

THE NATIONAL BUREAU *of* ASIAN RESEARCH

NBR SPECIAL REPORT #23 | SEPTEMBER 2010

Central Asia's Pipelines: Field of Dreams and Reality

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On December 14, 2009, President Gurbanguly Berdimuhamedov of Turkmenistan hosted China's president Hu Jintao, Kazakhstan's president Nursultan Nazarbaev, and Uzbekistan's president Islam Karimov at a remote natural gas field in the eastern part of Turkmenistan for the inauguration of an 1,800-kilometer pipeline that connects all four countries and will transport 40 billion cubic meters (bcm) of gas annually when it reaches its ultimate capacity.¹ The ceremony marked yet another turning point in the two-decade saga of bringing Central Asian oil and gas to international markets after the collapse of the Soviet Union—a saga marked by a few successes and more failures.

Like the old Silk Road, this story has many twists and turns and culminates in multiple routes rather than a single direction. Unlike in the time of the Silk Road, Central Asian and Caspian countries are main actors in this modern journey and not just a crossroad. Many lessons can be drawn from the experience of the past twenty years to plot a future path. This essay will attempt to explore this landscape.

Russian Domination

The period immediately after the collapse of the Soviet Union was characterized by the overwhelming advantages former colonial power Russia held in transiting Central Asian oil and gas—advantages that were largely squandered in the 1990s. All the transportation and other logistical infrastructure of Central Asia was directed toward European Russia as part of the Soviet legacy. With respect to oil and gas infrastructure, pipelines crucially ran to Russia. Likewise, communications, railroads, river, and air transport were linked with Russia and nowhere else.

Central Asia was not only land-locked, it was completely isolated even from its immediate neighbors outside former Soviet space. Refineries in eastern Kazakhstan ran West Siberian crude oil, crude oil production from western Kazakhstan was shipped to Samara in the Russian Federation, and Azerbaijan received crude oil and natural gas from Russia. The Soviet Union was also a union of oil and gas.

Even as countries in the Caspian sought to strengthen their newfound political and economic independence by inviting Western oil companies to rapidly develop the region's oil and gas potential, these same major oil companies saw using the old Soviet pipeline system as the easiest way to evacuate their initially low volumes in order to defer capital expenditure on new transportation infrastructure.

Thus, Chevron, which was the first major entrant in Central Asia, based its initial plans on Tengiz production continuing to go to Samara. The company made offers to Russian oil pipeline monopoly Transneft to invest in upgrading the capacity of that line and in debottlenecking the Tikhoretsk to Novorossiysk segment of the major Russian export line to the Black Sea, so as to defer costly construction of a new line for initial Tengiz production of only 90,000–180,000 barrels per day. Similarly, BP and partners in the Azerbaijan International Oil Consortium (AIOC) wanted to take advantage of the existing Soviet-era pipeline by reversing the direction of flow so that early oil production of up to 100,000 barrels per day from offshore Caspian fields could be shipped out of the Black Sea by connecting with the same line to Novorossiysk.

¹ Marat Gurt, "China Extends Influence into C. Asia with Pipeline," Reuters, December 14, 2009, <http://uk.reuters.com/article/idUKSGE5BD0BQ20091214?sp=true>.

Unfortunately, Russian political ambition and commercial obstinacy thwarted both attempts at cooperation by the Western oil majors in the 1990s. Soviet industry practice, which persists to this day in Russia, traded oil by weight instead of volume, which is the international practice. Additionally, it did not adjust for market values of different crude oils based on quality differences. Crude was simply exchanged or accounted for on a ton-for-ton basis, without regard to whether it was light (producing higher-value products), sweet (low sulfur) or sour (high sulfur), and full of other impurities that make certain crudes more difficult to refine, or not. Transneft provided for neither the batching of different grades of crude oil nor a quality bank to adjust for differentials in market value. As a result, Tengiz and Azeri Light (produced by AIOC) crudes, which are both light and sweet, containing large cuts of valuable gasoline and gasoil when refined, would have lost around 20% of their economic value if exchanged for Urals (the Russian export blend), as Chevron and BP had originally intended.

