Chapter VII

INDIA-RUSSIA ENERGY COOPERATION
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7.1: Introduction

The Power industry has been the most promising field in bilateral strategic partnership with Russia’s cooperation. When India was badly short of energy after gaining independence in 1947, Soviet experts helped Indian colleagues not only to prospect for oil, drilled wells to produce more oil and also built the Indian power industry infrastructure. Oil refineries were constructed in Ranchi, Koyali, Barauni and Mathura. As a result, the Soviet Union became India’s number one supplier of crude oil and India became its biggest trade partner among the developing countries. The need for energy security re-emerged from the collapse of Soviet Union which was India’s most important and reliable supplier of oil and oil products. The bilateral cooperation between the two countries has again come up in energy sector. Russia’s oil and gas reserves and its expertise in thermal hydropower and nuclear energy sector are crucial in ensuring India’s energy security in future. A number of thermal and hydropower projects have already been built with Soviet/Russian collaboration. India’s nuclear arrangement with Russia is another important form of cooperation, in case unexpected snags develop in any of the stages of U.S-India nuclear deal. On the nuclear issue, Russia showed considerable understanding of the Indian position when the Pokhran-II blasts took place in 1998.

Russia has preferred many times Indian companies in some energy deals to intensify bilateral relations in the long run. Russia’s cooperation has always been important for India because it is not in the position to cope with major Chinese or U.S Oil companies. Cooperation in the nuclear field, the delivery of nuclear fuel, cooperation in pipeline projects and Sakhalin projects are the major fields of energy cooperation between India and Russia. Joint investments and collaborations in Sakhalin projects is a grand success for Russia at international level. India is receiving regular supply of its oil and gas share from Sakhalin project-I and trying hard for getting share in Sakhalin III project. Pipeline projects are incentive to work together for mutual
benefit. On India’s initiative, Russia is participating in Turkmenistan-Afghanistan-
Pakistan-India (TAPI) pipeline project to have cross border gas pipeline to weaken
Europe’s future gas projects as well to diversify energy exports. Russia is actively
involved in the construction of North-South International Transport corridor (ITC)
which would offer a highly competitive alternative to the sea route via the Suez
Canal, Slashing Costs and shipment times between Russia/ Northern Europe and the
Persian Gulf/Indian Ocean/South Asia/South-East Asia.

Russia has supported India to seek its full membership of Nuclear Supplier’s Group
(NSG) and multilateral export control regimes. In fact, Russia was the first in
recognizing India’s nuclear needs and is still ahead in the game. Russia has been
supplying reactors to India from the time of first large nuclear power plant.

India’s quest for oil and gas has again intensified its relation with Russia in energy
sector. According to Petroleum Ministry of India, during the year 2007-08, there was
an annual jump of over 40% in India’s oil import bill. At that time, Russia again came
forward to India’s assistance during oil crisis. For example, in 2005, as oil touched
US $ 50 barrel, Russia offered India oil at below market price (Alexander 2005).
Russia has again become a much more important international partner for India.

ONGC Videsh Limited is a wholly owned subsidiary and the overseas arm of India’s
largest corporation, ONGC Limited. Oil Videsh Limited’s efforts are fully supported
by the Indian government because India’s foreign policy is centered on ensuring
energy security through boosting domestic production and investing in overseas
energy assets. The Indian Government has granted Oil Videsh Limited an exclusive
right to invest without limit in foreign hydrocarbon production, transportation and
processing projects. From just one asset in Vietnam in 2000, Oil Videsh Limited at
present has 40 assets, contributing a fifth of the country’s oil production.¹

¹: www.mea.gov.in , 2010
7.2: India-Russia Energy Agreements

Artem Konchin, Oil and Gas analyst at UniCredit Spa in Moscow has stated that as India’s energy consumption has been increasing as of China and Russia wants to be at the forefront of securing access to the Indian market. Whether it is crude or for products, Russia wants to be a key supplier to India\(^2\). Several energy deals are being entered between India and Russia from time to time.

7.2.1: ONGC and Rosneft Energy Cooperation

In 2000, Russia and India signed an agreement on bilateral strategic partnership, which revived the idea of large scale energy cooperation. Rosneft (Russian Oil Company) and ONGC jointly considered refining and retail marketing projects in India and third countries. In 2001, Oil Videsh Limited’s investment in the Sakhalin-I oil field for a 20% share, the biggest Indian oil investment abroad. In the year 2004, both countries signed a memorandum of understanding for joint exploration of gas in the Caspian Sea and for building facilities to store gas underground in India. India has already pursued a joint venture to work on gas liquefaction projects in Russian offshore fields for shipment to India and trying to invest greater efforts for cooperation with Russia’s Rosneft for winning the joint bidding for Sakhalin-III project. In fact, India has been trying to link the signing of major bilateral military cooperation contracts with Oil Videsh Limited’s involvement in Sakhalin-III project. So, Russia’s growing production of hydrocarbons with India’s growing market through dedicated joint ventures is an ideal match. In fact, Russia has always been interested in joint construction of oil and natural gas production and transportation facilities in India and in the surrounding regions.

India’s former Petroleum Minister, Murli Deora had showed keen interest in acquiring stake in some oil fields in East Siberia and North Russia for Oil Videsh Limited joining hands with Russian firm Rosneft for exploring and developing the Vankor oil fields in East Siberia\(^3\). Joint bidding of Timan Pechora region of North Russia has

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2: Chaudhry, Archana and Bierman, Stephen (2008) and www.bloomberg.com
3: Sergei Shmatko (2010)
been considered by India and Russia. Russian Investments in new refineries and petrochemical projects in India have been encouraged. Russian companies have always been willing to facilitate the participation of Indian companies in developing 12 new oil fields during 2009 onwards in the East. Rosneft, Russia’s largest oil firm has explored in a LNG terminal of ONGC’s plans to build at Mangalore in Southern India. Russian companies have been participating in roads and gas pipelines construction projects. The consortia with Russian JSC Transitory have been fighting for Rs 12,000 crore tender for construction of 71 km of Metro line in Hyderabad. Indian companies are also quite active in the Russian market.

7.2.2: Gazprom energy deals with GAIL and ONGC

Joint efforts are being made in building the Iran-Pakistan-India gas pipeline by Gazprom and GAIL. Both sides have moved forward. India has agreed to buy additional amounts of Iranian liquefied natural gas (LNG) at higher prices. Moscow has resolved to veer its energy policy towards Asia. India’s interest in hydrocarbons has lead to greater cooperation in funding exploration and development oil and gas fields in Russia. In turn, Russian companies are taking part in marketing oil products and LNG in India. In December 2004, Gazprom and GAIL signed the agreement of strategic cooperation for implementation of projects for natural gas supply to India as well as the intensification of joint efforts at Block NEC-OSN-97/1, located in India’s offshore area, in the northern Bengal bay. On February 21, 2005 Gazprom and ONGC group signed in Moscow a Memorandum of Understanding regarding the cooperation in hydrocarbon processing, oil and gas chemicals supply to Asia-Pacific and South Asia, trunk line construction and operation, scientific technology cooperation deepening and staff development. Besides this, Gazprom has always been open to help in implementing and financing the pipeline. Russia has been supporting for solving transportation problem of the fuel. Russia’s support for a proposed US$ 7 billion project to pipe natural gas from Iran across Pakistan to India has been an important indication that Moscow recognizes India’s concern about energy security.

