

India's Quest for Energy Security and Role of Iran in Changing Geopolitical Scenario

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ABSTRACT

Today the issue of energy security is one of the prominent concerns not only for individual state but also for the entire international politics. Every state whether it is developing or developed is willing to secure its energy needs. Now availability of energy especially hydrocarbons like crude oil natural gas and coal are vital component of development as every aspect of human life is very much dependent on it. In this regard India is not an exception: due to insufficient domestic energy resources India has import around 82% of its oil needs 45% of its natural gas needs and around 80% of its thermal coal requirements. India imports around 70% of its oil requirement from gulf countries like Saudi Arabia, Iraq, Iran, UAE Kuwait, major portion (10%) of this supply comes from Iran. In India's plans and Policies for energy security the country plays a vital role. Iran not only important for India on energy perspective it also provides access to Central Asia Energy resources bypassing Afghanistan and Pakistan. But after the re-imposition of economic sanctions on Iran by US, which caused oil supply disruption for India. This changing scenario has put India again in a dilemma of balancing act between the two states. This presents a huge challenge for Indian policy Makers to deal with this situation for maintaining its consistent oil supplies without making inimical relations with both US and Iran. This paper analyses India's stance in this changed geopolitical scenario. How India is going to deal the problem of oil shortages? And what are the alternatives in front of Indian government?

Key Words : Oil, Gas, Energy Security, Economic Sanctions, India, USA, Iran

INTRODUCTION

Today the issue of energy security is one of the prominent concerns not only for individual state but also for the entire international politics. Every state whether it is developing or developed is willing to secure its energy needs. Now availability of energy especially hydrocarbons like crude oil natural gas and coal are vital component of development as every aspect of human life is very much dependent on these. In this regard India is not an exception. Economic growth of India since liberalization in 1990s has been very good and it is well known fact that for the development of every aspect of society energy resources are vital commodity. Presently Indian government's policies like 'Smart Cities mission',

'Pradhanmantri Awas Yojana', 'Atal Mission for Rejuvenation and Urban Transformation' (AMRUT) all are very much Infrastructure development prone which requires more Energy consumption. It is going to be the huge challenge for Indian policy makers to sustain constant availability of energy resources keeping in mind the domestic scenario as well as new unfolding of events in international politics. India does not possess huge oil and natural gas reserves to satiate its energy thirst. Currently due to insufficient domestic energy resources India has been importing around 82% of its oil needs 45% of its natural gas needs and around 80% of its thermal coal requirements. India imports around 70% of its oil requirement from gulf countries like Saudi Arabia, Iraq, Iran, UAE Kuwait, major portion (10%) of this supply

comes from Iran. In India's plans and Policies for energy security the country plays a vital role. Iran is not only important for India from the energy perspective it also provides access to Central Asia Energy resources bypassing Afghanistan and Pakistan. But after the re-imposition of economic sanctions on Iran by US, which caused oil supply disruption for India. This changing scenario has put India again in a dilemma of balancing act between the two states. This presents a huge challenge for Indian policy Makers to deal with this situation for maintaining its consistent oil supplies without making inimical relations with both US and Iran. This paper further analyses India's energy mix and the energy relation between and Iran and India following analyses of Current US-Iran Relation's and challenges for India.

India's Energy Mix :

Due to population growth and economic development, India's consumption of energy has been increasing relatively fast. Our (India's) energy mix currently is 56% based on Coal, 30% on Oil, 6% on Natural Gas, 4% from hydropower around 3% from Renewables and only 1% from Nuclear energy. Oil and Gas reserves in India are not sufficient enough to meet its growing energy needs. The transportation sector in India has grown enormously and in recent years and as per the existing technology, oil is the essential element for them. As on 2017 India depends on imported oil for up to 80% of its demand, this dependence is expected to go up to 90% by 2025. India is accounted for only 0.4% of the world's total oil reserves while consumes 4.5% of the total oil consumption of the world. With regard to natural gas its reserves stood at 1.12 trillion cubic meters (0.6 % of the world's proven reserves).

