

Caspian Energy: A viable alternative to the Persian Gulf?

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The collapse of the Soviet Union and the end of the Cold War led to a dramatic change in the landscape of EurAsian geopolitics. On the one hand, it resulted in the emergence of the eight independent states of Central EurAsia: the sub-region of Central Asia consisting of Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan; and the sub-region of the South Caucasus consisting of Armenia, Azerbaijan and Georgia. On the other hand, it changed the control of the Caspian Sea basin from two littoral states - the Soviet Union and Iran - to the five countries of Russia, Iran, Azerbaijan, Kazakhstan and Turkmenistan.

The strategic geopolitical importance of Central EurAsia and the Caspian Sea region are obvious. They connect Northeast and Central Europe with countries on the Mediterranean Rim, Middle East and, further on, the Indian Ocean and Asia-Pacific. Central EurAsia and the Caspian Sea region are located between Russia - an unstable regional power, the Middle East - a resource-rich region confronted with structural political and economic crises and Asia-Pacific - home to highly populous states with great economic potential. Central EurAsia and the Caspian Sea region are adjacent to Iran, a United States adversary, Turkey - a Western ally, Afghanistan - a war-torn country undergoing reconstruction and Iraq - a chaotic and unpredictable country.

The oil and natural gas reserves of the Caspian Sea region are undeniably significant. The proven oil reserves of the five Caspian Sea littoral states total 153.8 billion barrels (BBbbl), while their total natural gas reserves are estimated at 2688.3 trillion cubic feet (tcf). The five Caspian Sea littoral states have about 14.6% (1,050.0 BBbbl) of the world's total proven oil reserves, and almost 50% (5476.7tcf) of the world's total proven natural gas reserves.

Since the end of the Cold War, states and non-state actors have assigned more significance to economic and resource concerns. Conflicts over the control of global oil and gas have become more probable as global energy consumption rises, environmental conditions deteriorate, the availability of oil and gas decreases, and prices for these commodities rise. Internal conflicts over oil and gas could arise in countries where these are the main source of income. The possession of a huge military arsenal and an extended alliance system is no longer necessary for state survival. The survival of state and domestic society instead depend on economic dynamism, the cultivation of technological innovation, and getting access to raw material inputs required for both. Resource competition could be accompanied by ethnic hostility, economic injustice, and political competition; all factors, which are linked to disputes over the control of hydrocarbon resources.

With the world's energy demands projected to rise rapidly over the next decades, can Central EurAsia and the Caspian Sea region become a viable alternative to the Persian Gulf as a global energy supplier? What are the potential obstacles for the production and security of supply of the region's energy resources? This paper surveys the oil and natural gas reserves of Central EurAsia and the Caspian Sea region in the matrix of competitive forces of the post-Cold War world. It centres on the following three factors:

- The increasing global demand for oil and gas.
- The scarcity of oil and gas resources.
- The dispute over ownership rights of these resources.

The Main State Actors in Central EurAsia and the Caspian Sea Region

The vast oil and natural gas resources of Central EurAsia have transformed the region into a location in which the forces of interstate rivalry, enterprise competition, and responses by regional state and non-state actors intersect. All major industrialised powers and many of the multinational companies that have their home base in these countries meet in Central EurAsia and the Caspian Sea region. Contenders from late-industrialising countries are trying to get a foothold in the region. Local actors have to respond to new social forces in the region. In such a complex matrix of social forces, competition and co-operation are *ad hoc* and multi-level. The main actors involved in Central EurAsia and the Caspian Sea region are: the immediate and highly interested regional powers China, Iran, Russia, Turkey and also Pakistan and Afghanistan; western countries, especially the US, European Union (EU) and its member countries; and western Transnational Corporations (TNCs). The region is not incorporated into the territorial sphere of security institutions of one of the major powers and its allies.

Central EurAsia is not divided into agreed upon, and thus stable, zones of influence. Instead, extra-regional state and non-state actors attempt to project their power and influence into the polities and societies of their hosts, interacting with local actors. Uncertainty and thus unpredictability are part of the rules of the game. "Multi-dimensional rivalry" is perhaps a suitable term for what is going on. Because everyone is involved, and regime legitimacy is at stake, major power competition in Central EurAsia and the Caspian Sea region has the potential for aggravating instability of the world system as a whole.

