

**RUSSIA'S ENERGY STRATEGY: REBALANCING
INDIA AND CHINA, 1991-2013**

*Thesis submitted to Jawaharlal Nehru University
for the award of the degree of*

DOCTOR OF PHILOSOPHY

SUKANYA KAKOTY



**CENTRE FOR RUSSIAN AND CENTRAL ASIAN STUDIES
SCHOOL OF INTERNATIONAL STUDIES
JAWAHARLAL NEHRU UNIVERSITY
NEW DELHI 110067**

2017



JAWAHARLAL NEHRU UNIVERSITY

Centre for Russian and Central Asian Studies

School of International Studies

New Delhi-110067

Tel.: (O) +91-11-2670 4365

Fax: (+91) - 11-2674 1586, 2586

Email: crcasjnu@gmail.com

Date: 21/7/2017


DECLARATION


I declare that the thesis entitled “Russia’s Energy Strategy: Rebalancing India and China, 1991-2013” submitted by me for the award of the degree of DOCTOR OF PHILOSOPHY of Jawaharlal Nehru University is my own work. The thesis has not been submitted for any other degree of this University or any other university.


SUKANYA KAKOTY

CERTIFICATE

We recommend that this thesis be placed before the examiners for evaluation.


Prof. Archana Upadhyay
(Chairperson, CRCAS)


Prof. Arun K. Mohanty
(Supervisor)

In the loving memory of my grandfather

Late. Gopal Ch. Kakoty

*Because some people leave the deepest imprint in our lives even
during the shortest span of time.....*

ACKNOWLEDGEMENTS

This academic endeavour of mine would not have been so fulfilling without the help of my respected Supervisor, Prof Arun K. Mohanty. I am extremely grateful to him for his exceptional guidance, kind cooperation, active supervision and critical insight which helped me in the completion of this academic exercise. I thank him for his patience since the initiation of my research until the accomplishment of the task.

I owe my gratitude to JNU for not only inspiring me to do thought-provoking research, but also for instilling in me a wider world view and benevolent understanding.

I thank the faculty of my Centre for inspiring me in my programme of study and making it a formative experience for me.

I thank the JNU library, IDSA and for granting me access to the useful resources that was integral for my research work.

My field trip to Russia was a crucial part of my research. I am obliged to JNU and ICSSR for generously funding the entire trip that helped me in getting a first-hand experience of the region I was working on. Here I express my gratitude to my Supervisor and Prof. Sanjay Kr. Pandey for the assistance and technical arrangements for the field study.

I am extremely grateful to Prof. Artur Demchuk (Deputy Dean for International Affairs, Moscow State University), the Dean, Prof Andrew Yu. Shutov (MSU), Igor Yushkov (Energy Analyst), Vladimir Ivanovich Yakunin (former President of Russian Railways), Prof. Goncharev (HSE, St. Petersburg), Prof. Eugenia Vanina & Prof. Alikber Alikberov (Institute of Oriental Studies), Dr. Anna Bochkovskaya (Institute of Asian and African Studies), Prof. Igor Tomberg, Prof. Maxim & Pritch A. Stanislav (HSE, Moscow) and Dr. Larisa Chereshneva (Lipetsk State Pedagogical University) for their valuable academic inputs.

It goes without saying, but my obvious thanks go to my parents (Sri Pradyut Kakoty & Smt. Kritanjali Kakoty) for being there in every step of my life. I thank my brother,

Anindit for the love. My heartfelt gratitude goes to my husband, Gokul, for being a source of constant support. I am also grateful to my new family, Sri. Hara Kanta Bora and Smt. Nilima Bora for their blessings.

I bestow my regards to my friends/cousins for their love - Kabandi, Baibhav, Hirok, Treesha, Lupa, Suman, Chandrima, Rashmirekha, Manidipa, Sumit, Neimeno and many others..you have been phenomenal in the journey!

A special thanks to Namita maám for being incredibly kind to us and always make us feel at home.

I thank God for giving me the strength, courage and good health.

If there are any inadvertent error, they are mine only.

21 July 2017

New Delhi

Kakoty

Sukanya

CONTENTS

<i>Acknowledgements</i>	<i>i-ii</i>
<i>List of Tables</i>	<i>vi</i>
<i>List of Graphs</i>	<i>vii</i>
<i>List of Maps</i>	<i>viii</i>
<i>Abbreviations</i>	<i>ix-xii</i>
CHAPTER 1:	
INTRODUCTION	1-36
1.1 Energy Security: Definition.....	1
1.2 Understanding the concept of Energy Security	3
1.3 Theoretical Perspective	4
1.3.1 Energy Security: The Three Perspectives.....	9
1.3.2 Energy Security Complex and Dependency	11
1.4 Background of the study	12
1.5 Review of Literature	22
1.6 Rationale and Scope.....	30
1.7 Aims and Objectives	32
1.8 Research Questions.....	32
1.9 Hypotheses	33
1.10 Research Methodology	33
1.11 Chapterisation.....	34
CHAPTER 2:	
RUSSIA’S CHANGING ENERGY STRATEGY	37-82
2.1 Introduction	37
2.2 Russia’s Energy Strategy: The Yeltsin Period	39
2.2.1 Russian Energy Interests and the ‘Near Abroad’ Policy	47
2.2.2 The Ukraine factor in Russia’s Energy Strategy.....	49
2.3 Russian Energy and the European Market	49
2.4 Russia’s Energy Strategy under Putin.....	53

2.5	The Issue of Transit States	56
2.6	Russia’s Changing Energy Strategy Towards the Asian Market	59
2.6.1.	Factors behind Russia’s Energy Strategy towards Asia	62
2.7	Russia’s energy strategy: Far East and East Siberia	65
2.7.1.	Russia’s Energy Strategy Up To 2020	66
2.7.2	Russia’s Energy Strategy Up To 2030	70
2.7.3	The APEC Energy Demand and Supply Outlook 2030	70
2.8	Russia’s Energy Policies In The Far East And East Siberia	71
2.9	Russia’s Energy Strategy Eastwards And The Role Of Gazprom.....	80
2.10	Conclusion.....	81

CHAPTER 3:

RUSSIA-INDIA ENERGY COOPERATION.....	83-117	
3.1	Introduction	83
3.2	Understanding India’s Energy Strategy	87
3.2.1	India Hydrocarbon Vision 2025.....	87
3.2.2	India’s Energy Basket	89
3.3	Russia-India Energy Cooperation: An Overview	90
3.3.1	India in Russia’s Energy Strategy Up to 2020.....	91
3.4	Steps towards Russia-India Energy cooperation	92
3.5	India in Russia’s Far East.....	98
3.6	Russia-India nuclear energy cooperation	102
3.6.1	The comparative advantage of Russia in India’s nuclear energy sector	109
3.7	Loopholes in the energy partnership.....	111
3.8	Future Prospects	114
3.9	Conclusion.....	116

CHAPTER 4:

RUSSIA-CHINA ENERGY COOPERATION	118-162	
4.1	Introduction	118
4.2	Chinese petroleum industry and the Soviet support	121

4.3	Russia-China Relations Since ‘Normalisation’	122
4.4	China’s energy strategy.....	123
4.5	Factors of Convergence	126
4.6	Russia-China Energy Ties.....	131
4.6.1	Cooperation in the Oil Sector	134
4.6.2	Cooperation in the Gas Sector	139
4.7	Russia’s Eastern Gas Program and China.....	143
4.8	The Russia-China Gas Deal	155
4.9	Factors of Divergence	157
4.10	Conclusion.....	162

CHAPTER 5:

RUSSIA AS A COMMON FACTOR IN THE TRILATERAL ENGAGEMENT 163-195

5.1	Introduction	163
5.2	Assessment of the factor of geographical proximity	165
5.3	Russia as a potential energy superpower-An Assessment	169
5.4	Russia, China, India and the role of Regional Organisations.....	175
5.5	Russia’s act of balancing: Energy cooperation & larger geopolitical interests.....	179
5.6	Western sanctions on Russia’s energy sector: Implications & Responses	186
5.7	Russia-India-China Strategic triangle (RIC).....	188
5.8	Conclusion.....	194

CHAPTER 6:

CONCLUSION.....196-203

REFERENCES204-229

APPENDICES230-232

LIST OF TABLES

TABLES:

1. World Primary Energy Demand	2
2. Demand for Natural gas up to 2030 (BCM)	18
3. Oil Demand and Imports, 2000-2020.....	20
4. Russia's Natural Gas Plans up to 2030	61
5. Russia's major Greenfield oil assets	78
6. Major Russian LNG Projects	79
7. India's Demand and Supply Scenario in petroleum.....	88
8. Russian Oil and Condensate Production by Company.....	187

LIST OF GRAPHS

GRAPHS:

1. The World Energy Mix: Past, Present and Future (Dominance of Hydrocarbons).....	17
2. Energy Mix in five major Asia-Pacific economies in the year 2009	20
3. Main Net Exporters of Gas (Pipeline and LNG), 2012	21
4. China's increase in Natural gas imports	63
5. LNG sales of Sakhalin II (no. of cargos delivered per country, since 2009).....	74
6. India's Nuclear Energy Consumption	108
7. Fluctuations in World Oil Prices from 1990 to 2009	172
8. Russian oil production and export during sanctions	187

LIST OF MAPS

MAPS:

1. Oil and Natural Gas Production in Russia (2013).....	56
2. China’s oil import route and the Strait of Malacca	129
3. The ESPO Pipeline: Russian inroads into Asia	138
4. Gazprom’s Eastern Gas Programme	144
5. Major hydrocarbon fields in Eastern Siberia and the Far East	144
6. Yamal LNG Shipping options	154

LIST OF ABBREVIATIONS

APEC	Asia-Pacific Economic Cooperation
API	American Petroleum Institute
APR	Asia-Pacific Region
ARAMCO	Saudi Arabian American Oil Company
ASEAN	Association of Southeast Asian Nations
BBC	British Broadcasting Corporation
BCM	Billion Cubic Meters
BFA	Basic Framework Agreement
BP	British Petroleum
BRIC	Brazil Russia India China
BRICS	Brazil Russia India China South Africa
BTC	Baku-Tblisi-Ceyhan
CAGP	Central Asian Gas Pipeline
CASA	Central Asia-South Asia
CBM	Cubic Metres
CDB	China Development Bank
CEE	Central and Eastern Europe
CEO	Chief Executive Officer
CIRUS	Canada-USA Nuclear Reactor
CIS	Commonwealth of Independent States
CNOOC	China National Offshore Oil Corporation
CNPC	China National Petroleum Corporation
CPSU	Communist Party of the Soviet Union
CSO	Central Statistics Office

CSTO	Collective Security Treaty Organization
CTBT	Comprehensive Nuclear Test Ban Treaty
EBRD	European Bank for Reconstruction and Development
ECSC	European Coal and Steel Community
EIA	Energy Information Administration
ERT	European Round Table
ESPO	East Siberian Pacific Ocean
EU	European Union
FICCI	Federation of Indian Chambers of Commerce and Industry
G2	Group of Two
G8	Group of Eight
GAIL	Gas Authority India Limited
GDP	Gross Domestic Product
GM&TS	Gazprom Marketing and Trading Singapore
GTS	Gas Transmission System
HPCL	Hindustan Petroleum Corporation Limited
IDSA	Institute for Defence Studies and Analyses
IEA	International Energy Agency
IEO	International Energy Outlook
IES	State Institute of Energy Strategy
IMF	International Monetary Fund
IOC	Indian Oil Corporation
IPI	Iran Pakistan India
IPO	Initial Public Offering
ITAR	Information Telegraph Agency of Russia
TASS	Telegraph Agency of the Soviet Union

KPMG	Klynveld Peat Marwick Goerdeler
LDT	<i>Lietuvos Duju Tiekimas</i>
LEU	Low Enriched Uranium
LNG	Liquefied Natural Gas
MoU	Memorandum of Understanding
MTCR	Missile Technology Control Regime
MTs	Metric Tonnes
MW	Mega Watt
MWE	Mega Watt Electrical
NGO	Non-Governmental Organization
NOC	National Oil Corporation
NPT	Non-Proliferation Treaty
NSG	Nuclear Suppliers' Group
OECD	Organisation for Economic Co-operation & Development
ONGC	Oil and Natural Gas Corporation Limited
OPEC	Organization of the Petroleum Exporting Countries
ORF	Observer Research Foundation
OVL	ONGC Videsh Limited
PDVSA	Petróleos de Venezuela, S.A. (Petroleum of Venezuela)
PPP	Purchasing Power Parity
PRC	People's Republic of China
PSA-	Product Sharing Agreement
RAPS	Rajasthan Atomic Power Station
RCI	Russia China India
RIC	Russia-India-China
RIL	Reliance Industries Limited

SCO	Shanghai Cooperation Organization
SINOPEC	China Petroleum & Chemical Corporation
SLOC	Sea Lines of Communications
SPA	Sales and Purchase Agreement
TAPI	Turkmenistan Afghanistan Pakistan India
TAPS	Tarapore Atomic Power Station
TCF	Trillion Cubic Feet
TCM	Trillion Cubic Meter
TNK-BP	Tyumenskaya Neftyanaya Kompaniya
TPOC	Turkish Petroleum Overseas Company
UCP	United Capital Partners
UK	United Kingdom
UN	United Nations
UNIDO	United Nations Industrial Development Organization
USA	United States of America
USSR	Union of Soviet Socialist Republics
VVER/WWER	Water-Water Energetic Reactor
WGL	Washington Gas Light Company

CHAPTER 1

INTRODUCTION

The introductory chapter discusses the basic definition of energy security, its evolution, the theoretical basis of it and its relevance in the present day world. This chapter further focuses on how the factor of energy works as a defining aspect in reshaping existing foreign relations among countries and establishing new liaison with emerging regions. It brings out the background of the study depicting energy as an important element in Russia's foreign policy. This chapter introduces the hypotheses, important variables, research questions and objectives and explains the rationale of the study.

1.1 ENERGY SECURITY: DEFINITION

The classical definition of energy security is abundant, economic and reliable supplies of energy. But, the definition varies with the consumers and the supplier nations. Countries like the EU and the USA which are substantial energy importers find energy security in secure flows of supplies at affordable prices. On the other hand, for large exporters like Russia, energy security lies in finding stable and lucrative markets that offer profitable prices. There is a third type i.e. the transit countries; these countries lay geographically between the supplier country and one or more consumers. Energy security for transit countries lies in ensuring a constant flow of transit rents and its influence over the supplier country (Pami Aalto 2012: 12).

The demand for energy has been increasing and according to the IEO 2010 projections, total world consumption of energy will increase by 49 percent from 2007 to 2035, mostly driven by economic growth in the developing countries (International Energy Outlook, 2010). Also, reports of IEA's World Energy Outlook 2006 affirm similar projections and reveal that by 2030 the global energy demands will be dominated by hydrocarbons with 81 percent rise (World Energy Outlook 2006: 65-66).

Energy security has become one of the top national security priorities and foreign policy objectives for the successful economic growth of a country. With a sheer rise in energy demand in the present times, secure supplies of energy are very important. Hence the new global attention to energy security could be understood by the rapidly rising energy demand of the newly emerging economic giants. This pronounces how hydrocarbons will be in the cards of the world's top most energy countries' energy mix in the years to come.

Table 1. World Primary Energy Demand

	1971	2002	2010	2020	2030	2002-2030*
Coal	1 407	2 389	2 763	3 193	3 601	1.5%
Oil	2 413	3 676	4 308	5 074	5 766	1.6%
<i>Of which international marine bunkers</i>	106	146	148	152	162	0.4%
Gas	892	2 190	2 703	3 451	4 130	2.3%
Nuclear	29	692	778	776	764	0.4%
Hydro	104	224	276	321	365	1.8%
Biomass and waste	687	1 119	1 264	1 428	1 605	1.3%
<i>Of which traditional biomass</i>	490	763	828	888	920	0.7%
Other renewables	4	55	101	162	256	5.7%
Total	5 536	10 345	12 194	14 404	16 487	1.7%

Source: World Energy Outlook 2004, OECD/IEA, 2004, page-59

The table above lists about the trend of the world's growing energy demands through several decades. It is interesting to note that the demands for conventional sources like coal will keep increasing but at a slower rate than oil and natural gas. In fact, natural gas has a higher growth rate of 2.3 percent over the projection period. This is mostly due to the factor of acceptability in energy security. Other renewable resources also show an all over growth percentage but its demands will remain gradual being a fairly new entrant in the energy mix. Hence, by 2030, the share of natural gas will rise by 21 percent in 2002 to 25 percent in 2030 (World Energy Outlook, 2004).

1.2 UNDERSTANDING THE CONCEPT OF ENERGY SECURITY:

As history suggests, the definition of energy security was restricted to the idea of supplying fuels to the military around the first half of the twentieth century by the end of the World War II. Before the use of oil, domestic coal was largely used as a fuel source. By the twentieth century, the British navy began replacing coal with imported oil; leaving the oil fields, refineries and pipelines more susceptible to enemy attacks. Many battles were in fact fought over oil fields in various parts of the world like in Indonesia, the Middle East, the Caucasus region, Romania etc during the phase of World War II drawing attention to the significance of imported oil in military usage (Yergin 1991).

Post-war period, the importance of oil became imperative in day-to-day use in the industrialised and developed societies. It was also the phase of decolonisation which meant that now the developed countries could no longer exploit their former colonies with the latter's resources and hence oil import from the developing countries started becoming the order of the day. On the other hand, it was also crucial for the developing countries to export their hydrocarbon resources in order to earn export revenues for their economic development and political stability. However, the immediate vulnerability and importance of oil came into prominence only in the early 1970s, when the oil-rich Arab countries within OPEC and outside of it cut-off oil supplies to the USA and several of its allies as a sign of protest against the US's support to Israel thus inflicting an 'oil embargo'. This was a landmark event as it not only sky-rocketed global oil prices but it also led to a huge global economic crisis exposing the volatility of the entire structure of world oil supplies (Cherp and Jewell 2011). The 1973 Oil Embargo was also described as 'oil weapon' (JJ, Paust and Blaustein, AP 1974). This was a remarkable turning point in the history of comprehending the meaning and perspective of energy security. Now 'energy security' started becoming a priority agenda of political importance. The main concerns revolving around energy security was the protection of oil supplies around the world (ibid). Hence there was a gradual shift in looking at 'energy' as just an economic element to more of an element of political interest.

This finally led to serious measures taken towards establishing international regimes for securing the supply of oil globally. Firstly, as expressed in the Carter Doctrine countries

like the US even went on with its political power and military might in the oil-producing Middle Eastern region to ensure the ‘free movement of Middle Eastern oil’ as a way of guarding its national interest (Carter Doctrine 1980). Secondly, measures were taken up to set up a global market for oil and oil products to guarantee that no single actor can exercise and manipulate more leverage upon the others (Yergin 2006). Thirdly, a measure was taken up to establish an international platform to deal with emergency situations in relation to disruptions in the supply of oil. For this, the International Energy Agency (IEA) was established to initiate a response by OECD countries during emergencies by either keeping energy stockpiles or any other similar measures (Cherp and Jewell 2011).

So while analysing the evolution of energy security the first thing that comes to mind is how ‘oil’ was the original source and its history of availability, import and export that articulated the concept of ‘energy security’. The importance of oil, in fact, translated the importance of energy security in the new modern and industrialised era. Imported oil is still an important source of energy today, but with the coming up of alternate fuels like natural gas, nuclear energy etc in the 1980s to 1990s, the world saw a temporary but sharp drop in the global oil prices during that time. A drop in oil prices meant ‘energy insecurity’ for oil-producing countries at the same time. However, post-1990s, the subject of energy security has drawn the attention of scholars and policy makers in a new way. With the emergence of new and fast-growing Asian economies like China (Leung 2010) and India, apart from the developed countries, the issue of ‘energy security’ has reemerged in a dynamic way.

1.3 THEORETICAL PERSPECTIVE:

The Regional Security Complex Theory:

Barry Buzan and Ole Waever’s theory of Regional Security Complex gives one of the finest theoretical basis in understanding different notions of regional security. In their 2003 work named ‘Regions and Powers: The Structure of International Security’, the authors introduced the concept of how ‘regional security complex’ defining how security is centred around geographically oriented regions. The basic understanding of the concept

is that security dilemmas are concentrated in specific regions that are defined in strict geographic terms. These security dilemmas are very much interlinked and hence demand a lot of interdependence security-wise between actors/states within a region but not between regions. (Buzan 1991: 189-194) As in the words of Buzan and Waever,

The central idea in Regional Security Complex Theory is that, since most threats travel more easily over short distances than long ones, security interdependence is normally into regionally based clusters: security complexes.....Process of securitization and thus the degree of security interdependence are more intense between actors inside such complexes than they are between actors inside the complex and outside of it (Buzan & Waever 2003:4).

Although Buzan and Waever did not explain the concept of energy security in isolation from the economic security sector, the core idea can be drawn from it. For the convenience of my thesis work, I have limited the focus of energy security to specific regional terms. So in this case, regional energy security denotes the presence of energy-based interactions between two or more actors in a geographically-defined region. Therefore, there is naturally a sense of energy interdependence among the various actors placed in a specific region. This energy relation or dependency between states in a region also involves a threat perception that is the concept of 'securitisation' as explained in Buzan. The energy transactions between states include three types of actors- the producing states or the exporters, the consumers or the importers and the transit states that facilitate the interactions. Moreover, there are various factors through which the relative strength of energy dependencies could be measured such as the availability of domestic resources, energy trade balance and other prospects of diversification (ERT 2006).

Realist and Geopolitical Approach:

Under this approach, the politics of energy is seen through the lens of accessibility and control over the resources. Easy access and control of energy resources is a very important component of national security interest. States compete for the access to these resources with one another as the energy resources especially hydrocarbons are limited

and getting more scarce due to its rising demand. Hence, international conflict and tough competition over energy resources are very much likely to occur (Dannreuther 2010: 2). Classical realists like Hans Morgenthau states that, “Whenever there is a competition of scarce goods....a struggle for power will ensue” (Waltz 1988: 616). In the case of Russian energy resources, since both China and India are fast growing economies and have a rising energy demands, therefore, a prime source of conflict between these two Asian giants is most likely to rise for having an upper hand in accessing the Russian energy resources. Similarly, this realist-driven energy conflict approach reflects India’s concern over the rise of China with its expansionist energy policies not only for Russian resources but hydrocarbon resources present all over the world. Likewise, it also bothers China. Hence, a zero-sum game for control of energy resources of Russia is present among China and India.

Anita Orban (2008) gives a slightly different approach on the lines of the neo-classical realist theory of understanding Russia’s energy strategy. It is close to the approaches of traditional geopolitical notions of energy politics. Orban’s 2008 book named ‘Power, Energy and the New Russian Imperialism’ gives a picture of Russia’s handling of energy resources as a tool in expanding its power and control in its vicinity with the help of intensifying its political and economic hold. The author realises that the strength of the Russian Federation’s energy resources is equivalent to its capacity as a military power in the Soviet days. Hence a tendency of monopolistic control has often been observed since the dissolution of the Soviet Union as energy is the only source through which Moscow has the chances of reviving its lost glory in present times. The author reveals that Russia demonstrated its energy power in several episodes with the post-Soviet states regarding issues of transit fees and regulating the supplies of energy as instruments to control the behavior of transit states like Ukraine, Georgia, Azerbaijan, Armenia, Belarus and Lithuania and if the need be then it is ready to use similar methods with other customers in the West. Orban depicts how Russian energy companies have been used as instruments of neo-mercantilist, energy-centered foreign policies which are well-crafted to suit Russia’s imperialistic ambitions in the post-Soviet space. Orban’s analysis of Russia’s imperialistic energy strategy concludes with recommendations to the post-Soviet states’ dependence on Russian energy resources to find new diversification routes of oil and gas

away from Moscow to fight the latter's energy monopoly (Orban 2008: 252). The theory and its solution of diversification in a similar way also give Russia an impetus to look for new markets and diversify in order to sustain as a globally recognised energy power.

Energy security discourse under the geopolitical school also takes into consideration the recent phase of 'peak oil' along with the rise of new customers in the Asian region and the changing relations between the European countries and Russia. The basis of this school of thought lies on balance of power strategies, the control over energy assets and energy resources that draw in political, military and 'civilizational' dimensions (Klare 2008).

Theory of Strategic Manipulation:

Adam N. Stulberg gave one of the finest theoretical understandings of Russia's use of its energy card beyond just economic motives and as a political leverage over other countries. In this context, Stulberg coined the term 'strategic manipulation' that revolves around Moscow's adoption of 'soft diplomacy' against hard or coercive diplomacy towards states (known as manipulated countries or targets) in a way such that the political choices of the target countries are manipulated and altered as a result. The target countries are given limited choices by the manipulator (also known as the initiator) in the case with options of compliance, opposition or cooperation with Russia. Although a manipulator country can use both types of manipulative methods like coercion or soft power, Stulberg recognises Russia's capability as an energy power to use strategic manipulation as a common diplomacy stunt (Stulberg 2007). There are two pre-conditions of the theory of strategic manipulation on energy statecraft to work-

First, the manipulator should have market power in the targeted country and a wide reach in the global energy market. Second, apart from the target's vulnerability, the manipulator must arrange its energy statecraft in a way that the energy companies are loyal enough to advance the policies of the manipulator state. This is more of a condition that has to be met by the domestic factors i.e. the energy companies which have a control over the energy resources and infrastructure and works in unison with the manipulator, Russia in our case (Stulberg 2007:7).

The soft strategy of Strategic Manipulation applies largely to Russia's gas situation. Being the world's largest natural gas exporter, it has a wide market in gas exports and has been playing a dominating role in manipulating its target countries in various post-Soviet states. Although Stulberg's work on Russia's energy statecraft is integral to the Eurasian region, the theory on the soft strategy of manipulation on energy statecraft could be applied to other traditional markets of the European region and the emerging markets of Asia as well. The basic idea is in fulfilling the two factors of market dominance and the domestic institutional conditions by Russia in playing its energy card as a manipulator over the target regions. The manipulation strategy Moscow's comeback role as an energy power in its interest regions rather than 'coercive diplomacy'.

Liberalism:

Liberalism explains economic cooperation in general and energy cooperation in particular. It states that the most effective system of economic exchange is largely market driven. Theory of free trade by Cobden believes that trade brings mutual gains to all players irrespective of their size or nature of their economies. While David Mitrany explains transnational cooperation specifying that cooperation in one sector leads governments to extend cooperation in other sectors as well. India and China's cooperation in the Russian energy sector could open gates for other sectors mutually beneficial for all the three. Another positive implication of such cooperation is to challenge the dominance of a single sovereign state. For instance, the Russia-China-India axis could eventually weaken the unipolar world order of US dominance (Dunne 2007:190-193). Also, the concept of independence is another explanation. China and India as emerging economies have ever-growing energy demands, and Russia having abundant energy reserves need lucrative markets for its supplies; hence both the sides are interdependent on each other regarding energy security needs (Ibid: 193).

1.3.1 Energy Security: The Three Perspectives-

Energy security concept is seen in three distinct perspectives that differ in the kinds of energy security threats that exist, response mechanisms to the threats and resilience strategies are as follows-

- ***The Sovereignty perspective-***

Under this perspective, energy security issues are determined on the basis of security threats on energy sources that are posed by external factors ranging from hostile or rogue states, non-state actors, unreliable energy suppliers, exceedingly powerful foreign energy companies with extreme monopolistic tendencies. The kinds of threats that are addressed under this perspective usually emerge from energy embargoes, terrorism or foul play of market power etc. The response strategies adopted to fight these types of energy threats usually adopted under this perspective are through the configuration of interests; making alliances, manoeuvring in order to diversify from certain options of energy sources or suppliers, direct a state's all-round control over energy assets from military political and economic angles, etc.

- ***The Robustness perspective-***

It points towards the limits of global energy resources under the broader field of engineering and natural sciences and precisely explains the quantifiable factors of energy assets. It is driven by objective factors like quantity of energy resources available, resource scarcity, problems related to technology, technical errors, infrastructural limitations, a rise in energy demand and severe natural calamities etc. Response approach towards these risks includes infrastructural development, diversifying to more abundant energy resources, managing the growth of excessive energy demand and use of safe and improved technology (Cherp and Jewell 2011: 6).

