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## Analysis

# The Southern Gas Corridor and Europe's Gas Supply

By Roland Götz, Berlin

## Abstract

The southern gas corridor, as embodied by the European-supported Nabucco pipeline, is designed to secure access to new suppliers of gas outside of Russia for the European market and open a route for gas deliveries that does not traverse Russian territory. While there are a number of Central Asian and Middle Eastern countries that could supply Nabucco with gas in the longer term, only Azerbaijan can be counted on as a secure source of regular deliveries in the foreseeable future. A comprehensive assessment of Nabucco must take into account alternative future pipeline routes that will also lead westwards from the Black Sea region, namely the Russian-supported South Stream underwater pipeline from the Black Sea to Bulgaria, with an extension towards the Balkans, and designs for a White Stream underwater pipeline from Georgia to Ukraine. Among Nabucco's competitors, the South Stream has the best prospects of being realized, but it would neither prevent nor replace Nabucco. The security of Europe's supply will not be substantially increased by Nabucco, because this channel will deliver only a small fraction of the continent's gas imports. On the other hand, Europe has many other potential delivery channels, instruments, and measures for enhancing the security of natural gas supplies at its disposal besides the southern gas transit corridor.

## Nabucco: The project

In the interests of improving gas supplies, a number of actors, including the EU Commission, have demanded that Europe diversify its gas imports by constructing additional pipelines and liquefied natural gas (LNG) terminals. Specifically, in the aftermath of the Russia-Ukrainian gas crisis of January 2009, many in Europe called for speedy construction of the Nabucco pipeline, which would serve to deliver natural gas from the Caspian region and the Middle East to the European market as the backbone of a "southern gas corridor". The project would be financed by loans from the European Investment Bank in Budapest, subsidized by €250 million in funding from the EU budget.

The OMV and Botas energy corporations conceived the Nabucco pipeline project in 2002 and named it after the opera of Giuseppe Verdi. The plans call for the pipeline to carry gas to Europe from Azerbaijan, Kazakhstan, Uzbekistan, and Turkmenistan as well as from Iran and Iraq and even North Africa on a route running from Turkey, across Bulgaria, Romania, and Hungary to Austria. A consortium consisting of the mainly state-owned gas companies Botas (Turkey), Bulgargaz (Bulgaria), Transgaz (Romania), Mol (Hungary), and OMV (Austria), as well as the private German RWE company hope to finance, construct, and operate it. The planned capacity is 31 billion m<sup>3</sup>, with up-front investments of around €8 billion for the construction of the 3,300-km long pipeline.

## Azerbaijan as a Gas Provider

Azerbaijan has supplied Turkey via the Baku-Erzurum pipeline, also known as the South Caucasus Pipeline (SCP), since 2007. From there, the Turkey-Greece-Interconnector (TGI) and Interconnector-Greece-Italy (IGI) offshore pipelines transport the gas further to Greece and Italy. The SCP could also carry gas supplies from Turkmenistan or Kazakhstan to Turkey, provided that the transport facilities across the Caspian Sea are available.

Exploration of the major offshore Shah Deniz gas field in the Caspian Sea will increase the importance of Azerbaijan as a gas-exporting country oriented towards the Turkish and West European markets. In addition to covering domestic requirements, in the long run the country will be able to export up to 30 billion m<sup>3</sup> of gas to Turkey and Europe.

## Central Asian Gas Providers

Kazakhstan, Uzbekistan, and Turkmenistan have a combined long-term potential (i.e., from approximately 2020 onwards) for gas exports of around 150 to 200 billion m<sup>3</sup>, which is equivalent to about two-thirds of Russia's longer-term export potential. However, the gas produced by the Central Asian CIS states will go mainly to Russia and Ukraine as well as to China, as there is already a Soviet-era pipeline system ("Central Asia-Center") in place that can deliver supplies at high capacity to Russia and that is currently being overhauled and expanded; furthermore, China is forging ahead with

construction of an eastbound pipeline system that feeds into the Chinese “West-East” gas pipeline. Since Russia’s Gazprom intends to pay European rates (minus transport fees) for Central Asian gas imports from 2009 onwards, exports to Russia have become a lot more lucrative for the states of Central Asia than was previously the case. China will also offer favorable rates to ensure that Central Asian suppliers will meet its gas requirements.

Alternative routes for delivering Central Asian gas to the West while avoiding Russian territory include pipelines traversing the Caspian Sea to Azerbaijan (Trans-Caspian Pipeline), transporting LNG or compressed gas via the Caspian Sea to Azeri ports, and overland deliveries along the southern coast of the Caspian Sea via Iranian territory to Turkey. As of 2009, the Trans-Caspian Pipeline, which has been under discussion since the 1990s, still has not been constructed. The delay stems from the unresolved disputes among the Caspian littoral states over the exploitation of oil and gas resources situated in the middle of the Caspian Sea (such as the Kyapaz/Serdar deposit, which Azerbaijan and Turkmenistan both claim). It is also questionable, however, whether Azerbaijan and Iran are prepared to allow large quantities of gas to be piped through their territories, since both countries regard themselves as supplier states, not transit states. On the other hand, since Turkmenistan’s presidency passed from Saparmurat Niyazov (Turkmenbashi) to Gurbanguly Berdimukhammedov in 2006, there have been signs of rapprochement between Azerbaijan and Turkmenistan that might have a positive effect on cooperation in the energy sector. In a first step, for example, Azerbaijan and Turkmenistan could link their offshore extraction platforms in the Caspian through an underwater pipeline, allowing quantities of gas extracted from Turkmen fields to be routed towards Azerbaijan.

### **Iran and Iraq as Gas Providers, the Role of North Africa**

Both Iran and Iraq have considerable potential export volumes. However, it is impossible to predict when the two countries will be able to increase their production and what the extent of their domestic consumption will be, so there are no reliable export forecasts. Despite Iran’s huge reserves and resources, which make the country the most gas-rich in Eurasia after Russia, it only acted as a net exporter of gas between 1970 and 1980, when it supplied gas to the Soviet Union. Since then, apart from small volumes exported to Turkey, which are offset by equivalent imports from Turkmenistan, its entire pro-

duction has been consumed domestically. One-third of the Iranian gas is used for downhole pumping in oilfields in order to increase extraction; another third is used for electricity generation; the remainder is used in the petrochemical industry and in private households. As with petroleum, Iran subsidizes the domestic consumption of gas through low prices making gas use very high relative to population size and economic output.

Since December 2001, a pipeline connects Tabriz in Iran to Erzurum in Turkey with a nominal capacity of 20 billion m<sup>3</sup>; however, only a few billion m<sup>3</sup> of that capacity are actually in use, and the pipeline is closed down altogether whenever there is a gas shortage in northern Iran. Furthermore, a gas pipeline runs from southern Turkmenistan through Iran to Turkey (Korpezhe – Kurt Kui). It has a capacity of 13 billion m<sup>3</sup> and operates at about half of that potential. The development of major Iranian gas resources in the Persian Gulf (South Pars) is sluggish and constrained by US sanction policies. For all of the above reasons, no one knows when Iran will be willing and able to pipe gas northwards in quantities that are relevant to Europe and feed it into the Turkish gas network. One estimate (Hafner 2008) predicts that Iranian exports towards Turkey and Europe will reach a volume of 35 billion m<sup>3</sup> by 2020. Competing projects include pipelines running to Pakistan, India and China, as well as LNG exports to the world market, which would also be in the interests of China, Pakistan, India, and other countries. However, the future of Iranian exports to Europe will depend not only on economic factors, but to a large extent also on political developments in the Middle East, the country’s domestic situation, and the future stance of the US towards Tehran.

Iraq’s potential for gas exports is significantly smaller than that of Iran. Provided that the country’s domestic and foreign affairs can be stabilized, exports could reach a total of 12 billion m<sup>3</sup> by 2020, 5 billion of which would go to Turkey (Hafner 2008).

Next to Middle Eastern countries, Egypt would also be able to feed natural gas into the southern gas corridor through the existing gas pipeline from Egypt via Jordan to Syria if this pipeline were extended to Turkey. The pipeline could also be used to deliver gas from northern Saudi Arabia.

### **South Stream – A Competitor for Nabucco?**

The South Stream gas pipeline, a project undertaken in June 2007 in collaboration between Gazprom and Italy’s ENI, is to pass along the seabed of the Black Sea from southern Russia to Bulgaria, where it will branch off

southwards towards Greece and Italy and northwards from the Balkans to Hungary. Taking into account the technological challenge of pipeline construction at the bottom of the Black Sea with a depth of up to 2km, it can hardly be expected to start operating by 2013, as planned, but will more likely be brought into service in 2015 or later with a capacity of up to 47 billion m<sup>3</sup>.