Russia remains the most prominent regional power in Central EurAsia and the Caspian Sea region. It continues to try to re-incorporate these areas into its security system, as can be illustrated with its aim of establishing a unified air defence system in the context of the Commonwealth of Independent States (CIS). For Russia, CIS provides the possibility of reviving the former security, political and economic order of the Soviet Union within a new political constellation. Another attempt at regional co-operation is the EurAsian Economic Community (EAEC) of Belarus, Kazakhstan, Kyrgyzstan, Russia and Tajikistan. Its main objective is deepening co-operation in the economic and humanitarian fields. Russia sees its decline in power as due to its own economic problems, the wish of Central EurAsia states to distance themselves from it, and increasing US involvement (military, political and economic) in the region.

China, another power immediate to Central EurAsia, could become a powerful force in the region in the coming years. Like Russia, it fears the US will try to dominate the region and thus gain control of the oil and natural gas resources in Central EurAsia. China has a booming economy and is currently the world's third largest oil consumer. This means it has a great interest in the import of the region's oil and gas resources. There are also common interests between Russia and China. As a possible counterbalance to US activities in Central EurAsia, China and Russia have established the Shanghai Co-operation Organisation (SCO) which also includes Kazakhstan,

Kyrgyzstan, Tajikistan and Uzbekistan as member countries. The agenda of the SCO is based on military and economic co-operation, but also on combating radical Islam.

Iran and Turkey, though politically and economically less powerful than Russia and China, are also important regional economic players and attractive countries for Central EurAsia and Caspian Sea region co-operation. Iran controls 8.5% of global oil and 14.8% of global gas resources. It possesses a substantial pipeline infrastructure that could be easily connected to oil terminals in Central EurAsia. Turkey's oil and natural gas demand is increasing, making it an attractive market for oil and natural gas exports. Turkey is also a bridge to European markets. Iran and Turkey aim to strengthen their influence within Central EurAsia through their respective economic regional co-operation. While both countries are part of the Economic Co-operation Organisation (ECO), Turkey has also initiated the establishment of the Black Sea Economic Co-operation (BSEC) that excludes Iran but includes Russia as a member country. BSEC also includes Greece, an important partner because of its EU membership.

The United States has acknowledged the great oil and natural gas potential of Central EurAsia and the Caspian Sea region. A timely example of this is the yet unforeseeable consequence of the current war in Iraq. Central EurAsia's oil and gas resources could provide a temporary alternative supply if Persian Gulf oil becomes inaccessible because of political instability in the region. The US strives for influence in Central EurAsia through the Partnership for Peace (PfP) program, aimed at expanding political and military co-operation between the North Atlantic Treaty Organisation (NATO) and Central EurAsia, as well as all interested member countries of the Organisation for Security and Co-operation in Europe (OSCE). The PfP program has been joined by all Central EurAsian states except Tajikistan and Russia.

Other ambitious undertakings by the US in the region are the Membership Action Plans (MAPs) for possible NATO membership, Euro-Atlantic Partnership Council (EAPC), and the Georgia, Uzbekistan, Ukraine, Azerbaijan and Moldova (GUUAM) security arrangement with NATO. While Turkey is an ally of the US, especially with regards to the construction of westward energy pipelines, this alliance is not fixed and has had major differences over the war in Iraq. Since 11th September 2001, the US has expanded its military presence in Central EurAsia and adjoining regions, and its military is currently involved in Afghanistan, Pakistan, Uzbekistan, Tajikistan, Kyrgyzstan and Georgia.

The European Union has its own motives for gaining influence in Central EurAsia and the Caspian Sea region. Because of its geographic proximity, the EU fears that instability in the region might also affect Europe. Additionally, as North Sea oil and natural gas resources decline, the EU has to find new providers to satisfy its energy demands. The EU is active in Central EurAsia through the Technical Assistance to the Commonwealth of Independent States (TACIS) program, Transport Corridor Europe-Caucasus-Central Asia (TRACECA), Black Sea Regional Energy Centre (BSREC), Black Sea Environmental Program (BSEP), and Interstate Oil and Gas Transport to Europe (INOGATE).

The Western European Union (WEU), closely linked to the EU, is considering military peacekeeping activities in the region. The OSCE, also working in close co-

operation with the EU, considers Central EurAsia to be an integral part of the European security system, and hopes to exert more political pressure on Central EurAsia governments. However, a unified European strategy towards Central EurAsia does not yet exist. This is partly because EU member countries, particularly its main actors France, Germany and the UK, each have different priorities; France tends to be more oriented towards North Africa, Germany towards Eastern Europe, and the UK towards the Baltic States.

