

# Energy Crisis of India: In Search of New Alternatives

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## Abstract

India's economic diplomacy partly has been transformed into oil diplomacy. India's oil diplomacy can be divided into three phases (1) from independence to 1960s, (2) from 1960s to end of the Cold War and (3) since 1991 to present time. In the third phase, especially in 2000s India sought for alternative overseas sources of oil and gas. In the 21st century, oil issue has been key issue in India's foreign policy. Regarding overseas oil, India started high-level diplomacy. India's oil diplomacy had changed in 1960s onwards due to domestic policy and changing scenario of international political-economy. Due to rapid growth of oil price and other technical factors India had to tilt towards Soviet Union for its oil support. In 1960, India signed a treaty with USSR and started to import oil. The Western oil refinery firms were not interested to refine India's imported oil from Moscow. Indian government decided to establish its own oil refinery company with the help of Soviet Union and Rumania government. During 1977-1982 periods, New Delhi was depended on Moscow; approximately, 5-15% of total India's imported crude oil came from USSR. India's quest for energy security leads to strengthen the oil diplomacy. India imported 23% of its total oil from USSR in 1984-85, 17% in 1985-86 and 17% in 1989-90 respectively. After end of the collapse of USSR India has stopped to import oil from Moscow and started to extend its dependency on other destinations. India's shift of oil diplomacy from Cold War period to present world order has been evolved through continuous changing process. India's Energy security question rose as a big question since 1991. Since 1990s, the suppliers of India's oil supply have been changed. With the collapse USSR and end of the Cold War Russian oil supply to India has been almost ended. To augment commercial purchases on the world market, India's government and oil firms sought to secure oilfields in abroad. These assets added 3 to 5 million tons annually to India's oil supply in the mid-and late 1990s. India's main sources of energy are coal, oil and gas which is 50% of the reservation of India's own petroleum is very little. This paper is based on three hypotheses. (1) Energy security is closely related to diplomacy. (2) Oil is indispensable (3) Uncertainty of oil is a negative aspect of a country's entire growth. In my paper I will critically analyze India's energy crisis in present and future.

**Keywords:** Oil; Security; Diplomacy; Economy; Policy; Globalization

## Introduction

With nominal gross domestic product (GDP) of USD 1847 billion, India was the tenth largest economy in the world in 2011. In terms of purchasing power parity (PPP), with constant 2005 USD 3976 billion, India ranked third after the United States and China in 2011. However, India's nominal per-capita income of USD 1489 remained much lower than other large economies. For example, it was less than one-third of China's per-capita income of USD 5430 in 2011(WDI, 2012). The Indian economy is moving towards a free market economy, albeit with remaining traces of a socialist economic model. Inspired by the Soviet Union, after independence Indian policy makers infused many socialist elements into the Indian economy, including central planning, large public sectors, an import substitution approach and strict government regulations, which led to high inefficiency in the economy. Indian economic growth stagnated around 3.5% to 4% per year until major economic reforms commenced in 1991. The economy has increased at an average rate of approximately 7% since 2000. Amid the global economic recession in 2008, the Indian economy quickly rebounded and grew over 9% between 2009 and 2010. In a series of economic reforms implemented throughout the 1990s and 2000s, the most significant is the industrial reform, or often-called New Economic Policy, effectuated in 1991. Amid India's balance of payment crisis and following intervention by the International Monetary Fund (IMF), the Indian government released a "Statement on Industrial Policy" access to energy is the foremost goal in India's energy policy making, as nearly one-quarter of the population lacks access to electricity. This implies ensuring the supply of adequate and reliable energy to the Indian population amid growing energy demand, bolstered by economic growth. Second, energy security is driven by increasing dependence on imported fuels, which is crucial to meet the India's huge energy demand. Increased import dependence also exposes the country to

greater geopolitical risks and international price volatility. Finally, India is dedicated to the mitigation of climate change, although overcoming energy poverty and ensuring economic and social development remains a top priority. Fulfilling all three objectives is not an easy task, as they can stand in conflict with one another. For example, supplying an affordable and considerable amount of energy using low-cost energy fuels, primarily coal, potentially undermines efforts to tackle climate change and local pollution. Pursuing the utilisation of domestic resources and promoting indigenous energy technologies could help enhance energy security in the long term, but does not solve India's energy problems in the short term. This paper provides a comprehensive overview of India's energy sector and identifies challenges towards achieving the country's energy objectives. Energy security takes a central position in government policy making. The emphasis of energy policy until the 1990s was on electricity shortage and unsatisfied energy needs. However, increasing dependence on imported energy sources, mainly oil, but also natural gas and coal, resulted in greater government attention to the subject.