Western Alternatives

Consequently, both Chevron and BP and its AIOC partners were forced to find other transportations options for their initial production from the world-class fields they were developing—Tengiz in Kazakhstan and the offshore Azeri-Chirag-Guneshli (ACG) fields in Azerbaijan. Russia lost an opportunity to integrate its logistical network with the global market by not accommodating the new political realities in Central Asia and the commercial requirements of Western companies operating in the Caspian.

Instead, Chevron developed an arduous process for shipping crude oil by rail and barge to the Black Sea via Georgia and Ukraine and to as far away as Finland and China from Tengiz. Transneft's loss became the Russian railroad's gain. BP and most of its AIOC partners invested over \$500 million in constructing an "early oil" pipeline from Azerbaijan to a new marine terminal at Supsa in Georgia.

This early experience in dealing with Russia informed Western oil companies' determination to control their own exit routes without overly relying on Russia. This was always the intent of their host governments, especially Azerbaijan led by President Heydar Aliyev. Now these strategic national interests converged with the major oil companies' vital commercial interests and gained their strong financial backing.

Chevron restructured the previously ill-conceived attempt to build the Caspian Pipeline Consortium (CPC) project into an oil company-controlled pipeline dedicated primarily to moving crude oil from Western oil company production in Kazakhstan to its own separate terminal on the Russian Black Sea coast. The 1,500-kilometer CPC Pipeline was completed in 2003 at a cost of \$2.6 billion. It has a current capacity of 450,000 barrels per day and an ultimate capacity of 1.35 million barrels per day,² although Russia blocked the pipeline's expansion until recently. BP and partners forged ahead after the Baku-Supsa line to build a more ambitious 1,800-kilometer, \$4.2 billion Baku-Tbilisi-Ceyhan (BTC) Pipeline to the Turkish Mediterranean coast. The pipeline started operations in 2006 and can ship over a million barrels per day, bypassing the Turkish Straits and also Russia.

² Caspian Pipeline Consortium, "General Information," 2004, <http://www.cpc.ru/portal/alias!press/lang!en-us/tabID!3357/DesktopDefault.aspx>.

With an unintended assist from Russia, the early movers among oil companies in the Caspian placed new facts on the ground by building new Western-controlled pipelines contrary to industry's own initial plans, which for the first time reduced the dominance of the Russian pipeline network over Central Asian oil and gas flows. Oil companies championed these new pipelines because they had sufficient economic stakes in major new production from Kazakhstan and Azerbaijan and the financial, technical, and managerial capacities to execute these complex, multibillion dollar projects.

By contrast, Turkmenistan, which did not and still does not allow international oil companies to invest in its major onshore fields, remained largely dependent on the Russian transport route for gas. This was not for lack of trying by Western industry. Shell and the pipeline development company PSG, which was a joint venture between General Electric and Bechtel, tried to promote a trans-Caspian gas pipeline to transport Turkmen gas to Turkey via the southern Caucasus. However, Shell never acquired the major production asset onshore Turkmenistan that was required to make this scheme work, and Turkmenistan under then president Niyazov never committed politically to a non-Russian route. Instead, Turkey started receiving additional gas from Blue Stream, a new Russian pipeline under the Black Sea, representing essentially swapped volumes from Turkmenistan.

Ingredients for Success

Long-haul pipeline projects crossing multiple international borders are rare—they can be counted on one hand. The more national borders such projects cross, the more difficult and complex they are to complete. Indeed, it is highly doubtful that the Soviet-era oil and gas pipelines across Warsaw Pact countries to Western Europe could have or would have been built under today's conditions. The BTC Pipeline, which crosses Azerbaijan, Georgia, and Turkey, was thus a major achievement.

Significant credit belongs to the U.S. government, which helped align the three countries politically and cajoled them to provide the economic conditions necessary for oil companies to invest in the pipeline. Unfortunately, this led some officials to exaggerate the role government played in advancing this project. Some believe that political will and smart diplomacy can somehow substitute for economic realities and commercial considerations. In the extreme, some officials even believe that “if you build the pipeline, oil and gas will come.” Though this may work in Hollywood, in reality defined upstream supply is a prerequisite for every pipeline project.