5 : Igor Tomberg (2007)
Joint development of new oil and gas basins- Besides Sakhalin joint investments, **Gazprom and Oil and Natural gas Corporation (ONGC) has signed a seven-year agreement** on joint development of a gas deposit in the Bay of Bengal shelf. The development of new oil and gas basins in Arctic off shore East Siberia and Far East can further replenish the existing resource base. A large amount of oil can likely to be produced from Western Siberia and Volga-Ural basins. Russia’s growing production of hydrocarbons is the biggest alternative source of energy supply for India. Besides this, Russia has shown remarkable keenness on cooperation and partnership on energy security of India. Therefore, India’s expanding market and Russia’s growing production of hydrocarbons are sought to be matched through dedicated joint ventures. Economic performances of India and Russia, their growing energy markets and technical capabilities have made them reliable partners in the quest of energy security. It can be stated that Russia’s position as the world’s second largest producer of energy and India’s growing demand for energy resources, estimated to be the third largest consumer of energy in near future, spell out a natural complimentary between India and Russia in energy sector. India and Russia are taking advantage of the new environment to further strengthen the bilateral and economic relations. Russia’s Far East is a potential energy asset for the Asia-Pacific region and might soon become a more significant oil and gas supplier.

**Swap arrangement and Gazprom’s cooperation in LNG supply**- Swap arrangements allow countries to leverage their comparative advantages that are proximity to an energy supplying country vis-à-vis overseas equity investments of another country. Gazprom has been considering the possibility of a Liquefied Natural gas (LNG) deal with India to be swapped for gas. Russia has earned profit by exporting natural gas to Europe via pipeline, opened its first liquefied natural gas plant to supply fuel to Asia in tanker ships. The plant has been shipping about 5 % of the world’s LNG supply. This would be different from India’s stake in Sakhalin- I project. LNG’s supply to India is growing from year to year. From 2009 to 2011 Gazprom has shipped 10 deliveries to India totaling 0.65 million tons. India has been importing 2 million tons of LNG a year from Russia’s Sakhalin-II LNG project.
LNG’s supply to India has planned to double its Dahej terminal capacity to 10 million tons would double its imports to 4 million tons a year.

7.2.3: India’s ONGC Investment in Imperial Energy

Imperial energy is a UK based petroleum exploration and production company, operating in Russia. It is a collection of small fields but not a strategic asset, so same need not be under Russian state control.6 During August 2008, ONGC, India’s biggest exploration company bought Imperial Energy Plc for $2.10 billion to tap Siberian deposits. Imperial Energy, the biggest overseas acquisition by ONGC, has 6.8 billion barrels of oil equivalent in reserves and annual production around one million ton.

ONGC’s Imperial Energy Merger with Sistema- State run ONGC and Russian Sistema have merged their oil and gas business in Russia under a joint venture, in no-cash deal in December 2010. ONGC would have 25 % shareholding of merged entity but with a say in the management. The merger of three companies-Bashneft, Russneft, both Russian companies and ‘Imperial Energy’ would give ONGC a share in the Russian firm’s 25-million-tons annual oil production, 20-mt refinery output in new oil fields, Trebs and Titov7.

The Indian state oil company’s prospects are improving as it ties-up with Sistema, Russia’s fastest growing oil company. ONGC Ltd. has signed an initial agreement to barter its stake in its Russian unit, Imperial Energy for a 25-30 % interest in Sistema-owned JSC Bashneft. Sistema is the target diversified public financial corporation in Russia and the CIS countries that manages companies with a presence in telecommunications, energy, high technology, aerospace, banking, health care services and tourism. It had been scouting for a strategic partner with experience in the oil and gas sector. The agreement would give the state-owned firm access to the lucrative Trebs and Titov energy fields. Bashneft is developing the largest discovered fields Trebs and Titov in the Arctic Circle. ONGC has long been seeking to broaden

its oil and gas base in Russia. Bashneft produces 13 million tons of oil from Russian fields and owns refineries with a combined capacity of 20mt.

ONGC Videsh Ltd, the overseas arm of ONGC, would get a part of Sistema’s 49% stake in Russneft which has fields in Russia producing 12mt oil as well as a stake in Trebs and Titov fields that Bashneft has won with 200 million barrels reserves. In exchange Oil Videsh Limited would give away its 100% interest in Imperial Energy, which it had acquired for in the year 2008. Sistema holds over 75% in Bashneft and together with persons acting in concert, controls over 90%. ONGC proposes to lead a consortium of Indian oil public sector units to acquire the stake offered by Sistema under the agreement. ONGC, the public sector exploration giant would be practically managing oil and gas assets of the merged entity due to its experience. Investment-wise around 41% with the two major projects, Sakhalin and Imperial, accounted for almost $5 billion of India’s total investment of $12 billion by the year 2010.

**ONGC deal with Sistema is providing Oil Security for India** - ONGC’s deal with Sistema firms concluded on June 29, 2011 would be providing oil security to India, as it agreed 25% share of Sistema’s annual oil production. This deal would give ONGC an immediate access to the biggest discovered oilfields in Russia, Trebs and Titov, which have estimated 200 million tons recoverable reserves, equivalent to 35% of ONGC’s total oil reserves.

OVL has been demanding tax breaks for its projects, Sakhalin-I and its acquisition in Imperial Energy. Production cost for Imperial Energy is very high due to difficult climatic conditions and inadequate infrastructure but is at par with other projects in East Siberia since the operating conditions are similar. India wants no mineral extraction tax and a 10 years tax holiday. It has also sought lower profit tax on Sakhalin-I project for OVL, without the requisite tax exemptions, the project runs the risk of being unviable. OVL has paid

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8 : Sen, Amiti (2011)
profit tax at 35% for the Sakhalin-I project in 2008, which was subsequently brought down to 20% in 2009. Delay by Russian Government to confirm applicability of lower rates has significantly impacted cash flow of OVL and resulted in payment of excess taxes worth $129 million. OVL’s bid for Trebs and Titov projects in Timan Pechora Region was rejected and also India’s request for tax breaks on investments made by ONGC Videsh Ltd. in Imperial Energy and Sakhalin-I Project. But India is still interested in sourcing LNG from Russia. OVL has been actively pursuing invitation of Russian Government for participation in Yamal Peninsula Gas Project.

7.2.4: New phase of India-Russia Cooperation: Oil and Gas sector

India’s involvement in Russia oil and gas sector has been limited. Apart from the Sakhalin-I project; Indian oil companies have been relatively inactive in Russia. Most of the big contracts for oil and gas explorations have gone to either western countries or Chinese companies. Russia has been equally keen on enhancing ties with India in the energy sector. It helped Oil and Natural gas Corporation Videsh Limited (OVL) in the acquisition of imperial energy during August 2008. At present, ONGC does not even have a full- fledged office in Russia-just a small presence in Sakhalin-I project. Indian companies are negotiating with their counterparts for acquiring more blocks in north Russia9.