## Sources of oil

Its oil industry was largely controlled by the British-owned Burma

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and American companies Standard – Vacuum and Caltex. These firms imported oil from their fields in the Middle-East; thus from 1940s to 1960s, most of India's imported oil came from Iran, Saudi Arabia, with smaller amounts coming from Kuwait and Indonesia" [1]. India's oil diplomacy had changed in 1960s onwards due to domestic policy and changing scenario of international political-economy. Due to rapid growth of oil price and other technical factors India had to tilt towards Soviet Union for its oil support. In 1960 India signed a treaty with USSR and started to import oil. The Western oil refinery firms were not interested to refine India's imported oil from Moscow. Indian government decided to establish its own oil refinery company with the help of Soviet Union and Rumania government. During 1977-1982 periods, New Delhi was depended on Moscow; approximately, 5-15% of total India's imported crude oil came from USSR. India's quest for energy security leads to strengthen the oil diplomacy. India imported 23% of its total oil from USSR in 1984-85, 17% in 1985-86 and 17% in 1989-90 respectively. After end of the collapse of USSR India has stopped to import oil from Moscow and started to extend its dependency on other destinations. India's shift of oil diplomacy from Cold War period to present world order has been evolved through continuous changing process. India's Energy security question rose as a big question since 1991. Since 1990s, the suppliers of India's oil supply have been changed. With the collapse USSR and end of the Cold War Russian oil supply to India has been almost ended. To augment commercial purchases on the world market, India's government and oil firms sought to secure oilfields in abroad. These assets added 3 to 5 million tons annually to India's oil supply in the mid-and late 1990s.

### Globalization and energy policy

The un-impeded force of globalization implied three things, such as first, rapid growth of FDI based industries, second, rapid change of society, third, the growing tendency of modern amenities. Presently India is facing energy insecure. India's main sources of energy are coal, oil and gas which is 50% of the reservation of India's own petroleum is very little. We have a confirmed discovery of gas in [Krishna-Godavari] KG basin D-6 by Reliance Industries but that is from over seven years back. Since then, not even the private sector has discovered any new find. If our own exploration is going to stagger in both oil and gas and if we do not put in enormous resources that are required in research and development to deal with the peculiar geographical problems found only in India, then the future seems insecure.

Numerous policy reforms over the past 20 years have shifted India's energy sector from a predominantly government-owned system towards one based on market principles, offering a more level playing field for both public and private sectors. Political complexity and a tradition of socialist economic practices, however, hindered the complete liberalisation of India's energy sector, leading to sub-optimal outcomes. In this sense, the huge blackouts that occurred in northern India in July 2012 could be seen as a consequence within the framework of incomplete market liberalisation. The goal of providing energy access to the entire population led to well-meaning policies designed to protect the poor, but resulted in a system of untargeted producer and consumer subsidies that prevent a more thorough implementation of a well-functioning and financially-sound energy sector. In combination with an industrial policy that aims to protect the indigenous manufacturing industry through import substitution.

India now finds itself trapped halfway along the transition towards an open and well-performing energy sector. India's energy sector is increasingly unable to deliver a secure supply of energy amid growing demand and fuel imports. In conjunction with a rising

subsidy level and systemic failure to ensure proper revenue collection along the value chain, the financial capacity of energy sector players is significantly undermined. Lack of sufficient capacity to make timely and adequate investments gives reason to fear that India is heading towards energy crises. Increasing import dependency exposes India to greater geopolitical risks, fluctuating world market prices and intensifying international competition. Indian energy policy cannot be set in isolation and needs to account for rising global interdependence, while simultaneously communicated appropriately to the public and reflected in policy debates. India should overhaul its current patchwork of energy policies in favour of a comprehensive and clear-cut policy that encourages economic and social development through reliable energy supplies [2,3].

