TURKEY:
THE KEY TO CASPIAN OIL AND GAS

World Energy Development

Social and economic development anywhere depends inevitably on some primary resource of energy. In the first part of the 21st century the well-being of the developed world will depend substantially on free access to the oil and gas of the Caspian basin. In turn, that access will depend on a strong and healthy Turkey playing the decisive role in securing that access.

Coal fueled the world's industrial development up to the First World War. Crude oil took over the lead in the Second World War. Nuclear energy has yet to fulfill its promise. Renewable and clean resources are hopes. Today and in the foreseeable future, oil and natural gas are the material *sine qua non* of well-being and the sinews of power.

Table 1:
The Percentages of the Main Resources in the World Primary Energy Production (%)

Source	***2000***	***2010***	***2020***
Oil	**38.9**	**38.1**	**37.9**
Natural Gas	**21.7**	**25.5**	**28.5**
Coal	**26.1**	**23.1**	**22.1**
Nuclear	**5.9**	**5.2**	**3.7**
Others	**7.4**	**8.1**	**7.8**

Source: U.S. Energy Information Administration, International Energy Outlook 2000 (www.eia.doe.gov).

Table 1 shows that fossil fuels (coal, gas and oil) in the year 2020 will account for 88.5 percent of the world's needs for energy. Oil and gas will have to provide 37.9 percent and 28.5 percent respectively. During the next 20 years, energy demand is projected to expand more than 50 percent, increasing in the industrialized world by some 23 percent while more than doubling in

the developing world, especially in Asia.[1] To meet this massive increase in demand, regions outside the the Persian Gulf will have to add very substantially to the total stream of supply. New regions of production, therefore, will reshape the world's existing geopolitical balances.

Geopolitics and Energy Security

A case in point is the changing relationship between western Europe and Russia. From the 1960s to the 1990s one of America's greatest worries was that the Soviet Union would gain influence over Europe's sources of oil and gas in the Middle East. But in recent years, the leading members of the European Union, especially Germany and Italy, have been making themselves dependent on Russia directly by subsidizing Russian oil, gas, and pipelines. Changes in basic economic dependencies inevitably undermine old alignments and lead to new strategic flirtations, if not alliances. There is every reason to question to what extent the E.U. can maintain an alignment with the United States when it gets nearly half of its energy directly from Russia. Moreover, if alignment with the U.S. were to become an obstacle to Europe obtaining oil and gas from its non-Russian sources, mainly in the Persian Gulf, the U.S.-European alliance would be on shaky ground indeed. This easily could happen due to possible, even likely, shifts in government power in the Persian Gulf region in favor of anti-American trends.

A recent study[2] by CSIS (Center for Strategic and International Studies) in Washington, D. C., foresees that by 2020, 50 percent of estimated total global oil demand will be met by countries posing a high risk of internal instability. Crises in the world's key energy-producing countries are highly likely for the next two decades. There is little likelihood that such crises will bring to power rulers friendlier to America than the current ones, since 65.3 of the recoverable oil reserves of the world (683.6 billion barrels)[3] are in the unstable and largely anti-American Middle East region. Saudi Arabia produces a 25.3 percent share, while Iraq puts out 10.8 percent and Iran 8.6 percent.

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[1]Robert Ebel, "The Geopolitics of Energy into the 21st Century," CSIS (March 2001), CSIS website (www.csis.org) Energy Program, "Executive Summary," p. xv.
[2] Ebel, "The Geopolitics of Energy into the 21st Century."
[3] *BPAmoco Statistical Review of World Energy*, June 2001. (Also available online:www.bp.com/centres/energy/)

Table 2:
Proven (Recoverable) Reserves of Selected Countries and Regions (end of 2000)

Countries	*Billion barrels*	*Billion tonnes*	*Share of total (%)*	*R/P * ratio (years)*
United States	**29.7**	**3.7**	**2.8**	**10.4**
Mexico	**28.3**	**4.0**	**2.7**	**23.5**
Venezuela	**76.9**	**11.1**	**7.3**	**66.4**
Total North, South and Central America	**159.6**	**22.1**	**12.1**	**22**
Norway	**9.4**	**1.2**	**0.9**	**7.7**
U. Kingdom	**5.0**	**0.7**	**0.5**	**5.3**
Total Europe	**19.1**	**2.5**	**1.9**	**7.7**
Russia	**48.6**	**6.7**	**4.6**	**20.6**
Iran	**89.7**	**12.3**	**8.6**	**65.7**
Iraq	**112.5**	**15.1**	**10.8**	**> 100**
S.Arabia	**261.7**	**35.8**	**25.0**	**81.1**
Kuwait	**96.5**	**13.3**	**9.2**	**> 100**
U. Arab Emirates	**97.8**	**12.6**	**9.3**	**> 100**
Total Middle East	**683.6**	**92.5**	**65.3**	**83.2**
Algeria	**9.2**	**1.2**	**0.9**	**17.4**
Nigeria	**22.5**	**3.1**	**2.2**	**29.4**
Libya	**29.5**	**3.9**	**2.8**	**55.3**
China	**24.0**	**3.3**	**2.3**	**20.2**
World Total	**1046.4**	**142.1**	**100.0**	**39.9**

Source: BPAmoco Statistical Review of World Energy, June 2001, p. 4.
(*) R/P ratio is the ratio of reserves to the current production volume of the specific country. It is an indication of how long the existing reserves could last with the current production rates.

Since the Persian Gulf is expected to be responsible for almost 80 percent of world crude exports between the years 2000 and 2020 and for a still substantial 54 to 67 percent by the year 2020,[4] who controls the flow of such supplies is crucial. Furthermore, the recent high prices of oil have allowed states to invest heavily in Weapons of Mass Destruction (WMD). The primary external beneficiary of this development, both economically and diplomatically, has been Russia.[5] Hence no one should be confident that these sources of oil and gas can be relied on to fuel the prosperity and security of the Western world. It is therefore important to consider the conditions of access to

[4] "Reliable, Affordable and Environmentally Sound Energy for American Future," *Report of the National Energy Policy Development Group to The White House*, May, 2001, p. 4-8 (www.whitehouse.gov/energy/Chapter8.pdf).
[5] Elnur Soltan, "Hatemi'nin Rusya Ziyareti: Soyut Anlaşmaların Somut Sonuçları" (Hatemi's Visit to Russia: Concrete Results of Abstract Agreements), *Stratejik Analiz*, April 2001 [Turkish] pp. 5-19.

the large and growing energy sources outside the Persian Gulf, sources that may amount to nearly half the world's exports by 2020, and of course a much higher percentage of world consumption.

Some countries (Russia, Iran, Iraq, Azerbaijan and Kazakhstan) are self-sufficient in hydrocarbon reserves but need modern technology and investment to develop and benefit from those sources. The U.S. is 50 percent dependent on oil imports; Turkey and Israel are almost totally dependent on outside oil and gas. Almost 50 percent of U.S. oil imports come from the Western hemisphere, mostly from Canada (15 percent), Venezuela (14 percent) and Mexico (12 percent). Middle East countries supply 24 percent of total U.S. oil imports (Saudi Arabia supplies 14 percent). Hence the U.S. gets only about one eighth of its oil from the Middle East. That proportion is dropping.

