CENTRE FOR EUROPEAN REFORM
policy brief
Transatlantic Academy

Should the Nabucco pipeline project be shelved?

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★ It is easy to be pessimistic about the prospects of Nabucco, a pipeline designed to bring Caspian and possibly Middle Eastern gas to the EU. The financing is not yet secure, European gas demand is down, and the question of where Nabucco's gas will come from is open. Russia, meanwhile, is pushing hard for its rival South Stream pipeline.

★ Nabucco would be good for the EU in various ways. It would make Central and East European countries a lot less dependent on Gazprom and increase the energy security of the EU as a whole. It could help reduce intra-EU divisions over Russia. It would underpin stronger ties between the EU and potential supplier countries such as Azerbaijan and Turkmenistan. It could help improve EU-Turkey relations.

★ Many of the benefits that Nabucco would bring do not accrue to the companies that are trying to build it or the banks that lend the money for it. Therefore, the EU and its governments should back Nabucco more strongly, both politically and financially.

"No demand, no supply, no money". This is how one leading energy expert sums up the chances of the Nabucco pipeline being built. Nabucco – a 3,300 km pipeline planned from Turkey's eastern border through Bulgaria, Romania, Hungary and into Austria – is the flagship project of the EU's fledgling energy security policy. It could eventually bring 31 billion cubic meters (bcm) of Caspian and perhaps Middle Eastern gas to Europe each year. It is at the heart of the EU's 'southern corridor' strategy, which aims to connect the European energy market to these gas-rich regions. Nabucco would lessen the EU's dependence on Russian gas, contribute to stronger ties between the EU and the countries in its eastern neighbourhood and prove that the EU and Turkey can work together at a time when the Turkey's accession process is deadlocked.

If the Europeans believe that Nabucco will achieve objectives that go beyond enabling some energy companies to make a profit by shipping additional gas to Europe, then they should give it stronger public support. The EU can help to finance the pipeline and, together with the member-states, provide political backing. But it has limited influence over many of the make-or-break issues for Nabucco – in particular whether and when gas will become available from places such as Turkmenistan or Iraq.

Progress at last

Preparations for Nabucco have been under way for almost a decade. In 2009-10, they finally made some headway. In March 2009, the EU allocated €200 million from its own budget to the project. Europe's big public lenders, such as the European Investment Bank (EIB), promised to lend a significant share of the money needed for the pipeline's construction. In May 2009, the leaders from all the countries through which Nabucco is supposed to run met high EU officials and representatives from potential supplier countries for a 'southern corridor summit'. The aim was to give the project a much-needed political push. In July, the governments of the transit countries signed

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a long-awaited 'intergovernmental agreement' (IGA) on the rules that will govern the shipment of gas through Nabucco. By March 2010, all of them had ratified the IGA and some had started the environmental impact assessments required for the project to go ahead.

In April 2010, the Nabucco consortium started preparing the first tender for €3.5 billion worth of pipes, bends and valves. Later in the year, the consortium will ask energy companies to submit binding offers for the use of the pipeline (a process known as open season in the gas industry). If this goes well, the final investment decision could be taken before the end of 2010. Another international Nabucco conference has been called for the autumn to sort out any remaining issues. "Progress towards Nabucco could become irreversible within one year", predicts Mihaly Bayer, Hungary's envoy for energy security. The Nabucco consortium members say that the first gas will flow through their pipeline in 2014.

While 2010 may well be the critical year for Nabucco, it is also a year during which it will be exceedingly difficult to get such a big pipeline project going. In the 2008-09 recession, European demand for gas fell for the first time ever; and it is likely to stay depressed as long as Europe's economic recovery remains sluggish. At the same time, a massive boost in the output of 'unconventional' or shale gas (gas coming from rock formations) in the US has added to a global gas glut. Liquefied natural gas (LNG) that is no longer needed in the US has come to Europe instead, depressing prices on the 'spot' market for short-term gas contracts. With gas markets oversupplied, some are asking why Europe would need another pipeline. Medium-term uncertainty over European gas demand will only add to the caution of investors who remain risk averse in the aftermath of the financial crisis.

How Nabucco works

Gas pipeline projects are usually attached to big, long-term supply contracts. Pipelines are built by the companies that supply the gas or the ones that buy it, or both, as is the case with Nord Stream (a joint venture between Gazprom, on the one hand, and German, Dutch and French gas distribution companies, on the other). Nabucco is different. The Nabucco consortium is made up of companies from the countries that lie along the pipeline's prospective route: Botas (Turkey), Transgaz (Romania), Bulgargaz (Bulgaria), MOL (Hungary) and OMV (Austria). Germany's RWE (a big gas distributor that also has ambitious plans for getting into production abroad) joined the consortium in 2008. But no gas supply company from the Caspian or the Middle East is involved. The consortium members will build the pipeline and mostly sell the rights to use it to others.

One EU official describes Nabucco as a test case for big infrastructure projects under the EU's new system of 'regulatory unbundling'. Under EU rules on 'third party access' (TPA), companies in the EU that operate pipelines must allow other companies to use them on commercial terms. In practice, this has not worked well because it was often the same companies that bought the gas, shipped it across the EU and sold it to customers. Such companies had few incentives to let competitors use their infrastructure. EU attempts to break up all vertically integrated energy companies have not succeeded. But a new law requires them to at least run their supply, transport and sales businesses separately.

In so far as the Nabucco consortium members are already 'unbundled', it will be the transport bits of these companies that build and operate Nabucco. The upstream and distribution businesses of the same companies may or may not use Nabucco to ship gas to the EU. More likely than not, they will. MOL, OMV and RWE (or their exploration businesses) are involved in gas projects in Azerbaijan, Turkmenistan and Iraq. If these projects are successful, the companies may use preferential rights to ship their gas through the Nabucco pipeline.

These preferential rights stem from the EU practice of granting a partial exemption from the TPA rule for newly built pipelines. The Nabucco consortium members will get the right to use or directly sell 50 per cent of Nabucco's maximum capacity, while the rights to use the other 50 per cent will be auctioned off in a tender known as open season.

Most importantly, it is still not clear where Nabucco's gas will come from. Since prospects for gas exports from Turkmenistan and Iraq remain uncertain, the initial gas would have to come from Azerbaijan – which is embroiled in a heated commercial and political dispute with Turkey. Another reason why many observers are giving up on Nabucco is that Russia is pushing ahead with its rival South Stream pipeline that would compete with Nabucco for both Caspian gas and European markets.