- ***The Resilience Perspective-***

It explains the economics behind the functioning of energy security. The future of the energy market is understood as naturally risky, unpredictable and irrepressible due to its inherent complexities, multi-dimensional markets, technologies and societies. In this case, the threat perceptions under the resilience perspective are also increasingly unexpected and consist of regulatory changes, unpredictable economic emergencies, and major political shifts in a state, technological disruptions and environmental challenges etc. So as the word resilience suggests, response approaches adopted under it are ‘flexibility, diversity and adaptability’ in any unpredictable situation (Cherp and Jewell, 2011: 7).

So all of the various definitions and perspectives of energy security fulfils the **four A’s of energy security-**

- **Availability**— It refers to the physical aspect of energy security and directs specifically towards the physical existence of energy resources around the world.
- **Accessibility**— It refers to the geopolitical aspects connected with the access feasibility of resources. It is a very important aspect as energy resources even if available might not have the ease of access to the required consumer markets.
- **Affordability**— It refers to the economic affordability, the energy prices and costs in buying energy resources.
- **Acceptability**— It refers to the social and environmental aspects of energy security. Energy resources should be socially accepted and environmentally safe (Kruyt et al. 2009: 2053-2464).

Technically speaking, oil security is also measured on the basis of firstly, the “confidence about the availability of oil resources and transparency of information” and secondly “international access to oil resources” (Milov 2005: 65-66). In the similar way, Sovacool and Brown also divide energy security into four dimensions. Apart from the determinants of availability, affordability and environmental acceptance, they have put forward a new aspect of efficiency (Sovacool and Brown 2010: 77-108).

Other authors on energy security throw light on several other new aspects that determine energy security with the changing times and contexts. According to Alhajji, energy security covers a wide range of aspects like “economic, environmental, social, foreign policy, technical and security” (Alhajji 2007). Other experts like Von Hippel, Suzuki et al. in their work ‘Energy security and sustainability in Northeast Asia’ also mentions about different dimensions covering economic, technological, environmental, social/cultural and military-security. (Von, Hippel D. et al. 2009) Keppler introduces the ‘risk-management’ side of energy security. His notion basically originates from viewing the concept of energy security under the perspective of unpredictability and risk-factors that call for diversification, flexibility, reducing impacts and responsiveness. Keppler’s three dimensions of energy security include geopolitical aspects, technical difficulties and economic challenges (Keppler 2007).

1.3.2 Energy Security Complex and Dependency:

The dependency part is integral in an energy security complex. My thesis specifically tries to understand the case of Russia’s prospects of diversification towards the Asian market to limit its dependence on the traditional European customers. In this context, it is imperative to understand that the factor of dependence in an energy security complex is very dynamic. The relative ratio of measuring dependency or security implications lie on several determinants like-

- ✓ Different types of energy sources require different types of transportation mediums. For example- the transportation of crude oil through tankers make it more global than natural gas that requires solid and long-term infrastructures like pipelines that makes it more regionally confined.
- ✓ Secondly, factors such as historical relations also have the potential to influence energy dependency in both positive and negative ways. The historical factor also explains partly the nature of certain energy dependencies as more politicised (political), less-politicised (security) or non-politicised (economic).

Another very interesting study on energy security is given by Sterling. He explained energy security under three broader notions of- (a) technological vulnerability (b) sustainability (c) transformations. Moreover, he categorised the risks attached to energy security under long term risks or ‘stresses’ and short term risks or ‘shocks’. In this case, the different kinds of risks were to be addressed with different kinds of response strategies such as- stability, durability, resilience and robustness (Sterling 2011).

1.4 BACKGROUND OF THE STUDY:

Russia is geographically located in a cut above position is the world’s foremost gas supplier with around 50 percent of natural gas supplies and having been surrounded by countries that are some of the leading energy consumers of the world. However, this is a very simplistic understanding of energy dependency. The dependency trends are more dynamic having many factors like domestic energy mix of the dependent countries and other security related factors. This makes energy security complex a much more complex issue than political or other security complexes.

In a similar way, the structure of energy security complex in a region is subject to shifts in other relative changes in the energy dependency percentages. But this shift in energy dependency has to be major and structural changes that are huge infrastructural changes which are strategic in nature. Pipelines, for example, are the most substantial indicators and can totally affect the energy dependency patterns within a region and also connect more states into the regional energy complex. In the case of Russian energy resources, Moscow being the foremost source of energy supplies in its vicinity both because of its huge oil and gas reserves and monopoly over the major pipelines has a dominating position in the region. These situations are also described as ‘overlay’ or total dependency. This situations wind up to having a two-fold proposition-

- ✓ Unipolarity in an energy complex leads to greater degree of dependency
- ✓ Multipolarity in an energy complex leads to greater degree of inter-dependence

As observed by Waltz, “mutuality of dependence, which is a feature of multipolar systems, compels each state to observe others with suspicion.” And, Mearsheimer

supports the argument saying, “.....if interdependence is high, there are many occasions in which the states can come into conflict” (Linklater 1995).

Therefore, different energy resources are benefitted with different security features mostly when a country uses its energy resources as a political instrument but with certain limitations at times. If there is a single energy supplier in a region with multiple consumers and the prime connectivity is through pipelines, then from the supplier’s point of view, it has more of monopolistic precision over controlling fewer countries than numerically bigger ones. This is because it is technically difficult to cut off supplies to just one customer in the entire region with several consumers that are connected to a common pipeline. This in a way restricts politically backed ambitions in the garb of economic plans.

Complexities of energy security are huge as it has both political and economic dimensions and as such the security implications cannot be curbed within limits of either one of the sector. Hence it is an important prerequisite for maintaining security throughout all other inter-related sectors (Buzan et al. 1998). There are essentially three levels of analysing energy security- state level, regional level and global level. The security dynamics are different in different levels considering that different types of energy sources have different security implications. As has already been explained, the reach of crude oil is more global because of its nature of flexible transportation and wider market capabilities and natural gas is more integral to the regional level; hence the analysis in energy security is not uniform in various levels (Buzan and Wæver, 2003). Each of these perspectives helps in categorizing an energy security study and in recognizing an energy security challenge to address it with the necessary responses.

In my study of understanding Russia’s changing energy strategy, there are some imperative points to bear in mind. Russia has the world’s largest reserves of hydrocarbon resources and as such has a very crucial role to play in the world with increasing energy demand. Russia had proven oil and gas reserves of 60 billion barrels at the beginning of 2010 and most of the resources under exploration are located in Western Siberia between the Ural Mountains and the Central Siberian Plateau. Russia has produced an estimated 9.9 million bbl/d of oil in 2008 and consumed approximately 2.9 million barrel/day

(bbl/d). Russia exported around 7 million bbl/d including roughly 4.0 million bbl/d of crude oil and the remainder in products. Majority of Russian exports go to the European markets (80 percent) but around 12 percent of Russia's oil exports go to Asia. Russia also holds the world's largest natural gas reserves with 1,680 trillion cubic feet (Tcf). Russia boasts for the largest gas fields located in Yamburg, Urengoy and Medvezh'ye (Oil and Gas Journal, 2010).

The post-cold war era has witnessed India and China as the two big emerging Asian giants with mounting amounts of energy consumption. China is the largest economy in Asia and second largest in the world. India is calculated with its booming economy to rise to a third or fourth place in the global economy in a couple of decades. Taking into account such a situation, there is all likelihood for an increased competition between both the countries to have hold of available energy options all over the world. Though, a joint participation might be helpful for both India and China to gain energy access so as to fulfill its energy requirements. But it is easy said than done, as energy related matters and especially in conflict-prone areas such as the Asian region is a complicated issue mainly because of its typical geopolitical arrangement. There are also problems like historically unresolved border issues among these countries, long-term problems of energy-security complications etc (Sikdar and Sikdar 2009: 15-16).

An international relations perspective of Russia's energy interests towards the Asian markets and China in particular lies in an approach called 'weak globalization'. It has been observed that economies like Russia and China prefer to be relatively closed and as such have a lot of trade barriers. Economic decisions in both the countries are also often taken with political objectives rather than purely economics. And as such, both of them consider economic globalization trends as inherently detrimental to their national security and sovereignty. In this way, for instance Russia's economic interests in the global level are driven by strategic national-political interests on one hand and maintaining its presence in the significant trade and capitalists market, on the other (Linde 2005) This explains the nature of economic and energy ties that Russia has with China, it is mostly bilateral than multi-lateral agreements. Even with India, Russia has some major breakthroughs in India's energy in the recent years.

Russian oil companies also benefit a lot under state-run systems in situations of depleting reserves where they can divert from exploration projects (upstream) to refining and trading (downstream) as state-owned oil companies mostly engage into upstream projects. In this scenario, energy relation no longer remains just a matter of economic concern but comes under the larger context of bilateral relations. Politically-driven energy strategies also help in bringing out major breakthroughs in energy relations as governments tend to play a much crucial role in leading and coordinating energy companies and striking energy deals faster with the government-backed funds etc. Countries like China in this case is more interested in trade towards a supplier like Russia as it does not attached democratic reforms or structural changes along with its economic and trade policies like the West. As such Beijing can effectively maintain its national strategic interests and economic or energy goals.

For Russia which already has a long history of energy relations with the EU is looking for energy diversification towards countries that it is compatible with and serves what is best for its national interest. Russia's new energy role in the Asia-Pacific region and in China and India in particular gives it a rationale to reduce dependency on the European market and reinstate its superpower status through energy as the most determining aspect today. Russia's energy engagement with China and India provides it with the highest possibility to attain security of demand and security of revenues to be earned and also a potential to expand beyond energy market. Moreover, EU's attempts to make Russia liberalize its gas markets were not going well. Russia was never in a place to accept the demands of the EU for all the structural changes and to give away major energy concessions that would not serve the best of Russia's interests. With an additional set of customers, Moscow also has an upper edge of playing one set of consumer with the other under the lines of playing its 'energy card', an argument that Russia's foreign policy is so familiar with (General Energy Council 2005: 22-23).

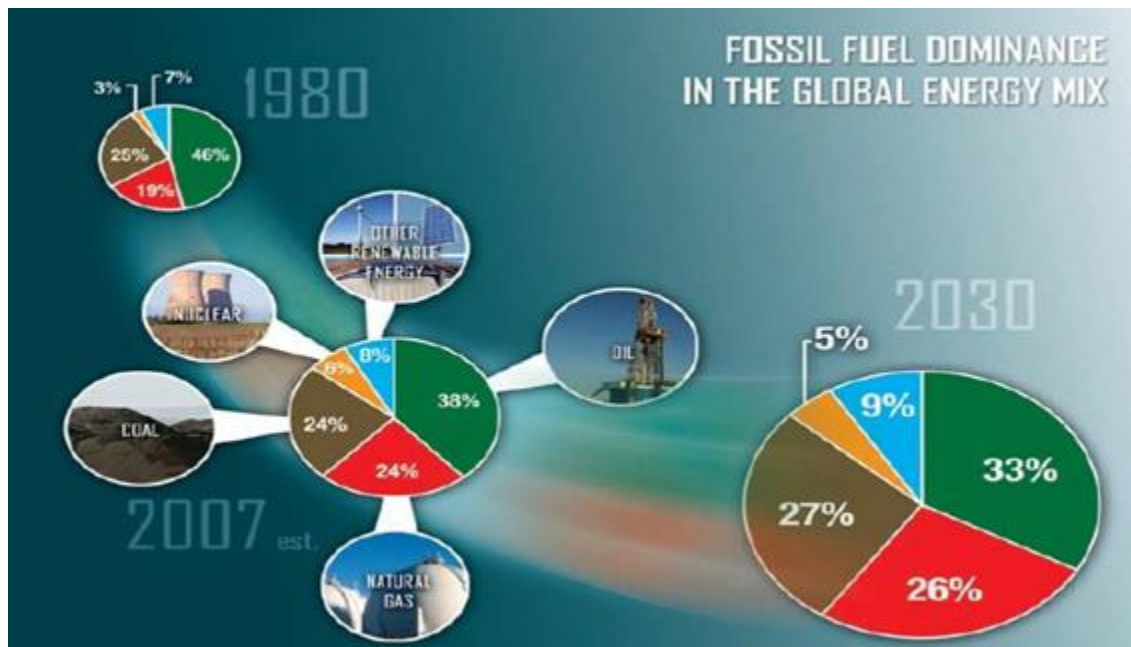
In view of the above mentioned backdrop, India and China apart from consolidating its own energy resources, also reinforces inclinations towards bilateral and regional cooperation with energy-rich countries which also justifies their inevitably growing role in the Middle East, Central Asia and Russia. Of all these regions, Russia seems to be a strategic and reliable option for both the countries for a number of reasons---

- Russia is the world's leading exporter of natural gas and in case of oil exports is second only after Saudi Arabia. And, a secure energy supply route like that of Russia is very vital for China.
- Keeping in mind the factor of secure energy routes, though a sizeable amount of energy is imported from the Middle East by China and India, yet Russia's importance for China is fundamental because oil and gas shipments from the Middle East or elsewhere has to pass through territories and seas monitored by the US. While, supply routes from regions of Russia, Central Asia or Iran is protected from such surveillance.
- In case of Russia-China energy links, Russia is very much suitable for China as it is geographically so close to China and also shares a long border.
- For India, Russia has always been a wonderful partner and the chronicle of Russia-India relations has been very sound, mutual and boasts of a long past. In fact, India-Russia energy cooperation goes back to the early years of India's independence. Close propinquity with Russia helped India to engage in the Sakhalin projects.
- India has many historical problems and border related issues with its neighbours like Pakistan, China etc. These political issues come in the way of India's energy-related ambitions. For instance, for any successful pipeline projects to either come from Russia, Central Asia or Iran, the viable routes have to pass through Pakistan and China, which is a trouble area for India. Russia here could lend a hand to India which in fact to give an example; Russia did show an interest to take part in the Iran-Pakistan-India gas pipeline project.
- The very desire of Russia to diversify its energy routes from the European markets to the new Asian markets is another factor. This policy would be helpful to shed away its complete dependence on European market, avoid the disruptive transit routes and in the process.
- A common aspect of both Russia and China is their attitude towards the US. China regards Russia as an ally against the US because China is considered by the US as a geopolitical threat. Apparently, sharing of such similar views based on

economic and strategic grounds by both the countries prompts Russia and China to enhance energy cooperation (Stephan Blank 2006: 1)

These points substantiate the significance of Russia's energy resources and its relations with India and China. Both being two fast-growing economies have since some decades endorsed meeting its energy needs as a top national security priority.

Graph 1: The World Energy Mix: Past, Present and Future (Dominance of Hydrocarbons)



Source: US Energy Information Administration (EIA), 2008.

This figure in above shows the trends in the world energy demand mix as analysed by the US Energy Information Administration (EIA), 2008. It portrays the domination of hydrocarbons as a central source of energy security as compared to other sources. Hydrocarbons have always been in the top table be it in the past i.e. during the 1980s which show a leading 46 percent in oil, 25 percent in coal and 19 percent in natural gas in world energy mix. Similarly, 2007 records points out the fact that although there is seen an increase in the use of nuclear energy and other renewable energy sources from 1980 standards, yet coal, oil and natural gas still record a higher demand and sum up to 86 percent of total energy mix. Similar trends in the future have also been calculated. As per 2030 expected world energy mix, hydrocarbons are to dominate the scene and among

hydrocarbons, it is being expected that cleaner sources like natural gas would record higher demands again due to factors of environmental acceptability. The essentiality of high demands for hydrocarbons among other factors, one is the high energy demand in the non-OECD countries i.e. Asian players, China and India being a critical part of it.

The following tables and figures depicts components like Russia's ability as a natural gas producer and exporter and increase in energy growth as suitable factors for establishing Russia's dominance as a superior energy giant.

Table 2: Demand for Natural gas up to 2030 (BCM)

Ref Case	2007	2020	2030	2007-2030*
US	655	635	649	-0.0%
EU	526	564	619	+0.7%
Japan	100	103	111	+0.4%
China	73	176	242	+5.3%
India	39	94	132	+5.4

450 Scenario	2007	2020	2030	2007-2030*
US	655	629	626	-0.2%
EU	526	523	509	-0.1%
Japan	100	92	98	-0.1%
China	73	163	198	+4.4%
India	39	89	132	+5.5%

* Compound average annual growth rate

Source: IEA, 2009: 366-373

The table above shows the rising demands for natural gas by 2030. Russia is in a privileged position in this case having the largest reserves of natural gas. It gives a detailed data description of two cases. One is the future projections of rise in demand for natural gas in the reference case of the economies of US, EU, Japan, China and India from 2007 to 2030 depending on its current economic growth rate. It is interesting to note that in case of China the growth projections in demand for natural gas are exceedingly high from 2007 figures to 2020 and 2030 estimates. This is primarily because of the exceptional annual GDP growth rate of China that was increasing since the 1979

economic reforms. Similar kind of economic growth in India resulted in the increase of its energy demands. Indian economy also recorded an average of 7.5 percent to 8 percent GDP annual growth since past decade. Another important indication in the table is the comparative increase in projected natural gas demands of China to be more than Japan by 2020 which was leading according to 2007 data.

The second case is under the purview of the 450 Scenario which is based on the pledges announced in association with the Copenhagen Accord and Cancun Agreements which explains the future projections to slightly differ in case the reference countries if abide by the 450 scenario. The 450 Scenario as explained by International Energy Agency,

Sets out an energy pathway consistent with the goal of limiting the global increase in temperature to 2°C by limiting concentration of greenhouse gases in the atmosphere to around 450 parts per million of CO₂ (OECD/IEA 2007: 141-142)

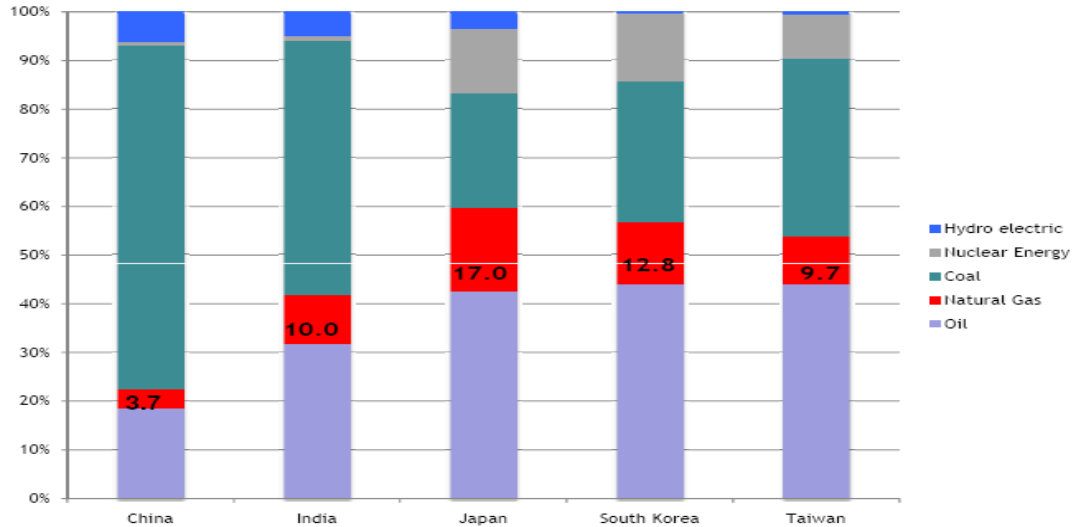
It means that it sets out a benchmark for energy consumption by countries to limit consumption to reduce the rate of carbon emissions to the standard of environmental acceptability.

So, according to the 450 Scenario table, two things could be concluded- Firstly, that countries like India and China that are responsible for contributing global energy related CO₂ emissions as the domestic availability of coal pose a threat to the environment. So there is an increased willingness for both the countries to divert its coal options to a cleaner fuel like natural gas and nuclear energy. Though, OECD and IEA projections forecast a drop in the share of nuclear power in world energy generation from 16 percent in 2004 to 10 percent in 2030. Yet closer observation shows that the Western countries are mostly responsible for this drop. Most of the nuclear power generating capacity from 364 GW in 2004 to 416 GW in 2030 occurs in the Asian countries of China, India, Japan and South Korea (OECD/IEA, 2007: 141-142). Secondly, in terms of natural gas demands of China and India, although the 450 Scenario shows slight decrease from the Reference case, yet diversion from coal-oriented economy to cleaner source of hydrocarbons like natural gas is extensively being pursued by both the countries as will

be discussed in the coming chapters. And, here Russian gas exports have a huge role to play.

The figure below demonstrates the Energy Mix in some of the major countries in the Asia Pacific. It shows how coal has been largely a part of energy fuel used by these countries for a long time.

Graph 2. Energy Mix in five major Asia-Pacific economies in the year 2009.



Source: BP 2010.

The next table shows the trend in rising demand and imports in Asia-Pacific since 2001 and the expected trend until 2020.

Table 3: Oil Demand and Imports, 2000-2020

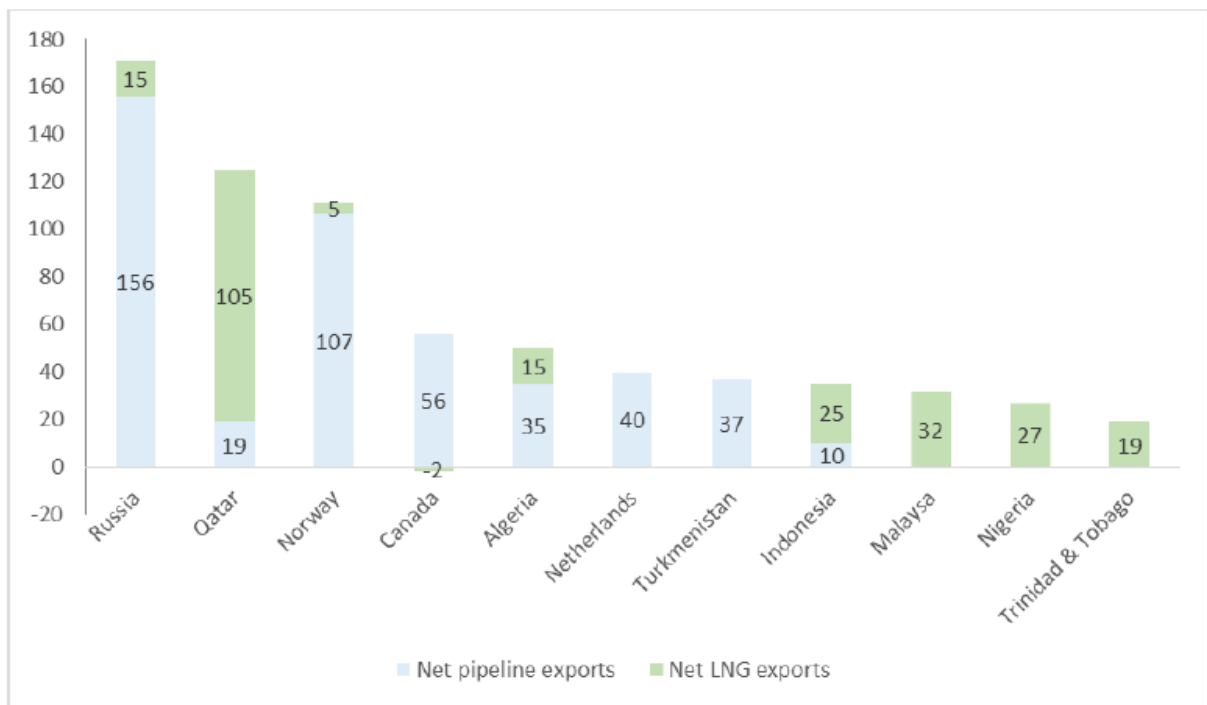
APR economies & the World	Demand, 2001 Million b/d	Demand, 2020 Million b/d	Imports, 2020 Million b/d
Japan	5.7	6.4	6.4
China	4.3	10.6	7.6
South Korea	2.1	3.0	3.0
Taiwan	0.8	1.0	1.0
India	1.8	4.9	4.0
World	75.4	119.4	-----

Source: Energy Information Administration (EIA), <http://www.eia.doe.gov/oiaf/ieo.oil.html>

The table above depicts the scenario of rising oil demands for various Asian countries of East Asia, South Asia and Southeast Asia. While it shows that in countries like Japan, South Korea and Taiwan there is a gradual increase in demand from 2001 to 2020, other Asian players like China and India record expeditious growth in demands- China's demands in oil has bounced from 4.3 million b/d in 2001 to a projected increase of 10.6 million b/d in 2020. Similarly for India the demands for oil have more than doubled from 1.8 million b/d in 2001 to 4.9 million b/d according to 2020 estimates. Due to domestic insufficiency of oil in both these countries, they rely on massive imports of oil, which is reflected in the table showing the imports trend. Out of 10.6 million b/d of oil demand in 2020 in China, it caters for 7.6 million b/d in imports in 2020. Similarly, out of 4.9 million b/d in 2020, India's oil imports are 4 million b/d. For other countries like Taiwan, South Korea and Japan, it can be observed that they rely completely on oil imports, indicating the tremendous dependency of Asia-Pacific economies on oil importing countries.

The next figure depicts the data of Russia's capabilities as a natural gas exporter.

Graph : Main Net Exporters of Gas (Pipeline and LNG), 2012



Source: BP Statistical Review of World Energy, 2013

In the graph above, there are various countries involved in gas exports. The lighter shade represents the net pipeline exports and the darker shade represents net LNG exports. In the figure, Russia is seen leading in the total capacity of gas exports in the world, but other competing parties like Qatar has a good edge over LNG exports and is far more than Russian LNG exports. However in terms of pipeline exports Russia is leading due to its extraordinary nature of transcontinental pipeline infrastructure capability which is not a fundamental feature of any other natural gas exporters. Russia has approximately 150,000 km of trunk pipelines. In terms of pipeline gas the capabilities of other gas pipelines are fairly limited. This unique feature of Russian gas market has enabled it to have a huge influence over the European market and the CIS.

1.5 REVIEW OF LITERATURE

Various researches have been done on issues of Russia's energy relations with different countries. Energy being the core element of Russia's foreign policy attracts attention of numerous researchers. But most of the works have been majorly focussed on Russia's energy cooperation with either the European states or the Central Asian states.

Under the framework of understanding regional energy dependence and the monopolistic position of a largely single energy producer, comes up the question of the potentialities a Russia's claim to acquire the energy superpower status. Russia's ambitions to become an energy superpower have been unequivocal and at the same time disputed. In this case, Russia's probable claims to become an energy superpower have to be examined under two-fold grounds-

- ✓ Firstly, if there are any other energy superpowers?
- ✓ Secondly, what is the structure of polarity between energy superpowers?

For Russia's sake of the debate on having the greatest chances of becoming an energy superpower, the following argument seems to have the closest argument. In a largely global perspective, it is well known that energy resources are limited and restricted to specific geographical locations. Hydrocarbons are largely concentrated in the regions of Russia, the Middle East and West Africa. The main regions of high rate of energy

consumption basically lie in the United States, the EU, China and India. Considering this analysis it can be comprehended how the Eurasian region and specifically the hydrocarbons resources of Russia have the closest geographical connectivity with its consumers complimenting the demand side increasingly. Along with its conventional European customers, even the future of Russian hydrocarbons looks much optimistic with the policies of energy diversification towards the Asian region. This is one significant point that will be addressed in the fifth chapter of the thesis along with instances, facts and analytical approach.

Moreover, the rise in global oil prices since 2004 gave a commendable boost to Russia and consolidated its economy which majorly depended on the energy revenues. Many scholars put forward the argument that Russia's economic rise is vulnerable as it is centered round its energy sector and hence driven largely by the ups and downs of global energy prices. However, since 2004, for a long time the oil prices have varied from \$22 to \$28 per barrel only. Future trends are also expected to remain stable or increase further due to the all-round developments in the global oil market (General Energy Council 2005) These developments are closely connected to the economic developments of the energy markets in Asia especially China and India. The economic growth rate of India and China since the last two decades was recorded to be even better than many other states. Moreover, China and India together account for a one-third of the world's population which means that the demand for energy is just going to grow day by day. This largely explains that in a few years, world economic focus will drastically shift towards China and India (Wilson and Purushothaman 2003).

