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ISSUEBRIEF

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A Transatlantic Perspective on Natural Gas Security in Central and Southeastern Europe

OCTOBER 2013

The fundamentals of the natural gas sectors of the United States and European Union (EU) are on divergent paths. While the US prepares for gas exports on the back of the unconventional gas revolution, Europe is facing declining indigenous production and growing dependence on imports. The Central and Southeastern Europe (CSEE) region has moved closer to integrate into the EU's internal energy market, but it remains in a vulnerable position in the short-term compared to the rest of the EU and especially the US due to the region's historic exposure to Gazprom's monopolistic abuse. A concerted US, EU, and regional effort is needed to implement a diversification strategy, where US liquefied natural gas (LNG) exports could make a real difference. In the medium and long run, the region can benefit from and play a crucial role in Europe's gas supply diversification strategy and may even succeed in adapting the US unconventional experience, contributing to a healthier energy import balance on the continent.

Strategic Context

Transatlantic cooperation on energy in general and on natural gas in particular has a rich history. Cooperation intensified after the first oil crisis in 1973-74 and led to the establishment of the International Energy Agency (IEA), the energy arm of the Organization for Economic Co-operation and Development (OECD). In the 1980s, the transatlantic partners somewhat differed in their views on core energy security issues and in their responses to challenges. The role of the Soviet Union in providing oil and natural gas to Western Europe and Germany in particular was a touchy subject in the 1980s and led to debates between the United States and its European allies. Transatlantic cooperation again intensified in the 1990s and 2000s on various issues, such as new oil and gas pipelines,[1] energy efficiency, research and development cooperation, carbon capture and storage projects, smart grids, and energy storage. The establishment of the EU-US Energy Council in November 2009 testified to the recognition of energy as an issue of strategic importance and great potential in transatlantic

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1 Such as the Baku-Tbilisi-Ceyhan oil pipeline and the planned Nabucco gas pipeline.

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cooperation.[2] President Barack Obama's reelection in 2012 and a growing recognition of climate change as a real threat in the United States on the one hand, and a more realistic approach to climate and energy security challenges in Europe on the other, may bring the allies even closer.

As natural gas is widely viewed by policymakers as a cleaner-burning "bridge fuel" into a future that is dominated by zero-carbon energy resources, both the United States and the EU treat it as a strategic fossil fuel resource, the demand for which will likely increase further in the medium and long term. Natural gas is at the heart of public policy and private investment decisions that fundamentally affect both geopolitics and energy security, nowhere more so than in Central and Southeastern Europe.[3]

At the same time, there are tectonic shifts in the energy markets on both sides of the Atlantic. The allies find themselves in starkly different situations when it comes to gas and oil. The United States is just beginning to fully grasp the consequences of its unconventional gas and oil revolution that has already dramatically reduced US exposure to external sources of fossil fuel supplies. Whereas eight years ago 60 percent of crude oil in the United States was imported, today that number is below 40 percent, in large part as a result of enhanced vehicle fuel economy standards and increased production of domestic unconventional oil. Crude oil imports may further decrease to the lower 20s by 2020.[4] In 2005, the US Energy Information Administration prognosticated that the United States will become the world's largest natural gas exporter by 2015. Today, the United States is not only the largest natural gas producer globally[5] but is also planning to start exporting liquefied natural gas around 2016-17.[6] The United States and Canada may technically become energy independent by 2020.[7] Gas (Henry Hub) prices are around four dollars per million British thermal unit (mmBTU), down from thirteen in 2005. Gas and electricity prices for the industry have decreased by 66 percent and 4 percent, respectively since 2005,[8] and increased for households by only 6 percent and 8 percent, respectively.

