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Peace Pipeline, Interests of the Countries involved

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Abstract

Peace pipeline is actually considered as a gas transmission project to deliver natural gas from Iran to Pakistan and from Pakistan to India. This project has been called as Peace Pipeline. Through connecting the economy of India and Pakistan (Strategic Energy Sector) as two countries fought recurrently, directed them to peace; in this sense, this project with development and protection of common economics, provided peace to them. Recently, the demand and consumption of gas in various sector of international economy has been increased. On the other hand, improving in technology and increasing environmental concerns lead to preference of using gas instead of other fuels and today considered as a fist choice to producing electricity. Since, gas turbine technology developed significantly and international gas pipeline and liquefied natural gas (LNG) energy production facilities achieved gas transmission through worldwide with lower costs, this product turn to a strong rival to other source such as coal and oil. This article discus about the Peace Pipeline.

Keywords: Interests, countries.

Introduction

Conditions of Iran's gas: According to the Iran petroleum ministry, the proved natural gas reserves of Iran are about 1,046 trillion cubic feet (29.6 trillion cubic meters) or about 15.8% of world's total reserves, of which 33% are as associated gas and 67% is in non-associated gas fields. It has the world's second largest reserves after Russia[1,] As it takes approximately 5,850 cubic feet (166 m^3) of gas to equal the energy content of 1-barrel (0.16 m^3) of oil, Iran's gas reserves represent the equivalent of about 216 billion barrels (3.43×10^{10} m^3) of oil. The US Energy Information Administration estimated Iran's proved gas reserves as of the start of 2013 as 1,187 trillion cubic feet (33.6 trillion cubic meters)[2]. Iran is one of the most hydrocarbon-rich areas in the world. Since the nation's first oil well in 1908, 145 hydrocarbon fields and 297 oil and gas reservoirs have been discovered in Iran, with many fields having multiple pay zones. A total of 102 fields are oil and the remaining 43 are gas, and there are 205 oil reservoirs and 92 natural gas reservoirs. According to Iran Energy Balance Sheet (2009, in Persian), 78 of these fields are currently active, with 62 onshore and 16 offshore, leaving 67 fields inactive at present. Some 23 hydrocarbon fields lie in border areas and are shared between Iran and adjacent countries, including Kuwait, Iraq, Qatar, Bahrain, UAE, Saudi Arabia and Turkmenistan[3].

Sector organization

The National Iranian Gas Company (NIGC) is responsible for natural gas infrastructure, transportation, and distribution. The National Iranian Gas Exports Company (NIGEC) was created in 2003 to manage and supervise all gas pipeline and LNG projects. NIGEC was under the control of NIOC until May 2010, when the Petroleum Ministry transferred it to NIGC in an attempt to broaden responsibility for new natural gas projects. As a result of the poor investment climate and international political pressure, some international oil companies, including Repsol, Shell, and Total, have divested from Iran's natural gas sector. In response, Iran has looked toward eastern firms, such as state-owned Indian Oil Corp., China's Sinopec, and Russia's Gazprom, to take a greater role in Iranian natural gas upstream development. Activity from these sources has also been on the decline because of imposition of sanctions on technology and financial transactions[4].

Under Iran's buy-back scheme, foreign firms hand over operations of fields to the National Iranian Oil Company (NIOC), and after development they receive payment from natural gas production to cover their investment. National Iranian South Oil Company (NISOC), a subsidiary of NIOC, is responsible for much of the southern natural gas production. Economy prosperity requires rich sources of energy. Various survey indicate that by 2050 hydrocarbon resources will be still the most major sources of supplying energy. Examining the trend of these resources and their geographical distribution indicates that only the five countries in the Persian Gulf region - the Islamic Republic of Iran, Saudi Arabia, Kuwait, Iraq and United Arab Emirates-will be the major oil producing countries[5].