### India quest for oil security

India is the seventh largest country in the world in terms of geographic landmass, and the second largest in terms of population – with 1.2 billion people. When gross domestic product is considered, the country falls into the ten largest economies. Further, the country has been experiencing economic growth of around 7% per annum since 2000, despite the 2008 economic crisis. The country enjoys an abundance of traditional and non-traditional energy sources, but these sources are insufficient to meet India's growing needs. It therefore resorts to importing most of its energy from abroad, especially from Middle East crude oil and natural gas exporters. Meeting the growing demand for energy is a major challenge that is constantly confronting Indian leaders. The country has crude oil imports from around 40% in 1990 to 70% in 2011. In 2012, over 64% of these imports came from the Middle East, a trend that is expected to continue. By 2032, over 91% of the country's energy needs will need to be imported. Thus, in an effort to secure both best prices and energy security, the country has concluded a number of short- and long-term contracts at government level and, to a lesser extent, through private companies [4]. By 2025, India will be the second largest pressure, after China, on global energy resources. The country is trying to respond to this through two ways: by expanding the base of domestic renewable energy and increasing its nuclear power capacity which is scheduled to rise to 9% of total energy capacity in the next 25 years from its current 4.2% level. India has five nuclear reactors, and is working to build 18 more by 2025. If this is achieved, the country will have the highest amount of energy nuclear reactors in the world. The seriousness of India's energy requirements can be gleaned from the fact that over 56% of rural households receive no electricity.

### India's vision towards middle-east and west Asia

India's relations with Gulf countries and West Asia are very old. During the Roman period the Arabs were an important link between India and Europe. According to A.K. Pasha, 'With the spread of Islam, Arab traders and Sufi Saints from the region added to this relationship and ties further consolidated.' Jawaharlal Nehru had a keen interest to West Asia and Persian Gulf countries. Since independence India started to import oil and gas from this region. India's economic engagement was closed with Arab countries since 1970s and 80s. The amount of import was increased during this period. The rapid developmental activities were took place in GCC states during this period. Thousands of labours from India went to these states to work in oil fields and various projects. Currently, more than 6 million Indian nationals are working in GCC countries and they are sending approximately \$40 billion US dollar to India. For various reasons India should develop its close diplomatic linkages with this region, especially, to Qatar, Kuwait, Oman, Iran, Iraq, Saudi Arabia, UAE, etc.

Saudi Arabia is an important and old source of India's imported oil. Relations between the two countries have strengthened considerably owing to collaboration in regional affairs and trade. Saudi Arabia is one of the largest suppliers of oil to India, who is one of the top seven trading partners and the fifth biggest investor in Saudi Arabia. In history there have been three visits to Saudi Arabia by an Indian Prime Minister: Jawaharlal Nehru (1955), Indira Gandhi (1982) and Manmohan Singh (2010). India was concerned about four things just after end of the Cold War in making relationship with Saudi Arabia, such as (1) the changing scenario of international politics and influence of the USA in Middle-East, especially American Saudi policy (2) rapid growth of oil demand in India, (3) Pakistan and China factor and (4) labour force and FDI in Saudi Arabia. Since the 1990s, both nations have taken steps to improve ties.

Since the 1990s, India's economic liberalisation has helped bolster trade with Saudi Arabia, which annually supplies to India nearly 175 million barrels (25 million metric tonnes of crude oil, or a quarter of its needs). In 2006-07 bilateral trade stood at USD 16 billion (USD 3 billion excluding oil) and is expected to double by 2010. India's current exports to Saudi Arabia stand at USD 2.6 billion, while Saudi Arabia's exports are in the range of USD 13.4 billion (USD 1.2 billion excluding oil). India's major exports include basmati rice textiles and garments and machinery, while it imports organic and inorganic chemicals, metal scrap, leather, gold and oil from Saudi Arabia. Both nations are expected to expand trade and cooperation and joint ventures in telecommunications, pharmaceuticals, health services, information technology and biotechnology.

