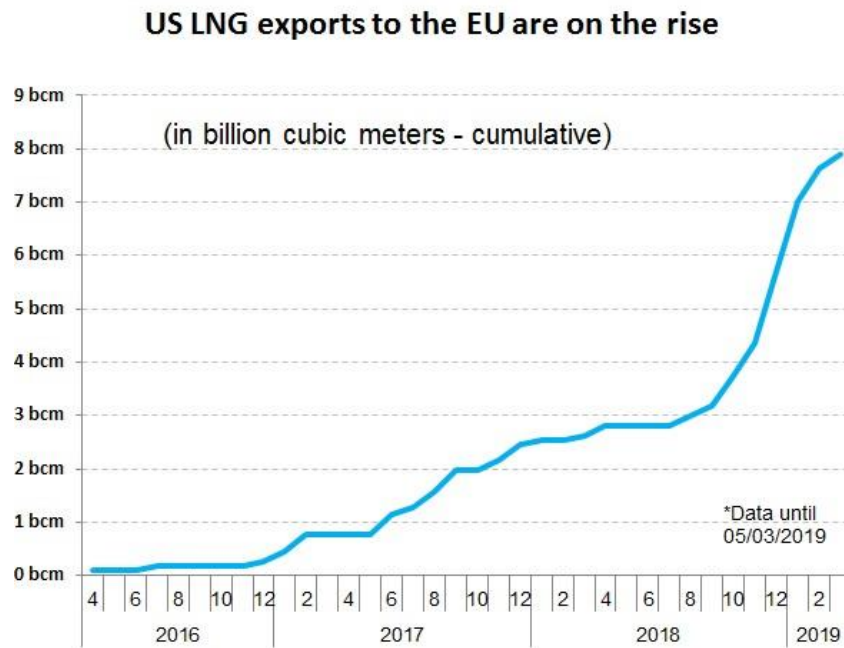
new trade agreements and the construction of new pipelines. (Bessi 2019) One of the reasons for this dispute is that the gas market is becoming increasingly important at world level, getting closer to the rich oil market for the amount of trade that is made.

In this "war" the nation that appears to be advantaged, at least in the beginning, is Russia. The great privilege of the Kremlin is, first of all, the possibility of selling its gas to European states at a low prices compared to other gas producers. Another advantage is the ease with which Moscow can easily transport its own gas throughout Europe, through the dense network of pipelines that cover the whole of the Old Continent. All these advantages of Russia in the European gas market have always frightened the likely competitors to enter this market as alternatives to Russia itself. (Dell'Olmo 2019) A turning point for the interruption of this hegemony could be marked by the introduction of LNG in the European market, especially from whit United States. The main problems for which LNG has not been able to impose itself on the European market so far are the long distance from the producing countries and the high price, compared, for example, to Russian gas. But these difficulties could be overcome by the construction of additional liquefaction and regasification plants for LNG. The increased presence of gas coming from outside Russia would be optimal, above all, to ease the geopolitical tension arising from Moscow's semi-monopolistic position vis-à-vis European countries.

This war has a fairly recent origin because, as mentioned above, the United States is recently imposing itself in the gas market. Unlike Russia, which has always played an important role in gas distribution since the Soviet Union.

The main question to ask is why has the Trump administration decided on this sudden acceleration in gas production? The main reason for this is the need on the part of the United States to consolidate the state budget (reduced after the application of the tax reform) but also the trade balance (especially in the manufacturing sector due to competition from China and India). Another reason for this concentration of the White House, on the production but above all also on the export of gas, concerns, as Russia teaches, the use of gas, in particular LNG, as a powerful means of control and influence of the policies of the importing states: in fact, LNG is becoming more and more a fundamental and pre-eminent element in the European economic and geopolitical spheres: In fact, the massive presence of US gas, and not only, could free Europe from the dependence of Russian gas and thus make the European Commission more free to apply, with greater relief, sanctions to inappropriate behaviour of the Kremlin (such as the annexation of the Crimea). (The Oxford Institute for Energy Studies 2019) For this reason, the USA, in recent years has signed agreements with the European Commission and also, in a very special way with some European countries, two above all Poland and Ukraine, several agreements for the sale of LNG with the official objective of wanting to reduce Europe's dependence on Russian gas pipelines. (Ercoli 2019)

Figure 4: US LNG exports to the EU are on the rise



Source: https://ec.europa.eu/commission/presscorner/detail/es/IP_19_1531?