According to the IEA reports, by 2030 in the 30 countries, which will form the great Europe, natural gas demand among other initial energies will grow significantly and from 450 million tons of oil equivalent in 2003 will reach 760 million tons of oil equivalent in 2030. It is noteworthy that demand for natural gas in the great Europe was just 110 million tons of oil

equivalents in 1970. Studying natural gas production and supply indicates that little by little when demand for natural gas in the earlier-mentioned countries in Europe goes up, dependence on import gas resources will dramatically rise[6].

Table-1
Top Ten Gas Reserve Holder Countries in the World

Item	Country Name	Reserve (tcm)	Share of total
1	Russia	43.3	23.4
2	Iran	29.61	16
3	Qatar	25.46	13.8
4	Turkmenistan	7.94	4.3
5	Saudi Arabia	7.57	4.1
6	United States	6.73	3.6
7	United Arab Emirates	6.43	3.5
8	Nigeria	5.22	2.8
9	Venezuela	4.84	2.6
10	Others	47.9	25.9

Source : Bp Statistical Review of World Energy 2009

Table-2
Iran's Position among the World's Top Ten Natural Gas Consumption Countries in 2008

Item	Country Name	Consumption (tcm)	Share of total
1	USA	657.2	22
2	Russia	420.2	13.9
3	Iran	132.7	4.4
4	Canada	100	3.3
5	UK	93.9	3.1
6	Japan	93.7	3.1
7	Germany	82	2.7
8	China	80.7	2.7
9	Saudi Arabia	78.1	2.6
10	Others	1280.25	42.7

Source : Bp Statistical Review of World Energy 2009

Table-3
Iran's Position among the World's Top Ten Natural Gas Producing Countries in 2008

Item	Country Name	Production (tcm)	Share of total
1	Russia	601.7	19.6
2	America	582.2	19.25
3	Canada	175.2	5.7
4	Iran	144.4	4.7
5	Norway	99.2	3.2
6	Algeria	86.5	2.8
7	Saudi Arabia	78.1	2.5
8	Qatar	76.6	2.49
9	China	76.1	2.47
10	Others	1173.7	38.19

Source : Bp Statistical Review of World Energy 2009

Transfer of Gas

International Energy Agency in its detailed estimates of types of primary energy carriers, predicted and declared significant jump in future demand for natural gas .and estimated average annual consumption growth of 2 to 2.36. As a result the most fast expected demand among various energy carriers belongs to natural gas demand grew by 23% to 27% to 28%.The biggest natural gas of Iran through pipeline belong to West of Europe and then to Pakistan and India. According to predictions, in the next two decades, gas consumption of India will increase significantly because of demand of power planet and environmental concerns. It is predicate, with decreasing in domestic gas production in Pakistan and increasing demand of this country –especially in power generation sector –to gas since 2010, Pakistan demand for gas two decays India and Pakistan demand for gas grew by 6% to 7% since Pakistan and India predicted that they couldn't provide their domestic Energy demands in future; They try to import Energy and the cheapest and most reliable way for them is transmission of Iran `s natural gas through pipelines. Gas transmission from Turkey to Europe , bilateral and multilateral cooperation in gas sector – with Armenia ,import of gas from Turkmenistan , and finally negotiation about construction of peace pipeline between Pakistan and India and China in future –have been considered as clear examples of development and growth of Iran`s energy sector in future . Iran with huge reservation of gas has targeted west and south west markets of Asia. Central Asia, Persian gulf and the Caucasus has huge reserves of gas. Located in center of production and consumption natural gas market of Asia; Iran is considered as the most economical, safest and closest bridge for gas export to world`s markets.

