Turkish Stream and its implications for the EU

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“A first assessment is that this would not work”, EC Vice-President in charge of Energy Union Mr. Maros Sefcovic said in an interview with The Wall Street Journal at the World Economic Forum in Davos on the 22nd of January. He was commenting on the recent announcement by President Vladimir Putin and Gazprom’s Alexei Miller. Indeed, the Russian gas giant’s CEO announced that South Stream would be replaced by a new project, Turkish Stream, linking Russia to the European part of Turkey and this in addition to the existing 16 billion cubic meters (bcm) Blue stream.

This policy brief looks at the various implications this new reality could have for Europe's energy security.

BYPASSING UKRAINE

Indeed, this new reality would significantly alter a big chunk of Russia’s gas delivery routes by making Turkey its main transit country for gas deliveries to Europe in an effort to completely bypass Ukraine. Hence, with the current transit agreements with Ukraine’s state-owned gas company Naftogaz ending in 2019, the possible redirection of Russia’s gas flow would lead certain EU countries that are highly dependent on Russian gas – Estonia, Finland, Latvia, Lithuania, Slovakia, Bulgaria and the Czech Republic all depend on Russia for more than 80% of their gas supplies – to reach an impasse in terms of gas security around that time. Indeed, according to Gazprom’s new plans, the European Transmission system operators (TSO’s) would have to build the needed infrastructure to link their grids to Gazprom’s new Turkish-Greek border hub by 2019. The construction of this new infrastructure would not only cost billions but would also have to start right now in order to be achieved by 2019. Yet, for now, this scenario remains uncertain as it faces realities that play both in its favour and in its disfavour. Moreover, if this scenario was to become reality, it would be improbable for Europe’s countries to sit back and watch. Those countries would then rather be looking at various options to face the scenario.

WHY TURKISH STREAM IS PROBABLY HAPPENING

Recently, various technical details were disclosed by Alexei Miller during a meeting with Turkish Energy minister Taner Yildiz. From the pipeline’s four threads combined and planned capacity of 63 bcm, 15, 75 bcm will go the Turkish grid and 47, 25 bcm to the European
market through the new Turkish-Greek border facility. The official agreement on the pipeline is planned for the second quarter of 2015, but no contract has been signed yet. The first thread of the project could be active and delivering gas to the Turkish market starting in 2017-2018. Furthermore, at least five main incentives are pushing Russia towards finalizing the project, including: the Third Energy Package (EU energy rules, notably including an ownership unbundling clause), avoiding loss of already engaged work, the financial benefit, keeping its geopolitical influence in Europe and avoid losing face in its current stand-off with the West.

Denounced as the main reason why Russia had to abandon the South Stream project, the Third Energy Package rules remain and this reality has given Moscow impetus to pursuing the new Gazprom plans. The Europeans are not likely to give way on the various implications of the Third Energy Package either, so any Russian temptation at pressuring the EU further on that would be counterproductive. The EU can’t afford to bury its energy laws if it is to achieve its single energy market. On the Russian side, the emergence of a new willingness to follow the Third Package rules is also highly improbable. For Gazprom then, the prospect of building new pipelines on EU ground is becoming a liability, hence its new plan to limit its infrastructure to the Greek-Turkish border. Indeed, Russia’s traditional energy model in Europe, controlling transport routes from point of extraction to point of final consumption is more and more constrained.

Another incentive is for Russia to avoid any losses in already disbursed cash and investments in the run up to the South Stream construction work. Indeed, most of the purchased pipes, the feasibility studies for the undersea part of the project and the technical capacities (pipe-laying vessels) will be used in the Turkish Stream project. On the financial side, abandoning South Stream makes sense. Indeed, South Stream was planned in a period of high oil prices. The current state of Russia’s ailing economy with the West’s imposed sanctions over the situation in Ukraine and the fall of oil prices has led to a ruble crash. This new economic reality would have made it quite difficult for Gazprom to invest in such a costly (about 40 billion USD) infrastructure as South Stream, hence the decision to drop the project. That being said, the new Turkish Stream pipeline might turn out to be expensive as well.

Furthermore, by building this new pipeline, Russia would make it possible for its gas deliveries to Europe to completely bypass Ukraine (about 60 bcm through the Brotherhood and Soyuz pipelines), with which it is in a de facto state of war, and still maintain its dominant position in the European market accounting for a third of EU’s needs, with around 140 bcm a year. This would strengthen Europe’s dependence on Russian gas as well as increase Russia’s geopolitical relevance in Europe.

