Chapter 6

Iran’s Energy Relations with China and India

Iran is a major player in the world energy (hydrocarbon) market. It controls around 10 percent 135.5 billion barrels of the world’s total proven oil reserves and 971 trillion cubic feet of gas. This provides the country a strategic leverage in defining world hydrocarbon regime. Iranian state draws 42.5 percent of its revenue from oil resources and it accounts for 80 percent of its export revenue.

For many years, the Iranian energy partners were Western countries. However, recently, due to U.S. sanctions against Iran’s energy sector and also its increased pressure on Iran- Europe energy trade, Iran is looking for other energy partners. In this situation rising of energy demand of East Asian countries, particularly China and India with fast-growing economy and their extensive demand for Iran’s energy sources, have reinforced Iran’s inclination to advance further economic and political-strategic cooperation with them as new markets.

This chapter is an attempt to analyse Iran’s energy relation with Asia specially reference to China and India. Before, going further with this discussion, a brief outlook of Iran’s energy relations with European countries is provided for understanding Iran’s energy relations in changing context.

6.1. Decline of Iran’s Energy Relations

According to European Commission report, “EU is Iran’s main trading partner concerning both imports and exports in 2007”. (European Commission report 2007). This relation has increased year by year with its start of Iran- Europe dialogue since 2001. In 2001, EU imports from Iran totaled 6.7 billion Euros, whereas the value of EU exports to Iran in the same year amounted to 6.6 billion Euros. Importantly, more than 80 per cent of EU imports from Iran consist of oil products (European Commission report 2003). However, in 2002 the volume increased particularly in energy sector because of European energy demand and consequently a working Group on Energy from the commission opened an energy bureau in Tehran aimed at expanding energy cooperation.
According to the European Commission report (2003), “better relations with Iran would guarantee a constant and stable supply of energy for the EU economy” (European Commission report 2003).

The EU’s trade balance (counting all 25 member states) remained positive in two consecutive intervals. The Report published by Embassy of the Islamic Republic of Iran in London 2006 shows that “more than 80 per cent of EU imports from Iran were energy related (mainly oil products), representing 3.9 per cent of the total EU imports in energy products. Iran ranks as 6th supplier of energy products for the EU”. The Islamic Republic of Iran was the fifth major crude oil supplier to the EU in 2007 by exporting more than 12 billion Euros worth of crude oil. Iran supplied 6 per cent of the European Union’s crude oil demands in 2007 (National Iranian Oil Company News 1 June 2008).

Although, Iran has faced sanctions from U.S. and UN but, EU remain the main Iran trade partner. A new report says Italy, Germany and the Netherlands were Iran’s major trade partners among the EU member states in the first quarter of 2007. According to a report by the European Commission, quoted by the Iranian Fars news agency, “the volume of trade exchange between Iran and Italy in the said period was 1.2 billion Euros” (Fars News Agency 30 February 2008). In addition, the volume of trade exchange with Germany and the Netherlands in the first quarter of 2007 stood at 724 million Euros and 612 million Euros respectively (Press News, 19 Jun 2007).

In addition, in gas sector, concerns about shortage of natural gas reserves and recent moves by major suppliers of natural gas, have greatly troubled the European countries. And because of that Europeans have been studying various routes for taking gas to Europe for many years and have come to conclusion that Qatar is too far, while Turkmenistan cannot meet their long-term needs and therefore, they should cultivate Iran. In fact, though global hegemony has changed over years, they are still eyeing Iran as the most strategic country in the region in view of its transit route, neighborhood with countries that can influence regional equations as well as existence of huge gas reserves (Maleki (2) 2007).
With attention to this argument, it has to be considered that although the relationship has significant growth potential; its development has been severely hampered by the ongoing problems related to the Iranian Nuclear Program. EU exports to Iran have declined about 10 per cent in average in the last two years. Trade with Iran is subject to certain restrictions derived from the sanctions imposed by the United Nations Security Council on Iran through UNSCR 1737 of 23 of December 2006 and UNSCR 1747 of 24 of March 2007. Trade restrictions with Iran are regulated by Council Regulations 423/2007 and 618/2007, which set out a list of products prohibited from export to Iran (Ibid).

Although, the European Commission said that Western European oil imports could rise from 55 per cent of consumption now to 65 per cent in 2010 and possibly to 80 per cent by 2020 (Payvand’s Iran News 28 June 2005) but according to the Press News, 19 Jun 2007, trade exchange in 2007, indicated a 6-per cent decline compared to the
figures of 2006. In addition, investment in Iran's hydrocarbon sector has declined sharply since 2004.

Although some oil Companies still are working in Iran oil industry but due to sanctions and high risk have frozen plans to invest billions of dollars in several projects. The following is a list of foreign companies at risk for being sanctioned by the U.S. for investing in Iran's oil and natural gas sector in violation of the Iran Sanctions (The Iran Task Force of Pittsburgh 2007).

**Total (France)**

- In September 1997, Total signed a $2 billion contract along with Gazprom and Petronas Malaysia to develop phases 2 and 3 of the South Pars natural gas field. Total has since expanded its involvement to other portions of the South Pars fields (Congressional Research Service 2006).
- In February 1999 Total and ENI began operating in Iran's Doroud oil field with an investment of $1 billion. Total is operator of the project, with a 55 per cent share, while ENI holds the other 45 per cent. (Energy Information Agency 2006).
- In April 1999, Iran awarded Total a 46.75 per cent stake to develop the offshore Balal field. Bow Valley Energy and ENI are also invested in the field, a reported total of $300 million (Energy Information Agency 2006).
- In each of the years since the passage of ISA, TOTAL has made investments in Iran (excluding South Pars) in excess of $20 million.
- In 2006, TOTAL's average daily production in Iran amounted to 20 kboe/d (kilograms of oil equivalent), approximately 1 per cent of its average daily worldwide production. TOTAL expects to continue to invest amounts significantly in excess of $20 million per year in Iran in the foreseeable future (SEC Form 20-F for TOTAL SA 4 November 2007).

**Note:** In 2000 Elf Aquitaine merged with Total Fina to form TotalFinaElf, which changed its name to Total in 2003. The investments made prior to 2000 were done separately by the two companies but are now under the control of the merged corporation.
Royal Dutch Shell (Dutch)

- In November 1999, Shell signed an agreement with the National Iranian Oil Company (NIOC) to develop two offshore oil fields in the Persian Gulf, Soroush and Nowruz. Shell’s investment of more than $800 million was pivotal in raising Iran’s oil output by 190,000 barrels per day, about an 8 per cent increase in total Iranian output. In mid-2005 Shell handed over the two developed fields to Iran after development difficulties forced the company to halt production. Shell however remained involved in the marketing of the oil from the fields (Congressional Research Service 2006). Shell is also involved in negotiations with the Iranian government and China’s Sinopec regarding a 20 per cent equity stake in the Yadavaran oil field in southern Iran. (International Oil Daily 7 November 2006).

- In January 2007, Shell, in partnership with Repsol, signed a preliminary deal to develop sections 13 and 14 of the South Pars field. The project would involve building a plant capable of liquefying 8-million tons of natural gas a year for shipment to Europe and elsewhere. According to the Iranians, the deal is valued at $10 billion (The Associated Press 30 January 2007).

- In January 2001 Enterprise Oil took a 20 per cent stake in phases 6, 7, and 8 of the South Pars natural gas field. After Shell purchased Enterprise it withdrew from the development.

Repsol (Spain)

- In October 2004, Repsol signed a $27 million deal with the National Iranian Oil Company (NIOC) for exploration operations in Forouz and Iran-Mehr oil blocks in southern Iran. (Iranian Student News Agency, 15 October 2004)

- In October 2001, Repsol in conjunction with OMV, ENAP (through its subsidiary Sipetrol) signed an agreement to explore the Mehr oil block. In February 2007, the block was declared commercial with with recoverable reserves of 150 million barrels (Platts Oilgram News 2 February 2007).

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shipment to Europe and elsewhere. According to the Iranians, the deal is valued at $10 billion (The Associated Press 30 January 2007).

**ENI (Italy)**

- In February 1999 ENI, in conjunction with Total began operating in Iran’s Doroud oil field with an investment of $1 billion. (Energy Information Agency 6 August 2006)
- In April 1999, Iran awarded ENI a 38.25 per cent stake to develop the offshore Balal field. In April 1999, Iran awarded Bow Valley a 15 per cent stake to develop the offshore Balal field. Total and ENI are also invested in the field a reported total of $300 million. (Energy Information Agency, Department of Energy 30 August 2006)
- In July 2000, ENI invested in Phase 4 and 5 of the South Pars natural gas project in a deal estimated to be worth $1.9 billion. ENI holds a 60 per cent interest in the project with the remaining 40 per cent interest being held by Iranian partners. (Energy Information Agency 2006)
- In June 2001 ENI signed a $1 billion contract to explore Iran’s Darkhovin oil field (Energy Information Agency 2006)

**INPEX (Japan)**

- In January 2003, JAPEX and INPEX participated in the development project of the Soroosh and Nowrooz fields through joint investment in JJI S&N, which holds a 20 per cent working interest in the project (INPEX Website, retrieved 19 March 2007).
- In 2004 INPEX signed an agreement to develop the Azadegan oil field. Under the agreement INPEX held a 75 per cent stake in the $2 billion project and the other 25 per cent share was held by the National Iranian Oil Company (NIOC). In October 2006 fears that the deal may lead to U.S. sanctions caused the deal to be slashed with INPEX now holding only a 10 per cent stake (Congressional Research Service, August 2006 & International Oil Daily 10 October 2006).
Oil and Natural Gas Company, ONGC, Indian Oil Corporation (IOC) and Oil India Ltd (OIL)

- ONGC is involved in the exploration of the Farsi Block. In 2002, a consortium of Indian companies signed a contract to carry out exploration in the Farsi Block. The consortium consists of ONGC-Videsh with 40 per cent, IOC with 40 per cent and OIL with 20 per cent of the equity.
- The contract commits $27 million in exploration obligation. Oil discovery in excess of 500 million barrels is expected. In November 2006, it was reported the consortium struck oil at three offshore exploration wells in the Farsi block (UPI, November 15, 2006 & The Telegraph (Calcutta) 27 December 2002).
- In October 2004, ONGC along with SINOPEC negotiated a long term deal with the National Iranian Oil Company for the development of Yadavaran, Iran’s biggest onshore oil field. ONGC is likely to receive a 29 per cent stake and SINOPEC a 51 percent stake.
- A related deal would allow ONGC to develop part of the South Pars natural gas field. If implemented in full the deals could be worth over $100 billion. The deal is still awaiting final approval (Congressional Research Service, October 2006 and International Oil Daily 5 February 2007).