Iran`s Gas Reserves and its unique place in region

Iran has 15.5% of proven gas reserves of the world. It also has the second largest consumption of natural gas in the world after Russia, and plays the vital role in the global equation .It contains an estimated 28.17 trillion cubic feet. Iran`s gas reserve can satisfy India and Pakistan need in next year's. South pars gas field is one of the largest independent gas reservoirs in the world lying in center of Persian gulf and geographically is considered the closest field to Indian subcontinent. In-place volumes are estimated to be around 14.2 trillion cubic feet natural gas and 18 trillion natural gas condensate held 50% of Iran`s and 8% world`s gas reservoir. Despite having huge reserves of gas, Iran`s production is not at high level. Although, it has been a growing tender over since 1996. In 1996, Iran produced 39 trillion cubic feet gas and in 2006 it increased about 105 trillion cubic feet gas (expected the injected and burned) that is equal to 3.7% of total production of world. After former Soviet Union, USA and Canada is produced gas in the lower level. Over the past ten years, average of 91.78 billion cubic meters of rich gas production in 1997 has increased to 159 billion cubic meters in 2005. During this period, the rich gas production has grown 73 .2% – or an average annual increase of

6.3%. According to the national Iranian Oil Company `s future plan for development of gas sector[7] over the next decade the rich natural gas production will continue with greater intensity so that the rich natural gas production, with an average annual growth rate of approximately 14% – in 2014 will be 1509 million cubic meters per day and in 2024 will be 1802 million cubic meters per days. The majority of this increase (about 50% of gas production in 2014) will be of the South Pars Gas field.

History and perspectives

There is no exact date for the project discussed gas exports to India. The primary plan for discussion about this subject was linked to 1979. In the early 90s with the discovery of huge reservoir of South Pars in 1988, exacerbated its effort to increase gas export through, LNG or gas transmission to international consumption market through construction of Iran – Pakistan – India pipelines. Discussion between the governments of Iran and Pakistan started in 1994. According to this project, the length of the pipeline that will be supplied from the South Pars field has been 2775 km (approximately 1100 km in Iran, 1000 km in Pakistan and 600 km in India). The initial capacity of this pipeline was 60 million cubic meters (2.14 cubic feet) gas transmission to India and Pakistan with equal share of each country. Based on predicted project, the capacity of this pipeline will be increased to 150 million cubic meters (5.35 trillion cubic feet) per days. This pipeline were under construction at depth of 1 to 1.5 meter under the ground level and at the cost of over 7 billion and 400 million dollar, and pass through Assaluyeh in Persian Gulf, Khuzdar, Sui to Multan and then to Delhi. Iran would supply 23 million cubic meters gas per day for 25 years under the agreement, adding the agreement could be extended for an additional five years.

However, the pipeline`s section in Iran was built by the National Iranian Gas Company. It used khatam al-Anbia as a sub-contractor. One such project is the 902 km with diameter of 56 inches originating in Asaluyeh, Bushehr province and extending to Hormozgan province and Iranshahr, that in first stage, 50 million cubic meters of gas moved to Sistan and Baluchistan, south of Kerman, and Hormozgan per days. It stretches over 200 kilometer to Pakistan. According to the National Executive of the seventh line gas, so far ,the pipeline operations have been progressing 65% and 750 km of required pipe has been supplying, and activities in other part of project such as road building, canal digging, welding and pipe burial have been well. Financing, is considered the most important factor in improving the overall operation of the gas pipeline. In this sense, completed the first stage of pipeline with two stations of pressure amplifier required two trillion and 100 million dollars. Gas transmission in such long distance required to nine station of pressure amplifiers and two stations of in the first phase of construction is completed. In the first of seventh overall, daily gas transfer capacity it's about sixty million cubic meters and timely provision of financial resource, it will be launched in the next year[8]. The Iran – Pakistan – India working group was formed in 2000 to move the project forward. In early August of 2007, the Iran, Pakistan, Indian`s oil official tripartite meeting held in new Delhi to discuss issues related to peace pipeline, particularly gas prices. High officials of three countries were able to negotiate on two days and reached agreement on pricing. It was held that pricing defined by international companies .In 2007, India and Pakistan provisionally agreed to pay Iran us 4.93% per million British thermal unit, but India subsequently withdrew from the deal ostensibly over concerns about the price and security. India was unwilling to pay more than 4.25 dollars for per million BTU of Iran`s gas[9]. In this sense, India officials did not attend the last few meeting on pipeline. As a result, Pakistan held a number of separate bilateral meeting with Iran as well as with India and project issue like gas volumes , project structure , governing laws , pipeline route, principle of transport tariff and transit fee will deliberated upon in detail[10].

