THE IRAN-PAKISTAN-INDIA PIPELINE PROJECT: CROSS-BORDER GAS PIPELINE CHALLENGES

A case study prepared for the International Gas Union’s Gas Market Integration Task Force.
The Iran-Pakistan-India Pipeline Project: Cross-border Gas Pipeline Challenges

With the second largest fossil fuel reserves in the world, Iran has enormous potential to serve newly emerging gas importers such as Pakistan, India and China by pipeline and markets farther away by LNG. Just as Russia and Qatar have already embarked upon an expansion of their export capabilities, Iran has the potential to become a new supplier to both eastern and western markets. However, geopolitical issues, Iran’s strategic intentions for LNG exports, escalating costs and a lack of clear leadership and decision-making combine to make the range of possible paths into the future numerous.

For Iran, the benefits of gas exports via pipeline to India include: 1) a major boost for job creation and economic prosperity of the provinces on the pipeline route; 2) the enhancement of Iran’s strategic positioning and standing both regionally and on a global level; and 3) regional economic integration.1 For the key topic of gas market integration, Iran therefore has centre stage with its massive resources and export potential to emerging markets nearby. However, despite all the potential for a deal on a long-planned pipeline from Iran to Pakistan and India (the IPI pipeline), huge cross-border barriers and uncertainties have so far put off the IPI project. It is common knowledge that Iran holds the world’s second largest gas reserves, after Russia. Yet a country such as Canada, with above and opposite Iran possesses the world’s second largest gas reserves with 15.7% of the global total.

but one-seventeenth of Iran’s reserves, produces nearly twice as much gas. Iran’s lower production is due mainly to a lack of adequate planning, adherence to the old bureaucratic structure within its fossil fuel industry and ineffective gas pricing.

Countless initiatives and technical solutions have been put forward over the past decades in an effort to integrate these markets with Iran, yet none have been successful at getting the IPI pipeline past the drawing board, despite favourable supply and demand projections. A major factor complicating the overall equation is the geopolitical overhang, which usually accompanies these types of large-scale, cross-border gas projects. The case of Iran is a particular conundrum both at a regional level as well a global one. From a global perspective, Iran’s resources remain vastly underdeveloped because of US and European sanctions designed to limit Iran’s capacities to attract investments and to “isolate” it, only ensuring that these resources

have no easy way of finding an outlet to an already tight energy market. The market is thus often forced to look for alternative means of gas market integration.

In addition, from a regional vantage point, Pakistan and India would have to come to terms with the long-term dependency relationship which the IPI pipeline is bound to bring. The IPI project is likely to continue to fail unless government-to-government cooperation is firmly achieved. It can only be achieved if the burdens of traditional commercial, technical and environmental risks such large-scale gas projects inherently impose on the potential partners are shared by all of them from the outset. Even before this can be accomplished, however, the geopolitical complexities involved will have to be overcome on the basis of mutual trust and determination, and perhaps ultimately, through the sheer necessity imposed by the macro-economic fundamentals of import-dependency.
small portion to be constructed overland through the UAE; and 2) a pipeline from Iran to Pakistan, i.e., the project currently on the table. In the former case, a time limit imposed by Qatar for the allocation of the gas came and went as the project was delayed and ultimately shelved, despite substantial work which had been carried out on surveys and design. The second option is now being negotiated between Iran, Pakistan and India.

Although Pakistan and Iran signed an agreement in 1995 for the construction of a pipeline to bring South Pars natural gas from the Persian Gulf to Karachi, new gas discoveries in Pakistan stalled the project for a number of years. During the visit of Pakistan’s Prime Minister to Iran in 2003, the project was revisited and a bilateral Joint Working Group (JWG) was formed to realise the project. An overview of the project’s route (and that of the competing Turkmenistan-Afghanistan-Pakistan-India pipeline) is provided in Figure 1.

It has long been a desire of the Iranian government to develop export markets for gas from the South Pars field. The problem in this respect has always been a conflict of interest and strategies within the Iranian energy establishment. Iran’s Oil Ministry and the Majlis (the Iranian parliament) Energy Committee have traditionally disagreed over whether the country should become a major regional and international gas exporter on the one hand, or concentrate its gas resources mainly on oilfield reinjection and the development of the petrochemical and gas-based industries and other domestic demand, on the other. A pipeline to the Indian sub-continent offers a stable initial outlet for Iranian gas prior to any further ventures as a major gas exporter.