South Stream will be able to deliver Russian gas, as well as gas imported from Central Asia, to the Balkan countries and to southeastern Europe without transit through Ukraine. Like the Nord Stream Pipeline though the Baltic Sea, this project strengthens Gazprom's negotiating position vis-à-vis Ukraine. The Blue Stream II scheme, which aimed to add a second leg to the Blue Stream pipeline running from southern Russia to the Black Sea to the Turkish coast and extend it into western Turkey, would have served a similar purpose. It has been cancelled in favor of South Stream, however, probably because Gazprom was concerned that Turkey's negotiating position as a transit country might become too strong, as was already seen in the low price for Russian gas from Blue Stream, which was a longstanding source of disappointment for Gazprom.

Since South Stream is to run largely parallel to the Nabucco pipeline from Bulgaria onwards, many observers regard South Stream and Nabucco primarily as competing projects. This is not necessarily the case, however: Should Europe's need for gas imports increase as predicted by standard scenarios, both pipelines will be required. On the other hand, if demand in Europe should stagnate or diminish, the question of capability utilization would affect all pipelines coming from the East. Probably, transit through Ukraine would be the first to be cut back, since the Ukrainian pipeline network is the oldest one and requires considerable investment for maintenance and technical improvements (modernization of compressor stations). On the other hand, the most recently constructed, most modern, and most efficient pipelines, namely Nord Stream, South Stream, and Nabucco, will most likely remain operational under any scenario.

### White Stream – A Substitute for Nabucco?

One project that is still in a very early stage of discussions is the idea of an underwater pipeline from the Georgian Black Sea coast to Crimea, continuing to Ukraine with the possibility of extension to Poland (White Stream or Georgia-Ukraine-EU (GUEU) pipeline). Another variant being considered under this moniker is that of an underwater pipeline through the Black Sea from Georgia to Romania. White Stream has been eclipsed by

the intensifying discussion over Nabucco. This project could be revived, however, if Turkey as a participant in the Nabucco project should make excessive demands (EU membership or a role as an autonomous gas distribution center).

### Europe's Energy Security and the Southern Gas Transport Corridor

While it may at first glance appear that the southern gas transport corridor, with the Nabucco pipeline as its main component, not only promises a significant enhancement of Europe's gas supply, but also a major reduction of European dependency on Russian gas imports and a lowering of Russian economic and political dominance in Central Asia, a more differentiated picture emerges upon closer inspection. For the foreseeable future, Turkmenistan, Iran, and other Middle Eastern states cannot be counted on to supply major quantities of gas. Nor should the willingness of Azerbaijan and Iran to serve as transit countries for Central Asian gas be taken for granted. The future role of Turkey also remains unclear. While Ankara is open to the idea of the southern gas corridor, it is not satisfied to function exclusively as a transit country, but wants to acquire a role as an independent gas hub. There are also some indications that Turkey's support for the Nabucco project is contingent on progress in its accession negotiations with the EU.

The only element that appears to be relatively certain is Azerbaijan's ability and willingness to supply Nabucco with 10 to 20 billion m<sup>3</sup> of its own gas. Further smaller quantities of gas for Nabucco of around 5 billion m<sup>3</sup> each will likely be supplied via the existing pipelines from Iran to Turkey and from Turkmenistan via Iran to Turkey.

It is thus likely that European countries will begin importing gas through the southern corridor over the coming decade; however, even after the pipeline begins operating at its full capacity of 31 billion m<sup>3</sup> around 2020, these imports will only account for 6 per cent of expected import requirements of about 500 billion m<sup>3</sup>, thus only marginally raising the volume of European supplies. It is also unlikely that prices will go down as a result: Gas from costly offshore fields in Azerbaijan, Turkmenistan, and Iran that must be transported via yet-to-be constructed pipelines will not be cheaper than Siberian gas supplied through the existing Soviet-era network. Furthermore, under the prevailing conditions of price formation in the European market, the price of gas from the southern corridor will, as with Russian gas, be linked to the price of oil.

Even after the completion of Nabucco, the Central Asian states would remain under Russian sway in multiple ways, including through close energy relations, as their economies and energy sectors would still be closely linked to the Russian national economy. With or without the Nabucco pipeline, Russia will remain the dominant supplier of gas to the countries of Eastern and Central Europe. Nevertheless excessive “dependence” on Russia is not to be expected, as both sides remain highly interdependent.

In order to improve Europe’s mid-term gas supply from the East and its ability to deal with potential disruptions of gas deliveries by transit states such as Ukraine and Belarus, the EU and some of its member states have already begun to aim for certain measures such as constructing and enlarging gas tanks, building interconnector pipelines, further liberalizing the

EU gas market, and enhancing the legal framework for gas imports from non-EU countries by way of partnership agreements.

It should not be forgotten that in addition to the southern corridor, further gas pipelines from Africa through the Mediterranean to Southern Europe are being constructed and that the construction of LNG terminals can increasingly serve to enhance global diversification of Europe’s gas imports. However, in view of the problem of climate change, which is far from being resolved, the main goal of European energy policy is not increasing consumption and imports of fossil fuels, but energy conservation and increasing energy efficiency. In this field, the European countries as well as the countries of the East have their work cut out for them.

*Translated from the German by Christopher Findlay*

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Roland Götz, an economist and former researcher in Soviet studies, has served at the Federal Institute for East European and International Studies in Cologne and at the German Institute for International and Security Affairs (Stiftung Wissenschaft und Politik) in Berlin.

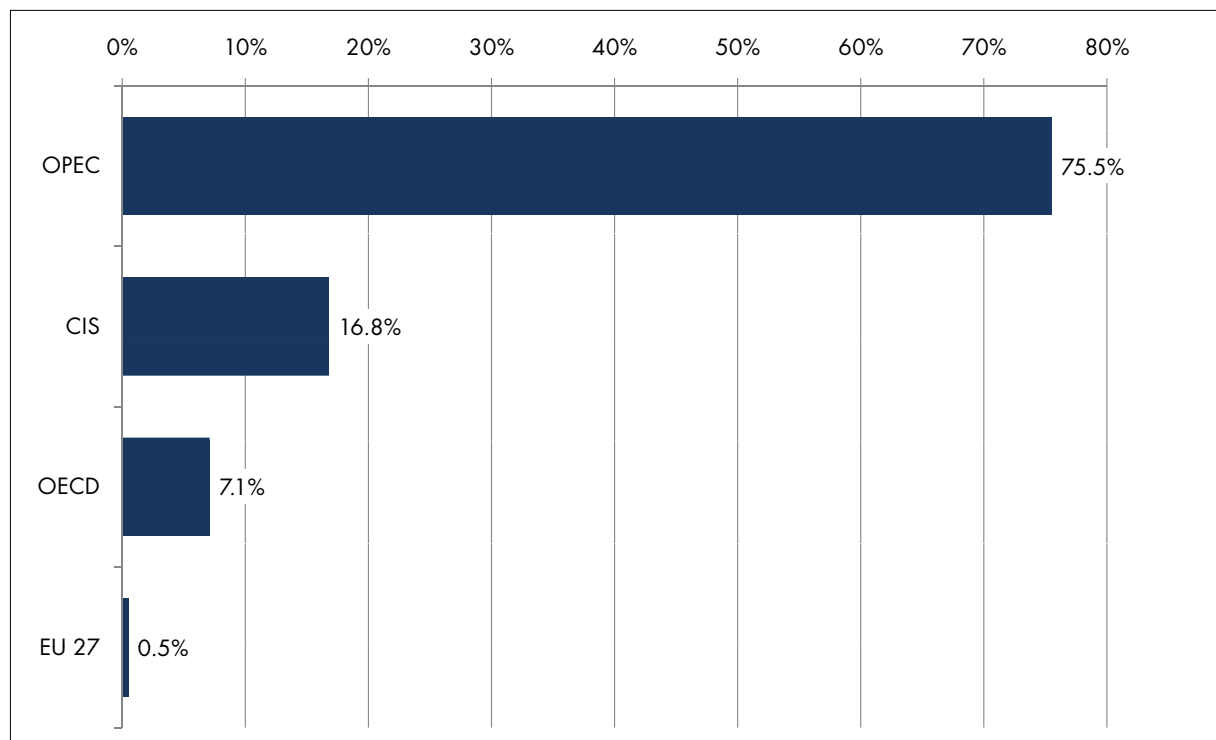
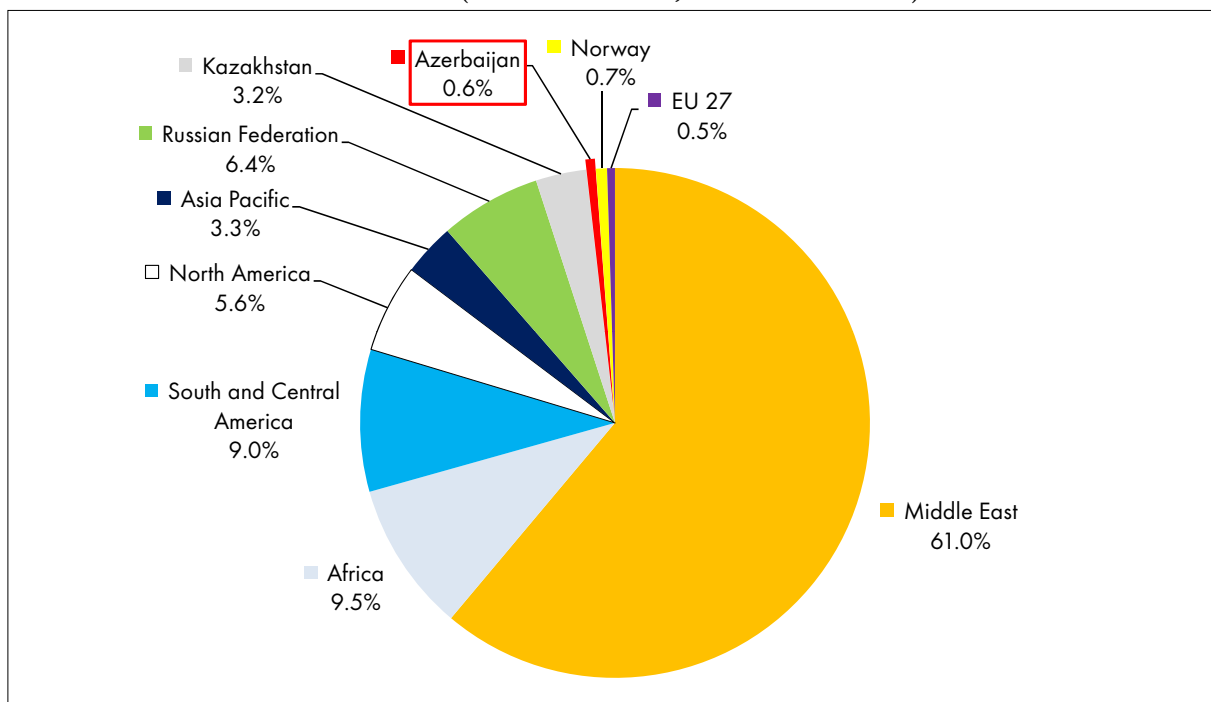
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## Statistics