However, in order for the United States to "free" Europe from the grip of Russian gas, the old continent must have regasification plants in order to accommodate US LNG vessels. Without them it would be impossible to obtain gas with stars and stripes (Molnar, et al. 2015). The situation in Europe with regard to the presence of regasification plants is quite critical because most of the plants are located in Western Europe (the European area that is potentially less blackmailed by Russia) while in Central and Eastern Europe there are only two regasification plants (one in Poland and the other in Lithuania). This situation leads to numerous disadvantages for the countries of the former Iron Curtain to obtain the American LNG. In addition to the regasification plants, the so-called cross-border pipelines are also of fundamental importance. These are pipelines that run from countries that import LNG to countries that do not have an outlet to the sea. An example is the construction that is taking place on the island of Krk, which has the main objective of supplying US LNG to all the countries of the Balkans and Central Europe. But among these agreements there is also a second aim: to reduce and limit Russia's power of control and influence in the European chessboard. (Grigas 2017)

In any case, the opening of Brussels to the US LNG, was a hard blow for Gazprom, and therefore for Russia itself. In particular, it accused the continuous fall in prices of being decisive in undermining Gazprom's domination. The Russian state company, however, has tried in recent years to modify its contractual offers (guaranteeing lower prices but and longer contracts) without however obtaining great results. (Vita 2019) However, at least for the moment, the situation of Gazprom is not dramatic. Many long-term contracts are still in force, which gives Gazprom strong bargaining power. As an extreme hypothesis, it could apply an aggressive price policy to counter the advance of gas with stars and stripes in the European market (The Oxford Institute for Energy Studies 2019). In other words, to apply very low prices to discourage the various competitors from entering the European market. Obviously, the consequences for Gazprom would be a reduction in profits.

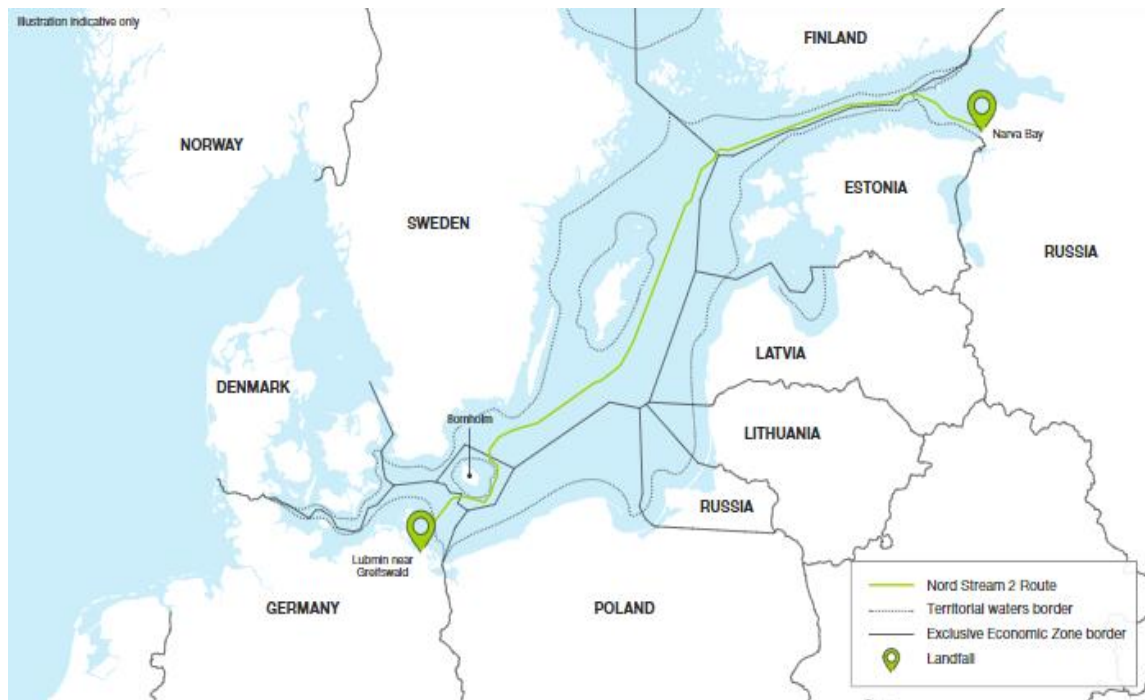
Obviously Russia, to avoid being dethroned by the United States in the sale of gas in the old continent, has not remained to look motionless agreements between Brussels and Washington. On the contrary, it has moved to build new gas pipelines and enter into new trade agreements with the aim of consolidating its position of hegemonic strength. The main projects carried out by the Kremlin are two: Nord Stream II (a doubling of the existing infrastructure, which allows 55 billion cubic metres of gas to be transported annually from the Russian coast near St Petersburg to northern Germany via the Baltic Sea (The Economist 2019)) and Turkish Stream (The project involves the construction of two branches, each of which can transport 15.75 billion cubic metres of gas per year). (Vita 2019) The first line will be entirely dedicated to the energy supply of Turkey. The second should supply Russian gas to the countries of southern and south-eastern Europe. Both buildings have been subject to threats of sanctions by the US to slow down and stop construction work.

