

## FROM BLUE STREAM TO TURKISH STREAM AN ASSESMENT OF TURKEY'S ENERGY DEPENDENCE ON RUSSIA

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### Abstract

Turkey started imports of natural gas from Russia before the Cold War ended, establishing the basis of an important relationship for decades to come. Construction of Blue Stream pipeline was a major landmark after which Moscow consolidated its position as the major supplier for Turkish market. Despite efforts to dilute Russia's dominance in natural gas imports, Gazprom still controls more than half of Turkey's total consumption today. Turkish Stream pipeline, that will directly link Russia with Turkey, is being constructed under these circumstances even though the project does not solely target Turkish consumers but aims to reach European market in transit from Turkey. Two decades after the signing of Blue Stream contract, a comparison between those projects may explain how Ankara has fared with its energy dependence on Russia.

**Keywords:** Blue Stream, Turkish Stream, Russia-Turkey energy relations, pipeline politics, energy dependence.

### MAVİ AKIM'DAN TÜRK AKIM'A TÜRKİYE'NİN RUSYA'YA ENERJİ BAĞIMLILIĞININ BİR DEĞERLENDİRMESİ

### Özet

Türkiye, Rusya'dan doğalgaz satın alımına Soğuk Savaş'tan önce başlayıp daha sonraki on yıllar için önemli bir ilişkinin tohumlarını atmıştır. Mavi Akım Projesinin inşası Moskova'nın Türkiye için ana tedarikçi konumunu sağlamlaştıran bir dönüm noktasıdır. Rusya'nın bu hakimiyetinin hafifletilmesi için gösterilen çabalara rağmen Gazprom Türkiye'nin toplam tüketiminin yarısından fazlasını kontrol etmektedir. Rusya ve Türkiye'yi doğrudan bağlayacak Türk Akım boru hattı bu koşullarda sürdürülmektedir ve sadece Türk tüketicilerini hedeflemekle kalmayıp Avrupa'ya transit ulaşma imkanı sağlayabilecektir. Mavi Akım hattı anlaşmasının imzalanmasından yirmi yıl sonra, bu iki projenin karşılaştırması Ankara'nın Rusya'ya olan enerji bağımlılığını anlaşılması için aydınlatıcı olabilecektir.

**Anahtar Kelimeler:** Mavi Akım, Türk Akım, Rusya-Türkiye enerji ilişkileri, boru hattı siyaseti, enerji bağımlılığı

## 1. INTRODUCTION

Turkey's energy relationship with Russia has been a controversial topic ever since the first gas deliveries reached from Russia-West pipeline in the 1980s. After three decades, the volume of energy imports reached a significant level despite reservations related to dependence on Russia. In order to understand the nature of this debate, a comparison between the construction of Blue Stream Pipeline and the Turkish Stream project that is under construction can be illuminating. The time gap between the planning of

those two gigantic projects is nearly twenty years, however in this short period of time a great number of parameters have changed that we can address when analyzing Turkey's energy dependence.

In isolation from other variables, pipeline politics can already be a complicated problem both from economic and political perspectives. In addition to that, various geopolitical factors will change the framework on which the energy game is played. At the end of the 1980s when Turkey started importing natural gas from Soviet Union, Cold War was not yet formally over and the two countries were positioned at different poles of the rivalry. Nevertheless, the East-West tensions were eased during Gorbachev era, allowing Ankara and its Cold War nemesis to pursue negotiations for practical transactions. When the Soviet gas was first introduced into Turkey it did not at first give a significant political leverage to Moscow and this cooperation could be considered an extension of their energy-based rapprochement with Europe. Only after the deepening of natural gas transactions, political component of this relationship came under scrutiny.

The collapse of Soviet Union at the beginning of nineties further eased Ankara's concerns related to the security threat from its northern neighbor, consequently allowing for development of commercial ties with its erstwhile foe Russia. The relations between Turkey and Russia had been historically problematic due to competition of those two actors in conflicting zones of influence. Cold War was a natural extension of this age-old rivalry but the end of it brought forward the possibility of focusing on areas of cooperation. Moscow was willing to develop its role as an energy supplier to European markets since the 1970s (David, Jaffe, & Hayes, 2006, p. 131) for two obvious reasons. First, income from oil and gas sales constituted a considerable portion of export earnings for Russia. Second, establishing economic relationships with European countries on a long-term basis would help them erode the monolithic Western bloc driving a wedge between USA and its allies in the old continent. Moscow's interest in selling gas to Turkey may be motivated by the same factors.