A recent CIA report estimates that by the year 2015, only 10 percent of Persian Gulf oil will go to the Western hemisphere, while 75 percent will go to Asian markets.[6] Latin American sources (Venezuela, Mexico and Brazil) are becoming more important for the U.S., as are domestic reserves including Alaska. Africa will ship more and more oil to the U.S. Hence for the U.S. the hydrocarbon sources of the Caspian seem less important and are not high on its priority list of hydrocarbon imports. This may be one reason for the significant difference between the rhetoric and the real application of the administration's "multiple pipelines strategy" towards the Caspian.

The current and foreseen dependence of its traditional European and Asian allies on Middle Eastern sources is more critical. Based on these remarks, Ebel of CSIS makes the following conclusion: "The share of world oil production from the former Soviet Union is projected to increase from nine percent to almost 12 percent. But. . . this oil will follow the market, not attempt to lead it." Such forecasts underestimate the highly volatile political nature of the Middle East and the vital need for diversification to ensure energy security. A reasonable respect for diversity and security dictates that the importance of Caspian hydrocarbons will greatly increase. It is expected that access to energy will be an increasingly divisive issue for the U.S. and its allies.[7] For the last 50 years, Europe has imported large quantities of oil from the Persian Gulf

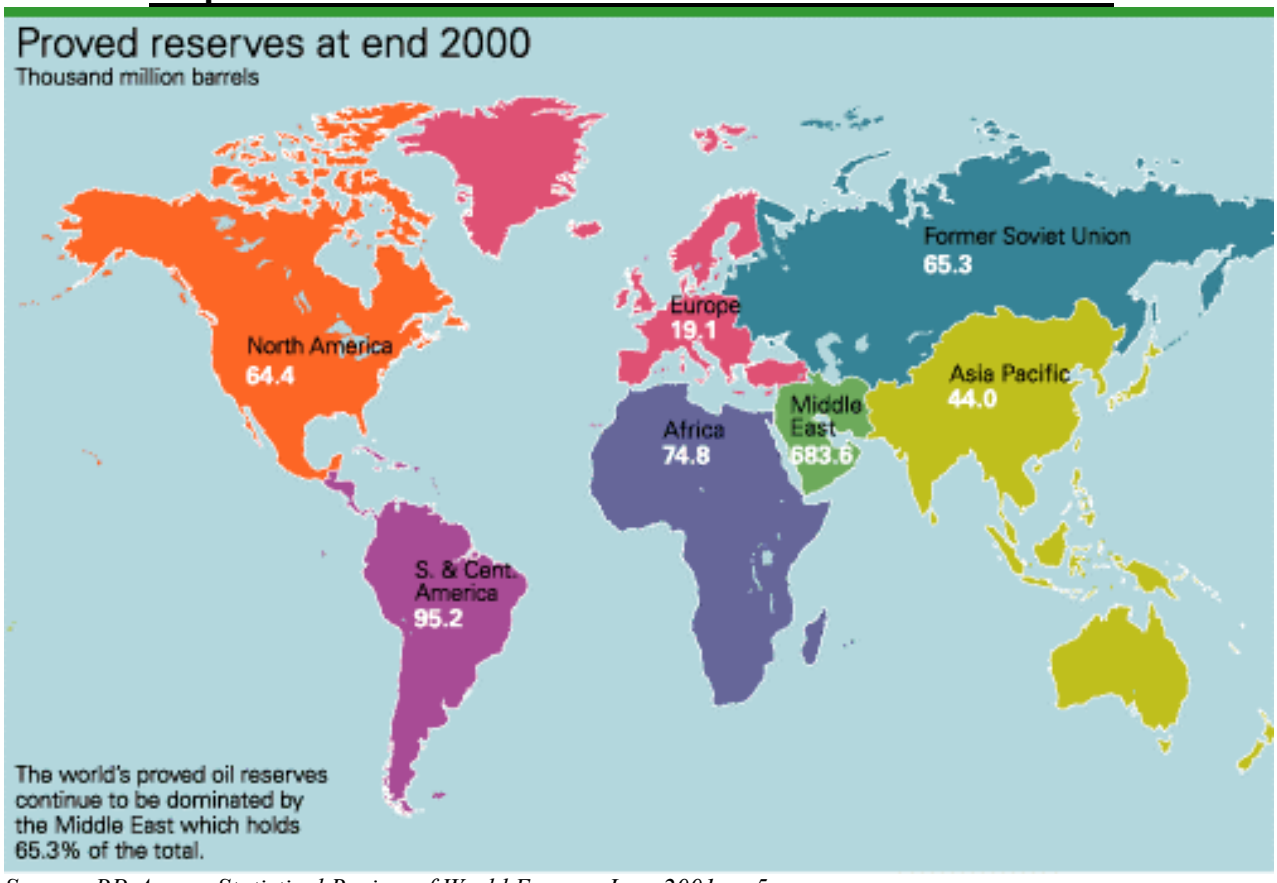
[6] "Global Trends 2015: A Dialogue About the Future with Non-government Experts," www.cia.gov/cia/publications/globaltrends2015

[7] R. Sokolsky, S. Johnson and S. Larrabee, "Persian Gulf Security: Improving Allied Military Contributions," RAND, 2001 (www.rand.org/publications/MR/MR1245.ch3.pdf), p. 31.

and has been a prime beneficiary of the American security umbrella in the region. But since the Gulf War, U.S. influence in the region has dropped steadily; by 2001 association with America has become a net liability for nearly anyone in the region, or who tries to do business there. To add to the strain, some major European, Asian and Russian oil companies (TotalfinaElf, Shell, ENI and others) are taking advantage of anti-Americanism generated by U.S. sanctions toward Iran and Iraq by investing there, free of U.S. competition. Therefore it is questionable whether the U.S. will be able or willing to secure Europe's (and Asia's) Middle Eastern oil supplies.

All of this again focuses our attention on the oil and gas of the Caspian basin. While control over the export of Caspian oil and gas will not by itself determine the alignments and alliances of the world's major countries, it will certainly be an important factor. This control will decide whether the governments of the region provide oil and gas to the West on a commercial basis or attach strategic and political strings, as do Russia and the Middle East.

Map 1: The Distribution of World Recoverable Oil Reserves



Source: BP-Amoco Statistical Review of World Energy, June 2001, p. 5.

Caspian Hydrocarbon Potential as an Alternative and Strategic Resource

Evaluations of the hydrocarbon potential of the Caspian are varied. Some have compared it to the North Sea. Others, exaggerating, have compared it to that of the Middle East. Neither is true. Sometimes, such estimates use the term "potential reserves" instead of proven "recoverable reserves." Other times, the estimates mistakenly assume that currently proven, recoverable reserves are the only ones that exist. But there are other reasons for miscalculations. Some national oil companies around the Caspian tend to exaggerate their unexplored (potential) reserves to attract foreign investors. On the other hand, some major oil companies try to play down those reserves, either to receive better terms in the Production Sharing Agreements or to delay major investments like main export pipelines, as we now are observing in the decision process of the Baku-Ceyhan oil pipeline from the Caspian.