Petronas (Malaysia)

In September 1997, Petronas signed a $2 billion contract along with Gazprom and Total to develop phases 2 and 3 of the South Pars natural gas field. Petronas has since expanded its involvement to other portions of the South Pars fields (Congressional Research Service 2006).

Petrobras (Brazil)

In July 2004, Petrobras signed a $34 million deal to drill in the Iranian part of the Caspian Sea. In 2003, the National Iranian Oil Company granted the company a license to explore a 3,200-square-mile area of the Persian Gulf (Energy Information Agency, 2006).
GS Holding Corp (South Korea)

- In September 2002, Iran signed a $1.6 billion development contract with South Korea's LG Construction to develop phases 9 and 10 of the South Pars gas fields (Energy Information Agency 2006).
- In 2003 LG Corp split into two separate holding companies, LG Corp. and GS Holdings Corp. LG Engineering and Construction, the subsidiary that oversaw the Iranian investment, joined GS holdings and is now known as GS Engineering & Construction Corp. As of January 2005, GS Engineering & Construction is no longer an affiliated company of LG Group.

Norsk Hydro (Norway)

- In April 2000 Norsk Hydro signed an exploration service contract for Iran’s Anaran block with the National Iranian Oil Company. In 2005, Hydro was announced as the winner of the tender for the Khorramabad exploration and development contract. In 2006, the $107 million contract was approved and signed with Hydro-Zagross, a subsidiary of Norway's Norsk Hydro ASA (NHY) (Congressional Research Service, 2006).
- Norsk Hydro and Statoil are in the process of merging.

Statoil (Norway)

- In October 2002 Statoil signed an agreement with Iran to develop phases 6, 7, & 8 of South Pars gas field. The company reportedly plans to invest as much as $300 million in the $2.6 billion South Pars gas field (Energy Information Agency 2006).
- Statoil is also working with the National Iranian Oil Company on improved oil recovery from 3 fields in Iran-Ahwaz, Marun and Bibi Hakimeh (Statoil 2003 Annual Report).
- In January 2007 China National Petroleum Corp (CNPC) began talks with Statoil to join a $3.6 billion project to develop the South Pars natural gas field (Dow Jones Newswires 12 January 2007).
- Norsk Hydro and Statoil are in the process of merging.
Bow Valley Energy Ltd. (Canada)

In April 1999, Iran awarded Bow Valley a 15% stake to develop the offshore Balal field. Total and ENI are also invested in the field a reported total of $300 million (Congressional Research Service 2006).

China National Petroleum Corp (China) - Sheer Energy (Canada)

- In May 2002 Sheer Energy signed an $80 million to develop the Masjid-e-Soleyman (MIS) oil field (Energy Information Agency, 2006).
- Sheer Energy in October 2005 was renamed Cygam Energy Inc. However, Sheer Energy sold its 49% working interest in the Masjed-I-Suleyman project in Iran during 2004. The purchaser was CNPC International Limited, a Cayman corporation which is wholly owned by the China National Petroleum Corporation. In 2007 CNPC renegotiated the terms of the agreement with the National Iranian Oil Company and is now set to invest around $150 million in the project. (Cygam 2005 Annual Report & Middle East Oil and Gas News Wire, 27 March 2007)
- In January 2007 the China National Petroleum Corp (CNPC), the country's biggest oil producer, signed a memorandum of understanding to invest $3.6 billion to develop a portion of the South Pars natural gas field. The MoU with Iran's oil ministry pledges CNPC to spend an estimated $1.8 billion on exploration and production in the SP14 gas block in the field and an additional $1.8 billion on building a liquefied natural gas plant.
- CNPC is in talks with Norway's Statoil ASA (STL.OS) about joining the SP14 project (Dow Jones Newswires 12 January 2007).

Gazprom (Russia)

In September 1997, Gazprom signed a $2 billion contract along with Petronas and Total to develop phases 2 and 3 of the South Pars natural gas field (Congressional Research Service 2006).

Lukoil (Russia)

- Lukoil and Norsk Hydro are involved in the exploration of the Anaran onshore project. Lukoil owns 25% per cent of the geological exploration project (Hydro Press Release 29 September 2003).

- ConocoPhillips as of December 31, 2006, held a 20% ownership interest based on authorized and issued shares in Lukoil.

**GVA Consultants (Sweden)**

In March 2001, GVA Consultants, a Swedish company, signed a Caspian Sea transit contract worth an estimated $225 million. GVA was later acquired by Halliburton in November 2001. In March 2005, Halliburton said it would no longer take on new business in Iran. On April 9, 2007 Halliburton announced that all of its contractual commitments in Iran had been completed and the company was no longer working in Iran (Congressional Research Service, August 2006 & Halliburton Press Release 9 April 2007).

**OMV (Austria)**

- In October 2001, Repsol in conjunction with OMV, ENAP (through its subsidiary Sipetrol) signed an agreement to explore the Mehr oil block. In February 2007 the block was declared commercial with recoverable reserves of 150 million barrels (Platts Oilgram News 2 February 2007).

- In June 2005 OMV reportedly signed a joint venture agreement for the planned 'Nabucco' pipeline project which would transport natural gas from the Caspian Sea region to Middle and West Europe. Other companies reportedly involved in the deal include Hungary's MOL, Romania's Transgaz, Turkey's Botas and Bulgaria's Bulgargaz. The construction cost of the pipeline is estimated at 4.6 billion euros (The Financial Times 27 June 2006).

**ENAP (Chile)**

In October 2001, Repsol in conjunction with OMV, ENAP (through its subsidiary Sipetrol) signed an agreement to explore the Mehr oil block. In February 2007 the block was declared commercial with recoverable reserves of 150 million barrels. In May 2006; the state-owned oil company announced it would sell its 33 per cent stake in the Mehr oil block due to the rising risk of doing business in Iran (Platts Oilgram News 2 February 2007 and Global Insight 12 May 2006).
However in 2007, again the Bush administration has warned foreign energy companies and some foreign governments lately that they might incur penalties if they pursued deals in Iran. This has given the tensions, several European companies (Mouawad 2007). Because of the U.S. pressure also, the OECD downgraded Iran's credit rating for official credits and now assesses Iran at the same level of risk as countries with active insurgencies. Energy firms Baker Hughes, ConocoPhillips, and BP have reportedly suspended dealings with Iran (Ibid).

With increasing sanctions against Iran by U.S and UN, Iran's foreign policy as tactic and as a sign of protest to the arrogant behaviors of some Western powers, especially with regard to Iran's nuclear dossier, and also as a strategic change in Iran's foreign policy has started the policy of look to East. One of the elements of looking this policy is due to emerging Asia as energy market.

6.2. Asia: The Emerging Energy Market

According to the IEEJ forecast, the world's primary energy demand will increase at a rate of 1.9 per cent per annum from 10.3 billion tons of oil equivalent in 2005 to 16.5 billion tons in 2030, expanding about 1.6 times. Approximately 80 per cent of this future increase will come mainly from developing countries, particularly in Asia, which will account for 53 per cent. More specifically, China and India will account for 27 per cent and 12 per cent, respectively (Asia /World Energy Outlook 2007).

According to Asia /World Energy Outlook 2007, presently, China is the world's second largest consumer of energy behind United States and in 2030 it will be the largest. China's share of the world energy market will increase from 15 per cent to 19 per cent, further enlarging China's presence. India's share will also increase, rising from 4 per cent in 2005 to 7 per cent in 2030. Consequently, these two countries will account for approximately a quarter of the world's primary energy demand in 2030 (Ibid).

In oil sector, according to Energy Information Administration (2005), “Asia's oil consumption will increase from 1.07 billion tons (22 million barrels per day) in 2005 to 2.05 billion tons (43 million barrels per day) in 2030, an increase of 2.6 per cent per annum. In terms of region, China will account for approximately 50 per cent and India 30 per cent of this increase” (Energy Information Administration 2005).
About other Asian countries in 2008, “Indonesia, Thailand, Malaysia, Vietnam, and other ASEAN countries still account for only a small percentage of total primary energy demand in Asia. But it has to be considered that, primary energy consumption will increase rapidly in these countries as well as their economies develop. In the long term, these countries have the potential to add further dynamism to overall energy supply and demand in Asia and in the world” (Toichi 2008). According to Asia World Energy Outlook 2007, among the ASEAN countries, Indonesia and Thailand will likely increase their dependence on oil imports. At the same time, Malaysia and Vietnam, which are currently net exporters, are expected to make the shift to being importers in the medium-to-long term as internal production comes down while domestic demand continues to rise. Therefore, oil trade is increasing greatly accompanying steady growth in world energy demand, especially in Asia.