The picture in Europe is in stark contrast. Natural gas usage is forecast to be flat by the end of the decade in the European Union, but it will likely pick up again in the next decade, as coal and in some cases nuclear are phased out from the energy mix and gas is used to steady the uneven performance of renewables.[9] As conventional reserves deplete, Europe's dependence on gas imports is expected to grow further even in the case of a significant—and at present distant—uptick in unconventional gas production. Europe is already more than 60 percent dependent on gas imports and over 80 percent dependent on oil imports. By 2035, these numbers could go up as high as 85 percent and 90 percent, respecitvely.[10]

Even as the EU as a whole succeeded in supply source diversification and progressed in market integration, the region has seen a stark increase in gas and electricity prices for industry (35 and 45 percent, respectively) and households (28 and 22 percent, respectively) since 2005. Wholesale gas prices are around three times the level of the Henry Hub price and could go up to five times as much in the CSEE region for those countries without access to alternative supplies. This supply and price gap

2 David Koranyi, "Towards a Transatlantic Alliance: Prospects for EU-US Cooperation in Fighting Climate Change and Promoting Energy Security and New Technology" in *Transatlantic Energy Futures: Strategic Perspectives on Energy Security, Climate Change and New Technologies in Europe and the United States*, edited by David Koranyi (Washington, DC: SAIS Center for Transatlantic Relations), 13-14, http://transatlantic.sais-jhu.edu/publications/books/Transatlantic_Energy_Futures/transatlantic-energy-futures.html .

3 In this paper, the CSEE region refers to the Visegrad Four (Czech Republic, Hungary, Slovakia, and Poland), Lithuania, Ukraine, Romania, Bulgaria and the western Balkans (Croatia, Serbia, Bosnia and Herzegovina, Macedonia, Montenegro, and Albania).

4 Tom Donilon, "Remarks by Tom Donilon, National Security Advisor to the President at the Launch of Columbia University's Center on Global Energy Policy," April 24, 2013, http://www.whitehouse.gov/the-press-office/2013/04/24/remarks-tom-donilon-national-security-advisor-president-launch-columbia-.

5 The United States overtook Russia as the largest natural gas producer in the world in 2011.

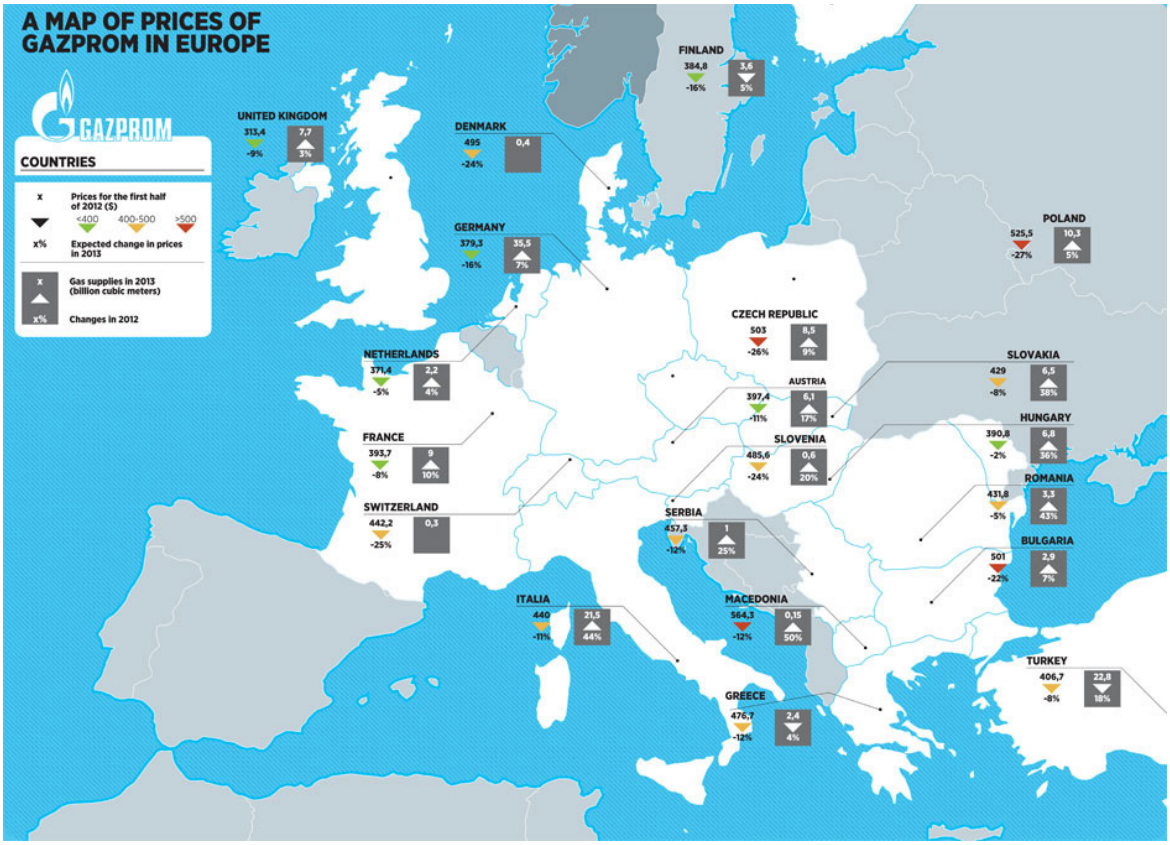
6 US Energy Information Administration data.