Table 1 shows that in 2017 around 92.2% of total

primary energy demand is comes from the fossil fuels *i.e.* Coal Oil and natural Gas while only around 7.8% energy comes from other resources like Hydro-electricity, Nuclear Energy and Renewable resources. This is about 7% less than the world average contribution, which is 14.71%. Among all energy resources coal dominates India's total energy mix with the share of more than 56 %. On the other hand contribution of oil is highest in terms of TPED on global level. Coal is the primary and essential sources of energy in India though the country is trying to diversify its energy resources and giving more emphasis on renewable and environment friendly resources like Solar power, wind energy hydro power, yet it is certain that for the near future coal will remain a major source of energy in India. India possesses huge reserves of coal and ranks 5th in the world. After coal, Oil and gas are the other two sources of energy which holds substantial amount of primary energy consumption. Oil contributed to 30.05% and 29.48% of the countries TPED in 2016 and 2017 respectively. While natural gas accounted for 6.05 % in 2016 and 6.10 % in 2017. So there has been a marginal growth in natural gas consumption. Coal has been the main source of energy in India. But the quality of Indian coal is not good and has high ash content which contributes to increased pollution. There is also a pressure of international community to control the carbon emission. Share of renewable resources are increasing but the growth is very minimal as in 2016 renewable resources accounted for 2.53% of total primary energy consumption which slightly increased to 2.89% in 2017. So it is evident that in India's total energy mix Coal, oil and natural gas holds substantial share, and India will remain dependent on import of these resources for its energy needs.

Table 1 : Consumption by type of Fuel (in mtoe) and Share in TPED (in %) of India and World in 2016 and 2017

Type of fuel	India in 2016		World in 2016		India in 2017		World in 2017	
	Volume in mtoe	Share of TPED (in %)	Volume in mtoe	Share of TPED (in %)	Volume in mtoe	Share of TPED (in %)	Volume in mtoe	Share of TPED (in %)
Oil	217.1	30.05	4557.3	34.37	222.1	29.48	4621.9	34.20
Natural Gas	43.7	6.05	3073.2	23.17	46.6	6.10	3156	23.35
Coal	405.6	56.15	3706	27.95	424	56.25	3731.5	27.61
Nuclear	8.6	1.19	591.2	4.45	8.5	1.12	596.4	4.41
Hydro-Electricity	29	4.01	913.3	6.88	30.7	4.07	918.6	6.79
Renewables	18.3	2.53	417.4	3.14	21.8	2.89	486.6	3.60
Total	722.3	100	13258.5	100	753.7	100	13511	100

(Source: BP Statistical Review of World Energy, 2018, p p. 9.)

India and Iran Energy Relations:

India and Iran historically share an economic and cultural relation. Both the states are complimentary to each other as on the one hand India's rapidly growing economy require more energy resources and on the other hand Iran possesses huge amount of oil and gas reserves. This mutual dependence makes the two states natural economic partners. In 2016 by surpassing Japan India became third largest oil consumer in the world. In its quest to acquire Energy resources from every possible source Indian government is striving hard. In this scenario Iran has been a reliable source of oil and gas for India. Iran holds some of the world's largest deposits of proven oil and natural gas reserves, and ranks fourth in terms of oil and second (After Russia) in terms of natural gas reserves¹. Iran also ranks among the world's top five oil producers and top five natural gas producers². As of January 2018, Iran had an estimated 157 billion barrels of proved crude oil reserves, representing almost 10% of the world's crude oil reserves and about 13% of reserves held by the Organization of the Petroleum Exporting Countries (OPEC)³. Base of the India and

Iran's economic relations has been Energy trade as share of oil import in total trade has been around 80%. Iran has been one of the major suppliers of Oil and gas for India. But for the last few years, there have been noticeable fluctuations, primarily due to US led sanctions and the difficulties regarding payment mechanisms⁴. Table 2 shows that in 2015-16 share of Iranian Oil in total oil Imports of India dropped to 4.6 % from 6.81% of 2011-12 year. And again in the year of 2016-17 Oil Import from share from the Persian state increased to 8.7%. In comparison with the previous year (2015-16) share of oil Importation Doubled. Primary reason behind this rapid increase of oil import was signing of P5+1 nuclear deal⁵ by Iran in 2015. This deal facilitated Iran to trade freely. Recently after the re-imposition of economic sanctions against Iran, India's energy Import from the state has significantly reduced as on April 2019 India had dropped its dependency on Iranian oil from about 2.5 billion tonnes a month to 1 million tonnes a month⁶. After the end of 6 month waiver which was given to 8 major Iranian Oil Importer states like China and India, It has been reported that Oil Import from Iran has stopped⁷.

