

# India and Pakistan:

## *Pipe Dream or Pipeline of Peace?*

Toufiq A. Siddiqi

In spite of steady economic progress and accelerating rate of growth in India and Pakistan in recent years, their per capita income is still less than a tenth of that in the developed world.<sup>1</sup> Continued economic growth is the key to eliminating poverty and maintaining stability on the Subcontinent. This growth, however, is dependent on access to affordable and reliable energy sources that are not available domestically. Many have begun to look to a natural gas pipeline from the rich fields of the Persian Gulf and Central Asia to the Subcontinent as a potential solution.

Even though the economic benefits provided by a pipeline are clear, there are immense political obstacles to such a project. A pipeline from Central Asia would have to pass through politically unstable Afghanistan, as well as Pakistan, whereas one from Iran or the Emirates would have to pass through most of Iran and Pakistan before reaching India, whose leaders fear that the pipeline would give economic leverage to Pakistan in any future political crisis. Others believe that a pipeline could serve as an important confidence-building measure and facilitate the improvement of relations between the two countries—a veritable “pipeline of peace.” This article argues that measures could be taken to largely depoliticize the pipeline, and enable it to be built for the economic benefit of India, Pakistan, and the rest

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of the region. It could then serve as a building block of peace between these two hostile neighbors.

**The Energy Scene.** Some primary sources of energy in India and Pakistan—biomass, coal and oil—have become less attractive in recent times due to their environmental impact and the severe air pollution in many of the cities of the Subcontinent.<sup>2</sup> India and Pakistan relied mainly on biomass, such as fuel wood, agricultural wastes, and animal wastes, for energy during most of their recorded history, but it has become clear that biomass will not be able to supply sufficient energy for the future. Further, biomass fuels have exposed millions of people in rural areas to a pollution load that is 15–30 times higher than the level considered safe by the World Health Organization.<sup>3</sup> Coal, present in large quantities, mainly in eastern India accounts for more than half of all the

Solar energy use is rapidly increasing, but the costs of generating electricity from this source are still very high. There was a boom in India during the 1990s to use wind power, but the growth rate has declined in recent years. The potential wind capacity of 35–45 Gigawatts is impressive, but unlikely to constitute a substantial percentage of the electricity for the region as a whole, since much of the Subcontinent lies far from the windy coastal regions. Early expectations that nuclear power would supply large shares of electricity have not been fulfilled due to external concerns over nuclear weapons proliferation and internal concerns over safety and the disposal of radioactive wastes. The heavy initial capital requirement for nuclear power plants has also slowed down their construction.

Natural gas, on the other hand, is relatively cheap, transportable, and clean. Major gas fields have been discovered in both Pakistan and India, leading to the

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commercial energy used in India. Much of the coal has a high ash content that results in large emissions of particulates and other air pollutants when burned.

Hydro, solar, wind, and nuclear power are all important alternatives to biomass and fossil fuels, though each has its own limitations. Hydropower has been a significant source of electricity generation in the region, but faces considerable opposition from those whose lands are submerged and from environmental groups concerned about the loss of biodiversity. As a result, large dams have become quite difficult to build.

development of pipeline systems throughout Pakistan and in Western India. Figures 1 and 2 show that natural gas already supplies about 42 percent of the commercial energy in Pakistan and 8 percent in India.<sup>4</sup> Thus, the basic infrastructure to use it is already in place in many parts of the Subcontinent. Yet, the natural gas supplies of India and Pakistan are far too small to support the burgeoning demand in both countries. This much is agreed upon; what remains contentious is the best way to import natural gas to the region. If agreement can be reached on these issues, natural gas is

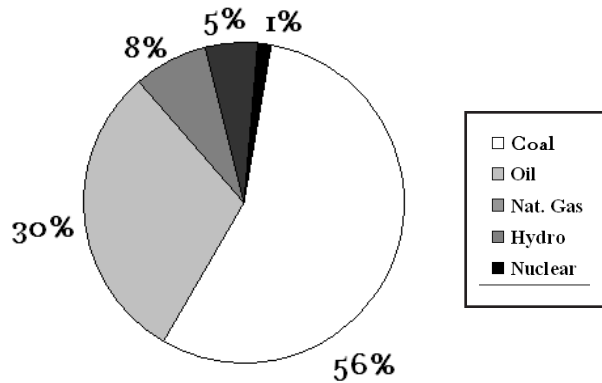
poised to become the leading form in which energy is imported to the Subcontinent.