Hence the Iranian government filed a request with the Pakistani government for extension of the proposed gas pipeline to India. For Pakistan, the pipeline offers badly needed gas supplies and revenues from transit rights: 50% of the 22 bcm per year would go to Pakistan and the other half to India.

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**Historical background**

Before delving into some facts and figures on supply and demand, it is instructive to review the historical developments preceding the current setting, regarding the IPI market integration project. The export of gas from the Gulf region to Pakistan was first considered in the early 1990s. Two projects were initially put forward: 1) a Qatar-Pakistan pipeline following an offshore route except for a
The extension was acceptable to Pakistan, but it took India more than a decade to digest the idea of gas transmission over the territory of Pakistan, with which it has had various armed conflicts and an as of yet unresolved dispute over the area of Kashmir. India does not feel entirely comfortable with the idea of being dependent in the long-run on Pakistan. Thus even though there is an acute shortage of energy and especially natural gas in India, the Indian government still is not enthusiastic about entering into an agreement with Pakistan regarding gas transit. India thus began looking at yet another alternative means of attaining Iranian gas, through an offshore pipeline which would skirt Pakistani territory altogether. But after detailed Indian field studies highlighted several technical and geophysical issues, the offshore route was found to be unfeasible.

Despite Pakistan’s willingness to extend the gas pipeline to India, Pakistan has maintained that it would proceed with the project even without India, should the latter lose interest. As a result of protracted negotiations, Iran and Pakistan signed a Memorandum of Understanding (MoU) in the middle of 2005 to go ahead with the project. Since then there have been a number of meetings between delegates from Iran, Pakistan and India to iron out the problems and to reach an agreement on the Gas Sales and Purchase Agreement (GSPA). The Indians actively participated in various meeting of the IPI gas pipeline project initially, but they did not attend any meetings on IPI from mid-2007 to March 2008. During this time, India was put under overwhelming US pressure to drop the GSPA as a civil nuclear deal with the US was being finalised. Meanwhile, in December 2007, Iran and Pakistan initiated the GSPA, which included a provision to add India further downstream at a later stage if India ultimately desires to join the project. Pakistan has also stated that it would be able to buy the gas volume allocated to India in the GSPA in case India is unable to join the project. There is hardly anything else Pakistan could have done to ensure the pipeline goes through, compelled to do so by its own energy demand forecasts.

**Iran’s gas resource base and potential**

Iran holds the world’s second largest gas reserves which, in 2007, amounted to 27.8 tcm or 15.7% of the global total. A most favourable feature of Iran’s gas deposits is that around 62% are located in non-associated gas fields and have not been developed, meaning that the country has great potential for future gas development.

Iran’s greatest concentration of resources lies in the South Pars gas field. Geologically an extension of Qatar’s North Field, South Pars was first identified in 1988, and originally appraised at 3.62 tcm in the early 1990s. Current estimates are that South Pars contains 8 tcm or more (some estimates go as high as 14.2 tcm) of natural gas, of which a large fraction will be recoverable. 2

A vital aspect regarding the future development of Iran’s energy potential is Iranian energy policy, which must cope with the domestic needs, balancing them with the various export options the government has. Many members of the Majlis argue that, prior to undertaking any export projects, domestic gas needs and oil field injection must be satisfied first and override export options if necessary, particularly because the Iranian government must take into account issues such as domestic economic development and unemployment. Iran is the largest consumer of gas in the Middle East and growth in consumption in the last two decades has been substantial: some 9-10% per annum since 1990. Those in favour of gas exports by pipeline and LNG argue that there

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2 In addition there are the 0.18 tcm, non-associated Khuff (Dalan) reservoir of the Salman oil field (which straddles Iran’s maritime border with Abu Dhabi, where it is known as the Abu Koosh field); the 22.65 bcm Zireh field in Bushehr province; the 0.11 tcm Homa field in Fars province; the 0.4 tcm Tabnak field located in southern Iran, the 0.37 tcm Aghar and Dalan fields in Fars province, and the Sarkhoun and Mand fields. Iran has also discovered two new natural gas fields in the Persian Gulf, one at Balal and the other beneath Lavan Island, possibly holding 0.2 tcm.
is a limit to gas injection and using gas domestically in Iran can only utilise less than 40% of its reserves in the next 25 years. In addition, Iran incurs a significant opportunity cost by denying itself a fully fledged role in the international gas industry.