In this context, the recent emerging topic of concern has been about Russia's role in the Asian region in general and with the two emerging Asian giants that is India and China in particular. It is very interesting to learn how the Asian market is becoming a new fascination for Russia and how the issue of geopolitics plays an important role here. The literature review has been catagorised into four sub-themes.

Energy as a Foreign Policy Tool of Russia:

Energy is the main driving force for nations. Hydrocarbon resources are not widespread and are available in limited zones; hence its easy and affordable access is very important.

Factors like geographical nearness, safe terrain, pleasant neighbours, good bilateral relations etc helps in easy and smooth access to energy resources. Therefore energy acts as a compelling factor in shaping the behavior of nations. Likewise, consumer nations display a cooperative behavior towards the leading exporters of oil and gas, and behave in a competitive framework with its fellow consumers. Russia is very rich in energy resources with world's largest gas reserves and second largest oil reserves. Hence, it uses this as a merit in order to strengthen its position in the international scenario and in steering relations with engaging states.

After the Soviet disintegration, Russia lost its superpower status and thereby its position as an important world actor. It was during the Putin era from 2000 onwards that global oil prices increased and energy evolved as a crucial player in Russia's foreign policy that saw the resurgence of Russia in the international platform once again. Russia's image as an energy giant is on basis of its extensive oil and gas potential that attracts the emerging and fast-growing economies of the world. According to Bocharov (2006), oil and gas played a crucial role in president Putin's modernisation strategy utilising it as an influence on Russia's foreign, economic and security policy strategy. The calculations of the 'Russian Energy Strategy to 2020' constitute the main ideological foundation defining energy exports as a major instrument of Russian foreign policy. In fact, the Russian energy sector dominates more than 25 percent of the country's GDP and as such dominates Moscow State Exchange.

Bugajski (2004) identifies energy control as one of the fourteen foreign policy tools of Russia. The tool of energy is used for diplomatic strength and economic advantages.

Russia is well aware of its energy competence and in this context have several times used the energy card with engaging states. Whether as a business act or political act, Russia tries to secure highest possible returns from its energy sales since Russian energy sector majorly defines the strength of Russian economy. Perovic (2009) observes Russia playing its energy card in January 2006 when it shut down its supplies to Ukraine creating immediate shortage in supply to a number of European countries. As a business issue, it suggests how Russia could secure high energy prices and as a political issue Russia could perceive considerable dependence of European countries over Russian energy assets.

Although at present, Russia is one of the leading exporters of hydrocarbon resources and monopolizing gas supplies does help Russia in leveraging the gas prices in the export markets yet Russia cannot use the energy tool to an extreme extent as the factor of mutual dependence also plays an important role here. According to Fredholm (2005), Russia needs the consumer nations as much as they need Russia. Though Russia's role as a leading supplier matters, yet has to understand that it is not the sole energy supplier in the world and in order to sustain its image as an energy superpower, it has to evolve itself from time to time and as such cannot just remain being a sole supplier to its traditional customers in Europe but expand its market towards the upcoming Asian region.

Russia's Diversification of Energy Routes and its Energy Strategy towards Asia-Pacific:

In connection to the first theme of using energy as a foreign policy tool of Russia, diversifying of Russian energy exports is a remarkable step taken by Russia. The diversifying of energy routes not only helps Russia to overcome its over-dependence on European customers but also re-emerge as an energy superpower. As predicted in Russian Energy Strategy up to 2020, the production from Western Siberia which mainly serves the European consumers is likely to reduce from 71 percent to 61 percent (Russian Energy Strategy up to 2020). The diversification plan of Russia opens way for Russia's hydrocarbon reserves of East Siberia and Far East, providing a more viable option to make business with the Asian markets. Also, the Asian region has no complications of problematic transit states, hence providing only the benefactors. According to Yergin (2006) Russia's concept of energy security lies in maintaining the security of demand for its exports, reasserting its control over strategic energy resources in order to gain primacy over major pipelines and market channels through which hydrocarbons are transferred to the international market.

Therefore the diversification plan of Russia is closely intertwined with the concept of energy security itself. In order to retain its position as energy supreme even in the post-Cold war period, Russia has to be a global energy player. Pant (2008) confirms that

Russia cannot just confine its energy market to the domestic arena and just be a supplier to Europe primarily, but extend its reach towards other energy markets as well.

On the basis of *Russian Energy Strategy to 2020*, Russia in the near future has projected to produce approximately 106 million tons by 2020, a dream to be realised by means of exploiting the long neglected Eastern Region. Therefore, in this context Moscow has drafted a policy towards the Asia-Pacific Region by supplying energy, attract foreign investments and increase trade. According to Mohanty (2011), Russian energy strategy visualises a considerable hike in hydrocarbon exports to the dynamic Asia-Pacific region and India from 3 percent of energy exports at present to 30 percent in 2030.

A similar argument is also given by Itoh (2008) who recognises Putin's efforts in leading energy diplomacy and eastward development, ensuring increasing Russian role in the Asia-Pacific region. Therefore, it can be understood that in the backdrop of gradual decline of production volumes of West Siberian energy resources of Russia, the Far East energy potential of Russia will be compensating for this loss. As Subramaniam (2005) mentions, energy relations suitably act as a catalyst in appealing other businesses like automobiles, electrical and electronics hence leading its way towards greater industrial development.

Russia's Energy Policy towards India:

The historical relations of a country play a very important role in shaping its present approach to bilateral or multilateral ties. The most fundamental link between India and Russia since the Soviet times has been the energy sector. India-Russia bonding has been the result of long evolution through time-tested friendship and sharing of common interests. According to Kumar (2008), Putin's era is a special period of Russia-India's renewal of closer ties especially in the energy sector for Putin's personal and political interest and involvement in it.

India has limited availability of oil and gas domestically and hence depends greatly on energy imports. Though India at present depend to a large extent on West Asia for its oil and gas requirements, yet Russia is a very viable option for India due to its historical proximity and presence of some very significant ongoing exploration projects. According

to Kundu (2010), today India-Russia cooperation has the basis of a constructive approach that strengthens their strategic partnership with a mutual long-term interest in carrying forward their partnership. Russia is expected to play a greater part in global energy security and with India's growing energy need, it could be expected that by the year 2020, about 45 percent of the growth in demand for oil is expected from India. The author mentions about a proposal given by ONGC regarding a pipeline project (Russia-China-India pipeline) to supply gas to northern India. In the similar context of petrochemicals, ONGC Videsh Limited (OVL) and Rosneft are engaged in joint bidding for the Sakhalin III project.

Patnaik (2008) also states that Russia helps to meet India's energy requirements by allowing India to invest in the Russian energy sector.

Hence, the major investments of India in Russia are that of OVL acquiring stakes in Sakhalin-I oil and gas project, other Indian companies making their presence in Russia are GAIL, Coal India, Oil India Limited, Reliance etc. Mohanty (2013) referring to the February 2001 Rosneft and OVL agreement, states that it led to the transfer of 20 percent stakes by Rosneft to OVL with an investment of \$ 2.7 billion making it one of India's largest investment abroad. Sachdeva (2010) points out that energy ties could play an important role in developing Russia-India relations if problem areas like meeting economic and energy linkages, insufficient information, logistic concerns, visa problems etc are solved.

Moreover, the energy sector is a vital ingredient in Russia-India partnership simply depending on demand-supply equations. As Sharma (2010) mentions, "impetus for greater engagement lies in simple demand and supply complementarities." However, for removing challenges in energy cooperation, solutions like swap arrangements, more secure route options, better trade and economic connections, joint energy projects could be adopted.

Russia's Energy Strategy and China:

China is the fastest growing economy of Asia. In fact, Russia could not have perceived of such a diversified energy strategy without having the rewarding Chinese market in mind.

The basic Chinese state policy is committed to rapidly building its economy and in this process drives China into encouraging relations towards prime energy producers and exporters world over and in a similar way poses challenges to the other energy importers in related competition for securing energy resources. In the context of the Asian region, the emergence of China and India is concurrent and both the countries are competing for the same upstream resources and bidding for the same blocks. Therefore, a clash between India and China is natural and unavoidable.

The geographical proximity in case of China favours it by providing Russian energy as a feasible option for China. Apart from the factor of China's geographical benefit of easy accessibility to the Russian Far East, other factors such as ability to finance big projects, provide cheap labour, Chinese interest in meeting its soaring energy demands and its insistent thirst for energy resources world over supports China's position as a suitable actor in the context of Russia's energy strategy towards the Asia-Pacific region.

Russia finds China as a very attractive and suitable destination for energy exports and investments owing to the latter's record of striking successful deals and acquisitions worldwide within a span of some years. It makes China not only a reliable partner, also ensures Russia's energy security by providing it with a secure and lucrative market for its supplies. According to Yew (2013), in a race for acquiring energy assets worldwide in 2013, China's major acquisitions have been by CNPC in Mozambique, Kazakhstan and Russia; by PetroChina in Australia; by Sinopec in Angola and Egypt and by Sinochem in Colombia and the U.S. While, major acquisitions by India were by OVL in Mozambique, Azerbaijan and Brazil only.

One of the primary disadvantages of India in this competition lies in the fact that China is economically affluent than India. This provides China an added advantage of acquiring energy assets or grabbing energy deals faster. China has been more successful in striking deals as it is overpaying to secure international energy assets, hence maintaining a very aggressive energy policy. It leads a very ferocious energy policy and its intensity of involvement in the hunt of global energy assets is intense. Panda (2006) recognizes the issue of China entering into the trajectory of a fast growing economy that makes securing energy resources a pre-requisite. In fact, China's success in acquiring overseas energy

assets is overwhelming. CNPC is competitively engaging in the Russian energy market in terms of constructing a network of pipelines, infrastructure development in the energy sector. In this way it challenges other players in the game including India's ONGC which has been facing serious competition.

In a similar context, Chinese energy companies deliberately offer infrastructural projects related to Russian energy projects in a bid to strike energy deals. Chinese banks provide huge loans to Russia for financing large infrastructural projects in Eastern Siberia, Russia's Far East. In fact in 2009, a contract was signed for crude oil supplies between Rosneft and CNPC. Moreover, Rosneft and China Development Bank finalized contractual documentation for a long-term credit line in the framework of facility agreement signed between the parties in March 2013. Also, in the construction of the second phase of the ESPO pipeline too China has invested almost \$25 billion. These are certain significant steps taken by China in the direction of competing for Russian energy resources, an advantage not enjoyed by India.

Chinese companies are primarily state-owned and hence receive government support for faster negotiation of deals. Proper government finance is very urgent in this case. As Downs (2010) mentions, China had the ability to lend bankrupt Russian energy companies about US\$25 billion in exchange for the completion of an oil pipeline to China and a 20 year oil supply contract. Similarly, on the grounds of economic muscle the comparative inability of the Indian Government in financing Indian companies to tap overseas energy markets is becoming a major detriment in building India's energy connections with the leading energy suppliers including Russia. (Rajan 2012).

Moreover, China's geopolitical advantage also alleviates its business relations with other countries. It is not only the geographical location of China bordering fourteen nations that acts as an advantage but also the fact that China has friendly neighbours, helps Beijing in matters of building a secure on-land pipeline. Therefore, China benefits in this regard as it shares a long border with Russia, the two-way trade has been much greater than India and even the US. As Naughten (2007) observes, China from being a net exporter (22 percent) in 1990 will change into a net importer (75 percent) in 2025 and China's geographical nearness to Russia gives it an advantage to closely cooperate in the oil and

gas sector. Legault (2008) also agrees to the same point and states that Lukoil and PetroChina together own 25 percent of the reserves owned by top ten companies which is a clear indication of the mounting oil and gas assets that Russia and China have hold on.

Therefore, considering all of the above factors, it can be understood how China is another strong actor in the region for accessing Russian energy resources and it allows Russia to play its energy card in presence of two the competent buyers. Considering the presence of India and China in Russia's new energy strategy towards Asian region, it spells not just competition but a sense of strong rivalry.

Although there were speculations in the past over a possible cooperation between China and India in order to reduce the escalating oil prices and hence lowering the energy costs, yet nothing has seemed to materialise till now. In fact, India and China have involved deeply into a fierce competition in drilling oil reserves and acquiring oil fields with all possible tactics. Hence China is as much a player in the region as India which essentially adds a strategic dimension to Russian energy rather than just being a commodity of demand and supply. Pant (2012) recognises the rise of China as being the greatest geopolitical event of present times. The Sino-Indian relationship is further complicated as both these Asian countries mount in the global inter-state hierarchy. Therefore, in context of energy security, the author clearly sees this Indo-China connection as a zero-sum game as securing energy resources fundamental for both the countries to sustain their economic growth. Titov (2008) even warns India and states that in this regard; in the near future, Chinese military deployment of its navy would be such that it would prompt India's naval assets to protect India's shipping and trade routes and access of energy resources from the Sakhalin province of Russia.

1.6 RATIONALE AND SCOPE OF THE STUDY

Although many studies have been done on Russia's energy policies yet most of them have concentrated on energy policies towards Europe. This study aims to fill the gap in the existing research on Russia's energy strategy towards the Asian side. Diversification of Russian energy exports towards Asian region as a whole is something that Russia is interested in, yet western scholars have an impression that this is less likely to happen.

However, Russia has its own energy strategies and the two Asian giants, India and China are a big part of this plan. India and China are the fastest growing economies of Asia and as such a very lucrative consumer market for Russian energy supplies. Therefore this study aims to evaluate the facts of Russia's energy diversification towards the Asian market at large.

The study also aims to understand the importance of energy as a vital element for economic growth and that it has a strategic value being rare in nature and the country which has it in abundance can use it as a foreign policy tool. Similarly, for acquiring this valuable resource, energy importers behave in various ways, extending from cooperation with the energy exporter to competing for the same resource with a fellow competing state. However, Russia proves to be a very significant energy source for both India and China regarding the adequate availability, historical and political goodwill, cost-effective operations, meeting strategic and geopolitical needs, future prospects; whichever is convenient for India and China.

One of the prime ambitions of the study is to analyse both India and China in context of its energy relations with Russia. The question is how the presence of two concurrent emerging powers and fastest growing economies evolve Russia's role in rebalancing them in the region on account of its changing energy strategy. What is the amount of competition among the two Asian economies in their engagements with Russia for energy resources? Whether it only brings a negative outcome or is there any room for cooperation among China and India in this context? Whether presence of China in the scene affects India as the other player negatively or positively? How does this strategic energy triangle of "one seller: two buyers" ratio affect one another's individual energy strategies? How does Russia benefit from engaging in it? It will also try to evaluate the best option for all the three countries that will help them benefit the most while engaging in this energy triad. The study will also view the strategic angle of the energy triad and understand it as more than just a traders' relationship and whether Russia emerges as an energy superpower as a consequence of this triangular engagement rebalancing both India and China in the process. The study also aims to look into how Russia plays its part

in the Asian region in the context of the forces of convergences and divergences shaping their energy relations.

The study will also add scope to understand how energy plays a definite role in structuring the behaviour of the buyer nations, examining the nature of cooperation or conflict that might exist among the buyers and problems, prospects and implications related with it. The study will confirm the connections between different variables like historical factors, energy security, foreign policy, energy strategy, geopolitics etc in understanding Russia's energy tactics with India and China. Additionally, this proposed study will be a pointer towards future research in this direction.

1.7 AIMS AND OBJECTIVES OF THE STUDY

1. To examine the market potential of the emerging economies of India and China in the context of increasing energy demands.
2. To assess Russia as a prospective energy supplier to India and China.
3. To examine energy as a tool of Russia's foreign policy towards India and China.
4. To examine the factors responsible for a sluggish Russia-India energy cooperation.
5. To examine the factors behind an increasing Russia-China energy cooperation.
6. To study Russia's energy strategy as a tool for rebalancing India and China.

1.8 RESEARCH QUESTIONS

1. What are the primary elements of Russia's energy policy?
2. What are the main energy projects undertaken by Russia with India and China?
3. How far are India and China successful in meeting their energy demands from Russia?
4. How does Russia use energy as a foreign policy tool with India and China?
5. How does Russia use its energy potential to balance its relations with India and China?

6. How does Russian energy add a strategic dimension in the Asian region than just being a demand-supply concept?

1.9 HYPOTHESES

1. Russia's effort to diversify its energy exports towards the emerging Asian market has created opportunities for strengthening Moscow's cooperation with India and China which further augments Russia's position as an energy superpower.
2. While the traditionally strong ties between Russia and India create favourable conditions for India to be an active energy partner with Russia; China's growing energy needs, its geographical proximity, its strong desire and ability to invest in Russia's energy sector has negatively impacted Russia-India energy ties.
3. India and China's efforts towards meeting their soaring energy demands from Russia provides Moscow with a more strategic role in the Asian region on account of rebalancing these two largest emerging Asian economies.

1.10 RESEARCH METHODOLOGY

The main thrust of this research is to examine the energy potential of Russia towards India and China as collected from various available energy data and to see its growing prominence in the new emerging Asian markets on account of firstly, the thriving economies of India and China and secondly, Russia's policy of diversifying of energy routes. In this sense the study becomes empirical. This study will however analyze in detail the geopolitics of energy in the context of the exiting theories on energy, geopolitics and geo-strategy with regards to the region. This will allow the study to pursue historical, theoretical and deductive method to justify the case under scrutiny in the light of the already established theories. The study will also include a comparative method in understanding Russia's energy policies towards India vis-a-vis China.

Primary sources like official websites of Russia, China and India will be used. Original documents like Russia's Energy Strategy 2020, Russia's energy Concepts and Doctrines

of 1995, 2003, Energy Strategy for Russia: For the period up to 2030, India's Hydrocarbon Vision 2025, APEC Energy Demand and Supply Outlook 2030, Global Security: Russia Second Report, President of Russia Website, Energy Reports from Ministry of External Affairs Website, Reports on Energy available in the FICCI Website etc will be read and examined. Other sources such as newspaper reports, published and non-published interviews on energy issues by energy experts would be used as per availability. Secondary sources would include books, articles, and research papers, international and peer reviewed research journals and submitted M.Phil dissertations and PhD thesis on energy related topic. If resources permit the research would undertake field study to collect the relevant data.

As far as variables are concerned, in the first hypothesis, diversification of Russian energy exports is the independent variable and Russia's position as an energy superpower is the dependent variable while the cooperation of Russia with India and China in the Asian market acts as the intervening variable. In the second hypothesis, the traditional ties between Russia-India and favorable factors of China (like China's growing energy needs, its geographical proximity and its willingness and ability to invest in Russia's energy sector etc) are the two independent variables in determining Russia-India energy equation. Hence, the Russia-India energy cooperation is the dependent variable here. In the third hypothesis, India and China's interest in energy cooperation with Russia is the independent variable while Russia's strategic role is the dependent variable while Russia's act of rebalancing the Asian economies is the intervening variable.

1.11 CHAPTERISATION

The thesis has been catagorised into six chapters. The introductory chapter discusses the basic definition of energy security, its evolution, theoretical basis of it and its relevance in the present day world. It brings out the background of the study depicting energy as an important element in Russia's foreign policy. This chapter introduces the hypotheses, important variables, research questions and objectives and explains the rationale of the study.

The second chapter entitled “Russia’s Changing Energy Strategy” focuses on three basic aspects. Firstly, it examines the domestic energy policies under the Yeltsin era and the challenges that came with it; the structural changes in the energy sector since Putin which recognised ‘energy’ as a crucial component of Russian economy. Secondly, it examines the traditional energy policies of Russia primarily focused on the European consumers and how in the backdrop of the challenges, there emerged a gradual shift in Russia’s energy strategy which saw the adoption of the policy of diversification towards the newly emerging markets of Asia. And finally, it analyses how the trend of the economically-thriving Asian economies of China and India facilitated Russia’s option to explore its prospects in a more comprehensive way and ensure its rise as a dominant energy player.

The third chapter entitled “Russia-India Energy Cooperation” examines Russia’s energy synergy with India. It gives a historical backdrop of Soviet Union’s unparalleled assistance to India’s energy sector which was critical to the latter being a newly independent country. It analyses India’s energy aspects in terms of growing demands and the role of Russia in it. It further deals with significance of historical affinity between the two states to evaluate the nature of energy cooperation. The chapter also identifies the various loopholes in the relationship.

The fourth chapter entitled “Russia-China Energy Cooperation” deals with Russia’s energy relations with China. It focuses on the various energy projects taken up by Russia and China, the favorable aspects of its energy ties and also the hindrances in the cooperation.

The fifth chapter entitled “Russia as a common factor in the trilateral engagement” analyses the energy relations of Russia in a comparative framework between India and China and its act of balancing the two Asian states. It examines the various hypotheses of the study and emphasises on how the aspects like geographical proximity, historical affinity and political will have played its own role in defining Russia’s energy ties with both China and India. The chapter also gives an assessment whether ‘energy’ has helped Russia reemerge as an energy superpower. It also focuses on the problems underlying with such an ambition.

The final chapter constitutes the summary, major findings and implications of the study. It also states the possible measures to address the loopholes in the energy cooperation and energy strategy of Russia.

CHAPTER 2

RUSSIA'S CHANGING ENERGY STRATEGY

2.1 INTRODUCTION

The second chapter focuses firstly on the traditional energy policies of Russia that point to the conventional areas where Russia's energy draft was focussed on and how there has been a gradual shift. It deals with the new energy strategies adopted by Russia towards the Asia-Pacific region and the factors behind such an interest. It focuses on three basic aspects. Firstly, it examines the domestic energy policies under the Yeltsin era and the challenges that came with it; the structural changes in the energy sector since Putin which recognised 'energy' as a crucial component of Russian economy. Secondly, it examines the traditional energy policies of Russia primarily focused on the European consumers and how in the backdrop of the challenges, there emerged a gradual shift in Russia's energy strategy which saw the adoption of the policy of diversification towards the newly emerging markets of Asia. And finally, it analyses how the trend of the economically-thriving Asian economies of China and India facilitated Russia's option to explore its prospects in a more comprehensive way and ensure its rise as a dominant energy player. The chapter also tries to find out obstacles in such cooperation.

During the cold war period, the former Soviet Union stood majorly on two pillars of strength which were ideology and military prowess. These two elements identified the former Soviet Union as one of the superpowers in the bipolar world order in the cold war period. However, in the post-cold war era, after the collapse of the Soviet Union, Moscow was more ardent in talking in the language of energy. The advent of Putin to power laid down the way for strengthening Russia's modernisation and foreign policy strategy and the energy sector of Russia played a defining role here. The post cold war era is essentially identified as an era of geo-economics and geopolitics. Hence the emphasis on 'soft power' becomes more commanding in today's age. Russia's re-emergence as a great power depends largely on the economic and energy calculations. Putin's goal of restoring Russia's great power status was based on not only being a

significant military competence but also in using its energy resources for an economic control. The main foreign policy goals of Moscow essentially thrive on aspects like economic modernisation and a regional great power (Bocharev 2006). Hence, economic integration of Russia with other economies of the world was the first step and the EU was most connected with Moscow's economic ambitions. As mentioned in *The Economist* (2004),

Putin wants Russia to be an economic tiger integrated into world economic systems and processing strong ties with the EU being, at the same time, the dominant [and independent] regional power within the CIS (Bocharev 2006: 5)

Russia's energy stock essentially has two different variants of hydrocarbons. It is important to mention this because of both the energy types i.e. oil and gas play a different role in the economic development of Russia. As Thane Gustafson explains this scenario, he puts it as, "Thus, without much exaggeration, one could say there is a division of roles: oil pays the bills abroad, while gas subsidises the economy at home." (Gustafson, 2012) This reflects how important Russia's energy sector for the country's growth and development is. The Russian oil and gas industry in this way has built its own approach to privatisation, foreign policy etc (Hedlund 2014: 93)

Russia's impulse to constitute energy security as the top most priority for handling issues of economic and foreign policy concerns was also evident when the Russian government presented energy security as the key subject in the G8 Summit in July 2006 held in St. Petersburg. The G8 Summit in St Petersburg identified the importance of energy and stated it as,

essential to improving the quality of life and opportunities in developed and developing nations. Therefore, ensuring sufficient, reliable and environmentally responsible supplies of energy at prices reflecting market fundamentals is a challenge for our countries and for mankind as a whole (Global Energy Security, G8 Summit 2006)

The St. Petersburg Plan of Action on Global Energy Security also mentioned some of the overarching goals that were closely linked with energy security like high pricing issue,

growing demands, increasing import dependence, environmental concerns and threats such as protecting the energy infrastructures from natural and man-made disasters, threats emanating from terrorism, political instability etc. The Summit further showed energy security having a global reach. Without securing sustainable access to around 2.4 billion people and electricity for about 1.6 billion people in the developing parts of the world, neither Millennium Development goals nor energy security can be achieved (Global Energy Security, G8 Summit 2006).

2.2 RUSSIA'S ENERGY STRATEGY- THE YELTSIN PERIOD

After the dissolution of the Soviet Union in 1991, Russia as the largest successor state of the USSR was deprived of the kind of status it used to enjoy as a superpower. It had lost its political might. Boris Yeltsin was the first President of the Russian Federation. It saw some radical transitions from the age-old centrally-planned economy of the Soviet Union to a market-based economy in October 1991. However, the years just after the Soviet disintegration did not yield much result. The problem was structural. Boris Yeltsin took up some radical steps to restructure the economy and in this venture went about with rapid privatisation and de-industrialisation. The energy sector also got affected in this process. During the very first years of Yeltsin's administration, he started with the groundwork for a smooth transition to a market-oriented economy and such began with the gradual elimination of price control over commodities (Considine and Kerr 2002: 236).

However, Yeltsin's term in office was not as balanced and easy as he expected when he won the Presidential seat with 57 percent seats. His relations with his Parliament was rocky and unsupportive. Yeltsin's attempts to transform the state's economy to a market model invited severe loathing from his own parliamentarians especially the conservatives from the old Soviet command who felt that the new market reforms would harm their personal interests and they would be stripped off their own special perks. Yeltsin faced the strongest opposition not only from other political parties, but also within the Parliament from the Speaker Ruslan Khasbutalov and his own Vice President,

Aleksander Rutskoi. Moreover, Russia's constitution did not have answers to this situation of conflict between the President and his parliamentarians which also led to a constitutional crisis. In this way Yeltsin had a two-fold problem- firstly, trying to transform the economic base of the country from a long-established state-controlled system into a free market economy overnight; and secondly, making a difficult choice of going against his own parliamentarians who should have been his support system (Kumar 2010: 46).

Russia's economic situation just after the coming of Yeltsin was therefore disastrous. The Government's increasing lack of control over the economy coupled with a severe drop in production and tax collection led to this tragic situation. The anarchic state of affairs emanating from all the restructuring of the Russian Federation due to the disintegration process and Yeltsin's radical policies also had an impact on Russia's energy industry. Goskomstat (1993) compared this sorry state of Russian economy during Yeltsin as worse than the economic condition during four years of fight against Nazi Germany during World War II. Official estimates stated that Russia's GDP from 1991 to 1994 dropped to more than 38 percent (Goskomstat 1993: 13-14).

Anders Aslund, Russia's economic advisor from November 1991 to January 1994 explained this sorry state of affairs in his words as follows-

The defining characteristic of Russia in 1991 was the depth of the collapse of the state, which had occurred in at least four ways, first, and most obviously, the Soviet Union broke up in December 1991. Second, the communist political system fell apart in the fall of 1991. Third, the command economy system foundered in 1990 and 1991. Fourth, state finances faltered as well, as a massive budget deficit of perhaps 30 percent of GDP mounted in 1991. They had lot of hopes from Boris Yeltsin. Very few were aware of the gravity of Russia's economic problems and the realities of its political situation (Aslund A 1995: 6)

After price liberalisation was introduced by Yeltsin in his initial years, many opportunities opened up for the Russian and foreign business elites. The dollar demand in the international market escalated swiftly and brought profits to the business class who bought commodities at low prices in Russia and resold at higher prices in the

international market. This in a way impacted the Russian oil industry because the big businessmen made excessive money by selling oil and other raw materials in the global markets. The corrupt bureaucracy made an easy way out for these business elites who were doing nothing more than stripping the Russian state from its significant energy assets. It was therefore not the fair play of foreign trade that was generating profits for the businessmen, but the unfair system of corruption, malpractices, bribery etc. Hence it was paving a way for the Russian oligarchs to exercise control over the Russian oil industry (Kumar 2010: 51).