The Russian side is seeking reciprocal access of the downstream oil and gas business in India. To take the relationship to a new level, India would have to pursue a much more aggressive policy in Russia’s energy sector and Russia can facilitate greater involvement of Indian companies in Russia’s oil and gas sector. India and Russia could take some important steps such as:

i) Swapping of assets by India in the Russian energy sector and Russia in the Indian energy sector.

ii) India could invest in Russia’s crude oil and Russia in India’s refineries.

iii) India could help Russia in building refineries in Siberia.

iv) Russia has been looking for cooperation in the liquefied natural gas sector and India could consider this.

9: Roy, Singh Meena (2010)
In this regard Russian Prime Minister Putin’s visit to India on March 11-12, 2010 signified the beginning of a new phase in Indo-Russian friendship.

7.2.5: Promoting investment cooperation in energy sector

For increasing investment in energy sector and involvement of Indian companies in Russia and vice-versa, in oil and gas production and refining projects, India has invited Russian oil and gas investors:

i) India offered 34 hydrocarbon blocks in licensing round
ii) India has invited Gazprom to develop two gas blocks
iii) ONGC has been giving thought on Russian Trebs and Titov oil fields,

India has also shown its interest in increasing its participation in the development of Russia’s vast oil and gas reserves. In 1999, India had launched its New Exploration and Licensing Policy (NELP), offered better terms for contractors. On December 13, 2010, India’s energy officials presented the ninth round of New Exploration Licensing Policy in Moscow, urged Russia for taking part in the exploration of 34 hydrocarbon blocks. Bid closed for the same on March 18, 2011. The previous round attracted over $1 billion in investments. Gazprom has been invited to be co-operator on two gas projects, one onshore and the other offshore.\(^\text{10}\) midsize oil firm Bashneft, owned by Sistema, hold an estimated 200 million tons of oil reserves, has been left as the only contender in a government auction. India has been trying to help the oil firm in developing the Arctic Trebs and Titov oil fields, to promote hydrocarbon cooperation from Russia.

During December 2010, Russia’s OAO Bashneft won the rights to develop the Trebs and Titov field. Russia’s largest undistributed fields might hold more than 200 million tons of recoverable reserves.\(^\text{11}\) It could be the country’s largest new oil development. Oil Videsh Limited through its Russian unit had bid for the fields to develop the Arctic fields. The Russian agency disqualified all applicants for the same. Bashneft was the only contender left in the auction.

\(^\text{11}\): Ibid
Russia’s plans for developing the vast energy resources in Eastern Siberia and the proposition for increasing energy exports to Asia-Pacific has been a perfect match and the basis of future energy cooperation with India and Russia. The new Russian energy strategy 2030\(^\text{12}\), established the target figure to 26-27 % by 2030, for increasing the share of Asia-Pacific markets in Russia’s exports of hydrocarbons, while assuming that around 20 % of their production would come from Eastern Siberia and the Far East\(^\text{13}\). This resulted in reorientation of oil and gas flows originating in Western Siberia and the Far East and created conflicts also. The least controversial part of Russia’s energy policy is export of ‘Nuclear Services’ by construction of nuclear power stations.

Russia’s cooperation with India is also increasing for extracting gas from coal using Russia’s technology i.e. coal gasification. An agreement has been made on using Russian technology for large underground coal gasification; enabled India to extract gas from coal reserves. This could give an entirely new dimension to through Russian collaboration. This is the new platform of cooperation between Russia and India on the gas front. Besides oil, gas, nuclear energy and coal gasification, Russia has also starting cooperating with India for Solar energy joint projects. The basis for this cooperation would be availability of new technologies and investments for Indian energy security. It could be stated that India and Russia have enormous potential for developing cooperation in the all these areas.

7.3: India-Russia Cooperation for Pipeline Projects
Much of economic cooperation between countries far and near is supported by transport, all types of transport and routes it follows. On the basis of estimated future oil and gas scenario by the year 2031-32, in previous chapter, it can be stated that Coal, Oil and Natural gas would remain the principal sources of energy at least for the next quarter century. The pipeline projects would play a crucial role in assuring energy security, as the pipelines are a guarantee of delivery.

\(^{12}\) MINPROMENERGO, Russia. Published by ‘Norwegian Institute of international Affairs ( 2003)
\(^{13}\) Baev, K. Pavel. (2010)
Transport routes in Eurasia are valuable to Russia, China and India, who are focusing on transcontinental routes linking the European Union and the Asia-Pacific Region (APR). The road infrastructure emerging around Iran is acquiring more and more prominence. In 2002, Iran has signed an agreement with India and Russia on the construction of a North-South transport corridor to encourage North-South road traffic between Western Asia and Northern Europe. Along with the routes of highways, the construction of pipeline is to be considered. The world’s gas map depicts numerous gas pipelines moving across thousands of kilometers from Russia, Central Asia and the North Sea to Western Europe, there are hardly any pipelines in Asia that move Eastwards and Southwards. This is set to change due to the increasing Asian demand for gas and the ability of Asia to transport gas economically from producers to consuming centers. It is India’s participation in the transnational gas pipeline projects on its Western and Eastern land frontiers that has been a big step towards energy security and diversion in energy supply sources.

With a prospect of growing Russian deliveries to China through pipelines, Indian experts have analyzed that Russia could be piping India’s quota to China and China being paid the transit charges, could deliver its own hydrocarbons recovered at the Tarim river oil and gas fields to India. The idea of a joint pipeline system shortens the projected routes. This idea applies to cooperation between Russia, China and India in the form of joint highway and pipeline construction, investment projects and road security projects. Co-operation in transport can stimulate broader economic ties. Main gas pipeline and transport corridor projects are given below.

7.3.1: Iran-Pakistan-India gas pipeline project (IPI) initiated in 1989, has a sound commercial base as Iran has the world’s second largest gas reserves. A pipeline from the Iranian collection centre to the Indian border would be about 1900 kms. which is within the range of economic gas supply by pipeline vis-à-vis LNG. This has been planned to bring natural gas from the South Pars fields in Southern Iran through an
on-land route to Pakistan and India. For a long time, due to various political issues, IPI gas pipeline could not be materialized. Russia’s Gazprom has agreed to join the project and function as operator of the pipeline and contractor of the building. Russia has been interested in developing of eastern route. Russia’s participation in the construction of the project is one of the major steps of enhancing India-Russia energy cooperation. **The proposed cross border natural gas pipelines (IPI, TAPI), existing natural gas transmission pipeline, proposed natural gas transmission pipeline, existing LNG terminals and proposed LNG terminals are shown in the given map on the next page.**

**7.3.2: Turkmenistan-Afghanistan-Pakistan-India (TAPI) Pipeline Project**

Governments of Trans-Afghanistan Pipeline proposed a transnational gas pipeline to exploit the available gas reserves in Turkmenistan. In order to meet its growing demand for gas, India has agreed to participate in the ADB assisted TAP project and joined in Dec. 2010, after which the project was renamed as TAPI. The pipeline would stretch from the Turkmenistan/Afghanistan border in South-Eastern Turkmenistan to Multan, Pakistan (1271 kms) with an extension of 640 kms in India. For the first time, South Asia would have access to gas from Central Asia. Russia is also linking up with this pipeline to meet the increasing demands of South Asia.