7 Edward Morse, et al., Citi GPS, *Energy 2020: North America, the New Middle East?* (March 20, 2012), https://ir.citi.com/%2FSyMM9ffgfOZguStaGpnCw5NhPkvdMbbn02HMA05ZX%2BJHjYVS07GqhxF2wMk%2Bh4tv7DEZ5FymVM%3D.

8 International Energy Agency data.

9 International Energy Agency, *World Energy Outlook 2012*.

10 Jose Manuel Barroso, "Energy Priorities for Europe, Presentation of J.M. Barroso, President of the European Commission to the European Council of 22 May 2013," European Commission, 4, http://ec.europa.eu/europe2020/pdf/energy3_en.pdf; International Energy Agency data.



Source: Izvestia, *http://rbth.ru/multimedia/infographics/2013/02/08/a_map_of_prices_of_gazprom_in_europe_22639.html.*

between the United States and Europe is increasingly a headache for European leaders, especially in Central and Southeastern Europe, as an issue of economic competitiveness, social stability, and national security.

Gas Markets in Central and Eastern Europe

Gas markets show a rather mixed picture in central and southeastern Europe. In some countries, gas plays a negligible (like Albania, Montenegro, and Macedonia) or small (Poland and Serbia) role in the overall energy mix. In others, such as Hungary and Slovakia, gas usage constitutes a large chunk (above 30 percent) of the mix. Demand may have already peaked in the latter countries but import needs will increase as domestic conventional production winds down in the coming years. Demand increase in the former countries is in their strategic interest because it will help them to comply with climate change objectives and reduce coal consumption. But gasification of these economies encounters the chicken-and-egg problem: without access to reasonably priced gas, progress in building the necessary infrastructure to bring additional supplies has been postponed until there is a market demand.

Supply source diversification therefore is a pressing need for the region. This is particularly true for those CSEE countries and companies that will see long-term contracts expire with Gazprom[11] in the near future or those that may want to renegotiate their existing oil-indexed contracts just as the Western European companies have done recently.[12] The map above shows the gas price differentials for pipeline gas provided by Gazprom in Europe. It also serves as proof that the dual strategy of market integration and supply diversification to lessen central and southeastern Europe's vulnerability is beginning to yield results. Countries better integrated into the European gas market, such as Hungary, witnessed their wholesale gas prices decrease as the wholesaler German company E.On renegotiated prices

11 Hungary, Lithuania, Estonia and Bosnia and Herzegovina in 2015; Czech Republic in 2017 (small portion); and Ukraine in 2019.