### Oil and Gas Reserves and Production – International Comparison

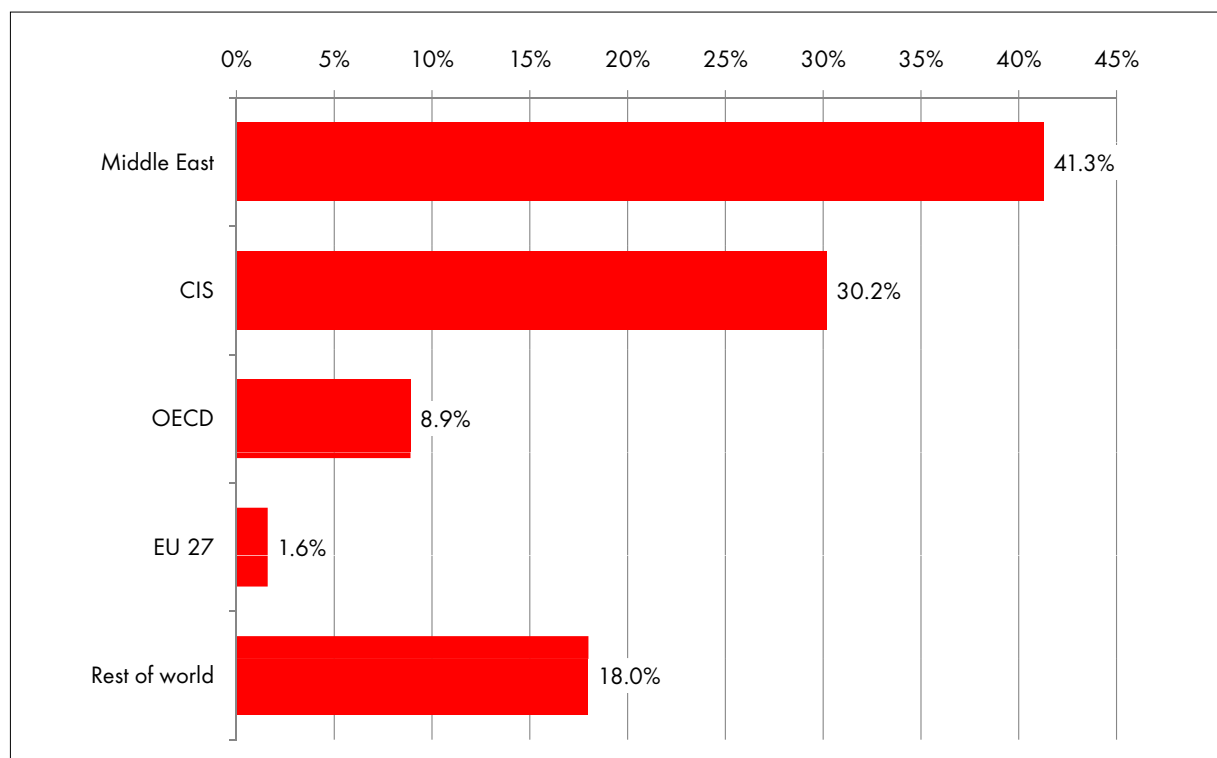
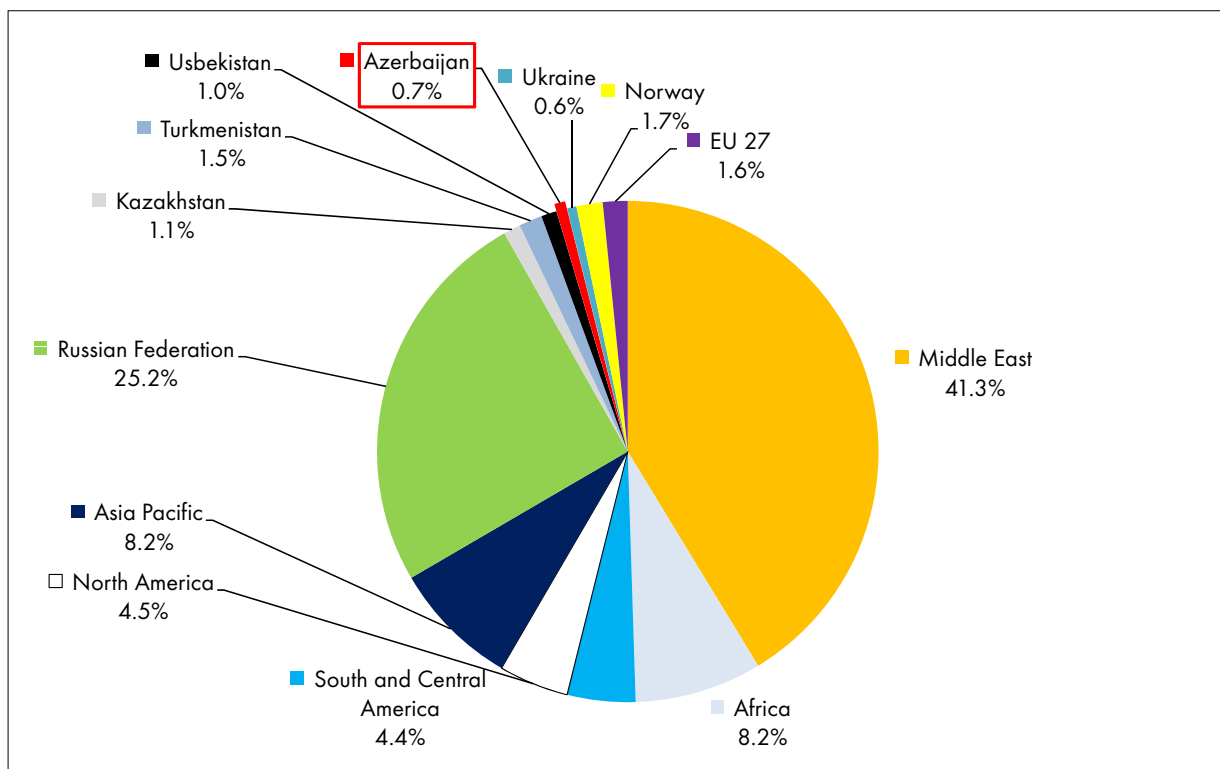
Distribution of World Oil Reserves (Proven Reserves, End of Year 2007)



Source: BP Statistical Review of World Energy June 2008, <http://www.bp.com/statisticalreview>