It became quite apparent that the idea of opening the Russian economy in a drastic way to the world was not a very good idea. Not only that the economy was going through its worst phase but the energy industry complex was passing through its lowest ebb. There was no major investment even to reform and develop the oil industry. In the words of Peter Reddaway and Dmitry Glinsky (2001),

Russia, in the 1990s benefited little from the opportunities and advantages of opening to the international economy because its economic system remained highly corrupt, concentrated, politicized, unaccountable, and opaque. Opening to global financial markets did not attract investment and capital; instead, it facilitated capital flight. Privatization did not promote entrepreneurship; it encouraged asset stripping, created large and unproductive business holdings, and discouraged foreign direct investment. Shifting to a market economy did not subject Russian businesses and the Russian state to the disciplining constraints of the market; rather, it enabled them to amass wealth without the threat of bankruptcy and spend state funds without balancing the budget largely by attracting foreign investment willing to enter the new Russian stock market and purchase Russian government securities bearing favorable interest rates. (Reddaway and Glinsky 2001)

The Russian oil Taxation System in the 1990s:

The oil taxation system of Russia during the entire Yeltsin era was also a mess. It was damaging and not at all suitable to the demands of time. Firstly, different types of taxes like federal tax, regional tax and local taxes were levied on oil companies and above that these taxes were not based on profit-earnings but on the basis of production which affected the oil industry negatively (Stulberg 2007: 78).

This taxation system reflects the negative implications over the transition economy that was facing an extreme financial crisis.

- The Taxation system was revenue based and not profit-based; as a result during low price periods, costs with additional taxes exceeded the price
- Permanently increasing the number of taxes at various levels- federal, regional and local
- Lack of transparency in tax administration
- Lack of stability and predictability
- De-stimulated new investments
- Destruction of existed investment projects based on ‘project financing’ principles (JVs)
- Increase of effective aggregate tax rate into the range of ‘excessive’ values stipulated low tax collection as explained in the effect of Laffer’s curve (Konoplyanik 2004).

Hence, the oil taxation system was damaging and not at all suitable to the demands of time.

Another disruptive practice that prevailed during Yeltsin’s period in the oil industry was the system of ‘transfer pricing’. It was a different kind of transaction happened between one ‘extraction company’ and a ‘second company’. The ‘extraction company’ that dealt intensely with all the production procedures at the oil wells including drilling, field work and labourers sold oil to the second company at a relatively much less price. The second company exported the same oil in the international market at a much higher price, resulting in huge losses for the ‘extraction companies’ and sizable profits for itself. The long term adverse effect of it was that largely the oil companies and hence the energy industry of Russia was losing a lot of money hampering the further growth of the Russian economy.

In connection to this, the Russian Government in the early 1990s created ‘holding companies’. These ‘holding companies’ were endowed with almost 51 percent of voting shares in the extraction companies which gave the former formidable controlling rights. These ‘holding companies’ became huge energy giants within a very brief period of time. On the other hand, the investors and the shareholders of the extraction companies were stripped off their profits by the owners of the holding companies through the method of transfer pricing. In fact, Yukos itself compelled three of its subsidiary extraction companies to sell about 240 million barrels of oil to it at a price as low as US\$ 1.70 per

barrel when the average market price was high as US\$ 15 per barrel of oil. And, it, in turn, exported nearly 75 percent of oil to the international markets at high prices. In this way, oligarch Khodorkovsky of Yukos drained US\$ 800 million within nine months (Wolosky 2000: 22).

The result of this huge gap of prices created due to the presence of ‘extraction companies’ and ‘holding companies’ gave rise to oil companies that were modelled like Western companies. Lukoil was the first vertically integrated oil company of Russia created by Vagit Alekperov. It was formed in 1991 when three state-run, three western Siberian production companies, Langepasneftgaz, Urayneftgaz and Kogalymneftgaz were merged along with two refineries and a trading company. Alekperov believed that the only way for Russia to give competition to the Western oil companies was to build a company following Western standards. In this way, Lukoil became the standard model for the Russian oil industry. Hence under Yeltsin, the government planned to restructure oil fields and refineries into large private companies to suit the requirements of a market-based oil-industrial complex. And as a result on 17 November 1992, Yeltsin signed a decree in order to set up three Lukoil-like oil companies and ordered the restructuring of the oil industry likewise (Moser and Oppenheimer 2001).

Yukos was also created in a similar way in 1992. It was created as a holding company with the merge of production companies named Yuganskneftgaz and Samaraneftgaz along with refineries. Mikhail Khodorkovsky acquired Yukos as a result of the controversial ‘loans for share’ auction of the mid-1990s. As rapid privatisation led to the handover of state-owned institutions into private hands on nominal expenses and oil and gas companies were specifically begun to be controlled by the Russian capitalists. It was Yeltsin’s decision to; in this way distribute ownerships of shares to the citizens of Russia. In fact, the Russian oligarchs especially came to power and prominence during the time of Yeltsin. Initially, the Yeltsin government launched a system whereby free vouchers and cash purchases of shares were initiated. However, the failure of it led to the advent of ‘loans for shares’ program through which the government sold a bulk of stakes of esteemed companies of different sectors like energy, telecommunications, metals and metallurgy etc in exchange for loans from rich private sector banks. This ‘loans for share’ scheme was introduced via a decree signed by Yeltsin on 30 August 1995. As a result,

majority stakes of some of the largest Russian companies were earned by banks at extremely cheap rates. These businessmen also financed the 1996 presidential victory of Yeltsin thereby acquiring the ability to influence over Yeltsin too. Consequently, Russian oligarchs like Mikhail Khodorkovsky became owners of some of the largest oil, gas and raw material companies of Russia specifically of Yukos, Boris Berezovsky and Roman Abramovich owned Sibneft. Boris Yeltsin's rapid privatisation plan as part of economic shock therapy earned him more denunciation than accolades. Voucher privatization was a big misstep as the 'oligarchy politics' hit hard on both the common Russian population who were deprived of their basic necessities and along with that, the nationalist wing within the government turned hostile towards the oligarchs who were believed to be putting their business interests ahead of the interests of the Russian state (BRIC Spotlight Report 2010).

The 'loans for share' scheme, that benefitted the large chunk of Russian oligarchs, was also introduced in the pretext of Yeltsin winning a second presidential term in 1996. As Yeltsin started becoming very unpopular by the end of his first term as the President, and that in the 1996 Presidential elections the Communist leader Zyuganov could emerge as a popular leader that would lead the communists to take control of all the key industries including energy industry; hence the 'loans for share' scheme was introduced (also as a part of 1996 election campaign) that was favouring the big Russian businessmen to secure Yeltsin's position as the President of Russia (Lieberman and Veimetra 1996: 773).

The rise and consolidation of oligarchs in the energy industry were, therefore, a distinctive aspect of Yeltsin's rule. Oligarchs like Rem Vyakhirev and Viktor Chernomyrdin were behind the inception of Gazprom. In August 1989, under the leadership of Chernomyrdin, the Ministry of Gas Industry was reconfigured as State Gas Concern Gazprom that became Russia's first state-corporate enterprise. Gazprom's political influence significantly increased when Yeltsin appointed Chernomyrdin as the CEO of Gazprom and also as the Prime Minister in December 1992. Rem Vyakhirev, on the other hand, was appointed as Chairman of the Board of Directors and the Managing Committee of Gazprom. He controlled Gazprom from 1992 to 2001. Yeltsin by a Decree of the President of the Russian Federation on 2nd November 1992 and the Resolution of

the Government of Russia of 17th February 1993 began privatising Gazprom from a fully state-owned joint company into a private joint stock company (Goldman 2008).

While, the Russian economy and politics heavily suffered for this reason; by having control over the major resources of Russia, the oligarchs firstly involved themselves into the state's politics and foreign policy-making process. They were very much able to accustom in ways that served their own interests and manipulate foreign policy processes in such a way that were generally consistent with the West.

This became more evident when during Yeltsin's tenure the most controversial engagement of oligarchy politics was seen in inter-twining of their role in the Russia-Chechnya issue. It was speculated that since the Russian oligarchy was largely under the influence of the West, therefore these oligarchs had bankrolled the Chechnya government against Moscow (Tekir 2012).

Development of other energy instruments and policies during Yeltsin's regime:

- The Russian government under Boris Yeltsin introduced the "Concept for Energy Policy under New Economic Conditions" by resolution N°26 of September 10, 1992. This policy marked the advent of the newly independent Russian Federation's long-term energy policies and this strategy was systematically devised in order to equip Russia with continuous and reliable supplies of energy through which Moscow secure its security and independence and at the same time consolidate its position as a leading energy exporter. Moreover, other objectives of the Strategy were the need to secure and build up Russia's raw materials base and develop its renewable resources base as well (Fredholm 2005)
- A second energy document was formulated in the year 1994 by the Ministry of Fuel and Energy named "Energy Strategy for Russia" which was subsequently approved by the Russian government on 7th December 1994.
- Then following a Presidential decree by Resolution N°472 of May 7, 1995, the first post-Soviet Russian energy strategy under Yeltsin was confirmed entitled "On the Main Directions of Energy Policy and Restructuring of the Fuel and Energy Industry of the Russian Federation for the Period up to the year 2010" and subsequently by a Governmental decision in the same year on 13 October 1995,

the document named 'Main Provisions of the Russian Energy Strategy' was approved under Resolution N°1006 of October 13, 1995 (Fredholm 2005).

- Moreover, in order to maintain a day-to-day monitoring of the policy implementations, the Ministry of Fuel and Energy in 1998 felt the need for the establishment of a structural coordinator entitled the State Institute of Energy Strategy (IES). The main role of the IES was to make complex analysis and to estimate and predict the energy complex development in relation to the changing trends of the country's socio-economic development (Energy Strategy of Russia up to 2030).

Russia's First energy strategy concept: The Energy Strategy up to 2010

Being the first energy strategy it largely focused on the European and CIS markets. The major objective of the first Energy Strategy up to 2010 (approved by the Russian Government in 1994) was as follows-

- ✓ Build up a state-controlled internal market, state control to be ascertained by policies of taxation and pricing.
- ✓ Frame such policies so as to create a friendly environment for the energy industry.
- ✓ Draft an Energy Code in order to maintain a balanced relationship between both the actors of the energy industry and the state administration (Oostvoorn et. al. 1999: 10).

However, all the goals mentioned in the Energy Strategy were not fulfilled and was not a complete success owing to the context of Russia being a newly independent state and the approval of the Strategy only in 1994. It was just after the disintegration of the Soviet Union and hence it at its very initial stage of implementation Most of the energy policies were hence at a very tentative phase and were more of experiments. The 1990s phase therefore also did not set any substantive records in its oil and gas production (Thomas 2011: 40)

Moreover, in order to maintain a day-to-day monitoring of the policy implementations, the Ministry of Fuel and Energy in 1998 felt the need for the establishment of a structural coordinator entitled the State Institute of Energy Strategy (IES). The main role of the IES was to make complex analysis and to estimate and predict the energy complex development in relation to the changing trends of the country's socio-economic development (Energy Strategy of Russia up to 2030). Therefore, it is observed that under the Yeltsin regime, although the Government tried to undertake measures in the direction of reforming the energy sector of the country; it did not yield much fruit. This happened largely because of bad performance of the Russian economy as a whole, there were reforms that were not sufficiently implemented and because of many other policy failures under the Yeltsin period (Russia Energy Survey, 2002).

2.2.1 Russia's Energy Interests and the 'Near-Abroad' Policy:

In order to invigorate Russia's position as great power state, it wanted to have its dominion in the Central Asian and the Caucasian region. However, just after the disintegration of the Soviet Union, it was not an easy task. Basically, because of the kind of rapid changes in the economic system in terms of privatisation or because of its own internal clashes under the old and weak President Yeltsin, Moscow wasn't able to exert much influence on the newly independent states. Moscow's 'Near Abroad' Policy had always been quite open and it was generally on account of its energy-related economic policies.

The Central Asian states are also very rich in natural and hydrocarbon resources and that gives Russia an impetus to continue its presence in the region even after its independence. This economic leverage of Russia over Central Asia and the Caucasus has actually helped Moscow to translate it into political influence. It is well comprehended by Russia that energy resources are crucial in knitting a state's future both economically and politically. And ever since the independence of the Central Asian States, it has been noticed that external players have always tried to make their presence felt, a situation which Moscow is not completely comfortable with. For Russia, it's not just the energy

resources of Central Asia, but also the energy routes. By having a strong presence in the region, Moscow can have control and ownership of the existing pipelines and refinery potential and an economy based on energy priority cannot let go of the trade and supply links. The Russian National Security Concept of 1994 stated Russia's national security concern connected with two fundamental points and clearly pointed towards an understanding that firstly, Russia's concern should be towards the supply of Russian fuel and raw materials to other members of the CIS and secondly, that Russian troops would be involved in conflicts with the borders of the former Soviet states. The Concept, therefore, underlined the fact that Russian National Security gives much importance to the connection between energy and security (Blank 1995). In spite of this, during the Yeltsin era, Russia did not gain as much as it aimed for. Its position as a potential energy exporter eroded as Moscow had subsidised the energy use for the former Soviet states for many years through 1993 which led Russia to incur losses. Russia's energy industry was on the verge of a breakdown as there were indications of declining production and under-investment further deteriorated Russia's condition.

Russia's involvement in the post-Soviet space should also be seen in terms of context. It is not a mystery that Russia has economic and political goals in the former Soviet space which Moscow understands to be under its 'Sphere of Influence'. But during the time of Yeltsin although Russia understood the significance of its 'energy card' but it failed to implement it in the best possible way. The Central Asian states do suffer from some structural problems, both in terms of security, economic and foreign policy perspectives. Primarily, being a landlocked region, Central Asian states need the help of Moscow for sparking off new trade routes connecting the region to the world and for that Central Asian states again had to depend on Russia for huge capital and investments for infrastructure and transportation routes. Control over trade and pipeline routes to a large extent determines the economic and political fate.

2.2.2 The Ukraine factor in Russia's Energy Strategy:

Russia's gas discord with Ukraine appeared just after the disintegration of the Soviet Union. The rise in Russian gas prices was mostly due to the immediate privatisation policies adopted by Yeltsin. The gas dispute emerged mainly due to Ukraine's non-payment of debts to Russia during which Moscow interrupted gas supplies to Ukraine several times from 1992 to 1994. However, for the first time, Russia's energy policy towards Ukraine in terms of gas disputes being politically motivated came to the forefront during Yeltsin's time in 1993. Gazprom had cut off gas supplies to Ukraine by 25 percent even before a week from a summit in Massandra, Crimea citing the reason of non-payment. So, in the Summit meeting, Yeltsin offered to cancel all the Ukrainian debts in return for the control of the Black Sea Fleet and Ukraine's nuclear arsenal. This event revealed Ukraine's vulnerability to Russia's dominance at various levels-economic, political and security (D'Anieri 1999: 77-78).

Later, various other agreements did take place between Russia and Ukraine on gas issues. Agreements stating Ukraine's deal to let Gazprom participate in the privatisation of Ukraine energy complex and again in 1994, the Ukrainian Deputy Prime Minister ascertaining that it would let Gazprom acquire 51 percent stake in the pipeline system, and then in 1995, both the countries agreed on establishing a joint company namely Gaztransit. But none of the agreements was actually implemented (Pirani, et al., 2009).

2.3 RUSSIAN ENERGY AND THE EUROPEAN MARKET:

During the Yeltsin era, there was an impression of Moscow's strategic influence in its immediate European neighbourhood; and hence, in the post-Yeltsin period, energy policies have been quite clear and largely directed towards European markets. Russia has been viewed as a promising partner by the EU. For Russia as well, EU is a lucrative market. However, there exists a very unique and diverse nature of the relationship between these two partners as it stands on two grounds- political and economic.

Bilaterally, each country of the EU has distinctive interests. France and Germany being the largest economies of the EU, have concrete energy demands from Russia. For France with huge nuclear energy needs, Russia is a desirable exporter among in the vicinity.

Similarly, Germany is also to a greater extent dependent on Russia for its energy resources, and therefore not in full support with the alternative pipeline arrangements like the Nord Stream that bypasses Belarus and Poland. France and Germany have pure economic needs from Russia and hence the EU-Russia Energy negotiations are very much a part of economic pragmatism for these states. Russian energy strategy towards EU dates back since the 1990s. Russia-EU energy relations speaks about two sides of a coin; one that depicts the economic rationale objectives and the other depicting the political character of the Union as a whole (Bozhilova and Hashimoto 2010: 627-642). Considering the first side, Hughes advocates the presence of an incessant pragmatism in the relations and the shaping of foreign policies. Many a times the economic card laden with the system of economic interdependencies and cost-benefit analysis outdoes the second side which is more of political value laden that talks about issues like democracy promotion, human rights issues etc. and it happens more so because of the already mentioned factor i.e. asymmetric interdependence and extreme reliance on Russian energy exports. Therefore, although EU's foreign policy towards Russia balances around its passion for democratic values and its geostrategic interests in the Central and Eastern European (CEE) region (a stance that Russia does not appreciate), yet rapidly shifting political settings and its economic needs have always been an impediment towards EU over following a shared and uniform foreign policy towards Moscow. (Hughes, 2006) This attitude of the EU has often been subject to criticism and the EU surfaces as to having a weak and divided voice in this regard. Moscow, on the other hand, has exhibited a very determined and strong foreign policy stand with the EU. It has shown some excellent traits of both a balance between economic pragmatism and geopolitical calculations and the emphasis on 'east-west' divide on a certain level.

Also, studies have revealed that Gazprom, which is Russia's gas giant has in some years been through a lot of operational challenges lately especially in the European sector. Partners of Gazprom such as RWE, E.ON and Gasunie have revealed that their business models were affected in the past due to situations of pressures and uncertainty in the European markets. Russian energy prices in the European markets get largely affected now and then due to the presence of other factors. The competitiveness, especially appears in terms of the supply of natural gas as it works primarily over long-term

contracts of gas as the European customers haggle mostly on buying discounts for Russian gas prices. So the rising concern for Russian companies lies in that they are likely to be losing the guaranteed European buyers and petrodollars in case the supplies exceeds the demands. In fact, Gazprom, in order to maintain its position as a significant energy supplier and maintain higher prices in the European markets, has restricted its volumes of gas supplies from time and again. Consequently, in the years 2007 and 2008, the European customers of Gazprom wanted to ascertain long-term gas supply contracts for assuring an uninterrupted supply of energy. This indeed marked a potential capability of the influence of Russian energy resources over its European consumers. So even if the European market is any day important for Russia, the only problem is with its maturity as a market for gas and there are higher chances that in the near future Gazprom is likely to face competition with a new range of energy sources that would jeopardise the demands of higher prices of Russian gas. As a result, Moscow has devised its plan to divert energy sources towards the Asian market (Russian Energy Strategy 2030) on one hand; and make attempts at developing the system of ‘energy asset swap’ in order to secure its ‘downstream advantage’ in the European markets.

It is also perceived that the phenomenon of the ‘end of cold war’ may have not completely died inside of the Russian psyche. It has often been observed that there is a serious ‘US-centric’ sentiment among the leaders of Russia throughout. The US and Russian foreign policies have often depicted a natural posture that affects each other’s national interests. There is also a growing trend that shows how certain behavior of Western countries has influenced Russia’s energy strategy to incline over new players in the Asian region that ascertains Moscow’s political clout as well. The external influence of the US has also affected Russian interests in the European market in recent times.

In fact, Igor Yushkov states the constant presence of the US in European economics and politics as a persistent challenge to Russia that is affecting its business in the European market. There have been instances where the European countries are persuaded by the US about Russia failing as a stable energy supplier. The rise in the Russian gas prices for Europe has also been used as an advantage by the US to retain the European market for its selling of shale gas. It is a fact that because of the emergence of shale gas revolution in the US, the prices of electricity has gone down resulting in lower cost of production as

well. Subsequently, the US has signed an agreement with the EU to have a free flow of goods. However, this is at a very initial phase and to facilitate this goal, it is imperative that energy prices in Europe rise so that it can take over the European market from Russia. Yushkov, cited the example of Poland and Lithuania which are very keen to reduce its energy dependence on Russia and are also building their own energy terminals (Yushkov 2016). Prior to joining the EU until 2003, these countries remained totally dependent on Russia for energy imports. However, with the EU membership, the European Commission (EC) invested in a number of energy infrastructure projects with these new members. With the huge EU investments, especially in the case of Lithuania, the project Lithuanian Klaipeda LNG Terminal could reach the stage of operation by December 2014. The Lithuanian Klaipeda LNG terminal has also been receiving LNG cargo since its operation from Norway's Statoil Hammerfest plant. This was a clear strategy of diverting its energy imports from its traditional neighbour, Russia. Moreover, the revised LNG contract facilitated a price cut by 15-20 percent with an extension in the time period of the contract up to ten years. Hence the imports are expected to increase from an earlier 2.7 bcm to 3.7 bcm (LNG World News, 2016).

Another report from Reuters confirms that due to the increasing trend of LNG imports of Lithuania from Norway, Gazprom's monopoly over LNG exports in Lithuania has been drastically affected. There are reports of two new importers signing deals with Norway's Statoil that will only increase the imports by huge margins. The Energy Minister of Lithuania, Rokas Masiulis accepted the fact that the Norwegian LNG is giving Gazprom a tough competition. Masiulis replied to a Reuters' interview as such, "LDT and Achema's agreements with Statoil are clear proof that there is real competition to Gazprom's gas in the market" (Adomaitis, 2016).

Moreover, Lithuania's LNG contract with Gazprom has expired and fresh negotiations are yet to begin. (Ibid, 2016) According to a report by Natural Gas Europe in 2015, Gazprom's prices have been already dipping to a low of 24 percent from \$488/1000 cm to \$370/1000 cm (Newman 2016: 22-23). Hence, Norway's market share will be heavily affecting Gazprom's traditional share.

Poland has also been building LNG terminals and diverting its supply from Russia and depending on Qatar for the LNG supplies rather than Russia. The LNG deal between Poland and Qatar will facilitate an access to about 5 billion cubic meters of energy. However, a close examination of this deal reveals that Poland has to actually pay more to buy Qatari LNG. Some reports have cited that the Qatari imports would cost threefold than what Poland is paying Gazprom on the basis of current LNG spot prices (The Moscow Times, 18 September 2014). Such issues have been a constant challenge for the smooth functioning of Russia's energy policies in the European region. It depicts that the role of external actors are at times harmful for the interests of Russia.

2.4 RUSSIA'S ENERGY STRATEGY UNDER PUTIN:

Oil baron, Mikhail Khodorkovsky's arrest in 2003 was a symbolic representation of a change in Russia's energy strategy with the commencement of Vladimir Putin. Khodorkovsky was planning to trade a majority of Yukos stakes to a foreign company that would have affected Russia's role over the energy sector negatively. His arrest was a way of reinstating the role of the state in its energy affairs unlike the days of Yeltsin's rule that gave an excessive undue advantage to the Russian oligarchs. Apart from a definite economic aspect, studies also relate how Putin's action towards Khodorkovsky is politically motivated to desist the increasing role of Russian oligarchs into politics that effectively emanated from exceeding economic power. Putin believed in the centrality of the state in the energy sector and realized its significance as an integral part of Russia's economy.

Putin's view of changing the dimension of Russia's energy strategy gets a special mention in his doctoral thesis as well. While defending his PhD thesis in Economics in 1997 from the Mining Institute in St. Petersburg, he emphasised the role of the state in the major decisions about energy and other natural resources of the country (Putin 1999).

Similar views were also articulated in several papers that Putin had published arguing the necessary participation of the state. He argued that in order to ensure Russia's economic development and reinstate its strong position in the world, the reformation of its natural resource base was urgent. As inscribed in Putin's dissertation,

The stable developments of the Russian economy in the coming years need to be based on the planned growth of its component parts including in first place, the potential of its mineral resources ... which will serve as a guarantee of the country's economic security (Putin, 1999).

He further stated that Russia's role in its energy industry would not limit in matters of just exports, but also towards development of the domestic processing industry. This will ensure the economic rise of Russia and rise in the standard of living of the Russian citizens within a very short time (Putin 1999).

Putin was not completely against the idea of Western involvement in the Russian oil industry and realised the importance of investments. However, participation was restricted to the policy priorities of the Russian state and that was limited to the policy on partnership and a slow evolution of western engagement rather than a drastic change overnight (Olcott 2004: 14).

Putin's defence minister Sergey Ivanov statements on Russia's energy strategy echoed similar outlook as the former---

The state, in my view, should not lose control over all the strategic branches of industry. This does not mean encroaching on their activity, but it must control them, know the situation and understand in what direction these branches are developing ("B" Bullavinov 2003: 1).

In 2000, the Russian Federation by Resolution N°39 of November 23, 2000 approved a renewed version of Russian energy strategy entitled "Major Provisions of Energy Strategy for Russia for the period up to 2020" the new report was prepared under IES working group and by Council of Experts under the Ministry of Fuel and Energy which was duly approved three years later in 2003 (Energy Strategy of Russia up to 2030).

As soon as Putin became the President, he started off with the task of restructuring the energy complex of the country. He started with the process of bringing back the big oil and gas companies under the control of the state. Gazprom that was a huge private gas entity during the Yeltsin time was the first target of Putin. It was a long and tedious struggle against the energy administration. Putin in 2001 expelled the long time Gazprom head, Rem Vyakhirev and hired Alexei Miller as the CEO of Gazprom. Slowly and steadily only three out of a total of nineteen members of the former management of Gazprom remained by 2005. Not only that, other sister-concerns that had stakes in Gazprom were split out of it so as to get a complete state control over Gazprom. Further, in 2005, the Russian Government got hold of a majority stake in Gazprom due to its merger with another giant, Rosneft. These changes in the control of the oil and gas industry of Russia from the charge of the oligarchs to the state essentially reflected a process of 're-nationalization'. By 2005, almost 60 percent of oil production and almost entire gas production in Russia were brought under the state control (Victor 2008: 51).

Later on, with Rosneft's takeover of Yukos and Gazprom's hold over Sibneft retained the Russia's control over almost 30 percent of oil reserves and complete control over pipelines and gas reserves. However, both Rosneft and Gazprom were believed to be controlled by two factions of the Russian Government- the liberals and the Siloviks and they were competing for energy assets and pipelines. Under Putin's administration in 2006, an agreement was signed between both the companies as an attempt towards cooperation. This kind of policy of cooperation as encouraged by the Kremlin was understood as a sign of 'popular resource nationalism' (Victor 2008: 52).

Russia's strengths as an energy producer and exporter during the Putin era also reflected with its direct and indirect hold over the Caspian resources. Russia could exploit Caspian resources by buying its gas at low prices and selling the same at high prices in the international market. Moreover, the Caspian countries were heavily dependent on Russia for its gas exports as the latter has control over the pipelines and most of the resources pass through the Russian territory. However, the situation has been slightly changed for Moscow over the years. New gas deals concluded by Turkmenistan with China has opened for alternative routes of gas exports. Russia has also been compelled to work out

with such arrangements that will enable the Caspian countries to earn international prices for their gas sales to Gazprom (Eurasianet March 14, 2008). Russia had also faced a blow in 2006 when a new pipeline called the Baku-Tbilisi-Ceyhan (BTC) pipeline was opened with the backing of the US that bypasses the Russian territory.