**Natural Gas Options.** There are two basic methods of transporting natural gas: through a pipeline as gas or in liquefied form (LNG) in ocean tankers and then through domestic pipeline to areas of demand. The former is far less costly. The cost of gas delivered to Northwestern India from a pipeline through Pakistan could be about \$2.70–\$3.00 per thousand cubic feet (Mcf).<sup>5</sup> Importing it as LNG and then sending it via a domestic pipeline from the West Coast of India is likely to cost about 50 percent more. Given an anticipated demand for natural gas in India of more than 7 billion cubic feet (Bcf) per day by 2010, a pipeline would save India about \$1–2 billion annually. Pakistan stands to reap substantial benefits as well—a total of more than \$14 billion over the first 30 years: about \$8 billion in transit fees, \$1 billion in taxes, and \$5 billion in energy cost savings.<sup>6</sup>

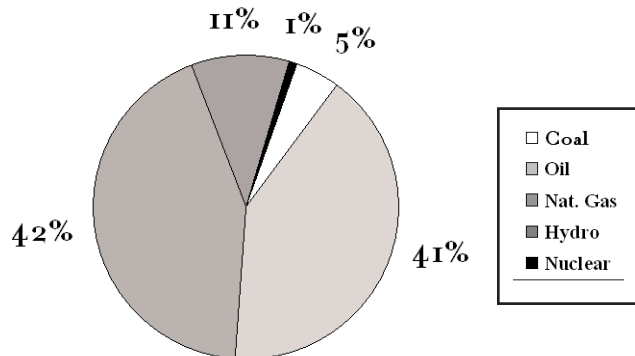
Given the geographical proximity and the availability of large proven natural gas reserves (see Figure 3), the most likely sources of gas for Pakistan and Northwestern India are Iran, Qatar, the United Arab Emirates, Oman, and Turkmenistan. Each of these states has much larger proven reserves of natural gas than either India or Pakistan, and relatively small amounts of domestic

consumption. Two major alternatives are under discussion: first, a land pipeline from Iran or Qatar to India via Pakistan, or second, a pipeline from Turkmenistan through Afghanistan and Pakistan and then on to India. The Iran option, which has been under study by BHP Australia

**Figure 1: Shares of Primary Commercial Energy from Different Sources in India, 2002**



**Figure 2: Shares of Primary Commercial Energy from Different Sources in Pakistan, 2002**



and a five-company consortium; it would cost \$5 billion to build, and would deliver about 3.3 Bcf of gas per day. The

Turkmenistan option has been pursued by a consortium (CentGas) of six multinational energy companies led by Unocal and the Government of Turkmenistan since 1997. This proposed pipeline would cost a total of about \$2.5 billion, according to a recent World Bank estimate, and would deliver 2.0 Bcf per day.

A third, more recent, alternative has been proposed by Russia's GAZPROM to run along the shallow coastal waters between Iran and India at a depth of fifty meters. The cost of the pipeline would be essentially the same as the overland route and offers the benefit of not passing through Pakistan's land territory, thus alleviating some of the Indian concerns about giving Pakistan economic leverage.

**Political Considerations.** Despite frequent discussions regarding the concept of a natural gas pipeline over the past decade, India and Pakistan have not been able to reach agreement in the climate of high tension, due to the 1998 nuclear tests, the 1999 Kargil war, the ongoing struggle in Kashmir, and the explosion outside the Indian parliament in 2001. Any cooperative activity had little likelihood of success—especially a multibillion-dollar natural gas pipeline giving Pakistan potential leverage over India.

Even when leaders in one state warm to the possibility of a pipeline, leaders in the other often balk. The pipeline is frequently viewed not in "win-win" terms, but in "win-lose" terms. Pakistan was less forthcoming in the early 1990s, when Indian interest ran high. Indian requests for surveys of Pakistan's coast for a potential pipeline were denied by the Pakistani navy, deeply suspicious of any Indian interest. In the mid-1990s, the Benazir Bhutto government in Pakistan authorized unofficial contact

with India to search for common ground. Opposition within India to Pakistani involvement, however, was pervasive in the bureaucracy, which succeeded in convincing the political leadership of the disadvantage of any reliance on Pakistan for a secure, uninterrupted supply of natural gas destined for Indian industry. The bureaucrats pointed instead to the desirability of a deep sea pipeline linking India with Oman. That preference continued even after Oman wrote off the scheme as too costly. The Nawaz Sharif government in Pakistan lost interest in the deal soon afterwards, as India became increasingly apprehensive of the benefit that Pakistan might accrue from transit fees.