From the point of view of Ankara, as the security concerns were diminished, possibilities for cooperation came to the fore on several areas. Energy would be listed on top of these collaboration possibilities. Turkish economy in the 1980s scored solid growth rates after a wave of market reforms while export oriented industrial sectors benefited disproportionately from this trend. Adding on top of that, population growth and increasing rates of urbanization Turkey's energy requirements surged after 1980s onwards. The fact that Anatolia is poor in terms of fossil fuel resources meant that policy makers had to deal with the task of securing a stable flow of supplies from different sources in order to reduce risks of outages. Not only the industry but also heating at homes were mostly relying on unclean resources such as coal previously. The search for a clean and relatively economic source of energy made Russian natural gas an obvious choice for Ankara (Bilgin, 2015).

As the Cold War ended Russian gas started flowing into Turkey from the Russia-West pipeline but that was only the beginning of a more comprehensive cooperation between those two countries. It took a few years before the two capitals found a new equilibrium in their relations by the collapse of the bipolar system. The initial bombastic rhetoric of Turkish politicians asking for a Turkic world from the Adriatic to Wall of China was countered by the facts on ground. Although Turkey and Russia were on the opposing sides of the Azeri-Armenian conflict in the Caucasus (Cornell, 1998) and the disintegration of Yugoslavia, (Çalış, 2001) two major diplomatic disputes by the end of Cold War, both sides were eager set aside their

differences and push forward a positive agenda on energy cooperation. Eventually, Turkey decided to pursue a more nuanced diplomacy in the former Soviet zones of influence while relations with Moscow flourished. Energy came to the top of those cooperation areas. Looking back after a quarter century, it can be concluded that energy-based cooperation, survived through the ups and downs of short term political disagreements.

## 2. ENERGY SECURITY

Security of energy supplies cannot be reduced to a single variable. In the case of Turkey, where most of sources are procured from foreign producers the main factor to look after is import dependence ratio and diversity of supplies (Kruyt et al., 2009). As the ratio of imports to consumption is increasing we might assume that vulnerability to shocks are increasing. Diversity of supplies is an additional factor to consider on energy security because of additional contingencies related to few number of suppliers. In case of over reliance on a limited number of producers or transit routes, disruptions may not be handled without major problems. However, diversity of supplies cannot be reduced to the presence of a multitude of suppliers to a single market. This entails investments in newer technologies that might create alternatives to conventional resources as well as management of relations with existing suppliers (Yergin, 2006). Although fossil fuels still constitute a major portion of primary energy demand, local and renewable sources enable better control over energy supplies.

Energy security also depends of well-functioning markets that bring in supply and demand at optimal conditions. When the outcome is determined by the willingness of producers to supply and consumers' decisions, markets adjust to changes in conditions. Yet, proper functioning of the markets require governments to assume a role in the absence of which finite resource cannot be used in an efficient way and reliable supplies are accessible at competitive prices (Nuttall & Manz, 2008).

It is not only the availability of energy resources but also elimination or reduction of the risk of severe price fluctuations that is associated with security of supplies. Sharp hikes in energy prices may seem to create windfall profits for producers however it also induces consumer nations to search for alternative options (Baghat, 2006). In that sense, price volatility is a risk for both parties. Pipelines are problematic in the sense that it links consumer nations to the producers that reduces the probability of diversity of supplies. Similarly, it does not contribute to the switch to alternative resources. However, it partially serves to the purpose of creating price stability thanks to longer term contracts even if most of the agreements are oil linked.