The proven recoverable oil reserves of the Caspian amount to 18.4-34.9 billion barrels[8] (Table 3); that forms 1.8-3.4 percent of the proven (and recoverable) world oil reserves. But the probable Caspian reserves (together with those already proven) are estimated to be as high as 253-270 billion barrels, which represents 24 to 26 percent of the world total. Roughly 260 undrilled probable oil-bearing geologic structures are reported to be present in the Caspian area. The recent discovery (Kasaghan: OKIOC) in the Kazakhstan section of the Caspian supports this estimated potential. The sum of the proven and estimated gas reserves of the region is given by the same source as 645-665 trillion cubic feet (16-19 trillion cubic meters). That is 11-12 percent of the world total. The reserves are there; but exploration, production and exportation need vast investment and time.

The land-locked region does not have access to all of the worldwide resources of the oil and gas industry, such as marine drilling and construction fleets or world-scale fabrication facilities.[9] As a result, the Caspian region must be more self-sufficient than most developing hydrocarbon basins.

[8] *U.S. Energy Information Administration*, website (www.eia.doe.gov), August 2001.
[9] K.T. [Terry] Koonce, President Exxon Ventures (CIS) Inc, "Caspian Infrastructure," talk delivered at CACI, Dec. 9 1998.

Therefore, the development of the hydrocarbon potential of the region faces serious competition from the existing dominant supplying regions like the Middle East or Africa, which in turn limits the development and marketing chances for the Caspian resources.

It is even more important to the newly independent republics in the Caspian region than it is to the world that the former be able to immediately export their hydrocarbon riches through route(s) that are not exclusively across Russia (which is the current status). Since the only existing export means from the region crosses Russian Federation territory; the export of Caspian oil and gas immediately in a politically secure manner means exporting them through an alternative and dependable route, that is, a route not crossing Russia. Turkey offers the most rational solution, since the other alternative is crossing Iran, which is politically and economically unrealistic. Even neglecting the Iran-Libya Sanctions Act, economic facts make the Iranian route irrational for any other producer in the Caspian. Iran produces its own oil much closer to the loading ports in the Persian Gulf; it is therefore impossible for the Azeri, Kazakh or Turkmen oil to compete with Iranian crude, given transportation costs for an extra 1000-1700 kilometers.

In his remarks Valeh Alesgarov, vice president of Azerbaijan's state oil company, states that, "We simply wouldn't be able to compete with them [Iran]. So we are left to direct our oil to the European and American market. If that's the case, then why should we take a route through Iran instead of one that is closer to our final destination? By going through Ceyhan [Turkish port], it would be both profitable and feasible for us to access any place in Europe and America via large tankers." The market, he continues, is already captured in the Persian Gulf, and there is no rationale for Caspian producers to transport their oil through Iran. He concludes, "This is a vital issue that offers a very suitable area of cooperation for the Caspian producers like Azerbaijan, Kazakhstan and Turkmenistan and the consumers like Turkey, Israel, Europe and the U.S." [10]

The problem with the Caspian's hydrocarbon potential is not its size, which is clearly significant, but its unsolved export dilemma. The existing outlets for export from the region have to cross Russian territory. Moreover, the Soviets consciously designed this infrastructure to help maintain

[10] Valeh Alesgarov, "Current Trends and Developments in Azerbaijan's Oil," *Azerbaijan International*, Spring 2001 (also available at www.azer.com).

central control of the united republics. This infrastructure includes oil and gas pipelines, railways and the Volga-Don channel. Such exclusivity is a very effective tool in the hands of Russian policy makers and they are succesfully using it to exert political pressure on the now supposedly independent republics in the region. For Turkey in turn, being the major outlet for Caspian energy means being able to diversify its supply sources of energy and cementing its ties to its preferred partners in the West. Projects like Baku-Ceyhan oil pipeline, Turkmenistan-Turkey natural gas pipeline, Azerbaijan-Turkey natural gas pipeline, are all part of the so-called East-West Corridor. The construction of this corridor would allow the West, the Caspian countries, Turkey and Israel to benefit from Caspian energy while avoiding likely difficulties with countries such as Russia, Iran and Iraq.

The governments of the U.S. and Turkey are frequently "expressing their support" for the actualization of this integrated project. Azerbaijan and Georgia had already ratified the framework agreements for Baku-Tblisi-Ceyhan in their parliaments. But despite these positive steps, neither Western oil companies nor Western governments have put up the necessary money for any part of the East-West Corridor. Since the project is an integrated one, failure of any one of those projects will adversely affect the others. Conversely, if two or more construction projects were to proceed concurrently, the capital investment and operational costs of each could be reduced. Yet today the claims of strong will by some high level officials for constructing the integrated TransCaspian Pipeline System within the framework of the East-West Corridor seem more like wishful thinking than a prelude to substantial upstream investment and the planning of export solutions to make it pay off.

Table 3:
Caspian Sea Region Oil Reserves
(Billion barrels)

	Proven Oil Reserves	Possible Oil Reserves	Total Oil Reserves
Azerbaijan	**3.6-12.5**	**32**	**36-45**
Iran (*)	**0.1**	**15**	**15**
Kazakhstan	**10.0-17.6**	**92**	**102-110**
Russia (*)	**2.7**	**14**	**17**
Turkmenistan	**1.7**	**80**	**82**
Uzbekistan	**0.3**	**2**	**2**
Total	**18.4-34.9**	**235**	**253-270**

Source: Energy Information Administration, Department of Energy, U.S.; June 2000.
(*) Only the regions near the Caspian are included.

Table 4:
Caspian Sea Region Gas Reserves
(Trillion cubic feet; 35.31 cubic feet = 1 cubic meter)

	Proven Gas Reserves	Possible Gas Reserves	Total Gas Reserves
Azerbaijan	**11**	**35**	**46**
Iran (*)	**0**	**11**	**11**
Kazakhstan	**53-83**	**88**	**141-171**
Russia (*)	**NA**	**NA**	**NA**
Turkmenistan	**98-155**	**159**	**257-314**
Uzbekistan	**74-88**	**35**	**109-123**
Total	**236-337**	**328**	**564-665**

Source: Energy Information Administration, Department of Energy, U.S.; June 2000.
(*) Only the regions near the Caspian are included.

Markets for Caspian Oil

The most atrractive point of distribution for Caspian crude oil is the Mediterranian. The eastern Mediterranian region itself represents a major market. Other potential markets are the Black Sea, European (East Coastal, West Coastal and Central Europe) markets. The sour Kazakh and Russian crudes have higher potential in the Black Sea market, while the Azeri crude has a higher chance in the east Mediterranian and European markets.

The most important challenge for the Caspian crude in the Mediterranean markets is excess supply (contrary to popular opinion, there really is something of a natural oil glut on the market) and the logistic advantage of the North African and Middle Eastern crudes. Some Middle Eastern crude will continue to be purchased and processed in the region, since there are some refineries in which Kuwaiti and Saudi Arabian producers have equities. To a certain extent, this is true for West African crudes as well. Because these conditions are not easy to change, Caspian crude will face a serious economic challenge in the Mediterranean and European markets. Caspian energy should be preferred, however, because of strategic considerations, the need for diversification, and the need for energy security. In the not-so-long run, Caspian energy would also bring concrete economic benefits in the form of lower prices. There is no doubt that, if the Baku-Ceyhan oil pipeline and similar new pipelines were implemented to let new resources reach the market, it would cause oil prices to decrease, which is in favor of countries like Turkey and Israel that are significantly dependent on imports. Azerbaijan, Kazakhstan and Turkmenistan will be other beneficiaries, since they will capture the opportunity of exporting their oil through

diversified, uninterrupted routes and with international prices. Conversely, Russia, the members of OPEC and other (non-OPEC) producers, who are the existing owners of the market, will be adversely affected.