Iran had some success in the mid-1990s in furthering its proposal, signing an agreement with India in 1993 followed by several bilateral working group meetings. Iran secured concurrently Pakistani cabinet-level approval of the Iran option. But this process was complicated by a third actor: the United States, which sought to prevent Iranian involvement in the pipeline and later placed sanctions on India and Pakistan over nuclear proliferation issues, (thus favoring the CentGas consortium).<sup>7</sup> The sanctions imposed by the United States on all three countries made it difficult for U.S. energy companies to participate in such projects, even though these are precisely the companies that have the widest range of expertise in undertaking such major projects. Although the sanctions imposed on India and Pakistan following the nuclear tests of the two countries in 1999 have been removed to ensure their cooperation in the war on terror, the sanctions on Iran imposed in 1984 remain in effect even today. Furthermore, the Iran-Libya Sanctions

Act of 1996 provides for sanctions even on foreign companies that provide new investments over \$40 million for the development of petroleum resources in Iran. Although some companies such as the French energy firm Total, have continued to invest in Iran, the Act has led others to hold back from participating in projects involving that country. As a result, U.S. support or, at least, restraint from opposition, is an important ingredient in the construction of any pipeline through Iran.

In Pakistan, despite cabinet approval of a pipeline, there are still pockets of likely resistance. Some in the military feel that the project provides greater advantage to India without an overall resolution of differences, particularly over Kashmir. Moreover, extremist groups who are opposed to the present government or to any cooperation with India may decide to target the construction or operation of a natural gas pipeline linking Pakistan to India.

The failure to press ahead on the two major proposed routes has led to at least some interest in the GAZPROM proposal. It may sidestep the U.S. sanction issue against Iran, since Russia already has major energy projects in the country. The coastal route reduces the possibility of sabotage against the pipeline and thereby alleviates India's concerns about the physical security of gas supplies. It may even be welcomed by Pakistan, which would, after all, have to guarantee the security of the land pipeline. However, this proposal has not attracted strong interest from either India or Pakistan. One reason may be that, while it reduces the likelihood of sabotage, the cost of repairing any damage to an offshore pipeline would be much higher.

**Reassuring India.** In order for India and Pakistan to take advantage of upswings in the political climate to further planning for a pipeline, progress must be made on ensuring the reliability and security of supplies. During periods of political tension, of which there are sure to be many more, India believes that Pakistan might intentionally turn off the gas supply and cause substantial damage to India's economy. Perhaps of greater concern, militants could disrupt supplies themselves, causing an economic slowdown and necessitating costly repairs to the pipeline. Several approaches aimed at addressing these concerns have come out of Track Two meetings on the Subcontinent:<sup>8</sup>

- Given that international financing would be needed to gather the capital required to build a pipeline, the multilateral institutions financing the project could require binding guarantees from Pakistan not to disrupt supplies to India intentionally.

- Sabotage risks could be reduced through patrolling and remote monitoring, but they cannot be eliminated. A working group of representatives of gas users and suppliers in both countries could be set up to design measures to enhance security. Most importantly, India must feel reassured that the Pakistani government does not encourage sabotage, which could be attained through discussions and investigations at the working-group level.

- The receivers of pipeline gas and the financiers of the pipeline could sign an agreement stating that curtailment of gas deliveries to India would result in curtailment of delivery to Pakistan as well.

• A “take or pay” clause could be incorporated into the purchase agreement stating that Pakistan would have to pay for the entire amount of gas supplied

extend from the Gulf States, Saudi Arabia, and Iran in the West, Turkmenistan and Afghanistan in the North, through Pakistan and India to

## A breakdown in the system would not have catastrophic implications for the Indian economy.

even if it did not transmit it further to India. Since about two-thirds of the total gas would go to India, it would be beyond Pakistan’s financial resources to continue to pay for this additional gas.

• Some power plants using the natural gas could be located in India close to the Pakistan border, and would supply electricity to parts of both countries. Any disruption of supplies to these power plants would adversely affect both countries.

It may also be useful to keep in mind that the natural gas pipeline would supply less than 10 percent of India’s current energy needs, and a breakdown in the system, whatever its origin, would be disruptive but would not have catastrophic implications for the Indian economy. If these measures are not enough to assuage India’s concerns, or because a mainly bilateral pipeline deal lacked domestic political support, broadening the pipeline idea—rather than shirking it—would be preferable.

### A South Asia Natural Gas Supply System?

A natural gas transmission system linking several countries may succeed in the domestic political scene in both countries in ways that a unidirectional Pakistan to India pipeline may not be able to. Such a system could

Bangladesh. Natural gas could be fed into the pipeline by various countries, based on long-term agreements, and withdrawn initially by Pakistan and India. The pipeline system could be extended later to Myanmar and Thailand in the East, and to other Central Asian countries in the North once the initial infrastructure was constructed. The initial parts of a South Asia Natural Gas Supply System (SANGSYS) could be pipelines between Bangladesh and India, and between Iran and Pakistan that could then be extended to India.

Due to the location of coalfields in West Bengal and Bihar, the Eastern part of India has relied heavily on coal for its energy. The environmental problems associated with the coal system, as well as transportation bottlenecks, have led to greater interest in the use of natural gas in that part of the country—but bringing in oil or gas from Assam in the Northeast of the country has been impractical as a result of the small size of the reserves coupled with high transportation costs.