Both Blue Stream project and Turkish Stream are pipeline infrastructures connecting the supplier country to its target market directly. If we take the first phase of Turkish Stream only into consideration we can conclude that in both projects Russian gas is directly being delivered to its target market without going through any transit states. From a game theoretical perspective pipelines are the result of a "commitment" strategy for both parties (Ritz, 2018). Being extremely large-scale projects with massive financing needs those projects require a financial commitment from both the seller and buyer's sides. The seller country will only undertake such large projects if and only if the buyer is committed to buying the supplied

quantity at previously agreed trade terms. This liability of the buyer will be guaranteed by a “take or pay” agreement where a predetermined quantity is to be bought or the amount corresponding to the remaining quantity should be paid for. Since most of the costs associated to the extraction and transfer of natural gas is fixed, those projects will only be feasible in the presence of continuous and stable cash flows in the future.

In this case, the buyer country locks in its purchases of natural gas from a specific supplier or otherwise promises to pay the cost of the agreed amounts. This means the consumer nation will allocate this specific quantity to the same producer, so any other potential suppliers will be excluded from the market. Especially in cases where the buyer country is not allowed to re-export those quantities there would be no rationale to look for other producers otherwise the market will be oversupplied.

Consequently, there should be a commitment to sell on the other side of the pipeline so that the buyer nation will make sure an uninterrupted flow of the agreed quantities. From both sides the incentive to stick to the agreement is strong and has legally binding aspects for the producer and the seller. A pipeline project does not necessitate convergence between parties on all other issues yet creates a long-term alignment of objectives at least on a specific area. This might be interpreted as an additional motivation for keeping a stable relationship in the long term. Fluctuations related to any other issues may be second to an ongoing energy transaction.

In this respect delivering natural gas with pipelines and selling it in liquified form in spot markets display significantly different dynamics. Liquified natural gas is a versatile commodity like oil and unless a long term buying contract has been signed does not bind the buyer and seller. Under these circumstances market conditions are expected to prevail where demand and supply conditions will determine output quantity and the price leaving little room for political leverage. Since there is no OPEC like organization for LNG producers it would not be wrong to assume that buyers can safely expect to buy the needed amounts at market prices. Similarly, sellers are free to deliver their products to the highest bidder. Hence LNG transactions are unlikely to produce any form of dependency between the consumer and producer nations.

### **3. TURKEY'S ENERGY SECURITY CHALLENGE AND BLUE STREAM**

Blue Stream pipeline project was met with suspicion by especially pro-Western observers ever since it came into the agenda (Baran, 2007) while some have pointed out to technical and financial difficulties despite accepting the usefulness of the project (Baçık, 2001). As Turkey's economic growth necessitated increasing amounts of steady energy supplies throughout the 1990s (Balat, 2010), Russian natural gas appeared to be one of the most obvious alternatives at hand to meet the requirements of a growing economy. The share of natural gas started to increase in primary energy consumption while Moscow seemed to be the only feasible supplier at the same period (Bilgin, 2015). The project came at a time when Russia had not yet recovered from the economic downturn of their lost decade, the nineties, and the political weaknesses associated with the loss at the Cold War. While oil and consequently gas prices fell to low plateaus after the Asian crisis, Moscow found itself more and more in economic hardship (Aslund, 1998). Under these

circumstances, Russia was eager to find new markets for its fossil fuel resources and to deepen the scope of the business in countries where it had already established its presence. Transit risks became obvious only after the Orange Revolution took place in Ukraine in 2005, but even before that Moscow's proposed project, the Blue Stream, would go directly from Russia to Turkey by an underwater pipeline.

The low profile political posture of Russia right after the end of Cold War may have led to the conclusion that warnings of dependency on Moscow was overblown. Furthermore, Turkey's preference for clean and cheap Russian gas can be perfectly understandable in its energy mix especially when European Union countries also relied on the same source. Yet, it should also be noted that divergences of opinion already existed on several diplomatic issues in this period between both countries. Moscow tried to hold on to its clients in the Balkans in the process of Yugoslav disintegration while Ankara allied itself with its NATO partners especially during Bosnia and Kosovo crisis. It was the most significant political dispute of post-Cold War era in eastern Europe where both parties found themselves in completely opposite camps. While post Yugoslavia crisis was resolved favorably for NATO, in another conflict where Turkey and Russia also had conflicting interests, Moscow had the upper hand. Right after the dissolution of Soviet Union, nationalist tensions between Azerbaijan and Armenia led to a military confrontation that involved Moscow heavily. The conflict in Nagorno-Karabagh also had an aspect related to transfer of Caspian oil and gas into world markets (Schaffer, 2005) and Turkey positioned itself alongside its Western allies without reserves. Armenia had the upper hand against Azerbaijan with Russian support in this conflict but in the overall picture Caspian oil was brought to Mediterranean ports through Baku-Tblisi-Ceyhan, a project favored by Turkey and the West (Oktav, 2005). Despite this very clear clash of interests with Russia in the Caucasus and Caspian oil resources and their transfer into the markets, Turkey did not hesitate to sign the Blue Stream pipeline, isolating this project from other diplomatic disputes (Karaosmanoğlu, 2001). It could also be considered as a balancing act by Ankara who wanted to maintain a certain degree of relations with its powerful neighbor. In fact, economic and social relations continued to deepen during this period irrespective of power struggle in some areas.