Markets for Caspian Gas

Turkmen, Uzbek and Azeri gas reserves are significant and alternative sources to supply the rapidly growing world and regional demand. One of the most important obstacles, again, is the enormous gas reserves (first in the world: 48 trillion cubic meters) of Russia and the exclusive gas export pipeline network that is totally under its control. Ironically, Russia is also a purchaser for Turkmen gas, but at below-market prices ($40 per 1000 cubic feet) and paying only partially in cash. Turkey, Europe, India, Pakistan and Iran are significant markets. Although Iran has world class gas reserves (23 trillion cubic meters), it is not an exporter. Iran injects all of its gas production into its oil fields to maintain pressure and thus oil production. Therefore, with frequent interruptions, Iran is also purchasing Turkmen gas (like Russia). Ukraine is one of the biggest markets for Caspian gas but its inability to pay is a major problem. Another negative factor is that Turkmen gas has to traverse Russian territory and use the Russian pipeline network to reach the Ukranian market.

Turkey is the most immediate and feasible market for Caspian gas. This is true for both the Azeri and Turkmen gas. But, here the problem is the already existing "take or pay agreements"[11] signed by Turkey to purchase high volumes of gas from Russia and Iran. In the last 5-6 years, Turkish officials signed so many of these agreements for gas imports that today the country seems over-contracted. Although diversity is the most important element of a country's energy policy, Turkey is becoming almost exclusively dependent on Russia for its gas imports; its second and very limited alternative is Iranian gas. This irrational policy is further addressed later in this study, but at this point it is sufficient to observe that despite official statements to the contrary, the Turkish

[11] "Take-or-pay agreement" is a common type of long-term gas contract. The aim is to guarantee both the supplier and the consumer countries against the failure of either party, since such long-term (25 years or more) agreements need billions of dollars investment (both for gas exploration/production and for transportation/distribution projects). Thus, if the consumer country fails to complete its commitments, it still must pay the cost of the gas, whether it consumes it or not. Similarly, if the supplier fails to supply the volume of gas agreed upon in the contract, it must compensate for the losses of the consuming party.

domestic energy market is not large enough to absorb all the gas from Russia, Iran, Turkmenistan and Azerbaijan.

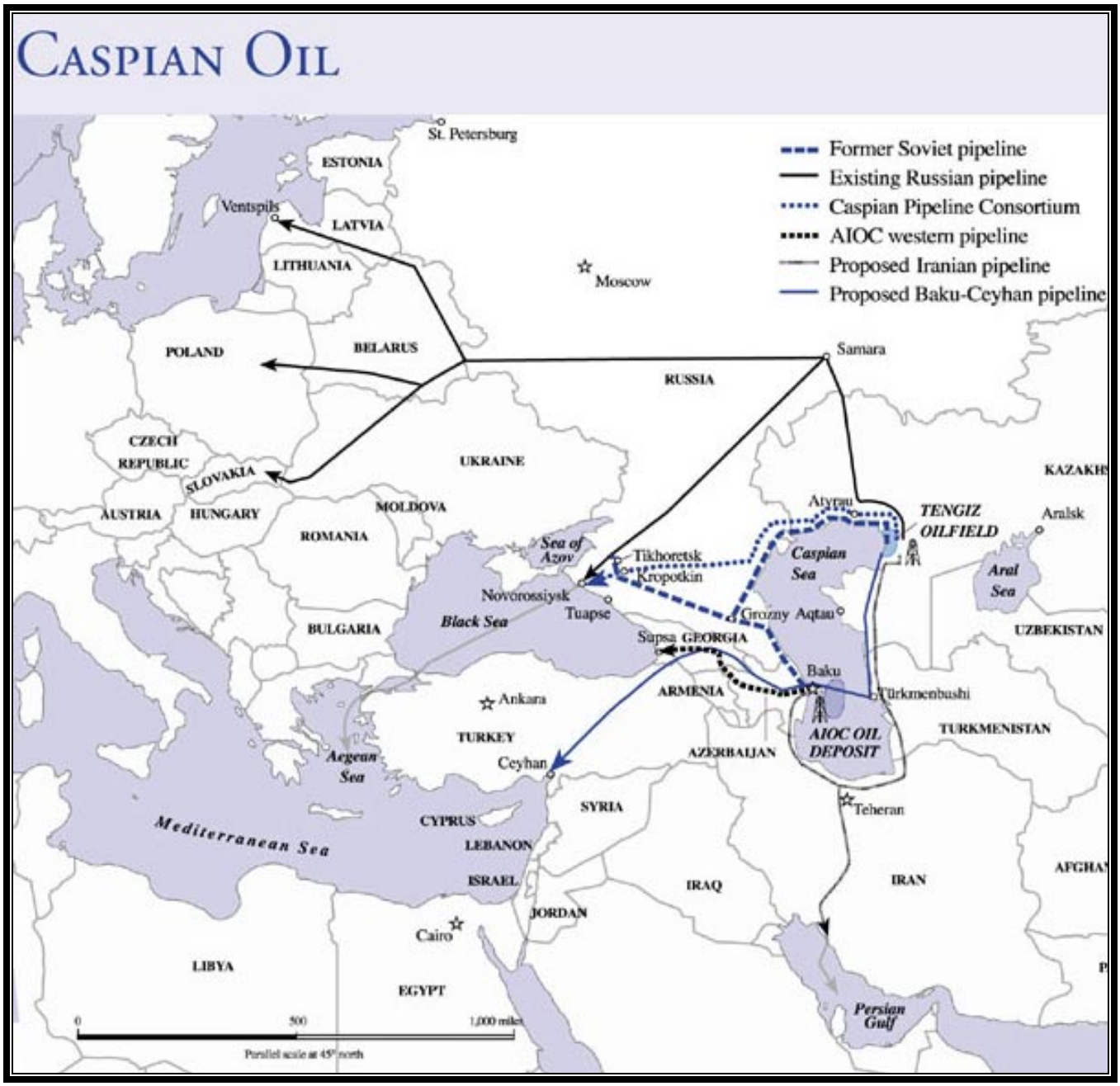
As a result of the agreements signed with Iran and Russia, a deal that Turkey had already signed for Turkmen gas stalled. (There were other problems, including the ongoing dispute over the status of the Caspian and the call for advance payment by Turkmenistan President Saparmurad Niyazov.) Turkey's deal for Azeri gas (from Shah Deniz field) was limited to 6.6 billion cubic meters per year (although the flow easily could be increased to 16 billion), and the first delivery was postponed from 2003 to 2005. Turkey should have given priority to the Azeri gas and then sought a parallel pipeline to deliver Turkmen gas. Becoming dependent on Russia for gas limits Turkey's options toward the Caucasus and Central Asia. Furthermore, it adds to the hegemony of the Russian Federation in the region as previously described. Iranian regimes have always competed with Turkey in the regional power game and tried to destabilize Turkey by giving support to Islamic radical elements and/or separatist terrorist groups like PKK. It is therefore hard to understand and agree with giving priority to Russian and Iranian gas against the Caspian resources.