The recent energy crisis and unprecedented increase in oil prices in international markets lead India and Pakistan to put back on the table. These countries reached agreement on the transit of natural gas from pipeline agreed that construction can begin in 2009. Since the negotiations between the two countries on the transport of the gas were left out without any agreement; in June 2007, it resumed a tripartite meeting instead of the bilateral India-Pakistan negotiation. As a result obtained agreement with Pakistan on the pricing must be corrected on the base of new formula[11].

Outlook for Gas Demand in India and Pakistan

In recent years, India has one of the highest economic growth rates in the world. As a result it`s need to energy increase and it is predictable that natural gas will play an important role in providing energy. Decreasing oil reserves in India, the country has had to find alternatives quickly to fill the gap between demand and supply. In 2005 Indian gas demands reach to 129 million tons that 95 millions of it provided through imports. In addition the import of oil product reaches to 7.7 million ton. According to predictions of Atomic Energy Organization, during 2005-2030 Indian gas demands will reach more than3 times. India use about 3.2bcm (29 million tone oil) in 2005to more than 103bcm (93 million ton oil) in 2030. In this sense, demand for gas will be more than other fossil fuels. Table 3 point to this fact**.** During (2005-2030), Gas production increase in a law rate and reach from 28.8bcm in 2005 to 44.9 bcm 2030 (Less than two times). In conclusion, during (2005-2030) Indian gas import reach from 3.4bcm in 2005 to 8.4 bcm in 2015, and increase up to 52.6 bcm in 2030. Table-1 reveals this fact. With increasing the oil prices, Pakistan with same situation would be needed to this project as a source of producing energy. In order to satisfy its commercial and industrial needs to natural gas: Pakistan request to this project. Implementation of this project will be beneficial. In 2005, Pakistan import 16 million tons oil. In 2025 it will reach to 100 million tons. In addition, in 2015, Pakistan's lack of gas will be 14bcm that it will be increase to 28bcm in 2025.In conclusion, in 2015 and 2030, Pakistan total

needs to gas will be 22.4bcm and 80bcm created huge export markets for Iran. Political and economic exports believe, implementation of this project bring peace and security for these three countries.

Benefit and Chances of pipeline

Economically and politically, consequence of implementation of this project is so positive that Iran, Pakistan, and India couldn't ignore it. Its reason hidden in provider of Indians gas because without attention to technical problem of transferring gas from Qatar, It is guest that import of gas from south Asian countries is more expensive (15%). About Turkmenistan, it is more expensive (2%). In this sense, Benefits of gas resource is not comparable to other countries and has safe road to transfer gas than Afghanistan. In addition, Turkmenistan road is intensively unsecure. However Qatar has reliable source of gas but its capacity to produce gas will complicated to next 10 years and it hardly accept new commitment to other customer. In this sense, Iran is the most secure road for transferring gas[12].

Pakistan is another revival for Iran gas through its shallow water but it is economical choice. Generally the benefits of pipeline include:

Implementation of these project significant incomes to Iran and Improve Iran position. In addition to huge income of this project to Iran, with new variation of gas export, Iran reduces the risk of export through LNG. This project leads to create new chances for more occupation in these industries. It increases efficiency, effectiveness, and power among foreign revival. Implementation of this project involves historical advantages. One of them is held as agreement between India and Pakistan and both countries may improve their cooperation and also straighten the concept of peace between countries. Implementation of this project changes the recourse of energy. It creates new prices for providing energy for them and reduces the atomic power. For Indian, it is necessary to use long term energy. Pakistan has been faced to lack of energy and sign this agreement is considered crucial. Receiving transit produce income for Pakistan and reduce import spending for Pakistan It produce 400 to 600 $ for Pakistan. Instruction of Pipeline leads to increase development of South Asia. On the base of environmental accounting across the world, using natural gas is more rational and economical to the people of the world. In addition income impact of this project, it will bring more peace and security to India.