Table 2 : Share of Oil in India's Imports from Iran (In Million US Dollars)

Year	Oil Imports from Iran	Total Oil imports	Iranian share In Total Oil Imports	Imports From Iran	Per cent of oil in imports from Iran
2011-12	11764.01	172753.97	6.81	13790.16	85.31
2012-13	9716.39	181344.67	5.36	11594.86	83.80
2013-14	8556.95	181382.67	4.72	10307.16	83.02
2014-15	7292.13	156400.01	4.66	8955.02	81.43
2015-16	4461.57	96953.06	4.60	6278.75	71.06
2016-17	9006.29	103163.20	8.73	10506.51	87.82
2017-18	9232.61	132294.61	6.98	11111.52	83.09

Source: Adapted from Director-General of Foreign Trade, New Delhi, at www.dgft.gov.in

1. MansourehEbrahimi, AhmadaliGholami&KamaruzamanYusoff, "Politics of Oil and Natural Gas vis-à-vis the Foreign Policy of Iran", *Asian Journal of Middle Eastern and Islamic Studies*, 2017, 11:3, p. 68.
2. Ibid.
3. "Country Analysis Executive Summary: Iran", *U.S. Energy Information Administration*, January 2017, available at: https://www.eia.gov/international/content/analysis/countries_long/Iran/pdf/iran_exe.pdf
4. P.R.Kumaraswami and Meena Singh Roy (Eds.), "Persian Gulf 2016-17: India's Relations with the Region", *Institute for Defence Studies and Analyses and Middle East Institute*, Pentagon Press, 2018, New Delhi, P. 57.
5. P5+1 includes five permanent members of United nations security Council (USA, UK, Russia, France and China) + Germany, Under the accord Iran agreed to limit its sensitive nuclear activities and allow in international inspectors in return for the lifting of crippling economic sanctions.
6. "US Deadline Ends, India Stops Purchasing Iranian Oil", *The Economic Times*, May 2019, available at <https://economictimes.indiatimes.com/industry/energy/oil-gas/us-deadline-ends-india-stops-purchasing-iranian-oil/articleshow/69475495.cms?from=mdr>
7. Ibid.

To attain energy security Indian government has been giving emphasis on the diversification of resources and sources hence India's efforts can be categorized in three strategies as: (1) to acquire energy assets overseas via obtaining equity and exploration and production agreements in various parts of the world, (2) to diversify the energy supply sources, and (3) to get natural gas through gas pipelines via cooperation with the regional states. Besides Importing oil from Iran by Pursuing this approach India government has also signed and showed interest in various energy deals with Iran like in 2005 dollar 22 billion LNG supply deal for 25 year, Iran Pakistan India Gas Pipeline and recently initiated Middle East to India Deep-water Pipeline also known as SAGE Project.

Indian firms Like ONGC Videsh (OVL), Indian Oil Corporation, Oil India Limited have acquired exploration rights to explore Farsi Block in Iran. A consortium headed by OVL signed a contract in December 2002 to explore the block. Equity share of Indian PSUs in the Consortium is: OVL with participatory interest (PI) of 40% IOCL with PI of 40% and OIL with PI of 20%. Further in 2008 the consortium discovered Farzad-B gas field which is estimated to have around 500 billion Cubic meters of gas reserves of which 370 Billion cubic meters are recoverable. Final deal has not been finalised as there is a deadlock over the gas prizes and negotiations are still underway⁸.

In Iran-Pakistan-India gas pipeline project regarded as peace pipeline project joined by India in 2005 when a Memorandum of Understanding was signed between India and Iran for the construction of US dollar 7.5 Billion and 2775 Km. long Iran-India gas pipeline that would pass through Pakistan⁹. Through this project India had to receive 90 million standard Cubic meters per day (mmscmd) gas¹⁰. Nevertheless, in 2009 India withdrew from the IPI project citing the issues of security and over pricing after signing civil nuclear cooperation deal with

US in 2008. Pakistan claimed that India's withdrawal from the project is influenced by US. Although Later in 2010 India again showed its interest to join the project¹¹.