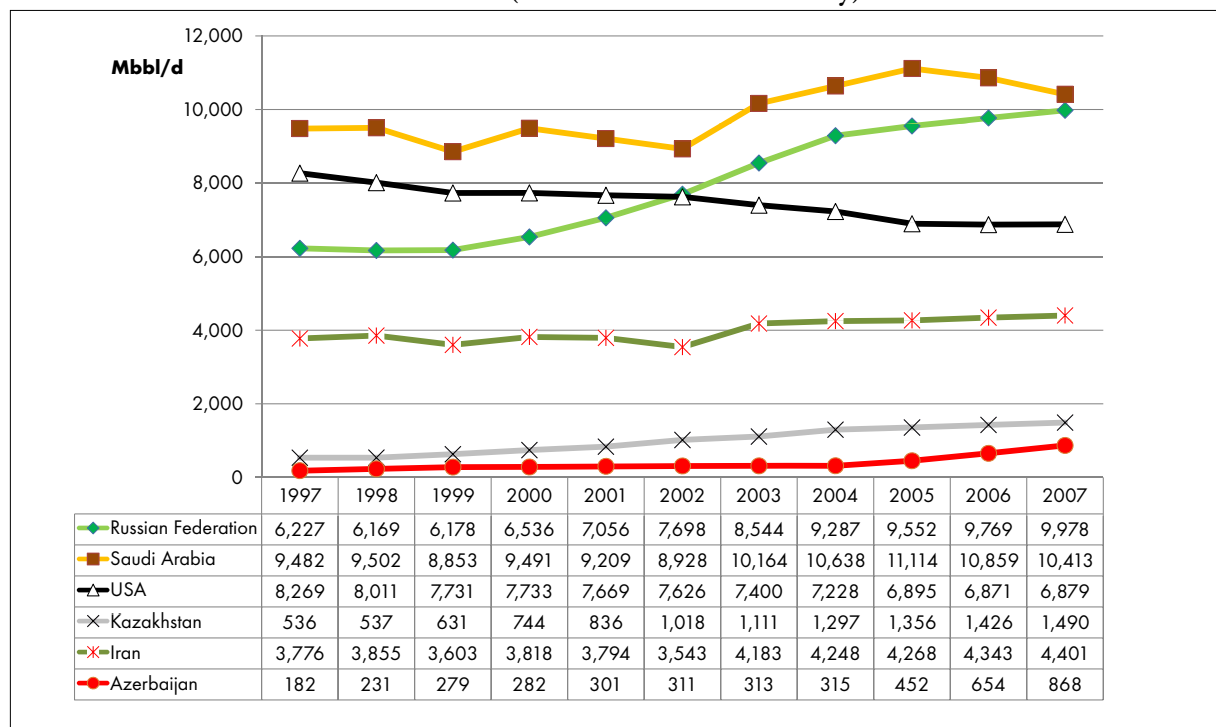


### Distribution of World Natural Gas Reserves (Proven Reserves, End of Year 2007)

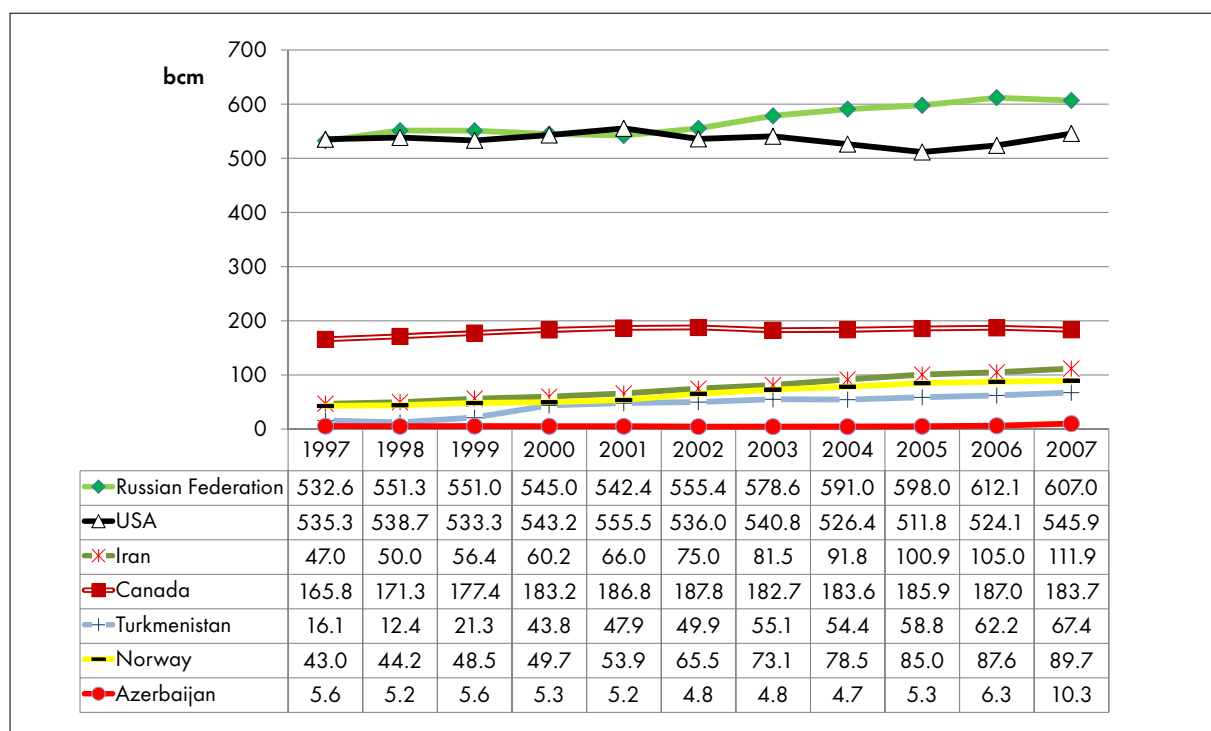


Source: BP Statistical Review of World Energy June 2008, <http://www.bp.com/statisticalreview>

### Worldwide Oil Production 1997–2007 (in Thousand Barrels Daily)



### Worldwide Natural Gas Production 1997–2007 (in Billion Cubic Meters)



Source: BP Statistical Review of World Energy June 2008, <http://www.bp.com/statisticalreview>



## Analysis

# South Caucasus Countries Can Benefit from Alternative Energy Development

By Manana Kochladze, Tbilisi

## Abstract

The three South Caucasus countries have extensive alternative energy potential that they are not currently utilizing. Instead, outside powers have reinforced a focus on traditional sources of energy, particularly oil and gas. Current obstacles to developing the region's renewable energy potential include a lack of coherent policies and legislation, insufficient financing mechanisms, and the public's poor understanding of the benefits of renewable sources. Focusing on developing decentralized, environmentally-sustainable sources of energy could help alleviate poverty in rural areas and promote greater energy security.

## Moving Away from Fossil Fuels

For the last decade, the Caucasus region has been associated with the US and EU search for oil and gas resources against a background of political turmoil, rapid economic growth and a search for increased welfare. One consequence of the political and economic turmoil has been that approximately 50 percent of the South Caucasus population continues to live below the poverty line, earning less than two dollars a day.

The extraction, use, and transportation of conventional fossil fuels, such as oil and gas, continues to have a devastating impact on the environment and on the peoples living in the region. While fossil fuels take their toll on Azerbaijan and Georgia, Armenia also suffers from the careless use of nuclear energy and the associated pollution.

Incentives from the EU's Neighborhood policy and the EU's drive to diversify its energy supply away from the use of fossil fuel could, at least in theory, positively impact the development of renewable energy and stimulate efficiency in the South Caucasus. In practice, however, as long the governments and oil companies remain focused on the oil and gas sector, which has been generating huge profits, renewables and energy efficiency will continue to play a negligible role. Along these lines, the EU Commission openly stated that the construction of new international pipelines to deliver oil from the Caspian region and Central Asia directly to the EU is vital. Likewise, the Europeans have emphasized upgrading the existing energy infrastructure in the Black Sea Region and building new connectors, the key project here being the Nabucco pipeline. Making Nabucco functional requires an underwater pipeline from Turkmenistan to Azerbaijan, which could pose serious problems for the Caspian Sea environment.

## South Caucasus – Rich Potential in Alternative Sources of Energy

In spite of all the attention given to the oil and gas sector, the countries of the South Caucasus are rich in specific types of renewable energy sources. These resources have the potential to mitigate fuel poverty and support economic development, as well as to increase employment opportunities. Although each country is distinct in terms of its energy use and potential for renewable energy, we may distinguish two common characteristics regarding the development of alternative energy sources in the region:

First, none of the three countries exploit renewables to their fullest potential. Rather, they rely heavily on the use of oil and gas and nuclear (in Armenia). In 2006, Armenia derived 6 percent of its total energy from renewables (hydro), Azerbaijan's figure was 1.5 percent (hydro), and Georgia's was a more impressive 33.8 percent (hydro and renewables), according to the International Energy Agency. Historically oil and gas have been available at below market prices, reducing incentives for consumers to switch to alternatives. More recently, the high oil prices of 2003–08 placed a heavy load on the countries' economies, making the development of alternative sources more attractive.

Second, the Caucasus countries have done the most to exploit hydropower. At the same time, the massive growth in wind power seen globally is beginning to make itself felt in the region as well.

The case studies below describe the specific country situations in order to highlight the diversity of renewable energy development trends, while noting the common features as well.

## Armenia

Armenia, with almost no fossil fuel resources of its own and currently under heavy pressure from the US

and the EU to close the Soviet-area Medzamor nuclear station, which currently supplies some 40 percent of the country's electricity, is strongly interested in the development of alternative energy supplies. Its legislation emphasizes the importance of energy saving and developing renewable sources to reinforce Armenia's energy independence and security in the future, as well as to ensure a reliable and affordable power supply.