Lastly, in the wake of Russia’s political standoff with the West in the Ukraine crisis, President Putin can’t be seen as losing face. With this new energy deal with Turkey, Russia is showing it is independent, not as isolated as the west pretends and remains capable of high investment infrastructure projects, sanctions or not.

**Why it’s going to be difficult**

For various reasons, Russia’s new pipeline project, Turkish Stream, might turn out to be too complicated to develop. First, the EU remains Russia’s top gas customer. Indeed, even though Russia and China recently announced important gas deals (in May and November 2014) and the development of the Power of Siberia pipeline, China is unlikely to replace Europe as Russia’s top customer in the short to medium term. With a maximum 68 bcm per year
planned export capacity by 2020, Russian supply to China, amounting then for about 1.7% of China’s energy demand, would still suffer by comparison to Europe’s yearly 140 bcm demand. In addition, the negotiation with China on price will be tough and due to the current low gas prices, the Chinese might end up paying less than the Europeans do. Thus it is hard to imagine a wise seller toying with his prime buyer for too long without taking the risk of eventually alienating him for good, this being especially true when the buyer is already cautious, “once burnt, twice shy” as the saying goes. Can Gazprom really afford to lose its main market and two-thirds of its cash revenues?

Besides, numerous long term contracts signed between Gazprom and certain European energy companies go well beyond 2019. These contracts are usually quite specific about the point of delivery (currently through Ukraine). Thus breaking these contracts wouldn’t come cheap as it would result in Gazprom facing important penalties. In order to avoid such penalties, Gazprom would have to convince the European companies and Transmission System Operators (TSO’s) to agree to both a contract modification and a huge investment on their part to build the new infrastructure linking their grid to the Turkish-Greek gas hub by 2019. The only way to convince them would then probably be to offer substantial discounts on delivery prices. So the question is, will the European companies play along when they know they will have to invest massively and won’t be supported by an irritated European Commission in face of Gazprom’s “fait accompli”? Indeed, those investments could well be redirected towards other EU supported projects that wouldn’t reinforce Russia’s energy grip on the EU, as the Southern Gas Corridor, for example. The EU would surely be looking for more reliable energy sources, where it wouldn’t have to face the 2006 and 2009 winter crisis kind of scenario.

Moreover, Turkish Stream looks like a costly infrastructure when the European demand is weakening and the EU is actively working on the diversification of its supply sources, meaning new competition for Russian gas. Gazprom’s plans to bypass Ukraine’s existing grid to switch to a new yet to-be-built route to supply Europe thus makes little sense economically. Indeed, Russia abandoned South Stream’s construction because, at least partly, it was becoming too pricy within the current economic conditions. Yet, at least, Gazprom was part of a consortium with ENI, EDF and Wintershall in South Stream’s construction process. By contrast, the Russian company will have to build the whole undersea infrastructure of Turkish Stream on its own and will only be sharing the cost of the project’s onshore infrastructure with the Turkish company Botas but investors, Russians as well as Turkish might be hard to find given the current economic environment. Hence the new project could turn out to be as expensive as South Stream.

The appropriateness of this huge investment could be further challenged by the EU’s future renewed efforts to reduce its dependence on Russian gas by reducing demand, increasing its energy efficiency and actively looking for alternative energy sources (renewables, unconventional resources) and alternative gas sources. Adding to this, the recent mild winters and more importantly the economic crisis impact on EU’s economy, have seen EU’s Russian gas imports slowing continually since 2010, thus weakening Russia’s position in the European market. In this context one wonders if the European demand for 47 bcm really exists? Of course this reality must be nuanced by the IEA’s latest EU energy policy review stating the EU’s expected gas imports increase between 2020 and 2030 and thus its renewed dependence on Russian pipeline gas imports for the foreseeable future.
Finally, the European Commission is getting ready to proceed with its antitrust case against Gazprom that was launched in September 2012. The case, based on the Russian Energy Giant’s presumed abuse of its dominant position in Europe’s natural gas market, could further weaken the company’s position in Europe as well as its finances. Indeed, it could, if the allegations are upheld, be facing important fines, mandatory restructuring of its European activities and even mandatory sales of capacities to competitors. In such a scenario, Gazprom could be forced to change the way it is doing business in the EU.