If Nabucco does not make much headway in 2010, those who have always doubted the project's commercial viability will feel vindicated. Others will argue that Nabucco's lack of progress is a failure of EU energy policy. Neither is entirely true. The whole debate about Nabucco is muddled and short-sighted.

What the EU has (not) done

The EU has declared the 'southern corridor' a priority for its emerging energy security policy. Nabucco is not the only pipeline in this scheme (more later on the other plans), but it is clearly the flagship project. Nevertheless, political backing for Nabucco has been inconsistent and financial support has been meagre.

In 2003, the EU agreed to cover half the costs of the initial feasibility study for Nabucco. In 2009, it allocated €200 million from its European economic recovery package (which contained a total of €4 billion for energy and infrastructure projects). Since the money is part of the EU's stimulus package, it needs to be spent by the end of 2010, otherwise the Nabucco consortium will lose it. The EU's grant is only a tiny portion of Nabucco's total construction costs, estimated at €8 billion by the consortium. But it is important because it symbolises the EU's support and could give other investors confidence to invest in the project. Conversely, if the consortium had to hand the money back at the end of 2010, investors and potential suppliers would interpret this as a signal that Nabucco is in trouble.

The companies that form the Nabucco consortium have committed themselves to paying 30 per cent of the construction costs, with the remainder to be borrowed from international markets. Europe's two big multilateral lenders, the EIB and the European Bank for Reconstruction and Development (EBRD), have promised to lend a significant share of that money. The International Finance Corporation (IFC, a part of the World Bank that lends to the private sector) may also chip in. This is normal practice: big infrastructure projects, especially complicated ones that span borders, usually benefit from some sort of public financial backing, be it subsidised loans or export finance guarantees. The EIB and the EBRD would lend money to Nabucco on terms similar to those available in the markets but they may well be more willing to take the risk attached to the project.

The perception of that risk would fall if the EU gave the project its full political backing. Many European Commission officials and members of the European Parliament whole-heartedly support the pipeline. They regard it as an important step towards a more unified EU energy policy and a contribution to the EU's overall energy security. For the same reason, several smaller EU member-states also like Nabucco. The governments of Central and Eastern Europe all support Nabucco to varying degrees since it would mitigate their over-dependence on Russian gas.

Nabucco has enjoyed a lot less encouragement from the larger member-states. Angela Merkel, the German chancellor, has been lukewarm about Nabucco and initially vetoed the EU's €200 million grant to the pipeline (officially because she did not want EU stimulus money to be spent outside the EU). She later spoke out in favour of Nabucco, but only after the EU reconfirmed its support for the German-Russian led Nord Stream – despite visceral opposition from Poland and other new member-states. Neither has Nicolas Sarkozy been a champion of the southern corridor. The Turks – incensed about a French parliamentary resolution about the Armenian 'genocide' and Sarkozy's open opposition to full Turkish EU membership – had rebuffed Gaz de France's offer to join the Nabucco consortium. Sarkozy now seems to prefer that France's big energy company join forces with Gazprom: Gaz de France joined the Nord Stream project in March 2010 while Electricité de France is rumoured to be talking about participation in South Stream. Sarkozy's stance may change if – as some observers expect – a French energy company joins the Nabucco consortium in the future. Silvio Berlusconi also prioritises bilateral relations with Russia. Italy's ENI is Gazprom's main partner in South Stream. That leaves the UK as the strongest backer of Nabucco among the big member-states. Although Britain can for now rely on its own gas reserves and growing LNG import capacities, it knows that it will need more pipeline gas in the future and it cares about the geopolitical benefits that a southern corridor would entail.

More than a steel pipe

Although the EU has declared the southern corridor to be at the heart of its energy security policy, it relies almost entirely on a handful of private companies to get the pipelines built. The Europeans cannot have it both ways. They either insist that Nabucco (and other southern corridor projects) are private endeavours, and risky ones at that. In this case no-one should be surprised when the pipelines suffer from the setbacks that usually befall big infrastructure projects; and no-one should interpret such delays and difficulties as a failure of EU policy. Or the Europeans get serious about the political nature of the southern corridor – in which case they should make it clear that Nabucco is a public policy objective as much as a private commercial project. There are a number of arguments why Nabucco is more than just another pipeline and therefore warrants political backing and public financial support.

★ **Energy security and solidarity:** Sceptics never tire of pointing out that Nabucco, even at full 31 bcm capacity, would only deliver a tiny share of European gas demand of around 450 bcm annually. Russia is, and will remain, by far Europe's most important gas supplier. This is true – and beside the point.

The EU as a whole is not over-dependent on Russian gas: Gazprom's sales account for around one-quarter of total EU gas consumption (and 40 per cent of EU imports). France, Germany and Italy buy gas not only from Russia but also the Netherlands, Norway, Algeria and in the shape of LNG from places such as Qatar. They have well thought-out emergency plans and big gas storage tanks. Their leaders think that the best insurance against supply disruptions is to maintain good relations with Russia. For these EU countries, getting access to Caspian gas supplies or those from Iraq would be nice, but it is not essential.

By contrast, some of the smaller EU member-states, in particular those in Central and Eastern Europe and the Baltic region, are completely dependent on Gazprom. Countries such as Bulgaria, Poland, Hungary and Slovakia rely on Russia for two-thirds to all of their gas consumption. Some of them suffered badly in 2006 and 2009, when Russian gas stopped flowing through Ukraine and into the EU after Moscow and Kyiv fell out over gas prices, debt and transit fees.

These countries need to diversify their gas supplies and work out better emergency plans. There are some encouraging developments: the EU is working on a new law that would require all member-states to make their national energy markets more resilient. All East European countries now have at least some plans to build more 'interconnectors' between their national gas (and power) markets. Such cross-border infrastructure links would not only result in more vigorous competition; they would also allow for emergency supplies in case of an accident or crisis. The EU has allocated money in its 2009 stimulus package to help build some interconnectors in the new member-states. But progress has so far been slow. Moreover, most interconnectors only have very limited capacity so they would reduce, but not eliminate, the energy security dilemmas of the Central and East European countries.