Armenia has extensive potential for developing renewable resources. The country's theoretical wind power potential measures 4,900 MW in 4 zones with a total area of 979 km<sup>2</sup>. Solar energy potential is significant, with 2,500 sunny hours per year and an average annual solar radiation on horizontal surfaces of about 1,720 kWh/m<sup>2</sup>. Hydro capacity at an estimated 3.92 billion kWh annually could cover 60–65 percent of electricity demand in the country. Implementing the new 200 MW Small Hydropower Plants (SHPP) scheme will make it possible to cut reliance on imported gas and oil supplies. Additionally, there is a strong interest in Armenia in biogas generation from farm-based anaerobic digesters, as well as from landfills.

Armenian legislation requires that utilities purchase renewable energy through 2016 at high prices through a feed-in tariff scheme. This program is the only one existing in the region. International financial institutions and organizations have allocated some investment funding for the development of renewable energy, particularly small and mini-hydropower plants. Unfortunately, however, there is no major initiative to develop existing renewable resources due to artificially low electricity rates and a lack of finance capital. Armenia continues to provide energy subsidies, which reduce the price consumers must pay for electricity.

The Medzamor nuclear facility was shut down following the massive 1988 earthquake. However, due to the Karabakh conflict, Azerbaijan cut off oil and gas supplies, leading to severe energy shortages and the reopening of one of the two nuclear units at Medzamor in 1993. Under intense pressure from the EU and US, the Armenian authorities signed an agreement with the EU in Brussels in September 1999 on decommissioning the Metsamor Nuclear Plant by 2004 because the Soviet-type reactor does not meet Western safety standards. However, in 2006 the Armenian government announced that it could safely operate the plant ten more years, until 2016. Proposed investments for developing renewables are far from sufficient to replace the energy that will be lost with the closure of Medzamor. Armenia currently is discussing the possibility of constructing a new nuclear power plant with either 1,000

or 1,200 MW capacity, with a projected cost of \$4 billion and \$5.2–7.2 billion, respectively.

## Azerbaijan

Azerbaijan is well known for its vast reserves of oil and gas. Azerbaijan's proven reserves totaled 7.0 billion barrels of oil and 1.28 trillion m<sup>3</sup> of gas at the end of 2007, according to the BP Statistical Review. However, it is less known that the country has a large renewable energy potential in the areas of wind, hydro, and biomass. Climatic conditions are favorable for exploiting wind power, with a technical potential of an estimated 1,500 MW, as well as solar energy. The potential of hydropower resources is estimated at up to 16 billions kw/hour in a year, of which only 10 percent is currently being used, according to the EBRD.

With an economy based largely on the export of oil and gas, the state has little incentive to invest in the development of renewables or increased energy efficiency, and so far has allocated very little money to these projects. Despite the formal recognition of the fact that oil and gas resources will be exhausted within the next 20–30 years, and despite the fact that the government even formulated a State Program on the use of alternative and renewable energy for 2005–2013 (with the objective of developing wind and small hydro power), the introduction of legislation to support this goal has been delayed. If Azerbaijan would strive to comply with EU standards, the country might become eligible for investment from the EU. The international financial institutions are already highlighting the huge potential of the sector in order to reduce the level of poverty throughout the country, especially in rural areas, where high prices for energy impacts the impoverished population directly.

Meanwhile, in June 2008, the International Atomic Energy Agency (IAEA) issued a preliminary agreement for the construction of a \$119-million 10–15 megawatt nuclear reactor outside Baku for research purposes. IAEA officials believe that Azerbaijan can use the expertise acquired in the coming years to develop a nuclear power-generating capacity.

## Georgia

Georgia, a country that survived the economic crisis of the nineties thanks to its existing hydropower resources, until recently associated the development of renewables with "environmental schemes" rather than as an integral part of an effective energy security policy. Meanwhile, the energy crisis had a disastrous impact both on the environment (degradation of forests, erosion, etc) and

the health of the population (for example, via the use of low quality oil products and indoor pollution).

Analysis performed by World Experience For Georgia, Core International, and the OECD, among others, shows that the country possesses adequate resources to establish a sustainable energy system. Georgia is rich in renewable energy resources, specifically small hydro, wind, geothermal and solar power. However, only a very small part of the potential is being used. Currently the amount of electricity generated from renewables is approximately three percent of the total amount of electricity produced (excluding generation from large hydro of over 10 MW).

At the end of 2007, the Georgian government formally declared an increased interest in renewables, and especially the creation of small hydro power plants and wind farms. However, due to the lack of a clear state strategy and action plan for renewable energy development, the activities carried out have been chaotic and raise doubts that the development of such sources will really take off.

Georgia's State Policy in the Energy Sector, adopted by the parliament in 2006, declares that the country's main long-term objective is to satisfy the demand for electricity on the basis of its own hydro resources. Unfortunately, it advocates large hydro schemes, while underlining the importance of equal treatment for traditional and alternative sources of energy that in principle limits the opportunity for the wide-spread development of renewable energy, contradicting the EU's principles for alternative energy development. Up to now, no strategic vision exists in Georgia when it comes to renewable energy development, and there is a complete legislative vacuum in this regard. Since 2006, the only positive legislative changes have addressed efforts to connect small hydro to the grid.

In such circumstances, it should not been surprising that since 2005 the government has approved the construction of nine Large Hydro Power Plants, like the Namakhvani Cascade (installed capacity of 700 MW), Khudonhesi (Khudoni hydropower plant with installed capacity of 638 MW), Oni Cascade (installed capacity 272 MW) and another six hydro power plants with a total capacity of 1,747 MW.

In addition, the Georgian government actions directly contradict the Policy's officially declared goals and priorities, which did not foresee construction of nuclear power plants. In 2007 a governmental commission was set up to study the rationality of building a nuclear power plant in Georgia. Moreover, according to some press reports, the government has had some pre-

liminary negotiations with the French Company Areva, that constructs nuclear facilities.

## Developing Green Energy

The South Caucasus desperately needs to develop renewables to tackle its energy problems because, despite some progress achieved in recent years, the state of the energy sector still remains unsustainable.

Why has interest in renewables lagged? The low level of state support, a focus on other priorities – such as the urgent need to upgrade infrastructure – and an almost complete lack of public debate and understanding of the role that renewables could play are all important factors.

All three South Caucasus countries need to address the barriers to developing renewables. Everywhere, there is a lack of clear plans (financial and legislative) for the development of renewable energy and using financial resources allocated as incentives for alternative energy sources.

However, the South Caucasus governments are greatly dependent on external support for developing renewable energy sources. Organizations like the OECD, World Bank, USAID, EBRD and KfW already support some interesting initiatives in the field: including feasibility studies, the rehabilitation and construction of a number of small/mini hydro plants, the development of wind and geothermal resources, and facilitating the removal of key barriers to renewable energy development in the legislative and regulatory fields.

However, the absence of a sound and reliable legal framework for renewables, a coherent overall state and financial strategy, and the numerous missed political opportunities undermine the efforts of different international organizations in the region and significantly delay the implementation of projects in the field of renewable energy.

What steps should be taken to change the situation in favor of renewables in the South Caucasus energy sector? One answer could be via the Action Plans developed under the Neighborhood Policy between the EU and the individual countries. In all cases, the plans require “energy policy convergence towards EU energy policy objectives”. Thus it will be important for the South Caucasus to take the right steps to ensure security of supply that conforms with EU policy (energy efficiency, development of renewable energy, reduction of emissions, etc.).

But the governments involved seem to lack political will. In accordance with the EU European Neighborhood and Partnership Instrument strategy paper for

2007–2013 for the East neighborhood region, there are contradictory strategic objectives. The first of these is sustainable development and environmental protection, which underpins all EU legislation and policies. However, both sides seem to care more about the second priority that includes “the need to ensure the diversification and security of energy supplies to the EU”, which emphasizes the need for further extraction and transportation of the Caspian Sea’s oil and gas resources from the South Caucasus to Europe over development of an environmentally-friendly energy sector within the region.

So it should not be surprising that the governments of the South Caucasus countries are more focused on opportunities to develop unsustainable and environmentally-unfriendly mega projects, that could present more opportunities for international trade, than to focus

on the development of renewables which would serve a smaller number of communities within the countries.

The international community and governments need to put more effort into the promotion of renewables. Ultimately, the development of renewables in the South Caucasus has the potential to support decentralized energy supply and to operate in isolated networks that can directly address the needs of local industry and communities. Bearing in mind the slow tempo of development for the non-oil and gas economies, the extremely inefficient use of energy, and the population’s decreased consumption of energy due to rising prices, a decentralised energy system based on renewable sources can be developed step-by-step to respond to the needs of local communities and industry, while bringing energy to the market more quickly than traditional energy sources.

#### *About the author*

Manana Kochladze is CEE Bankwatch Network Regional Coordinator for the Caucasus.