Map 1: Oil and Natural Gas Production in Russia (2013)



Source: US Energy Information Administration, Eastern Block Research, IHS EDIN, <https://www.eia.gov/todayinenergy/detail.php?id=18051>

This map gives a thorough data about the geographical location oil and natural gas resources with the production figures in Russia in 2013 by US EIA. The map shows the various regions in Russia that are rich in hydrocarbon reserves. Russia's oldest hydrocarbon reserves are concentrated in West Siberia, the Urals-Volga and North Caucasus. The greenfields¹ are concentrated basically in Eastern Siberia, North-West Arctic and the Far East regions as shown in the map. Russia's energy strategy and goals as an indispensable element of Russian foreign policy are quite apparent in its objectives.

¹ Greenfield is a common word used for a new oil and gas field development. ((Schlumberger Oilfield Glossary, 2017, website: <http://www.glossary.oilfield.slb.com/Terms/g/greenfield.aspx>)

The Russian Federation since its inception has tried to invigorate its position in the global energy market and emerge as a superior energy exporter. Russia is placed in a unique geographical and geopolitical position and it serves her with an added advantage to engage in active dialogue and strategic bonding with the CIS States, the Eurasian Economic Community, EU and Asia. As far as Russian gas exports are concerned, it has been a leading exporter of Western and Central European markets and Moscow has the potential to deliver its natural gas supplies to the new and emerging markets of the Asia-Pacific region and South Asia like China, Korea, Japan and India (Fredholm 2005).

2.5 THE ISSUE OF TRANSIT STATES:

Russian gas exports to Europe transits through three transit states of Ukraine, Belarus and Moldova. However, Ukraine's significance accredits to its geographical position for which almost 80 percent of the Russian gas transits through Ukraine. Since the Yeltsin period, the Russia-Ukraine gas relationship was typified of irregular payments or unpaid bills leading to temporary interruption to the gas supplies. From 1998 to 2005, Russian gas was sold to Ukraine at \$50 per cubic meters, which was a rate much lower than the market price. Yet Ukraine failed to pay for its share of gas. So a conflict arose when 7.8 billion cubic meters of Russian gas that Gazprom had deposited in Ukraine's storage reservoirs a previous winter had gone missing. It was later revealed that a diversion of gas deliveries bound for European customers was used for Ukraine's own domestic need. So, by July 2005 Gazprom, Naftogaz and RosUkrEnergo reached a preliminary agreement whereby Naftogaz received 2.55 billion cubic meters of natural gas as a partial settlement of Ukraine's transit services in 2005 and another 5.25 billion cubic meters was sold by Gazprom to RosUkrEnergo that the latter would receive from Naftogaz. However, by the end of 2005, the negotiations had stalled between Gazprom and Naftogaz and thereby Gazprom eventually increased the gas prices to market prices charging \$160 to \$230 per 1000 cubic meters. Russian President also noted that Moscow had already subsidised Ukraine by \$1 billion annually from the Russian budget that was basically paid from revenues earned by Gazprom. So finally, Gazprom cut off the gas

supplies due to the inability of Ukraine to reach an agreement before 1 January 2006, which eventually also affected its European customers (Stern 2006).

Again the 2009 incident of transit issues between Ukraine and Russia was repeated displaying how significant it is to reduce transit risks for both commercial and political purposes. There have been separate supply and transit agreements between Russia's Gazprom and Ukraine's Naftogaz on 19 January 2009, to devise a way to eliminate the risks associated with the gas transit system of Ukraine. It was also an attempt to strengthen and enhance the reliability of Russian gas supplies to Ukraine and the rest of Europe and ensure transparency. Moreover, under the 10 year supply contract signed in 2009, it consists of methods and ways to prevent non-compliance, a clause of pre-payment in case Ukraine fails to pay for the gas it received. It also came about during a time when the European gas demands were estimated to further rise at a faster rate that is 20percent by 2020. This step actually gave an impetus to open up a much seamless energy partnership with European states (Kuprianov 2009). It was observed that after the negotiation of the treaty in 2009 and until the year 2013, Ukraine payments for gas to Russia were relatively regular and in compliance with the gas pricing formula. However, after and around 2013, the payments from Naftogaz started to become quite irregular or incomplete. The problem of transit states still lingers as an issue of unpaid debts which has also resulted in Gazprom threatening Ukraine with the pre-payment clause of the agreement in May (Gazprom Ukraine Facts 2014).

In 2007, of 607 bcm of Russian gas production, 148 bcm was exported to Europe through a pipeline. But IEA projections look very much positive that Russia's levels of natural gas production will reach up to 823 bcm and amount to 237 bcm of exports. However, in order to sustain Russia's gas monopoly in the future too, it has to divert some necessary investments towards infrastructural development and transportation (Downs 2010: 150-151).

2.6 RUSSIA'S CHANGING ENERGY STRATEGY TOWARDS THE ASIAN MARKET:

With the slowly depleting hydrocarbon resources of Russia that lie vastly in its western parts, a country whose economy is significantly dependent on energy cannot overlook the huge array of energy resources lying in the country's Far East and East Siberian region. The energy resources of Russia that lie in the wilderness of the Far East and the Eastern Siberian region accounting for about 75 percent of Russian resources, is going to serve as an impetus for its future resurgence as an energy superpower (Simonia 2006).

In fact, the oil experts did realise the significance of the reserves of Far East and East Siberia way before the West Siberian resources depletion started. When the hydrocarbon resources was at its peak during the 1970s, it was the Minister of Oil Industry, Valentine Shashin that expressed the need for opening up new areas in the following words,

We face as never before the issue of the need to discover enormous new oil provinces equal to the Volga-Urals and West Siberia, the Caspian Depression, and the shelves of the seas and oceans, which have enormous potential for the growth of reserves, may be such regions. But at present we are alarmed by the fact that the USSR Ministry of Geology is not drilling enough exploratory wells in new prospective provinces (Poussenkova 2007: 7).

Supporting the argument to go on with intense explorations of the new oil fields in East Siberia and the Far East, another report of an economist of the Oil Ministry in 1973 emphasised the significance of the new region and in 1973 expressing that, "In the decade 1981-1990, a new oil region must be created in East Siberia" (Ibid: 7).

However, the Soviet leadership was too proud to believe in the same. By the end of the 1970s, when the Soviet Union was hit from the oil production crisis for the first time, that the vulnerability of the West Siberian Resources and its limits were exposed to the Soviet leadership. This finally got translated into attempts and policies to develop new energy provinces in areas other than the present ones. So while on the paper-works, the CPSU Central Committee and the Council of Ministers of the Soviet Union passed resolution no. 265 'On Intensifying Oil and Gas Activities in East Siberia' dated 21 March 1979, but the actual groundwork to comprehensively develop the Eastern territories took more

time than that was expected of and finally the dissolution of the Soviet Union had a crumbling impact over the projects. A timely completion and development of the Asian side of Russia's border opening up to the Pacific Ocean remained unfinished for a long time (Poussenkova 2007: 7).

Moscow's intention of diverting its export routes towards the East is also because of the nature of declining of total GDP growth of EU till 2030. The growth in total consumption of the EU region is expected to reach 11 percent by 2030. And, this consumption is wholly on natural gas and renewable energy resource type. In this case, the calculations reveal that expected energy demands is in a declining phase by 1.7 percent per annum. In the same projected calculations, it is estimated that the total consumption of the developing economies of Asia of 2030 would triple the 2001 demands making them an attractive ground for Russian resources. (Bozhilova 2009).

Russia's energy strategy eastwards has opened maximum opportunities in China in various economic and energy-related sectors like oil production and refining, nuclear energy, thermal energy, electric power and energy efficiency (Jakobson et al. 2011, Paik 2012). By proper implementation of the provisions mentioned in Russia's energy strategy up to 2030, it has the potential to make Russia a larger player in the Asian market than now. Russia's energy strategy up to 2020 adopted in 2003 initiated the 'Asian vector' which aimed to reduce Russia's energy dependence over European consumers, decrease transit risks and augment the economic development of East Siberia and the Russian Far East. It got most of the attention only in the third term of President Putin. In fact, a concrete measure towards this direction taken by Russia was in the year 2012 when the Ministry for Development of the Russian Far East was set up. By 2013, a new Strategy for Social and Economic Development of the Russian Far East and Trans-Baikal Region through 2025 was adopted (Shadrina and Bradshaw 2013: 479).

Russia's policies towards the Asian region are more comprehensive and detailed than just addressing the core issue of energy integration. It is driven by wholesome benefits of integration and long-term development of Russia's eastern region with the new Asian gateway. Since Putin and Medvedev, Russian foreign policy was quite clear in terms of intermingling both the agenda of modernisation and the economic and energy plans and articulating it in the form of various foreign and security concepts like the Foreign Policy

Concept of 2008, the National Security Strategy of 2009, the Long-Term Socioeconomic Development Concept to 2020 and Energy Strategy to 2030 (Tsygankov 2006: 25). ‘*Obzor Vneshnei Politiki*’ which is the Russian Foreign Policy Survey subsequently became the foundation for Russia’s foreign policy towards the Asia-Pacific region and Moscow’s parallel interest in shaping up its Eastern regions (Kurth 2012: 473).

In an apex summit held in Bangkok, Putin emphasised the position of Russia as a prime guarantor of energy security in the Asia-Pacific Region. Russia’s goals were limited not to being just an energy supplier, but to come up as a larger geopolitical player in the region (Laumulin 2007: 111).

The table given below shows Russia’s Energy plans for the Asia-Pacific in three stages.

Table . Russia’s Natural Gas Plans up to 2030

	2008	2015 Stage 1	2020 Stage 2	2030 Stage 3
Natural Gas Production (BCM)	13	43-53	91-122	130-52
Share of Russian Gas Production %	2	7-8	12-14	15
APR share of Russia’s Gas Exports %	0	11-12	16-17	19-20
Share of LNG in total gas exports %	0	4-5	10-11	14-15

Source: C. Itoh (2010), Gromov (2010), MinEnergo.

The table above gives an analysis of Russia’s natural gas production in 2008 and its successive plans up to 2030 in three different stages. It is interesting to note that in the purview of Russia’s adoption of ‘Pivot to Asia’ policy, the share of Russian gas exports to the Asia-Pacific region which was nil in 2008 had risen to 11-12 percent in 2015 and the 2030 projections are even more.

Therefore, Russia’s new energy policy towards Asia-Pacific is a well thought-out strategy keeping in mind the upcoming market dynamics and trends. Russia cannot possibly

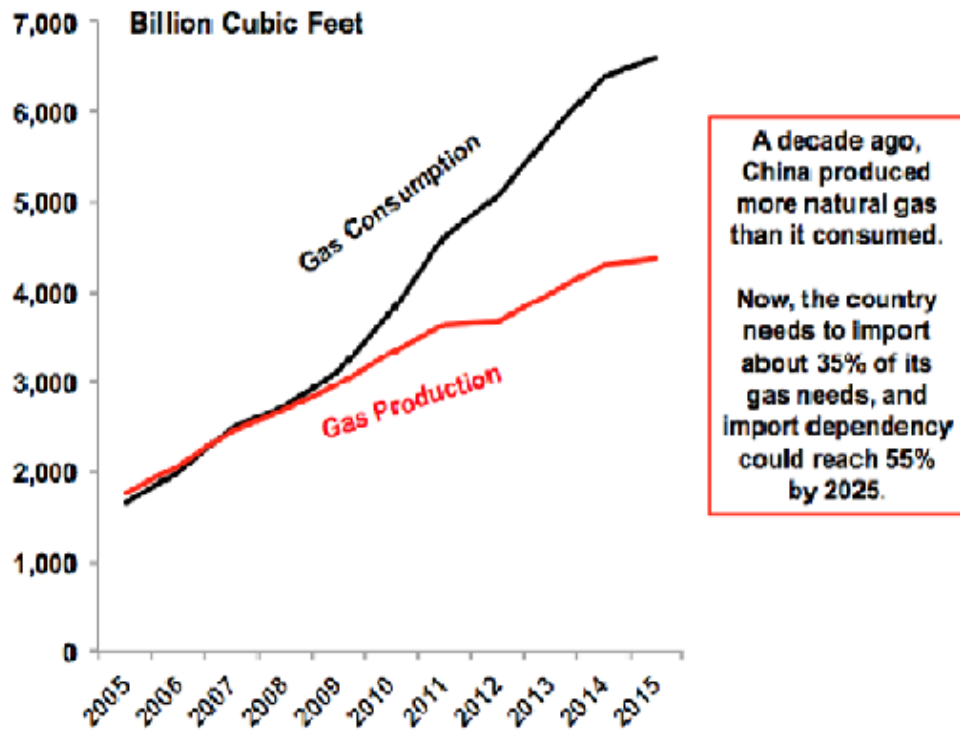
overlook the huge potential it has, not only for its huge resource base but also its geopolitical location, its leverage as a Eurasian power with an ability to influence both its western neighbours and the newly emerging states of Asia. As Komori et al understand, the Asia-Pacific region provides Moscow with a high potential market for Russian hydrocarbons. It is a complementary step for both the energy-hungry Asian markets and the energy exporter Russia to engage in mutually beneficial energy business ties for a brighter future (Komori et al. 2005).

2.6.1 Factors Behind Russia's Energy Strategy Towards Asia:

- **Geographical nearness** is one major argument in the thesis on why it is a prime factor in Russia's Asian strategy in general and towards China in particular. While this 'geography-laden' claim seems to have an organic position in justifying the key role that Moscow has in the Asia-Pacific region and specifically with China with all the Chinese ports in the Pacific Ocean, others have a totally contradictory view over the 'geographical affinity' approach. Dmitri Trenin finds geography an obsolete argument and disregards Russia as a 'bridge between Europe and Asia' (Trenin 2002: 217). However, geography cannot be completely abandoned or considered irrelevant. It essentially interprets how far in case of countries lying in the close vicinity to Russia like China, Japan its geography apart from other factors serves as a viable aspect of closer cooperation; likewise, other countries like India, which do not share a direct border with Russia still have an equally important chance to cooperate even intimately over other relevant grounds.
- Secondly, apart from several geopolitical events that are happening at the turn of the century, apparent **changes in the domestic energy mix** of the newly emerging Asian countries is another relevant factor. There is domestic switch-over taking place, especially in the domain of the energy mix in the fast-growing Asian countries. Changes in the domestic energy mix have a slow but significant impact on the global economy and the energy industry, especially in countries like India and China, which have been for a long time heavily dependent on coal as

traditionally the major source of energy. However, studies reveal that there are higher chances of these countries reaching the optimum levels of production and only leading to coal shortage. Also in India, coal is being replaced largely in some parts by the use of bio-fuels. And in such conditions imports are growing day by day. Coal is mostly imported from Australia, South Africa and Indonesia. The point, however, is that in the condition where China and India being traditional users of coal as the main energy source is gradually facing an unavoidable shortage of the same has to meet the challenge by both through diversifying its energy sources to other fuels and through imports (Global and Russian Energy Outlook to 2040, 2014: 103-104).

Graph 4 : China’s increase in Natural gas imports



Source: EIA, JTC. <https://www.forbes.com/sites/judeclemente/2016/04/24/chinas-rising-natural-gas-demand-pipelines-and-lng/#26ba3df75d00>

The graph shows the increase in China’s imports of natural gas from the 2009 levels. Chinese natural gas consumption levels are way higher than its domestic

production levels. Most importantly, after the adoption of the 13th Five Year Plan (2016-2020) in China, it calls for the replacement of coal with natural gas or renewable resources. China's target to divert from coal by 2030 will leave a vacancy for natural gas to fill in.

- Thirdly, the Asian market is important because apart from providing a **future market for Russia's hydrocarbon resources**, there are possibilities for a future expansion of the financial sector; deregulate the sector with a clear asymmetry between the US/European and the Asian market. Further commitment to enhancing the energy security of the Asian market was seen during the 22nd ASEAN+3 meet in Manila (more specifically, the ASEAN Ministers on Energy Meeting+ China, Japan, and the Republic of Korea) on June 2004. This meeting formed towards achieving effective solutions for energy security in the Asian region in the form of steps taken like natural gas development, oil market studies, stockpiling and renewable energy resources etc (Subramanian 2005).

Russia's energy interests towards the Asian market got definite direction through the various policy instruments and projects adopted during the Putin era. Putin specifically mentioned in one of his speeches the following points-

While implementing the given national project, it's necessary to liven up Russian business and to attract foreign capital, but private capital alone will not cope here, that's why state participation will also be needed, as serious and complicated infrastructure tasks will have to be accomplished; Development of an oil and gas complex might become the abutment stone both for the general socioeconomic development of East Siberia and the Far East and for Russia's integration into the APR (Nodari 2006: 16-31).

The Russian economy is heavily dependent on energy resources. Hence, the country is slowly trying to change its strategy by introducing new changes in the economic design like-

- ✓ Rent-driven strategy
- ✓ Mobilization strategy
- ✓ Inertia-led strategy
- ✓ Modernization strategy

Out of these four strategies, the modernization strategy is totally innovation-based. Since 2008, the Russian energy strategy has been consciously innovation-driven modernization strategy (Mohanty 2011: 38) Therefore, Russia's energy strategy towards Asia is indicative of its strategy of modernization and rent-driven one. The oil and gas rent for Russia is significant for any innovation to take place. Asian countries like China, Japan and the Koreas, therefore, has a big role to play in taking forward Russia's new diversified energy plan and towards developing the new fields in Russia's Far East and East Siberia (Konstantin 2004)

With the attenuating energy reserves in the oil fields of Western Siberia, Moscow has to go about with new discoveries to sustain the levels of its reserves. According to Fredholm, the future fossil fuel hub of Russia lies in the exploitation of the Yamal Peninsula fields, gas extraction in the Far East, East Siberia, Yamal Peninsula, Barents Sea, Kara Sea, the Arctic Ocean Shelf, the Sea of Okhotsk (near Sakhalin), Caspian gas shelf, the reserve basins of Pechora, Gorlovsky, Kansk-Achinsk, Minusinsk, Irkutsk and South Yakutia (Fredholm 2005). According to Komori, unless Russia makes some breakthrough discoveries it will not help Russia to maintain the current levels and the Eastern Siberian region, Sakhalin etc are the only alternatives to this looming issue (Komori 2005).

2.7 RUSSIA'S ENERGY STRATEGY: FAR EAST AND EAST SIBERIA

Russia's plan to develop its Far East dates back to the Soviet days of Mikhail Gorbachev since 1987. The plan, however, did not materialise until the advent of Putin. Many challenges in terms of conflicts with the central authorities disrupted the development programs in the region. Even after that the coming of the successive government the plans continued to be discussed, with no result (Amirov and Mikheev 2009: 62). Yeltsin even promised a ten-year programme for the socio-economic development of the Russian Far East during his presidential elections in 1994 but to no avail. The problem of economic funding a consistent issue in delaying the Eastern energy projects of Russia.

In 2003, Viktor Ishaev, the Governor of Khabarovsk Krai from 1991 to 2009 explained the importance of foreign funding for Russia's energy projects eastwards. He acknowledged the fact that although immediately after the dissolution of the Soviet Union, Ishaev had opposed the idea of a border treaty between Russia and China due to the escalating Chinese population in the Russian borders, yet he admitted that there was no alternative to this growth and a sort of Chinese integration is unavoidable and important (Smith 2003).

Ishayev, while he was still the Governor of Khabarovskii Krai, developed a strategy for flourishing Khabarovskii Krai. The strategy had two types of scenarios- Innovative and Inertial. He also pointed towards three requisite factors necessary for Russia's nexus to the international economy. These factors were- natural resources, the geographical location and a pollution-free landmass. The Inertial scenario has three factors and let Russian raw materials play a very significant role in the markets of Asia-Pacific. The innovative scenario has a fourth factor apart from the three requisite ones, that is education or research giving an innovative dimension to it. In the innovative scenario, Khabarovskii Krai would integrate with the Pacific Rim countries, however, the Krai's development solely depends upon the development of all the neighbouring regions of Russia's Far East and in this way pave a way for Russia's development as well (Natasha Kurth 2013). This placed huge importance on the neighbouring areas of the Russian Far East like China and others, the economic assistance, which is going to be a determining aspect of the successful implementation of Russia's energy policies eastwards.

2.7.1 Russia's Energy Strategy Up To 2020:

Russia's energy sector is central to the country's economy and growth as it contributes more than 25 percent of the GDP and almost 1/3rd of the industrial production earns 50 percent of the federal budget and export (Pant 2008: 170). This proves how important is the contribution of the energy sector to the all-round development of the country. Those close to 80 percent of Russia's energy resources that are lying in the wilderness of Eastern Siberia and the Far East, in order to be exploited needs the help of both technology and a way to get the product to its nearest markets. According to oil and gas experts, Russia's energy capacity has not reached its production competence due to harsh

climatic conditions and lack of deep-sea ports. Moreover, Gazprom has dire investment needs in order to build up the next generation of oil and gas fields the required infrastructure (Beehner 2010). Therefore, foreign investments are urgent.

Hence, in order to set out a standardised energy policy, the Russia's Energy Strategy 2020 was designed in 2000 and formally accepted by the Russian Federation in 2003. It was initiated primarily to determine the goals and objectives of Russia's energy sector comprising of long-term development plans for the future, the priorities and guidelines, the mechanisms of the state energy policy at the various phases of implementation and the basic strategy for ensuring the realisation of the shared objectives. It focused on Russia's necessary heavy investments for countries large resource base that is principally located in remote areas far from proper markets and infrastructure (Russia's Energy Strategy up to 2020, Ministry of Energy of Russian Federation, 2003). The Energy Strategy of Russia up to 2020 states Russia's main Asia-Pacific partners to be China, Japan, South Korea for markets of gas, oil, atomic technologies, fuel and nuclear production sales.

While the initial phases of the strategy laid down ways of reforming the energy sector of Russia, the **second phase aiming towards the Asian side has the following characteristics-**

- Advance the growth of openness and competition in the energy markets in terms of market infrastructure that was forming during the first phase.
- Speedy use of the existing odds in nuclear power and hydro-energy sector, developing petrochemical, coal industry and gas chemistry projects that would design the necessary foundation for projects in the new provinces of Eastern Siberia, Far East, Yamal and offshore.
- Attain a corresponding growth of annual investments in the fuel and energy complex not less than 1.5 times more compared to the preceding period.
- Modernise the Russian energy sector by enhancing with scientific and technical innovation.
- Make adjustments in the pattern of consumption and distribution of the energy sources have to be modified by increasing consumption of atomic, hydropower,

coal and renewable resources while redirecting of hydrocarbon production in Western Siberia, Russia's Far East, the Caspian region and the European North (Ministry of Energy of the Russian Federation 2003).

The strategic objectives for the development of Russia's Gas industry as per the Energy Strategy up to 2020 are as follows-

- To ensure stable, uninterrupted and economically efficient supplies of domestic and international demands for gas.
- Up gradation of the unified system of Russian gas supply and its expansion to Russia's geographical East and ensure the advancement of inter-regional integration of the same.
- Improve the organisational structure of the gas market to increase its economic efficiency and move towards a more liberalised gas market.

The progress and implementation of the Energy Strategy up to 2020 has the following features in the field of oil complex-

- Production of oil has already commenced in deposits of Verkhnechonkoye and Talakanskoye. Active developments have also happened in the Timano-Pechorskaya oil and gas field. It was estimated that the annual oil output was more than 25 million tons. During the same time, oil mining also started in the Sakhalin 1 and Sakhalin 2 shelf deposits.
- In the field of transporting energy resources, new trunk oil pipelines were built for instance the Baltic Pipeline system that had an annual transportation capacity of 65 million tonnes. Apart from that, for transportation through ships and trans-border shipment, port facilities were built in the town of Primorsk and Varandei. In the energy transportation sector, however, the most outstanding step taken was the construction of the ESPO pipeline with an annual transportation capacity of 80 million tons. This pipeline is a huge step in providing Russia an opportunity to develop its oil complex in the eastern part of the country and boost its diversification plans and open new destinations of oil export.

- There has also been a record increase in the volume of the oil industry, from 173 million tons in 2000 to about 237 million tons in 2008. Also, the refining depth showed an increase to 72.6 percent from 70.8 percent.
- There was also an increasing trend seen in the export of oil products due to the improvement in the state regulation of oil complex. Under this, the structure of customs duty calculation related to oil and its products was made better in order to promote the export of oil and its products and handle situations better during a change in world energy prices.

The energy strategy plan up to 2020 also plans to incorporate its traditional oil fields in such a way that Angarsk-Nakhodka pipeline system becomes a vital part of Russia's energy strategy towards Asia. One of its branches is directed towards China's Datsin. The Angarsk-Nakhodka pipeline structure with a capacity of 80 million tonnes every year has new oil-production hubs in the East Siberian region and Republic Saha (Yakutia). The energy strategy of Russia up to 2020 mentions transport and infrastructure as major determinants in diversifying its energy strategy towards the Asian market. Towards these objectives, building roads in the Far East for the uninterrupted conveyance of hydrocarbons and raw materials is important.

Russia's adoption of the Asian-directed energy strategy also redirects its footing as a significant energy producer in the world energy market than just being seen as an appendage of a raw materials provider. It offers Russia the ability to enhance its capabilities in the export of fuel energy complex and secure the country's economic position as well (Russia's Energy Strategy up to 2020, Ministry of Energy of Russian Federation, 2003). There is also a fear on Russia's part, that in the future, European demand for Russia's oil and gas would stagnate. The stagnation period was evident in the 2000s onward. The period from 2000 to 2008 saw a rise in world oil consumption from China with a 35 percent increase and India with 8.6 percent, while the rate of consumption dropped in Germany, USA and Japan. In the case of natural gas, due to China, the world's consumption increased by 12 percent, while Germany and Italy contribution were much less (Tabata and Liu 2012).

2.7.2 Russia's Energy Strategy Up To 2030:

The draft of Russia's Energy Strategy Up to 2030 sets some revised guidelines for the development of Russia's energy sector and extends the time period up to 2030 with new goals and objectives. It is basically based on the experience of the implementation of the previous Energy Strategy in Russia up to 2020 and the challenges related to its implementation. The Strategy directs towards socio-economic development linked with energy strategy and at the same time initiate integrated programmes for developing regions in the Far East, Eastern Siberia, North-West Region of Russia, the Yamal Peninsula and the continental shelf of the Russian Federation. These regions will also be used when developing individual industries for the fuel and energy complex, geological explorations and adjusting investment programmes and major projects of energy companies.

In 2007, Russia's energy plan towards the Asian markets was adopted in the form of a programme named 'Programme of Creating a Single System of Gas Extraction, Transportation and Supply in East Siberia and the Far East, Taking into Account Possible Gas Exports to China and Other Countries of the Asia-Pacific Region' that was approved by Order of the Ministry of Industry and Energy No. 340 of 3rd September 2007.² This programme was to be handled under the supervision of Gazprom under the Government Order No. 975 of 16th July 2002. Oil and gas industries were the only push for economic upliftment in the region.

2.7.3 The APEC Energy Demand and Supply Outlook 2030:

Another important document illustrating Russia's energy directed towards the Asian market is the APEC Energy Demand and Supply Outlook 2030 Report, 2006. It reveals how both the Asian and European markets are important for Russia in strengthening its regional energy trade relations. The main objectives of Russia as enshrined in the document are tapping the energy resources of West Siberia, East Siberia, the continental shelves of the Arctic and the Pacific Ocean. The document also cites how the efforts of the European consumers to divert its energy import routes from the Russia towards

² The preamble to the programme notes that this order was issued in accordance with Protocol No. 1 of the meeting of the Government Commission on the Fuel and Energy Complex and Regeneration of the Mineral and Raw Materials Base on 15 June 2007. This Government Commission was set up by Government Resolution No. 794 of 21st December 2005 and its present Chairman Igor Sechin (Tabata and Liu 2012: 163).

Central Asian energy resources and routes and intricate issues with the energy transit states of Russia with the energy has given Russia an excuse to go on its idea of finding new customer base on the Asian side.