It has to be considered that gas is also one of energy sources for Asian countries. Forecast published by Asia Gas and LNG Report in 2008, shows how dramatic gas demand growth led by India and China will see regional net imports rise 65% – from 91bcm in 2007 to 176bcm in 2012 – the strongest growth globally. Indeed, Asia has evolved into the hottest market for LNG globally, and it forecast in the 2008 Asia Gas & LNG Report that the region’s total gas import bill is set to reach US$64.9bn by 2012 .The report also assess “the supply and demand implications of Japan, China, India and South Korea becoming leading gas importers, and of Indonesia, Malaysia and Australia comprising the main net exporters - and earning a total US$27.5bn of export revenues by 2012” (Asia Gas and LNG Report 2008).

6.3. Source of Oil Supply to Asian Countries

The increasing need of Asian countries for energy and the necessity of providing it from foreign resources have made energy security a vital issue for these countries. For this reason, this matter has become a priority on the foreign policy agenda of these countries (Jaffe 2002). But at the same time it has to be considered that, the world’s most important energy producers are in West Asia, and the fastest growing energy consumers in the world are East Asia (plus India).
Given the general decline in energy production, particularly oil production, in other parts of the world, West Asia, especially the Persian Gulf, is the most important region that can provide reliable energy to world consumers during the next 50 years (Ibid). It has to be considered that Central Asia and specially Caspian Sea and African countries are important resources of oil supply for East Asian Countries.

6.3.1. Persian Gulf and Asian Countries Interdependence Relation

According to most recent estimates by Energy Information Administration (2008), oil reserves of the Persian Gulf countries account for nearly 56 per cent of the world’s total and, at current output levels, assure continuous supply for 80 to 110 years. In May 2008 nearly 30 per cent of the world’s total crude oil was produced the Hormuz Strait. The main producers were Saudi Arabia (with 9.4 million barrels per day [bpd] or 12.62 per cent); Iran (4 million bpd, 5.38 per cent); the United Arab Emirates (2.7 million bpd, 3.64 per cent); Kuwait (2.6 million bpd, 3.5 per cent); Iraq (2.5 million bpd, 3.3 per cent) and Qatar (938,000 bpd, 1.26 per cent). Also, according to the statistic published by Strait of Hormuz (2007) web site, the Persian Gulf countries as members of OPEC contain a significant percentage of the world’s oil reserves and production capacity:

- Oil production capacity of 25.4 million barrels per day (33 percent of the world total) at the end of 2006.
- Total oil production of 23.6 million barrels per day in 2006.
- About 2.4 - 2.9 million barrels per day of excess oil production capacity, as of March 2007, of which 1.9 to 2.4 million barrel per day is located in Saudi Arabia

It has to be considered that production by OPEC countries, which have a large volume of reserves and low production costs, will increase to 46 million barrels per day in 2030. OPEC’s share will increase from 44per cent in 2006 to 54 per cent in 2030, expanding to nearly the same level as in 1973 when it set the previous record (Toichi 2008). Thus, approximately 80 per cent of the world’s future increase in oil demand will be met by increased production by OPEC countries (Asia /World Energy Outlook 2007).

Clearly, most of Asia’s growing demand for oil will be met by the Persian Gulf. The DOE (The U.S. Department of Energy) forecasts that in 2020 Asia will consume 38 million bpd – including 10 million in Japan and Australasia – of which it will produce
about 20 per cent and import from the Persian Gulf more than 75 per cent (Clawson 2000).

**Figure 9: The Persian Gulf Region and Global Energy (as a % of global)**

![Bar chart showing energy distribution]


Asia’s increasing reliance on the Persian Gulf oil parallels the Persian Gulf’s increasing reliance on Asia as a market. The DOE forecasts that Persian Gulf production will go increasingly to East Asia. It seems that in 2020, more than half of Persian Gulf oil production will go to the Pacific Rim countries including northeast Asia compared to seven percent to the United States and nine percent to Europe. South Asia will take a big part of the remaining portion. This trend raises important questions about the role of Asian countries in the security of the Persian Gulf (Richardson 2007).

Japan imports almost 90 per cent of oil from the West. Asia’s two emerging economic giants, China and India, are also heavily reliant on the West Asia (Middle East) for their oil, India for about 70 per cent of its imports and China for nearly half its foreign supplies. Singapore, the Philippines, Thailand, Taiwan and South Korea each depend on the Gulf for over 70 per cent of their oil imports (Ibid). In addition, the supply route goes from the Persian Gulf through the Straits of Hormuz, then from the Indian Ocean to Southeast Asia (through the Strait of Malacca, etc.), and from the South China Sea to the
vicinity of the East China Sea, and on to Japan. Looking ahead even in the long-term, this route will continue to assume a pivotal role as the sea lane for West Asia crude to reach Asian countries including Japan (Ibid). Clearly energy security, of major energy consumers, is a significant challenge that requires them to be linked to them to the Persian Gulf region. Thus, interdependence is evolved among the Persian Gulf, East Asia and South Asia regions. Persian Gulf states can manage strategic concerns about energy security, while East Asian countries can meet some of the strategic needs of Persian Gulf countries on issues related to development and security (Vaezi 2006).

It seems that there are common grounds for starting a constructive dialogue aimed at providing a model for Asian interdependence based on energy security. According to this model, West Asia is considered an energy supplier, and East Asia is regarded as a supplier of technology and capital. Energy consumers and producers in the two regions have reliable geographical links, meaning that there are no obstacles disrupting their geographical connection. More importantly, there are no major political disputes or critical tensions between these regions.

**Figure 10. Persian Gulf Oil Exporters**

![Persian Gulf Oil Exporters](source_image_url)
6.3.2. Caspian Attractive Source

The Caspian Sea region presently is a significant, but not major, supplier of crude oil to world markets, based upon estimates by the Energy Information Administration (EIA), U.S. Department of Energy. The nations in the Caspian region — notably Azerbaijan, Kazakhstan, and Turkmenistan, and to a lesser degree Russia, Iran, and Uzbekistan — are believed to be sitting on what amounts to 10 per cent of the earth's potential oil reserves. Proven reserves total approximately 17 billion to 49 billion barrels of oil, with a possible additional 100-300 billion barrels not yet proven (Energy Information Administration 2007).

The Caspian region produced 1.9 million barrels per day (bbls/day) including natural gas liquids in 2005, or 2 per cent of total world output. Thirteen non-Caspian region countries each produced more than 1.9 million bbls/day in 2005 (Ibid). In 2006, Caspian oil production totaled about 2.3 million billion barrels a day (bbl/d), comparable to annual production from South America's second largest oil producer, Brazil. During 2007, the U.S. Energy Information Administration expected over 200,000 bbl/d of annual production growth, comprised mostly of growth from Azerbaijan. By 2010, EIA expects the countries of the Caspian Sea Region to produce between 2.9 and 3.8 million bbl/d, which would exceed annual production from South America's largest oil producer, Venezuela (Ibid).

Energy resource in Caspian Sea and Central Asian countries is attractive source for East and South Asian countries. They are becoming increasingly involved with their Central Asian neighbors in the funding and development of major energy and infrastructure projects. This involvement — encompassing Japan, South Korea, and India as well as Pakistan, China, Iran, and Russia — signifies a new trend towards the genuine internationalization of the foreign relations of Central Asian nations. Russia, China, and Japan are now trying to work out arrangements for financing pipelines and expediting delivery of Russian energy supplies from the Kovytinskoye oil and gas fields in Siberia through Xinjiang and northern China to Japan. And Russia is developing transport projects tying it together with India and Iran. These projects obviously also involve Central Asian governments (Blank 2000).
Meanwhile, Japan, as part of its overall Eurasian initiative, has substantially upgraded its profile and investments in Central Asia, thereby also meeting local interests in broadening the scope of foreign investment in Central Asia. South Korea also has made efforts to penetrate Central Asian markets. India’s rising interest in Central Asia likewise owes much to its efforts to deny Pakistani influence there, and to improve relations with Russia and China while curbing the incidence of Islamic insurgency at home and in Central Asia (Ibid).

For India, the most attractive oil domain outside the Persian Gulf is the Caspian Basin. Recognizing this, India is already trying to be friend the region and gain a foothold (Blank 2000). At the same time Russia, like the Central Asian states, desperately needs markets, pipelines, and investment capital for its energy holdings (Maleki (2) 2007). Therefore, the deepening East and South Asian-Central Asian cooperation reflects both the interests of the concerned parties and the deeper and broader process of globalization. It also makes the pooling of resources among multiple partners easier, more economically
advantageous to the partners involved, and more likely an outcome where major projects are concerned (Blank 2000).

6.3.3. African and Asian Diversification of Supply

According to the 2008 BP Statistical Energy Survey, Africa had proven oil reserves of 117.481 billion barrels at the end of 2007 or 9.49 per cent of the world's reserves and in 2007 the region produced an average of 10317.6 thousand barrels of crude oil per day, 12.5 per cent of the world total and a change of 3.1 per cent compared to 2006. Five countries dominate Africa's upstream oil production. Together they account for 85 per cent of the continent's oil production and are, in order of decreasing output, Nigeria, Libya, Algeria, Egypt and Angola.

Other oil producing countries are Gabon, Congo, Cameroon, Tunisia, Equatorial Guinea, the Democratic Republic of the Congo, and Cote d'Ivoire. Exploration is taking place in a number of other countries that aim to increase their output or become first time producers. Included in this list are Chad, Sudan, Namibia, South Africa and Madagascar while Mozambique and Tanzania are potential gas producers (MBendi 2008). Also, according to the 2008 BP Statistical Energy Survey, Africa had 2007 proved natural gas reserves of 14.58 trillion cubic meters, 8.22 per cent of the world total. Natural gas production for 2007 was 190.37 billion cubic meters, 6.45 per cent of the world total (Ibid).