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#### *Georgia*

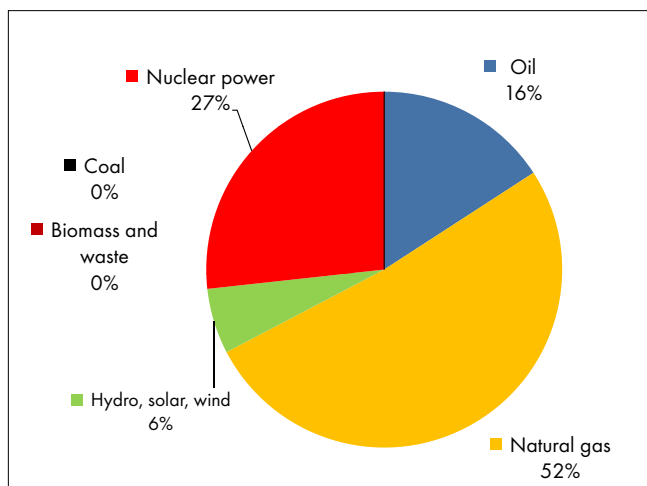
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## Statistics

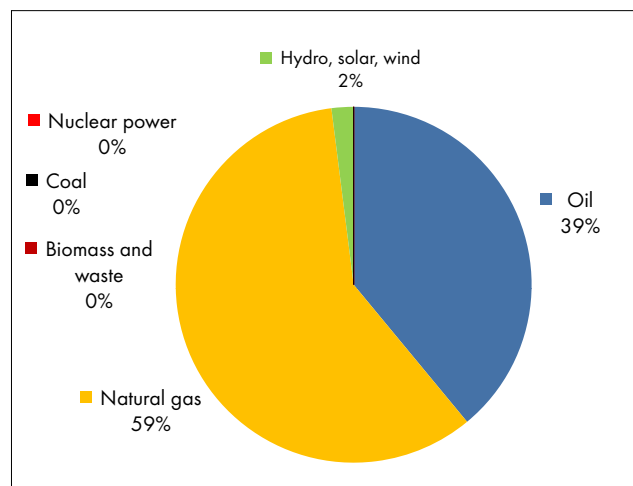
### Energy Consumption in the Countries of the South Caucasus

#### Primary Energy Consumption

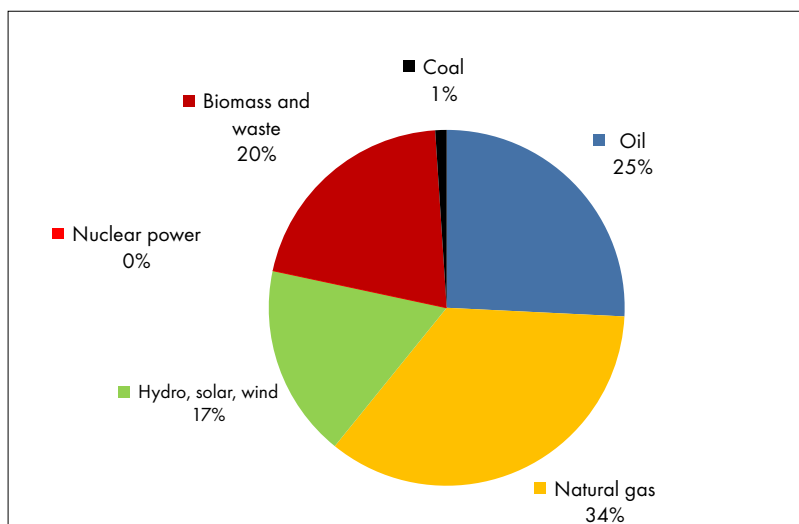
##### Armenia



##### Azerbaijan



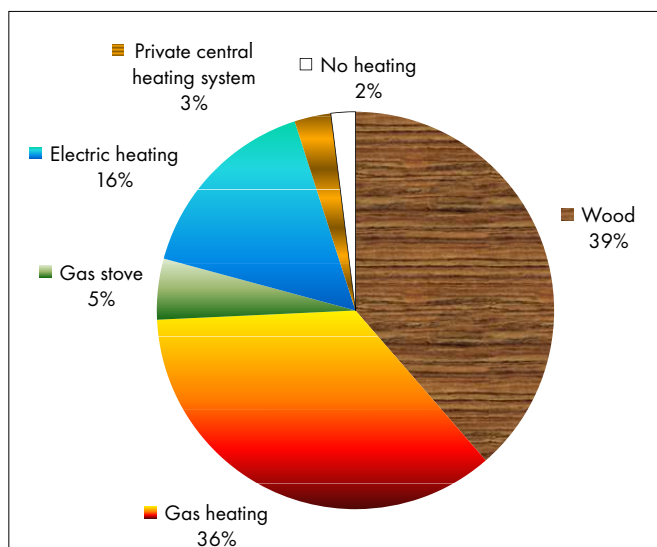
##### Georgia



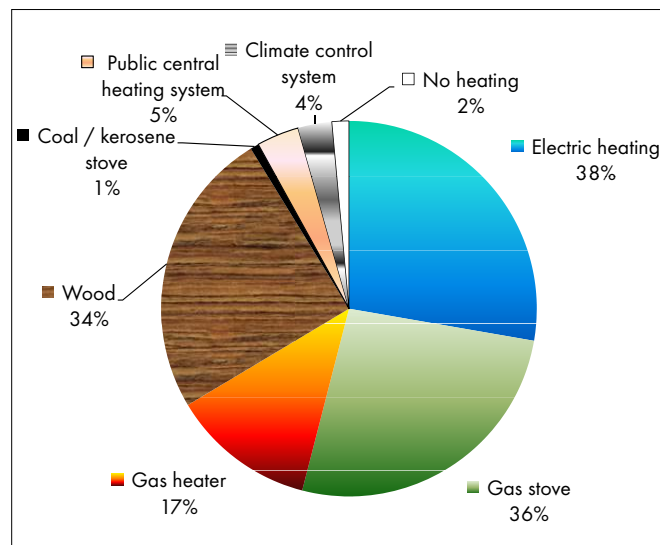
Source: UNDP – Human Development Data, <http://hdrstats.undp.org/indicators>

## Private Households' Heating Material Last Winter

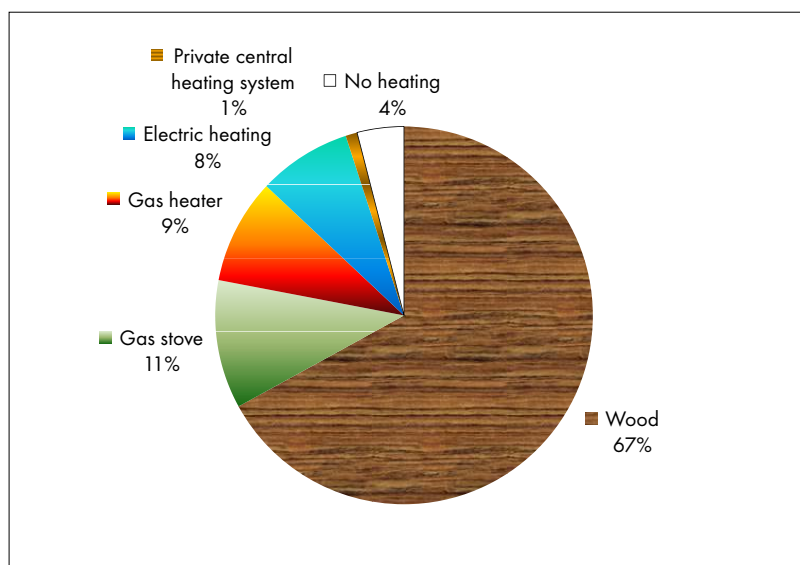
### Armenia



### Azerbaijan



### Georgia



Source: Caucasus Research Resource Centers, Data Initiative 2007



## Opinion

### Azerbaijan's Geo-strategic Role in the EU's Energy Security

By Elkhan Nuriyev, Baku

#### Abstract

The author provides an Azerbaijani view on the energy politics of the South Caucasus region. He stresses the importance of Azerbaijan in Europe's efforts to develop non-Russian sources of oil and gas and as a bridge to countries further east.

#### New Geo-Economic Importance

Azerbaijan's perceived willingness to cooperate closely with the enlarged European Union has attracted an unprecedented level of international attention for this rapidly developing, young democracy with the fastest growing economy in the world. To date, the Azerbaijani leadership has implemented a number of strategically vital projects which already have become important milestones in ensuring the country's participation in global integration initiatives. The Baku-Tbilisi-Ceyhan, Baku-Supsa and Baku-Novorossiysk oil pipelines, as well as the Baku-Tbilisi-Erzurum gas pipeline and the recent purchase of the Kulevi oil terminal on the Black Sea coast have enhanced Azerbaijan's geo-strategic role in the establishment of the South Caucasus-Caspian-EU corridor for energy and transportation linkages. The main concept at the center of President Ilham Aliyev's contemporary strategic agenda is the desire of the national political elite to ensure the competitiveness of Azerbaijan in regional processes and the consolidation of economic leadership in the South Caucasus.