GEOPOLITICS AT PLAY

The potential gain for Russia is quite obvious. Indeed through Turkish Stream, Putin is looking at achieving three main goals: reinforcing EU’s dependence on Russian gas by developing a new delivery route, making Ukraine irrelevant when it comes to gas transit and strengthening Russia’s control over the Turkish market. Russia’s energy policy is directly linked to its grand strategy. Having understood that the EU won’t loosen its Third Energy Package’s rules, Russia and Gazprom will leave it to the Europeans to build the necessary infrastructure to link the European market to the new Turkish Stream. To do so, Russia is employing a divide and rule strategy, taking advantage of the diverging member state’s views. In fact, it is counting on a “coalition of the willing” consisting of those European countries showing a pro-Russian stance such as Alexis Tsipras’ Greece, Orban’s Hungary but also Macedonia and Serbia. All of them have been cozying up to President Putin as witnessed by recent state visits and diplomatic gestures. To enhance its relations with these countries, Russia is offering price discounts on oil and gas deliveries but is also providing financial help in the case of Greece. If Russia’s efforts are successful, then, these countries would likely be instrumental in building new infrastructure linking Turkish Stream to the European market. This project could also serve as a Russian retaliation towards the reluctant EU member states it is blaming in the South Stream cancellation, especially Bulgaria. Moscow has a long history of threatening the eventual objectors with increasing gas prices. In order to avoid being left aside, Bulgaria is now actively lobbying in favour of the Turkish Stream alternative, namely the Trans Anatolian Pipeline (TANAP) and its possible European extensions, including the currently shelved Nabucco West pipeline and the 5 bcm Greek-Bulgarian interconnector (IGB). The prospect for all these potential transit countries is to benefit from important transit fees as well as gaining in geopolitical relevance. It is interesting to see how Russia is also taking advantage of Europe’s open market reality by confronting it with its monopolistic state-owned groups. However, it remains unsure what project the EU and the European energy companies will support.

With Turkish Stream, Russia will also be able to strengthen its control over the growing Turkish market. Indeed, it will add a new route to the already existing ones (Blue Stream, Tans-Balkan Pipeline) and link its resources to new hubs in Turkey. It will also geopolitically bring Ankara closer and strengthen its influence in the region. Nonetheless, arm-twisting Turkey will be much harder than arm-twisting Ukraine in case of disputes over gas transit, or with respect to other political issues. Russia won’t be able to play the game it used to play in Ukraine.

For Europe though, supporting the Turkish Stream project could be counterproductive in terms of diversification and even strengthen its current dependence on Russia. Indeed, Turkish Stream would only add a new route for Russian gas to access the European market. Moreover, Russia would still be able to control the volumes reaching Europe. Adding to this, the project might compete with the TANAP project. Both
of them are supposed to transit through Turkey and become operational around 2020. Turkish Stream might thus hurt the TANAP project by reinforcing the sentiment of uncertainty and instability surrounding these huge gas infrastructure investments. Furthermore, if TANAP and its general framework the Southern Gas Corridor project were to be completed as planned, they could truly help Europe’s need for diversification as well as undermine Russia’s interests, be they geopolitical or economic. This explains why we might witness an actual race between the projects.

The EU will also have to manage the rising tensions between its member states and try to convince them to stay united on the energy front. This, as witnessed already with Hungary’s latest comments and the first signs of division concerning the Energy Union, might turn out to be quite complex.

Turkey defends its pragmatic approach and pledges to accept all pipelines that want to cross its territory. Indeed, the country would happily see itself developing as a regional energy hub even though it might actually rather develop as a regional transit country if it doesn’t negotiate the contracts well. Currently it is letting both the EU and Russia advance their pawns in their respective pipeline projects. The EU’s Southern Gas Corridor project transporting gas from the Caspian Sea (Azerbaijan’s Shah Deniz II fields) and eventually Central Asia and the Middle-East to Europe and Russia’s Turkish Stream creating a new route towards the Turkish and European markets. Even if Turkey is reluctant in openly acknowledging the existing competition between the two projects, it remains uncertain if both of the projects will be supported in the same way by Ankara.

