

Turkmenistan-Afghanistan-Pakistan-India Gas Pipeline: South Asia's Key Project

The biggest pipeline issue in South Asia currently is the proposed Trans-Afghanistan Pipeline or TAPI, as it is known. This report gives a breakdown of the history of the project as well as the pertinent issues.

The Trans-Afghanistan Pipeline (TAP or TAPI) is a proposed natural gas pipeline being developed by the Asian Development Bank. The pipeline will transport Caspian Sea natural gas from Turkmenistan through Afghanistan into Pakistan and then to India. The abbreviation comes from the first letters of those countries. Proponents of the project see it as a modern continuation of the Silk Road. The Afghan government is expected to receive 8% of the project's revenue.

The original project started in March 1995 when an inaugural memorandum of understanding between the governments of Turkmenistan and Pakistan for a pipeline project was signed. In August 1996, the Central Asia Gas Pipeline, Ltd. (CentGas) consortium for construction of a pipeline, led by U.S. oil company Unocal, was formed. On 27 October 1997, CentGas was incorporated in formal signing ceremonies in Ashgabat, Turkmenistan by several international oil companies along with the Government of Turkmenistan. In January 1998, the Taliban, selecting CentGas over Argentinian competitor Bidas Corporation, signed an agreement that allowed the proposed project to proceed. In June 1998, Russian Gazprom relinquished its 10% stake in the project. Unocal withdrew from the consortium on 8 December 1998.

The new deal on the pipeline was signed on 27 December 2002 by the leaders of Turkmenistan, Afghanistan and Pakistan. In 2005, the Asian Development Bank submitted the final version of a feasibility study designed by British company Penspen. 'Since the US-led offensive that ousted the Taliban from power,' reported Forbes in 2005, "the

project has been revived and drawn strong US support" as it would allow the Central Asian republics to export energy to Western markets "without relying on Russian routes". Then-US Ambassador to Turkmenistan Ann Jacobsen noted that: "We are seriously looking at the project, and it is quite possible that American companies will join it". Due to increasing instability, the project has essentially stalled; construction of the Turkmen part was supposed to start in 2006, but the overall feasibility is questionable since the southern part of the Afghan section runs through territory which continues to be under *de facto* Taliban control.

Trans-Afghanistan Pipeline	
Location	
Country	Turkmenistan Afghanistan Pakistan India
General direction	north-south
From	Dauletabad gas field, Turkmenistan
Passes through	Herat Kandahar Quetta Multan
To	Fazilka, India
Runs alongside	Herat-Kandahar highway ,
General information	
Type	natural gas
Technical information	
Length	1,680 km (1,040 mi)
Maximum discharge	27 billion cubic meters per year

A Gas Pipeline Framework Agreement, signed by representatives of the four participating nations on April 25, 2008 in Islamabad, envisaged construction to start in 2010, supplying gas by 2015. The announced 1,000-mile route would follow the ancient trading route from Central to South Asia, extending from the Dauletabad gas field in Turkmenistan along the highway through Herat, Helmand and Kandahar in Afghanistan, to Quetta and Multan in Pakistan, and on to Fazilka in India. Participating countries have held numerous high-level planning meetings during the past eight years, with Asian Development Bank (ADB) sponsorship and multilateral support.

The 1,680 kilometres (1,040 mi) pipeline will run from the Dauletabad gas field to Afghanistan. From there TAPI will be constructed alongside the highway running from Herat to Kandahar, and then via Quetta and Multan in Pakistan. The final destination of the pipeline will be the Indian town of Fazilka, near the border between Pakistan and India. The pipeline will be 1,420 millimetres (56 in) in diameter with a working pressure of 100 standard atmospheres (10,000 kPa). The initial capacity will be 27 billion cubic meters (bcm) of natural gas per year of which 2 bcm will be provided to Afghanistan and 12.5 bcm to each Pakistan and India. Later the capacity will increase to

TAPI is expected to boost the economies of all four countries. In 2008, Pakistan's Prime Minister described the pipeline as a vital project for the development and progress of the region. Further, pipelines are potentially good for peace. As President Berdimuhamedov of Turkmenistan said: "The pipeline between Turkmenistan, Afghanistan, Pakistan and India will be a weighty contribution to the positive cooperation on this continent."