12 Such as Eni, GDF, E.On, RWE, and others.

on all of its contracts with Russia's Gazprom. By contrast, Bulgaria and Macedonia, which are less integrated into the European gas market, continue to pay exorbitantly high prices lacking alternative options.

The four main sources of diversification in order of time horizon are:

- increased shipments of diversely sourced pipeline gas through western Europe via new interconnectors and reverse flows (by 2014/15);
- direct shipments of LNG to CSEE utilizing the Revithoussa terminal in Greece (ready), the Swinoujscie LNG terminal in Poland (under construction, ready by 2015), and the planned LNG terminal at Krk, Croatia (possibly ready by 2018);
- pipeline gas from the Caspian and perhaps beyond (i.e., Iraq and the Eastern Mediterranean) through the Southern Gas Corridor (mid-2020s for most CSEE countries; and finally
- the development of unconventional resources, (unlikely before the 2020s).

Gas Market Integration

Developing natural gas interconnections within the region and with Western Europe is the immediate task that will ensure that the benefits of market liquidity and hub-based pricing make their way to Central and Southeastern Europe. The past four years indicate that the interconnection project is off to a good start. With European assistance, a series of interconnectors have been constructed, forming the backbone of a North-South Gas Corridor that links all of central Europe's gas systems from Poland to Croatia and connects the Central and Southeastern European markets with the rest of the EU. The concept has been around since the proposal of the New European Transmission System (NETS) in the mid-2000s to create economies of scale by forming a liquid gas regional market and got a boost after the 2009 Russia-Ukraine gas crisis with the help of EU funds. But several key pieces such as the interconnectors between Poland and Slovakia, Slovakia and Hungary, Croatia and Hungary, Bulgaria and Greece, Bulgaria and Romania, and Romania and Moldova are still missing.

There is also a need for reverse flows between Ukraine and Slovakia as well as Hungary and Croatia. Linkages between the Western Balkan countries are also mostly missing or insufficient. The HAG pipeline connecting Hungary to Austria and others is often congested and its capacity allocation is not determined by markets. Any new gas supplies from outside the region ought to reach a better-integrated market by the end of the decade. The primary responsibility for realizing this goal lies with the regional governments though EU guidance and financial assistance from the modest funds available[13] might certainly help.

New Sources of LNG Supply

Direct natural gas shipments to the region are equally important, whether by LNG or via pipeline. For that the build-up of regasification capacities is needed. The North-South Corridor's northern end, the Swinoujscie LNG terminal, is already under construction. With an initial capacity of five billion cubic meters (bcm), it will be a major source of new supplies primarily for gas-hungry Poland. Revithoussa, the Greek terminal owned by Greek pipeline operator DESFA (66 percent of which is being privatized to Azerbaijani SOCAR) has another 5.1 bcm capacity for gas that can be fed into a Greece-Bulgaria Interconnector even earlier than Caspian gas.

The concept of the Croatian LNG terminal has been around for almost a decade. After years of paralysis due to both domestic Croatian political bickering and external (mainly Russian) meddling, the LNG project's prospects have improved recently. Croatia is indicating to prospective investors and to Brussels and Washington that it is fully committed to Krk LNG as a top priority. The Croatian LNG terminal now requires all the support it can get from regional governments, the European Union, and the United States. The Croatian government, together with the commercial consortia that will develop both projects, should ask the European Union to designate the LNG terminal as Project of Common Interest, thereby securing co-financing from the EU's Connecting Europe Facility.[14]

13 The Connecting Europe facility allocates a mere 5.85 billion euros throughout a seven year period (2014-2020) for cofinancing energy Projects of Common Interests in the EU. See http://ec.europa.eu/energy/infrastructure/pci/pci_en.htm.