In fact, government support is necessary but not sufficient. The new pipeline projects from the Caspian were anchored by super-giant fields, Tengiz and ACG, and led by commercial champions, Chevron and BP, who had compelling interest. When Chevron, as half owner of Tengiz, was not directly involved with CPC because of onerous conditions imposed by its original promoter, the project went nowhere for four years. The political vision of Presidents Aliyev, Eduard Shevardnadze of Georgia, and Suleyman Demirel of Turkey for a pipeline crossing their three countries and U.S. shepherding of their efforts were crucial. However, the BTC project was also stuck until BP bought Amoco in 1998, which resulted in the merged company owning 34% of AIOC and becoming operator of the consortium, whereas previously decisions were made by committee. The BTC Pipeline also benefited from the discovery of the gas/condensate field Shah Deniz in 1999, which

provided additional liquids for the oil pipeline and commercial interest in using the same corridor for a gas pipeline to Turkey.

Both Chevron and BP committed themselves fully to the CPC and the BTC pipelines not because of the persuasive powers of government but because Chevron and BP desperately needed the pipelines for production expansion. Government eagerness tends to make companies try to figure out how they can take economic advantage of the situation. In the case of the BTC Pipeline, BP and its pipeline partners gained favorable cost recovery terms beyond the original production sharing agreement in Azerbaijan, overrode some of Georgia's concerns over its sovereign rights, and obtained an uncommon \$400 million cost overrun guarantee from Turkey on its segment of the line. If politicians wanted to take credit for the pipeline, this was all right with oil companies, which were interested in securing their investments and maximizing profits.

Another common mistake is to believe that the central role for U.S. policy in Caspian pipelines will persist. To whatever extent this is a modern day Great Game—a truly inappropriate analogy to Russia and Britain's imperial competition over Central Asia in the 19th Century—the United States is the “away” team. The traditional regional powers were in temporary decline in the 1990s. Russia was in political and economic turmoil after the collapse of the Soviet Union. Iran was still suffering from the aftermath of the terrible war with Iraq. China had just become a net oil importer in the early 1990s and had only started responding to the surprising opening in Central Asia, beyond securing its own borders and concerns over minorities in Xinjiang, after the Soviet Union's collapse.

None of these conditions were likely to persist, but the United States was temporarily afforded a freer rein in Central Asia. Nevertheless, some of players on the U.S. away team started to believe that they were on the home team and overreached by promoting pipeline proposals that bear no resemblance to earlier successes. The critical ingredients for these successes were (in order of importance):

- Major dedicated volumes of oil or gas, without which there is no project
- A commercial champion who is capable and committed
- Economic viability of the pipeline and superiority over alternatives
- Political support, which is instrumental but not decisive

Regional Powers Return

Today, conditions in the region have departed from the unusual circumstances of the 1990s. With the important exception of NATO and U.S. military presence in Afghanistan, which will not be examined by this essay, a level of normalcy has been restored with Russia and Iran exercising regional influence, including in oil and gas transit, as littoral states of the Caspian.

Iran receives around 100,000 barrels of oil per day from Caspian producers, which is piped to northern Iranian refineries for processing and swapped for Iranian volumes in the Persian Gulf. Iran also imports 5 to 8 bcm of Turkmen gas³ for its underserved eastern region (and smaller quantities from Azerbaijan) and has announced projects to expand import volumes from

³ U.S. Energy Information Administration, Country Analysis Brief, “Iran: Natural Gas,” 2010, <http://www.eia.doe.gov/emeu/cabs/Iran/NaturalGas.html>.

Turkmenistan to 20 bcm. If Turkmen gas is to reach European markets, it is more likely to do so through swap arrangements via Iran and Turkey than through fanciful ideas of cross-Caspian and Nabucco pipelines.

Barring international sanctions and other political barriers, a southerly exit via Iran remains a credible alternative for Kashagan, the newest world-class Caspian oil field development project, located off the shore of Kazakhstan, which is capable of producing more than a million barrels per day. Much depends on political conditions when large volumes of Kashagan oil finally come on stream at the end of this decade. A southerly route has the advantage of lowering costs by connecting to Iran's existing pipeline system and of adding another direction to diversify major supply routes for Caspian oil, especially if a new pipeline reaches the Gulf of Oman outside of the Strait of Hormuz.