Being a pivotal country with the largest population in the South Caucasus, Azerbaijan has close contact with the Islamic world, while it is simultaneously influenced by neighboring Christian countries oriented towards Western culture. Its position at the junction of East and West has enabled Azerbaijan to develop a synthesis of the values of both cultures. Consequently, Azerbaijan acts as a bridge which can unite not only different cultures and civilizations, but also the major economic systems of Europe and Asia. In the contemporary world, the economy is closely linked to geopolitics. Relying upon the country's favorable geographical location, Azerbaijan attempts to effectively use its economic potential while adhering to its own national interests in regional and international projects. In the framework of restoring the Great Silk Road, the realization of the geo-strategically important Baku-Tbilisi-Kars railway project, a major Eurasian transportation link, will foster regional economic cooperation, thus creating new possibilities for developing extensive coopera-

tion between North and South. Still, given that energy resources are presently the most important aspect of good neighborly relations between states, it is essential to take into account the interests of all the geopolitical actors so as to form a stable architecture of regional and global security.

#### Promoting Azerbaijan as a Global Energy Player

Quite obviously, the transnational infrastructure projects successfully implemented during the past several years have created a new geo-economic situation in the South Caucasus, contributed to regional cooperation and accelerated the integration of the wider Black Sea-Caspian basin with the Euro-Atlantic community. For the first time in the history of the world, Caspian energy sources are reaching the Western markets by alternative routes. As a result, Azerbaijan has become a significant geopolitical actor within and beyond the region. At the same time, the oil and gas pipelines have enabled Azerbaijani authorities not only to diversify the supply routes, but also meet economic and social needs as well as conduct effective economic and political reforms in the country. In other words, Azerbaijan's energy policy has opened doors to new possibilities for developing the national economy. The ruling elite in Baku has taken steps to diversify the economy so that it is less dependent on the price of oil and the energy sector. Due to the well-conceived policy implemented in the fields of diversification and support for private ownership, the authorities have succeeded in reducing the country's dependence on energy.

Furthermore, the increasing importance of energy security as a global issue has highlighted Azerbaijan's geo-strategic significance. Even without that Azerbaijan remains a pivotal country in the corridor connecting Europe to Asia and Russia to the Middle East. Staying on the path of modernizing and diversifying its economy, Azerbaijan has great potential to become a rising star in the strategic Eurasian region. For this reason, safeguarding Azerbaijan's role as a global energy player



at a time when energy security is a major international issue is rapidly emerging as one of the main priorities of Azerbaijani foreign policy. Azerbaijan is now positioning itself not only as an important energy supplier, but is also using its geographic location to promote itself as an important energy transit hub, offering the resource-rich countries of Central Asia an alternative route for moving their products to world markets.

### Contributing to European Energy Security

Currently, energy security is gaining prominence on the EU agenda and it is most likely to guide the EU's relations with Azerbaijan in the coming years. Recently implemented investment projects in the Black Sea-Caspian basin have proved that Azerbaijan could play a much greater role in Europe's energy security. Azerbaijan has earned an image of a very reliable partner for the international community. Due to its own rich oil and gas resources, as well as its interest in assisting the transit of Central Asian resources, Azerbaijan has become a critical new energy supplier for the EU, helping European countries to diversify energy sources and routes. However, the diversification is important not only for the consumers, but for the suppliers as well. Right from the start of the global financial crisis, most international analysts focused attention on the problem of the consumers. Despite the fact that Azerbaijan's economy has not been badly damaged by the current global crisis, Azerbaijan, as a supplier country, also needs secure and reliable routes, which allow it to transport energy sources in different directions. But the question arises about the additional volume required for European energy security.

In reality, Azerbaijan thoroughly explores new energy opportunities, thus participating actively in the discussions on the Turkish-Greek-Italian, Nabucco and Trans-Adriatic pipeline projects. The transportation capacity of the existing pipelines does not meet the export potential of the country's energy resources. In the future, Azerbaijan may produce twice as much gas as it currently does. There are at least 2 trillion cubic meters of confirmed gas resources in Azerbaijan and, according to estimates, this energy wealth will be sufficient for the next decades. While Azerbaijan will produce more than 20 billion cubic meters of natural gas in 2009, the country's exports are still restricted to the regional market. Yet the new pipeline projects, such as Nabucco, create opportunities for diversification and long-term reliable supply mechanisms. The Azerbaijani government fully supports Nabucco's construction and has publicly stated that the country has sufficient gas production poten-

tial to supply the first phase of the pipeline. However, there are several important issues that must be addressed before the Nabucco project can proceed.

Most importantly, the funding for Nabucco's construction needs to be clarified. The EU lacks solidarity regarding its external energy policy, and given that the Nabucco project unites only several Central European countries rather than the entire EU membership, there are mixed opinions about the viability of the project. As a consequence, the question of how important a role the EU can play in realizing the Nabucco project remains open. This means that despite Nabucco's importance to Europe's energy security and despite official support from Brussels, the future of the project remains uncertain.

So far, however, Nabucco is a critical part of Europe's energy diversification strategy. The pipeline is categorized as an EU 'priority project' and has the full support of the United States. If the EU pushes for the development of the Caspian-EU gas corridor, Azerbaijan, Kazakhstan and Turkmenistan might play a more significant geo-economic role in the system of global energy security. Clearly, the Caspian-EU gas corridor is in the interests of European consumers, producers in the Caspian basin (Azerbaijan, Turkmenistan and Kazakhstan), and the transit countries (Turkey and Georgia). For this reason, the Nabucco pipeline project has a good chance to be realized, but it will take some additional time and consistent effort of all the participants – suppliers, transit countries and consumers.

Interestingly, although more committed to European energy security than are European leaders themselves, President Ilham Aliyev certainly cannot push much harder for either Nabucco or the Transcaspian pipeline than the Europeans, the projects' beneficiaries, are ready to push themselves. It seems that European governments should move ahead and offer a deal. Certainly, as a first step, it is necessary to make arrangements with transit countries so that Azerbaijan can begin natural gas production and have direct access to the European market. European companies need to take ownership of the gas projects. Likewise, most importantly, the EU should be prepared to stand up to Russia. This is something which the Azerbaijani leadership has done on several occasions for a simple reason: it does not perceive the transnational pipeline projects as anti-Russian, but rather as a strategically vital direct connection from the Caspian basin to European markets.

The Russian-Ukrainian gas crisis affected European energy policy and gave an additional impetus to the EU to diversify gas supplies. This means that the

EU will have to take more intensive measures to open direct access to Caspian oil and gas fields via transnational pipelines. Azerbaijan will benefit from its two-fold role, serving as a producer and energy transit country. Azerbaijan may become a key country not only for ensuring implementation of projects such as Nabucco or the Turkey-Greece-Italy or Baku-Tbilisi-Erzurum gas pipelines, but also as a transit country for Turkmen and Kazakh oil and gas. Such a favorable situation strengthens Azerbaijan's geo-economic position in the Caspian basin and consolidates the diplomatic stance of the country in expanding political and economic relations with the European community of nations. Azerbaijan's philosophy on energy policy is simple – energy issues should unite the interests of the suppliers, transit countries and consumers on the basis of mutually beneficial cooperation.

### Conclusions

Being a pivotal resource-rich country in the South Caucasus, Azerbaijan has the opportunity to influence economic and political trends not only in Central Asia and the Caspian basin, but also in the Middle East. Large investments made by major European energy companies and the growing presence of some EU member states demonstrate that Azerbaijan is seen today as a reliable partner with which the EU is trying to culti-

vate trade and economic relations. In practice, Azerbaijan has already taken a lead in developing the East-West energy and transportation corridor, the most ambitious initiative in the Black Sea-Caspian basin to date. Moreover, it was a regional approach that determined Azerbaijan's strong push for major transnational energy projects, such as BTC and BTE, which have underscored not only the closer relationships among Azerbaijan, Georgia and Turkey, but also have highlighted the activation of EU involvement in the wider Black Sea area. All of these factors are necessary elements of any successful EU strategy for the wider Black Sea-Caspian basin. To ensure that the EU strategy is indeed successful, Brussels should formulate an integrated energy policy on the basis of a new comprehensive strategic vision.

Given today's debate on the future of the Caucasus-Caspian region, the success of the Azeri-Georgian-Turkish alliance in building reliable partnerships with the EU member states and in advancing European strategic interests in the wider Black Sea region is quite remarkable. Both the EU and Azerbaijan are keenly interested in the development of the Caspian-EU energy corridor. The resulting infrastructure and transportation linkages will not only satisfy the needs of the producers, transit states and consumers, but they will also assist in promoting better strategic relations and more security in the entire region.