Asia is experiencing a huge rise in energy demand, a significant portion of which must be met by oil imports. The need to meet this voracious energy requirement from diversified overseas sources has driven Asian states into Africa, once nearly the sole preserve of the Western oil majors (Fee 2006).

To meet growing energy demand, China, India and Malaysia have in the past decade implemented an aggressive energy investment strategy in Africa. Its effects are beginning to be felt across a wide range. These countries are investing heavily and rapidly in African exploration and production projects starting in the Horn of Africa, but more recently expanding into West Africa in the politically unstable Persian Gulf of Guinea region (International Information Administration 2005).
At the same time, the geopolitical or national security consequences of this Asian energy strategy in Africa should not be overdrawn or exaggerated. A recent US government report concluded, for example, that Chinese energy demands do not per se threaten the U.S. National security interests but rather act to enlarge world oil supplies. Thus, there is a longer-term, strategic component to Asian governments’ strategy in Africa: to ensure that adequate oil and gas development projects outside the West Asia are “in the pipeline” and steadily coming onto world oil markets (Fee 2006). However, it has to be considered that oil is a commodity bought, sold and traded in a world oil market that constitutes one large pool.

As Asian states will in future be among the biggest purchasers from that pool, it makes sense for those governments to ensure that it attains its maximum size. Asian importers will tap federal treasuries as needed to acquire supplies at whatever price the market sets; but first the supplies must be available. That means exploration, development and production investment expenditure, in places like Africa, 5, 10 or even 20 years in advance of export production and transportation (Ibid).

6.4. Iran and Asia Energy Demand

As it has been mentioned above, the world most important energy producers are in West Asia, and the fastest growing energy consumers in the world are East Asia (plus India). Given the general decline in energy production, particularly oil production, in other parts of the world, West Asia, especially the Persian Gulf, is the only region that can provide reliable energy to world consumers during the next 50 years (Vaezi 2006). Persian Gulf states can manage strategic concerns about energy security, while East Asian countries can meet some of the strategic needs of Persian Gulf countries on issues related to development and security.

It seems that there are common grounds for starting a constructive dialogue aimed at providing a model for Asian interdependence based on energy security. According to this model, West Asia is considered an energy supplier, and East Asia is regarded as a supplier of technology and capital. Energy consumers and producers in the two regions have reliable geographical links, meaning that there are no obstacles disrupting their
geographical connection. More importantly, there are no major political disputes or critical tensions between these regions.

In this situation, Iran's policy in controlling its energy resources, its political stability and its special interest in cooperating with independent Asian countries to establish and consolidate Asian solidarity heighten its potential. In addition, Iran's 4th Five-Year Development Plan lays out large projects in the country's oil, gas and petrochemical industries, which are to be implemented with the participation of foreign companies.

In general, given its obvious advantages in terms of oil and gas reserves and its geographical location, Iran can play a positive role in addressing the common interests and reducing the mutual vulnerabilities of these two parts of Asia. To this end, Iran is currently ready to first establish bilateral dialogues with Asian consumers and later to pave the way for a multilateral dialogue among parties. This dialogue could be established by emphasizing the possibility of linking Iran's vast gas resources to Asian consumers via pipelines and liquefied natural gas (LNG).

In addition, the unique geographical position of Iran, which links Caspian Sea countries to the Persian Gulf States, is a major factor that could facilitate the construction of a major gas transmission network. Iran has common boarders with Pakistan and Turkey that are going to be the major gas importers from the region in the coming years (Ghorban 2005).

Iran's pipeline network at present is extended from the shores of the Persian Gulf in the South to the Caspian Sea in the North (Iran's gas network has been connected to that of Azerbaijan in the past twenty-five years). The existing pipelines East-West extends from Sarakhs at the Turkmenistan boarder to Rezaieh near the Turkish boarder with Iran (Iran's pipeline network has also been linked to Turkmenistan network since 1997).

This pipeline network consists of nearly 4,000km of major lines (between 20-56 inches) and over 10,000km of high pressure pipelines capable of carrying over 80 billion cubic meters of gas per year (bncm/y) for domestic consumption and injection into the oil fields. Kazakhstan could be easily connected to the above network through the expansion
of the existing lines and building new pipelines between Kazakhstan and Turkmenistan (Ibid).

However, Cooperation amongst the major gas producing states will ensure the most economic way of developing gas resources and constructing transmission networks for gas utilization in the long term. Iran, Turkmenistan and Kazakhstan could cooperate in developing a major pipeline network capable of carrying gas from these countries to the regional and international markets.

This will avoid simultaneous development of large pipelines and LNG projects for the same markets. Qatar can also be connected to the Iranian pipeline network with the construction of a small pipeline from its North Dome field to the Iranian port of Assaloieh. If the recent discoveries of gas in Azerbaijan are developed it could also use Iranian network. Under these circumstances, Iran can play a pivotal role in Asian cooperation toward establishing a dialogue on energy.

6.5. Iran’s Energy Relation with China

Before the revolution, the last Chinese official to meet with the late Shah Mohammed Reza Pahlavi was Chinese Communist Party chief Hua Kuo-feng. The meeting left a very strong negative feeling about China among Iranians. Concerned about possible attendant instability in China-Iran relations following the Islamic Revolution in 1979, the Chinese leadership moved quickly to recognize the new government and express its hope that friendly relations would continue (Huwaidin 2002).

The onset of the Iran-Iraq War in September 1980 forced China into a delicate balancing act. China considered both countries as allies and tried not to take sides, urging a peaceful resolution of the conflict. Beijing also welcomed Iran’s condemnation of the Soviet invasion of Afghanistan and encouraged Iran to mend its relations with the United States. As Washington attempted to punish the Iranian government for allowing militant students to take its embassy personnel hostage, the Chinese leadership displayed its willingness to part ways with the United States in order to maintain its relations with Iran (Ibid). Like the Soviet Union, in 1980, the Chinese government refused to support the UN arms embargo against Iran under Security Council Resolution 598. The Chinese
government also abstained from voting on a U.S.-sponsored resolution to impose economic sanctions on Iran.

Ali Khamenei, president of Iran visited China and assured Deng Xiaoping of Iran's commitment to expanding friendly relations between the two nations. As a result of this closer relationship, Sino Iranian trade increased substantially in the 1980s. Total trade between the two countries increased from $627 million to $1.627 billion (Ibid).

The end of the Iran-Iraq War in 1988 provided China with a new opportunity to participate in much-needed economic reconstruction and emerge as the provider of arms and technology for Iran. Strained Iranian relations with the United States and Western Europe rendered Iran an alluring market for China. This is also the period when China's economy began to grow rapidly, exponentially increasing China's need for new sources of energy supply and investment markets. Iran needed a reliable buyer for its oil and gas and a supplier of military equipment and weapons systems. This made the rationale behind the mutually beneficial relationship even more patently clear to both sides.

Although the relations were first limited to military purchases by Iran, this soon extended to vast economic exchanges. State-oriented economies, cheap Chinese commodities, and easy economic and banking systems and exchanges were among the factors that gradually enhanced the two sides' economic relations. This expansion of the relationship soon led to China's further involvement with Iran's infrastructure economic activities, such as roads, railways and urban construction as well as oil and gas infrastructure. Those plans require a long-term Chinese presence in the country. Over the last decade, China's involvement has slowly won Iran's confidence both in economic and political-strategic activities (Barzegar 2008).

Iran-China economic relations are wide-ranging and extensive. China has built Tehran's subway system, dams, fisheries and cements factories and is currently engaged in many other reconstruction projects. China is also a major provider of consumer goods to Iran; by 2003, it was responsible for 9.5 percent of Iran's total imports. In what follows, we will discuss in detail the most important aspect of this relationship – energy (Ibid).
6.5.1. China Oil Demand

With the ascendance of Deng Xiaoping to power in 1976 and the inauguration of open-door and economic-liberalization policies, China's economic growth began to take off in earnest. This dramatic economic development exponentially increased China's need for additional sources of energy (Ziegler 2006). When anticipated petroleum reserves in Xinjiang province and in the East and South China Seas failed to meet expectations and with the Daqing field's reserves running down, China's energy production, particularly its domestic oil production, failed to keep pace, and China became a net importer of crude oil in 1993. Since then, the growth in China's demand for imported oil has been enormous and has had a mounting impact on global energy markets. From 1993 to 2002, Chinese oil demand grew close to 90 per cent, while domestic production grew less than 15 per cent (Ziegler 2006 p: 7).

Another important factor contributing to China's spiraling demand for oil and gas is the need to reduce the use of coal, which is responsible for about three-fourths of the Chinese domestic energy supply. With the increasing environmental degradation and high level of pollution in major Chinese cities (carbon dioxide, sulfur dioxide and particulates), there is an urgent need to switch to other sources of energy, thus the increasing Chinese demand for imported natural gas, which generates much less carbon monoxide. The booming automobile industry is another source of the surge in energy demand. Car sales in 2004, for example, were about 5 million, making China the third-largest car market after the United States and Japan (Ibid).

By 2004, with the economy still growing at 9.5 per cent annually and as the world's third-largest automobile market, adding more than five million vehicles each year, Chinese oil demand had risen to six million barrels per day, with 40 per cent coming from imports. Some 40 per cent of oil demands growth worldwide over the past four years has come from China, illustrating the magnitude of China's demand the world's oil markets (Leverett and Bader 2006).

According to Oil & Gas Journal (OGJ), China had 18.3 billion barrels of proven oil reserves as of January 2006, flat from the previous year. EIA estimates that China produce 3.8 million barrels per day (Mmbbl/d) of oil in 2006, slightly higher than the
previous year. Of this, 96 percent is expected to be crude oil (Energy Information Administration 2006).