Generally, these pipeline works as a bridge connected south and west of Asia. In addition with joining of china and its development to Caspian Sea, it leads to reduce gas prices. In conclusion, geographical political security and strengthen the social and structural relationships between these countries held as main benefits of this project. Originally, the transnational gas pipeline project was to include India, the report said. An unclear deal from the us, perceived security risk from Pakistan and a pricing with Iran, were some of the main factors, the report suggests. The report comes at the time when Iran - Pakistan gas pipeline faces obstacles in the construction of Pakistan`s own section of pipeline. The key findings highlighted the Iranian gas will prove too expensive for Pakistan. This may create a new hurdle for government of Pakistan to conduct pricing negotiation with Iran, in the light of high price. Moreover, importing electricity may prove cheaper for Pakistan, than generating electricity from gas, the report said. Pakistan is importing electricity since October 2002. In August of the current year, the country imported 38,263,100 units of electricity from Iran at the rate of only 10 per unit, which is much cheaper. Iran is offering export of 1,000 M.W, which is not under consideration of ministry of water and power, it said. Pakistan signed an agreement with Iran on the import of 1,000 M.W on May 2012 by the National Transmission and Dispatch Company (NTDC) chief and deputy Iranian minister for energy. Iran had a total installed electricity generation capacity of 61,000 M.W, having capacity to export 5000 M.W.

Challenges of Peace Pipeline

However, peace pipeline is the best way for providing energy to India and Pakistan, but it is not considered the unique way. Turkmenistan pipeline through Afghanistan to Pakistan is considered as a main revival. Turkmenistan with huge reserve of natural gas doesn't have significant production. Pakistan desperately is seeking to greater share in developing countries. In 2005, Turkmenistan produced 62bcm that 16bcm was used in its reteam and remain was exported to other countries. In addition unresolved issue between Pakistan and India include the transit and tariff fees levied by Pakistan for IPI pipeline. Pakistan initially asked 1.57 per mbtu for transportation tariff, while India was not willing to pay more than 50 cent per mbtu. Iran hopes that India and Pakistan agree on this Issue. Finally, India and Pakistan reached on an agreement; however, some detail relating to price adjustment remained open to further negotiation. Price negotiation in the IPI context are quite complex. In August 2006, Iran had initially demand 7.2 per mbtu linked with a price that India offered on its border. A further price escalation is expected because of transit right and transport tariff to paid Pakistan by India. On the next negotiation, the price formula revised according to Japanese crude cocktail price. India suggested formulating on the pries on the model of Japanese LNG price. According to new formula, the price of gas was to translate to 4.93 per mbtu, which linked to Japanese crude cocktail (JCC) price.

Conclusion

Buyers believe: Gas prices will be competitive and affordable to customers and for the success of this project, market should coordinate with prices; in order to stimulate long-term mutually competition. In fact, they want cheap gas with competitive price with other energy carriers in the domestic market. However, pricing should be such that the price of export of gas to India

and Pakistan in compare to other emerging market – such as European countries. In addition, it must be provided long-term interests of our countries. Then, determining the correlation between the price of natural and crude oil; constant formula for the export. Gas prices should be determined at competitive and aligned with other emerging countries[13]. On the other hand, it should be noted that the natural gas market in India is ready to jump prices in next year's and India is able to receive higher prices for gas imports in the coming years and will adjust their prices to world market. Because now, the India government officials allow selling natural gas to highest price ever present in the domestic markets. It was decided, gas production in area of Pnna-Mukta and Tapti in offshore west India sell at the price of 7.5 dollars per barrel by consortium with supervision of BG and consist of ONGC and reliance in about 6 billion cubic meters (580 million cubic feet) per day to sel. The IPI pipeline is of great regional importance, which is why decisions made regarding it have implications on countries other than just Iran, Pakistan and India.

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