33 bcm. Six compressor stations would be constructed along the pipeline.¹⁹¹ The pipeline was expected to be operational by 2014.

The cost of the pipeline is estimated cost at US\$7.6 billion.¹⁹¹ The project is to be financed by the Asian Development Bank.

In December 2010, setting aside concerns about Islamic militants, the presidents of Turkmenistan, Afghanistan, Pakistan, along with India's petroleum minister, Murli Deora, have signed an inter-governmental agreement pledging to construct a 1,735-kilometer natural gas pipeline connecting all four states. On December 12, a day after the agreement was inked in Ashgabat, Afghanistan's Mines and Industry minister said pipeline security would be a top priority.

The Turkmenistan-Afghanistan-Pakistan-India (TAPI) pipeline would supply 33 billion cubic meters of Turkmen gas a year from the Dauletabad gas fields to Pakistan and India via Afghanistan's volatile southern provinces, according to the semi-official Turkmenistan.ru website. In doing so, Kabul could reap billions of dollars in transit fees.

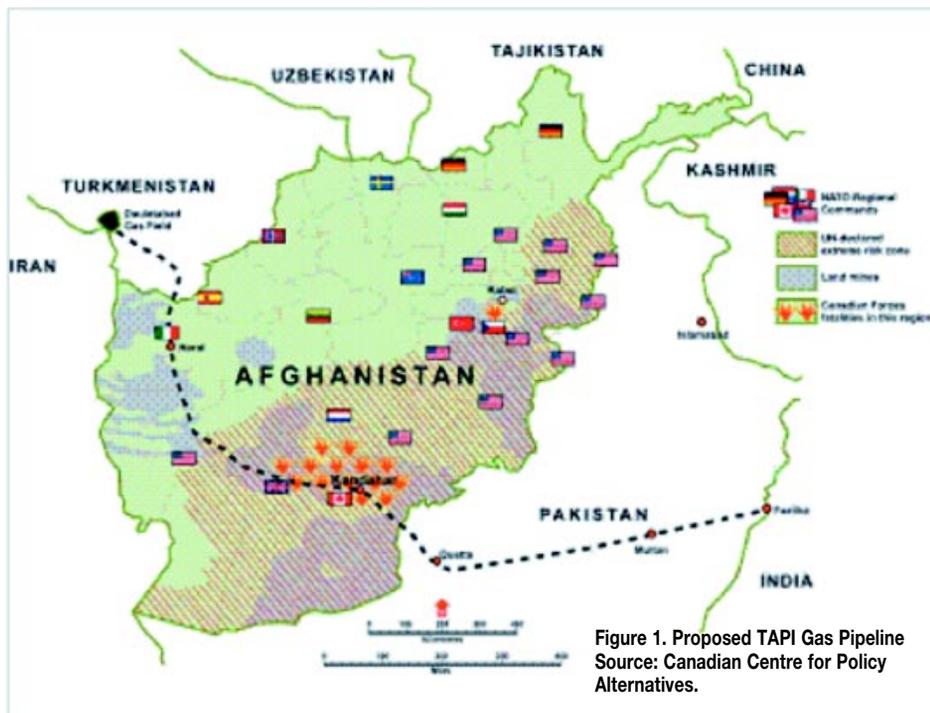


Figure 1. Proposed TAPI Gas Pipeline
Source: Canadian Centre for Policy Alternatives.

Afghan President Hamid Karzai stressed the economic benefits of the pipeline and said Afghanistan would work to “expedite” the project’s completion. Kabul could earn upwards of \$1.4 billion in transit fees annually.

History

After a pipeline from Turkmenistan to Pakistan through Afghanistan was first proposed in the mid-1990s, a Unocal consortium signed a construction agreement in early 1998 with the new Taliban government in Kabul. It was never built after Unocal withdrew from the consortium in late 1998 because of international publicity of the human rights abuses, and in particular the treatment of women, under the Taliban regime. After the end of the Taliban regime, the idea was revived. At the end of 2002, the three countries signed a new agreement. The Asian Development Bank (ADB) conducted a feasibility study, executed by the British firm Penspen, which rendered a favorable verdict in 2005. In 2006, the Indian federal cabinet approved India’s joining the project, although New Delhi had not yet been invited; India was formally incorporated into the project in 2008.