2.8 RUSSIA'S ENERGY POLICIES IN THE FAR EAST AND EAST SIBERIA

In order to make all the necessary implementations of the various energy policies and instruments, Russia undertook various infrastructural projects during its Sakhalin ventures. During Sakhalin I, an oil pipeline with a capacity of 12.5 million tonnes per year was constructed by Russia with sea passage to the terminal in De Castry in the Habarovsk region via the Tatarian strait. Again, during the Sakhalin II project, Russia constructed two overland oil and gas pipelines of 800 km in length, spreading from northern to southern parts of the Sakhalin Island. The plans are also advancing the helium industry by developing helium fields of Eastern Siberia and the Far East. They are located in the underground storage of the Irkutsk region, Krasnoyarsk region and Saha Republic (Yakutia). Development of the coal industry is another part of the plan. Russian coal fields are mostly located in the East Siberian region, Buryatia, Yakutia, the Far East and the European part of Russia like the Pechora and Eastern Donbass, these fields have huge potential in ensuring energy supply to the Asian market. Also, thermal energy stations are parts of the plan. Concerning the Siberian region in power engineering, the main priority would be the building up of the fuel energy station running on coal and hydroelectric stations during the phase of the energy strategy. The Far East, on the other hand, hydro-electro stations working on gas are to be developed (Thomas 2011: 25).

Hence, keeping these objectives in mind, Russia's energy policies in the Far East and East Siberia embarked upon fulfilling three main goals-

- a) Developing the Sakhalin Projects of oil and gas
- b) The completion of the East Siberia-Pacific Ocean (ESPO) Pipeline Project
- c) Complete utilisation of the East Siberian oil fields. (Tabata and Liu, 2012: 163)

A brief outline of the three major goals is as follows-

- a) **The Sakhalin Projects:** For Russia's plans in the Far East, the Sakhalin Islands are crucial and the production facilities at Sakhalin I, Sakhalin II, Sakhalin III and

other projects at the continental shelf of the Sakhalin Island are some of the most potential ones among world's recoverable oil and gas reserves. According to an estimate stated by Wood Mackenzie, the hydrocarbon reserves of the Sakhalin Islands are the most commercially and technically viable recoverable reserves. The estimated recoverable oil reserves stand at five billion barrels and gas reserves were estimated to be around thirty-four trillion cubic feet (EIA 2008).

- **Sakhalin I**

The Sakhalin I project was placed under the responsibility of ExxonMobil and the expected amount of production was to go around 250,000 bpd by 2008. (Miller, 2007) Both the first two projects of Sakhalin I and II were successful in making the desired production. The major shareholders of the Sakhalin I were – ExxonMobil, Rosneft, Sakhalinmorneftegas and SODECO at the beginning. The main objective of the project was to develop the oil and gas fields of Chayvo (both onshore and offshore facilities), Odoptu and Arkutun-Dagi. By May 2009, the Odoptu field was all set for drilling and by the next year production of oil and gas started. These oil and gas lie in the extreme terrain and climate of the sub-arctic. After some time the project was also joined by the Indian oil and gas major ONGC Videsh Limited (OVL) with a share of 20 percent (Pussenkova 2007: 55).

In the first phase, the production in Chayvo was initiated by Exxon Neftegaz in October 2005 with the first delivery of crude oil made to the Komsomolsk refinery. Also in 2005, the gas production was started and an amount of 1.7mcm/day was supplied to Khabarovskenergo and Khabarovskkraigas. In the second phase, the commissioning of the southern platform on Chayvo and pipeline gas exports to Japan was planned running from the bottom of Okhotsk Sea to Hokkaido island of Japan. The planning of third and the fourth phases was to be after 2014. Oil from Arkutun-Dagi platform and gas reserves of Arkutun-Dagi and Odoptu will only be built after 2032 (Pussenkova 2007: 55-56). According to recent reports, Russia's Rosneft and Gazprom are concentrating on exporting natural gas from Sakhalin-I to Japan, China and South Korea. Another publication in Moscow Times also Gazprom's announcements on sales agreements with

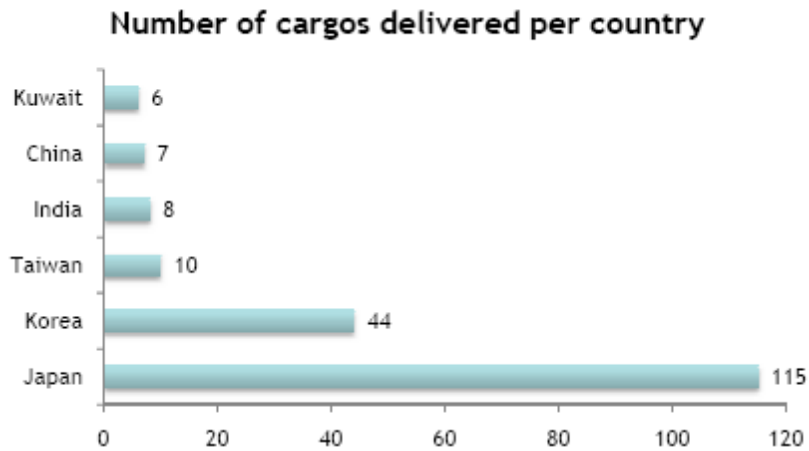
China, India and South Korea to enlarge its export markets and guarantee a stable flow of cash. Gazprom also sent LNG tankers to these countries from the Sakhalin II project with an aim to supply 14 percent of the global market for LNG by 2030 (Medetsky 2011)

- **Sakhalin II**

Sakhalin II is Russia's first offshore gas project and the world's largest integrated and export-oriented oil and gas project. The project is crucial for the Asia-Pacific markets as it is expected to fulfil 8 percent of Japan and 5 percent of South Korea's gas demand. The official website of Shell states that gas from the Sakhalin II project has been sold under long-term contracts to the Asia-Pacific region along with North America. As a part of Sakhalin II project, the Sakhalin Energy Company built the first LNG plant in Russia. It was inaugurated on 18 February 2009 by then-Russian President Dmitry Medvedev (Shell Official Website).

The Sakhalin II project consists of 155 million tonnes of oil and condensate and 490 bcm of gas reserves. The main objective of the project was to develop the oil, gas and condensate of the Piltun-Astokhsk field and Lunskoye natural gas field. The Piltun-Astokhsk field was discovered way back in 1986 and Lunsk was discovered in 1984. The project for the development of the Sakhalin II consortium was in the early stage secured by three companies- Marathon, McDermott and Mitsui in 1991 and later by Mitsubishi and Shell in 1992, namely MMMMSh. Later in 1994, the Sakhalin Energy Investment Company Ltd. was created for the successful implementation of the Sakhalin II project. And on 22 June 1994, the first PSA was signed. In 2000, all the stakes of Marathon in Sakhalin II were bought by Shell (Shell Sakhalin Holdings B.V.) which became the vital shareholder and project operator of the Sakhalin II with 55 percent of shares followed by Mitsui Sakhalin Holdings B.V. with 25 percent of shares and Mitsubishi Diamond Gas Sakhalin with 20 percent of shares. Moreover, it made Sakhalin II, the single one to be developed without any Russian companies during that time (Pussenkova 2007: 52).

Graph 5: LNG sales of Sakhalin II (no. of cargos delivered per country, since 2009)



Source: Bradshaw, M. (2008/9), "Russia's Eastern Gas Strategy" in *Global Energy Dilemmas*, Dept of Geography, University of Leicester.

However, in 2005-2006 due to environmental issues and legal violations of the Russian environmental regulations, the consortium was deeply criticised following which under political and legal pressure, it had to sell a majority stake of 50 percent plus one to Gazprom. On 21 December 2006, Gazprom took over Sakhalin II by signing an agreement with Royal Dutch Shell. In April 2007, the 'Area of Mutual Interest' was signed by Gazprom with the rest of the project associates that let the further expansion of the project by allowing the purchase of third party gas by Sakhalin Energy and the potential acquisition of exploration blocks in the region. This led to the first year-round of oil exports in December 2008 from the new Oil Export Terminal at Aniva Bay and thereby the first LNG export commenced in Japan in early 2009. Hence, this made the Sakhalin II project one of the benchmarks for Moscow's energy export interests towards the Asia-Pacific region, providing Russia with the potential to become the foremost regional centre for oil and LNG exports (Shell Global Official Website, <http://www.shell.com/>). Gazprom as being the largest stakeholder in this PSA project by an international consortium would allow it to promote its energy interests in the Far East as Russia's share of produced gas was intended to be delivered to the Far East for regional gasification (Gazprom official website, www.gazprom.com).

- **Sakhalin III**

The Sakhalin III project is estimated to have approximately 1.5 billion barrels of oil and about 2.7 Tcf of natural gas in the Kirinskoye and Veninskoye fields. Russia's Rosneft and China's Sinopec are together involved in developing the Veninskoye block and have successfully drilled four wells till now and the production is to begin by 2017 (Shell Global Official Website, www.shell.com). Gazprom holds permits for three blocks in various projects like Kirinsky, Ayashsky and Vostochno-Odoptinsky. Gas reserves under the Sakhalin III project are projected to be around 1.4 trillion cubic meters of the most sizable reserves located in the Kirinsky field. The reserves of the Sakhalin III project are further expected to increase by about 600 million tons of fuel equivalents and 500 billion cubic meters of gas. There is a great deal of planning to expand the development of the Sakhalin III project with a target to complete over 3000 square kilometers of 3D seismic work by the year 2020 and the building up of twenty exploration wells (Gazprom Official Website). The most significant aspect of the Sakhalin III venture is the wide presence of Russian firms (Shell Global Official Website)

- b) **The completion of the East Siberia-Pacific Ocean (ESPO) Pipeline Project**

The ESPO pipeline is undoubtedly one of the most significant steps taken under Russia's energy policy in the Far East and East Siberia. It was the result of political, economic and environmental considerations. The political motivation behind the construction of the pipeline was highly felt to be not in sync with the hydrocarbon reserves of East Siberia as firstly, bigger fields in East Siberia are yet to be discovered and secondly, at present ESPO pipeline connects to the a trunk pipeline from Western Siberia to Angarsk in Irkutsk Oblast to supply from the Western Siberian fields as an alternative. This also endows Russia in an attempt to discover much larger oil fields in East Siberia and in that sense switch from the old and stagnant oil fields of West Siberia. In this way ESPO pipeline marks a diversion of Russia's energy exports from the European markets to the Asian ones. The economic purpose of the pipeline was two-fold; one is the obvious purpose to capture the fast growing and energy-hungry Asian market. The second

purpose was to avoid the ‘monopoly of demand’ by aiming to deliver oil to many Asian markets including China, Japan and the rest of the Asian countries, although at the moment, China is the prime consumer country. The third motivation behind the decision of building the ESPO pipeline is environmental; Putin at a public hearing two days prior to the start of the construction of the pipelined changed the route on environmental grounds. It might be the first time that Russia considered the environmental factors (Tabata and Liu 2012: 166).

c) Complete utilisation of the East Siberian oil fields

The discovery of large oil fields in East Siberia was a path-breaking incident in Russia’s history of energy planning. A large oil field was discovered by geologists of Rosneft within the Mogdinsky and East Sugdinsky license areas in the Katangsky District in Irkutsk region in East Siberia. Through an auction in 2006, Rosneft acquired licenses in both the areas. The location of the field is approximately 80 kilometers away from Verkhnechonskoye Oil and Condensate Field, where Rosneft is involved in developmental methods and about 150 kilometers away from the ESPO trunk pipeline. The reserves were deemed to be strategic because the field’s primary recoverable reserves under the C1+C2 categories were estimated to exceed 160 million tons. The deposits, however are located in difficult geological surroundings need further intense exploration. Although exploration in the field commenced since the 1980s, yet first batch of commercial oil was discovered only in 2009 by the use of advance exploration drilling techniques. Rosneft is actively involved in the exploration process at its licensed plots and proceed with 2D seismic of 2930 kilometres and a resistivity survey of 3700 kilometres. Four new wells are also on the card (World Oil News report 2010).

Another kind of policy adopted by the Russian Government to promote the oil fields of East Siberia and attract investors is the recently implemented ‘tax-manoeuvre’. Under this system, the Russian government has adopted some special methods like exemption or reduction of extraction taxes and export duties on oil that is produced in the East Siberian region including the Sakha Republic. Such exemptions have been introduced since the

year 2007 by Federal Law No. 151 of 27th July 2006. According to this law, tax relief was to be applied to all the oil fields that are partly or completely located within the Sakha Republic, Irkutsk Oblast or Krasnoyarsk Krai and if production in the fields is less than 25 million tonnes of oil since exploitation started. Exemptions on export duties over crude oil were also applied by the end of 2009 by Government Resolution No. 954 of 26 November 2009. The tariff on the export duties of the commodity of code '27.09.009001' that refers to a specific quality of crude oil³ was set at zero. The Government Resolution No. 574 of 16 July 2009 that introduced the special crude oil type also mentioned that the code applies to thirteen fields in the East Siberian region and the Sakha Republic. Later that year the tax relief was expanded to nine other fields in the region and the previous code was replaced by a new one as '27.09.009002' of 19 January 2010. The new code represented broadly all crude oil produced from Vankor oil field in East Siberia. (Motomura, 2010: 22) Moreover, the code was to be applied to nine other oil fields in East Siberia. (Tabata and Liu, 2012: 166) These tax reliefs lasted for a period of seven months and later in 2010 these were substituted by tax reductions. This was seen as a compromising step between the Ministry of Finance and oil companies. Hence by another Government Resolution No. 472 of 26 June 2010 the tariff of export duties of commodity code '27.09.009002' was set at Roubles 69.9 per ton while the tariff for standard crude oil stood at 248.8 roubles per ton. Since then the routine became of rearranging the tax rates for commodity code '27.09.009002' with changes in other export duty rates of oil and petroproducts every month (Ibid 2012: 167-168).

On the other hand, the Krasnoyarsk Krai by Law of the Krai No. 7-2619 of 18 December 2008 cut down its tax rates from 18 percent to 13.5 percent for oil producers for five years from 1st January 2009 to 31st December 2013. Similarly, the Sakha Republic by Law of No. 285 of 17 June 2009, reduced profit tax rates to 13.5 percent for oil producers from 1 January 2009 to 31 December 2010 (Ibid: 168).

³ *Government Resolution No. 574 of 16 July 2009 introduced the commodity code no. '27.09.009001'

- d) **Russia's footing in the Asia-Pacific market is based on the accomplishment of some future projects as well.** The proposed natural gas pipeline called the Altai gas pipeline project to export natural gas from Russia's Western Siberia to North-Western China (www.gazprom.com).

Table 5 : Russia's major Greenfield oil assets.

Fields	Company (ies)	Peak Output (kbpd)	Launch Date
Vankor	Rosneft/ONGC/Indian consortium	440	2009
Verkhnechonsk	Rosneft/Beijing Enterprises	175	2008
Yurubcheno-Tokhomskoye	Rosneft	100	2017
Russkoye	Rosneft	130	2018
Naulskoye	Rosneft	20	2017
Lodochnoye	Rosneft	40	2019
Labaganskoye	Rosneft	23	2016
Kuyumba	Rosneft/Gazprom Neft	65	2019
Messoyakha Group	Rosneft/Gazprom Neft	130	2016
Suzun	Rosneft	90	2016
Tagul	Rosneft	100	2016
Filanovskoye	Lukoil	120	2016
Imilorskoye	Lukoil	100	2015
Pyakiyakhinskoye	Lukoil	50	2016
Prirazlomnoye	Gazprom Neft	110	2014
Novy Port	Gazprom Neft	170	2014
Trebs/Titov	Bashneft/Lukoil	100	2016
Yarudeyskoye	Novatek	70	2016
Taas Yuriakh (phase 2)	Rosneft/BP/Indian consortium	100	2018

Source: Henderson and Grushevenko, February 2017: 14

The table above lists out some of the major greenfield oil assets of Russia. Rosneft and Gazprom Neft being major companies in running these greenfield projects. Apart from that Indian company ONGC and an Indian consortium is associated with two of the significant projects, i.e. Vankor and Taas Yuriakh (phase 2). Verkhnechonsk is situated in Irkutsk Oblast. The oil produced in this field is shipped through an 85 km pipeline to Surgutneftegaz' Talakan field where it is supplied to the ESPO pipeline. Yurubcheno-Tomkhomskoye field lies in the Krasnoyarsk Krai and is connected to the main ESPO pipeline for delivery to the Chinese market. Other important fields include Filanovskoye which is the second Caspian field, Imilorskoye oil field West Siberian city of Kogalym and Pyakiyakhinskoye- all under Lukoil. Most of the launch dates of greenfield oil assets

are from 2008 to 2019 which gives an idea of Russia’s ongoing efforts to develop its greenfields to maintain future production levels.

Table 6: Major Russian LNG Projects

Project	Companies	Started in	Output, mln. tons per year	Investments, bln. \$	Target markets
Sakhalin-2 expansion (3 rd train)	Gazprom, Shell, Mitsui, Mitsubishi	2017	5	5-7	Asia Pacific
Vladivostok LNG	Gazprom	First phase 2018; Second phase 2020 Third phase 2022	15	12,4	Asia Pacific
Sakhalin-1 LNG	Rosneft, ExxonMobil	First phase 2018; Second phase 2021	10	15	Asia Pacific
Yamal LNG	Novatek, Total, CNPC	First phase 2016; Second and third phase 2018	16,5	20	Europe and Asia Pacific
Shtokman LNG	Gazprom	Postponed	15	30	Europe
Baltic LNG	Gazprom	2018	10	5-7	Europe

Source: Mitrova, 2014: 68

The table above lists out some of the major LNG projects in Russia. It is interesting to note that under the purview of Russia’s ‘Pivot to Asia’ policy, most of these energy projects are targeted towards the Asia-Pacific market. Some of the projects as mentioned in the table are Sakhalin 2 expansion, Vladivostok LNG, Sakhalin-I LNG which is exclusively oriented towards Asian markets. Yamal LNG is as explained in a previous map, is a unique project seeking to balance between both the European and Asian markets via its dual routes- summer and winter routes. While Shtokman LNG and Baltic LNG projects are targeting Russia’s traditional European customers.

2.9 RUSSIA'S ENERGY STRATEGY EASTWARDS AND THE ROLE OF GAZPROM:

The role of Gazprom is significant in piloting Russia's energy strategy towards the Asian market. During the Sakhalin Oil and Gas Company 2012 International conference held on 24th September 2012, Alexander Medvedev, the current Deputy Chairman of the Management Committee of Russian gas major, Gazprom, in his speech made some key points on the grand strategy of Gazprom towards the Asian market. Since September 2007, the government of Russia endowed the Gazprom group to execute its 'Eastern Gas Programme'. Gazprom's task is to generate-

A unified system of gas production, transportation and gas supply with the possibility of gas exports to the markets of China and other Asia-Pacific countries as well as in Eastern Siberia and the Russian Far East (Medvedev 2012).

According to several estimates, the consumption rates of natural gas in the Asia-Pacific region are likely to increase by 3.3 percent reaching a level of 660 Bcm by 2035. As the uses of natural gas is multiple ranging from its usage in the form of LNG, maritime transport and vehicle fuel as at present the Asian market is seeing a high rise in vehicle sales. The consumption of natural gas in the Asia-Pacific Region (APR) accounts for more than 18 percent. According to 2011 statistics, APR has already used more than 600 Bcm of natural gas. The major demands will be from China and India primarily, and Japan following after as it wants to redirect its energy mix from nuclear to other safer sources since the Fukushima incident in 2011 (Medvedev 2012).

After China, India is a very crucial market for Russia in general and Gazprom in particular for its gas exports on account of rapid economic development and population. Gazprom Deputy Chairman, Alexander Medvedev in his speech on Gazprom's role, raised the problem of energy scarcity in India and how in more than half of the population of India most of the time live and work in conditions with no electricity. In this regard, Gasification could be the basic solution to it and hence Gazprom has been working with GAIL. In this relation, Gazprom and GAIL have been working in close quarters .

The markets in the APR are positive in paying more for gas than the US and Europe which serves Russia's interests to maximise profits. Russia has therefore set up many gas production centres in and around East of Russia in close proximity to the Asia-Pacific region in several places like Krasnoyarsk, Irkutsk, Yakutsk, Kamchatka and Sakhalin. It has also established the first interregional gas transmission network in the Far East called the 'Sakhalin-Khabarovsk-Vladivostok'. Hence, Gazprom, the Asian market is a top priority and the Sakhalin offshore fields has been identified as in the state of 'high readiness'. (Mitrova 2008: 2-17).

Some European energy experts fear that at the moment Gazprom's ambitions to supply gas to China and other Asian markets would not suffice the gas reserves and therefore the Asian strategy has the potential to threaten European states' energy security. However, Russia's diversification strategy is not likely to harm its energy security interests anyway as the development of oil and gas fields in East Siberia and the Far East is most likely to cater to the energy needs of the Asian market, thus making Moscow a sort of 'gas bridge' by being able to supply both the east and west of Eurasia (Mitrova 2008: 2-17).

2.10 CONCLUSION

Hence it can be understood that Russia's energy strategy has gone through different phases of highs and lows. The period just after the disintegration of the Soviet Union and the advent of Yeltsin was highly experimental and did not fare that well both for the Russian economy in general and the energy industry particularly. The control of the Russia oil industry by the oligarchs led to several factors of downfall such as asset stripping, unproductive business holdings, the flawed taxation system that affected the energy sector badly. There were no major investments made to revive the age-oil industry. Further, the introduction of systems such as 'transfer pricing', 'holding companies' etc stripped off the profits from the shareholders and investors of the extraction companies. Another policy adopted by Yeltsin to restructure the energy sector was the implementation of 'loans for share' that ultimately facilitated the selling of huge stakes in large Russian companies at cheap rates that led to the ruin of the Russian energy sector and such policies hit hard on the lives of common Russian people. However, the coming of Putin saw a revival in the Russian energy sector. He started off with the

restructuring of the Russian energy sector and brought big oil companies under the control of the state. Apart from the Russian energy resources, the Putin era also saw a firm hold (direct or indirect) of Russia over the Caspian resources and energy pipeline routes supporting the 'near-abroad' theory. The Putin era also identified the US interests in its backyard when the BTC pipeline project was accomplished with the backing of the US. Putin was an expert in Russian energy strategy and he realised the importance of this sector that was crucial for the development of the Russian economy. Hence, he realised how important it was for Russia to keep on finding new markets for ensuring Russia's energy security and not just solely depend on the European customers. Therefore, even before the depletion of the Western Siberian fields started, the Asia-Pacific strategy was enunciated. The strategy was however discussed much before Putin came, in the 1970s; but it was only during the third term of Putin as the President that the 'Asian Vector' was fairly highlighted. In this way the Russian President was quite far-sighted to make strategic advances to effectively form relations with the Asian states and adopt various policy instruments and implement them also. The development of the 'green fields' also recognised the importance of foreign funding which largely accentuated the involvement of the Asian players like China, India, Japan etc in the Sakhalin projects. The Asia-Pacific strategy of Russia had several inter-related benefits to Moscow like the economic development of the East Siberian and Far East region, development of the helium industries, coal industries and pushing forward of the thermal energy projects in the region as well. One of the most significant advancement was the starting and completion of the first phase of the ESPO pipeline project. Hence it can be seen how remarkably the fate of the Russian energy sector altered from the scenario in the 1990s to reach the highs in the 2000s. The changes were both internal and external. Unlike the Yeltsin era, the tax regime also saw some absolute changes in the form of the system of 'tax manoeuver' adopted to attract more and more investors in the energy sector and reduction of taxes on extraction and export duties especially for the oil produced in the East Siberian and the Sakha Republic.

CHAPTER 3

RUSSIA-INDIA ENERGY COOPERATION

3.1 INTRODUCTION

This chapter examines Russia's energy synergy with India. It gives a historical backdrop of Soviet Union's unparalleled assistance to India's energy sector which was critical to the latter being a newly independent country. It analyses India's energy aspects in terms of growing demands and the role of Russia in it. It further deals with significance of historical affinity between the two states to evaluate the nature of energy cooperation. The chapter also identifies the various loopholes in the relationship.

For India, the energy sector has been one of the most noted among bilateral economic ties with Russia. In fact, India's petroleum industry owes big to the former Soviet Union for the kind of assistance that Soviet Russia extended that let India stand on its own just after it got its independence. As the first Prime Minister of India, Pt. Jawaharlal Nehru rightly pointed,

Oil is of vast importance in the world today. A country that does not produce its own oil is in a weak position. From the point of view of defence, the absence of oil is a fatal weakness (Ministry of Petroleum and Natural Gas 1988).

India's synergy with Russia in the energy cooperation has been one of the most successful ones with extensive historical roots. Before independence, India did not practically produce any oil of its own. India's oil production began only during its post-independence period with Soviet backing. The Soviet Union backed India not only in terms of seeking oil wells, drilling, exploration and domestically produce oil but also in building India's very own oil refineries in places like Barauni, Koyali, Ranchi and Mathura etc (Chopra 2008). It took almost three decades of Indo-Soviet cooperation in the hydrocarbons sector. The process started from the very understanding of the geology of India, leading to geological surveys, technological know-how relating to oil and gas exploration, construction, drilling, exercising of oil processing enterprises, supply of advanced oil exploration and refining equipment and assistance of Soviet experts in the

entire process including the training of Indian technicians and specialists. The areas covered under the projects of exploration of hydrocarbons were North Cambay Basin and Cauvery Basin. Almost about 70 percent of the costs in handling these projects were financed by the Soviet Union. In fact, India's energy giant ONGC was set up in 1955-56 with Soviet assistance. Following the Industrial Policy Revolution, 1956 that stated, "future development of oil industry will be the exclusive responsibility of the state"; ONGC became India's pioneer in state control oil resources (Ministry of Petroleum and Natural Gas 1988).

Substantial number projects regarding exploration and production of oil and gas in India taken up by ONGC was in close collaboration with the Soviet Union. Numerous exploration surveys were executed in different parts of India including Jammu & Kashmir, Punjab, Himachal Pradesh, Assam, Rajasthan, Cambay Basin and Kutch (Gujarat) and on the Eastern Coast. These attempts were, of course, fruitful because in 1958 the first oil field was discovered in Cambay and in Ankleshwar, Gujarat in 1960. This was followed by the discovery of oil and gas fields in various parts of Assam. The 'on-land' drilling yielded results and led to the discovery of oil and gas bearing structures at Dabka, Santhal and Balol in Gujarat; Amguri, Chariali and Borholla in Assam and Baramura in Tripura (Ministry of Petroleum and Natural Gas 1988) By the end of the fourth five-year plan, the discovery of oil fields increased to twenty-seven and number of gas fields discovered were six. Moreover, Soviet experts also helped Indian specialists in training and know-how regarding geology, oil drilling, exploration and its research base. Hence, Soviet Union helped India in building its first oil research and training institute in Dehradun. Other training institutes were set up in Ankleshwar and another Hind Oil Designing Institute in Baroda, Gujarat. In fact, the Hind Institute which had a large number of Soviet staff later on assisted in the fabrication of Koyali Refinery in Gujarat (Singh 1989: 89).

Apart from that, the Soviet Union also extended its helping hand in building another refinery in Barauni, Bihar with an annual capacity of 2 million tonnes which was subsequently increased further to a capacity of 3 million tonnes. In the year 1975, Soviet Union assisted India in the construction of Bongaigaon Refinery in Assam and also

Asia's largest refinery in Mathura. Cooperation in oil and gas sector proved to be a very productive sector in blossoming Indo-Soviet ties. Apart from the exploration of hydrocarbons in Indian soil, Soviet Union also increased the supply of oil to India and also granted long-term credit.

Consequently, India became the largest trading partner of the Soviet Union among the developing countries and the energy trade between India and the Soviet Union also flourished as the latter became the top most crude oil supplier to India. Hence, during the first forty years of India's independence, the Soviet Union was a huge contributor to India's industrial development. Be it the sector of petroleum, gas, coal mining, steel, aluminium, heavy industry, extraction and refining of hydrocarbons, agriculture; Soviet assistance was very apparent and its role in the process of India's industrialisation has been remarkable (Mohanty 2008). However, just after the disintegration of the Soviet Union, the pace of Russia-India cooperation in general and in the oil and gas sector, in particular, slowed down until the efforts of Indian petroleum minister V.K. Ramamurthy in 1998 that opened new avenues for India's energy synergy with Russia (Mohanty 2013). The bilateral energy ties emerged in a renewed way again expanding into the diverse sectors of energy like thermal and nuclear apart from the hydrocarbon sectors. In fact, one of the most significant signs of Russian support towards India was during India's Pokhran-II nuclear tests in 1998.