Blue Stream project became a controversial issue because it could increase Turkey's energy dependence on Russia. Indeed, in a newly developed market where there were almost no alternative suppliers Ankara was constrained by an inflexible contract (Winrow, 2004). Turkey planned to bring in alternative suppliers into its domestic gas market to reduce Moscow's leverage, yet Russia continued to be the dominant player in the decades to come. Natural gas would not only be used in heating and industry but also be used in electricity generation increasing the vulnerability of the whole economy to supply disruptions. When this ambitious project with 17 bcm / year capacity was terminated Russian gas had a clear dominance in Turkish markets. Deliveries of smaller quantities of Iranian and Azeri gas did not do much to dilute the preponderance of Russia (Austvik & Rzayeva, 2016) in total consumption. It should be noted that without the undertaking of such a major project Turkish gas market would not have grown at such a pace leaving the question of supplying energy to the rapidly growing economy open.

By the year 2017 natural gas constitutes around one third of Turkey's primary energy consumption almost all of which is imported. Among those imports Russia's share is slightly above half, a figure that shows the significance of Moscow in Turkey's energy markets as a player. If only the gas coming through pipelines

is considered, Russia delivers approximately two thirds of the total amount. These figures illustrate the dependence on Moscow especially in long-term contracted purchases. The share of natural gas in electricity generation was close to half in total production in 2014 but it is reduced sharply to close to one third within a few years. That is a further proof that Russian gas constitutes the most critical bulk in primary energy consumption figures.

There are significant attempts to reduce the overreliance to Russian gas in energy mix as of now, however it remains to be seen whether a more evenly distributed supplier portfolio can be created. The most important project that is underway to reduce dependence on Moscow is the Trans Anatolian Pipeline project (TANAP) that is going to bring Caspian gas to Turkey and into Europe. The pipeline will start with a capacity of 16bcm after which the volume will increase to 26 and 31 bcm gradually. Obviously, completion of Blue Stream project established the dominance of Russia in Turkish gas markets and policy makers are looking for ways to overcome this situation. In this environment, it might seem intriguing to bring in more gas from Russia with Turkish Stream project yet there are important details to note.

%	2000	2007	2010	2015	2030est
<b>Coal</b>	29	31	31	29	25
<b>Oil</b>	41	26	27	28	29
<b>Natural Gas</b>	17	31	32	32	29
<b>Hydro Power</b>	3	4	4	4	5

**Table 1.** Turkey Primary Energy Consumption Breakdown

**Source:** Ministry of Energy and Natural Resources database, IAE

#### 4. TURKISH STREAM

Syrian Civil War created a political atmosphere in the region that brought Turkey and Russia on a collision course at its early stages. Ankara believed in a smooth and relatively rapid overthrow of the government in Damascus (Quirk, 2017) and consequently decided to provide support to opposition groups especially until the summer of 2016 (Hinnebusch, 2015). Russia on the other hand did not wish to lose its client in the Levant and stood behind Assad regime, at first indirectly and later directly by participating into combat missions with the invitation of Damascus. The perilous situation further deteriorated when Turkish Air Force downed a Russian fighter jet after the latter allegedly violated Turkish air space. The incident brought fears of a Russian reprisal that could potentially include interruptions in gas supplies. Even though the likelihood of such a strong reaction was not big, the impact that it would potentially create unnerved Turkish policy makers and public opinion. In case of a cut off or reduction of flows, emergency plans were tried to be prepared. Nevertheless, in an environment where Russian gas has a significant share in primary energy consumption, it is not possible to envisage an optimistic scenario. As Turkey has not yet invested enough in storage capacity and regasification capacity is limited (Bilgin, 2010) a strong reaction to an emergency is hard to plan. In any case, throughout this tense period, when Ankara and Moscow were