For now, Turkey has signed a Memorandum of Understanding (MoU) with Russia but no legally binding contract yet and the latest comments by the Turkish authorities put the beginning of construction at the end of 2017. By contrast, the TANAP project is based on a binding intergovernmental agreement signed by both Azeri President Aliyev and Turkish Prime Minister Erdogan on 26 June 2012. On 16 March 2015, the opening ceremony marking the start of TANAP’s construction works was attended by EC Vice-President in charge of Energy Union Sefcovic, Azeri President Aliyev and Turkish Energy Minister Yildiz. Furthermore, Turkey is part of the consortium managing the Shah Deniz II oil and gas fields that will be supplying TANAP.

Because of all these elements, Turkey is generally seen as the main winner in any scenario. Both with TANAP and Turkish Stream it gains leverage on the EU as well as on Russia. It might use this new political clout to constrain Russia’s grand regional strategy and gain weight in its EU membership negotiations. But Turkey might also deepen its dependence on Russian gas by building Turkish Stream. Indeed, the country already imports more than half of its gas from Russia, thus adding a new Russian route to the already existing ones is almost certain to increase this dependency.

Ukraine, on the one hand, could be losing its geopolitical relevance with the new Turkish Stream project. Indeed, if it was to be bypassed completely, it would first, lose its transit revenues and second, lose its political status as the main energy link between Russia and the EU. On the other hand, the country could, by losing its transit role, become less dependent on Russia and may have the opportunity of engaging in the needed political reforms with less outside interference.

**WHAT CAN THE EU DO?**

The EU is at a crossroads. Now is the time to take important decisions that will have lasting implications for the European energy market. The Juncker Commission has understood this,
hence the development of the Energy Union and the launch of talks focusing on Energy Diplomacy at the EEAS. The Energy Union’s plan, unveiled on 25 February, will aim at bringing greater energy security, sustainability and competitiveness to the European Energy market. This plan puts forward actions focusing on: energy security and solidarity; the full integration of the European market; a renewed effort on energy efficiency; progress in the decarbonisation of the economy; improving energy management and governance; further investments in R&D and competitiveness.

Developing the Energy Union and making sure the 2030 framework for climate and energy policy targets are fully implemented, could be one solution for the EU to lessen its dependence on Russian gas. By pushing for diversification but also interconnecting the national grids, developing reverse flows capacities, developing more storage facilities, building new LNG terminals, reducing energy consumption in general with more efficiency, expanding the deployment of renewable energy technologies and unconventional oil and gas resources, the various EU member states could find themselves in a more comfortable position when it comes to energy security. Of course it’s not going to be easy for all the MS to move in the same direction together; it is going to be a long-haul project.

Nevertheless, we will here focus on gas. Russia’s gas is probably going to stay important in Europe’s energy mix but for the various reasons previously developed in this article, Europe might still be willing to diversify its supply sources. To do so the Commission has put forward various solutions in its Energy Union Package², its European Energy Security Strategy³ and in the list of the recognized projects of common interest⁴ benefiting from the Connecting Europe Facility financing scheme. First, Europe should develop its conventional gas resources, the current production areas should be further exploited while the new potentially producing areas should be explored. Indeed, as it becomes increasingly recognized that British, Norwegian and Dutch production is in decline, the Eastern-Mediterranean area (Cyprus, Israel, Lebanon and Palestine) could become Europe’s next energy production hot-spot. Simultaneously, EU’s MS should try to assess their unconventional gas (shale gas) resources potential that could be limiting the impact of Europe’s declining conventional resources. Indeed, in British Petroleum’s (BP) last Energy outlook, the company expects that by 2035 two-thirds of Europe’s natural gas will have to be imported.