The project received increased impetus from Turkmenistan following President Saparmurat Niyazov’s death and his succession by Gurbanguly Berdimuhamedov at the end of 2006. Another key factor was Russia’s treatment of Turkmenistan in the wake of the April 2009 pipeline explosion in the latter country, which Turkmenistan accused Russia of instigating, and which led to the suspension of gas exports to Russia for the rest of that calendar year, with reduced quantities flowing in 2010 as well. The present design of the project provides for export of 33 billion cubic meters per year (bcm/y) from Turkmenistan, of which India and Pakistan would each receive 14 bcm/y while Afghanistan gets 5 bcm/y. Indian demand for natural gas would justify laying a parallel pipeline later to double the quantity, and this is not out of the question if the initial implementation is successful. The present schedule foresees the end of construction in 2014 with the pipeline entering into service in 2015.

It is thought that transit revenues ac-

ruing to Afghanistan would be in the order of US\$ 300 million per year, equivalent to one-third of the annual budget for development projects, in addition to providing for domestic job creation. This would also enhance possibilities for the development of domestic gas resources in Afghanistan for local use. Earlier estimated to cost only US\$ 3.3 billion when it was a trilateral Turkmenistan-Afghanistan-Pakistan, the current cost figure including India is US\$ 7.6 billion. It was at first thought that the gas would come from Turkmenistan’s Daulatebad field, but Ashgabat has now clarified that it will come from the newly discovered South Yolotan-Osman field. A 1,045-mile route going south from Turkmenistan and then east through Herat and Kandahar was chosen over a northern route through Kabul because of terrain considerations. Mountains in the north rendered that route too difficult, and the southern route has roads that facilitate the transport of construction materials.

Alternatives

For several years, India and Pakistan have been negotiating with Iran for another pipeline project to bring Iranian gas to their countries. With an estimated capital cost of \$7.5 billion, the pipeline would be similar in cost to the TAPI project. Petroleum ministers of India and Pakistan met in Islamabad in April 2008 (just after the TAPI meeting) to resolve a pricing issue and clear the way for signing agreements; and President Ahmadinejad of Iran visited Islamabad and New Delhi the following week for talks on the pipeline. Since then, India has oscillated on the project

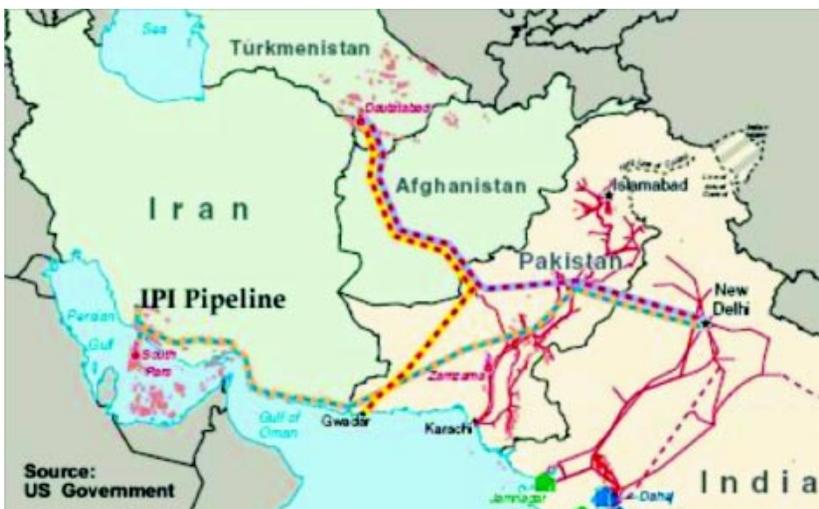


Figure 2. Proposed Iran-Pakistan-India Pipeline

and has stayed largely on the sidelines following a period of tense India-Pakistan relations. However, in December 2009, India's petroleum minister, Murli Deora, said his country was discussing important issues relating to the pipeline with other participating countries.