In other words, Iran can use its gas resources to develop a relative economic advantage. In order to live up to its potential and make full use of every cubic metre it can export without sacrificing domestic economic growth, Iran needs a strategy that enables the country to free up export volumes. However, this will take some time, according to Gholam Hossein Nozari, Minister of Petroleum.

Dr Narsi Ghorban has summarised four options available to Iran for its gas resource development: 1) domestic use of gas, including power generation; 2) gas used for oil lifting; 3) gas-based industries including petrochemical and GTL projects for internal use and export; and 4) gas export by pipelines and in the form of LNG. The Majlis favours oil lifting, especially in a high oil price environment. For Iran to be able to manage these different choices effectively, he argues, Iran is in need of an NOC for oil as well as gas production such as Gazprom, Sonatrach and Qatar Petroleum, as well as a gas ministry parallel to its oil ministry. Iran has the potential to become a major driving force not only in the international gas market but also regionally within the Middle East and the Persian Gulf region.

The last winter period has further proven that a more coherent and overall energy policy is required in order to avoid situations involving a potential breakdown in contracted supplies to Europe, and in particular to Turkey. Some type of “neighbourhood policy” could form the spearhead of Iran’s external energy policy, which could manage energy relations with key potential customers and their regulators such as India and Pakistan, but also with significant Central Asian exporters Kazakhstan and Turkmenistan, as far as supply integration and transit is concerned. A sound, state-to-state, realistic and geo-strategically underpinned orientation is essential for any would-be Iranian energy policy. Figure 2 provides the projected forecast on availability of natural gas for export projects in Iran.

As far as major green field investments are concerned, Iran has the same path of possible development: a split between greenfield flows by pipeline and by LNG. In mid-2008, however, Repsol and Shell abandoned their negotiations with...
Iran over the Persian LNG project because they perceived the risk of US reprimands as too great to move ahead with business in Iran. Finding private international, or in any case Western investors, has been difficult and could prove to be in vain, in the end.

- Pakistan: primary energy demand forecasts
For Pakistan, the need for the IPI gas pipeline project is propelled by the huge deficit in energy, especially in the natural gas sector. Pakistan’s Planning Commission has prepared energy supply and demand forecast projections for the short, medium and long term, which forecast that the country will have to fill a natural gas supply gap of 1.5 bcf/day (roughly 42.4 mcm/day) by 2013 (see Figure 3). This is expected to be met by the proposed LNG terminal at Karachi and the first phase of the IPI pipeline. By 2025 the supply-demand gap is projected to amount to 10 bcf/day (283 mcm/day). Given the proximity of large natural gas reserves in neighbouring Iran, it would thus be logical and understandable for Pakistan to establish a lasting bilateral relationship with that country.

- India: primary energy demand forecasts
Given the fact that long-term supply and trade commitments are vital for covering the long-run costs of the pipeline, it is important to take India as another potential customer for the pipeline into account. India consumed some 44 bcm of natural gas in 2007, which represents some 15% of its overall primary energy consumption. This figure is projected to grow to some 143 bcm per year by 2025, accounting for 20% of India’s overall primary energy mix, according to GAIL. According to the IEA’s World Energy Outlook 2007, which includes a special review of the Chinese and Indian energy sectors, Indian demand could indeed reach 123 bcm by 2030 based on the IEA reference scenario. Though India appears keen on developing regional gas pipelines, its energy plans make no mention of or seem to take into account specific gas pipelines.

- The potential routes of the IPI pipeline
The first phase of the project will have a design capacity to carry 2.1 bcf/day (60 mcm/day) from the gas delivery point at Iran-Pakistan border, planned to be commissioned in 2012. The volumes are to be shared equally by Pakistan and India. Under the auspices of the Iranian domestic energy policy, the first section of the pipe in the Iranian sector is to be executed as an IGAT-VIII project, which is basically designed to supply gas to the eastern provinces of Iran, supplying natural gas on the express orders of the Majlis. The second phase of the project will increase the design capacity of the pipeline to 150 mcm/day by laying a second pipeline, planned to be commissioned in 2017. Pakistan’s share of the gas volumes would be some 60 mcm/day and India would receive 90 mcm/day.