India imported 33% of its total crude oil from Saudi Arabia in 1984-85, 16% in 1985-86, 25% in 1989-90, 30% in 1992-93, 25% in 2005-06, 18% in 2010 and 19% in 2012 respectively. Both Saudi Arabia and Iran are extremely important to New Delhi. Saudi Arabia is home to a large Indian population and is an important trade partner. Trade between both countries was estimated at \$43 billion for 2012-2013, and was \$32 billion for the period April-November period of 2013 alone. Crude oil imports by India are a major component of this trade. India has cut crude oil imports from its top supplier Saudi Arabia by over 8% in 2014-15 (PTI, New Delhi, July 27, 2015).

Iraq is the second largest supplier of crude to India after Saudi Arabia, and ahead of Iran. IOC is also the single largest purchaser of crude from Iraqi crude procuring around 250,000 BPD. In 2012, calendar year, India is estimated to have import crude from Iraq worth more than US\$ 20 billion. HPCL and BPCL are the other two major Indian crude importers from Iraq. Before, 1991 Persian Gulf War India's oil import quantity from Iraq was impressive. The aftermath of 1991 Indo-Iraqi oil diplomacy got setback. Since 2004, it gets momentum. Due to political turmoil and extensive terrorist violence, especially, the activities of ISIS once again Indo-Iraq oil diplomacy has been disrupted.

Iran was once the second biggest crude oil supplier to India. New Delhi has maintained crude oil imports from Iran at 2013-14 level as the US looked to financially choke Tehran to bring it to negotiating table on its controversial nuclear programme. India has set a target for reduction in import dependency in energy by 10% to 67% by 2012-22, from 77% dependency in 2013-14. The Iran-Pakistan-India pipeline was first discussed in mid 1990s. It was proposed in July 1993 during the Iranian oil minister's visit to India. Three countries were agreed on principle purpose of pipeline [1]. In mid of 2004, UPA-I government led by the Congress did not link the pipeline with the MFN issue, and this resulted in a positive response from Pakistan [5]. In March 2006,

Pakistan, India and Iran held their first tripartite governmental talks in Tehran. Still other political factors delayed the project. The relation between Iran and the USA was hostile. The USA declared Iran as an evil state. The American administration had an allegation against Iran as it supplies and manufactures nuclear technology and bombs. The International Atomic Energy Agency arranged a voting system against Iran in January 2006. India was aloof itself from casting the vote. There was a dilemma to India, whether it would continue its friendly relationship with Iran and continue the process of tri-national gas pipeline project or not; because, during that time India was forwarded towards "Civil Nuclear Deal" with the US for mitigating its energy deficiency. Then South Block argued that, for adapting the realist foreign policy India was silent about Iran. Then strong allegation was raised against the Manmohan Singh led UPA-I government whether India's foreign policy will be directed by USA or its own decision. However, by this pipeline Indo-Pak relations might be enhanced. Although some groups in the US noted that the gas pipeline could advance the India-Pakistan peace process - it could bind the two countries in economic linkages that would be hard to cut off for political reasons [6]. With proved reserves of crude oil estimated at 25.2 billion barrels by the Oil and Gas Journal (as of January 2015), Qatar holds the 9th largest reserves in OPEC and 13th largest in the world. Qatar's crude oil and lease condensate production ranks 17th in the world, with most of the country's production sent abroad as exports. Due to some technical shortcomings Iran is not able to produce LNG. Indian firms are also less interested to setup LNG facilities in Iran due to American sanctions on it. However, there is shows a light of hope that in mid of 2015, the administration has partly withdrawn its embargo from Iran. Hopefully, Modi would like to use this opportunity to revitalize the India-Iran oil diplomacy with a new outlook.

Kuwait has been a reliable and fourth largest supplier of crude oil to India. During 2014-15, Kuwait was the fourth largest oil supplier to India after Saudi Arabia, Iraq and Venezuela and it meets about 10% of India's energy needs. Total bilateral trade with Kuwait during 2014-15 was US\$ 14.58 billion (Rs. 88,843.72 crore). India's imports from Kuwait during 2014-15 were US\$ 13.38 billion of which POL accounted for US\$ 12.28 billion (Crude oil import was worth US\$ 11.47 billion). The reduction in Kuwait's exports to India, compared to 2013-14, was due to the sharp fall in crude oil price in the last two quarters of 2014-15 and reduced purchase of crude oil from Kuwait by Indian oil PSUs. In Rupee terms, the total imports from Kuwait were at 81,510.69 crores during 2014-15. Major imports from Kuwait (excluding Petroleum and its products) were organic chemicals, plastic and its articles, iron and steel, aluminum and copper and articles thereof; salt; sulphur; earths and stone; plastering materials; lime and cement, pulp of wood, etc. Historically, Indo-Kuwaiti relations have always had an important trade dimension. India has consistently been among the top ten trading partners of Kuwait (Source: Embassy of India, Kuwait, November, 2015, Report).