Projected global demand for Oil and Natural Gas

According to estimates prepared by the US Department of Energy, the global demand for oil and natural gas is predicted to increase over the next two decades. For oil, global demand is predicted to rise by about 2.2% annually between 1999 (74.9 million barrels per day [MMbbl/d]) and 2020 (118.6 MMbbl/d), and oil is expected to remain the main fuel for the world's industries and households, accounting for about 40 percent of global energy consumption. For natural gas, global demand is predicted to rise by an annual average of 3.2% between 1999 (84.2 tcf) and 2020 (162.8 tcf). Over this period, the share of natural gas in total global energy consumption is expected to increase from 23% to 28% from 1999 to 2020. A closer look at Table 1 reveals important region/country variations in the predicted consumption of oil and natural gas between 1999 and 2020.

Amongst the industrialised regions ("North America", "Western Europe" and "Industrialised Asia"), the largest increase in oil demand is expected in North America (US, Canada and Mexico) where it is projected to rise at an average annual growth rate of 1.8% between 1999 (23.4 MMbbl/d) and 2020 (33.7 MMbbl/d). Although oil is currently the largest energy source in Western Europe, its projected annual increase in demand between 1999 (13.9 MMbbl/d) and 2020 (15.8 MMbbl/d) of about 0.6% is the lowest among all the region/country categories in Table 1. This is mainly due to the gradual replacement of oil consumption by natural gas use in all industrialised regions, but especially in Western Europe (which holds less than 5% of the world's natural gas reserves but was responsible for 17% of the world's total gas consumption in 1999).

In "Industrialised Asia" (Japan, Australia and New Zealand), oil demand is projected to increase by an average of 0.9% per year between 1999 (6.9 MMbbl/d) and 2020 (8.3 MMbbl/d). Japan, which imports all its oil needs, accounted for fully 81% of the total oil demand in Industrialised Asia in 1999. The region is predicted to increase its natural gas consumption by 1.9% annually between 1999 and 2020 (a remarkably smaller rate than the 11.2% annual increase in natural gas demand in Industrialised Asia between 1970 and 1999).

The greatest increase in oil demand over the period under study is expected in the states of "Developing Asia" (including China and India). Whereas China imported less than 800,000 tons of oil and oil products in 1985, these had increased to 43.81 million tons by 1999. The country's oil consumption is predicted to increase by 4.3% annually between 1999 (4.3 MMbbl/d) and 2020 (10.5 MMbbl/d). At this rate, in less than 10 years, China will surpass Japan to become the largest oil consumer in Asia, and the second largest oil consumer in the world behind the US. By 2020, China's aggregate oil consumption (10.5 MMbbl/d) is predicted to be almost half that of the US

(26.7 MMbbl/d). Also its overall totals are smaller, the predicted growth rate of 4.6% per annum in oil consumption for India between 1999 (1.9 MMbbl/d) and 2020 (4.9 MMbbl/d) is even higher than that of China. Note that India imports about two-thirds of its crude oil requirements. At 10.1% and 6.1%, respectively, the predicted annual increases in natural gas consumption by China and India between 1999 and 2020 are even more striking. Developing Asia as a whole is predicted to account for 19% of the increase in global gas demand over the same period.

Caspian Sea Region Reserves and Production of Oil and Natural Gas

At the end of 2001, the total global oil stock was estimated by British Petroleum at 1,050.0 billion barrels (BBbbl) proven reserves. Of the world's total, 863.29 BBbbl of oil was located in OPEC member states (Algeria, Indonesia, Iran, Iraq, Kuwait, Libya, Nigeria, Qatar, Saudi Arabia, Venezuela and United Arab Emirates) and 242.12 BBbbl in non-OPEC countries. Fourteen countries (Algeria, China, Iran, Iraq, Kuwait, Libya, Mexico, Nigeria, Norway, Russia, Saudi Arabia, USA, United Arab Emirates, Venezuela) accounted for 90% of the total global proven oil reserves. Of these, just five countries (Saudi Arabia, Iraq, UAE, Kuwait, and Iran) hold almost two-thirds of the world's proven oil reserves.

The Caspian Sea littoral states of Russia, Kazakhstan, Azerbaijan, Turkmenistan and Iran account for an extremely important share of the world's oil reserves. Of these five countries, Iran and Russia are the two main powers in terms of oil reserves. In 2001, Iran ranked fifth (89.7 BBbbl or 8.5% of the global total) in the world in proven oil resources, and Russia seventh (48.6 BBbbl or 4.6%). Kazakhstan has much larger reserves than were estimated during the Soviet period and, after Russia, is considered to be the richest of the former Soviet republics in oil resources. Its proven oil reserves (8.0 BBbbl or 0.8%) rank it fifteenth in the world. Azerbaijan has been an important source of oil for more than a century and, in 2001, its proven reserves ranked it sixteenth (7.0 BBbbl or 0.7%). Turkmenistan also has significant oil reserves, estimated at 0.5 BBbbl in 2001. Together, the total proven oil reserves of the five Caspian Sea littoral states were 153.8 BBbbl in 2001, about one fifth of the combined total 734.7 BBbbl of Europe, the US and the Middle East (Iran, Iraq, Kuwait, Oman, Qatar, Saudi Arabia, Syria, United Arab Emirates and Yemen)