The pipeline in Iran is to start in Assaluyeh, from where it will run up to the Pakistan-Iran border, and will have a length of 1,157 kilometres. In 2006 Iran started construction of a 902-km, 56-inch diameter underground pipeline from Assaluyeh to Iranshahr. Planners in Iran seem to
have built extra capacity in this pipeline for that purpose. It appears that in this first stage, the 56-inch diameter main transmission pipeline is already being built in the province of Seistan. Iranian planning and design takes into account future possible interconnection between this section of the pipe and Pakistan and India. The pipeline has a capacity of 3.2 bcf/day (90 mcm/day) and about 40% of it was complete by the end of 2007. Iran has already started planning to extend this pipeline by another 255 kilometres to bring it to the Pakistan-Iran border where Iran expects to deliver 2.1 bcf/day (60 mcm/day) of gas for Pakistan and India in the first phase.

Pakistan has done extensive work to identify a suitable corridor to lay this pipeline over its territory, and is currently working on a route which traverses the Balochistan Province coastline and passes near the city of Nawab Shah before reaching the Pakistan-India border. The first section from the Iran-Pakistan border to Nawab Shah will be 795 kilometres long with a capacity of 2.1 bcf/day (60 mcm/day). Nawab Shah is the off-take point for the contracted gas volume for Pakistan where it will be connected to the existing gas network. If India decides to participate in the end, Pakistan will lay a second section of 240 kilometres from Nawab Shah to the Pakistan-India border having a design capacity of 1.05 bcf/day (30 mcm/day), which is to be provided to India under the agreement. From the delivery point for gas allocated to India at the Pakistan-India border, a pipeline will be laid to connect it to the existing Indian gas network (see Figure 4).

In a nutshell, the required financing to complete the IPI pipeline segment which Iran will construct (1,157 kilometres) amounts to an estimated cost of $3 billion. The Pakistani segment of the pipeline, having a length of 1,035 kilometres, is estimated to cost $2.2 billion. India must construct 300 kilometres at an estimated cost of $0.65 billion through its own territory to connect to its existing gas pipeline network. The figures given are all based on 2007 pre-feasibility studies, to be worked out in more detail depending on whether any commercial deal and/or GSPA will be established between commercial parties. However, it is estimated that the full cost of the overall project for the three countries to produce pipeline quality gas in Iran and to build transmission and distribution pipelines in India and Pakistan to bring the gas to their consumers will be more than three times as much. This availability of energy will attract huge investments in industry and power generation in both India and Pakistan, which they will need in order to maintain their projected economic growth.

**The IPI pipeline project: investors and funding**

Initially, the plan was to have an international holding company with an internationally led sponsor for the construction of the entire length of the pipeline. This attracted many major companies and joint ventures including BHP, Petronas, Total, Shell, British Gas, Gazprom and a joint venture of Iranian gas companies. It has now been decided that the three countries will own and build the portions of the pipeline in their respective countries, which may have local and international participation in one form or another. This segmented approach was designed to avoid having to put together funding for one single large project, which in turn would have required funding from international institutions. As such, one of the project’s main hurdles has been funding from major development banks, whose policies tend to go hand-in-hand with US foreign and development policies, meaning access to funding is subject to political conditions, which is something all three countries involved wish to avoid.6

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6 The September 2008 credit crisis and the subsequent global financial market crisis are likely to further limit the role of international institutions and will make it more difficult for individual players to attain financing.
The IPI stakeholders

The stakeholder relationship involved in the potential IPI pipeline is complex, each party having its own proper ownership structure. Besides the governments of Iran, Pakistan and India, the following stakeholders are involved in the negotiations for the IPI gas pipeline either directly or indirectly:

- The National Iranian Oil Company (NIOC), which owns the gas fields in Iran, is negotiating a GSPA through its subsidiary, National Iranian Gas Export Company (NIGEC). The IPI pipeline segment in Iran will be owned and operated by the National Iranian Gas Company (NIGC), another subsidiary of NIOC.
- The Government of Pakistan has created a special purpose company called the Inter-State Gas System (ISGS) to handle the import of natural gas in Pakistan. ISGS is a wholly-owned subsidiary company of Sui Southern Gas Company (SSGC) and Sui Northern Gas Pipelines Limited (SNGPL), the two public sector gas utilities in Pakistan. SSGC and SNGPL own 51% and 49% of ISGS, respectively. ISGS is negotiating the GSPA from Pakistan’s side.
- Gail India Limited (GAIL), which is a major gas utility in India, is negotiating the GSPA on its side and would also own and operate the Indian part of the IPI pipeline besides being the beneficiary receiving the gas.