Nabucco, on the other hand, would make a huge difference for the newer member-states. A third of the gas flowing through Nabucco would be earmarked for consumption in the countries along its route. Spurs could be built to other countries in the region that also want to diversify their supplies. What is more, the direction of the gas flowing through Nabucco would be reversible. This feature, together with the pipeline's many entry and exit points, would for the first time allow cross-border gas trading in a region where national gas markets have so far been largely sealed off.

In an emergency, the 31 bcm of Nabucco gas could supply the main Central and East European gas markets for up to six month, claims the Nabucco consortium. The fact that the flow of gas in Nabucco would be reversible provides additional insurance. If for some reason the gas stopped flowing from east to west, the pipeline could swiftly be used to ship rather large amounts of gas from Austria's central gas hub of Baumgarten into Eastern and Southern Europe. The Nabucco IGA contains detailed procedures about what happens in the case of a gas cut-off, unlike the agreement that governs Nord Stream – not to speak of the opaque and unpredictable Ukrainian gas transit system. "Nabucco has built-in solidarity", says one EU official, "that's why the new member-states all love it."

Although the EU's larger member-states have been slow to admit it, Nabucco would not only benefit the Central and East European countries – the EU as a whole would gain. First, although the volumes coming through Nabucco would be small compared with total EU demand, the availability of alternative supplies could strengthen the position of the European gas companies vis-à-vis Gazprom. They may be able to buy Russian gas more cheaply and on more advantageous conditions. Something similar happened in 2009, when LNG that was originally destined for the American market started arriving in Europe. Although the volume of LNG in overall European supplies is still limited, Gazprom was eventually forced to allow its big customers to buy a certain amount of Russian gas at the 'spot' price (which had fallen very low compared with pipeline gas shipments that are governed by long-term contracts). If Nabucco allowed EU companies to negotiate slightly more advantageous contracts with Russia (and perhaps Algeria and other big suppliers), all European customers would gain.

Second, Nabucco could help to eliminate divisions that are poisoning relations within the EU. The EU has, in principle, declared energy security a common concern, and member-states now expect 'energy solidarity' from their neighbours. Most Europeans do not deem it acceptable that Slovaks or Bulgarians should freeze in a gas crisis while German and Italian houses are snug.

However, the East Europeans have repeatedly accused the big EU countries of having adopted a *sauve qui peut* attitude in energy while leaving the new member-states out in the cold. Such divisions do not only affect EU energy policy: the new member-states think that France, Germany and Italy feel compelled to be nice to Moscow to keep their energy relationship with Russia smooth. Politicians in Berlin and Paris insist that it is mainly up to the East Europeans to improve their energy security and thus reduce their vulnerability to Russian trouble-making. It is unlikely that the EU will be able to speak with one voice on Russia as long as such suspicions persist. If the big member-states fully supported Nabucco, they could, in turn, demand that the new member-states step up their own efforts to make their energy markets more resilient. The Nabucco pipeline – by making the most vulnerable EU countries a lot less so – could help to address the EU's energy security and solidarity conundrum in a sustainable way.

★ **Neighbourhood policy:** Over the last five years, the EU has shown a growing interest in, and engagement with, the countries of the Southern Caucasus, the Black Sea region and Central Asia. The EU's declared policy objective is to help foster stability, democracy and economic prosperity in the countries around its borders. The European Neighbourhood Policy, launched in 2004, offers former Soviet countries and those of the Southern Mediterranean new opportunities for co-operation and economic integration. Since many thought the ENP less than fully effective, the EU launched the Eastern Partnership in 2009, specifically designed to draw eastern neighbours such as Ukraine, Azerbaijan and Georgia closer. In 2007, the EU formulated its first Central Asia strategy. The same year, it launched the 'Black Sea synergy' initiative to support integration and co-operation among the littoral states.

The EU's aim of helping East European and Central Asian states become more democratic and economically open is an ambitious one. Countries such as Turkmenistan and Azerbaijan are unlikely to respond well to EU advice about political and economic reform unless clear incentives are on offer. If the EU manages to create 'facts on the ground', through investment, trade and energy links, a more fruitful dialogue may develop. EU policy can also help these countries to gain a greater degree of independence to choose their own destiny rather than falling under a Russian sphere of influence. So long as the likes of Azerbaijan and Turkmenistan could only sell their energy via Russia, their room for manoeuvre was limited. For an energy producing country "freedom is multiple pipelines", as one Turkmen official put it at London's Chatham House think-tank in February 2010.

Russia understands this reality very well, which is why it is pushing so hard to foil Nabucco and tie East European and Central Asian countries to its own pipeline networks. Successive US administrations have also been acutely aware of the importance of making former Soviet countries less dependent on Russia pipelines. In the 1990s, the Clinton administration pushed very hard for new energy links to get Caspian oil and gas to western markets. The most visible result has been the Baku-Tblisi-Ceyhan (BTC) pipeline that now ships crude oil from Azerbaijan via Georgia to the Turkish coast. A small gas pipeline, the South Caucasus Pipeline, runs along roughly the same route. But the big gas link between the Caspian and Europe is still missing. The Obama administration strongly supports the southern corridor and US officials sometimes get frustrated when the EU's own backing appears less solid.

Stronger energy ties – through dialogue, regulatory convergence and investment – are a prominent objective of the ENP, the Eastern Partnership and the EU-Central Asia partnership. In 2004, the EU launched targeted programmes to support energy co-operation and transport links between the EU and the countries of the Black Sea and the Caspian, as well as among these countries (the INOGATE and Baku initiatives, respectively). Nevertheless, many politicians in the Caspian countries (and analysts in the West) remain sceptical whether the EU is serious about establishing new energy links. A high-profile trip by the EU's new energy commissioner, Günther Oettinger, to Turkmenistan and Azerbaijan in April 2010 may signal that the EU is moving towards a more pro-active approach.

★ **Turkish accession:** Turkey's accession negotiations with the EU have slowed to a snail's pace. Turkey no longer seems as keen on political and economic reforms as it had been before the talks started in 2005. A bust-up over Cyprus in 2010 cannot be ruled out. Alternatively, the EU and Turkey could simply run out of things to talk about. Most of the 'chapters' of EU law and policy that Turkey needs to plough through before it can join are now blocked by the EU or individual member-states. Opposition to Turkish membership remains strong in many EU countries. Some Turkish political leaders, and a growing share of the Turkish people, think that Turkey should walk away from the accession process. That would be a huge shame since both sides would gain significantly if Turkey joined the EU under the right circumstances.