Oman is one of old diplomatic and trading partner of India with which India concluded a Treaty of Friendship, Commerce and Navigation ON May 13, 1953. Since then Indo-Oman friendship has been extended in many ways especially in the field of petroleum goods. Through bilateral reciprocal relationship both have enhanced strategic partnership also. Due to Oman's strategic location, India may use it in multipurpose. Oman's strategic location at the straits of Dormouse and its proximity to the Bab-el-Mandeb both are willing to cooperate in relation to Gulf security and maritime security near the Somalia coast. Both countries are increasing the joint air and naval exercises. Oman has keen interest to upgrade its technical vocational skills and

this offers a good opportunity for Indian companies for investments. India and Oman have signed a treaty of extradition. A Large number of India's criminals take shelter to Gulf countries, so this treaty would be beneficial to India. Oman is an important overseas source of India's petroleum import. It supplied 4% of India's total oil in 1984-85 and 10% in 1985-86 respectively.

Qatar is the largest exporter of liquefied natural gas (LNG) in the world, and the country's exports of LNG, crude oil, and petroleum products provide a significant portion of government revenues. Like many of its neighbours, Qatar relies on its energy sector to support its economy. India's first liquefied natural gas (LNG) imports from Qatar in 2004. Thereafter, in June 2005, Indian-Iranian firms like – GAIL, Indian Oil, and National Iranian Gas Export Company (NIGEC) have signed an agreement. India agreed to import 5 to 7.5 million of tons of LNG each year from beginning of 2009. With proved reserves of crude oil estimated at 25.2 billion barrels by the Oil and Gas Journal (as of January 2015), Qatar holds the 9th largest reserves in OPEC and 13th largest in the world. Qatar's crude oil and lease condensate production ranks 17th in the world, with most of the country's production sent abroad as exports. Qatar was the world's fourth-largest dry natural gas producer in 2013 and it has been the world's leading liquefied natural gas (LNG) exporter since 2006, with 31% of market share in 2014.

However, due to Arab spring and thereafter political disturbances in several parts of West Asia, India's policy outlook towards this region has been changed. India's orientation towards this region is to be revised. It is obvious, that, some Arab regimes are going through severe loss of sovereignty and some even threat of disintegration, civil wars and identity crisis. An independent Indian approach has much greater chance to broaden and deepen our relationship with the three states. India has started to give emphasized on African nations for its oil import. But geographically and strategically, Arab states are more significant to India. If India takes slow policy towards West Asia, then, China may impose its dominance on various oilfields. So, India should rethink over it.

### Immediate neighbours - Myanmar and Bangladesh

India's two immediate neighbours-Myanmar and Bangladesh have good volume of natural gas reservation. According to India's Act Look (previously known as look east policy), these two countries are strategically important for direct access to South-East Asian countries. Not only this reason, had India aimed to import natural gas from both Bangladesh and Myanmar. Long-term negotiation is going on. Due to Chinese factor Myanmar project has been stagnant. On the other hand, due to domestic political equations Bangladesh project is also the same. The then Ministry of External Affairs, Jaswant Singh talked to Myanmar government during his visit to Myanmar in 2001 [7]. This project has a political aspect. While the Iran-Pakistan –India pipeline project stopped for American reason, then this project, nonetheless, could not successful due to China. Although, in 2005, the leaders of these three countries discussed on the proposed project, but it did not advanced. Bangladesh has taken a bargaining method in dealing with this project. It demands for removal of non-tariff barriers; a trade and transport corridor linking Nepal and Bangladesh through Indian Territory [8].