China’s demand is expected to continue to grow at impressive rates for at least the next two decades, exacerbated by the country’s notoriously inefficient energy use. According to the International Energy Agency (IEA) report China's oil demand is 6.98 mln barrels per day (bpd) in 2006, and it will be 7.59 mln barrels per day (bpd) in 2007 and it is rising to 8.05 mln in 2008 and further to 9.96 mln bpd in 2012 (Ibid). Also, it has mentioned in the IEA report that China will be the main driver of demand across the Asia region, accounting for 48.9 pct of non-Organization for Economic Co-operation and Development Asian demand by 2012. In addition to, “Given the country's booming economy, oil product demand is projected to increase by 5.6 pct per year on average to almost 10 mln bpd by 2012, consolidating its position as the second largest oil consumer after the US” according to IEA report (International Energy Agency 2007).

Based on the IEA report (2007), China will likely see increased competition for fuel oil imports leading up to 2012, as the country will require imports of around 500,000 bpd to meet bunker, industrial and other refinery demand. It has mentioned that Chinese crude imports are expected to grow by 80 pct over the medium term, from 2.5 mln bpd in 2007 to 4.5 mln bpd in 2012, due to refinery additions that will expand crude distillation capacity by over 2 mln bpd by 2012, as well as plans for strategic crude storage.

Thus, for Chinese leaders, these developments place a rising premium on their ability to access oil and gas resources beyond China’s borders. China is the world’s second largest energy consumer.

6.5.2. Source of China’s Crude Oil Imports

Angola surpassed Saudi Arabia as China’s largest source of crude oil imports in February 2006. According to one industry report, in May 2006 China imported 750,000 bbl/d of crude oil from Angola, a 70 per cent increase from the same month in 2005. According to the same report, between January and May 2006 China received 46 per cent of its crude oil imports from the Middle East and 32 per cent from Africa, while its neighbors in the Asia-Pacific region only supplied 5 percent of China’s imports (Energy Information Administration 2006).
In July 2006, China began receiving crude oil imports from its first transnational oil pipeline. The new pipeline spans 620 miles, connecting Atasu in northern Kazakhstan with Alashankou in the Xinjiang Uygur Autonomous Region. The pipeline was developed by the Sino-Kazakh Pipeline Company; a 50:50 joint venture between CNPC and Kazakhstan’s KazTransOil. The project has an initial capacity to transport 200,000 bbl/d of crude oil, with plans to double the capacity by 2010. Half of the imported oil comes from Kazakhstan and half from Russia. Russia’s Far East may also one day be a source for Chinese crude oil imports. Russian state owned oil giant Transneft began construction in April 2006 on a pipeline that will reportedly span 2,500 miles from the Russian city of Taishet to the Pacific Coast (Ibid).

According to Transneft officials, the first 1500-mile stretch is expected to be completed in 2008 and reach Skovorodino, which is only 30 miles from the Chinese border. The second stretch of the Eastern Siberia-Pacific Ocean (ESPO) pipeline will presumably reach the Pacific Coast on Russian soil, although no final decision on endpoints has been made. Likely candidates are Perevoznaya or Nakhodka, and Russian officials say they favor a route that would allow oil shipments to both China and Japan.

**Figure 12: Top Source of China’s Crude Oil Imports 2005 and 2006**

![Figure 12: Top Source of China’s Crude Oil Imports 2005 and 2006](image)

*Source: FACTS, Inc. China Oil and Gas Monthly, 2006*

Once completed, the project is expected to carry 1.6 million bbl/d of crude oil. News reports suggest that the first phase of the ESPO to Skovorodino will include a spur
to Daqing which would carry as much as 600,000 bbl/d to one of China’s major stream oil centers. Russia’s Eastern Siberia region has 7 billion barrels of proved oil reserves, with one Exploration Company in the area reporting that it contains 75 billion barrels of potential reserves (Ibid).

6.5.3. China Gas Consumption

Since 2005, China's natural gas consumption structure is changing. The chemical industry and urban fuel gas account for over 60 per cent of the total consumption. As fuel gas rapidly replaces fuel coal in household consumption, urban fuel gas consumption has been growing the fastest (2007-2008 Annual Report on China's Natural Market). As the demand for natural gas grows, China’s consumption structure will be further optimized in the future. Natural gas will gradually become the main fuel in the urban fuel gas market, and the level of urbanization will rise to 55 per cent in 2020 from 43 per cent at present. In addition, the natural gas demand will also shift regionally (Ibid).

By 2010, natural gas demand is expected to reach 100 billion cubic meters, while the output will amount to 80 billion cubic meters, leaving a gap of over 20 billion cubic meters. By 2020, natural gas demand will top 200 billion cubic meters, while the output will only stand at 100 billion cubic meters. The remaining 50 per cent will rely on imports (Ibid). Thus, China’s increasing needs for gas, combined with its extensive potential for development and insufficient domestic resources have made energy security a basic element needed for the country’s national security. This element can be secured through international energy resources, particularly those situated in the Persian Gulf and especially in Iran.

6.5.4. Iran Oil Export to China

China first purchased Iranian oil under the shah's regime in 1974, and the amount increased significantly in the 1980s. Whereas China imported 300,000 tons of oil in 1977, this amount reached one million tons (25,000 b/d) in 1982, and then two million tons (40,000 b/d) by 1989-90. In 1995, the Iranian News Agency announced that it would expand production to 60,000 b/d. In the same year, in order to expand oil exports to China and enable China to refine the imported crude faster, Iran agreed to invest $25 million in China’s oil-refining industry (Liangxiang 2005).
In 1997, China pledged to expand the imports of Iranian oil from 70,000 h/d to 100,000 b/d in 1999 and to 270,000 b/d in 2000. By 2003, China was importing 12,393,834 metric tons of oil and it quickly surpassed Japan to become the world's second-largest consumer of oil and petroleum products. These statistics indicate that energy security is very important to China's continued prosperity, and Iran so far has emerged as a reliable supplier that in return provides China with a lucrative market for investment and its consumer goods (Ibid).

Iran also possesses the second-largest gas reserves in the world, trailing only Russia. Iran is the second-largest provider, after Saudi Arabia, of oil to China; the two countries have signed oil and gas contracts worth $70 billion (Liangxiang 2005). While Chinese exports to Iran are very diverse, ranging from electronics and machinery to arms, consumer goods and textiles, oil accounts for 80 per cent of Chinese imports from Iran. By 2002, Iran was responsible for more than 15 per cent of the PRC's annual oil imports. In 2005, Iran was China's third-leading foreign supplier (behind Saudi Arabia), satisfying about 14 per cent of its import requirements. In January 2006, Iran replaced Saudi Arabia as China's number one source of imported oil (Ibid).

As a result of Iran-China energy cooperation, their trade exchanges exceeded 20 billion dollars in 2007 and are expected to reach nearly 26 billion dollars by the end of 2008. Oil is the main goods in their trade as Iran supplied 13 per cent of China's imported oil in 2007 (Investiniran 2008). In fact, Iran oil export to China according to Iranian official was 450,000 barrels per day in 2007 (Sarmaieh 6 of Shahrivar 1387). Also, according to agreement between two countries Iran has to export oil to China amount 400,000 barrels per day in 2008 (Petro net 25 of Aban 1387).

Thus, it is clear that result of this high level cooperation, has made Iran third biggest oil supplier of through the first 10 months of 2007, according to the Beijing-based Customs General Administration (Ying and Sethuraman 2007). Also, this stark rise in China's energy demand, paired with Iran's vast oil and gas reserves, makes the energy connection one of the most significant pillars of this relationship (Leverett 2007). This can be argued in energy cooperation among them.
6.5.5. Iran-China Energy Cooperation

Due to U.S.-imposed economic sanctions since 1980, Iran's oil infrastructure – exploration, refining and downstream production – has been deteriorating steadily. In 1996, the Clinton administration's Iran-Libya Sanctions Act imposed tough penalties on foreign companies and individuals found to be investing more than $20 million in oil and gas development in Iran. This initiative further hampered Iran's ability to modernize and expand its production capabilities.

This proved to be a boon for China. Conscious of Iran's urgent need to explore its vast oil reserves and rebuild its war-torn and decrepit oil infrastructure, China offered to rebuild the facilities and engage in joint-venture exploration and development of new oil and gas fields. In doing so, China hoped to lock into the Iranian oil market for the long haul. After allaying Iranian fears about Chinese technological capabilities, the two countries signed an agreement in 1997 for cooperation in prospecting and exploration. In 1988, a Sinopec subsidiary, Shengli oil Company, transferred a complete set of China-made oil equipment to Iran (Dorraj 2008).

As the West European oil companies began to object to the "extraterritoriality" of U.S. sanctions and defied them, China gained confidence that, despite intense anti-Chinese sentiments in the U.S. Congress, Washington could not single out China for punitive action. China cited the 1999 signing by Royal Dutch Shell of a deal with Iran worth $850 million to rebuild Iranian oil fields damaged during the Iran Iraq War to justify its own investment in Iranian oil and gas fields (Ibid p:268).