It is the historical links during the times of the erstwhile Soviet Union that India's energy cooperation with Russia is even today commendable and much credited to the historical affinity that both the nations share. It has to be borne in mind that, India needs Russia as much as Russia needs India and in the energy front, Moscow has preferred India both in terms of nuclear energy destination as well as the oil and gas sector.

3.2 UNDERSTANDING INDIA'S ENERGY STRATEGY

A close monitoring of India's energy trends reveals its increasing dependence on crude oil. It has been rising over some decades and although India produces a certain amount of its own crude oil it is far from meeting its demands. According to estimates, the gross and net imports of crude oil have increased from 11.68 MTs in 1970-71 to 163.59 MTs in 2010-11. The annual percentage rise in imports was 2.72 percent from 2009 to 2011. The import dependence over crude oil and other petroleum products are so much that over 70 percent of demands are met through imports which are quite a huge percentage. Having said that, it is important to mention that, over the years India has also tried to refurbish its processing capacity to produce various petroleum products to become a net exporter of the same and also succeeded in this plan to a certain extent. For a country whose exports of petroleum products stood at a meagre 0.33 MT during 1970-71 rose to an incredible 59.13 MTs during 2010-11 (Energy Statistics 2012: 35). Similarly, the rise in the consumption of crude oil had also seen an upward trend since the 1970s. From a mere figure of 18.38 MTs in 1970-71 in consumption of crude oil, it increased to 192.8 MTs in 2009-10 to 206.15 MTs in 2010-11 (Energy Statistics 2012: 43).

In the natural gas front too, India's consumption levels have been rising with the rising demands. Estimates indicate that in 1970-71, the consumption was 0.7 BCM which increased to 51.3 BCM by 2010-11. The natural gas consumption in the country has been majorly directed towards power generation with 46percent contributed towards this end, other than that about 28percent is consumed by fertilisers industry and 11.7percent for captive use or LPG shrinkage (Energy Statistics 2012: 43).

For India, its energy strategy is passing through a phase of gradual transformation. It has been quite implicit now that the cheap energy supplies from the Middle Eastern countries over which India has been dependent for years on account of political and security risks have become largely an unsecured and unreliable source of supplies. It had, therefore, become obligatory for India to find diversified energy supply sources. India's energy diversification policy has been trying not only to make changes in its energy mix which still has a larger coal count and replace it with more of an environmentally-suited source but there are planning to seek new sources of energy imports as well. Other agendas of energy security include international acquisitions of energy assets, foreign investments

and steps towards improving domestic productions. India's attempts to import gas from its neighbourhood in Myanmar or Bangladesh have met with limited results.

In this context, Russia and India during the 17th Indo-Russia Annual Summit supported the increased use of natural gas in terms of being more economically efficient and environmentally acceptable in accordance with the Paris Agreement on Climate Change (Joint Statement of the 17th Indo-Russia Annual Summit, Ministry of External Affairs, Government of India, 2016).

3.2.1 India Hydrocarbon Vision 2025:

India's energy security quagmire was well versed as follows-

- India's crude oil self-sufficiency declined from 63 percent in 1989-90 to 30 percent in 2000-2001 and it is expected to decrease to 15 percent by 2014-25.
- For gas, self-sufficiency is expected to increase from 49 BCM in 2006-07 to 125 BCM in 2024-2025.

Production of oil in India's hydrocarbons sector, according to the Report is not yielding good results like before and therefore the Government of India had mentioned it as one of the top priorities for guarantying India's energy security. The document 'India Hydrocarbon Vision 2025' therefore seeks to focus on the long-term energy security of India in the hydrocarbons sector. The agenda aims to achieving India's energy security through intensifying production and exploration techniques within the unexplored basins within the country to enhance the domestic availability of oil and gas supplies, investments in equity oil abroad, pursue natural gas and LNG projects, acquire self-sufficiency in upstream activities, create storage facilities for crude oil and other petroleum products, building a framework for the use of cleaner fuels, to have a rational tariff and pricing policy, ensure a strategic fiscal policy to attract investments in the oil and gas sector and liberalize the hydrocarbons market (India Hydrocarbon Vision 2025).

Table 7: India's Demand and Supply Scenario in petroleum

<i>India</i>	<i>2000</i>	<i>2005</i>	<i>2010</i>	<i>2015</i>	<i>2020</i>	<i>2025</i>	<i>2030</i>
Oil demand	102	120	145	171	201	236	271
Oil production capacity	32	34	34	34	34	34	34
Oil imports	70	86	111	137	167	202	237
Planned import sources							
Current imports	70	70	70	70	70	70	70
Residual Imports requirement		16	41	67	97	132	167

Source: Batra, Rk. and Khetan A. (2004), "Russia-China-India Energy Cooperation", *China Report* 40 (2): 175.

The table above gives an idea of India's demand and supply scenario in petroleum from 2000 to 2030. As can be seen in the table India's demand for oil has always been way more than its domestic production capacity and most of the oil demands are met from oil imports which is a fundamental aspect of India's energy security scenario. While the trend of domestic production has been constant since 2000, the oil demands and imports have increased over the years and is likely to sustain this rising trend of consumption making it a very lucrative market for energy exporters.

To bring in imports from Russia is viable considering all the other factors of convergence that the two states share (Sachdeva 2013) As Dr. Mamdouh G. Salameh, an international oil economist and energy consultant to the World Bank stated,

India is trying to reduce its dependence on the volatile Middle East for its energy needs amounting currently to 76 percent and projected to grow 85 to 90 percent whilst Russia is trying to diversify its export outlets, partly to open new markets in the Asia-Pacific region and also to neutralize the impact of sanctions on its global trade (Chowdhury 2014).

However, a better neighbourhood policy is vital for India to realise its dream of having direct access to Russian hydrocarbon resources via a pipeline.

3.2.2 India's Energy Basket:

According to the Energy Statistics 2012 of the CSO, India's crude oil reserves in March 2011 estimated at 757 million tonnes (MT) and natural gas reserves and natural gas reserves accounted for 1241 billion cubic meters (bcm). Crude oil reserves in India are mostly located in the Western Offshore which amounted to 43 percent and Assam with 22percent. There was also an increase in estimated reserves of crude oil in Andhra Pradesh by 33 percent and Tamil Nadu by 8 percent. In 2010-11, there was a 2percent decrease in the estimated reserve of crude oil throughout the country. On the other hand, the highest reserves of natural gas are geographically located in the Eastern Offshore amounting to 35 percent, Western Offshore with 33percent. The natural gas reserves, however, have shown an upward trend recording an increase by 8 percent in 2011 with most of the contribution made from CBM with 145 percent and Tamil Nadu with 7 percent (Energy Statistics 2012: 1).

According to 2011 statistics, India had a total of twenty refineries in the country, most of these under the public sector located at several places in India like Digboi, Guwahati, Numaligarh, Bongaigaon in Assam, Barauni (Bihar), Koyali, Haldia (West Bengal), Mathura (UP), Panipat (Haryana), and Vishakhapatnam, Chennai, Nagapattinam, Kochi, Mangalore, Tatipaka and two in Mumbai. Among the private sector refineries, there is one by Reliance Petroleum Ltd in Jamnagar and another named Essar Oil in Vadinar. This expanded the crude oil refining capacity of India and by early 2011; the country had a refining capacity of 187 million tonnes per annum. Moreover, with additional refining capacity because of new refineries in Indian Oil Corporation in Panipat, HPCL refinery in Mumbai and another CPCL in Manali increased the country's capacity by over five million tonnes. In fact, from 2009-10 to 2010-11, according to statistics, the recorded increase in crude oil processing was calculated to be at 6.9 percent (Energy Statistics 2012: 9-10) The enhanced nature of India's refining competence signifies the country's downstream capability. In this case, if the crude oil demands are met by imports, New Delhi could facilitate the refining processes on its own.

3.3 INDIA-RUSSIA ENERGY COOPERATION: AN OVERVIEW

The year 2008 marked a revival in Indo-Russian ties, particularly in the energy sector. According to statistics from the Petroleum Ministry of India, from 2007-2008, India's annual import bill for oil increased by more than 40 percent. And moreover, India being one of the major oil importers was dependent upon 80 percent of its crude oil imports in 2005-06. Russia being a major supplier in the world stands important for India. Even when there was a crisis and the oil prices went up to US\$ 50 per barrel, Russia catered to India's oil demand at a much lower rate than the existing market price (Chenoy 2012: 435-447)

For Russia, the Sakhalin projects have been a global accomplishment. For India, it has been a success as it ensures a stable supply of oil and gas from the Sakhalin I project. Its success has even inspired the Indian side to further go on for the Sakhalin III project and is pushing hard for it. Energy has become one of the vital elements in their strategic partnership. Russia's contribution to India's energy security has also extended beyond just cooperating with India in the level of oil and gas trade alone, but for the IPI project, Moscow had agreed for a financial assistance of \$7 billion to build the IPI natural gas pipeline. The Sakhalin I project where India had made one of its largest overseas investments, OVL's procurement of Imperial Energy etc is precedence towards understanding the grit of their energy ties. It is imperative to mention here that OVL has wide experience in overseas oil and gas projects. Apart from Russia, several other countries where OVL has its business concerns are Brazil, Colombia, Kazakhstan, Venezuela, Vietnam, Sudan, South Sudan, Syria etc. Moreover, OVL shares extensive business partnerships with noted oil and gas companies of the world like Shell, Total, Stanoil, ExxonMobil, Rosneft, Petrobras, CNPC, Sinopec, Petro Vietnam, Petronas, PDVSA, TPOC etc. All of it adds prospects for the development of a cross-border pipeline between Russia and India (Sachdeva 2013).

Russia's changing energy strategy towards Asia finds more meaning with the presence of a market like that of India which is not only mounting but is also willing to engage actively in bringing Russian hydrocarbons home in spite of several political and security

related complications. That is the reason why India is still interested in sorting out obstacles and going ahead with long due plans like the TAPI pipeline and the IPI gas pipeline. There have been long ongoing discussions on the viability of the route of the pipelines considering all the political, economic and security-related issues and with that, there have been several plans regarding the route of the pipelines. One of the suggested ideas to connect Russia and India through a pipeline is via Kazakhstan, Uzbekistan, Afghanistan and Pakistan. While other plans consider a revival of already existing routes between Russia and Central Asia with Mazar-e-Sharif in Afghanistan which is around 1200 kilometres from India, hence is building an energy corridor bridging Eurasian with South Asia (Sachdeva 2013).

As Dr. Salameh, energy consultant to the World Bank states suggesting Russia's orientation towards the Asian market,

Russia is in the process of reorienting its energy posture to Asia owing to the growth in energy demand in that region, coupled with the likely stagnation or decline of demand in Europe over the next few decades (Chowdhury 2014).

As Asia does not necessarily mean China alone, hence India provides Russia with a bright opportunity in a stable and profitable destination for its huge gas exports. India is also much more a reliable partner to Russia because unlike the Chinese which has a heavy footing in the Central Asian gas market, also sharing a direct pipeline, bypassing Russia; however, New Delhi does not carry any such baggage. (Sachdeva, 2013)

3.3.1 India in Russia's Energy Strategy Up to 2020:

In the Russian Energy Strategy 2020, the Asia-Pacific Region along with India has a special mention. Apart from the Asian countries of Japan, China and Korea, India is another important country for Russia's energy plans. The energy aspect is one where Russia and India share a satisfactory bonding but both the countries realise that this relationship needs a further boost. India is a bright and prospective market for Russia's oil and gas, atomic technologies and nuclear energy. According to the draft of the Russian Energy Strategy up to 2020, the Russian oil exports to Asia will rise from the present levels of 3 percent to 30 percent by 2020. For India, this is a good opportunity to

engage more closely with both Russia and other Asia-Pacific countries to ensure India's energy security.

Dr. Salameh, technical expert at UNIDO and energy consultant to the World Bank states in a positive tone that,

Russian major energy companies would be very interested to invest in India's oil and gas development as well as in nuclear energy. But Russia is equally interested in Indian investments in its energy sector (Chowdhury 2014).

Moreover, for Moscow India is a viable choice in its grand strategy towards the Asia-Pacific regions as it serves the purpose of exercising its leveraging position over the West. As Dr. Salameh observes,

Essentially Russia is seeking leverage over the West by demonstrating that it has other export markets besides Europe for its oil and natural gas exports, should Brussels impose too strictly sanctions against Moscow (Ibid).

3.4 STEPS TOWARDS INDIA-RUSSIA ENERGY COOPERATION

ONGC and Rosneft:

In an attempt towards renewing the energy ties between Russia and India, the advent of Russian President Putin had been very crucial. The relationship saw new avenues after the signing of an agreement on reaching bilateral strategic partnership that further boosted the energy cooperation. This is evident from the fact that immediately after that Russia's oil major Rosneft and India's giant ONGC jointly studied the possibilities of carrying out refining and retail marketing business undertakings in India and some other third world states. One of the biggest achievements of the Indo-Russia energy ties was the 2001 ONGC Videsh Limited's (OVL) investment in Russia's Sakhalin-I oil field for a 20 percent stake. The investment was remarkable because for India it was her biggest investment abroad that stood at an impressive \$2.7 billion (Mohanty 2013).

The two countries had also signed MoUs for joint exploration of gas in the Caspian Sea and jointly construct underground repositories for gas storage in India. India has also

expressed its interest to invest and cooperate with Rosneft to win a joint bidding in the Sakhalin III project. In the new Russia-India energy saga, investments and joint ventures have emerged as the fundamental component. In this way, Russia and India complement each other with the former's growing hydrocarbon production and the latter's interest in joint investments.

India's ONGC Videsh Limited (OVL) has been granted special rights from the government towards investing in overseas energy projects of production, processing and transportation has around forty assets in different parts of the world (Annual Report, Ministry of External Affairs 2010). OVL has been the key component in realising India's cooperation with Russia in the energy sector. Under former Petroleum Minister, Murli Deora, India for a long time showed its interest in purchasing stakes in various oil fields of East Siberia and North Russia and making OVL a part of a joint exploration project with Russia's Rosneft in East Siberia's Vankor oil fields. Among plans in North Russia includes India-Russia joint bidding in the Timan Pechora region. Apart from that Russia-India cooperation in terms of Russian investments in Indian soil include Rosneft's participation in exploring in one of ONGC's LNG terminals in Mangalore.

India's presence has also been in the Yurubcheno-Tokhomskiye oil field in East Siberia. Rosneft had sent a formal proposal to OVL for joint development of the oil field which is estimated to have 991 million barrels of oil equivalent reserves. The production of the field is expected to start by 2017.

Gazprom deals with ONGC and GAIL:

Gazprom's presence in the Indian shelf was evident from 2000 when it entered into a PSA with the Government of India and GAIL on Block 26 in the Bay of Bengal. This block located in the Indian continental shelf belongs to Bengal petroleum Basin (Report of India-Russia Joint Study Group 2007). In 2004, Gazprom inked an agreement of strategic cooperation with GAIL for natural gas supplies to India along with strengthening of joint efforts in India's eastern offshore area at Block NEC-OSN-97/1 located in the Bay of Bengal (Times of India 2005).

Then again in February 2005, an MoU was signed between Gazprom and ONGC on the subject of a collaboration to work together in hydrocarbon processing, oil and gas chemicals supply in the Asia-Pacific and South Asia region, construction and operation of a trunk line, cooperation in scientific technology and staff growth. Regarding the issue of financing a US\$ 7 billion pipeline from Iran via Pakistan to India, Gazprom has displayed its unrestricted willingness thereby implying how Moscow is interested in helping out India in ensuring its energy security.

The MoU signed on 21 February 2005 between Gazprom and ONGC had the following directions-

- developing natural gas, oil and other hydrocarbon output deep processing capacities in Russia, India and third countries;
- supplying oil and gas refining products to Asia Pacific and South Asia, India in the first place;
- designing, constructing, operating and maintaining gas mains and networks of underground gas storage facilities;
- promoting sci-tech cooperation in the major gas industry sectors;
- collaborating in staff qualification upgrading & re-training (Gazprom Press Release, 27 November 2007).

Also, India's principal natural gas company GAIL and Gazprom Marketing and Trading Singapore (GM&TS) which is a wholly owned subsidiary of Gazprom Marketing and Trading have signed a very strategically important agreement. Both the companies came into a legally binding treaty on LNG Sales and Purchase Agreement (SPA) for a period of twenty years. This agreement came after an earlier agreement called the Basic Framework Agreement (BFA) on 18 May 2011. According to terms of the contract, Gazprom production facilities will be providing GAIL with 2.5 million tonnes of LNG every year for two decades at a reasonable price using the oil-indexed formula. LNG will be delivered to two terminals in India namely Dahej in Gujarat and Kochi in Kerala. This agreement is viewed as a very high point in Russia-India energy relations and corporate partnership. As the CEO of Gazprom Marketing and Trading, Vitaly Vasiliev stated,

We are delighted to have signed this agreement with GAIL, during a period of rising demand for LNG in India. We are looking forward to working together with GAIL to help meet India's expanding gas demand whilst securing a long term market for Russian gas.....We recognize GAIL's strength as the major gas player within India, enabling flexible access to a rapidly developing market and are confident that this Sales and Purchase Agreement (SPA) will further strengthen our already well-established LNG trading relationship (News Report, Gazprom Marketing and Trading 2012).

The sentiments sounded mutual from India's side as well when the Chairman and Managing Director of GAIL (India) Limited expressed his views on this development between state-run energy companies of Russia and India as such,

This long-term LNG supply agreement with Gazprom, which holds the world's largest gas reserves, is another milestone in Indian-Russian Energy Cooperation. The deal with Gazprom reinforces GAIL's commitment to facilitate the development of the Indian market for which US\$6 Billion in investments are being made by GAIL in creating Natural Gas Infrastructure. The deal also marks our efforts to create a well-diversified and secured supply portfolio to meet the ever growing energy requirements of the Indian economy and enable sustainable long-term growth for GAIL (News Report, Gazprom Marketing and Trading 2012).

Joint Investments:

In addition to the joint investments in the Sakhalin, Russia and India have been closely cooperating in various other such similar joint investment projects as well. ONGC and Gazprom have concluded an agreement on joint development of natural gas basins in the Bay of Bengal in India's offshore. Apart from that in Russia's Far East and East Siberia and also from the Western Siberia and Volga-Ural basins, that provides one of the world's richest hydrocarbons base offers India with a key potential alternative source of energy supplies. Hence India-Russia joint ventures are vital and strategic methods adopted by both the countries for a secured energy future.

Swap arrangement and cooperation in LNG supply:

Swap arrangements are another source of Russia-India engagement in the energy sector. Energy experts understand the importance of it in Russia-India energy relations. These are appropriate techniques of using the comparative advantages of each country. For example in the case of Russia and India, both the countries could make an arrangement in such a way that the energy supplier Russia could avail India's overseas equity investments, in the process benefiting both the parties. Moscow knows it well that in order to realise its interest to redirect towards the Asian market, swap arrangements would turn out to be one of the keys. In this direction, Russian gas major, Gazprom has been evaluating the possibilities of a Liquefied Natural Gas (LNG) deal with India to be swapped for gas. Russia's LNG supply to Asia has already commenced with a start of shipping about 5 percent of world's LNG supply. All of these supplies are transported through tanker ships. It has been estimated that Gazprom has exported around 0.65 million tonnes of gas amounting to 10 deliveries from 2009 to 2011. (Gazprom News, 2011) And from Russia's Sakhalin II project, India imports about 2 million tonnes of LNG annually. The imports are expected to rise as India has plans to increase the capacity of Dahej LNG terminal in Gujarat up to 15 million metric tons per year by the end of 2014. Besides that, Petronet LNG Ltd. has other LNG plants operating from Kochi, Kerala since 2013 and a third plant is expected to come up by 2016 in Andhra Pradesh that will hold an annual capacity of 25 million tonnes (Petronet LNG Official Website).

One of the important aspects in LNG sector was the Indo-Russia Annual Summit of 2015 that acknowledged Russian LNG supplies to India and also the involvement of Indian companies for cooperating in joint projects from JSC NOVATEK project Arctic LNG (Joint Statement, Ministry of External Affairs, Government of India, 2015).

India's ONGC Investment in Imperial Energy:

ONGC has invested in Imperial Energy which is a UK-based oil company. It was in the year 2009 that ONGC bought Imperial Energy Plc. for \$2.1 billion to tap Siberian deposits which are a big deal for India as it is ONGC's biggest acquisition abroad that gives India access to 6.8 billion barrels of oil with an annual production of approximately

one million tonnes (The Hindu Business line, 1 January 2009). Imperial Energy includes five independent enterprises operating in Tomsk including two oil and gas enterprises. Russia-India joint venture also includes in business collaboration between ONGC's Imperial Energy and Russia's Sistema through a 'no-cash' deal struck in the year 2010. According to this deal, ONGC possesses approximately 25 percent shares and an influence in the management decisions. ONGC's share in the merger of the three companies that include Russian companies Bashneft, Russneft and Imperial Energy would benefit ONGC with a share in the Russian corporation's twenty-five million tonnes annual oil production and a 20 mt output in the new oil fields of Titov and Trebs in the Arctic Circle. Bashneft is involved in developing these fields. It alone produces about thirteen million tonnes of oil from these Russian fields. On the other hand, Russneft produces about 12 mt of oil from the Russian fields as well as has stakes in the Titov and Trebs fields which gets Bashneft with 200 million barrels reserves. The Indian deal with this Russian firm is that OVL which is the overseas wing of ONGC would get a part of Sistema's 49 percent stake in Russneft. Against this, OVL has proposed to give away its Imperial Energy. Sistema's shares counting in the total of its own 75 percent alone and the others combined together makes it 90 percent in Bashneft. The Indian company ONGC intends to lead a consortium towards acquiring the share offered by the agreement with Sistema. Of India's total investment in 2010 of \$12 billion, the two deals of Sakhalin and Imperial Energy accounted for a remarkable \$5 billion approximately (The Economic Times 2011)

Russia's Ural Supplies and India:

Recent reports suggested how leading crude oil suppliers to India like Saudi Arabia and Iraq had cut exports to India on account of production curbs under the agreement between OPEC and other leading oil producers. Similarly, shipments from Iran were also declining due to a row over Farzad B gas field. A group of Indian oil companies led by ONGC was interested in claiming the developing rights of the gas field. The gas field was discovered way back in 2008 by the OVL-led consortium. Moreover, Iran had also cut down the 90-day credit period to 60-day credit period to Indian refineries like Indian Oil

Corporation and Mangalore Refinery and Petrochemicals Ltd for payment of Iranian oil. (The Hindu Business Line, 7 April 2017) And against this backdrop, Russia has raised Urals oil supplies to India that never exceeded 500,000 tonnes per year, it had surpassed 1 million tonnes by the start of 2017. As quoted by a trader at a trading desk-

Large Urals flows to India have been one of the main new trends for Russian oil exports this year, and it was clearly triggered by OPEC cuts amid rising demand (Olga Yagova 2017).

3.5 INDIA IN RUSSIA'S FAR EAST

Apart from that India is considering investments in Russia's upstream hydrocarbon resources specifically in North-West Siberia's Yamal Peninsula. The region accounts for almost one-fifth of the world's natural gas production and India vehemently wants to secure its position in the energy race for Russian assets here. Russian firm OAO Novatek has offered an opportunity to Indian state-owned companies, and it requires an investment of about \$1.5 to \$1.7 billion to make this deal happen. This Russian project named 'Project Yenisey' is mainly an upstream hydrocarbon block-linked natural gas liquefaction project with the marketing of liquefied natural gas (LNG). The Indian companies that are interested in the offer are OVL, ONGC, GAIL (India) Ltd and Petronet LNG Ltd (Kundu, 2012).

Sakhalin-I:

The factor of geographical distance has been often understood as one of the hindrances in the energy relations between the two countries. However, India and Russia do not consider it as a major setback. Apart from the country's biggest investment in Sakhalin I, Indian private companies are also engaging together in Russian downstream petroleum projects through heavy investments to acquire stakes there. Sakhalin I has set an example that defies the problem of geographical constraints and distance. Along with state-owned companies of India, now even the private Indian companies are advancing towards investing in downstream petroleum units in Russia. In fact in the Sakhalin-I project, the Indian company ONGC offered some \$200 million more than other Western rival

companies and acquired 20 percent stake in Sakhalin I in 2001 by investing a whopping \$2.7 billion, India's largest investment abroad then. It was even an equally good deal for Russia's Rosneft as ONGC promised to back the Russian share of obligation to Sakhalin I until the project breaks even (Mohanty 2010).

Sakhalin-II:

Sakhalin II happens to be the world's largest integrated oil and gas project. Oil and gas production in Sakhalin II has been ongoing since 1999 making it the most advanced projects in terms of development and planning of gas. Its marketing strategy has been overtly targeting over 8 percent of the LNG market of Asia-Pacific which also gives India an opportunity to make swap arrangements etc. Under the Sakhalin II project, Russia established its first liquefied natural gas plant in February 2009. Although India was unsuccessful to bid a share in the Sakhalin II project as there were delays and huge cost overruns from \$9.8 billion to \$22 billion, yet India has been consistently importing LNG from the Sakhalin II project of Russia via tanker ships since 2009 (Kishkovsky 2007).

Sakhalin III:

After the accomplishment in India's participation in the Sakhalin I project, both Russia and India have mutual interest in Sakhalin III project. There have also been proposals by India for an exploration project with Russian oil and gas giants Gazprom and Rosneft and a joint venture to participate in gas liquefaction operations in Russia's offshore fields for ensuring shipments to India. India has further sought a stake in Sakhalin III oil and gas project and to invest approximately \$1.5 billion. Russia's diversification policy towards India in Asia seems most evident in the Sakhalin Projects. Russia's Defence Minister Sergei Ivanov during one of his visits to India categorically expressed Russia's desire to let Indian companies participate in its Sakhalin III oil and gas project. As noted by a news agency ITAR-TASS, Sergei Ivanov said, "Moscow is interested in the participation of Indian capital in the development of Sakhalin 3 project" (Reuters 2007). Indian side is keen on this exploration venture in the Far East and seeks for about 20 percent stake in it. Petronet LNG, the largest liquefied LNG importer wants to jointly engage in the project

with Gazprom to develop projects, produce LNG and shipment of gas (The Hindu, 8 December 2011).