### India's oil policy towards Africa

India's oil dependency on African nations has been increased for last few years. Since India's economic liberalization was launched in the early-nineties, India's foreign policy has been driven towards African

continent. The huge stock of natural sources, especially oil and gas in African states attracted India. Indian policy makers were also conscious about African market. Actually, Africa's growing strategic importance and India's growing energy needs have forced it to diversify its oil imports. In past, India has been depended on West Asian countries for its oil imports [9]. Like other super powers (UK, China etc.), India also started to explore the potentiality of petroleum stock in African states. India is giving importance the African continent not only for oil, but also various reasons. Strategically, eastern coast of Africa from South Africa to Somalia belong to Indian Ocean region. Security threat has been one of the key issues in world politics in recent times. Gradually, this region has been the hotbed of terrorism, militant – separatism, trans-national criminal syndicates. This area is known as drug, arms and women trafficking and piracy. Indian government has given emphasised on African nations for its energy security. Somalia's waterways has become jeopardise for merchant ships. B Indian navy is very much active in securing of sea lanes of communications. Indian navy and coast guard has been deployed in African coastal areas. In African Union Summit of 2003 (Mozambique) and India-Africa Summit in 2015 (New Delhi) bilateral relations always depend on interdependency. There were three reasons behind the India's oil diplomacy with African nations-first, by providing security in Indian Ocean and fighting against international terrorism India is trying to be closer with African Nations, second, information technology, computer software, biotechnology, agro-technology are most important instrument in Indo-African relationship. India is already in a good position in these sectors. And third, India is concerned about Chinese influence in African continent. India is seeking for alternative oil sources for securing its future energy demands. To enter in African states India is using various diplomatic measures.

Manmohan Singh and Narendra Modi both have paid their attention on Africa. Through the previous Afro-Asian sentiment Modi has trying to revive the bi-lateral relations. China has already aimed to Africa. A tuff completion has been started between USA and China for reserving of oil from AU states. India also lately started its race in this occasion. Oil diplomacy was one of the key agenda of the India-Africa Summit, which held from October 26 to 29, 2016 in New Delhi. To secure its energy security, through more investment in the African oil and gas sector, a senior official engaged in organising the event has said. India currently sourced about 16% of its \$125-billion worth of oil imports from African nations and the government was keen to step up its oil diplomacy and increase the share to between 20% and 25% in the short term, the official pointed out. One of the subjects of engagements of the oil diplomacy would be to explore opportunities for India to access larger energy imports through long-term contracts rather than the current predominant spot contracts. For example, in the case of Nigeria, diplomatic facilitations would broach larger investments by Indian Oil Corporation (IOC), the country's largest oil refiner-marketer, in upgrading and modernising Nigerian oil refineries in lieu of long-term contracts for energy imports from the African nation. In Mozambique, Oil India Limited, Bharat Petroleum Corporation Limited and ONGC had already committed investments to the tune of \$7-billion in developing oil and gas assets and the target was to double this investment over the next five years. (<http://www.engineeringnews.co.za>) please see the references for detail web-link.

Chinese influence in African continent has been extended since few years. Beijing has keen interest on African nations, because of huge oil and gas reservation in this region. Through the multi trading relationship it has started to expand oil diplomacy with African states. In the name of development and FDI it actually, started to extract of oil

and gas from Mozambique, Nigeria, Uganda, Somalia, and Tanzania. Chinese government has already migrated 7 lakh Chinese nationals in African states, most of them already employed in several oil fields. On the other hand, Indian and prime oil company ONGC (Videsh), Indian Oil Corporation (IOC), already invested a handsome amount of money in African countries. Instead of focusing on West Asia and the extended South Asia, which is a repository of hydrocarbons, we are keen on crossing “two oceans” to secure our energy needs. The government's present integrated policies would not be able to secure energy for India in the 21st Century. The ground reality is that thorium-based energy would not be useful till the middle of the century. There is a need to competitively access oil and gas instead of finding ourselves stranded in a sellers' market.