During the past few years, the discovery of additional natural gas fields in Bangladesh led to proposals for transporting it via pipeline to India. Domestic opinion in Bangladesh is divided about the extent of the proven reserves, and whether these are large enough to permit exports. The pub

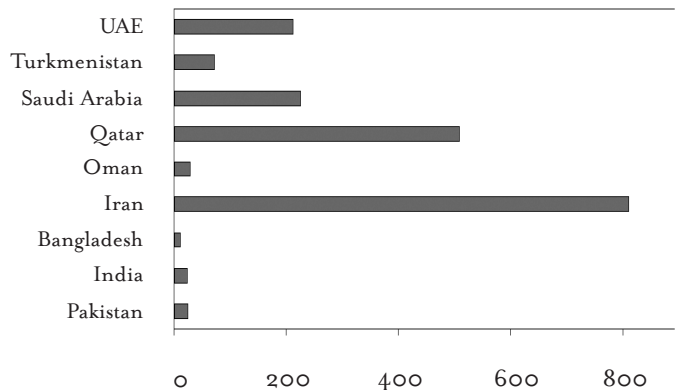
lished figure for the natural gas reserves of Bangladesh is about 10 trillion cubic feet (Tcf), which is about 27 times the current annual production. Since domestic consumption of natural gas in Bangladesh has been increasing rapidly, the current “proven” reserves would be inadequate to justify exports.<sup>9</sup> However, a recent report prepared jointly by Petrobangla and the U.S. Geological Survey suggests that the reserves could be as high as 65 Tcf or as low as 8.4 Tcf.<sup>10</sup> The high figure would exceed the combined reserves of India and Pakistan, which are about 53 Tcf, and would permit the supply of considerable amounts of natural gas to eastern India.

Unocal has proposed a 1360 kilometer pipeline from Bangladesh to Delhi that would link up to the current pipeline system in northwestern India. The \$1.2 billion pipeline would provide 0.5 Bcf of gas to customers along its route, where the supply shortfall is about 1 Bcf a day, and expected to increase to 4 Bcf a day by 2010. Most of this gas would be used for power generation and fertilizer production. According to Unocal, Bangladesh would earn about \$3.7 billion in revenues and tax receipts during the estimated 20-year life of the pipeline project. The present Bangladeshi government seems more amenable to exporting natural gas than its predecessor, but the main opposition party remains opposed to it. The outcome of this impasse may have to await an agreement on the actual proven reserves of the country. If these

can be established quickly, the Bangladesh–India part of SANGSYS could be the first part of the system to be completed.

On the western side of the Subcontinent, Pakistan’s economic situation during the last few years has resulted in a slowdown in the growth of energy demand. This, combined with some new discoveries of natural gas, has postponed the need for gas imports by about five years. If the recent lifting of economic sanctions results in faster economic growth in Pakistan, the need for additional energy supplies will be acute by 2005. Since it takes several years to build a natural gas pipeline of about several thousand kilometers through difficult terrain, the construction of such a pipeline would need to start very soon. Whether the natural gas comes from Iran, the Gulf States, or Turkmenistan, the

**Figure 3: Natural Gas Reserves in and Near South Asia (in trillion cubic feet, 2002)**



western part of the SANGSYS pipeline system could be in place by the end of this decade. Extending the link to India and Bangladesh could then provide a basis for a Southern Asia pipeline network.

## Pipe Dream or Pipeline of Peace?

Whether the proposed India-Pakistan pipeline is merely a pipe dream has yet to be seen. The economic benefits are evident: natural gas is the only major energy source that is available in large quantities and is environmental-friendly. Importing the gas through a pipeline to this burgeoning economic region would be far cheaper than importing it as LNG. Economies of scale also suggest that a joint natural gas pipeline to deliver gas to both countries would result in lower costs than a pipeline to only one.

India's concerns over the physical safety of the pipeline are valid—during the past year, opposition groups have blown up gas pipelines within Pakistan. However, these were quickly repaired, and only short-term disruptions were caused. Such events cannot be completely eliminated, but they could be minimized by following the measures suggested above. There is a substantial group, particularly in the business community and in academia, that believes that the highest priority in both coun-

tries should be faster economic development, and that cooperation in major projects such as a joint pipeline would not only contribute to this goal, but help build a constituency for cooperation in many other fields. The India-Pakistan pipeline, whether completed on its own or as part of a wider regional system, could be an important confidence building measure—a true “pipeline of peace.”<sup>11</sup>

The economic development of South Asia has been one of the major casualties of the India-Pakistan conflict. A “pipeline of peace” would not only strengthen economic development and political stability in India and Pakistan, but also contribute greatly to achieving these goals in the other countries of South Asia.

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### NOTES

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