The discovery of vast reserves in the Azadegan oil field in 1999 (estimated to have 26 billion barrels of oil, making it one of the largest undeveloped oil reserves in the world, worth $2.6 billion) posed a dilemma for the leaders of the Islamic Republic. Which one of their great Asian trading partners should receive the lucrative exploration rights, China or Japan? In 2000, President Khatami decided to grant the development rights to a Japanese firm. In order to prevent a rift with China, the National Iranian oil Company (NIOC) granted the China National Petroleum Corporation (CNPC) an $85 million contract to drill 19 wells in existing natural gas fields in Southern Iran. This was followed by a $ 13 million oil contract between the two in 2001 (Ibid p 269).
In August 2000, CNPC won its first drilling contract in Iran (to drill 19 gas wells in southern Iran) the first project of its kind put on international tender since the Iranian Revolution. The most significant breakthrough in this area is the widely reported preliminary agreement (reached in October 2004) between the National Iranian Oil Company (NIOC) and Sinopec to develop the Yadavaran oil field, whereby NIOC would sell 150,000 barrels per day (bpd) of crude oil to China at market prices over a period of 25 years when the field becomes fully operational. In June 2005, CNPC won a bid to develop the Khoudasht oil block in western Iran (Islamic Republic News Agency 27 of December 2004).

A combination of the U.S. pressure on Japan to withdraw its proposed $3 billion investment in the development of the Azadegan field, and Japan's concern about Iran's pursuit of a nuclear capability, culminated in the Japanese hesitating and missing the deadline of June 2003 to reach a conclusive agreement. Soon afterward, Sinopec expressed interest in taking on the Azadegan exploration and development. According to Sinopec officials, in 2004, the U.S. embassy in Beijing requested that Sinopec withdraw its bid, but Sinopec refused (Ibid).

In March 2004, the state-owned Zhuhai Zhenrong Corporation (a spin-off of NORINCO) agreed to import 110 million tons of Iranian liquid natural gas (LNG) over 25 years, a deal worth approximately $20 billion (Calabrese 2006). According to the terms of the Yadavaran project agreement, Sinopec has committed to the purchase of 10 million tons per year of liquefied natural gas (LNG) over a period of 25 years, beginning in 2009 (Ibid). Also, according to the terms of the Yadavaran project agreement, Iran’s former Deputy Oil Minister Hadi Nejad-Hosseinian estimated that gas exports to China will gradually increase to 40 million tons per annum (Islamic Republic News Agency 27 of December 2004).10

A few months later, Sinopec and NIOC signed another contract that would allow China to buy $250 million tons of Iranian LNG for the next 30 years. This deal is

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10 After Iran signed onto an additional protocol requested by the Intentional Atomic Energy Agency (IAEA) and halted its uranium-enrichment program in 2003, Japan decided to sign onto the Azadegan project in 2004 with an escape clause that would allow Japan to cease cooperation should Iran and the IAEA come to confrontation. Eventually, under relentless U.S. pressure, by October of 2006, Japan's INPEX.
estimated to be worth $70-100 billion. In addition, CNPC was also given the right to invest in the exploration of the Yadavaran oil field in exchange for the right to purchase 150,000 b/d at the market price, once the oil field is operational (Dorraj 2008).

Also, another area of cooperation is the upgrading of Iranian refineries and the enhancement of oil recovery. CNPC is engaged in an oil recovery and extraction project to increase the production of Iran’s Masjed Soleiman field based on a buy-back contract. Iran and China also signed a preliminary agreement to construct a gas condensates refinery in Bandar Abbas, aimed at raising the production of gasoline, which currently constitutes 56% of the refinery’s output (Marketos 2009).

In April 2006, the Islamic Republic of Iran Shipping Lines (IRISL) awarded an estimated $180 million contract to Sino-Pacific Heavy Industries to build six 53,000 dwt carriers (with the option of building four more) at the latter’s Dayang shipyard in Yangzhou (Calabrese 2006).

However, the National Iranian Oil Tanker Company (NITC) plans to order another 35 vessels to be built by 2010, including 10 liquefied natural gas carriers, a more complex ship that costs almost twice as much as crude-oil tankers. NITC Planning Manager Abdol-Samad Taagol gave some indication of the role that Chinese companies might play in this effort when he remarked, “We’ll give priority to Chinese shipyards if China is to become our biggest consumer of gas,” though adding that Iran had made “no firm commitment yet” (Iran focus 2005).

Finally, in 2007, China Petrochemical Corp signed a $2 billion agreement to develop Iran's Yadavaran oil field, advancing prospects for a contract on the sale of liquefied natural gas to the world's fastest-growing major economy. However, capture of Indian oil market as second country in the world with fast-growing economy is another Iranian aim (Iran focus 2005). China has also become an active participant in Iran's development of Caspian Sea oil and gas and the modernization of its facilities in Neka and other regions. The Neka-Sari pipeline, built by a consortium of Chinese companies led by Sinopec and CNPC (completed in 2003) carries Russian crude oil shipped from the Caspian ports of Astrakhan and Volgograd from the Iranian port of Neka farther into Iran. Another pipeline being built with Chinese participation will carry oil from the Neka
terminal to a refinery on the southern outskirts of Tehran in the municipality of Ray (Calabrese 2006).

In addition to China is sympathetic to Iran's attempt to bring Caspian oil and gas through pipelines to the southern Iranian ports for shipping to Europe and Asia. The United States is adamantly opposed to this initiative, which will expand Iran's economic and strategic clout. China, however, remains undeterred so far by the negative U.S. reactions to its attempt to forge closer relations with the Islamic Republic. China's aggressive cultivation of the Iranian market has been fruitful. China now supplants Germany and other European powers, which until 2006 were Iran's largest trade partners. In 2007, Iran-China trade volume increased by 27 per cent and reached $15 billion (Ibid).

China has an interest in expanding Iran's oil/gas pipeline network quite separate from whether or not its own firms help to build them. Consistent with its aim to develop alternative supply delivery networks, Beijing hopes to receive the necessary guarantees from Tehran to build an oil pipeline from the Caspian Sea, at a length of 386 km, to another pipeline in Kazakhstan that will be connected to China.

China imports a large quantity of oil and intends to import significant amounts of LNG from Iran. The main rationale for cooperating with Iran is not only to secure the supply of oil and gas, but also to seek commercial opportunities for Chinese NOCs, as Iran is one of the few countries in the Middle East that assigns China the right to conduct business in its upstream sector. China is the largest petroleum trade partner of Iran in 2007, and is one of the few countries to break US sanctions against Iran, which "penalizes foreign companies for investing more than $20mn" (Ma 2008).

Therefore, China is also critically important for Iran in terms of commercial and political support in the international arena. Chinese activities in Iran include refinery upgrades, as well as pipeline and engineering services such as drilling. The two major projects of North Pars gas field exploration and Yadavaran oil field development are among the most important projects between the two countries. A deal involving the development of the North Pars gas field between CNOOC and National Iran Oil Company (NIOC) is said to be finalized soon. The project involves an investment of
$16bn from the Chinese side. Another project worth $2bn, the Yadavaran project between Sinopec and NIOC, was finalized in 2007. Sinopec will develop it and buy 10mn tons of LNG over 25 years (Ibid).

6.6. Iran's Energy Relation with India

Although the Islamic Revolution in Iran was greeted favorably in India and was viewed as a reflection of Iran's quest for identity and national self-assertion, there were new and persistent differences between the two countries regarding various regional and international issues. It was due to these differences that relations between the two states remained inhibited, notwithstanding the fact that India was among the first countries to recognize the revolutionary government of Ayatollah Khomeini.

The Soviet invasion of Afghanistan in 1979 was the one issue where Iran and India had diametrically opposed positions. Iran, which had always felt threatened by Soviet Communism, was much more critical of the Soviet occupation of Afghanistan than was India, which traditionally had very close relations with the Soviets. In addition, with the establishment of clerical rule in Iran, the country veered off the path of secularism and the new dispensation in Tehran felt little motivation to cultivate ties with a secular country.

Iran's clerical regimes penchant to take up Islamic causes, its stand on the Kashmir issue and the condition of Indian Muslims led to strains in Indo-Iranian ties. India was also apprehensive of Iran's revolutionary regimes policy of exporting the Revolution and destabilizing the Persian Gulf regimes. The 1980-1988 Iran-Iraq war added yet another irritant to the already complicated Iran-India relations, as India struggled to protect its oil interests in Iraq while preserving its oil supply relationship with Iran (Mumtaz 2007).

While the decades of the 1970s and 1980s witnessed tensions between the two, there were episodic but notable periods of positive engagement, and the two sustained economic ties during this period, particularly on energy issues. Significant improvements in relations did not materialize until the end of the Cold War. One of the most consequential events in their shared recent history was Indian Prime Minister Narasimha Rao's 1993 state visit to Iran. "Rao became the first Indian Prime Minister to visit Iran
since the revolution, and his state visit was declared a "turning point" in bilateral relations by Iran's then-President Ali Akbar Hashemi Rafsanjani" (Fair 2007).

In 1995, Rafsanjani made a reciprocal visit to India. While high-level visits continued after 1995 – which did much to solidify in some measure their mutual economic interests in key technological sectors – the next state visit did not occur until 2001, when Prime Minister Atal Bihar Vajpayee visited Tehran. This visit culminated in the 2001 Tehran Declaration, signed by Prime Minister Vajpayee and Iran's President Muhammad Khatami. The Tehran Declaration laid the foundation for Indian and Iranian cooperation on a wide array of strategic issues, including defense cooperation (Ibid).

Then Iranian President, Muhammad Khatami, reciprocated the visit in January 2003. Muhammad Khatami was the Chief Guest at India's Republic Days parade, showing the remarkable degree of warmth in Indo-Iranian relations. It was a clear signal of the high importance India attached to its relations with Iran and its assessment that Iran was a vital player in regional inter-state relations and security arrangements. During the visit, the two countries signed the New Delhi Declaration and the Road Map to Strategic Cooperation, which promulgated a plan for the evolving partnership between them. The two sides signed seven agreements pertaining to economic exchanges, science and technology, information technology, educational training, reconstruction of Afghanistan, and anti-terrorism. Besides, they agreed to explore opportunities for cooperation in defense, including training and exchange of visits (Mumtaz 2007).