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16: www.gazprom.org  
Trans-Afghan Four Nations: Through TAPI Gas Pipeline Project, Russia is trying to focus on the emerging Asian Market. The Asian Development Bank (ADB) is the lead development partner of the project, which envisages supply of gas from Turkmenistan to Afghanistan, Pakistan and India.
The diversification of energy exports is an emerging trend in Russia’s energy diplomacy. The share of oil and gas exports to the Asian countries would reach 10-13% by 2015. For achieving this goal, Russia has been trying for participation in the 1680 kms. TAPI pipeline would deliver Turkmenistan gas to India and Pakistan through Afghanistan.

The United States has always supported the TAPI project, as an alternative to IPI project. This project was stalled for long due to security fears as the pipeline would pass through areas affected by the Taliban insurgency in Afghanistan. In a significant development, India along with three other participating countries, during September, 2010, initiated the Gas Pipeline Framework Agreement (GPFA) and heads of agreements for the proposed Gas Sales Purchase Agreement for the TAPI, in Ashgabat. Due to instability in Afghanistan, the pipeline would take more time to build, including a Gas Sales and Purchase Agreement18.

On Dec. 7, 2010 the Government of Pakistan has cleared the way for India for US-backing project, TAPI, as US wanted as an alternative route for Central Asian Gas by passing the Russian pipeline network. It might cost over $10 billion, for wheeling gas from Turkmenistan via Afghanistan and Pakistan. India has agreed to accept gas at the Turkmenistan-Afghanistan border and would bank on the international composition of the consortium building the pipeline to ensure supply security through Afghanistan and Pakistan. For this project, India has done continuous efforts in Afghanistan19.

India and Pakistan would import 38 million standard cubic meters per day (mscmd) of gas each from Turkmenistan, while Afghanistan would get 14 mscmd. According to the plan, 38 mscmd of gas would be supplied to both India and Pakistan for the next 30 years through the pipeline, while 14 mscmd would be bought by Afghanistan. Channel could bring in fuel from Turkmenistan in Central Asia to India via Afghanistan and Pakistan. Over and above the $7.5/mBtu price paid by China to

18: Senina, Olga (2010)
19: Times News Network, Dec.9, 2010
Turkmenistan, India could have to pay an additional $1.2-1.5/mBtu as wheeling charges, besides an equivalent amount as transit fee to Pakistan and Afghanistan for guaranteeing safe passage of gas through their territory. So, the delivered price of gas at the Indian border would be in excess of $10 per mbtu.\textsuperscript{20}

The purpose is not only the construction of the pipeline but also continuous and uninterrupted flow of Turkmenistan natural gas to India, over several decades. On India’s initiative, Russia has also agreed to participate in this project. Russian companies working in this area have necessary expertise, logistical resources and highly skilled personnel to build this pipeline. Settlement in Afghanistan is high on the agenda of the India-Russia working Group on combating International terrorism and the Joint Coordination group of the Security Councils of both states.

The Asian Development Bank (ADB), financier for the project, has already indicated that it would involve Chinese firms to take advantage of their experiences in building such long pipelines in a short time but involvement of China can create security problems.

**Eastern Siberia Pacific Ocean Pipeline (ESPO) - Tajshet-Skovorodino-Kozmino Bay.** Due to Petro-Political controversies and the focus of oil exports towards Asia-Pacific region, the role of the East Siberia-Pacific Ocean Pipeline became significant. It was mainly to diversify exports risks, whenever the situation is unfavorable in European market. The development of these fields requires extra-high investment and the companies including state-owned, Rosneft have been making investments on the basis that export duties would be lifted. Through this new route, Russian oil exports could be shipped by tanker to other Asian markets and possibly even to North America. There are number of hurdles in Eastern pipeline plans like:

i. Financing the project is challenging and

ii. Transport tariff expected to be high for getting the Capital cost.

\textsuperscript{20}: Times News Network, December 12, 2010
7.3.3: The North-South International Transport Corridor (ITC) - It is the desire of India and Russia to set up a network of new fuel-and-energy and transport corridors connecting the two countries on the Eurasian continent. It was India that initiated Russia’s participation. Russia’s participation in the construction project of the North South Corridor is one of the major steps of enhancing India Russia energy cooperation.

Russia regards the North-South International Transport Corridor as part of a strategic partnership with the countries to the South and duly signed an Inter-governmental agreement on its construction with India and Iran in September, 2000. Several other countries have since signed the agreement, including Belarus, Kazakhstan, Oman and Tajikistan. North-South corridor would be slashing costs and shipment times. For example, it costs US $3,500 to ship a 20 foot container from Germany or Finland to India via the Suez Canal, while the cost via North-South ITC is about 30% less. Transit of about 5 million tons of goods from India to Russia and the commonwealth of Independent States can be easily done. Indian businessmen could choose the shorter way of North-South corridor as the path for transferring their commodities. The corridor joins Indian Ocean and Persian Gulf to the Caspian Sea through Iran and then reaches to St. Petersburg and North Europe via Russia. It is linking India and Russia via Iran and Central Asia to ensure speedy movement of goods and cargo. The proposed North-South International Transport Corridor (ITC) is marked with red line in the world map which is given on the next page.

The North-South corridor has proposed Indian-Iran-Russia trade and energy transport route through Central Asia of which Turkmenistan is a signatory\(^{21}\). Apart from energy gains, this region is a potential market for Indian heavy machinery, pharmaceuticals and tea as it would increase volume for freight transportation.

\(^{21}\) www.sarid.net, 2007
Note: The proposed North-South International Transport Corridor (ITC) is marked with red line.
This corridor is the centerpiece of a grand Russian design to exploit Russia’s geography as a bridge between North and South and East and West and make Russia the hub of a vast overland and maritime trading and transportation network.

7.4: Russia’s Sakhalin projects cooperation with India

India’s demand-supply scenario of oil and gas in the past one decade 2000-2010 and expected significant increase of their imports and on the other side Russia’s plans to place significantly greater volumes on Asian countries (India & China) have become the basis for India-Russia cooperation in the energy sector. For that India and Russia have been working together for mutual benefit along with China, from well head to pipeline. But the India-Pakistan confrontation and security problems render difficult realization of IPI and TAPI projects. On the other-side, the stable political situation in Sakhalin raised the interest of the Indian Government and its business community in joint investment in Sakhalin projects. The search for a strategic partnership started in April 1998, for Sakhalin Projects.

Due to not much success in pipeline projects yet, ONGC has acquired Russian oil assets to ease India’s dependence on Middle East supplies. So, India had broadened and deepened its cooperation in the fuel-and-energy sphere with Russia by investing its capital in oil and gas development in Sakhalin and to join Russian-Kazakh oil deposit Kurmangazy in the Caspian Sea.

India imports around 75%-76% of its oil consumption, has always been keen on seeking a stake in Sakhalin Oil and Gas projects in an attempt to diversify its petroleum sourcing as a wider energy security measure. Russia also wanted participation of Indian Capital in the development of the Sakhalin Projects. Due to large distance from Sakhalin, India had to make number of decisions regarding whether to bring its share of oil to India, which is a highly tradable commodity, depending upon the global oil market, similarly considering the gas price reasonability.
7.4.1: Sakhalin Projects

In the new millennium, Russian-Indian trade and economic relations have been focused on energy sector with the participation of India partners in the Sakhalin-I project and possibilities for greater involvement of Indian business in other oil ventures. Sakhalin is situated in Eastern Russia, just to the North of Japan. Sakhalin is a long north-south Island in Russia’s Far East close to the mainland. Hydrocarbon deposits around it are estimated to contain 14 billion barrels of oil and 2.7 trillion cubic meters of natural gas\(^2\).