### India and Central Asia - An enduring partnership in energy security

In 2000, Indian government published its 'hydrocarbon vision 2025', where the question of energy crisis has been clearly manifested. Whereas in 2006-07, the demand of gas was 49 billion cubic meters, then by 2024-25 it would reach to 125 billion cubic meters. The central Asian countries may be a significant destination for India. India already made a close ties with Kazakhstan, Uzbekistan, Turkmenistan, Tajikistan, Kyrgyzstan for getting gas and oil. This region is rich in hydrocarbon. Kazakhstan is one of the oil producing country. It is expecting, by 2019 Kazakhstan will be one of the largest (among best 5) oil producing country. Turkmenistan may be the 6<sup>th</sup> largest oil producing country by 2019. Uzbekistan has 655 trillion cubic feet, in Kazakhstan 85 trillion cubic feet and Turkmenistan 100 trillion cubic feet. Actually, this region has reservation of 2.7% of world's total oil stock and 7% of total gas reservation. Against this backdrop, India aimed to close linkage with this region. There are mainly three problems to import oil and gas from the Central Asian countries (1) Geographical constrains. It is very difficult to carry oil and gas through pipeline via Afghanistan for its location. (2) There is a proposed pipeline project from Turkmenistan. In 2005, ADB submitted a feasibility study to the petroleum ministers Turkmenistan, Afghanistan, Pakistan and India. In May, 2007, India joined a four-party agreement with the ADB on this proposed pipeline [1]. But due to Afghanistan's political and security problem it has been materialised even today. (3) The Central Asian states are partly controlled by China. China is trying to stop India's initiatives regarding the pipeline project. India's energy pipeline diplomacy is back into play with the National Democratic Alliance government working on simultaneous plans for constructing transnational crude oil and gas pipelines to India from Turkmenistan, Russia and Kazakhstan.

This comes in the backdrop of subdued international energy prices, with producing countries seeking buyers as their respective economies are heavily dependent on exports for revenues. A case in point is Russia, which is particularly affected due to the twin onslaught of low oil prices and Moscow facing Western sanctions for the annexation of Crimea and its support for rebels in neighbouring Ukraine. India's pipeline project plans come in the backdrop of the International North-South Transport Corridor that promises to cut the costs involved in transporting goods to Central Asia by 30%. The proposed pipeline projects include the Turkmenistan-Afghanistan-Pakistan-India (TAPI) gas pipeline, the Iran-Pakistan-India pipeline, and crude and gas pipelines from Russia and Kazakhstan. “There are several projects in various stages of planning and discussions. They are very important from the viewpoint of India's growing demand for energy and also energy security. Vladimir Shkolnik, Kazakhstan's energy minister, had recently visited India, wherein a joint working

group was set up to examine the possibilities of such a pipeline from Kazakhstan,” an Indian government official aware of the developments said, requesting anonymity. “Similarly, efforts are being made with Russia for transportation of both oil and gas to India. The pipeline from Turkmenistan is a serious proposal with plans with Russia and Kazakhstan in advanced stages of discussions.” The International North-South Transport Corridor was first agreed upon between India, Iran and Russia in 2000. The route connects Mumbai in India to Bandar Abbas port in Iran and then Bandar-e Anzali in northern Iran on the Caspian Sea coast. From there, goods are expected to be transported to Astrakhan in Russia and then to Central Asia.

### Latin America and India: Understanding in oil diplomacy

South America rose 10% each as Indian refiners bought heavier but cheaper grade oil. Indian refineries have consistently reduced imports from traditional markets like Saudi Arabia and stepped up purchases from newer geographies like Mexico and Venezuela as imports have become viable due to availability of cheaper variants and softening of shipping cost. India imported 189.44 MT of crude oil in 2014-15, almost unchanged from the previous fiscal, to meet over 80% of its oil needs. Venezuela was a very close third with 24.40 MT of oil supplies, 13% higher than 2013-14.

Mexico supplied 5.06 MT of crude oil in 2014-15, marginally higher than 4.94 MT a year ago. A bilateral Agreement on cooperation in the hydrocarbons sector was signed during President Chavez's visit in March 2005, along with a MoU offering ONGC Videsh Ltd. (OVL) opportunities for oil and gas exploration in Venezuela, including a heavy oil field in the Orinoco belt, following which OVL opened its office in Venezuela. An agreement between OVL and CVP (subsidiary of PDVSA, Venezuela's national oil company) was signed for the creation of a Joint Venture called “Petrolera Indo-Venezolana SA” for production and exploration of oil in the San Cristobal field in which OVL has a 40% stake while PDVSA has the remaining 60% share. OVL's investment in the San Cristobal Project is US\$355.7 million. An international consortium comprising ONGC Videsh Limited (OVL), Indian Oil Corporation (IOC), Oil India Ltd. (OIL), Repsol of Spain and Petron as of Malaysia were declared the winners of an international bidding process to develop a multi-billion dollar integrated onshore Carabobo oil project in the Orinoco belt of Venezuela.