To improve the political atmosphere, and perhaps restore some momentum to the accession process, the

EU and Turkey should look for ways in which they can co-operate outside and beyond the narrow confines of the membership talks. Energy is an area where the EU and Turkey have clear common interests. The Europeans want to get direct access to hydrocarbons in the Caspian region and the Middle East. Turkey has aspirations to become a Eurasian energy hub. It also wants to reduce its dependence on Russian gas (currently over 60 per cent of imports). Potential synergies abound. Yet energy co-operation between the EU and Turkey has been complicated. It took the Europeans a long time to convince Ankara that Nabucco could only be built if all transit countries agreed to the same rules, and that these rules should be those of the EU *acquis* (which means that pipeline owners need to sell access to their pipelines on the open market).

The Turks had argued, with some justification, that if the EU wanted Turkey to take over the energy *acquis*, it should open the accession talks in that particular area. Cyprus, however, keeps blocking talks on the energy chapter (and much else). By signing the IGA in July 2009, Turkey has now accepted that Nabucco will be governed by EU-compatible rules. Ankara has also given up its long-standing opposition to joining the Energy Community Treaty. The ECT is a multilateral agreement under which the countries of the Balkan region (and in the future perhaps the Black Sea too) are aligning their energy laws and policies with those of the EU.

Stronger EU-Turkey energy relations, and in particular tangible progress on Nabucco, could improve the atmosphere between Ankara and Brussels. This could prepare the ground for more fruitful co-operation in other areas, such as foreign and security policy, and send a powerful signal to those who have become cynical about the prospect of Turkish accession.

For the EU, a lot of credibility hinges on the Nabucco pipeline. It is widely seen as the flagship project of the EU's diversification strategy. It could add to the EU's overall energy security and reduce divisions among the member-states. It would be an important ingredient of the EU's neighbourhood policy. And it could help to restore momentum to EU-Turkey relations. These are clear benefits. But they do not accrue to the companies that are planning to build the pipeline or the banks that put up the money for it. These private players will only look at the likely return on their investment. And that return still looks uncertain. The main question for Nabucco and other possible southern corridor pipelines is still: where will the gas come from? The answer to this question depends on various factors over which neither the EU nor the companies of the Nabucco consortium have much influence.

Will Ankara and Baku make up?

The original Nabucco plan foresees that the pipeline will be built in stages: it will start with a relatively small capacity of perhaps 8 bcm a year. Then it will be expanded to its full capacity of up to 31 bcm as more gas comes on stream in the potential supplier countries and companies buy additional capacity in the pipeline.

Most experts say that the only readily available gas for Nabucco comes from Azerbaijan's Shah Deniz field. The first stage of Shah Deniz is operational and delivers around 6 bcm a year to Turkey though the South Caucasus Pipeline. Contracts for the second stage have been signed with a consortium containing Socar, the Azerbaijani state oil company, as well as Britain's BP and Norway's Statoil. However, the oil companies have warned that they will stop drilling and send their engineers on leave unless Baku and Ankara resolve a bilateral dispute that is – ostensibly – about gas prices, volumes and transit fees but has a deeper and more intractable political background.

By March 2010, people close to the negotiations said that Turkey and Azerbaijan had more or less agreed on a renegotiation of existing gas contracts and the terms of future sales. But the tense political atmosphere between the two countries has prevented them from officially concluding a deal.

In October 2009, Turkey and Armenia signed two protocols that would, if ratified, lead to the re-establishment of diplomatic relations, the re-opening of the border between the two countries and the establishment of a panel of historians to look into the massacre of Armenians by Turkish troops during the First World War. Azerbaijan has traditionally had close ties with Turkey. But it was incensed that Turkey could contemplate normalising its relationship with Armenia without insisting that Armenian troops first withdraw from at least some of the territories around Nagorno-Karabakh (a largely Armenian-populated territory in Azerbaijan over which the two countries fought a war in the early 1990s).

To drive the point home that it does not need Turkey and its transit pipelines to sell gas, Azerbaijan started shipping some gas to Russia in 2009. It has also indicated that it may sell more gas to Iran, establish an LNG terminal at the Black Sea and even look into sales to China.

Towards the end of 2009, the Turkish government changed its stance on the Armenia protocols and it now insists that ratification will have to wait until there is some progress towards a solution of the Nagorno-Karabakh dispute. However, Azerbaijani President Ilham Aliev has still not given Socar the go-ahead to start negotiating the sale of Shah Deniz II gas (whether to Nabucco or another potential buyer) and trust between Ankara and Baku remains low. Azerbaijan and Turkey should be able to patch things up eventually, but it is not clear how long this will take.

Turkey knows that it needs to restore its relationship with Azerbaijan if its objective of becoming an energy hub is to be realised. But it also knows that if it makes the restoration of relations with Armenia strictly dependent on a resolution of the Nagorno-Karabakh conflict, the normalisation process – one of the Erdogan government's most courageous initiatives – may well falter.

Azerbaijan's strategic interest should be to build a gas link to the lucrative European market and to become a gateway between Europe and the energy producers of Central Asia. Azerbaijan might also want to be careful not to rely too much on tightly controlled yet unreliable markets such as Russia or Iran (and shipping the gas across the Caspian to China makes little commercial sense). The leadership in Baku seemed to share such considerations when it declined a Russian offer to buy Azerbaijan's entire gas output in 2009 and instead agreed to sell only symbolic amounts northwards. However, Russia's offer still stands and Azerbaijan can take its time to develop its gas and find the right buyer. The country already produces and exports sizeable amounts of oil, which brings in plenty of foreign exchange.

In the spring of 2010, EU officials stepped up their efforts to mediate in the dispute between Turkey and Azerbaijan. Even if Baku and Ankara signed their gas purchasing and transit agreements tomorrow, Shah Deniz II is unlikely to produce significant volumes of gas much before 2017. Then it could easily supply the 8 bcm needed for the first phase of Nabucco. But where would the other volumes come from for the pipeline to reach its full capacity?