at odds over the fate of Syria, no such interruptions occurred. Even though there are various claims that Russia is using its gas deliveries as a political leverage (Belkin, Nichol, & Woehrel, 2013), in this particular case there were no cuts or reductions in the flow. That can be also considered as a further proof that in energy business the stakes are so high, and the cooperation is extended over such a long horizon that parties will think twice before letting short term considerations prevail.

Despite the fact that Russian and Turkish interests have been realigned afterwards over Syria it cannot be asserted that there will not be any other friction points in the future between those two states. On the contrary, behind a façade of cooperation between Ankara and Moscow, in several areas there are conflicts of interest. Thus, the task of reducing energy dependence on Russia remains as a longer-term objective for policy makers. Under these circumstances construction of Turkish Stream pipeline seems to be contradicting this strategy at a first glance, but a wider perspective is required to be make an assessment on the full impact.

First, looking from an overall geostrategic point of view, the regional dynamics have changed dramatically in the last twenty years. When the Blue Stream project took off in the late nineties Russia was at the nadir of its power trying to recover from the shocks of the collapse of Soviet Union while Turkey was trying to readjust to the realities of a unipolar world where its usefulness to the Western alliance was questioned. Ankara, in this period, seemed to be perfectly aligned with American priorities in the Caspian and the Middle East where on the top of the agenda one could list energy issues (Kalicki, 2001). There were almost no immediate concerns on the resurrection of a Russian Empire that could threaten back Europe and the Middle East. During the First Iraq War, Moscow adopted a low profile leaving the field almost completely to US, leading to the conclusion that a unipolar world had been firmly established. Consequently, warnings on too much dependence on Russia in the energy sector seemed too alarmist and was seconded to the growing energy needs of the economy.

Only after the Russian power was reinvigorated under the leadership of Putin in the new century and following a series of complaints that Moscow was using its gas exports as a political leverage, energy relations came under further scrutiny (Rutland, 2008). European Union issued the Third Energy package that directly targets Gazprom dominance in the natural gas markets (Goldthau & Sitter, 2015) yet investments to bring more Russian gas into Europe continued. Especially after the crisis with Ukraine that resulted in temporary cut offs in supplies in 2006 and 2009, the country's role as a transit state was compromised (Schubert, Pollak, & Brutshin, 2014). Moscow started an ambitious program to by-pass Ukraine in its deliveries into Europe. North Stream was the first phase of the solutions to get rid of the transit risk and the project became a major lifeline into European energy markets. In the second stage, Russia proposed another pipeline to deliver its gas directly into Southeastern Europe, the South Stream. The original plan not only by-passed Ukraine but also left Turkey out of the energy game by going into Bulgaria directly by an underwater pipeline. European Union's reluctance for bringing in more Russian gas sealed the fate of this proposed pipeline after which Turkish Stream project came into the picture as a second alternative.

Turkish Stream is an ambitious pipeline project that aims to fulfill what South Stream failed to do that is directly linking south European markets with the production sites in Russia. The difference between the failed South Stream and current project is that rather than going directly into Europe Turkish Stream will

first reach European Turkey. Accordingly, the whole pipeline project will consist of 4 pipelines with 15.75 bcm per year capacity each. Half of this capacity will be dedicated to domestic consumption in Turkey whereas the rest will pass through into Europe. Turkey's commitment to buy the first phase is crucial for the project to be feasible hence it also helps Russia to go ahead with the plan. The phase that targets Europe is still subject to EU approval whereas the part related to Turkey is in progress. As such Turkish Stream has similarities with Blue Stream project that was completed more than a decade ago, yet it also has different traits.