### China's aggressive oil diplomacy and India's standpoint

Vast oil consumption of China requires policies that ensure that 1.3 billion people and tremendous Chinese market will not be affected by the lack of oil. With this in mind, this essay's main aim is to examine how has China been achieving oil deals and ensuring oil supplies from two significant regions – the Middle East and Africa. The first part of the essay gives an overview of history of China's increasing oil consumption, its oil policy, and involvement of African and Middle Eastern states in it. Second part is concerned with the pre-import preparation, presenting Chinese financial contribution to foreign states, selling of weapons and political support as methods that can be identified as used by China to ensure flow of oil from the two regions. And the final part examines shipping lanes from Africa and the Middle East, their possible dangers and China's attention to it [10]. The oil suppliers from Africa and the Middle East since the 2000s, countries such as Iraq, Angola, Sudan or Congo are among those which have supplied oil to the Chinese market as it has been highlighted by Shinn's article, the flow of oil from Angola, Sudan or Equatorial Guinea to China demonstrates the fact that China cooperates with these states despite “violation of human rights and serious abuses committed by

their governments.” The oil represents almost one fifth of the China’s energy demand, meaning that yet in 2009 China needed almost 120 million tons of oil equivalent to cover its domestic oil needs. There is number of states in the Middle East as well as in Africa in which the latter applies. China does not only neglect internal situation, but it has even pursued steps that have worsened domestic situation in particular states in Africa and the Middle East. These actions may be considered as a component of the Chinese foreign oil policy [11].

China has been strategically forwarded towards Middle-East and African countries through using aggressive and dangerous policies. For collection of oil and gas from Middle-East and Africa it adopted some steps which are beyond the imagination of Indian foreign policy makers [12]. Firstly, In 1990s, China had started to sell illegal arms to Iran secretly. In reply, it had simultaneously arranged to buy three times more oil, compared to the earlier period when no arms sales were commenced. In the eye of US administration Iran was a ‘rogue state’. The hostile relations between the USA and China wet in favour of China. China took this opportunity and made closeness with Iran by supplying arms. Sudan is another notable example of the Chinese engagement in selling of weapons to foreign armed groups and movements. China has been supplying approximately 90% of small arms. Secondly, being a super power China has successfully projected itself in Middle-East and Africa and in terms of oil diplomacy as well as market economy. In addition, to the already examined means of achieving oil supplies, China has also used its political power to make its ‘oil alliances’ with certain countries in the Middle East and Africa. Thirdly, China is imposing its pressure on African nations for violation of human rights and flourishing of terrorism. Fearing for China most of the oil rich African nations have bound to give access in oil fields. Fourth, China has started oil extraction from different parts of Africa. More than one million Chinese labours, engineers, officials are employed in African states. It is a sharp labour policy of China. In few cases, African nationals get jobs in Chinese occupied oil field. It is economically beneficial for China. Fifthly, China has been predominant power in Africa. Chinese goods already covered the entire market. Its expansionist policy is a tension area for India.

## Conclusion

India is beginning to institutionalize oil diplomacy. In order

to counter the towering presence of China National Petroleum Corporation and Japan National Petroleum Corporation, it has decided to use the expertise of the ministry of external affairs. India’s real economic growth averaged around 8% in the past decade, leading to 6.5% growth in the demand for energy. Given the projected economic growth levels, energy demand is expected to continue to rise; rising energy needs, in turn, have drawn attention to the importance of energy security. Energy security is ensured by guaranteeing three factors-availability, accessibility and affordability of energy resources. Coal, oil and natural gas are the most important sources of primary energy in India. Inadequate domestic supplies of these hydrocarbons are forcing the country to increase its import bill. While the country remains highly dependent on oil imports, it is saddening to note that supply of natural gas, which was expected to alleviate our energy security from the new domestic driven by accelerated capacity addition in power generation and decline in domestic coal.

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