The promise of Turkmen gas

Turkmenistan has enormous amounts of gas: at least 8 trillion cubic meters, according to the first independent survey of its reserves, released in 2008. That is more than all proven gas reserves of Western Europe taken together. Traditionally, Turkmenistan has sold its gas cheaply to Russia (typically 60-70 bcm a year), which sold it on via Ukraine to western markets at a much higher price.

When Gurbanguly Berdimuhamedov became president in 2006, he adopted a strategy of diversifying export routes and opened up some opportunities for international oil companies to help explore, produce and sell Turkmen gas. Since the beginning of 2010, Turkmen gas has been flowing to China through a newly-built pipeline that could one day transport as much as 40 bcm, once a trans-Turkmenistan pipeline has been added. Iran is also buying some Turkmen gas and says it wants more in the future (this gas could be re-exported through 'swaps', which means that Iran would import Turkmen gas into its north-eastern region and sell the same amount of its own gas on to Turkey in the west).

Since Turkmenistan has developed alternative export options, Russia now feels compelled to offer 'European market prices' for Turkmen gas. A year-long interruption in Turkmen-Russian gas shipments was resolved at the start of 2010. But Russia is still buying a lot less Turkmen gas than the 30 bcm that it signed up for and plans for an additional pipeline between the two countries have been put on ice.

President Berdimuhamedov and his officials have repeatedly said that they would also like to forge an energy relationship with Europe, and that Turkmen gas should go to the Nabucco pipeline under the right conditions. One of the Nabucco consortium members, Germany's RWE, has signed a deal to explore a field off Turkmenistan's Caspian shoreline. RWE, together with Austria's OMV, another consortium member, launched an initiative in 2008 to figure out how to bring Turkmen gas across the Caspian and into western markets (this initiative is called the Caspian Energy Company, not to be confused with the EU's idea for a Caspian Development Corporation, see below). When the EU's energy commissioner, Günther Oettinger, met Berdimuhamedov in April 2010, the two sides agreed to set up a working group to explore a possible legal regime for shipping Turkmen gas to Europe.

However, while Turkmenistan has plenty of potential as a gas exporter, there are doubts whether its gas will fill Nabucco in the near future. First, Turkmenistan has signed export contracts for a lot more gas than it actually produces. For now, there is no gas available for shipments to Europe, and it is unclear how quickly additional volumes may become available. Turkmenistan has ambitious plans for its energy sector. In 2009 and 2010, it signed a number of new contracts with international companies to help develop the giant Yolotan gas field, as well explore offshore reserves. But even these investment commitments are well below the $10 billion a year that experts say Turkmenistan would have to invest to meet its output targets.

Second, Turkmenistan only allows international oil companies to own reserves in offshore fields – and these have yet to be fully explored and may take more time to develop. Turkmenistan insists that it can develop its vast onshore reserves itself. International oil and gas companies are invited to provide technical help. But many seem to be holding out in the hope of one day being allowed to assume a more comprehensive role in the development and export of these resources.

Third, unlike Russia, Turkmenistan does not like to get involved in pipeline politics. It sells its gas at the border and leaves it to the buyer to figure out a way of getting it to the market (although the Turkmen positions on this could be softening). The reason why China was able to get access to Turkmen gas in just a few years is that it offered Turkmenistan not only to buy a lot of gas for years to come but also to build the pipeline, sort out the transit issues through Kazakhstan and Uzbekistan, help with the development of the gas within Turkmenistan and provide the money needed for all this (which Turkmenistan will repay through the gas it ships to China over the years).

The Turkmens sometimes drop hints that they would welcome a similar package deal from Europe to get gas flowing westwards. But while various European energy companies are interested in the country, there is no overarching strategy that could replicate China's muscular approach. The EU has been exploring a mechanism through which it could aggregate the demand from individual European companies and so offer the Turkmens a big contract that would get them excited. A study on how to make this mechanism work (called the Caspian Development Corporation) has not been made public, let alone acted upon, partly perhaps because western companies are wary of the European Commission assuming a role in procuring gas supplies.

The EU would need to offer a large-volume gas contract to motivate Turkmenistan to help sort out transit issues across the Caspian Sea. Some experts claim that for a trans-Caspian pipeline to be built, all the littoral states would first have to agree on a division of the sea bed (so far the delineation is governed by a series of bilateral agreements among the littoral states). Russia has no interest in such an agreement, which could hasten the end of its Eurasian gas transit monopoly. Iran also wants a bigger share of the Caspian Sea bed. Most experts say, however, that all that is needed for a pipeline to ship Turkmen gas westward is an agreement between Turkmenistan and Azerbaijan. A feud over a contested offshore oil field makes such an agreement very unlikely for the time being. Moreover, Turkmenistan is unlikely to risk Russian ire over a trans-Caspian pipeline unless and until it is convinced that the Europeans are serious about establishing a long-term and lucrative gas relationship.

There is a good chance that Turkmen gas will eventually find its way into Europe but it will take time to remove the various obstacles before this gas relationship can develop.

Iraq's hydrocarbon law

Another potential supplier of Nabucco gas is Iraq, where two of the Nabucco companies, MOL of Hungary and Austria's OMV, have joined an exploration project. Estimates of proven Iraqi gas reserves of around 3 trillion cubic meters may be revised upwards once more of the country has actually been surveyed. Iraqi gas would be relatively easy and cheap to get out of the ground. It could be shipped directly into Turkey and into Nabucco (there is already an oil pipeline connecting Iraq and Turkey).

However, as with Turkmenistan, there are a number of big issues that first need to be resolved before Iraqi gas can flow to Europe. The most intractable is the question of how to share power over, and allocate revenue from, future energy sales between the central government in Baghdad and the regions, in particular the oil and gas rich Kurdish province in the north. There are also disagreements between the various political parties over how much of a role international energy companies should play in the restoration and further development of the country's oil and gas sector.

A long-awaited hydrocarbon law was adopted by the Iraqi cabinet in February 2009 but then promptly shelved until after the parliamentary election that finally took place in March 2010. Once a new coalition is in place (which could easily take until summer 2010), the law will come back onto the agenda. All parties involved in the coalition talks say that they want to see energy exports rise soon. However, given the importance of a sustainable energy regime to Iraq's economic future and the fraught relations between the different political groups and regions, a quick agreement looks unlikely. Some believe that the regional government of the Kurdish province could start exporting gas without waiting for an agreement with Baghdad. However, the EU and the US would probably discourage such a move. And Turkey might be reluctant to ship such gas, given its own fears about any move by the Kurdish region towards greater autonomy.