While Turkey is the most reasonable, significant and closest market for Caspian oil and gas, Israel is not far behind. If Turkey and Israel were to develop a joint project, Caspian resources could provide a secure and relatively inexpensive energy flow to both countries. Of course, Caspian gas is plentiful enough to serve other markets as well. But the construction of pipelines (or lack thereof) will dictate whom it actually serves.

Pipeline Politics

Following the rush of the early 1990s to invest in exploration and production, it became obvious that export and marketing oil and gas from a land-locked region was a problem that would require significant infrastructure investment. The existing infrastructure consists of old pipelines that traverse the Russian Federation. Several pipeline projects have been proposed by various different companies and/or governments, as illustrated in figure 1.

FIGURE 1: EXISTING AND PROPOSED CASPIAN REGION PIPELINES



Source: U.S. Dept. of Energy, http://www.ceip.org/files/PDF/rea.Agenda.pdf

Russia

Russia has a monopoly of access to Caspian oil and gas. Moreover, it owns the world's largest gas reserves, the world's eighth largest oil reserves, and earns fully half of its foreign exchange through sales of oil and gas. It therefore has every incentive to exploit that monopoly to increase

the value of its own assets. All that is apart from Russia's nationalist ambitions and history of rapacious economics, which heighten that incentive. In addition, Russia views the existing monopoly of the export routes as a tool for re-establishing a measure of Soviet-era control over the nominally independent countries of Central Asia.

Russia's export monopoly is not limited to the pipelines, but also includes the railways and even the waterways, such as the Volga-Don Channel. For the countries in the region, such exclusivity makes it very difficult, if not impossible, to even consider policies that do not conform to Russian exigencies. Russia presses home its demands by creating frequent gas shortages in Armenia, Georgia, and especially Ukraine. The U.S. strategy towards the region, claiming to aim at greater real independence for the Soviet successor states, is to add new oil pipelines to the existing Russian system. The pipelines that the U.S. government supports are the Caspian Pipeline Consortium (CPC), the Baku-Grozny-Novorossisk early oil line and the Baku-Dagestan-Novorossisk (Cechenistan by-pass) line. But since adding to the Russian network does nothing to diminish the existing export monopoly, it is hard to understand how these new export lines would serve to reinforce the independence of the newly formed countries. The construction of the CPC line is completed and will transport Kazakh oil (from Tengiz field) to Novorossisk (Black Sea port of the Russian Federation), still through Russian territory. The first phase will transport 26 million tons per annum (mta) and will be operational this month. The second phase aims to expand the capacity to 72 mta. U.S. companies like Chevron and Exxon-Mobil are the most important shareholders of this consortium. These two companies are holding 75 percent of the stake in the giant Tengiz project and are the principal financers of the pipeline. These are, however, real projects. Real money has been committed, and real oil and gas are flowing.

The same cannot be said for projects that bypass Russia and are part of the East-West Corridor strategy nominally favored by the U.S. and Turkey. The Trans-Caspian Project, which aims to transport 16 bcm Turkmen gas to Turkey crossing the Caspian by an undersea pipeline, has been suspended. Consequently Turkmenistan signed an agreement with the RF to sell 30 bcm of their gas at absurdly low prices ($40 per 1000 cubic meters). That is almost one third of the international price. The West's lack of seriousness about the East-West Corridor has allowed the Russians to divert the gas of Turkmenistan, their biggest competitor, to and through their territory

at a cheap price, to be re-sold at world prices. They are reserving their vast gas reserves for the future and avoiding hard currency expenses for exploration and production in their Siberian fields. They are capturing the most attractive regional gas market, Turkey. In addition, since the Turkmen gas will cross Kazakhstan before it reaches the Russian Federation (RF), the Kazaks will get transit revenues and therefore will support one more expansion of Russian power.

The lack of alternative pipelines is also drawing Azerbaijan back into Moscow's orbit. A case in point is the recent agreement between Azerbaijan and the RF to restart the oil flows through the previously closed Baku-Novorossisk oil line. Azerbaijan needs the Russian gas today and therefore agreed to restart sending Azeri oil to Russia in return. If this exclusivity is not breached, Russian hegemony will be back in Baku.

Iran

Iran's radical regime does not feel comfortable with billions of dollars worth of investment flowing into the economies of its neighbors, Turkmenistan, Azerbaijan and Kazakhstan. These countries represent serious potential competitors for Iran in the oil and gas markets. If and when Caspian oil and gas begin flowing into the international market, Iran (and the others) will have to live with decreased revenues. No amount of "pistachio trading" will be able to fill the gap. Furthermore, a wealthy Azerbaijan will be a very dangerous center of attraction for the 15 to 20 million Azeri who live in the northern part of Iran. Finally, any export route passing through secular Turkey is another problem for the Iranian regime, which has never been friendly with Turkey in its history.

Iran sees Turkey as the biggest rival, both for historic and geopolitical reasons and because while Iran has a clerical regime, Turkey has a secular one. The regime in Iran is using all means at its command to destabilize Turkey through open support for terrorist groups like PKK and Hizbollah. To the extent that Iran's finances were reduced, for example by competition from Caspian oil, Turkey would be better off. Incidentally, U.S. sanctions on Iran have benefited Turkey indirectly by holding down Iran's oil industry to some extent. U.S. sanctions effectively limited cash flows, as well as access to the hi-tech equipment required to explore and produce the

oil and gas reserves which are the most important props of Iran's declining economy. As Ilan Berman has shown,[12] however, Russian and European companies have to some extent filled the investment gap created by U.S. sanctions. Again, this situation has benefited Russia far more than Iran.

Russia plays a double track policy with Iran. While aligning with Iran in the nuclear area by giving training and equipment support ("against the single superpower U.S."), it also has done its best to weaken Iran as its biggest competitor in the oil and gas business. Russia is recently changing its stance on the status of the Caspian and has already aligned with Azerbaijan and Kazakhstan. This is a tactical move to squeeze Iran in the regional power struggle. Iran claims that the Caspian should be equally divided into five segments among the five littoral states around the Caspian. But Azerbaijan's view is totally different. It claims that the Caspian Sea should be divided into national sectors according to the median line and each country should work freely in its own respective sector. Such a solution leaves Iran an area around 12 percent of the Caspian instead of 20 percent as it claims. Iran has not found as many deposits in the Caspian as have the other countries. Turkmenistan's stance is closer to that of Iran. Russia recently discovered some oil reserves in the northern Caspian, but those are also not comparable to Kazakh and Azeri Caspian reserves. As long as the legal status of the Caspian remains disputed, Turkmenistan will have problems in constructing pipelines that cross the Caspian and therefore continue to rely on exclusive export routes through Russia. Its only current alternative is to look for export means through Iran, one of its most significant competitors. Therefore Russia is the biggest beneficiary of the unresolved status of the Caspian.

Russian-Iranian relations extend to the area of WMD. Russia is reported to be constructing a nuclear reactor in Iran. The Shahab-3 missiles are built with Russian technological support. Shahab-3 has similarities with the North Korean Nodong-1, a developed Scud-B technology. This missile is reported to have a range of 1300 to 1500 km. Shahab-4 is in the research phase and expected to be effective within a range of 2000 km. Shahab-5 is reportedly being developed with North Korean assistance, based on the technology of its Taepo Dong missile, and is planned to

[12] Ilan Berman, "Russia and the Mideast Vacuum, *IASPS Research Papers in Strategy,* 12, (June 2001).

reach a range of 3500 to 5000 km.[13] Some analysts are not taking these efforts seriously. Reportedly, Iran has chemical weapons, and is trying to possess biological weapons. In 1998, the U.S. passed a law attempting to prevent Iran's efforts to produce missiles. As of January 1, 1999 the U.S. administration had imposed sanctions on ten companies within the framework of this law.