The other solution is for the EU to find new supplying partners. Through its various documents, the EC has highlighted key infrastructure projects to link Europe to the relevant areas when it comes to gas diversification. On top of the list is the Southern Gas Corridor that would link Europe to the Caspian Sea region. This massive project is based on the development of three pipelines: the Southern Caucasus pipeline (SCP), the Trans-Anatolian Natural Gas Pipeline (TANAP), and the Trans-Adriatic Pipeline (TAP). This set of pipelines will connect Azerbaijan’s Shah Deniz II gas fields to the European market in the short term. The medium to long term, it could be expanded and be connected to other producers as in the Eastern Mediterranean region, Turkmenistan, Iraq, the Kurdistan region and even Iran. The Southern Caucasus Pipeline (also called BTE) will be connecting Baku (Azerbaijan) to Erzurum (Turkey) via Tbilisi (Georgia) and will have a 25 bcm capacity. The Trans-Anatolian Natural Gas Pipeline (TANAP) will link Erzurum to the Turkish-Greek border and will transport 16 bcm (and up to 60 bcm in 2030). This pipeline will then connect with the Trans-Adriatic Pipeline (TAP) that will deliver around 20 bcm capacity and link Kipoi (Greece) to Lecce (Italy) via Fier (Albania). Additional
infrastructure could further be connected to this web to link other parts of Europe (notably the Balkans) with the 5 bcm Greek-Bulgarian interconnector (IGB), the 15 bcm Turkey-Greece-Italy interconnector (ITGI) or even the 30 bcm Nabucco West pipeline project that could eventually be revived and link Greece to Austria (Baumgarten) via Bulgaria, Romania and Hungary.

Azerbaijan’s first deliveries to Europe could take place as soon as 2018. The project will start with only 10 bcm, but could then be expanded in order to reach up to 60 bcm around 2030. Turkmenistan could also supply Europe by connecting itself to the TANAP pipeline with the 30 bcm planned undersea Trans-Caspian Pipeline (TCP) that would be connecting Turkmenbasy’s fields (Turkmenistan) and eventually Tengiz’s fields (Kazakhstan) to Baku (Azerbaijan). Both Azerbaijan and Turkmenistan look like serious alternative supply sources with respectively some 0.9 trillion cubic meters and 17.5 tcm. Azerbaijan’s close political proximity to Turkey convinced it to pursue the long haul project of supplying Europe. For Turkmenistan, things might be a bit more complicated even though Azeris and Turkmens concluded an agreement on the future construction of the Trans Caspian Pipeline in 2014. Firstly, due to the disputed legal status of the Caspian Sea, Russia, Iran and Kazakhstan could try to block any progress in the development of the TCP pipeline. Indeed, Russia and Iran would eventually suffer from Ashgabat’s rivalry in supplying the EU gas market in the future. Secondly, the EU could be competing with other actors, namely China, Pakistan and India. Turkmenistan has been ramping up its energy ties to China in the last years as China is willing to invest in Turkmenistan’s natural gas production capacities. Furthermore, the Central Asia-China gas pipeline (completed in 2009) has a 55 bcm capacity that could be expanded in the future. Indeed, even though China’s recent 30 bcm Power of Siberia Pipeline deal with Russia (May 2014) might be pushing Turkmenistan to look for new markets, Turkmenistan still remains China’s largest gas supply source. Moreover, the 28 bcm planned Turkmenistan-Afghanistan-Pakistan-India Pipeline (TAPI) could add another project competing for the same gas even if the project is not showing much progress since the 2010 intergovernmental agreement was signed in Ashgabat (due to the significant conflict ongoing).

The Southern Gas Corridor could also help linking Europe to Middle - Eastern gas suppliers. The two main regional players could be Iran and Iraq. Indeed, the Islamic Republic of Iran deserves more attention with the nuclear non-proliferation deal making serious progress. Of course, it remains uncertain whether the negotiations will succeed but western energy companies are already being courted by the Iranians. Iran is home to the second largest gas reserves after Russia. It could therefore be seen as a potential alternative to Russian gas, but one must take into account the following realities. Iran’s gas field infrastructure is ageing, it thus would take both time and heavy investments to modernize it and the speed at which the EU, the US and the UN sanctions would potentially be lifted would be another factor to account for. Moreover, Iran’s high domestic demand leads most of its production to actually be consumed internally. Finally, the EU would be competing with others on the client list, namely Pakistan, Oman and Turkey with whom Iran already shares pipelines. For all these reasons, if Iran could export gas to Europe, it would only be around 2030 at best, leaving it to others to supply the European market in the meantime. In the long term though, Iran could turn out to be a game changer in the gas world.

The second regional key player is Iraq. Home to 3.6 tcm, the country could also help enhance Europe’s energy security. Of course for Iraq, the necessary political stability, security and
economic conditions are far from existing. For it to develop the necessary infrastructure to supply the European market, the country must first tackle the significant internal political and security problems it faces. Most importantly, it will need to significantly degrade ISIS and regain control of large parts of Iraqi territory that were captured in the last year. The same goes for the Kurdistan region even if various major energy firms are already present on the ground and working on developing the gas production capacities.