Even if the hydrocarbon law was agreed and ratified soon, the main focus of Iraq's energy policy would continue to be oil (Iraq has the world's third biggest proven oil reserves and has already signed a series of large deals with international oil firms). Gas may be used for oil production or to satisfy fast-growing domestic needs. How much would be available for export and when remains uncertain. Nevertheless, Iraq has potential as a gas exporter to Europe in the medium term, once internal issues have been resolved.

Iranian gas is not an option

Turkey is one of the few countries in the world that maintains friendly relations with Iran. So it is perhaps not surprising that Turkish politicians sometimes claim that Iranian gas could help to fill Nabucco. Iran is Turkey's second biggest gas supplier after Russia so the Turks claim that they could build on an established energy relationship. When Turkey's prime minister, Erdogan, met Iranian President Mahmoud Ahmadinejad in Tehran in October 2009, the two leaders rekindled a long-delayed $3.5 billion investment deal in Iran's gas sector that could, if realised, produce additional gas for westward exports.

It looks highly unlikely, however, that Iranian gas – whether produced with the help of Turkish or other foreign investors – could flow to Europe any time soon. The US and the EU countries strongly discourage big investments in the Iranian energy sector as long as the regime there continues its nuclear enrichment programme. Turkey may decide not to support the tougher sanctions that the US and the EU are now contemplating. But any large energy project in Iran would struggle to get access to the necessary international finance and modern equipment. Other Nabucco consortium members have said loud and clear that they do not want Iranian gas in their pipeline.

Even in the absence of these political obstacles, the potential of Iran as a gas exporter would be doubtful. The Turkey-Iran energy relationship is littered with broken supply contracts, overdue bills, mounting fines, and unfulfilled investment promises. Iran's investment regime is formidable and the regime prioritises oil sales while using gas to meet subsidised domestic demand. Although sitting on what are widely believed to be the world's second biggest gas reserves, Iran is currently a net importer of gas.

Alternatives to Nabucco

Since it remains unclear where the 31 bcm to fill Nabucco will ultimately come from, some say that the EU may be better off focusing on one of the smaller pipeline projects that also form part of the southern corridor blueprint.

* **ITGI:** The project that has developed furthest is an interconnector between Turkey, Greece and Italy, known as ITGI. One section of the project – a link from Turkey to Greece – was inaugurated in late 2007 and is now used to ship gas from Shah Deniz I into Greece. The plan is to extend this pipeline to Greece's western coast and then under the Adriatic Sea to Italy. The project would be cheaper (maybe €1-1.5 billion to build the Adriatic link, plus the cost of expanding transit capacity through Turkey) and smaller (a total of 12 bcm) than Nabucco. ITGI is driven by Depa, Greece's gas monopoly, and Edison, an Italian energy company. The EU has promised some money under its trans-European network programme.

* **TAP:** The trans-Adriatic pipeline (TAP) is another possible gas link between Turkey, Greece and Italy, this one crossing Albania before it continues under the Adriatic Sea. It was originally designed to ship Iranian gas westwards since one of TAP's partners, EGL from Switzerland, signed a gas deal with Tehran in 2007. Since that contract is unlikely to deliver any time soon, TAP's other partner, Norway's Statoil, has suggested that Socar could sell gas from the Shah Deniz II field (in which Statoil is involved) to TAP. TAP's final capacity could be 20 bcm but its prospects remain uncertain, especially while the development of Shah Deniz II is on hold.

* **White Stream:** A third alternative would be the White Stream pipeline to transport Azerbaijani gas from the Georgian coast under the Black Sea to either Romania or Ukraine. White Stream would be ambitious (aiming at a 30 bcm capacity) and, as a sub-sea pipeline, expensive to build. Although the EU has agreed to pay for a feasibility study, it is currently unclear where the money for the pipeline would come from. The White Stream consortium does not disclose its members but is generally thought to lack a big, cash-rich energy company. White Stream suffers from many of the same uncertainties over gas supplies and demand as Nabucco.

* **CNG and LNG:** In late 2009 and early 2010, Azerbaijan signed memoranda with Bulgaria and Romania to ship gas across the Black Sea in the form of compressed natural gas. CNG is used as a fuel substitute in a growing number of places and it may become more common as a means of transporting gas without pipelines. The compressed gas would be transported in containers loaded onto ships. Shipping gas as CNG may require less upfront investment than LNG (which needs expensive liquefaction and re-gasification terminals and special LNG tankers). And unlike in the case of a pipeline, transport through CNG could be scaled up in accordance with actual demand. However, the technology is as yet unproven and in April 2010, Azerbaijan signed another memorandum with Georgia and Romania about exploring the options of shipping gas across the black sea in the form of LNG instead.

The European Commission has in the past adopted a 'neutral' stance on which of these options should be developed first, insisting that the ultimate decision would be a commercial one. Following the ratification of the Nabucco IGA in 2010, EU officials say that they can now back Nabucco more explicitly since it is the only pipeline that has contractually guaranteed transit rights through Turkey.

Some energy executives warn that a narrow EU focus on Nabucco would bar the way for developing one (or more) of the other, more doable projects. They argue that it would be better to start shipping Azerbaijani gas through a smaller and possibly cheaper pipeline than to wait for the politicised and commercially dubious Nabucco pipeline to make headway. Starting with a smaller project may in fact make Nabucco more likely. Gas analyst John Roberts predicts that once a direct link – however small – between the Caspian and the EU market has been established, investor interest in Caspian gas will increase massively while Caspian producer countries will start taking the idea of selling gas to Europe seriously. With prospects of bigger and more secure supplies, an ambitious pipeline like Nabucco might become easier to build.

Other energy sector watchers say the opposite. ITGI, TAP or the use of CNG/LNG would swallow up Azerbaijan's initial gas output and increase doubts over Nabucco's viability at a critical time. Small-scale pipeline projects would not give Caspian producers confidence that the EU is serious about developing a durable gas relationship. From a European energy security perspective, ITGI and TAP look less appealing: the gas would be shipped to Greece and Italy so these pipelines would do little to address the issue of Eastern and South-Eastern Europe's over-dependence on Russian gas (although Bulgaria and Greece are now planning to build an interconnector that would allow Bulgaria to buy some gas coming from ITGI or TAP).