According to this cooperation Iran has followed relationship with India and result of that was $1.6 billion which became the fiscal year ending March 2005 (Fair 2007). Iran-India trade grew up by nearly 80 per cent in 2007 and has reached the level of $9.3 billion. India exports goods worth $1.937 billion to Iran and imports goods worth $11.049 billion from Iran. India’s imports from Iran include crude oil and petroleum products worth $10.06 billion and India’s exports include export of petroleum products worth $850 million (Ettelaat 14 October 2008).

Also, Iran and India continue to make progress on their commitment to build a North-South Corridor with Russia. Iran, Russia and India signed this agreement (called the Inter-Governmental Agreement on International "North-South Transport Corridor" in
September 2000 in St. Petersburg. Since this corridor is a part of an Indo-Iranian initiative to facilitate the movement of goods across Central Asia as well as Russia, both India and Iran entered into an earlier trilateral agreement with Turkmenistan in 1997 (Aaron 2003).

This North-South Corridor permits the transit of goods from Indian ports to Iran's port of Bandar Abbas, or eventually to Chahbahar. Goods transit Iran via rail to Iran's Caspian Sea ports of Bandar Anzali and Bandar Amirabad. They are then transferred to ports in Russia's sector in the Caspian. From there, the route extends along the Volga River via Moscow and onward to northern Europe. This is intended to serve as an alternative cargo route, linking Indian products with Russia through the Baltic ports of St. Petersburg and Kotka in Rotterdam or through the Ukrainian Black Sea ports of Illychevsk and Odessa to connect to the Mediterranean (Fair 2007).

With a length of only 6,245 km, it is an enormous improvement over the 16,129 km route through the Suez Canal and the Mediterranean (Ibid). Indian officials are very enthusiastic about this route, because it will reduce the logistics of moving goods and diminish travel time and transport costs. Trial runs began in early 2001, with some 1,800 freight containers moving through it; officials expected those figures to rise by the end of 2002. In 2002, officials expected the corridor to handle 15 to 20 million tons of freight at $10 billion per year (Regine 2002).

As a part of this agreement, India agreed to help expand the Iranian port of Chahbahar and lay railway tracks that would connect Chahbahar to the Afghan city of Zaranj. Iran hopes that expanding Chahbahar will relieve some of the congestion of Bandar Abbas. Part of the concern that emanates from this activity is the ambiguity about what kind of facility or facilities will materialize at Chahbahar. Currently, India claims that this will be a commercial port (Port of Chahbahar 2007). However, others in the region—such as Pakistan and China—fear that once it is complete, Indian naval vessels will have a presence there. These apprehensions are important and may affect the Chinese and Pakistani planning at Pakistan's Gwador port. The Gwador port lies along Pakistan's Makran coast, only a few hundred kilometers from Chahbahar. Gwador is being modernized and expanded with Chinese capital, and it is hoped that this port will
diminish Pakistan's vulnerability to a naval blockade of its major port in Karachi. It has added importance in light of purported Indian and Iranian activities at Chahbahar (Fair 2007).

India has also committed to upgrading the 215-kilometer road that links Zaranj and Delaran as part of a circular road network that will connect Herat and Kabul via Mazar-e-Sharif in the north and Kandahar in the south. This would permit Indian goods to move into Afghanistan via Delaran and beyond. This initiative to expand trade into Afghanistan is part of a trilateral agreement that was signed with Afghanistan in January 2003. This agreement permits Afghan exporters to use Chahbahar with a 90 per cent reduction on port fees and a 50 per cent saving on warehousing charges. Afghan vehicles are also given full transit rights on the Iranian road system (Yaping 2003).

As reflected in the 2001 Tehran Declaration and the 2003 New Delhi Declaration, India and Iran want to move ahead on commercial and energy issues. As a matter of fact the main factor in Iran-India relationship is energy; India with an increasing need for energy as its population quickly approaches 1.3 billion, is the biggest potential customer (Roshandel 2009).

6.6.1. India Oil and Gas Consumption

India is the fourth largest consumer of oil in 2007 (BP Statistic Review 2008). India's oil consumption in 2007 was 128.5 million tones. There is a huge demand-supply gap in oil and gas in India. The country imports more than 74.9% of its crude oil requirement in 2007. Import dependence may rise to 80-90% around 2030 (Ibid).

According to Ministry of Oil and Natural Gas, India’s crude oil reserves have increased from 726mmt in FY02 to an estimated 786mmt in FY06, whereas natural gas reserves have increased from 763 billion cubic metres (bcm) to 1,101bcm between FY02 and FY06. Crude oil production was estimated at 32.19mmt and natural gas at 32.20bcm in FY06. Consumption of crude oil was estimated at 130.11mmt, whereas consumption for natural gas was estimated to be 31.02bcm in the same year. The production and consumption of petroleum products was estimated at 119.75mmtpa and 111.92mmt respectively (Business Market Reports 2007).
India’s crude oil imports from the volatile West Asia region increased 11 per cent to 89.73 million tons in 2007-08 with Saudi Arabia being the single largest supplier to Asia’s third largest oil consumer. Of the 121.67 million tons of crude oil imported in 2007-08, 73.74 per cent came from the West Asia region, according to data available from the Petroleum Ministry (Business Line 7 August 2008).

Of the total import of 111.5 million tons in 2006-07, the region sold 80.81 million tons of oil. Saudi Arabia shipped 26.98 million tons of oil to India in 2007-08, up 9.58 per cent from the previous year’s 24.62 million tons. India spent Rs 2,72,699 crore or USD 67.988 billion on its crude imports in 2007-08, up from Rs 2,19,029 crore or USD 48.389 billion in the previous year (The Financial Express 7 of August 2008).

Iran was the second biggest supplier with 19.48 million tons and Iraq gave 14.29 million tons in 2007-08. Imports from Iran swelled from 14.7 million tons in the previous year. Outside the West Asia region, Nigeria was the biggest exporter at 9.91 million tons, though the volumes from the African nation were down from 13.06 million tons in 2006-07. Angola followed Nigeria with oil exports to India almost doubling in 2007-08 to 4.33 million tons. Kuwait’s oil supplies to India declined to 10.3 million tons in fiscal 2008, down by 10.48 per cent from the previous year’s 11.38 million tons. India’s oil import

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from the United Arab Emirates in fiscal 2008 stood at 10.86 million tons, up 24.11 per cent from 8.75 million tons in the year-ago period (Ibid).

**Figure 15: Demand-Supply gap in Indian Oil to exist**

![Graph showing demand-supply gap in Indian oil](image)

Source: BP Statistical Review 2008

According to Energy Information Administration (2007) India had 38 trillion cubic feet (Tcf) of proven natural gas reserves as of January 2009. The EIA estimates that India produced approximately 1.1 Tcf of natural gas in 2007, up only slightly from 2006 production levels. In 2007, India consumed roughly 1.5 Tcf of natural gas, approximately 100 Bcf more than in 2006, according to EIA estimates. Natural gas demand is expected to grow considerably, largely driven by demand in the power sector. The power and fertilizer sectors account for nearly three-quarters of natural gas consumption in India.
Figure 16: Crude Oil import and Production in India

Source: Petroleum Planning and Analysis Cell (PPAC), Ministry of Petroleum and Natural Gas, India. For 2006-07 data, P = Provisional

6.6.2. Iran Oil Export to India

As reflected in the 2001 Tehran Declaration and the 2003 New Delhi Declaration, Iran and India want to move ahead on commercial and energy issues. Iran is anxious to get its hydrocarbons out of the ground and into new markets, and energy-hungry India wants to be such a market. However, progress on the energy relationship slowed in developing. In 2005, Indian crude oil imported from Iran range between 100,000 and 150,000 barrels per day (bpd), accounting for about 7.5 per cent of India's total crude oil imports (around two million bpd) (Fair 2007).

Iran tried to increase its relation with and due to it India now is Iran's third oil consumer. Iran exports 374 thousand barrels per day of its 2.485 million bpd exports to the Indian market (Energy Information Administration 2007). The head of International Affairs department of the National Iranian Oil Company (NIOC), Ali Asgar Arshi, in interview in 2008, said Iran plans to increase its crude export to an Indian refinery company called Reliance from October. NIOC and Reliance currently have a contract for
exchanging crude oil with petrol. Also he has mentioned: “We will open offices in Mumbai and Beijing where they will be concentrating on contracts with the purpose of increasing the crude oil sale. If the levels of oil sale to these countries increase then oil sales to certain other countries will fall and supply to the free market would, also, decrease” (Fars News 25 August 2008).

However, India’s largest crude oil import partner is Saudi Arabia, followed by Iran. Nearly three-fourths of India’s crude oil imports come from the West Asia. The Indian government expects this geographical dependence to rise in light of limited prospects for domestic production (Energy Information Administration 2009).

6.6.3. Indian Investment in Iran’s Energy

Iran is following Indian companies to invest in Iran’s oil fields. And at the same time India has proposed to invest in Iran oil fields. One of them is a consortium of public sector oil companies – ONGC Videsh (OVL), Indian Oil Corporation (IOC) and Oil India (OIL). They have proposed to invest $3 billion to develop Farsi block in Iran where they have found 12.8 trillion cubic feet (tcf) of gas. The block also has over 1 billion barrel of in-place oil reserves (The Economic Times 14 June 2008).