A resurgent Russia is trying to restore its role as hegemon in Central Asia. It retains historical and cultural ties in the region, as well as strong relationships with local political leaders. Russia's pipeline policy is more focused on controlling direct export routes to Europe than in Central Asia per se, where its efforts remain somewhat clumsy. It continues to maintain the important Atyrau-Samara Pipeline for Kazakhstan crude but has failed to capitalize on this by expanding the line's capacity by 200,000 barrels per day as had been planned for many years.⁴ Its obstruction of CPC expansion is likely to cause oil companies to hesitate to invest in a new pipeline through Russia for Kashagan. Russia processes gas from Kazakhstan's gas/condensate field Karachaganak at Orenburg mainly because it is nearby.

In Turkmenistan, Gazprom made the mistake of agreeing to too high a gas price at the end of 2008 and rendered itself an unreliable buyer when European gas demand and pricing dropped significantly in 2009 with the severe economic recession. It may be making the same mistake again in Azerbaijan by offering to take as much gas as it has to export at a reportedly very favorable price for Azerbaijan. Gazprom may believe that long-term contracts with Central Asian countries are meant to be reworked when market conditions change, unlike those with its European gas buyers who are expected to honor their long-term contracts. However, one fears for another pipeline mishap if Azerbaijan commits all its gas from stage two of the Shah Deniz gas field development to Russia.

The much-needed and long-planned repair and upgrading of the crucial Soviet-era Central Asia-Center gas pipeline capable of moving 80 bcm of gas to Russia from Turkmenistan via Uzbekistan and Kazakhstan remains a project on the drawing board, and Moscow's ambitious plan for a new pre-Caspian gas pipeline around the eastern side of the Caspian seems to move at an imperceptible pace.

In spite of the sometimes peculiar methods that both Russia and Iran employ in business dealings with Central Asia, it is nevertheless clear that their teams on oil and gas transit are back in the playing field and cannot be ignored by their Central Asian neighbors. In addition, both countries use the unsettled demarcation of maritime borders to obstruct and delay oil and gas transportation schemes being considered across the Caspian when it suits their purposes.

⁴ "KazTransOil and Transneft to Expand the Atyrau-Samara Pipeline," *Silk Road Intelligence*, July 10, 2008, <http://silkroadintelligence.com/2008/07/10/kaztransoil-and-transneft-to-expand-the-atyrau-samara-pipeline/>.

The Real Home Teams Show Up

Another important change in the past decade is the rise of countries in Central Asia itself. Political confidence has been instilled from twenty years of independence, particularly among the oil- and gas-producing states, which also enjoyed rising exports and commodity prices. State institutions, noticeably weak or absent in the early 1990s, were created and strengthened and include increasingly capable state oil companies, such as KazMunaiGaz of Kazakhstan and SOCAR of Azerbaijan, which plan to expand their business operations within and beyond their own borders.

Young professionals have been educated and trained according to international technical and business standards. No longer are local elites satisfied—if they ever were before—to take a back seat to external powers or foreign oil companies in deciding critical matters for their country, including export routes for their principal export commodity. Local business elites want to participate in transportation services as well. These natural ambitions are now supported by local money and capability that did not exist in the 1990s.

One sees these effects on negotiations for gas supply, pricing, and transit tariffs on the next stage of Shah Deniz gas development; on who controls marine oil transport across the Caspian, especially for higher volumes from Kashagan first-phase development; and most noticeably on who takes the driver's seat in negotiations over new pipelines to new markets such as to China.

Emerging Eastern Champion

In many ways, China is by far the most important new factor. Thirty years of rapid economic growth have raised domestic prosperity and the country's international economic prominence. China has become the second-largest oil importer in the world, surpassing Japan, and increasingly needs to import pipeline gas or liquefied natural gas (LNG) to fuel its economy and moderate adverse environmental impact. Although it was late off the mark, nearby Central Asia was a natural place for China to look for new sources of oil and gas and to seek diversification of its own import routes.