Any attempt to construct a new pipeline, and/or new interlinking projects with Pakistan and/or India cannot be finally deemed feasible unless all energy policy frameworks are agreed to between the seller and the buyer. Most large-scale energy deals are seen as part of a high-level, bilateral government-to-government (G-to-G) agreement, followed subsequently by a business-to-business (B-to-B) execution of the agreement. Thus these B-to-B deals always link up to so-called G-to-G deals.
It is remarkable to note that despite the fact that there is no B-to-B deal underpinning the project yet, the pipeline is already under construction in Iran, nearing the border with Pakistan, which is quite unlike the typical GSPA contracts which require commercial agreements long before actual construction begins.

- **The broader geopolitical context**

In discussing the complexities surrounding IPI pipeline on a regional, bi-lateral and tri-lateral level, it is hard to do so without mentioning the broader geopolitical context, at the heart of which lies Iran, and America's geopolitical strategy to deal with it.

During the Cold War, US strategy was reactively concerned with containment of the Soviet threat, a policy which was given a renewed push during the Reagan years and finally led to the collapse of the Soviet Union as a capable adversary. This policy consisted of building and developing relationships with key allies in an arc around the Soviet Union, stretching from Europe to the Middle East and on to the Pacific and Japan. Since the collapse of the Soviet Union, however, America's strategy has become more proactive. In the early 1990s, there no longer was a major, singular geopolitical threat such as the Soviet Union; indeed, there was ample opportunity to expand US influence in the vacuum left by the collapse of Russia’s influence. Central Asia quickly became a focal point for American foreign policy during the 1990s, an area which was now open to the outside world and was, next to Western Siberia, the Soviet Union’s main production area for oil (mainly Kazakhstan) and gas (mainly Turkmenistan).

The freeing up of oil and gas resources in this region became the centre of a wider American campaign to secure oil and gas flows from it. Thus the new American strategy became focused on securing energy routes and securing the necessary countries in a US sphere of influence. The Azerbaijan-Georgia-Turkey corridor became the first pro-US exit valve for Central Asian oil and gas while, since 9/11, Afghanistan now offers the second. With a pro-US regime in place in Afghanistan, the US can “comfortably” control one of the most important potential gateways for energy flows from Central Asia to emerging economies such as India and China. At the same time, the US invasion of Iraq appears to have been a manoeuvre to secure a long-term strategic position in the Gulf region (with Iraq known to have the largest un-explored oil reserves in the world).

Having said the above, it is clear why Iran is a major threat to US policy: Iran dominates the Persian Gulf region and has gained enormous regional influence. From an American point of view, it casts a long shadow over the Strait of Hormuz, which is a crucial passage for some 40% of the world’s oil flows (the US navy intensely patrols the Strait as well as the Gulf). Ever since the 1979 Iranian revolution US-Iran relations have been tense, at best, and diplomatic relations non-existent. Iran is considered by the US to be a major threat to its interests and therefore the US maintains economic sanctions against Iran.7

As regards the IPI pipeline, it thus becomes understandable why the US strongly objects to the building of the IPI pipeline and Pakistan’s and India’s dependence on a state the US deems as hostile to its interests. Already mentioned above is the isolation policy towards Iran, a major obstacle to the IPI project, especially as far as funding is concerned. One cannot escape the geopolitical

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7 These sanctions were further tightened in 1995 by the Clinton Administration under the Iran Libya Sanctions Act (ILSA), which was aimed at Libya on the same grounds, namely that it funded terrorist organisations. In 2006, Libya was no longer seen as a threat and was thus moved from sanctions list but the Act was extended to 2011 and remained applied to Iran (it was thus renamed the Iran Sanctions Act). The original reasoning behind the Act was that sanctions would curb the strategic threat posed by Iran by hindering its ability to modernise its petroleum sector. American and foreign firms were thus basically barred from investing in Iran. See http://fas.org/sgp/crs/row/R520871.pdf and Energy Information Administration, Iran: Country Analyst Brief, (Washington DC: US Department of Energy, October 2007), p. 4.
realities of the energy business and geopolitical factors should be factored into to large-scale, cross-border energy projects as business as usual. Although geopolitics is not the subject of this article, geopolitical issues have their bearing on an already difficult relationship. The discussion is incomplete without their mention and they continue to remain directly and/or indirectly the major cause of delays in the completion of the negotiation round of the IPI pipeline and other agreements related to the GSPA. These are bilateral and multilateral relationships between Iran and Pakistan, Iran and India and Pakistan and India. In these bilateral relationships, account must be taken of broader geopolitical issues such as the following:

- Iran’s ability to directly influence factors on the ground in Iraq so as to make life difficult for US forces gives it a new role in the Persian Gulf region and Southern Asia.
- The US-led, NATO war in Afghanistan, which of course is mostly centred on energy interests and on the geo-strategic positioning of the US and its allies for the long run. If it should be successful, Afghanistan could become part of a safe route for energy flows from the Caspian region and Central Asia, which would then go on through the Baluchistan province of Pakistan to the Arabian Sea.
- Iran’s efforts to play a role of its own in Afghanistan with the help of Afghan tribes and warlords sympathetic to Iran.
- Russia’s Gazprom and France’s Total have been among several parties willing to invest nevertheless in Iran’s upstream potential.
- US pressure on India not to go ahead with the IPI project in view of the civil nuclear agreement being offered to alleviate India’s energy problems.
- Nevertheless Iran has to deal, in the short term, with scarce investment capital and an unattractive buy-back system of contractual arrangements. Pakistan’s role in the US-led war effort in Afghanistan could potentially have negative effects on a possible long-term relationship between Iran and Pakistan, in addition to regional instability.
- The differing politico-economic and social characters of the countries involved add their weight to tensions between them, while all three countries have to deal with significant internal strife and instability (e.g., poverty and social discontent, etc.).
- Pakistan’s refusal to accept India’s hegemonic attitude towards its neighbours.
- Last but certainly not the least, is the tense relationship between Pakistan and India over the border region of Kashmir, a strategically sensitive region to which both lay claim (owing to the legacy left by the British at the time of their exit from the Indian sub-continent). From a politico-religious standpoint, it should be mentioned that Kashmir’s largely (95%) Muslim population is at odds with India’s Hindu population, leading to deeper tensions across the board.

**The importance of government-to-government relations**

Given the aforementioned difficulties, it is understandable why a preliminary G-to-G framework is essential for the success of the IPI pipeline. Not only does it take state-backed efforts to overcome immense cross-border risks, state-backed efforts are also necessary to tackle broader regional tensions and prevent them from sabotaging a project in which all parties involved have a common interest. From a historical perspective, it is obvious that all kinds of technical initiatives have been made and put on the table, various options for a pipeline that could provide Iran with regional export markets and security of demand, on the one hand, and security of supply for Pakistan and India on the other. Given the difficulties experienced in the past, it would seem that a more gradual, step-by-step approach should be considered as a way forward for the IPI. Past
successful examples of cross-border pipeline projects across the world reflect the fact that starting negotiations on a bilateral G-to-G basis first maximises the chances of success for more complicated projects.

In this context, typical energy supply and transit issues such as transmission tariffs, border-crossing issues, fuel mix support, energy efficiency, etc., are best dealt with in an initial Pakistani-Iranian G-to-G relationship and discussion, before potentially expanding the relationship to include third parties. When all the most important issues have been dealt with at a state-to-state level, then the necessary foundations will have been laid to proceed with the B-to-B relationship between the national companies, the GSPA on the part of NIGEC being an initial step. Both governments could then meet regularly to support and further develop B-to-B activities in order to emphasise their political willingness to hammer out an energy relationship. Iran maintains that IPI is a supply contract; therefore there is no requirement for allocation of certain blocks of the South Pars gas field and no requirement for Iran to supply gas from South Pars or from elsewhere depending on Iran’s domestic supply and demand balance as well as other contracts. All parties did agree in the initial stages on the gas volumes and Iran also allocated certain blocks from the South Pars field, but with the passage of time Iran kept changing its stance on the allocation of blocks, citing its difficulties and delays in negotiations related to the IPI pipeline. Iran now maintains that it would guarantee the supply of gas for the duration of the contract.

The IPI pipeline is a regional project involving cross-border commercial issues and barriers. Stable and predictable energy relations founded on and rooted in a mutual recognition of the immense common benefits to be gained are a vital pre-condition for success. Only then can most of the barriers to cooperation be removed, but the hard reality is that this will not happen overnight, it requires time and patience. Currently, the project is stalled because of a lack of political will and disagreements over transit tariffs and feed gas, even though Pakistan and India, for example, have already agreed on a broad range of issues after technical-level talks, subsequent to ministerial parleys which claimed to have reached consensus on basic issues.