There are number of different Sakhalin Projects, known by their numbers i.e. I to VI as shown in the following table, providing information related to fields/blocks, participants, recoverable reserves and project’s current status. Sakhalin Island is home to six Oil and Gas projects.

Sakhalin I and II are already producing and have targeted Asian markets. Sakhalin-III projects were first and foremost exploration projects. New tenders for this project had been held up by the slow progress of new legislation. Sakhalin-IV project comes under third generation projects, developed on the basis of normal tax and royalty, rather than PSA. In 1989, BP had signed an agreement with Rosneft to explore Sakhalin-V block. This alliance was expanded to include Sakhalin-IV and have become part of an alliance to develop projects in the Arctic and offshore Russia-wide. The Sakhalin-V project is in deep water and in colder conditions than the other projects. The Sakhalin-VI project is owned by the Russian Oil Company Urals Energy, which acquired ownership from the Alfa Group in 2004. The Sakhalin-VI to IX have not been awarded yet and are awaiting development.

\(^2\) www.infraline.com
### Table No. 7.4.1: Summary of Sakhalin I – VI Projects

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<thead>
<tr>
<th>Name</th>
<th>Sakhalin I</th>
<th>Sakhalin II</th>
<th>Sakhalin III</th>
<th>Sakhalin IV</th>
<th>Sakhalin V</th>
<th>Sakhalin VI</th>
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<tr>
<td>Primary Field/Block</td>
<td>Odoptu (Onshore) Chayyo and Onshore &amp; Offshore, Arkutundagl (Oil &amp; Gas)</td>
<td>Piltun-Astokskoye, Lunskoye</td>
<td>Kirinskii, Veniunskoye, Vostochno-Alyashkii</td>
<td>Pogranichny block, Okruzhnoye, West Schmidt</td>
<td>Kaigansko Vasyukransk, east Schmidt</td>
<td>Pogranichny</td>
</tr>
<tr>
<td>Oil Reserve Estimate</td>
<td>2.1 Billion bbl. (source: Wood Mackenzie)</td>
<td>1.0 Billion bbl. (Source: Wood Mackenzie)</td>
<td>4-5 Billion bbl of oil (Source: IHS)</td>
<td>Upto 1.3 billion bbl. (Source: IHS)</td>
<td>East Schmidt (2.98 billion bbl) K-V (8.5 Billion)</td>
<td>600 Million bbl</td>
</tr>
<tr>
<td>Gas Reserve Estimate</td>
<td>16.9 Tcf (Source: Wood Mackenzie)</td>
<td>14.2 Tcf (Source: Wood Mackenzie)</td>
<td>49 Tcf (Source: Gazprom)</td>
<td>19 Tcf, 1 TcF in West Schmidt (Source: Rosneft)</td>
<td>15.2-17.7 Tcf</td>
<td>N.A</td>
</tr>
<tr>
<td>Primary Project Developers/</td>
<td>Exxon Neftegaz (30%), SODECO (30%), ONGC Videsh (20%), Sakhalinmo Neftegas (11.5%) and RN Astra (8.5%)</td>
<td>Gazprom (50%), Sakhalin energy investment Co. Shell (27.5%) &amp; Mitsui (12.5%) &amp; Mitsubishi (10%)</td>
<td>Rosneft (49.8%), Chinese Sinopec (25.1%) &amp; Sakhalinskaya Neftyanaya Kompaniya (25.1%)</td>
<td>BP (49%), Rosneft (51%)</td>
<td>Elvary Neftgas: BP Rosneft (51%)</td>
<td>Urals Energy (49%) &amp; Alfa Eco.</td>
</tr>
</tbody>
</table>

7.4.2: Sakhalin- I Project

Sakhalin-I is a large oil and gas field in Far-East offshore in Russia, spread over an area of approx. 1146 square km. ONGC Videsh Limited, an Indian Oil Company invested $2.7 billion in Sakhalin-I, a major oil and gas project on the Sakhalin Shelf. Sakhalin-I, based on a production sharing agreement, is meant to develop oil and gas on Sakhalin’s North-Eastern Shelf23.

Production Sharing Agreement (PSA) is a commercial contract between the investor and the state, which allows the investor to undertake large scale long term and high risk investments. The purpose of the PSA is to define the terms and conditions for the exploration and development of resources by replacing existing tax and license regimes with a contract based arrangement that exists for the life of the project. Terms and conditions are:

i) Sakhalin Energy pays a royalty of six % of the oil and gas produced to the Russian Government throughout the lifetime of the project. The remaining production, after payback of investments, is shared between Russian Federation, the Sakhalin Oblast (regional government) and Sakhalin Organization.

ii) The Russian Federation Government will receive an increasing proportion of revenues from production as the project progresses.

iii) Under the PSA, the Russian Federation government retains its rights and ownership of the oil and gas resources.

The project was declared cost-effective in October 2001 and full scale production was made in 2006.24

The following companies belong to the consortium of investors in Sakhalin I:

i) Exxon Neftegaz Limited: owned by Exxon Mobil Corporation (U.S.) with a 30% stake, operator for the consortium;

ii) Sakhalin Oil & Gas Development Company Ltd. (SODECO), Japan with a 30% stake;

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23 www.ongcvidesh.com
24 www.sakhalinenergy.com
iii) RN - Astra, Russia, owned by Rosneft with an 8.5% stake; Sakhalin morneftegaz-shelf, Russia: owned by Rosneft Sakhalin morneftegaz with an 11.5% stake;

iv) ONGC Videsh Limited, India: Owned by the Indian oil and Natural gas Corporation (ONGC) with a 20% stake acquired in July, 2001. Originally, Rosneft held 40% equity, on insisting by Putin, the Russian Companies transferred half of their stakes to the Indian Company OVL, a 20% stake in the project.

Sakhalin-I’s potential recoverable resources are 307 million tons of oil and 485 billion cubic meters of gas. Project benefits to Russia include direct revenues to the Russian state estimated at over US$50 billion over the life of the project, major infrastructure improvements, technology transfer, employment of Russian citizens and the use of Russian suppliers for contracts. Commercial development brought with it a contribution of US $100 million to the Sakhalin Development Fund over a five-year period.  

Sakhalin-I consortium intends to develop the project in four phases:

- Phase I: Chayvo (late 2005) and Odoptu (2007) Development
- Phase II: Major gas export (Japan) 2008
- Phase III: Arkutun-Dagi Field Oil and Gas Development (2014)
- Phase IV: Late-life gas development

The Chayvo field is getting developed from both offshore and onshore facilities. The working conditions of Sakhalin-I Project was of mainly extreme low temperature i.e. minus 40 degrees Celsius. The braved oil men of India worked there are termed as the energy ambassador of India. Sakhalin-I was a new beginning in India-Russia energy relationship. It is the most vibrant place with unending flow of capital. The shallowness of the Chayvo offshore posed a major technological challenge; vertical wells were ruled out. In this project, horizontal wells were drilled over 8-11 kms. long, is a world record. Special rig from Alaska was refurbished and put to use in the Chayvo field.