Blue Stream project was undertaken when Turkish gas markets were already developing, and alternative resources seemed scarce. However Turkish Stream project is being undertaken at a time when multiple suppliers from the Caspian, Middle East and even Eastern Mediterranean are expected to use Turkish corridor to reach into Europe (Winrow, 2004). In that sense, at first it runs the risk of oversupplying Turkish market (Vygon, Ermakov, Belova, & Kolbikova, 2015), a factor that can deter alternative projects. The project is being taken at a time when natural gas markets reached a certain maturity, but saturation still seems decades away. Even if domestic demand continues to grow there is a risk that it might fall short of highly ambitious targets. Blue Stream brought significant amounts of Russian gas into Turkish market and so will Turkish Stream do, meaning that both projects have the same impact. Yet looking a bit deeper into details, significant differences should also be noted.

Blue Stream project aimed to bring in natural gas into Turkish market but did not aim to position Turkey as a transit corridor. Although initially there were plans to reach to Israel by a north south pipeline (Babalı, 2009) this idea was dropped due to economical and geopolitical difficulties. As abundant quantities of natural gas have been found in the Eastern Mediterranean in the last decade a north-south project seems even more irrelevant as of today. So naturally the only target market for Blue Stream was Turkey and when the details of contract is also considered together with this fact, one can conclude that Ankara's status was mostly passive having little leverage over this transaction. It can also be argued that Turkey pledged to buy significant amounts of Russian gas in this period oversupplying its market should the demand growth fall short of optimistic expectation. This might have created an obstacle for alternative suppliers and projects as re-exporting the incoming gas was not allowed by contract terms.

If we contrast the contemporary geopolitical situation with the end of 1990s we can easily claim that after two decades Russian foreign policy has become much more assertive and diplomatic relations with the West is worsening. As a result, any sorts of cooperation with Russia is raising eyebrows in the West. Furthermore, energy is one of the most critical factors that Russia can utilize to achieve its political objectives. In this atmosphere, it is not hard to understand why projects like Turkish Stream are being questioned thoroughly. Not only that particular project but also the second phase of North Stream is also bringing criticism for the same reason that dependency on Russia in energy may in the end compromise diplomatic capabilities.

Nevertheless, as we have already established that gas pipeline projects bring long term commitments to both parties, daily geopolitical analysis will not be adequate in evaluating these undertakings. In EU there are strong proponents of Russian gas claiming that the impact of this factor as a political leverage is overrated and it is the cheapest source available (Paillard, 2010). A similar logic well may be applied



to Turkish Stream because in a pure economic sense the project seems highly reasonable. Ankara is undertaking a project with the largest natural gas producer of the globe to deliver its needs at reasonable prices. Moreover, even if the proposed pipeline is going to bring more Russian gas into Turkish market it will mostly replace the existing gas coming through Russia-West. By by-passing Ukraine, transit risks will also be eliminated which became a growing concern after Russia-Ukraine disputes became acute.

Another factor that can be used to add favorably for Turkish Stream when compared to Blue Stream is that it envisages positioning Turkey as a transit country for EU market. Even though a final decision by the EU has not been made for this second phase of the pipeline, Ankara wishes to bring in different suppliers to deliver their gas through Turkish corridor transforming itself to an energy conduit. If this could be achieved Turkey can bolster its dream of becoming an energy hub for Middle Eastern, Caspian and Eastern Mediterranean resources (Winrow, 2013). That would not only bring economic advantages in terms of reduction of energy costs but also contribute to energy security by reducing probability of supply cuts. By establishing itself as a major route into Europe, Turkey may benefit from its position as an essential component of EU energy network.