With these facts in mind, it is hard to defend Turkey's decision to purchase 10 bcm per year gas from Iran. The agreement was initially signed in 1996 and modified in 1997 into a "take or pay" arrangement. Hence today Turkey has to purchase Iranian gas at the border. Initial gas flows were expected as early as 1999. But due to financial and technical problems on both sides, the deliveries were postponed to July 31, 2001 by mutual agreement. When this postponed date was achieved, however, there were still obstacles and accusations. The Iranian press claimed that the Turkish side was trying to alter the deal in favor of Russian gas since the market was too small for both sources. Now the deliveries are said to start this month after the technical approval of the gas metering station in Bazergan (Iranian territory). If there is a further delay, Iran may try to use this as a lever in bi-lateral relations. If, on the other hand, Caspian oil and gas were flowing east to west (from Kazakhstan, Azerbaijan and Turkmenistan via Georgia), Iran's leverage would be reduced.

Iran of course is trying to prevent that from happening. To attract Caspian oil pipelines to its territory it announced transit fee reductions.[14] Iranian diplomacy has also been successful regarding Azerbaijan. As a result, Azeri Foreign Minister Heidar Guliyev declared: "Azerbaijan has always supported multiple options for oil pipelines," meaning that Azerbaijan is not wedded to support for the East-West pipeline through Turkey.[15] Such a declaration might well be interpreted as a maneuver to force the U.S. and Turkish administrations to go beyond press releases or speeches of good will and take concrete steps toward the construction of the Baku-Ceyhan line.

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[13] Deniz Altinbas, "The Armament Efforts of the Iranian Armed Forces," *Ayrasya Dosyasi*, (October 1999), pp. 250-270 [Turkish].
[14] "Iranian Deal May Entice Caspian Oil Away From Turkish Pipeline," http://www.stratfor.com/MEAF/commentary/m9912092330.htm
[15] "Azerbaijan Re-examines Iranian Relations," http://www.stratfor.com/CIS/commentary/c0001192359.htm

However, the following is also true:

> Now that Grozny has been reclaimed as a ruin by the Putin-led Russian offensive, Azerbaijan's President Heidar Aliyev and to a greater extent, Georgian President Eduard Shevardnadze have inevitably been forced to make subtle policy adjustments to guard themselves against overt Russian pressure or even action in the South Caucasus. Georgia's aspirations for NATO membership, for example, have been replaced with statements of intent to declare neutrality.[16]

In other words, the Russian-Iranian relationship and the lack of Western countermeasures are forcing everyone in the region to accommodate themselves to harsh realities.

Kazakhstan is certainly doing that. Although there are contradictory statements by top-level Kazakh officials (including President Abishevich Nazarbayev), the recent declarations of Kazakh officials in favor of the Iranian route for oil exports and not in favor of Baku-Ceyhan show that Kazakhstan has moved a long way towards the Russian-Iranian position. Not least of the reasons for this is that U.S. oil companies like Chevron, Exxon-Mobil and Conoco have always preferred the southern (Iranian) route and not Baku-Ceyhan. Observers in the area expect that the Bush Administration will favor routes that go through Iran.[17] This poses another serious obstacle against Baku-Ceyhan and the East-West Corridor.

Turkey

Turkey imports 88 percent of its oil consumption and almost all of its gas consumption, paying $5.6 billion for crude oil and $3.1 billion for gas imports in 2000.

Table-5:
Turkey's Energy Demand By Fuel Type (%)

Years	Oil	Gas	Coal	Hydraulic	Others
1999	40.95	16.05	30.22	3.47	9.31
2020	27.10	29.50	32.60	3.60	7.20

Sources: Ministry of Energy and Natural Resources, WEC Turkish National Committee, 2000.

[16] Bulent Aliriza, "The Eurasian Energy Corridor: Turning Into a Cul-de-Sac?" available at http://www.csis.org/turkey/CEU000225.htm

[17] Charles Recknagle, "Iran: Bush Administration May Reconsider Its Energy Policy," Radio Free Europe/Radio Liberty (RFE/RL), Jan. 31, 2001.

As shown, while oil still will be important to Turkey, natural gas is expected (or planned) to be of even greater importance – and consumption must grow. Hence oil and gas pipeline projects are extraordinarily serious matters in Turkey.

Table 6: Turkey's Oil Imports (1998)

Countries	*Imports (million tons)*
Iraq	**3.6**
Iran	**4.2**
Libya	**3.5**
S. Arabia	**5.5**
Russia	**0.5**
Syria	**2.8**
Algeria	**1.2**
Egypt	**2.1**
Total	**23.4**

Source: General Directorate of Petroleum Affairs Yearly Bulletin, 1999.

A quick look at the list of supply sources does not inspire confidence in the stability of Turkey's oil supply, dominated as it is by regimes both generally unstable and hostile to Turkey. While the oil supply is relatively easy to diversify, the supply of gas is less flexible.

Turkey's Gas Supply Strategies (More Pipeline Politics)

Turkey consumed roughly 14 bcm gas in the year 2000. Roughly 8 bcm was imported from Russia through a pipeline crossing Moldova, Ukraine, Romania and Bulgaria. Agreements had already been signed to increase this amount to 14 bcm and expansion is in progress. (The consortium in charge announced that 3.8 bcm will be available before 2001.) The rest (5.2 bcm) comes from Algeria and Nigeria in the form of LNG (Liquefied Natural Gas). Based on the previously given ambitious demand estimates, Turkey had signed various "take or pay" agreements, memoranda of understanding and protocols. The existing and the "take or pay" agreements signed (i.e., Turkey's commitments for securing energy supply) are listed in Table 8, while the estimated gas consumption figures (Turkey's demand) are shown in Table 7, both supplied by BOTAS, the Turkish state pipeline company.

Table 7:
Turkey's Gas Demand Forecast by BOTAS and Turkish Energy Ministry[18]

Years	2000	2010	2015	2020
Residential	2.928	8.389	9.396	9.806
Industry	2.415	10.971	12.238	15.147
Fertilizer	839	929	929	929
Power	9.418	34.903	44.903	56.903
Total	15.600	55.192	67.466	82.785

Source: BOTAS (State Pipeline Company) website, 2001.

Table 8:
Natural Gas Purchase Agreements

AGREEMENTS	*Maximum (bcm)*	*Signature Date*	*Period*	*Status*
RUSSIA (West[19])	**6**	**86**	**25**	**In operation**
RUSSIA (East)	**8**	**98**	**23**	**In Operation**
RUSSIA (B.Stream) (Subsea via Black Sea)	**16**	**97**	**25**	**Raised finance, construction on land started, subsea almost started, targeted for April 2002**
IRAN	**10**	**96**	**22**	**Almost completed, postpones twice, problems exist**
AZERBAIJAN	**6.6**	**2001**	**15**	**Agreement signed, targeted for 2005**
TURKMENISTAN	**16**	**99**	**30**	**Agreement signed, problems unsolved**
ALGERIA (LNG)	**4**	**98**	**20**	**In Operation**
NIGERIA (LNG)	**1.2**	**95**	**20**	**In Operation**
TOTAL: 67.8 BCM				

Source: BOTAS, 2001.