During the period between 2001 and 2006, Rosneft’s share of the project was mainly financed by OVL loans. Production had started in 2005 with 50,000 barrels of oil per day, mainly to meet the needs of domestic customers. When commercial production began in 2006, Rosneft repaid the outstanding loan and proceeded from marketing its share of oil and gas produced. The oil of this project was mainly exported to Asia-Pacific countries.

OVL had sent one of its first tankers carrying 672000 barrels of Sakhalin Oil to the port of Mangalore in Southern India in the year 2006. During the year 2007, it targeted peak rate of 250000 barrels of oil per day in February, 2007. Sakhalin-I production had reached peak of 11.2 million tons in 2007. By 2008, OVL’s share of the oil produced has reached 2.8 million tons (20% of the total) since production began in October, 2005. In August, 2008, 157 million barrels of oils has been produced and delivered to meet world market energy demands. During 2009-2010, OVL’S share of production from project was 1.532 MMT of oil and 0.390 BCM of gas as compared to 1.853 MMT of oil and 0.372 BCM of gas during 2008-09. OVL is one of the strategic partners of Russia’s Rosneft. India would get the preferential right to buy Rosneft’s share of oil at market price in return for the loan OVL has extended to the Russian Company.

Sakhalin-I produced about 20 % more in the year 2011 (till June) as compared with the year 2010. Sakhalin-I had a completely different marketing strategy compared with Sakhalin-II focusing on pipeline gas. In the year 2010, Phase-I was completed, Sakhalin-I is under pressure to commit to a Phase-II that would see substantial natural gas exports. Sakhalin-I is the only source of gas for the Russian Far East before 2016 as per the ‘Eleventh Sakhalin Oil and Gas Conference’. In October 2006, the Russian Government approved the increase in the Sakhalin-I budget by 33 % to $17 billion, this includes also costs associated with Phase-I. The investment required for Phase-II is over $10 billion, a major commitment by the Sakhalin-I shareholders. Phase-II of Sakhalin-I would be considered as a new project or not-is to be resolved.

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There is uncertainty even about gas marketing. There are two options: first a pipeline to China and then to provide to other Asian countries second, selling gas of Sakhalin-II for export as LNG. For Sakhalin-I Project’s Output, Crude transportation will deploy 5 specialized tankers with the escort ice breakers to transport 250000 barrels of oil per day through ice in winter months.

**Sakhalin Region’s trade and investment with India**- OVL’s maximum net cash sink for investment in Sakhalin-I project was approved at USD 1,556 million (excluding carry finance). With the start of exports of Sakhalin-I crude oil from September 2006, the project started to generate positive cash flow. In the beginning of the year 2008, accumulated Indian Investment in the region totaled $565 million, has put India in the fifth place among investors after the Bahamas, the Netherlands, Britain and Japan.27

<table>
<thead>
<tr>
<th>Year</th>
<th>Indian Investment in Sakhalin Region ($ Millions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2004</td>
<td>130.7</td>
</tr>
<tr>
<td>2005</td>
<td>314.9</td>
</tr>
<tr>
<td>2006</td>
<td>551.0</td>
</tr>
<tr>
<td>2007</td>
<td>219.1</td>
</tr>
<tr>
<td>2008</td>
<td>565.0</td>
</tr>
</tbody>
</table>

Till the year 2006, the Sakhalin’s Region’s trade contacts with India were underdeveloped. The region’s exports to India in 2007 went up dramatically due to the beginning of oil shipments of that country. It had shot up to US$ 43763 thousands.28

**Sakhalin-I share arrangement between India and Russia**-Dependent on imports for 75 % of its crude requirements, India has been keen to bring its share of gas and oil from Russia to the country, the other option of swapping its share of oil and gas with Japan or China, taking delivery from sources near India (due to distance) but ONGC has not yet firmed up its plans on how to use its share of crude oil from Sakhalin-I whether to sell it abroad, swap it with another country’s crude or transport it to India.

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27: [www.en.rian.com](http://www.en.rian.com)
28: [www.infraline.com](http://www.infraline.com)
Due to large distance between India and Russia’s Sakhalin, it would be sensible for OVL to go for pooled marketing arrangement to the Japanese, Korean and other Eastern markets rather than trying to get the crude to India for the following reasons:

1. OVL gets ready access to Japanese Korean and other certain markets.
2. Sakhalin-I is a premium, fungible trade that can be processed in any refinery and is generally traded in the spot market.
3. India is not-so-good market for the product because of its distance and for the availability of equally good or better options from the nearby places like Middle-East and Nigeria.
4. The economics of crude transportation from such a distance may not be favorable despite the most optimal usage of very large crude carriers.

The Sakhalin-I project serves as an example of a successful joint national/foreign investment in Russia. These achievements include the on-schedule commencement of first production, timely completion of the export pipeline and terminal and the start up the crude export operations, commissioning of the onshore processing facility ahead of schedule, successful ramp-up of production to design levels of 2,50,000 barrels of oil per day. One of the main tasks of Sakhalin-I project, ONGC Videsh Limited is to establish good business relations with state-owned Rosneft, as the company is financing the project. Sakhalin-I taps only a small proportion of the Shelf hydrocarbons, despite of its significance for Asia-Pacific region.

**Controversy over Sakhalin-I plans to export Gas**- Gazprom has offered to buy all of the Sakhalin-I project’s gas to fill its own pipeline to the Pacific, near the Chinese border, but Exxon Mobil has stated Gazprom’s offer price for the gas as too low to justify the project investment. The state-controlled company, Gazprom has a monopoly on gas exports from Russia, but Exxon Mobil holds the legal right to sell gas from Sakhalin-I Project under PSA, 1990. During November, 2010, the matter has been reviewed. But marketing and exporting of Gas still remains unresolved between Gazprom and Exxon Mobil29.

29 www.oilprice.com
7.4.3: Sakhalin-II Project

Sakhalin II project is one of the largest integrated projects globally. In this project, India’s participation had been ruled out. It faced major delays and cost overruns. Sakhalin - II has been producing oil since 1999, is the most advanced project in terms of gas development and planning. For Sakhalin-II project in 1994, first production sharing agreement was signed. In 1996, Phase-I was launched. In 2003, Phase-II was launched and in the year 2009 first Russian LNG plant launched in Sakhalin. Sakhalin-II recoverable hydrocarbon reserves amount to over 600 bcm. of gas and 170 million tons of oil and gas condensate. Shareholders of Sakhalin-II Project:

i) OAO Gazprom (50 %, plus one share), Operating Company
ii) Shell Sakhalin Holdings B.V. (Parent Company Royal Dutch Shell Pic, the Netherlands and 27.5 Pc minus one share).
iii) Mitsui Sakhalin Holdings B.V. (Parent Company Mitsui and Co. Ltd., Japan, 12.5 %).
iv) Diamond Gas Sakhalin B.V. (Parent Company Mitsui Corporation, Japan 10 %).

Sakhalin Energy selected LNG as the best, fastest and most practical option to deliver gas to Asia and North America. Sakhalin-II is the world’s biggest integrated oil and gas project, drawing upon global oil and LNG expertise and experience.