In May 2009, Iran and Pakistan went ahead and signed an initial agreement, without India. Russia's Gazprom expressed willingness to help build the line, most recently in January 2010. The same month, US Special Envoy Richard Holbrooke met with Pakistan's petroleum minister Syed Naveed Qamar, and, according to a Pakistani newspaper, he offered incentives to Pakistan to abandon the Iranian project. Subsequently, the petroleum minister told journalists that Pakistan and Iran would sign a technical agreement soon; he had met with the US ambassador and officials of US Overseas Private Investment Corporation who had expressed no objection to the project.

Complications

The planned TAPI pipeline offers benefits to all four participating countries and would promote cooperation. For Turkmenistan, it would provide revenue and diversification of export routes. For Pakistan and India, it would address energy deficits. In Afghanistan, it would provide revenue for development and gas for industrial enterprises. The potential for export to other countries through the Pakistani port of Gwadar is a further advantage. TAPI is consistent with the US declared policy of linking Central and South Asia and diversifying export routes for Turkmen gas. For a number of countries, TAPI could provide business opportunities in construction and operation of the pipeline.

Understanding the significance of the TAPI pipeline requires shining the spotlight on Turkmenistan, the source of the gas. Turkmenistan is one of five Central Asian states that became independent in 1991 when the Soviet Union broke up.

Disagreement exists on how much gas the country actually holds. According to the BP Statistical Review 2009, Turkmenistan has the world's fourth largest reserves of natural gas, 7.94 trillion cubic meters (TCM), exceeded only by Russia, Iran and Qatar. Turkmenistan's 2009 ranking represents a sharp upgrade from 2008 (2.43 TCM). The new estimate follows the 2008 audit of the huge South Yolotan-Osman field in western Turkmenistan, conducted by the UK auditing firm Gaffney, Cline & Associates. The

audit estimated the reserves of this field alone to be between 4 and 14 TCM of gas, making it the world's fourth or fifth largest field.

Other fields remain to be audited, and Turkmen officials predicted in 2008 that the final results would be much higher. Since then, two publications have cast doubt on the audit results, relying on information obtained from unnamed Russian and Turkmen sources who suggest that Turkmen officials may have provided false data to exaggerate the size of the reserves. Gaffney, Cline & Associates refutes these allegations. Meanwhile, President Berdymukhamedov has dismissed various top energy officials. Whatever the truth of the matter, Turkmenistan's gas reserves are huge and there is a titanic struggle underway. The geopolitical stakes are high.

Doubts persist over the sustainability of gas supplies from Turkmenistan. Given that Turkmenistan has signed agreements with both Iran and China to increase existing supplies to these markets, and is also the largest supplier of natural gas to Russia's Gazprom, questions have arisen over whether it will be able to meet its commitments for TAPI. Though Turkmenistan claims that its gas export potential has increased following the discovery of the giant South Yolotan field, which holds 212 trillion cubic feet of recoverable gas (equal to about 90 percent of US proven reserves), its TAPI partners have demanded third party certification of its claimed reserves. As per the agreement, Turkmenistan will supply 90 mmcmd of gas for TAPI, with 38 mmcmd each going to Pakistan and India, and the rest to Afghanistan.

In addition, Turkmenistan's gas sector suffers from several constraints, including lack of financial resources and the technical capability to develop new projects. The country also lacks adequate pipeline network infrastructure to deliver gas to its markets, and continues to be dependent on Russia's network for exports to the West. As a result, according to some experts, it's unlikely that it will be able to increase its export volumes substantially over the next 10 years.

Since the TAPI route passes through areas with major insurgencies, security is clearly an issue. In both Afghanistan and the tribal area of Pakistan, people along the route have long histories of independence from central and foreign powers. Unless their cooperation is sought and the benefits to them are clear, pipeline security will be an expensive nightmare for years to come.