14 The Swinoujscie LNG terminal, for example, has already received EU funding.

Securing lower-cost supplies of LNG is an equally vital goal. One of the world's prospective suppliers of LNG is the United States. Market forces are driving US companies to seek opportunities to export LNG to higher priced markets in Europe and Asia. But federal regulations and legislation by default restrict US LNG exports in a bid to boost American industries (especially petrochemicals) by locking in cheap natural gas. US LNG could provide that crucial supply that would help ensure the success of Europe's emerging North-South Corridor. The Visegrad-Plus group and the EU should encourage the adoption of the LNG for NATO bill proposed by then-Senator Richard Lugar (R-IN) in 2012, which is now being pressed forward by Senator John Barrasso (R-WY) and Representative Michael Turner (R-OH). This would allow expedited licensing for LNG exports to NATO allies, placing these countries on an equal footing with those that have free trade agreements with the United States until the negotiations over a Transatlantic Trade and Investment Partnership (TTIP) between the EU and the United States conclude.[15]

The Southern Gas Corridor

The selection of the Trans-Adriatic Pipeline (TAP) has disappointed those who pinned their hopes on the Nabucco West project to bring gas to the CSEE region.[16] But Caspian gas may eventually make its way to CSEE. The Southern Gas Corridor's initial ten bcm capacity is likely only the beginning. By the middle of the next decade, additional supplies will likely be more than enough to provide up to thirty to thirty-five bcm of gas from Azerbaijan alone, which could potentially fill both a larger TAP and other pipelines that carry gas toward central Europe. The planned Greece-Bulgaria Interconnector could provide gas from TAP straight into Bulgaria.[17] By building a long-stalled Bulgaria-Romania Interconnector, gas could be moved onward to Hungary through an already existing Hungarian-Romanian Interconnector, which is currently undergoing an upgrade to handle bidirectional flows. That was the original idea of SEEP, a BP-led project based not on a grand construct such as Nabucco but on linking up the existing networks. All of the west Balkan countries could eventually be hooked up via the prospective Ionian-Adriatic Pipeline (IAP) route.

The Trans-Anatolian Pipeline (TANAP) or another dedicated pipeline crossing Turkey could also bring additional resources from the eastern Mediterranean (Israel, Cyprus), northern Iraq, and possibly from Turkmenistan offshore over time. To ease feeding these additional resources into TANAP, third party access rules for the pipeline will be necessary. That is currently not the case because Turkey is not a member of the Energy Community that extends EU rules and regulations to third-party countries.[18] Unlocking the blocked energy chapter in the EU accession negotiations with Turkey would facilitate Turkey's membership in the Community, a critical step in keeping the Southern Gas Corridor open and realizing its potential of becoming the fourth major gas transport corridor to Europe.

Unconventional Revolution in Europe?

The unconventional revolution in the United States has prompted some countries in the CSEE region to look into their own unconventional resources. Poland, Lithuania, Romania, Hungary, and Ukraine are all actively exploring what they might have underground.[19] The jury is still out on the unconventional gas potential in the region, as there are many uncertainties both under and above ground. The initial hopes pinned on Poland have yet to be proven right, as both the geology and the regulatory framework have turned out to be rather challenging. Ukraine has promising potential, but the road to major unconventional gas production

15 As of September 2013, the pace at which the US Department of Energy authorizes non-FTA exports has accelerated significantly. To date, four planned LNG export terminals (Sabine Pass, Freeport, Lake Charles, and Cove Point) were licenced to supply non-FTA countries. That is a potential of 424 bcm, sixty-seven of which can go to non-FTA countries (actual exports will certainly be less). There are twenty+ others waiting for approval.

16 For a detailed analysis on why TAP eventually won, see Matthew Bryza and David Koranyi, "A Tale of Two Pipelines: Why TAP has Won the Day," *Natural Gas Europe*, July 2, 2013, http://www.naturalgaseurope.com/southern-corridor-strategic-importance-tap-nabucco.