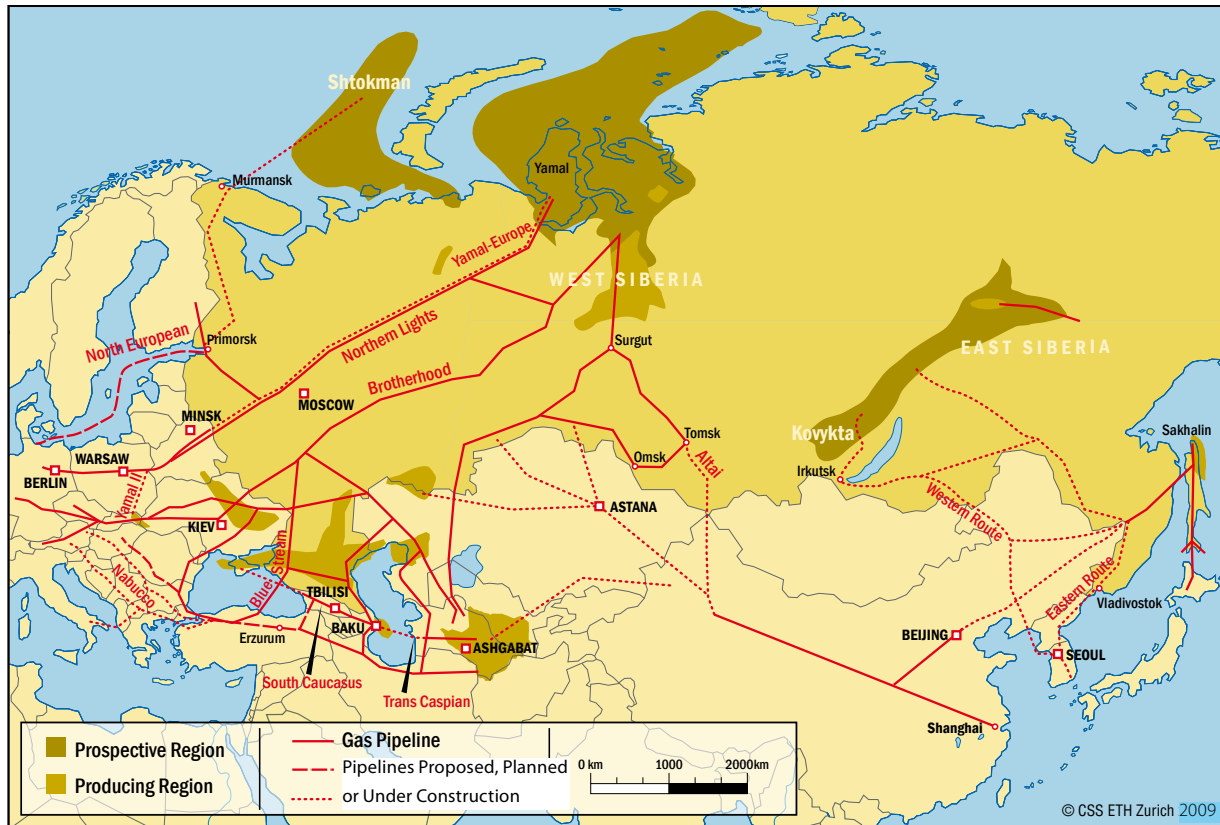
#### *About the author:*

Dr. Elkhan Nuriyev is Director of the Center for Strategic Studies under the President of the Republic of Azerbaijan.

The views expressed in this article do not necessarily reflect the official policy of the organization which the author represents.

## Map

### Main Natural Gas Export Pipelines from Russia



## Chronicle

### From 15 January to 13 February 2009

15 January 2009	The Council of Europe criticizes Azerbaijan's decision to ban international radio stations from broadcasting on national frequencies
16 January 2009	Riot police break up opposition protest in Armenia
16 January 2009	Azerbaijan's Foreign Ministry expresses concern over Russian arms delivery to Armenia
16 January 2009	Turkish Foreign Minister Ali Babacan says that relations between Armenia and Turkey as well as Azerbaijan and Armenia may normalize in 2009
16 January 2009	A Georgian police officer is shot dead near Georgia's de facto border with South Ossetia
19 January 2009	Russia notifies Georgia of its willingness to inspect Georgia's military bases in line with the OSCE 1999 Vienna Document on confidence and security-building measures
19 January 2009	Russian presidential decree orders an arms embargo on Georgia
19 January 2009	Abkhaz leader Sergey Bagapsh says he is "bewildered" over a memorandum signed between Georgia and the Russian state-controlled electricity trader Inter RAO on the exploitation of the Enguri hydro power plant (HPP)

20 January 2009	OSCE High Commissioner on National Minorities Knut Vollebaek visits Georgia
21 January 2009	Armenian Foreign Minister Eduard Nalbandian says that Armenia and Turkey have come close to normalizing relations
22 January 2009	Azerbaijani police detain opposition campaigners in the city of Sabirabad
22 January 2009	Georgia says it will not allow Russia to inspect its military bases citing “force majeure”
22 January 2009	European Commission will allocate 16 million Euros for the development of Azerbaijan’s judicial system
25 January 2009	Georgia resumes natural-gas supplies to South Ossetia
27 January 2009	Abkhaz Deputy Interior Minister Zakan Jugelia is shot dead
27 January 2009	The European Court of Human Rights (ECHR) orders the Georgian state to pay 26,700 Euros to the founders of 202 TV
28 January 2009	Georgia’s Conservative Party, a member of the opposition, calls for Interior Minister Vano Merabishvili to be brought to trial in connection with the murder of banker Sandro Girgvliani
29 January 2009	Twelve opposition parties in Georgia call for President Saakashvili’s resignation in a joint declaration
30 January 2009	Georgian Prime Minister Grigol Mgaloblishvili resigns, citing poor health
2 February 2009	Georgian President Mikhail Saakashvili offers to set up an advisory group of Georgian expatriate economists
3 February 2009	Georgian Foreign Minister Grigol Vashadze says Georgia has no plans to sign agreements on non-use of force with Abkhazia and South Ossetia
4 February 2009	Georgia’s ambassador to the Organization for Security and Cooperation in Europe (OSCE) Viktor Dolidze resigns
6 February 2009	Armenia confirms a USD 500 million loan from Russia to help mitigate the effects of the global economic crisis
7 February 2009	US Vice President Joe Biden declares that the United States will not recognize the independence of Abkhazia and South Ossetia
8 February 2009	Russia reaffirms plans for building military bases in Abkhazia and South Ossetia
9 February 2009	EU’s inquiry mission into the August war visits Georgia
10 February 2009	Chairman of Russian energy company Gazprom Alexei Miller meets South Ossetian leader Eduard Kokoity in Moscow to discuss the construction of the Dzarikau-Tskhinvali gas pipeline to link South Ossetia with North Ossetia in the Russian Federation
10 February 2009	The OSCE says two OSCE monitors were released after being briefly detained in a Georgian conflict zone
10 February 2009	Georgia’s former ambassador to the OSCE Viktor Dolidze confirms his intention to join the opposition after leaving the OSCE
11 February 2009	The head of the Azerbaijani Air Force Lieutenant General Rail Rzayev is shot dead
12 February 2009	The Armenian National Congress (HAK), an umbrella opposition movement, officially announces its intention to resume public rallies
13 February 2009	The UN Security Council agrees to extend its Georgia mission for four months
13 February 2009	Former Prime Minister Zurab Nogaideli’s party Movement for a Fair Georgia holds a protest rally in Adjara

## About the Caucasus Analytical Digest

Editors: Iris Kempe, Matthias Neumann, Robert Orttung, Jeronim Perović, Lili Di Puppò

The Caucasus Analytical Digest (CAD) is a monthly internet publication jointly produced by the Heinrich Böll Foundation in Tbilisi ([www.boell.ge](http://www.boell.ge)), the Research Centre for East European Studies at the University of Bremen ([www.forschungsstelle.uni-bremen.de](http://www.forschungsstelle.uni-bremen.de)), the Jefferson Institute in Washington, DC ([www.jeffersoninst.org](http://www.jeffersoninst.org)) and the Center for Security Studies (CSS) at ETH Zurich ([www.css.ethz.ch](http://www.css.ethz.ch)) with support from the German Association for East European Studies (DGO). The Caucasus Analytical Digest analyzes the political, economic, and social situation in the three South Caucasus states of Armenia, Azerbaijan and Georgia within the context of international and security dimensions of this region's development. CAD is supported by a grant from the Heinrich Boell Foundation and partial funding from the Jefferson Institute.

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The Heinrich Böll Foundation, affiliated with the Green Party of Germany, is a legally independent political foundation. The regional office for the South Caucasus was opened in 2003. Its main objective is to contribute to the forming of free, fair and tolerant societies in the region. The Foundation supports and facilitates cooperation of individuals and organizations throughout the region who, based on the principle values of human rights, search for the change of undemocratic and intolerant attitudes in societies and politics, for the transformation of ethno-political and territorial conflicts into the direction of fair and non-violent solutions and for the sustainable development of people and communities. The Foundation encourages critical public debate to make processes of decision-making democratic and transparent.

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