Peace is essential. Pipeline construction cannot begin until the killing stops and all stakeholders, including the Pashtun, participate in the project. Both Afghanistan and Pakistan are complex countries. Their mix of ethnic groups, long-standing tribal traditions, and history of minimal governance create major challenges. Such challenges require political, not military solutions. The strategy of national reconciliation offered at the London conference on Afghanistan in January 2010 is a beginning. TAPI is geopolitically significant, but encumbered with many difficulties that will challenge all participants in the years ahead.

As with the IPI project, the pipeline route remains controversial. The nearly 1,700-kilometre pipeline will originate from Turkmenistan's Daulatabad gas field, and transit some 730 kilometres through Herat, Helmand and Kandahar in Afghanistan, to Quetta and Multan in Pakistan, and on to Fazilka in India. Given the ongoing insurgency in Afghanistan, concerns over the security of the pipeline through that country remain. While the presence of NATO troops in Afghanistan may succeed in securing the route, how long can they be expected to remain in Afghanistan, and what will happen once they do withdraw?

Meanwhile, the 800-kilometre section of the pipeline in Pakistan also isn't secure. Part of the pipeline will pass through Balochistan, where the insurgency has intensified. The fact that domestic pipelines through Balochistan

are being targeted virtually every other day, affecting supplies throughout the province, suggest it's unlikely that an international project would be spared by the insurgents. Moreover, international sponsors and financiers would be unwilling to finance a project whose security is questionable.

Finally, differences over the pricing of the gas as well as transit fees have arisen between India and Turkmenistan. The recent inter-ministerial meeting apparently ended in a stalemate, with India expressing its unwillingness to pay the price proposed by Turkmenistan, as it would be higher than the price of liquefied natural gas (LNG).

All this means that if the pipeline is ultimately constructed, it will be largely down to uncompromising US support for the project. While Washington's *raison d'être* is that it will help stabilise Afghanistan as well as assist the country in its development, not least by allowing it to earn around \$300 million per annum in transit fees, it would also allow Central Asian countries to find an alternate market in the east and thereby lessen their dependence on Russia as well as feeding energy-starved South Asian nations.

Implications

The four-way decision to implement the TAPI project is the *coup de grace* against the long-discussed Iran-Pakistan-India gas pipeline project, which never progressed beyond the stage of Iran-Pakistan and Iran-India bilateral consultations. In the end, Pakistan signed an agreement with Iran in May 2009 for a reduced-volume bilateral pipeline after India withdrew from the project in 2008. In 2010, Iran stated that it had completed the internal segment on its own territory (or at least from the Assalouyeh Energy Zone to Iranshahr, 120 miles west of the Pakistani border). The floods and political unrest in Pakistan (the pipeline enters in Baluchistan) have likely delayed its execution of its part of the project. The variant whereby the gas would

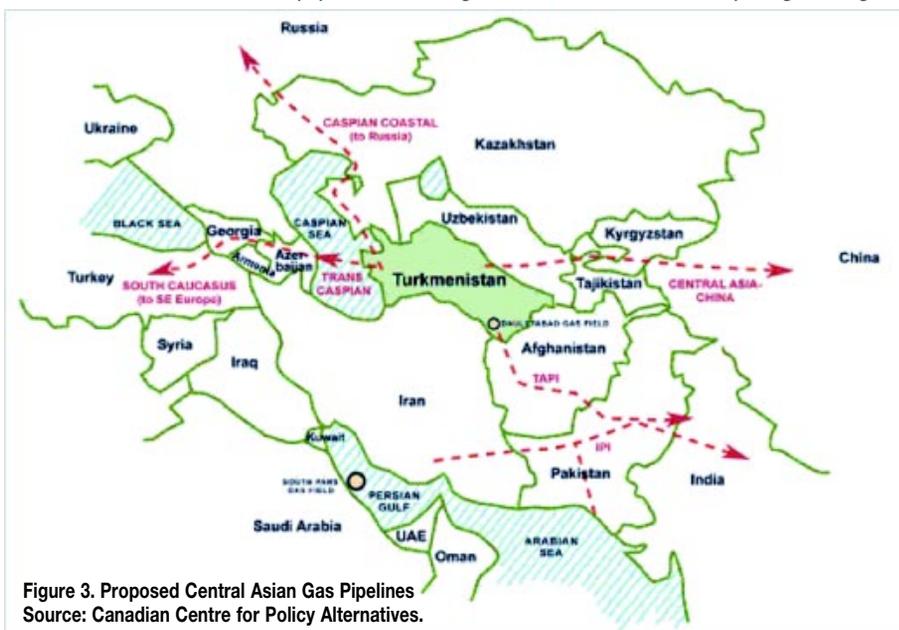


Figure 3. Proposed Central Asian Gas Pipelines
Source: Canadian Centre for Policy Alternatives.