17 The Gas Sales Agreements (GSAs) between the Shah Deniz consortium and European buyers announced on September 19, 2013 revealed that one bcm was already purchased by Bulgargaz EAD.

18 Energy Community members outside the EU as of September 17, 2013 include Ukraine, Moldova, Macedonia, Montenegro, Serbia, Kosovo, Bosnia and Herzegovina, and Albania.

19 Bulgaria—similar to France—placed a moratorium on fracking.

will be a bumpy one due to the many political, regulatory, and technical challenges the country faces. In countries like Hungary, a modest unconventional production could offset the decline in conventional resources. Overall, unconventional gas developments will certainly not be a panacea to the region's gas sector vulnerabilities in the immediate future, but may well provide significant quantities in the medium and long term (i.e., in the mid-2020s and beyond).

Conclusions

A concerted US, EU, and regional effort is needed to implement the diversification strategy outlined above. At the same time a rebalancing has taken place in terms of how the United States and the EU approach CSEE energy security.

While there has been a continuous agreement on the strategic goal of supply diversification, since 2006 and especially 2009, the EU has grown to play a more robust role while the United States assumed a supportive position more in the background. The US' vocal criticism of Russia's role and monopolistic practices in the CSEE region and forceful push for the realization of the Nabucco pipeline has gradually become more muted. The self-sufficiency of US domestic gas supplies and the perception that the implementation of the Southern Gas Corridor, the most visible piece of the regional energy diversification puzzle, is finally underway reinforced the conviction that the EU should primarily be in charge of its own energy security.

Many have attributed the US attempt to "reset" relations with Russia, as well as the lack of strategic focus on the CSEE region, due to the turmoil in the Middle East and other international crises, and the increasing importance of Asia in US foreign policy. But in reality, the transatlantic cooperation has worked well. Growing EU activism complemented a more subtle US energy diplomacy. Both the 2006 and especially the 2009 Russia-Ukraine gas crises served as a wake-up call for both Brussels and the region. From 2009 onward, the EU and its member states began to finally address the strategic vulnerabilities of the EU's internal gas market in general and the CSEE gas market in particular by adopting and implementing an ambitious agenda for the completion of a competitive and liquid internal gas market within the EU by 2015. They started to build key infrastructure pieces and cracked down on gas suppliers in monopoly positions, most notably through the EU's antitrust proceedings against Gazprom. Nevertheless, the United States remains a crucial player in facilitating the implementation of the Corridor and other projects. Increased technical and regulatory assistance in developing unconventional resources would also go a long way. Finally, the United States could and should play a more direct role in supply diversification in CSEE in the form of LNG.

While supply source diversification and access to hub pricing will be beneficial in any case, the choice of a right mix of long-term, calculable contracts and spot markets is a delicate one. Spot markets are volatile, and there are numerous uncertainties both on the supply and demand side in the medium and long run. In that context, CSEE countries might be enticed to recommit to long-term, oil-indexed gas supply agreements with Gazprom in order to meet their full import needs for short-term political gain (temporary gas price concessions), precluding the benefits of access to alternative sources down the road.

Indeed, an assertive Gazprom is fighting back, trying to retain its market share increasingly under siege in Europe. The South Stream pipeline makes little commercial sense but in all likelihood Gazprom will build it in an attempt to marginalize Ukraine as a transit state.[20] Though the automatic lock-in effect of South Stream should not be overestimated as TPA rules would apply to its European sections, South Stream could strengthen the siren call to rely on Russia alone. Therefore, it is all the more important that the United States signals its continuous support of EU efforts for supply diversification.

An earlier version of this paper was commissioned by the Aspen Institute Germany and presented at its workshop on southeast European energy security in Berlin/Alt Madlitz in October 2013.

20 András Deák, "Jön! Jön! Jön!—a Déli Áramlat," Grotius, 2012, http://www.grotius.hu/doc/pub/VELGUJ/2012_86_deak_andras_gyorgy_a_deli_aramlatl.pdf.

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