The South Stream threat

The most widely discussed alternative to Nabucco is not TAP or ITGI but Russia's South Stream project. The pipeline would run under the Black Sea and then probably fork into two lines, one going to South Eastern Europe and Austria and the other to Greece and Italy. The initial plan of Gazprom and its Italian partner, ENI, was for a 30 bcm pipeline but they have since doubled the projected capacity to 63 bcm. The price tag is an estimated $30 billion, which would make South Stream the most expensive energy infrastructure project ever undertaken.

Which route the pipeline will take is unclear since Gazprom has promised numerous countries that the pipeline would either go through their territory or at least have a spur to their local markets. Gazprom has signed initial agreements with Turkey, Bulgaria, Hungary, Greece, Serbia, Croatia, Slovenia and Austria, while negotiations were also going on with Romania in the first half of 2010. These agreements do not commit the partner countries to much more than helping with a yet to be written feasibility study. And the Hungarian and Bulgarian governments insist that Nabucco remains their priority. But the fact that Gazprom has managed to sign up almost all the Nabucco members has led many analysts to conclude that Russia is winning the 'pipeline war'.

South Stream is clearly a political project, with two main purposes: to cut out Ukraine as a transit country, and to prevent Nabucco – a threat to Gazprom's Eurasian energy transport monopoly – from being built. The first objective may look less urgent to Moscow since a new government in Kyiv is exploring whether to give Russia a stake in the Ukrainian pipeline system. That leaves the objective of foiling Nabucco. South Stream would feed into the same markets as Nabucco and, given that Russia's own gas output is stagnating, may have to be filled with Azerbaijani or Turkmen gas that could otherwise go to Nabucco or another southern corridor pipeline.

Whether South Stream will ever get built is an open question. No sub-sea pipeline of this magnitude has ever been constructed. Moreover, a project of this scale and complexity needs a unified legal and transit regime along its entire route (like the one created by the Nabucco IGA) and cannot be managed on the basis of bilateral agreements. Gazprom has never explained where the 64 bcm would come from or whom it would sell them to (Russia's existing gas pipeline to Turkey, the 16 bcm Blue Stream pipeline under the Black Sea, usually runs half empty). The huge costs may have to be financed at the expense of Gazprom's other investment priorities, in particular the development of the giant new gas fields of Shtokman and Yamal.

The fact that South Stream makes little commercial sense may not deter Gazprom. The state-controlled behemoth may be able to find both the gas and the money for South Stream, but the opportunity costs would be enormous. In March 2010, Paolo Scaroni, chief executive of ENI which is Gazprom's main partner in South Stream, suggested that South Stream and Nabucco should be merged. Some energy analysts interpreted his suggestion as a sign that ENI is getting cold feet about becoming involved in such an expensive and politically divisive project. Russian officials quickly rebuffed the idea.

Some European officials and energy executives have also talked about making Gazprom a partner in the Nabucco consortium. Such a move would be politically controversial and the ensuing brouhaha would delay Nabucco further. But the EU should be careful not to present Nabucco as an 'anti-Russian' pipeline. On the contrary, the EU may want to call Russia's bluff by pointing out that if Gazprom wishes to sell more gas to South Eastern Europe it may one day use the Nabucco pipeline to do so – like any other energy company, Gazprom (or affiliated companies) will be free to take part in the tenders for booking capacity in the new pipeline.

Until and unless it becomes clear that Russia is prepared to throw real money and resources at South Stream, the Europeans should stop worrying about it and focus on the question of which southern corridor projects make the most sense for them and in which order.

Nabucco needs patience and public support

All of Nabucco's current problems – lack of demand, finance and supplies – have a plausible solution. But will they all fall into place in 2010? Even if Nabucco is further delayed and not ready for gas shipments in 2014, it still makes sense to build it, both commercially and politically.

Energy forecasters say that the global gas glut is temporary. Some time between 2015 and 2020 global markets will tighten. There are significant uncertainties surrounding European gas demand at present. One stems from the EU's ambitious climate change targets: it is not clear how policies for raising energy efficiency, cutting CO^2 emissions and shifting from fossil fuels to renewable sources of energy will affect gas demand. Another wild card is the development of unconventional gas in Europe. There is little doubt that Europe, like the US, has large reserves of such gas. But will European countries – with their higher population densities and stricter licensing rules – be able to replicate America's shale gas boom? And if so, when?

Most forecasters still expect European demand for gas to grow slowly but steadily in future years. Even if it does not, the fact that output from the North Sea and other European fields will decline sharply means that the EU will need additional imports. The International Energy Agency predicts that Europe's net gas imports will rise by at least 100 bcm a year by 2030. Energy companies even foresee additional import demand of up to 250 bcm by that date. If such forecasts turn out to be correct, the EU will need Nord Stream, South Stream and all the southern corridor pipelines to satisfy its additional demand.

On the supply side, the challenges involved in getting Caspian (and maybe Iraqi) gas to Europe look formidable at the moment. But there are also plenty of encouraging developments, ranging from Turkmenistan's evolving investment environment to a possible Turkey-Azerbaijan rapprochement and greater political stability in Iraq. In the medium term, it still makes sense to connect this gas-rich region with the EU, the world's biggest gas importer.

There are things that the EU could do to increase the chances of a European-Caspian gas relationship developing, beyond allocating more money from the EU budget and asking the EIB and the EBRD to lend much of the rest for Nabucco. For example, the EU's new Lisbon treaty should, in theory, allow the Union to better integrate foreign policy, development assistance and energy security objectives. Such an integrated approach would be welcome by energy producing countries like Turkmenistan that get confused and annoyed when various EU representatives turn up with unco-ordinated agendas. The governments of the big EU countries should back the EU's fledgling attempts to build an energy foreign policy rather than relying on their own cosy relationships with Russia.

It is good that energy is one of the 'platforms' on which the EU is planning to build the Eastern Partnership and that it is a core ingredient of the EU's evolving Central Asia strategy. These eastern policies also need a strong focus on regional integration and mediation since some of the biggest obstacles to developing Caspian energy exports are disputes between the countries of the region. It is also critical that the EU and Turkey keep moving forward in their membership talks. An angry and disappointed Turkey would be a tricky partner for building the southern corridor.