Gazprom is the majority shareholder and operator of Sakhalin Energy Investment Company Ltd., i.e. Sakhalin-II Project. Eastern Siberia and the Far East are the higher priority regions for Gazprom in a long-term perspective. Transportation and supply system with due regard of possible exports to China and Asia-Pacific markets approved by the government of the Russian Federation in June, 2007. The greatest achievement of Sakhalin-II project was starting of Russia’s first liquefied natural gas plant in February, 2009. India has been importing LNG from Russia’s Sakhalin-II project regularly in tanker ships since 2009. The Sakhalin-II marketing, strategy has always been to sell the LNG to Asia-Pacific Markets (Japan, Korea, Taiwan and China) and then India can have swap arrangement or can get through tanker ships.

30: www.nytimes.com / 2009/02/18
from near market. Russian energy strategy 2020 clearly mentions India as one of the
target countries along with other countries of Asia Pacific region. The Sakhalin-II
Project would account for about 8% of the Asia-Pacific LNG market\textsuperscript{31}.

7.4.4: Sakhalin-III Project

Russian side has been reluctant on assuring any participating interest to any company,
as the new sub oil law is yet to be passed by the Russian parliament. In the Sakhalin-
III project, Rosneft has 74.9% ownership and Sinopec 25%. India is pushing for
OVL’s participation in Sakhalin projects through join bidding with Rosneft. India
wants OVL to form a 49.51 joint venture with either Rosneft or Gazprom to pursue
other oil and gas exploration opportunities in Russia such as the Trebs and Titov
exploration block in Timan Pechora region\textsuperscript{32}.

India, which is the third-largest consumer of oil in Asia, had been invited to take part
in the development of new oil fields and also for Sakhalin-III Project. The ONGC
could buy either existing oil companies or new oil fields in the Tomsk region, as well
as in Russia’s north. ONGC could become a partner of China’s Sinopec in the
Sakhalin-III Project by acquiring 25% share from Rosneft. Reserves at Sakhalin-III
are estimated to exceed 800 million tones of hydrocarbons. Russia’s Gazprom would
accelerate this project in the Far-East for its ambition to diversify energy exports
towards fast growing Asia-Pacific economies.

**Sakhalin success:** It was a bold decision taken by ONGC/OVL in 2001 for equity
participation in the production of crude oil from Sakhalin Island which had finally
paid off\textsuperscript{33}. At the time of investment in the project, due to the distance, there were
many doubts like how the crude and gas would be transported to India from Sakhalin.
But the doubts were answered with success. OVL has been expecting 2-4 million tons
of crude oil annually and 5-8 million cubic meters of gas per. Since year 2008, India

\textsuperscript{31} : Kishkovsky, Sophia.(2007) and www.iht.com
\textsuperscript{32} : www.sakhalinenergy.com
\textsuperscript{33} : www.flonnet.com
is regularly receiving its share of Sakhalin-I project and LNG supply from Sakhalin-II project from the year 2009 onwards despite of its no share in Sakhalin-II project. Sakhalin-I is the beginning of a much longer and deeper association with the Island on the East coast of Russia. Sakhalin Island has also been described as “the most vibrant place with unending flow of capital”.

7.5: India-Russia Nuclear energy cooperation

Russia’s nuclear cooperation with India is 1970’s, when the United States and Canada withdrew from the Indian Nuclear market in the wake of India’s 1974 nuclear text explosion. In 1976, the Soviet Union stepped in to supply heavy water needed for the operation of two Canadian supplied reactors at Rajasthan. In 1988, Moscow committed to construct two 1,000 MW reactors at Kudankulam. Consistent with the Nuclear Supplier’s Group (NSG) rules, Moscow required that the reactors be placed under IAEA safeguards. When the Soviet Union had disintegrated in December 1991, a final contract for the reactors had not yet been signed. The deal was never formally cancelled. It got finally signed in 1998. Russian diplomats had stated the initial Kudankulam agreement was signed in 1988, so the deal was not subject to the 1992 Federal Security Service requirement. In 1992, Moscow supported the strengthening of the NSG safeguards provision to restrict member’s future nuclear exports only to countries with Federal Security Service (FSS). The construction of the Kudankulam two reactors was finalized in November 2001.

In 2001, Russia shipped 58 tons of low enriched uranium fuel to power two U.S. built 210 MW boiling water reactors at Tarapur, in India’s State of Maharashtra. The shipment faced a strong negative reaction from NSG; the Russia’s commitment to NSG prevented it from providing further fuel supplies to Tarapur.34

With the announcement of the U.S-deal in 2005, Moscow perceived potential for a profound shift in the position of NSG members towards nuclear cooperation with India. Thus in 2006, even before the NSG decided whether or not to exempt India

34: www.wikipedia.org
from the FSS rule, Rosatom Officials agreed to supply 60 tons of low enriched uranium (LEU) fuel for the U.S. supplied Tarapur reactors. The 60 tons of LEU fuel is a sufficient quantity of fuel to power the reactor until 2011.

Russia’s construction of Kudankulam unit-I is completed but would be operational by end of August 2012. Unit-II would be completed in about 6 months due to temporary problems like agitation by people over nuclear safety. The commercial contract for the construction of unit-III and unit- IV unit has not been signed during the 12th Annual Indo-Russia Summit held in Moscow in December 2011.

During December 2008 and 2009, due to faults of Russia for setbacks in transferring the essential equipment under the provisions of the 2001 Kudankulam agreement, India have been given the right to extract the plutonium from spent reactor fuel or reprocessing provided within International Atomic Energy Agency (IAEA) safeguard facilities. So, Russia has given a ‘Sovereign guarantee’ of a lifetime fuel supply for the reactors, transfer of technology and the freedom to reprocess the spent fuel. Indo-Russia agreement could potentially become a model agreement to negotiate with the other supplier’s and could strengthen India’s bargaining position.

7.5.1: New Dimensions of Nuclear Trade after NSG exemption

India has not been a member of the Nuclear Suppliers Group. The NSG allowed participating governments to conduct civil nuclear commerce with India without insisting upon full scope safeguards and allowed NSG members to ‘transfer Trigger list items and or related technology to the safeguard civil nuclear facilities in India. NSG granted a waiver to India on September 6, 2008 and opened a door that was banged shut on India’s face after the 1974 nuclear test explosion. India became free to co-operate with other NSG member states on nuclear trade. The advent of the Nuclear Non-Proliferation Treaty (NPT) meant that if a non-nuclear weapon country gets any technology, it is supposed to use it for the peaceful purposes, under all circumstances. India has remained opposed to the nuclear NPT.
After the opening of India to civilian nuclear trade with the world, India has already been shopping Russia, France and the US, the main rivals in getting billions of dollars’ worth contracts. For a long time, in nuclear energy sector, Russia had been the only player but after NSG waiver, new players have emerged. Russia faces competition from France and the United States for Indian nuclear energy business. Russian technology could compete with U.S. and France and the rest of the world. It could be stated that Russia’s reactors to be improved by a joint effort by ensuring the transition to a closed nuclear fuel cycle on the basis of fast neutron reactors.