Whereas Western companies signed their first oil concessions in the Caspian region immediately after the collapse of the Soviet Union in the early 1990s, Chinese companies did not sign their first deal until 1997, when China National Petroleum Corporation (CNPC) acquired the rights to the Aktobe field in Kazakhstan, which included the Zhanazhol oil and gas condensate field and the Kenyiaik oil field.⁵ Studying the feasibility of a pipeline to China was already part of the original agreement, although not taken very seriously at the time by even the Chinese. This was followed by Chinese acquisition of additional upstream oil assets, especially in Kazakhstan.

From a Chinese point of view, its companies were trying to catch up to Western oil companies, which had a clear lead in Central Asia. China had missed out on all the big plays in the Caspian: Tengiz, ACG, Karachaganak, and Kashagan. The attempt by China National Offshore Oil Corporation (CNOOC) to buy into Kashagan when BG Group announced the sale of its 16.67% interest was rudely rebuffed by the international oil majors, who exercised their preemption rights as existing partners.⁶ The trump card China holds in face of this established Western competition

⁵ Bo Kong, *China's International Petroleum Policy* (Santa Barbara: Praeger Security International, 2010), 175.

⁶ John Roberts, "After Talks in London, Agreement Said Near on BG's Kashagan Stake Sale," *Platts Oilgram News*, March 7, 2005.

is a growing market that is contiguous to Central Asia. China also presents itself as an attractive development model and counterweight to other regional powers.

In spite of strong government support and cheap loans from state banks, China's pipeline efforts were challenged by marginal economics due to great distances and low volumes of oil and gas. It then received a major impetus from Russian actions, which once again had unintended consequences.

Numerous delays on a Russian oil pipeline to China even after then president Putin made a solemn commitment to Chinese president Hu in 2003 hardened Chinese resolve to finish the oil pipeline from Kazakhstan and to extend it from central Kazakhstan to western Kazakhstan, where the big oil fields are located.⁷ Even more galling from a Chinese point of view was that the Russian delay was instigated by interference from Prime Minister Koizumi of Japan, who offered \$7 billion of Japanese assistance for Russia to shift its plans to build the pipeline to the Pacific coast, which made the project even more economically dubious.

In 2004, China and Kazakhstan announced the building of the oil pipeline from western Kazakhstan to Xinjiang. Traversing 2,800 km just to reach the Chinese border (still far away from China's coastal demand centers),⁸ and with a capacity of only a few hundred thousand barrels per day, this project is hardly economically attractive. Yet China was willing to invest in this pipeline in order to establish the route.

Interestingly, the Japanese offer to Russia never actually materialized. After some delay the Russians finally proceeded to build the so-called ESPO (Eastern Siberia–Pacific Ocean) Pipeline from Eastern Siberia with Chinese loans, which will run first to China and then later to the Pacific Ocean. Meanwhile, West Siberian crude is actually being shipped to China by heading south and linking up with the Kazakhstan oil pipeline. Instead of a wholly Russian route, Russian oil is transported by pipe to China through a third country first. Russian oil will arrive on the Pacific by much more expensive rail transport from the pipeline junction of Skovorodino at the Chinese border. In October 2009, China and Kazakhstan completed an extension of the oil pipeline all the way to western Kazakhstan. A new pipeline corridor has been established—one that other oil shippers may take advantage of in the future.

A remarkably similar story of Russian mishandling drove China's construction of the gas pipeline from Central Asia. An Irkutsk-to-China gas pipeline was proposed far back in Soviet times. This dream finally took shape when BP bought half of the Russian oil company TNK in 2003 and the merged company gained possession of the Kovytko gas field in Eastern Siberia with reserves of 2 trillion cubic meters of gas. Plans were drawn to export this gas to China and South Korea, and serious talks were conducted on gas purchase terms. Unfortunately, this project was caught first in a struggle over who controls gas exports in Russia during Moscow's move to recentralize power in the oil and gas sector, and then in a contest between BP and its Russian partners for control over TNK-BP. A promising gas export project stalled for more than five years. As a result, China looked elsewhere for pipeline gas.

CNPC acquired an onshore concession in Turkmenistan in 2006 and proceeded to plan a pipeline through Uzbekistan and Kazakhstan to import gas to China. The 40-bcm twin lines are to be supported by gas volumes from CNPC's own production in Turkmenistan and from

⁷ Kong, *China's International Petroleum Policy*, 130. Kong notes that "right after his visit to Moscow, President Hu visited Astana in June 2003 and put the Sino-Kazak pipeline on a fast track."