**Broader, regional gas market integration**

The issue of gas market integration is relevant not only to the case of Iran, Pakistan and India, but also to the vast region including the Central Asian producers and Iran, on the one hand, and India and China on the other. At one end of the region there are major potential gas exporters to Eastern Asia, namely Kazakhstan, Uzbekistan and Turkmenistan, whose export potential can be channelled through Afghanistan and Pakistan to East Asian markets. There is thus extensive potential for trade and win-win situations for both producers and consumers, despite the geopolitical problems involved. The IPI case demonstrates that starting from a simple outset; a producer and supplier need to agree on a G-to-G framework first, with regulatory agreements put into place at this crucial stage.

So, for example, Iran and Pakistan come to an agreement first, before integrating their own systems into neighbouring countries as import and transit needs rise. In a next step, the Central Asian producers likewise can link their infrastructure to that of Iran (or expand existing infrastructure between Turkmenistan and Iran), so that eventually gas can be exported to East Asian markets through Iran. Thus gas market integration involves not only the IPI stakeholders but also the neighbouring countries in the Central and South Asian region. This scenario is what comes to mind when

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8 In late September 2008, the Islamic Republic News Agency (IRNA) reported that Iran and Turkmenistan were finalising a deal over their gas price-setting mechanism with Iran seeking to import 9 bcm from Turkmenistan in 2009, up from 6 bcm in 2007.
considering the proposed, US-backed Turkmenistan-Afghanistan-Pakistan-India (TAPI) pipeline. How­ever, on this issue, Russia’s Gazprom maintains that the gas being proposed to be transmitted through TAPI pipeline is in fact owned by Gazprom through its agreements with Turkmenistan.

Conclusion

The important lessons learnt from the trilateral negotiations on the IPI pipeline reflect variance in legal, institutional, economic and trade laws and practices prevalent in the three countries. Above all, the project highlights the complexities of cross­border pipeline projects, ranging from a macro view in which geopolitical forces play a role to a micro view where cross-border technicalities and regulatory issue play a role and, ultimately, how these complexities influence the choices made by the parties involved. The IPI gas pipeline has thus suffered delays common to most other cross­border pipelines. These were mostly due to time taken by the three negotiating parties to understand each other’s legal frameworks governing energy trade, laws that govern arbitration and disputes, policies of the regulatory bodies overseeing the energy business and pricing mechanisms for oil and gas products in each country. These issues become very important because of the bills which promptly become payable in accordance with contractual agreements; especially when these bills run into the billions of dollars. No seller would like to suffer a delay in its payments and no buyer can afford a resultant suspension of energy supply.

In essence, the nature of the difficulties faced by all parties involved underlines the fact that all of them, the supplier being Iran and Pakistan and India being the potential buyers, are operating in an embryonic market for gas in the region in question, thus the whole project has to start from scratch, regardless of any of the geopolitical obstacles involved. Security of gas supply is another area which is heavily influenced by technical, legal and political issues and needs to be understood clearly by the seller, the buyer and the transit country operators. Contractual agreements do provide remedies in terms of penalties but these appear to be so huge that instead of providing comfort, these open a Pandora’s Box of dispute resolution and arbitration which in itself is a time­consuming and expensive process to undergo. This brings us to the importance of regional stability concerning institutional and economic aspects. All three countries have state companies which act as agents on behalf of the state, the equivalent of Independent System Operators (ISOs) in the European market.

It is obvious that the region of Southern Asia is fraught with geopolitical obstacles to such a large project as the IPI pipeline. While none of the countries involved exhibit any form of dependency on one another except for bilateral trade, the necessity in the gas industry of long­term agreements, which rest on stability and pre­arranged commercial parameters, confronts these sovereign nations with issues they are not accustomed to dealing with. This is primarily the case because of the nature of gas pipelines, which bring long­term dependency and involve both suppliers and consumers in an almost inescapable relationship. Broader geopolitical and regional political problems are thus bound to affect pipeline negotiations because of dependency as well as transit issues. Nevertheless, there is a need to develop standard formats and a modus operandi to avoid disputes and to enhance security of supply for the sale and purchase of energy under the umbrella of international protocols. Ultimately, this should help to improve natural gas market integration, which would help to promote economic development in the region and ultimately, in turn, social well-being.

9 The TAPI pipeline would be financed by the Asian Development Bank.