Together, the Caspian Sea littoral states of Russia, Kazakhstan, Azerbaijan, Turkmenistan and Iran account for the lion's share of the world's natural gas reserves. In 2001, their natural gas reserves of over 2688 tcf was greater than the combined total of 2323.7 tcf found in Europe, the US and the Middle East. Russia and Iran contain the world's first (1680.0 tcf) and second (812.3 tcf) largest supplies, respectively, of proven natural gas reserves, while Kazakhstan, Azerbaijan and Turkmenistan hold a combined total of 196.0 tcf of this energy resource.

Prospects for Energy Supply from the Persian Gulf & Caspian Sea Regions

In 2020, the world's oil supply will exceed its 1999 level by 43.7 MMbbl/d. Production increases are expected from both OPEC and non-OPEC countries. The rise in non-OPEC oil supply over the last two decades has resulted in a substantial decline of OPEC's market share, once at an historic high of 52% in 1973. However, by 2020, it is projected that only about one-third of the total oil production increase will come

from non-OPEC areas. OPEC oil production is growing at an annual average rate of 3.3%, and is expected to reach 57.2 MMbbl/d by 2020. Its capacity utilisation will increase immensely after 2000, reaching 95% in 2015.

The Persian Gulf is the most crucial region in the supply and demand of the world's oil. In 2000, industrialised countries (North America, Western Europe, Industrialised Asia) imported 15.8 MMbbl/d of oil from OPEC countries; 9.9 MMbbl/d of which came from the Persian Gulf region. OPEC members exported 70% of their oil exports to industrialised countries, of which almost two-thirds came from the Persian Gulf region. It is expected that OPEC's exports to industrialised countries in 2020 will be about 6.2 MMbbl/d higher than in 2000, and that more than half of this increase will come from Persian Gulf countries.

However, despite the growth in Persian Gulf oil exports, OPEC's total share of petroleum exports to industrialised countries in 2020 is estimated to be 14% below its share in 2000. Notably, Persian Gulf oil exports to industrialised countries will fall to about 40% of the OPEC total. At the same time, OPEC oil exports to developing countries will increase by more than 17.0 MMbbl/d between 2000 and 2020, half of which will go to developing Asia. China alone is expected to import about 7.2 MMbbl/d from OPEC by 2020, most of which will come from the Persian Gulf region.

As the share of the world's oil supply coming from OPEC declines, non-OPEC petroleum exports from the Caspian Sea and other regions are expected to increase steadily between 2000 and 2020. For the period 1998 to 2010, the three new Caspian Sea littoral states of Azerbaijan, Kazakhstan Turkmenistan alone will account for 18% of the total increase in non-OPEC production of oil (while the North Sea, Latin America and Africa will account for increases of four, nine and 14%, respectively). In terms of European demand for oil, the Caspian Sea region's reserves are crucial. Without them, it is estimated that oil exports from the Persian Gulf to Europe will increase by 0.5 MMbbl/d in 2010. However, if the Caspian Sea region fully participates in the export market, oil from the Persian Gulf to Europe will decreased to 1.5 MMbbl/d by 2010.

A major concern for the US over the last ten years has been not only to secure its demand for oil and natural gas at home, but also to diversify its oil and natural gas supply to decrease its dependence on one major oil supplier; namely the Persian Gulf region. The latter is the main motivation for increasing US involvement in the Caspian Sea region and it aim to control the production and export of the region's energy resources (see the current Iraq War). The US has acknowledged the great oil and natural gas potential of the Caspian Sea region. The oil and natural gas resources of the states of the Caspian Sea littoral could provide a temporary alternative energy supply if political instability in the Persian Gulf region interrupts the latter's oil exports.

The EU has its own motives to be interested in the security of Caspian Sea oil and natural gas resources. Because of geographic proximity, the EU fears that instability in the region would also affect Europe. With the oil and natural gas resources of the North Sea in decline, the Caspian Sea region could become a serious alternative energy supplier.

Thus, while the Caspian Sea region will in no way be able to replace the Persian Gulf in meeting global oil supply demands, it should be internationally recognised as a valuable additional alternative. ■

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EurAsia Bulletin

Vol. 7 No. 10&11 Oct-November 2003

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