have gone to the Pakistani port of Gwadar (on a small peninsula in the country's southwest at the entrance to the Persian Gulf) for liquefaction and sea transport to China is no longer in play. In March 2010 China ceased providing its development assistance to Gwadar, a few months after pulling the plug on the Khalifa refinery project, also in Pakistani Baluchistan.

The ADB intends to fund one-third of TAPI's estimated cost. This declaration represents a geo-economic seal of approval that should help to unlock funding from the financial centers and the private sector, much as the European Investment Bank and European Bank for Reconstruction and Development play similar roles for European pipelines from Russia and the South Caucasus. India had early on hinted that it would like its own companies to have a significant role in the pipeline's construction, and Berdimuhamedov has reportedly approved a leading role for India in the pipeline construction consortium. Chinese and American companies have also been reported to be expressing interest in the construction consortium. At the December 2010 meeting in Ashgabat where the quadripartite agreement was inked among their leaders, the respective energy ministers also signed a complementary framework document. This document foresees, early in 2011, a series of three bilateral meetings between Turkmenistan and each of the other participating states in order to agree supply conditions, including commodity price and transit tariffs. Then another four-way meeting should be held to agree and legitimize contractually all the sales and purchase agreements together.

The fact that Ashgabat has informed its partners that the gas will come from South Yoloton-Osman rather than from Dauletabad strongly suggests that it is preparing an eventual decision to participate in constructing a Trans-Caspian Gas Pipeline (TCGP) to Azerbaijan for gas to enter either the Nabucco pipeline and/or any of a number of other gas transmission projects to Europe as defined by the EU's Southern Corridor strategy. That is because Dauletabad is the source of gas for the so-called East-West Pipeline (EWP) inside the country that Turkmenistan decided in 2010 to reconstruct on its own rather than contracting with Gazprom or any of the other 70 international companies that had responded to its international tender. The western terminus of the EWP is not far from the country's Caspian Sea coast, and its projected refurbished volume is 30 bcm/y. That happens to be the minimum volume necessary to make the

TCGP commercially viable and preferable to other methods (such as condensation or liquefaction) for transmitting the gas. At the December 2010 five-way Baku summit of Caspian littoral states, Berdimuhamedov declared that any two countries should have the right to build a pipeline under the sea between them without having to ask permission from all the others.

Conclusions

It is intended that segments of the TAPI pipeline in Afghanistan are buried in order to make them less susceptible to terrorist attacks. Local communities will be given incentives to participate in this defense, and the central government has bruited the deployment of 7,000 soldiers (to be trained by NATO) to safeguard the route. Successful implementation of the project would not only assist in the peaceful economic development of Afghanistan, diversify Turkmenistan's gas exports, and provide resources to energy-hungry Pakistan and India. It would also alter the geopolitical contours of the region, providing an artery for intensifying cooperation in the meta-region that lies east of the Caspian Sea, south of Russia, and west of China. In particular, it would in the first instance integrate Afghanistan more into South Asia while giving India the opportunity that it has long sought to deepen its own geo-economic projection into Central Asia.

As was the case with the IPI, most experts are sceptical about TAPI becoming a reality given the myriad constraints and political problems that exist among the partners. While India continues to be wary about the security of the pipeline traversing through Pakistan, it will have a hard time selling gas from this project, particularly when it has access to more cost-effective alternatives, be it from the IPI project, LNG imports or from its own recent gas finds. If the project does see the light of day, it will be due to significant US support for the project, as well as its own larger political and strategic considerations.

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