In addition to these listed agreements, protocols and memoranda of understanding have also been signed with Egypt, Iraq (10 bcm), Yemen (LNG), Norway (LNG), and Qatar (LNG).

[18] These demand estimates are heavily criticized by local and international institutions and experts. The author of this paper also believes that the energy demand estimates, as well as the corresponding gas demand estimates, are too high, for several reasons. There is no serious planning and coordination to justify the demand estimate studies, and the methodology and programs used are incompetent. There are many factors suggesting that the official figures are overestimated.

[19] Russia (West): Gas supplies through an existing pipeline that transits Moldavia, Ukraine, Romania and Bulgaria. The initial capacity of the line was 6 bcm. The line capacity is being expanded to 14 bcm.

The Blue Stream Project: A Dangerous Strategy for the Caucasus

Turkey and Russia signed an agreement for 16 bcm/yr to be transported by a submerged pipeline to cross the Black Sea and to be further transported from Samsun (Black Sea port of Turkey) to Ankara. Russia's Gazprom, the Italian ENI, three Japanese companies and the French company Boygues declared their support for this ambitious project. In April 2000, the partners issued a press release claiming that they had finally secured the financing. Some German banks also announced support for the project. The agreements were ratified by the parliaments of Russia and Turkey, and tax incentives were given to make the project attractive and priority was given to this project against others. Although there are very serious technical and related environmental challenges to the project, the real danger lies in the project's strategic significance. Simply, if the project were successful, Turkey would be bound almost exclusively to a single gas source, namely Russia. Connecting a country's gas supplies almost exclusively to any single source is not a rational and secure strategy. And if that single source is Russia, the venture is even more hazardous. Once Russia is capable of shutting down Turkey's power grid, no one should expect Turkey ever to play a role in the region to which Russia might object. Despite diplomatic demarches to the contrary by the Russian side and their Turkish defenders, Azerbaijan, Kazakhstan, Turkmenistan, Georgia and even its ally Armenia have all suffered such interruptions in oil, gas and electricity supply.

Some have argued, "With Blue Stream, Russia will become dependent on Turkey."[20] But this does not reflect reality. Russia is already exporting 240 bcm of gas. It could easily do without the revenue from the 16 bcm (six percent of the total) that it would export to Turkey. But for the year 2000, this 16 bcm would amount to 68 percent of Turkey's gas consumption. In the year 2010, those ratios would be nine percent versus 56 percent. Furthermore, Russia will be transferring to Turkey the gas it buys from Turkmenistan for $36-40 per 1000 cubic meters, at a price not less than $110 (perhaps more) per 1000 cubic meters. And finally, since the electricity production, heating and similar vital requirements will be exclusively bound to this source, it seems that

[20] Turkish American Association panel discussion of the Blue Stream Project, Dec 1, 1999, Alexander Lebedev, Ambassador of the Russian Federation to Turkey to Necdet Pamir, then Energy Studies Director of Center for Strategic Studies of Turkey on the Strategic, Economic and Technical Issues, printed in *Avrasya Dosyasi,* (January 2000), pp. 346-360.

Turkey will be losing much more than the value of the gas if there should occur an unintentional or hostile interruption of the Blue Stream gas.

Another critical point is the difficulty in financing two big projects like Blue Stream and Turkmen Gas simultaneously. Despite claims to the contrary, in testimony to the U.S. Senate in 1999, Ed Smith, the president of Pipeline Solutions Group, openly said**:**

> Both the Blue Stream and TCP will bring gas to Turkey, but only one will be developed at a time because of the size of the market in Turkey. Turkey's demand for natural gas is very great and would seem to be big enough to support the development of both projects. *But it is not.* The enormous cost and risks involved in developing projects of this size require a high level of confidence that the market will be there when the gas arrives . . . We are therefore convinced that, once one of the two projects is widely seen as heading for successful financing, the other project will stall, probably to be delayed by as much as 5-10 years.[21]

Had Turkey given priority to Azeri and Turkmen gas, it would have diversified its sources, saved money, and been able to contribute to Western political aims in the region. Instead, it will be consuming Turkmenistan's gas, which Russia and Iran can buy at absurdly low prices, for which Turkey must pay dearly, and which cripples Turkey as an independent power and as an ally. It must be emphasized that Turkey (and Turkey's allies) are in this unenviable position as a direct result of the U.S. government's and Western companies' refusal to actually construct the East-West Corridor. The Blue Stream project itself is a blow to the prospects of the East-West Corridor.

Turkey finally signed an agreement in 2001 with Azerbaijan to purchase 6.6 bcm at its peak point from Shah Deniz field of Azerbaijan. According to this agreement, supply will begin late in 2004. Shah Deniz gas is of critical strategic importance for the East-West Corridor strategy because it will also contribute to the construction of Baku-Ceyhan. As noted previously, if both lines are laid parallel, the capital and operational expenses will be greatly reduced. On the other hand, if the construction of the Shah Deniz gas pipeline fails for any reason, the East-West Corridor fails with it.

[21] *Congressional Daily Digest,* 106th Congress, March 3, 1999, pp. D203-D212.

U.S. Pipeline Policy Toward the Caspian

After the collapse of the Soviet Union, U.S policy toward the region amounted to then Deputy Secretary of State Strobe Talbott's priority of "Russia First." Thus the U.S. helped the Russians to maintain greater control of the region than they would otherwise have been able to manage. The U.S. pipeline policy during this period, consistent with "Russia First," did not support pipelines that would bypass Russia. After 1995, the U.S. administration started to promote the idea of "multiple pipelines." This approach seemed to be an alternative to the exclusively Russian export system. This new approach was in parallel with Turkey's proposals, namely the Baku-Ceyhan crude oil pipeline to transport Azeri and Kazakh crude and the TransCaspian Gas Pipeline to transport Turkmen and Azeri gas to Turkey. But after six years of speeches and signature ceromonies, neither of these lines advanced. Instead, the aforementioned CPC pipeline was implemented and financed by Chevron and Exxon-Mobil. Hence while U.S. rhetoric changed, U.S. policy effectively has remained "Russia First." The most important developments in favor of Baku-Ceyhan after so many years of struggle were accomplished by non-Americans, indeed by locals, namely the agreements between Turkey, Azerbaijan and Georgia and between Georgia and Azerbaijan on transit fees. But of course, no pipeline, no transit fees.

So, while Westerners and those locals who would side with them were making empty plans for the East-West Corridor, others were determining the real course of events. The consensus of local analysts is that U.S. influence in the region has substantially ended,[22] while the World Economic Forum held in late April 2001 in Alma Aty reflected the growing influence of Russia in the region. Most of the leaders in the region seem to be more interested in securing themselves against radical Islamic threats than in bringing democracy to their countries. One after the other, they seem to be turning their faces towards the "old master," ratifying the weakening interest and influence of the U.S. in the region.[23]

Azerbaijan and Georgia still seem to be looking toward the Western camp. But even formerly pro-Western Turkmenistan is turning toward Russia after the frustration of negotiating with

[22] "Central Asia Shuns U.S. Hegemony," http:www.stratfor.com/CIS/commentary/0004281700.htm
[23] "U.S. Loses Influence Over Caspian Basin Oil," http://www.stratfor.com/CIS/specialreports/special27.htm

Western companies over the TCP. "Ties to the West" are said to be "worsening."[24] The March 2001 Caspian Littoral States Presidents' Meeting in Turkmenistan for seeking an agreement on the status of the Caspian was postponed, which further diminished the chance that a TransCaspian Gas Pipeline would ever be built.