US – Iran Tension and Implication for India:

After the US withdrawal from Nuclear Deal with Iran Joint Comprehensive Plan of Action (JCPOA) and re-imposition of economic sanctions on Iran a challenge has re-emerged in front of Indian diplomats. This recent U.S. decision poses a quandary for India, as on the one side, the Persian state is not only a key oil provider but also a geopolitically important partner for India; India is helping Iran to develop Chabahar port which provides India access to Afghanistan and further to Central Asian (Energy) market. Besides this port has been regarded eminent for India to counter balance China's presence in the region as China is developing Gwadar port in Pakistan. While on the other side, India and US are good strategic partners and have strong defense cooperation. Besides this, With the Help and Support of US, India is seeking the membership of United Nations Security Council (UNSC), Missile Technology Control Regime (MTCR) and nuclear supplier Group (NSG). Therefore, India cannot fully tilt itself on any side in this critical situation and maintaining its energy security along with its foreign policy goals is going to be a huge challenge.

Keeping in mind the situation India has diversified its importation from other sources to fill the gas which is created by the absence of Iranian Oil. In May 2019, under the heavy pressure of US India stopped its oil supply from the Persian state. To fulfill his energy deficiency India government started to look for oil and gas supply from other countries. In this regard Indian Petroleum Minister Dharmendra Pradhan has stated in a tweet that a robust plan for an adequate supply of crude oil to Indian refineries" is in place and shortage of Iranian Oil will be completed through other additional suppliers like Kuwait,

8. "Iran-India Farzad-B Talks Deadlocked Over Gas Price", *Financial Tribune*, November 2017, available at: <https://financialtribune.com/articles/energy-economy/75398/iran-india-farzad-b-talks-deadlocked-over-gasprice>.

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10. Marie Lall and Iftikhar A. Lodhi, "Political Economy of Iran-Pakistan-India (IPI) Gas Pipeline", *Institute of South Asia Studies National University of Singapore*, Working paper no. 26, 23 October 2007, p. 15, Available at: https://www.isas.nus.edu.sg/wp-content/uploads/media/isas_papers/26.pdf

11. "IPI Gas Pipeline: India Shows Renewed Interest Despite 'US Pressure'", *The Express Tribune*, New Delhi, August 2011, available at: <https://tribune.com.pk/story/238114/india-renews-interest-in-ipi-project-keeps-eye-on-tapi/>

Saudi Arabia, UAE, Mexico, and the United States.¹² To bridge the Supply gap, Indian Oil Corporation, a state-owned firm, is dealing with world's biggest oil producer, Saudi Arabian Oil Co. (Saudi Aramco) to get 250,000 tonnes of crude supply per month¹³. The company has also inked two term contracts totaling 4.6mt of US crude oil for 2019-20 from Norway's Equinor ASA and Algerian state energy company Sonatrach and also in talks with Abu Dhabi National Oil Co. (Adnoc), the state-run oil company of the UAE, for additional supplies¹⁴. Moreover, India and China, Iran's two largest oil importers, are also working to cooperate in the energy sector and recently have formed a joint working group (JWC) to tackle with the crude oil volatilities in International energy markets¹⁵. The core idea of JCW will be, to find ways to check oil price fluctuation in global oil market. Furthermore, in its quest to diversify its energy sources the country has been investing heavily to acquire oil and gas assets overseas. Currently, Indian public sector undertakings (PSUs) with investment of more than USD 38 billion have 59 overseas assets in total 28 countries¹⁶. For example, keeping unavailability of Iranian crude in

mind, India is willing to secure its interest in Guyana's oil fields, which is regarded as one of the world's largest oil finds in recent times with estimated reserves of more than 5 billion barrels of oil¹⁷.

Conclusion:

After the US sanctions and in the absence of Iranian Oil, India is trying to compensate through various other sources like Saudi Arabia, UAE, Mexico and US. Iran is not only important for India on energy perspective but with the perspective of Geo-politics and Geo-economics the Persian States is very significant. India's importance for Iran can be seen as recently after the killing of Iranian military commander Qasem Soleimani in a US Drone attack and following escalated tension in the region, Iran's ambassador to India Ali Chegeni has said that Iran will welcome any peace initiative by India to de-escalate tensions in the region. Further, it can be said that in recent times India has more inclined towards US yet still trying to balance itself between US and Iran and Reiterated on various platforms that Iranian nuclear issue should be resolved peacefully through dialogue and diplomacy.

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 15. Sanjeev Chaudhry, "India, China set up joint working group to tackle crude volatility", *The Economic Times*, April 30 2019, Available at <https://economictimes.indiatimes.com/industry/energy/oil-gas/india-china-set-up-joint-working-group-to-tackle-crude-volatility/articleshow/69120462.cms>
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