Nabucco should remain the flagship project of the EU's emerging energy policy. It would add to the energy security not only of the Central and East European countries but the EU as a whole. It could enable the EU to have more solid relations with its eastern neighbours than it would otherwise have. It might even help the EU to develop a more coherent policy towards Russia. While Nabucco looks ambitious in the current environment, it is too early to declare the project a failure. It warrants the support of the EU and its governments.

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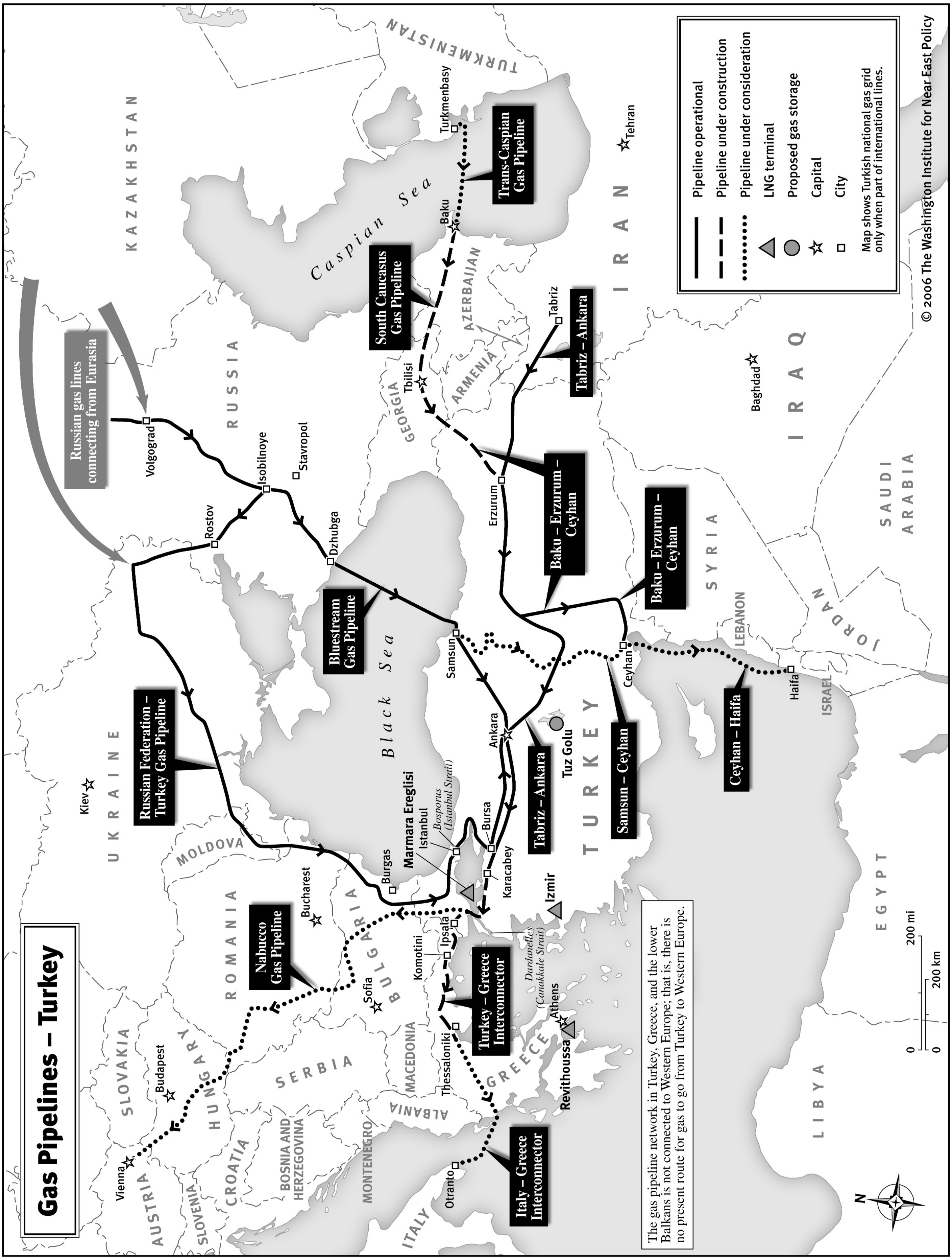
This policy brief is part of the Transatlantic Academy research project on Turkey and its neighbourhood. See http://www.transatlanticacademy.org

May 2010


Gas Pipelines – Turkey
Pipeline operational
Pipeline under construction
Pipeline under consideration
LNG terminal
Proposed gas storage
Capital
City
Map shows Turkish national gas grid only when part of international lines.
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The gas pipeline network in Turkey, Greece, and the lower Balkans is not connected to Western Europe; that is, there is no present route for gas to go from Turkey to Western Europe.
Russian gas lines connecting from Eurasia
Trans-Caspian Gas Pipeline
South Caucasus Gas Pipeline
Tabriz – Ankara
Baku – Erzurum – Ceyhan
Bluestream Gas Pipeline
Russian Federation – Turkey Gas Pipeline
Samsun – Ceyhan
Ceyhan – Haifa
Nabucco Gas Pipeline
Turkey – Greece Interconnector
Italy – Greece Interconnector
KAZAKHSTAN
TURKMENISTAN
RUSSIA
UKRAINE
MOLDOVA
ROMANIA
BULGARIA
SERBIA
MACEDONIA
ALBANIA
MONTENEGRO
BOSNIA AND HERZEGOVINA
CROATIA
SLOVENIA
AUSTRIA
HUNGARY
SLOVAKIA
ITALY
GREECE
TURKEY
GEORGIA
ARMENIA
AZERBAIJAN
IRAN
IRAQ
SYRIA
LEBANON
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LIBYA
Caspian Sea
Black Sea
Turkmenbasy
Baku
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Stavropol
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Dzhubga
Samsun
Ceyhan
Haifa
Ankara
Tuz Golu
Kiev
Bosporus (Istanbul Strait)
Istanbul
Marmara Ereglisi
Bursa
Karacabey
Izmir
Burgas
Bucharest
Ipsala
Komotini
Dardanelles (Canakkale Strait)
Athens
Revithoussa
Sofia
Thessaloniki
Budapest
Vienna
Otranto
N
0 200 mi
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