⁸ "Sino-Kazak Pipeline Transports 20 Mln Tons of Oil to China," *Xinhua*, January 25, 2010, http://news.xinhuanet.com/english2010/china/2010-01/25/c_13149919.htm.

production by Turkmen gas. Industry suspicion was that China would request additional onshore blocks should Turkmen gas volumes fall short of its government's guarantee.

Concerns over volume shortfall were alleviated when Russia failed to meet its volume obligation to purchase Turkmen gas in 2009 and formally reduced offtake volume for 2010. Consequently, Turkmen gas will start flowing to China at a much higher rate than was originally anticipated. A Russian construction company, Sroytransgaz, even helped build the pipeline to China.⁹ The Russian attitude seems to be, if Central Asian gas is to be exported by a route other than Russia, it is better for the gas to go east than west, where it would compete against Russian gas in its primary European market.

Strategic Interests

Underlying China's strong interest in oil and gas supplies by pipeline from Central Asia—or Russia for that matter—are strategic security concerns over relying too heavily on maritime imports of oil and gas. Given China's rapidly increasing import needs and the fact that the Persian Gulf is the only source of incremental supply for the world, this concern over security of supply routes can only be moderated, but not eliminated. However, this strategic motivation helps explain China's willingness to pre-invest in pipelines from Central Asia before economic volumes of oil and gas are apparent. Nevertheless, even China acquired upstream positions in Kazakhstan and Turkmenistan first before it started planning pipelines. In fact, Beijing uses the inducement of pipelines that provide diversity of export routes for Central Asian countries to help acquire more upstream assets.

This is an important difference between China's relationship with Russia and Central Asia. Given Russia's track record, China seems to have decided that its energy relationship with Russia is mainly for supply, sometimes secured by loans when Russia is desperate for cash and offer pricing terms favorable to China. In contrast, Central Asia is where China makes equity investments in oil and gas.

Of course, China is by no means the only Asian country interested in investing in Central Asian oil and gas. Japan and South Korea are even more dependent on oil and gas imports than China. India's import needs are also growing. However, these countries are not motivated by the same strategic concern over the U.S. Navy's domination of sea lanes and do not have China's geographic advantage of proximity to Central Asia.

As long as development of additional oil and gas transportation corridors from Central Asia brings incremental supply to the world market, all oil and gas importing countries, including the United States and those in Europe, also gain. Western companies will also increasingly consider providing their own production from Central Asia to eastern transit corridors as long as they reach higher-value markets and achieve superior netback to the wellhead.¹⁰

Consequently, it would be short-sighted for Western governments and companies to see Chinese pipelines out of Central Asia as a threat rather than as a possible opportunity. If China is willing to pay a premium for diversity of supply from Central Asia, it enhances rather than harms global energy security. The only possible loser is Russia, which may have to reconsider

⁹ Marat Gurt, "Russian Company Wins Turkmen Pipeline Tender," Reuters, February 19, 2008, <http://uk.reuters.com/article/idUKL194546920080219>.

¹⁰ "Netback to wellhead" is the price one gets after subtracting transportation cost from the price at the end-user market. A new pipeline is justified when it achieves a higher netback compared to alternatives.

the way it conducts international oil and gas business. The one player missing from the field appears to be the European Union, which is much better at making policy declarations than at taking policy action.

Where to Kashagan?

In many ways, the next chapter of the Central Asia pipeline story will be written by the destination for Kashagan oil. The field is the largest discovery in the world in more than 30 years and the one significant oil discovery in the Caspian since it opened to foreign exploration (beyond the development of Soviet-era discoveries). When it reaches peak production of over one million barrels per day,¹¹ Caspian oil volumes will likely double from around 1.5 to 3 million barrels per day, thereby fulfilling the hopes of the 1990s for the Caspian to become a world-class oil province on par with the North Sea in its heyday. Since the discovery of the field in 2000, however, Kashagan development has suffered numerous serious delays primarily because of the scale and technical complexity of the project and in part also because of management by committee among the five major oil company partners, not unlike in the early days of AIOC.