Figure 5: Turkstream map



Sources: <https://www.naturalgasworld.com/turkstream-41-laid-gazprom-56085>

Figure 6: Nord Stream 2 Route



Sources: <https://www.nord-stream2.com/en/pdf/document/125/>

In addition to the construction of new pipelines, the Moscow government has in recent years decided to focus on marine gas transport: LNG. At present, Russia, in the field of LNG, is significantly behind as it has always focused on distributing gas in the European market. Today Moscow continues to be a step backwards compared to the large world exporters of LNG due to the lack of so-called technological know-how and specific equipment for liquefaction.

Putin, however, is not only strengthening and affirming its dominant position in Europe, but is also looking for new markets in the East: the goal is to build an integrated international network that combines TurkStream with the Power of Siberia. If this project comes into operation, Moscow will have the possibility to connect the various pipelines with the liquefaction terminal in Vladivostok. From where, LNG could be transported everywhere, thus making the Russian gas and LNG market global. Russia will then be able to sell liquefied gas to the highest bidder on the planet instead of being forced to sell only natural gas to the nearest countries (Soldatkin 2019).

Conclusion

To date, the situation in Europe is still completely uncertain, although Russia could emerge victorious from this clash with the United States in the coming years. The advantage that Putin has over the White House in the future is the dense network of alliances with strategic nations, as far as gas distribution is concerned. One on all of Erdogan's Turkey. The latter boasts several alliances with the main gas exporters in Europe, mainly with the states of North Africa (mainly Libya) and with Qatar (the alliance with Qatar, another historical supplier of natural gas of the Old Continent. This intertwining of alliances could lead Putin's Russia in the coming years to directly and indirectly control the main foreign gas outlets in Europe. However, the US

and European counter offensives seem to lack strength. The various sanctions and visa blockades, mainly by the US, and to a lesser extent by Europe, do not seem at all to undermine the power of Gazprom and thus Russia itself. An example of successful US sanctions against Russian projects can be found in the termination of the Nord Stream 2 project on 22 December 2019. The success of these sanctions, however, has led to a tightening of relations between Washington and Berlin.

The only conclusion that can be given to date of this gas war, whoever will be the winner, the loser will always be one: Europe. Whatever happens, the old continent will always depend on a third nation that will always have the power (little or more will depend on the strength of the nation) to dictate the conditions of gas sales.

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