France claimed to have the latest technology but Russia was the only one, who had already built reactors in India even before September 6, 2008 (NSG exemption). The U.S. had gained goodwill with India by helping to get the International Atomic Energy Agency. Major nuclear powers are trying to build new generation capacity in India to cope with increase in demand for energy. Reprocessing of spent fuel has already been allowed by Russia in Kudankulam. So, the Russians have a definite advantage over both the French and the U.S. in supplying reactors to India.35

Indo-US nuclear deal has increased both real and perceived restrictions on India. About 90% of all nuclear facilities including the Fast Breeder Reactors which can produce plutonium for nuclear weapons would be included in the civilian sector. So for the military part of the nuclear sector, India would not be able to import technology or materials from any of NSG countries, even from Russia. Thus India’s nuclear weapons program would disappear. It could be stated that Indo-US deal on nuclear energy is unequal and discriminatory. The Russian deal has no such conditions. In fact, Russia is prepared to face competition from the United States as a supplier of civilian nuclear technology to India.

7.5.2: India-Russia Nuclear energy Deals

India-US Nuclear deal opened the possibility of an open-ended NSG exemption for India and opened the doors for rest of the member countries to trade in nuclear with

India. India and Russia are in the process of institutionalizing their re-emerged relations in nuclear energy.

Russia has an ongoing agreement of 1988 vintage with India regarding establishing of two VVER-1000 MW reactors at Kudankulam in Tamil Nadu. India-Russia 2008 agreement caters for provision of an additional four third generation VVER-1200 reactors of capacity 1170 MW each.

On 7th December 2009, India and Russia signed a path breaking broad-based agreement in civil nuclear field that has ensured transfer of technology and uninterrupted uranium fuel supplies to its nuclear reactors. This agreement is far beyond even the 123 agreement, more than $700 million in deals to supply India’s nuclear reactors with fuel.36 On the same date, three pacts were also signed in the defense sector. This agreement has broadened the reach of Indo-Russia cooperation beyond supplies of nuclear reactors to areas of research and development and a whole range of areas in nuclear energy.

The pact has replaced the older 1988 agreement under which Russia has been supplying two reactors at Kudankulam. The first reactor of the Kudankulam nuclear power plant is being built under a Russian design using Russian Technology and expertise, with Indian companies engaged in the construction and mounting work. Atomstroyexport, Russia’s nuclear power equipment and service export monopoly has been building two reactors for the plant since 2002 in line with 1988 deal between India and the Soviet Union37.

The December 2009 agreement has strengthened the already existing nuclear cooperation between the two countries under which four new nuclear reactors would be set up by Russia in Kudankulam in Tamil Nadu and a site for the fifth one, Haripur in West Bengal has been identified.

36: www.issi.org
37: www.ensec.org
The December 2009 agreement aimed at bilateral cooperation to reach a modern level by expanding investment and science and research ties. As per Nuclear Cooperation deal with India, Russia would supply 12-14 units made according to Russian technology to India. Russia has offered India to use unique Russian experience to build not individual units but series of such power units. This agreement would help to reduce its cost of construction of reactors by 25-30%. Instead of building one unit after another, under the Russian technology, work on four reactors would be executed simultaneously. This made it possible to cut construction time of one unit from six years to four years and commission one unit every year. So, India has been proved as Russia’s key partner in the Civil Nuclear Field. The Indo-Russian pact on Atomic Cooperation is a significant document and goes much further than the 123 agreement between India and the US.

On March 12, 2010, contracts were signed related to India’s nuclear power, space and defense sectors and have been valued at more than $10 billion. According to these contracts, Russia would build up to 16 nuclear reactors for power stations in India. That includes a contract for construction of two reactors at the Kudankulam nuclear power plant, where Russia has planned to commission the first reactor in the same year 2010.38

According to the latest assessment of the IAEA, Russian nuclear reactors are superior in design to those of the Soviet-era and are among the safest in the world. They have a direct protection, have double casing and also have special smart protection mechanism. Russian reactors can withstand a direct hit if a medium-range airplane weighing several tons crashes into them. Nuclear energy would relieve India’s power shortage, which has posed a challenge to the country’s growth. Russia has been supplying the country’s first large nuclear power plant, comprising two VVER 1000 (V-392) reactors, under a Russian financed US $3 billion contract. Russia would supply all the enriched fuel, though India would reprocess it and keep the plutonium. In fact, India wants to expand its previous level of nuclear cooperation with Russia by

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38: www.euromonitor.com
importing more uranium and eliciting Russian cooperation to help it to build at least five new nuclear plants, while continuing its assistance for existing plants.39

Russia’s capital and experience with nuclear energy could remove the obstacle of power shortages to GDP growth and would improve the business environment in India. In spite of inevitable problems in their nuclear engagement, prospects for Russian-Indian nuclear cooperation remain promising. Their delays in construction of Kudankulam units I & II and failure to reach a concrete agreement on four additional units jeopardizes the commitment by the Nuclear Power Corporation of India to generate 20000 MW by 2020. Russia has many projects in the energy sphere. But a large part is related to nuclear power engineering. Bilateral agreement on nuclear energy cooperation has allowed both the countries to develop cooperation for years to come.

Russia’s reliance on exports of mineral fuels around 63.8% of exports in 2009 is based on the fact that Russia is keen to thrust aside towards a knowledge-based economy. Cooperation with India, known for its technological savvy, would aid Russia to boost foreign investment and productivity. Russia has already planned to set up a free economic zone in India, a preferential setting for the development of chemical and metallurgical cooperation centered on titanium. So, enhanced trade cooperation would benefit consumers in both countries through boosted employment opportunities in the weapons industry in Russia and in nuclear construction in India. Russian consumers are benefited from greater access to India’s cheaper manufactured products. Georgy O Kumani, Vice President, of Atomstroyexport, a subsidiary of Rosatom, stated on Dec 7, 2010 that over $100 billion civilian nuclear market in India would be having the boom in the nuclear business in future40. Atomstroyexport has already signed an agreement with Nuclear Power Corporation of India Ltd. for carrying reactors. With Russia’s Cooperation, India would be a very fast growing market for civilian nuclear power projects.

39: www.wmdinsights.com
40: www.indiajuris.com
Finally, it can be stated that Russia has continued to play the pioneering role in the peaceful uses of nuclear energy and remains a staunch supporter of innovative approaches in this sphere ranging from the efforts to build, under IAEA control, a bank of nuclear fuel to the activities to develop nuclear reactors of new generation. Russia has proved to be the most prudent nuclear proliferators in the world.

Russia, the only country which stood with India since its independence and has proved its time tested strategic partner. In an emerging world that is running increasingly multipolar and where the G-2, the US and China are planning to rule the world, India cannot afford to neglect such a dependable partner like Russia. Russia’s cooperation in nuclear energy sector could help to reduce dependence on hydrocarbons imports to promote energy security in future. In fact, energy security has become the most important of the emerging dimensions of India-Russia economic and energy partnership.

India- Russia energy cooperation can be concluded that Russia is the only large energy exporter which is a member of G-8 and proposes strengthening energy cooperation through mutual penetration, assets swapping, new energy participation and effective interaction with India. Russia could play a greater role in India’s energy security for oil, gas and nuclear energy but there is need to improve pipeline connectivity between India and Russia. North-South corridor between India, Iran and Russian federation provides a high potential for energy cooperation. India is moving quickly to penetrate into Russian energy market.