Among the important uncertainties yet to be resolved on Kashagan is how its oil will reach world markets. To date, there are more questions than answers on this key issue:

- Given its abundant volumes, will Kashagan anchor a new export system as Tengiz did with the CPC Pipeline and as ACG did with the BTC Pipeline?
- Will Kashagan develop a new southerly exit route via Iran or will it take advantage of existing corridors via Russia, China, or across the Caspian and the Caucasus?
- Alternatively, will the volumes be split among two or three different directions for diversity of export routes?
- Crucially, who will make the strategic and key business decisions: the host government Kazakhstan, its national oil company KazMunaiGaz, or its oil company stakeholders (ENI, ExxonMobil, Shell, Total, ConocoPhillips, and Japanese Inpex)?

What is certain is that how these questions are answered will be critical to Central Asian oil development.

Conclusion

Simple but clear lessons can be drawn from the last twenty years of pipeline development in Central Asia:

- International politics can sometimes help development, but do not determine the outcome and more often block sensible commerce.
- Without bankable volumes, there will be no pipeline.
- The project champion is essential: a single committed and capable champion is better than multiple ones in realizing pipeline projects.

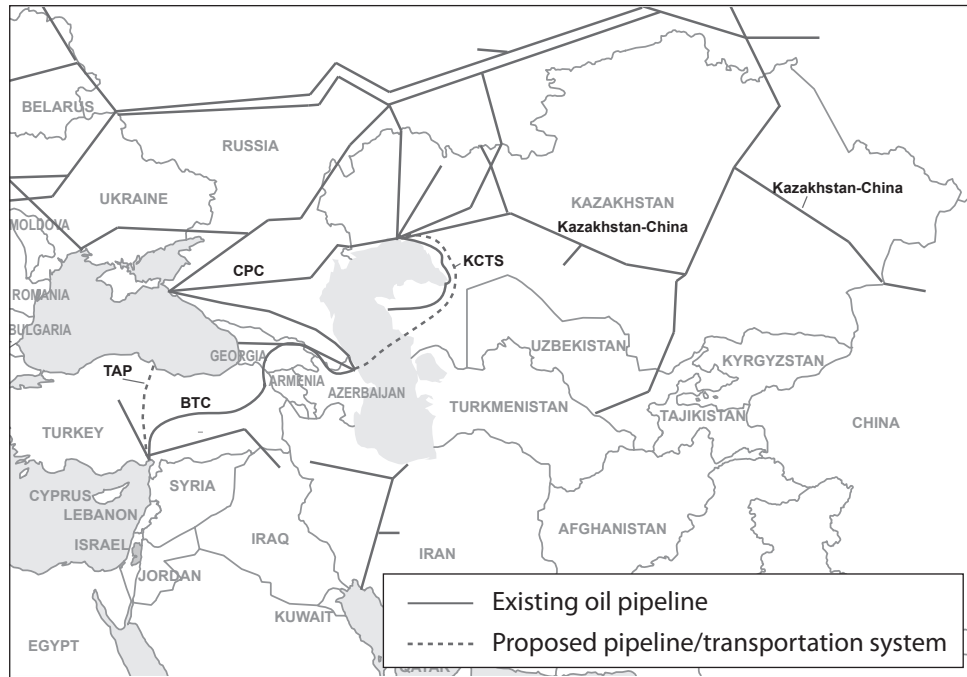
¹¹ U.S. Energy Information Administration, Country Analysis Brief, "Kazakhstan: Oil," 2010, <http://www.eia.doe.gov/emeu/cabs/Kazakhstan/Oil.html>.

- Fundamentals of oil and gas economics matter—superior netback to wellhead justifies new pipelines.
- Diversity of supply and routes is good, but someone has to pay the premium.
- The game has become more complicated, with multiple players coming from different directions.

What we have yet to see is cooperation among the different players in Central Asia pipelines in pursuit of convergent objectives, as opposed to competition for divergent interests. The zero-sum game principle applies not only to Russia, China, or Iran but also to Western government policy on pipelines in Central Asia. Perhaps in the next decade there will be more consideration of geo-economics than geopolitics.