The new U.S. administration's policy toward the region is of critical importance. There are conflicting messages from the administration. The Baker Institute's (Rice University) and the Council on Foreign Relations' *Joint Report* submitted to President Bush openly favor the Iranian route for Caspian oil exports.[25] But there are dissenting views in the same *Report* as well (e.g. Patrick Clawson) claiming that, "In these circumstances, it is inappropriate to assume, as the report does, that promoting Baku-Ceyhan is at odds with a commercial approach toward Caspian energy." Centers like Carnegie and Cato are also against supporting Baku-Ceyhan. But Carnegie, like many others, is advising the new administration to strengthen U.S. ties with Russia in the region. If the "Russia First" policy of Strobe Talbott prevails, the East-West Corridor strategy will be buried forever and first the Caucasus and then all of Central Asia will be left to the control of the Russian Federation.

Is There a Future For The East-West Corridor? (Yes, But...)

Turkey's interests in the Caspian region and beyond are not limited to its cultural and religious ties with the Turkic ethnic population in the newly independent countries. As has been shown, this interest has pragmatic and rational components like energy supply needs and security. The need for diversification should be considered the most vital and fundamental part of Turkey's energy policy. Such a policy then, should give its *priority* to the construction of the Baku-Ceyhan line and the Azeri and Turkmen gas lines to be laid, in part, parallel to it**.** This strategy overlaps with the "Multiple Pipelines" strategy of the U.S. and helps the economic (and therefore political) independence of countries like Azerbaijan, Georgia, Turkmenistan and Kazakhstan. But the project faces serious obstacles such as "commerciality" and "inadequate volumes." For the first one, it is clear that apples should be compared with apples: the comparison should be not only

[24] Michael Lelyveld, "Turkmenistan: Ties To West May Be Worsening," RFE/RL, May 2, 2000.
[25] "Strategic Energy Policy Challenges for the 21st Century"; *Report of an Independent Task Force Commissioned by President George W. Bush*, 2001. Available at www.rice.edu/projects/baker/Research/F-Policy/energy/energytf.htm

between the pipeline construction costs, but between total transportation costs. Tanker transportation costs, marketing opportunities (Turkey is one of the most attractive and close markets both for oil and gas); environmental costs and finally the strategic concepts should also be included in any comparison. Furthermore, the construction of a parallel Azeri and/or Turkmen gas line with the Baku-Ceyhan line will significantly reduce the capital and operational costs.

Therefore such an integrated package will be an interesting test for the seriousness of the claims raised by the AIOC companies. Since BP-Amoco is the leading stakeholder both in the Mega (oil) Project and the Shah Deniz (gas) Project, there still seems to be an important chance of a commercial "win-win" opportunity for the parties. The signing of the agreements by Georgia is a positive step toward Baku-Ceyhan. But any careful analyst knows that even with full government support, the most important part of any pipeline deal is to find the necessary throughput guarantees. Only then can one secure financing. The marketing strategy or the sales and purchase agreements are also needed to complement these steps. This final phase has not adequately been discussed but since there is a production surplus in the world, it is not that easy to market the "new comer" Caspian crude internationally. The Azeri oil has to compete mainly against the Middle Eastern, West African and North African crude in the Mediterranean market. As stated before, in the land-locked Caspian, the cost of investment is significantly higher than investment costs in the Middle East. But what is the price of secure sources of energy in an insecure world?

Moreover, there is the question of how much oil will be available for the pipeline to transport. To the extent that Russia (and then Iran) locks up production in the Caspian oil fields for its own pipelines there will be less available for Baku-Ceyhan. Baku-Ceyhan needs at least 20 mta of Kazakh oil (to add to 30 mta of Azeri oil). But the future Kazakh exports (Tengiz and Karacakhanak) are dedicated to the CPC line. Tengiz will have a peak production rate of 35 mta while the capacity of the CPC line is 70 mta. The Kazakh oil will be transported to a new port near Novorrossisk before the end of 2001 and eventually cause additional oil tanker threat to the Turkish Straits. If you open the web site of Chevron, you come face-to-face with this cold reality.

The recent discovery of the Kasaghan offshore field of Kazakhstan is a new and important resource, which could increase the chance of the Baku-Ceyhan project. Despite his former

promises to support Baku-Ceyhan with Kazakh crude, Nazarbayev signals a far distant date for a probable throughput for this line: the year 2015.[26] Furthermore, recent views by Kazakh Prime Minister Kasymzhomart Tokayev openly state that its "top priority, after the CPC, will be transportation through Iran."[27] The operator ENI (Italian) and TotalFinaElf (French) are also in favor of the Iranian route. Two of the AIOC companies, Exxon-Mobil and Lukoil, had openly declared that they would not send their oil through Baku-Ceyhan. Their total stake is 18 percent. This means that the already inadequate total reserves of the Mega Project are further reduced from 4.5 billion to 3.7 billion barrels. The declared minimum cumulative amount needed to make the line feasible is 6 billion barrels. As the Kazakh component does not seem promising, Turkey and the West need extra Azeri oil or an integrated approach to include Shah Deniz gas, as frequently stated in this study. There are many offshore and onshore projects in Azerbaijan to contribute the required volumes by Baku-Ceyhan (Lankaran-Talysh, Yalama, Absheron, Oghuz, Zafer-Mashal, Nakhcivan, Kurdashi, Gobustan, Inam, Alov, Muradhanlı, Atasgah, Kursangı-Garabaghlı, Lerik, Padar, Zigh-Hovsan).

In sum, although the tools are commercial, the struggle itself is about the power of states. That is why the struggle is turning on the decisions of governments about their most basic alignments. Kazakhstan and the companies of the European Union have already chosen to side with Russia and Iran. Turkmenistan is close to doing so. Azerbaijan still leans the other way, as does Georgia. Azerbaijan is dedicated to non-Russian, non-Iranian export solutions. Turkey, Israel, and the U.S. have to bring together the parties who will benefit from such solutions to develop professional joint projects. This could also encourage Kazakhstan and Turkmenistan to shift their inclinations. There is still a chance to successfully implement the TCP Project within the context of the East-West Corridor. This study has made clear that the stakes and the tactics involved go well beyond traditional oil company calculations. Therefore, if we play the game by its own rules and put forward all the necessary efforts, then we deserve to have hope for the future.

August 2001, Jerusalem

[26]Mehmet Binay, "Kazak Petrolleri ve Bakü-Ceyhan," NTV-Almati/İstanbul, (May 31, 2000), available on website of Turkish online publication ntvmsnbc (www.ntvmsnbc.com) .
[27] Sebastian Alison, "Oil Diplomacy Brings Kazakhstan, Iran Closer," *Reuters,* Feb. 6, 2001.