Even if the second phase of Turkish Stream may be delayed in the coming years, there are measures that can be taken to eliminate or at least diminish the negative effects of excessive dependence on Russia. The projects undertaken to increase storage capacities will help mitigate the effects of short term shocks. Similarly, completion of TANAP project at its full capacity and potential agreements with Kurdish regional government may help diversification efforts. More importantly, the major structural change that is taking place in the natural gas markets can be used to diminish risks associated with a dominant supplier (Yafimava, 2015, p. 10-13). In the last decade, fossil fuel markets were dramatically transformed by the shale revolution that allows extraction of resources that could not be retrieved economically in previous years. The result is a surge in oil and natural gas production in North America that removes the rigidity in energy supplies. Even if this revolution seems to be limited geographically it had a significant impact on the overall supply situation. United States, a country that used to be the largest LNG importer, became a net exporter of gas within a decade's time. Not only the investments undertaken all over the globe to supply US in the future have lost their target markets and started looking for alternative customers, but also American producers also started to export in the form of LNG. Considering also the fact that major producers such as Qatar and Australia are expanding capacity in liquified natural gas, it can be concluded that the sector is increasingly going to be driven by market dynamics in the future. Although pipelines seem to be a cheaper alternative especially for shorter distances, LNG is already being substituted as a relatively reasonable choice for natural gas imports. Major consumers such as European Union, China and India are adding to their regasification capacities in order to meet their increasing natural gas needs in the future. Similarly, Turkey is adding a floating regasification platform to its infrastructure that may allow for switch to higher percentages of LNG in its consumption.

This ongoing transformation in natural gas markets is helping consumer countries to deal with supply shocks provided that adequate emergency measures are taken. The vulnerability of Turkey vis-à-vis its primary gas supplier may be diminished if necessary infrastructure investments are undertaken in order

to switch to LNG when necessary. That will also help reduce the risks associated with more Russian gas delivered by Turkish Stream.

	2000	2009	2015	2025est*
<b>Russia</b>	<b>69</b>	<b>52</b>	<b>55</b>	<b>45</b>
<b>Iran</b>	<b>0</b>	<b>16</b>	<b>16</b>	<b>14</b>
<b>Azerbaijan</b>	<b>0</b>	<b>15</b>	<b>13</b>	<b>19</b>
<b>Other</b>	<b>31</b>	<b>17</b>	<b>16</b>	<b>23</b>

**Table 2.** Import Share by Country

**Source:** Energy Markets Regulatory Authority

\* Author's estimate with TANAP first phase completed, Turkish Stream first phase completed and Russia-West substituted

## 5. CONCLUSION

Blue Stream and Turkish Stream projects are undertaken at different geopolitical environments even though the objective of Turkish policy makers was to meet the country's growing energy demand in both cases. On both occasions there were concerns that pipeline projects and long-term commitments to buy Russian gas would create a relation of dependency between Moscow and Ankara. After Blue Stream pipeline started pumping gas, the share of Russian gas in Turkish consumption stabilized over fifty percent, a number that can be considered as problematic due to domination of the market by one single player. Nevertheless, in a real emergency when Turkey and Russia came to the brink of a clash because of disagreements on Syrian crisis there were no cut offs that could damage the credibility of the supplier nation. This should not imply that this risk would not be materialized in the case of further escalation between two countries.

At the height of the crisis, the new pipeline project, Turkish Stream, was put on the shelf only to be revitalized after reconciliation of Moscow and Ankara in 2016. As the project took off, similar dissenting voices claiming that Turkey is becoming too over reliant on Russia started to be heard. Only this time there are important issues regarding the new pipeline project that differs from the previous Blue Stream project. First, Turkish Stream project has two phases, the first one targeting the Turkish market and the second one by-passing Thrace to reach into southern Europe. The pipeline connecting Russia directly with Turkey with an underwater pipeline is going to be a substitute to the pipeline going through Ukraine, so in terms of energy security it can be considered even as an improvement on behalf of Ankara. If Turkey can position itself as a transit country for Russian gas with the agreement on the second phase it would give Ankara additional leverage on the energy sector. Additional investments on alternative suppliers, storage capacity and regasification facilities may further alleviate fears of over dependence on Russian gas. In that respect even if Blue Stream may seem as a necessary first step in order to develop gas markets in Turkey, it seems more problematic in terms of energy security when compared to the new project. On the other

hand, Turkish Stream may even give Ankara advantages over Moscow and EU if the whole project can be completed. Even if we witness a more assertive Russian foreign policy in today's world when compared to late nineties, in the longer horizon those projects should be evaluated relatively independent of short term diplomatic issues. Evidently, overall dependency to Moscow should be evaluated in a broader manner taking into account cooperation in nuclear energy and other alternative sources. Yet, a comparison of Blue Stream and Turkish Stream in isolation from other variables does not result unfavorably for the latter.

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