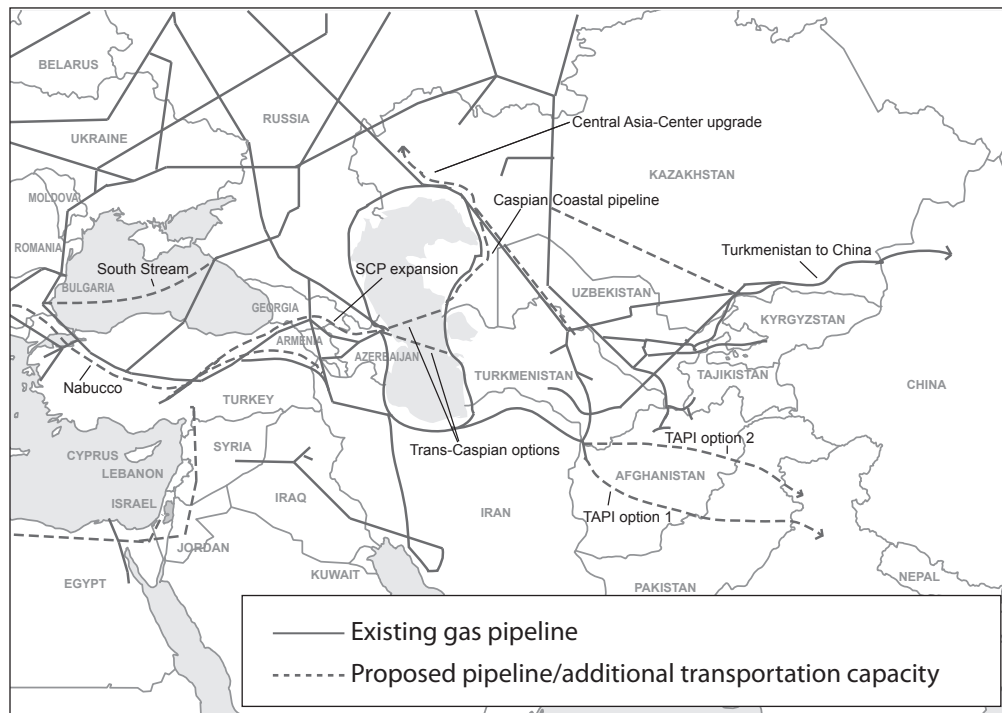
Appendix

FIGURE 1 Oil pipelines in Central Asia



SOURCE: Richard Jones, “The Politics of Central Asian and Caspian Energy” (presentation at Chatham House, London, February 23–24, 2010), available at http://www.iea.org/speech/2010/jones/chatham_house.pdf.

FIGURE 2 Natural gas pipelines in Central Asia



SOURCE: Jones, “The Politics of Central Asian and Caspian Energy.”

TABLE 1 Realized, failed, and proposed pipelines in Central Asia

	Realized	Failed	Proposed
Gas transit	Blue Stream	Trans-Caspian gas pipeline	South Stream
	South Caucasus gas pipeline	Turkmenistan-Afghanistan-Pakistan-India (TAPI) (in the 1990s and early 2000s)*	Central Asia–Center upgrade
	Turkmenistan-China	-	Pre-Caspian pipeline
	Turkmenistan-Iran		Nabucco
	-		Turkey-Greece-Italy
	-		Turkmenistan-Afghanistan-Pakistan-India (TAPI) (currently in discussion)*
	-		Iran-Turkey expansion
-	Iran-Pakistan-India (IPI)		
Oil transit	Baku-Supsa	Upgrade of Atyrau-Samara	Direction of Kashagan flows
	Caspian Pipeline Consortium	Odessa-Brody	Samsun-Ceyhan
	Baku-Tbilisi-Ceyhan (BTC)	De-bottlenecking Tikhoretsk to Novorossiysk	-
	Kazakhstan-China	Various Bosphorus bypasses	
Promoter-led Caucasus pipelines			

NOTE: In the 1990s Unocal proposed to transport Turkmen gas via Afghanistan to Pakistan, a proposal that failed to be realized. The Asian Development Bank later took up the proposal and extended the routing to India, but it failed again. Recently this concept has been revived and proposed as part of a development strategy for Afghanistan, but the prospects for realization are not high.