The other region that could be part of the Southern Gas Corridor supply is the East Mediterranean (East Med). Indeed, the East Med is home to large offshore gas reserves. Since 2009, the discovered reserves in Israel, the Republic of Cyprus and Lebanon amount to about 3.5 tcm. These countries have the potential of exporting more than 10 bcm within a 30 year timeframe. Unfortunately progress has been rather slow. This can be explained by multiple obstacles. On the political front, the long standing issues between Cyprus and Turkey still poison the overall negotiations and especially with the legal disputes concerning land and maritime borders. Another issue is the absence of transport infrastructure. The construction of pipelines or LNG plants will necessitate heavy investments. The interested investors are also facing regulatory and bureaucratic hurdles that are slowing any attempt at moving forward. This in turn makes it impossible for the exploiting companies to develop the discovered gas fields. Thus, for now, the necessary regulatory and political stability conditions for a better exploitation of the hydrocarbon resources are not fulfilled. If the local national authorities were to find political solutions, the region’s resources could then be contributing to Europe’s energy security.

Next to the Southern Gas Corridor, there’s another region that is explicitly named in the various EU external energy policy publications: North Africa. The main issues for the region are political stability and security. The impact of the weak regional stability imperils the hydrocarbon industry’s need for investments. The region which is already heavily connected to Spain and Italy, could theoretically easily increase its exports towards the European market. Indeed, the 12 bcm Maghreb-Europe pipeline linking Algeria to Spain via Morocco, the 10 bcm Galsi pipeline linking Algeria to Italy via Tunisia and Sardinia, the 8 bcm Medgaz pipeline linking Algeria to Spain, the 30 bcm Trans-Mediterranean pipeline linking Algeria to Italy via Tunisia and Sicily and the 11 bcm Greenstream pipeline linking Libya to Italy are currently underexploited. A good example of the different hurdles encountered on the ground can be found in Algeria. The country holds about 4.5 tcm of gas. Unfortunately, the conjunction of an increasing domestic consumption, a stagnant if not slowing production, a strong public opposition to new drillings especially for unconventional resources and alarming security issues linked to the presence of armed Islamic extremist groups make it quite difficult for any investors to be attracted to the country. A further issue is Spain’s poor interconnection with France thus making it difficult for North African gas to reach the rest of Europe by pipes. This problem could be faced by investing in additional interconnectors along the Spanish-French border. Hence Algeria’s national hydrocarbon industry suffers and remains underexploited. The same could be said for Libya where the security situation appears to be even worse. If the region was to stabilize politically and in terms of security, it could very well become one of Europe’s top suppliers when it comes to gas.

Finally, LNG capacities could also be part of the answer in Europe’s gas security. Various international suppliers are available on the market. Of course, the gas prices might turn out
to be more expensive because Europe would find itself in competition with other markets and notably the Asian one. For Europe to be able to better profit from these sources, it has to better use its already existing capacities as well as develop new LNG facilities as advised by the European Commission in multiple documents. Only then could it have an easier access to LNG supplies from Qatar, Saudi Arabia, the USA and Canada. In order to tackle this issue, the European Commission is currently working on a comprehensive LNG strategy as announced in its Energy Union Package.

**Europe should stick to its guns**

As explored throughout this article, Russia’s new pipeline project, Turkish Stream, might have important implications for Europe’s energy security. Indeed, this bold move by Gazprom, Europe’s prime gas supplier puts Europe at a crossroads. Now is the time for Europe to decide where it wants to go, what it wants to do, where it wants to do it, how it wants to do it and with whom. Europe can either follow the course it has been on for decades or it can decide to take a new road. This new road would stretch towards energy independence by taking on diversification plans. Russia, as Europe’s main gas supplier and big neighbour will obviously stay an important actor in Europe’s energy consumption for better or worse. But this reality shouldn’t stop Europe from diversifying its energy sources. On the contrary Europe should stick to its guns. It should implement its various infrastructure projects, such as the Southern Gas Corridor, and not allow for Russian tactics to transform its projects in further Nabucco scenario repetitions.

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ENDNOTES

2 See official document: http://eur-lex.europa.eu/resource.html?uri=cellar:1bd46c90-bdd4-11e4-bbe1-01aa75ed71a1.0001.03/DOC_1&format=PDF