The consortium is yet to submit a commerciality proposal for the development of the oil asset. The commerciality report for gas development though had been submitted to Iranian authorities in December 2007. The consortium partners have invested around $90 million in exploration of the asset, which includes drilling of four wells. It found gas in two wells and oil in one. Oil discovery in the block is stated to be “very heavy”, according to official. As the consortium has an exploration contract, its return on investment is ensured. Indian official has explained that they will get 35% return on the exploration investment made in the block. They also hope to get 15% return on development. The group is hopeful that it would get service contract for developing the asset. The development cost is estimated at $3 billion. Indian Oil’s share in the investment would be $1.2 billion (Ibid). Until the end of 2007, India’s Oil and Natural Gas Corporation (ONGC) discovered a new oil field in Iran. The ONGC and the Indian Oil Corporation each have a 40 per cent participating interest in the Farsi block, while the Oil India Ltd. has a 20 per cent stake (Tech News and World News Jun 29, 2008).
Also, Hinduja Group is on the verge of concluding nation's biggest energy deal for developing oil and gas fields in Iran and setting up a refinery and LNG terminal in India involving a total investment of 20 billion dollars (Ibid). The Indian consortium of Hinduja Group and OVL will get 60 per cent stake in development of South Pars Phase-12 and just over 50 per cent in Azadegan field, they said, adding a contract for the same will be signed within two months (Hindustantimes 03 June 2008).

Azadegan field will produce 150,000 barrels per day of oil in first phase that would double subsequently, while South Pars Phase-12 will produce 12 million tons of gas that will be converted into LNG at a two-billion dollar facility. Hinduja-ONGC has sought supply commitment for the entire oil produced from Azadegan field and 7.5 million tons of LNG from South Pars Phase-12 (Ibid).

However, before that in 2005 also, Iran decided to award a block to the Indian Oil Corporation - Petropars consortium in the North Pars gas field for its 9 million tonne per annum (mtpa) integrated LNG project. Indian Oil was amongst the few companies awarded a block in the first stage of development of the North Pars gas field. According to Indian government officials, the reserves in the North Pars gas field are estimated to be 47 trillion cubic feet (tcf) of gas (National Iranian Oil Company 2007).

Indian Oil requires around 12 tcf of gas for its 9 mtpa LNG project. The total cost of the integrated LNG project is $5.7 billion with Indian Oil chipping in Rs 7,300 crore. The project comprises five parts including a $2.2 billion upstream project, to be developed by a joint venture between Indian Oil and Petropars. Indian Oil has a 40 per cent stake in the JV with an investment of over Rs 4,000 crore (Gulf Oil and Gas, 14 of June 2005). Also, in 2007 India’s Essar Group was negotiating with National Iranian Oil Refining and Distribution Company (NIORDC) to set up a new oil refinery in Iran’s oil-rich southern region. The building of a two billion dollar oil refinery in the southern part of the country is parts of an 18 billion dollar fund allocated to the development and expansion of the nation’s oil refining capacity to meet its rapidly growing domestic fuel requirements (Iran Dily 29 December 2008).
6.6.4. Iran–Pakistan -India Gas Pipeline

Two projects were initially put forward: 1) a Qatar Pakistan pipeline following an offshore route except for a small portion to be constructed overland through the UAE; and 2) a pipeline from Iran to Pakistan, i.e., the project is 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 (Task Force looking at Gas Market Integration 2009).

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 realize the project. 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 agreed 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 re-injection 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 (Ibid). Iran signed agreements with India and included with the provision that India should import 7.5 million tones per annum of liquefied natural gas (LNG) starting from 2009 over a period of 25 years.

In turn, Iran would give Indian firms developmental rights in two oil-producing fields – Yadavaran and Jufeyr. Secondly, the Iran-Pakistan-India gas pipeline (it passes through Pakistan), which is also known as the “Peace pipeline,” is a proposed 2,775 km
project. It was expected to take three to five years to complete and would cost US $7.4 billion (Mostashari 1999).

Most of the energy analysts agree that if the pipeline to Pakistan is extended to supply India as well, it will be the most reasonable and economic approach to supply Indian subcontinent. The political challenge to this project is very strong at present. However, it could be argued that if Iran, Turkmenistan and possibly Kazakhstan and Qatar jointly undertook gas exports to Pakistan and India, the chances of overcoming political barriers would be higher.

A multilateral deal in which all of the above countries are involved and have major interest, will add to the security of supply, which the Indians are currently so concerned about. Furthermore financing the project with the combined resources of the countries involved would be more attractive to the international financial community. The local contribution to the project would also be substantially higher than the current proposal for export of gas to the Indian subcontinent from Turkmenistan via Afghanistan and from Qatar offshore (Ghorban 2005).

Although Iran and India are keen to have various, mutually-beneficial relations including energy relations, the project has some economic and technical problems that have spilled over on certain political and security issues.

**U.S. factor:** The Clinton Administration was relatively supportive of the pipeline idea in the late 1990s, when the “moderates” were in ascendancy in Teheran, as a way to defuse Indo-Pakistani tensions, but the Bush Administration has backed away from supporting the proposed Iran-Pakistan-India pipeline in recent years because of increased Iranian belligerence on the nuclear issue.

The U.S. Secretary of State Condoleezza Rice declared her country’s opposition to it because it would ostensibly strengthen Iran’s power and thus negatively affect the United States economically. “Our views concerning Iran are very well known by this time and we have communicated our concerns about gas pipeline cooperation,” she said in 2005 (Payvand’s Iran News 18 of March 2005). Also according to President Bush’s March 2006 press conference statement in Pakistan, “Our beef with Iran is not the pipeline, our beef with Iran is in fact they want to develop a nuclear weapon,” It was after
this that the Americans approached New Delhi for the ‘Nuclear Concession (Times of India 5 of March 2006).

According to the India-US agreement, the US would provide assistance to India in nuclear technology and fuel. The agreement, which marked a significant break from decades of US nuclear policy, highlighted the increasingly close relationship between the world's two largest democracies and enabled both leaders to declare Bush's visit a success. Therefore, although Iran and India are keen to have energy relations, India does not want to take unnecessary risk, as far as Indo-US relations are concerned.

However, both India and Iran are keen to pursue the IPI project and Iran is ready to reduce gas price due to its limited political sanction but care has to be exercised about Washington's opposition which may scuttle the project (Zahirinejad 29 September 2007).

Pakistan Conflict: According to the plan of the proposed project, the pipeline would start from Asalouyeh stretching over 1100 km Iran in itself. In Pakistan, it would pass through Baluchistan and Sind (Around 1000 km of Pakistani territory to India and 600 km of India).

Considering the three wars fought between India and Pakistan, it is clear that New Delhi has misgivings regarding the Pakistani attitude towards the project. Therefore, when Iran mooted the project to India, the Indian reaction was not so solicitous. India believes if it accepts this project, its security would be forced to depend on the Pakistan Government and opposing groups within Islamabad. In any case, the more fundamental problems with the pipeline lie elsewhere. Mutual suspicion between Pakistan and India and the threat of terrorists or insurgents damaging the pipeline are still serious obstacles. And if those are resolved, the normal commercial issues still remain, including the difficult one of agreeing on a gas price acceptable to all three countries.

Price of Gas: The deal reached a setback on July 16, 2006, when Iran demanded a price of US$7.20 per million British thermal unit (US$6.80/GJ) of gas against India's offer of US$4.20 per million British thermal unit ($4.00/GJ).
The Indian spokesperson stated that the price offered by Iran was more than 50% above the prevailing market price in India. India and Pakistan finally agreed in February 2007 to pay Iran US$4.93 per million British thermal units (US$4.67/GJ) but some details relating to price adjustment remained open to further negotiation (Iran Daily 2007). Also, Plans to move forward with the project, however, have stalled. Iran’s insistence that the price of gas being sold to India be renegotiated every five years, coupled with a dispute with Pakistan over transit fees, has prompted India to opt out of current round of trilateral talks on the pipeline. New Delhi has said it is still interested in pursuing the deal but is likely to wait and see how the precarious political situation in Pakistan unfolds before resuming negotiations (Dormandy 2008).

The formula, taking oil crude price at USD 60 per barrel, the cost of gas at Iran-Pakistan border translated into USD 4.93 per mBtu. The latest Iranian price is among a series of flip-flops the Persian Gulf nation has done during the seven year negotiations. It had originally proposed to sell gas at USD 3.21 per mBtu. Sources said Iran was not
willing to commit to a supply- or-pay regime wherein it would have been held accountable for non-delivery of gas at Indian border (Iran News Agency 21 February 2009).

Therefore, despite the potential prosperity in the project, many hurdles will have to be crossed before the IPI comes to fruition. However, it has to be mentioned that 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 meetings 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 finales. 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 Indian was 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 (Ibid).

**Conclusion**

The emerging Asian energy market does have potential to contribute to the recovery of Iranian energy power. Iranian state is looking proactively towards the Asian countries especially China and India. This situation results in the growing transaction between Iran and China and it has made China the second largest customer of Iranian oil and Iran is the second largest oil exporter to China. The two are keen to reap full advantage from this emerging energy relationship.
It seems that some huge oil and gas deals between the two countries will deepen their relationship for at least the next 25 years. On the other hand, Iran's energy relationship with India has different dynamics. Iran needs huge Indian market and India wants to get highest benefit possible from Iranian energy.

Thus, Iran enjoying as a major oil exporter and having major gas reserve in the region has relation with India and both are trying to deepen this relationship. However, in comparison to China, India is not in a position to participate in Iran's oil sector. At the same time, India does not enjoy the global strategic salience – for instance not being member of the Security Council to veto – to protect and promote Iran's global rehabilitation.

Therefore, there is a difference between Iran's energy policy towards China and its energy relation with India. The next chapter aims at differentiating the dynamics of Iranian energy policy towards China and India. It will examine and compare the nature of interdependence between Iran and the two Asian consumers in the regional and global context.