Rosneft and ONGC in the Vankor oil fields:

Indian oil and gas companies have always been seen as conservative players in the field of global expansions compared to the Chinese ones. Companies like ONGC have taken cautious steps in terms of managing expansions or it takes a lot of time to scrutinize over signing a deal which has also backfired many times by either delaying the deal or losing out of the race. Also, due to a hesitant attitude in taking risks and hesitant political decisions, Indian companies have faced the problem in quick inking of overseas energy deals for which there are a lot of bidders. But in recent times, the attitude has changed and New Delhi has been quite assertive in taking decisions. In 2015, it had announced the launch of a ‘global acquisition spree’ by investments worth \$180 bn to take along the Chinese rivals in the race of energy security. The success of India’s state-backed energy giant ONGC in striking a significant oil deal with Russia’s oil major Rosneft for a 15 percent stake in the Vankor oil field. The Vankorneft deal that India got confirmation of is a big evidence of Russia trying to make a strong footing into the Asian subcontinent. In spite of the growing affinity between Russia and China in the backdrop of several international and economic pressures on Moscow, it is also true that Moscow has inherent issues with Beijing and the Vankor and Taas Yuriakh assets are the leading examples to explain this. India and China’s competition for overseas energy assets have been a major story on the energy front. Limited resources and increasing demands has been the reason behind such competitive climate for these two Asian states. Chinese energy firms started having problems with Rosneft in 2013 on issues of debts and pricing. China’s leading energy firm CNPC and some other firms had lent Rosneft with tens of billions after the acquisition of TNK-B. Rosneft had offered China stakes in both Vankor (Russia’s second largest field accounting for 4, 21,000 bpd) and Taas-Yuriakh (to account for 100,000 bpd by 2017). While CNPC and other Chinese negotiators caught up in an obstinate position on pricing, evaluating more risks than benefits and failed to reach an agreement in time;

Indian energy major ONGC which was also competing for the same assets caught up and succeeded in acquiring 15 percent stakes in Vankor from Rosneft. Additionally another 11 percent of Vankor was sold to ONGC and a consortium of Oil India Limited, Indian Oil Corporation and Bharat PetroResources Ltd. acquired around 23.9 percent. This is a huge success for Indian companies to penetrate into the rich Russian energy blocks as now it has a massive 49.9 percent share in the Vankor project for an amount of \$4.1 billion. Similarly in the Taas-Yuriakh project, the same three consortium of Oil India Limited, Indian Oil Corporation and Bharat PetroResources bought a 29.9 percent stake for \$1.3 billion. (Trickett, 2016) Not only business wise is this a big step in India-Russia energy cooperation, but diplomatically and strategically it is a big win for India in its global energy expansion drive as China was also deeply interested to get a stake by it was taken over by India. India's investments in Russian energy market can be understood as important just as the Chinese market is. In the context of Moscow's burden of hefty debts, and falling oil prices, it can be identified that Moscow is trying to woo all its potential customers and not just concentrate on one (Reuters, 22 January 2007).

Similarly for India the best part as suggested by an analyst is that ONGC had a better bargain deal due to the urgency of capital access to Rosneft. It is important to mention here that in Rosneft-ONGC deal, Rosneft needed urgent capital as it had lost about 40 percent of its market capitalization in 2014. It was going through difficult times and in this regard also requested for a financial aid of \$37 billion from the National Welfare Fund before Putin's trip to India. So basically this deal was important for Russia to keep itself secure during its turbulent economic times (Barmin 2014).

The deal is strategic for two specific reasons: Firstly, that Russia has big volumes of oil and gas reserves and it is ardent for it to find good markets and the growing Indian economy needs more and more oil. As a senior analyst at Bernstein, Neil Beveridge puts in-

I think the deal looks fairly strategic in the sense that it's Russia, its big volume, big reserves....it very much speaks to an India that knows that as its economy grows it will need more of oil (Keohane and Farchy 2015).

Secondly, the signing of the deal was also very significant from India's point of view considering the drop in oil prices has reached up to \$50 per barrel making it a very suitable opportunity for India to augment its oil reserves. Moreover India has also not been able to make a major success in producing phenomenal supplies for its domestic use as identified by a head of energy infrastructure and government at KPMG, Arvind Mahajan (Keohane and Farchy 2015).

The Rosneft-ONGC deal gives India an opportunity to share the Siberian assets that otherwise goes majorly to China as connected by East Siberian Pacific Ocean (ESPO) Pipeline. In this way it can be seen how India is making a mark in China's backyard by attracting Russian energy supplies.

Hence, gradually hydrocarbons have re-emerged as an active area of cooperation between Russia and India. Counting the many acquisitions and stakes that India has been a part of in the Russian oil and gas assets, by end of 2016, Indian companies have invested approximately US\$ 5.5 billion just in Russia's hydrocarbons sector. (Ministry of External Affairs, 2016)

3.6 RUSSIA-INDIA NUCLEAR ENERGY COOPERATION

There is another aspect of Russia-India energy cooperation that has found new avenues over the years. Cooperation in nuclear energy has been a good alternative to Russia-India cooperation in the hydrocarbons sector. The history of establishing India's nuclear energy complex has been quite convoluted due to various factors. Firstly, the idea of 'nuclear energy' during the cold-war phase was in general restricted to the understanding of 'atom bombs'. Secondly, India did not have the required technical know-how to pursue nuclear research in the right direction. That brought India face to face with the third problem that was to get assistance from external sources especially the developed countries. Largely, none of the nuclear power states was willing to help India in its endeavour but the USA in the year 1969 did assist India in building its first Light Water Reactor with a capacity of 320 MWE (CIRUS).⁴

⁴ CIRUS is the short form of Canada-USA Nuclear Reactor

However, India went on with its own first peaceful nuclear test in 1974 anyways and that particularly invited a lot of criticism to India by the international community especially the West. This nuclear test was a testing ground for Indo-Soviet ties mainly because relations between India and the West were deteriorating and the only option for New Delhi was to move closer to the Soviet Union. The Soviet Union although had reservations about India's nuclear tests but it was not visibly very open about it. In fact, Soviet Union's position over this issue worked in stimulating Pakistan's nuclear energy programme in close cooperation with China (Dixit 2002: 217-18) On the other hand, the consequences of the nuclear tests came in the form of Western sanctions against India and even Canada discontinued its supplies of nuclear reactors and nuclear fuel to India. However, the USSR did emerge as a true friend during this bleak moment of India and by 1976 the first Indo-Soviet nuclear cooperation started with the Soviet Union supplying heavy water to the second unit of the Rajasthan Atomic Power Station (RAPS) (Jha 2007: 7)

Even for India, the road towards establishing its own nuclear regime or assistance from the P5 countries wasn't an easy path. The five permanent members of the United Nations Security Council were the only ones with nuclear power. They set up an organization called the Nuclear Suppliers' Group (NSG) to deter the proliferation of nuclear technology beyond the P5. This NSG⁵ then was a group of forty five nuclear material supplier states seeking to control the export of nuclear materials, equipment and technology especially to deter the development of nuclear weapons by non-nuclear states. India in this context was also compelled to sign the Non-proliferation Treaty (NPT) to disband its nuclear programme. The NPT legally justified the possession of nuclear weapons for only those states that did nuclear tests prior to 1968 making the P5⁶ states legal possessors of nuclear technology as all of these states had tested before that year. For India the treaty was a reflection of meting out discriminatory attitude by the nuclear weapon states towards the non-nuclear states. Hence, India refrained from signing the

⁵ As of 2014, the NSG has 48 members including Argentina, Australia, Austria, Belarus, Belgium, Brazil, Bulgaria, Canada, China, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Japan, Kazakhstan, Latvia, Lithuania, Luxembourg, Malta, Mexico, Netherlands, New Zealand, Norway, Poland, Portugal, Romania, Russia, Serbia, Slovakia, Slovenia, South Africa, South Korea, Spain, Sweden, Switzerland, Turkey, Ukraine, United Kingdom, United States.

⁶ P5 refers to the UN Security Council's five permanent members- The US, the UK, Russia, China and France.

treaty at any cost. The Soviet Union was also not able to smoothly cooperate with India in its nuclear plans as the former was a member of the NSG.

But the Sino-Indian war in 1962 and Indo-Pak war of 1965 was a turning point for India in the aspect of its nuclear energy cooperation with the USSR. It was crucial for India to modernise its defence sector and be a nuclear-power state with at least a credible nuclear deterrent. Especially after the Sino-Indian war and the phase of the Sino-Soviet split, for India, the USSR was the only option left.

The USSR-India cooperation in the nuclear sector hence started for the second time in the year 1988 when Moscow signed an agreement with New Delhi on the Koodankulam project on 20th November. This was the first Inter-Governmental Agreement between the USSR and India signed in 1988 for the supply of Light Water Reactors to India. According to the agreement, the USSR was to construct two units of 1000 MW reactors at Koodankulam in India state of Tamil Nadu. However, due to the sudden disintegration of the Soviet Union in 1991, the implementation of the agreement got delayed tremendously although the deal never got formally cancelled (Subramaniam 2000).

India's nuclear tests in Pokhran in 1998 presented a dilemma before Russia as to its immediate official response. Without a doubt, being non-signatories to NPT and CTBT, India had gone ahead with the tests and did not only invite international criticism but also sanctions from the West. The official response from Russia that came immediately after the break of the news was on one hand 'unacceptable' as Prime Minister Yevgeny Primakov remarked and President Yeltsin criticised it saying "India has let us down"; and on the other hand refused to impose sanctions on India unlike the West as it would have been "an extreme step and counter-productive" according to Moscow's stance. So in entirety, the nuclear tests by India did not bring any pause to the Indo-Russian ties at all. In fact, the way Russia had earlier responded to such tests by pro-Western countries such as Israel and South Africa with vehement criticism; the response during India's tests was quite subtle. The only concern of Russia post-Pokhran tests was that it would become a trend-setting ground for nuclear tests/proliferation in South Asia starting with Pakistan. Other than that, there was not any major alteration in Russia's India policy after Pokhran. In fact, the relationship between the two got elevated to the level of strategic partnership soon in the coming years (Bakshi 1998).

The advent of Russian President Putin in October 2000 accelerated the dormant project of Koodankulam and before his first visit to India, the final contract on the project was finally signed in the year 1998. Putin's visit to India was also commendable as it affirmed India's peaceful uses of nuclear energy. The construction of two reactors in Koodankulam was finalised by 2001. Another highlight of Putin's visit to India in the aspect of nuclear cooperation was his trip to the Bhabha Atomic Research Centre on 5th October 2000. Putin's soft stand on India's non-signing of the Comprehensive Test Ban Treaty (CTBT) was also evident when he addressed the scientific community and announced as such,

I would like to see India participate in the CTBT.....however; we realise that the signing of the CTBT should be based on strategic vision and interest of India and the local populace (Subramaniam 2000).

Prior to the visit of the Russian President, a Russian delegation of officials and scientists headed by Reshetnikov visited Rajasthan and Tamil Nadu which was an active signal towards Russia's decision to assist India in the field of nuclear power generation. Reshetnikov and his team of experts visited RAPS and later on confirmed to build four more units of VVER type reactors of 1000 MW capacity at Koodankulam, Tamil Nadu. Reshetnikov even referred to the Koodankulam project as the start of a 'new phase of cooperation' (Subramaniam 2000).

Apart from the four new units at Koodankulam as specified in the Russia-India agreement of nuclear cooperation, a joint declaration was concluded by the then Russian Prime Minister Dmitry Medvedev and then India's Prime Minister Manmohan Singh to construct more nuclear reactors in different states of India to consolidate Russia's cooperation with India for peaceful nuclear energy usage (Sethi 2008).

Nuclear fuel supply is probably one of the most potential fields where Russia can help India. The Inter-Governmental Agreement between India and Russia in 2000 as already mentioned above allowed the supply of LEU fuel worth approximately 58 tonnes to two 210 MW boiling water reactors at Tarapur in the state of Maharashtra in India TAPS-I and TAPS-II in the year 2001. For this act of Russia, the international community however strongly criticised Moscow as it was still a member of the NSG preventing further supplies to Tarapur. Since Russia's sporadic supply of nuclear fuel to Tarapur

reactors of India in spite of objections from the international community, Russia has been continuing the supply of nuclear fuel to India and in fact, these supplies for nuclear reactors in India have been a basic part of Indo-Russia nuclear cooperation. Also in the year 2006, Russia announced the supply of a LEU fuel for two reactors in the Tarapore Atomic Power Station (TAPS) and by April the same year, the first shipment of about 50 tonnes were delivered. The amount was good enough for the reactors to operate up to 2008 and the second shipment let the reactors operate until 2012-13. Russia has even agreed to grant India with a lifetime supply of fuel for its reactors that are being constructed with Russia's assistance. Over and above, Moscow has also agreed to a five-year renewable contract to provide supply to India's Tarapur plant. Moreover, unlike the conditions as given by the US, Moscow's nuclear agreements with India are not conditional to the discontinuation of fuel supplies in case of a nuclear weapons test by India anytime.

A dramatic change occurred in India on 6th September 2008 when the NSG allowed its members for a civil nuclear cooperation with India. It was a huge boost for India because, in spite of being a non-signatory to the NPT, it had received this special treatment. This step opened many opportunities for India in the field of developing its nuclear energy sector. Just after this, India had concluded bilateral agreements on nuclear energy cooperation with the USA, France and Russia. In fact, according to estimates, out of an approximate \$60 to \$100 billion Indian nuclear markets for legitimate nuclear trade, Russia could hope to get at least 30 percent of the share from India's market (Pobedash, 2008).

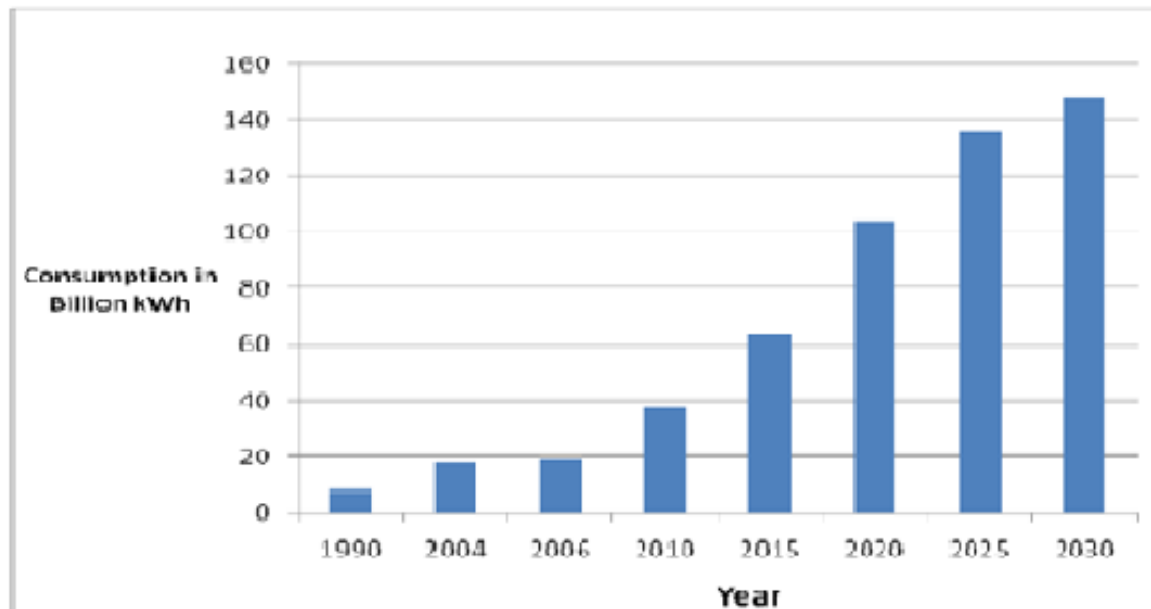
India's dependence on Russia in the nuclear sector is ascertained to increase as it is one of the cleanest sources of energy and India wants to reduce its heavy dependence on coal. Even if at the moment nuclear stands at only 3 percent of India's energy mix yet it is expected to reach a nuclear capacity of 20,000 MW by 2020 and approximately 63,000 MW by 2032, resulting in meeting the electricity demands of the country by 25 percent through nuclear energy. The year 2008 has been crucial for India's nuclear energy dream as it opened up its nuclear market after the Indo-US bilateral trade agreement and acceptance by the NSG. For Russia, the opening up of India's nuclear market is great news as it opened opportunities for it along with other nuclear technology supplying

countries to engage intensely now. Moscow even succeeded to take the largest share in transferring latest nuclear reactor technology and fuel with the signing of the nuclear agreement in 2009 (Chowdhury 2014).

During another visit of Putin to India when he was the Prime Minister of Russia in 2010, a very important document was signed on 12th March, 2010 called the 'Inter-Governmental Agreement on Cooperation in the Field of Use of Atomic Energy for Peaceful Purposes' that encompassed a wider field of cooperation in the nuclear energy sector of India for ensuring a long-term cooperation in nuclear power production. Also in the same year in December 2010, the State Atomic Energy Corporation 'Rosatom' of Russia and the Department of Atomic Energy, India signed an MoU on advancing an extensive scientific and technological cooperation in the field of peaceful usage of nuclear energy. Again in the year 2011, Russia and India also signed an MoU on Cooperation on India's 'Global Centre for Nuclear Energy Partnership' (Department of Atomic Energy, Government of India, 2011).

Russia's assistance in advancing India's nuclear industry is also important in modernising the Indian nuclear technology. While India had earlier set up nuclear reactors with a capacity of only 220 MW and less, with the help of Russian experts it is now developing nuclear reactors with a capacity of 540 MW and 1000 MW. As India is short in domestic uranium to run its nuclear reactors, most of the countries' reactors actually have to operate only half of its capacity. The Tarapur nuclear plant in Maharashtra that has a capacity of 540 MW can utilise only 55-70 percent of its capacity due to the shortage of nuclear fuel. A large part of the Western region in India, as a result, experiences an extreme shortage of electricity supply. Russia's agreements on nuclear energy cooperation find a way to not only fulfil India's demands for uranium but also to set up state of the art nuclear power plants in the country. India is also interested in Russian-styled nuclear plants as they are cheaper in cost than that of the Western plants and much simpler for services. The agreement signed on 5th December 2008 was a significant step towards meeting India's uranium needs as it ensures Moscow's commitment to supply about 2000 tonnes of uranium to India. Moreover, both the countries have massive plans for joint extraction of uranium as well. Russia had also offered New Delhi to work jointly on fast neutron reactors (The Hindu, 6 Dec 2008).

Graph 6: India's Nuclear Energy Consumption:



Source: EIA, 2010

The graph above explains the trend of India's consumption of nuclear energy since 1990s and likely-consumption levels until 2030. Though in India's energy basket, nuclear energy still holds a very small percentage, yet over the years there has been a rise in switching over to nuclear energy specially for electricity generation. This effectively puts focus on the rising demands for nuclear energy, setting up of nuclear energy infrastructure and Russia, being the largest partner to India in this sector, has played a commendable role.

India's three-staged nuclear research programme:

There is a lot of positivity in India-Russia cooperation in building India's three-staged nuclear research programme that is-

Stage 1: Pressurized Heavy Water Reactor

Stage 2: Fast Breeder Reactor Programme

Stage 3: Thorium Based Reactors

Russia is the best option for India in this scenario because of a couple of reasons.

- Primarily, Russia possesses world class standard nuclear technology;

- Secondly, Moscow, unlike, the Western countries, did not impose India with any pre-conditions for nuclear technology transfer.
- Thirdly, Russia suits to India's desire to not just depend on other states for technology transfer but develop its own indigenous technology of course with the help of Russia. India is blessed with vast reserves of thorium (a crucial source of nuclear fuel) that would also enable India for its own indigenous programme (Chopra 2013: 19)

Hence, Russia provides India with a set of compatible terms much more than what other countries have offered.

Examining the account of Russia's engagement with India in the latter's advancement of the energy sector it is quite evident that Russia's contribution and assistance are widespread and positive- be it in the sector of hydrocarbons or nuclear energy. Even when the world had doubts about India's intentions to go ahead with nuclear power, Russia still recognised New Delhi's intentions of use for peaceful purposes and its impeccable track record in non-proliferation. Moscow also supports India intent for a full membership of the NSG and other international export control regimes like the MTCR and the Wassenaar Arrangement on Export Controls for Conventional Arms and Dual-Use Goods and Technology.

3.6.1 The comparative advantage of Russia in India's nuclear energy sector:

Russia's nuclear cooperation with India as aforementioned has a throwback to Soviet times and since then it has successfully imprinted its footprints in the nuclear sector. Firstly, for a race where countries like France, US, Japan etc need to start from scratch from identifying sites for nuclear plants, settling disputes with state governments in India, anti-nuclear NGOs and other environmental and safety concerns; Russia has already had a comparative advantage in starting early and already establishing two nuclear plants in Koodankulam, Tamil Nadu. Moreover, these plants were built under old contracts that do not apply the 1990s ban on nuclear supplies to India. Even Moscow had to face the usual obstructions and delays related to the domestic regulations, litigations and agitations in India, but that phase for Russia is already over. Secondly, Indo-Russia nuclear agreement is also unique vis-à-vis the Indo-US nuclear deal or for that matter the other deals signed

by France and Japan from the point of view of the 'liability act'. Indo-Russia agreement for 3 and 4 reactors of Koodankulam has already been ratified by the Russian Parliament paving the road ahead for India. And, unlike US, France and Japan, private sector companies are not a party to the nuclear deal with India unless India enacts a liability act in the event of a nuclear accident; but Russia's state-owned Atomstroyeksport will be supplying nuclear equipment as it already has government insurance cover in case of liabilities. Thirdly, in the case of the supply of uranium fuel also, only Russia (first instalment of 30 tonnes out of 2000 tonnes) and France (300 tonnes of uranium) has been ahead in making the supplies, such nuclear fuel negotiations are still absent in the deal with Japan or the US (Aiyar 2009). Fourthly, although the India-Japan nuclear deal has been celebrated by the countries and media as a landmark step, a close look at the deal reveals how the deal stands at a very fragile position itself. The deal specifically mentions how the deal gets nullified the moment India conducts a nuclear test under the 'nullification clause'. And, this is not in isolation but there are similar termination clauses related to civil nuclear agreements with the US, France, Britain, Canada, Australia, Kazakhstan and Mongolia. But such a condition does not appear within the premises of India-Russia nuclear cooperation. As Rajiv Nayan, a Senior Research Associate of IDSA expressed to Sputnik,

India-Russia nuclear power cooperation is time tested. Russia has helped India when no country supported India. It is due to the mutual trust that India has asked Russia to construct over a dozen nuclear reactors. Kudankulam nuclear power plant which is being built with Russian cooperation is one of the most advanced one. In fact, India-Russia has unique bilateral relationship in the Indian foreign policy matrix. There are several factors which drove India-Russia ties over the last six decades. First is that in spite of geopolitical changes, both have shown maturity and strengthen their relations (Sputnik news 2016).

The then Russian President, Medvedev even made it clear that Russia-India nuclear cooperation goes on independent of any kind of foreign-imposed restrictions. And an accord signed between Russia and India in 2009 gives the latter autonomy to proceed with the closed fuel cycle that includes mining, preparation of the fuel for reactors and the reprocessing of spent fuel. Under the recent 2014 'Druzhba-Dosti' vision statement India and Russia went ahead with plans for the setting up of at least ten more nuclear

reactors in India. This deal is special also in the way that like Soviet Union's assistance of India in setting up its oil and gas complex, this time Russia's assistance will help India manufacture equipment and components in India thereby supporting India's policy for being self-sufficient in the manufacturing sector i.e. 'Make in India' (Chaudhury 2016).

The importance of Russia-India cooperation in the nuclear energy sector was mentioned in the Joint Statement of 13th Indo-Russia Annual Summit as an example of unparalleled commitment of Russian assistance to India. This included an important bilateral instrument like the 'Strategic Vision for Strengthening Cooperation in Peaceful Uses of Atomic Energy between the Russian Federation and the Republic of India' signed in New Delhi on 11 December 2014. One of the defining aspect of Russia-India nuclear cooperation as mentioned in the Statement was Russia's agreement to work towards 'localisation of manufacturing' of nuclear power plants in India under the aegis of 'Make in India' (Joint Statement, Ministry of External Affairs, Government of India, 2015). Again in the 17th Indo-Russia Annual Summit, a landmark achievement was the commencement of the site work for Kudankulam plant Units 3 and 4 and laying of foundation stone. Moreover, the Unit 2 of Kudankulam Nuclear Power Plant was dedicated to "India-Russia Friendship and Cooperation" (Joint Statement of the 17th Indo-Russia Annual Summit, Ministry of External Affairs, Government of India, 2016).

3.7 LOOPHOLES IN THE ENERGY PARTNERSHIP

The India-Russia partnership has various loopholes that need to be addressed. The factor of historical compatibility alone does not suffice at all time though it has been quite successful until now in shaping their relations overall and in energy and defence in particular. This is quite evident in case of India's achievement in getting through the Sakhalin I deal. The special role of President Putin cannot be undermined when he chose India's OVL over British Petroleum in the Sakhalin I project and since then, India's participation in the hydrocarbons sector has been quite restricted relatively. India's active role is much more required therefore in making a foothold in the Russian energy market and as Dmitry Medvedev before succeeding Putin as the President stated, "We are ready

to forge an energy partnership with India...but India has to cover its part of the road” (Radyuhin 2007)

- ***The importance of overseas equity oil share:*** India’s idea to search for acquiring overseas assets was not something that was decided suddenly. But the idea and subsequent policies were initiated since the 1990s. The main purpose behind this objective was to reduce India’s dependence on oil imports. India’s demand for crude oil and its domestic production has been asymmetrical for a long time. One of the prominent steps taken by India was the India Hydrocarbon Vision 2025. This report was prepared by a group under the Prime Minister of India to basically deal with India’s energy security in strategic terms. The report specifically emphasizes on the need for equity oil and gas and developing closer ties with overseas oil and gas companies. As estimated, by 2025 India’s demand for oil is expected to reach up to 370 million tonnes for which India has to produce a minimum of 110 million tonnes of oil every year. To make up for this gap, Atul Chandra, ex-managing director of ONGC Videsh Limited (OVL) stresses the importance of equity oil for India’s energy security and states,

Hence to maintain this level, we need to add 60 million tonnes of oil every year. We thought the only way to get this was to get it from outside India as equity oil. Our mission, therefore, is to get this 60 million tonnes every year by 2025. (Dadwal and Sinha 2005: 521-529).

However for India securing equity oil is not a cake walk. There is huge competition in the process of acquisition for oil equity abroad. Since it is considered as one of the best methods for ensuring energy security, many energy-hungry countries are excessively in competition with each other. India is facing intense competition from its next door neighbour, China. India and China are particularly competing to secure oil resources. Beijing is a strong competitor as its overseas acquisitions are mostly funded by state financing from China Investment Corp. The China Investment Corp. is Beijing’s sovereign fund with wealth of approximately US\$375 billion (FICCI 2011: 6). Apart from that, the Chinese companies have huge advantage over Indian companies as the former is also

backed by major political will of the Chinese Government by offering to invest in social and infrastructural and developmental projects and provides huge soft loans to the target energy producing countries. Another disadvantage for India vis-à-vis China is its inability to overpay like Beijing does. Indian companies are more concerned about such kinds of overseas projects that would yield them with maximum returns. However, the good news for India is that since some years the government of India is proactively encouraging its oil and gas giants to spread out and indulge thoroughly in such ventures abroad (FICCI 2011).

- ***Non-Implementation of Pipeline projects:*** Import of gas via international pipelines is one of the ways to meet India's increasing domestic consumption and demand for natural gas. To serve this purpose, India is building new LNG terminals and upgrading the capacities of the existing ones. In the past, however, some pipeline projects like IPI pipeline and TAPI pipeline etc were planned which have not been realised due to various security and geopolitical obstacles (FICCI 2011: 8).
- ***Lack of necessary political visits by Indian ministers:*** India has to act in a much more assertive way through more and more bilateral visits to strike deals faster. When Mani Shankar Aiyar was the Petroleum Minister, he paid three visits to Russia within a year but his successor Murli Deora did not pay any visit during his twelve months and even when he did pay a visit it wasn't that lucrative from the point of view of energy objectives. In fact, during the twelve months period, India's ONGC blew an opportunity to acquire a stake in its Initial Public Offering (IPO) of Russia's Rosneft and also lost a bid for Udmurtneft, the largest oil-producing field in the Udmurt Republic, Russia (Radyuhin 2007). This bid was won by China's Sinopec and now the enterprise is being managed by Rosneft and Sinopec. This was a huge deal because the Udmurtneft enterprise develops fields at the territories of twelve republic districts with fifty-eight licenses for oil and dissolved gas production at twenty-six fields and four exploration licenses for exploration and production of hydrocarbon crude (Rosneft Official Website).

Considering this scenario of India's energy security concerns and the practical hindrances, it can be well interpreted that apart from a committed energy strategy plan and strong government backing, what the country needs is also a good neighbourhood policy.

3.8 FUTURE PROSPECTS

Russia and India's energy cooperation, especially in the hydrocarbons sector, have been quite limited until now considering the extraordinary historical equation that both the countries share since the Soviet days. However, Russia's role in India's energy sector cannot be completely ruled out on the basis of the numbered projects and collaborations that both the countries share. There are various aspects within the broad parameters of energy cooperation that Russia and India are engaging in. Cooperation in the field of nuclear energy is one such area. In view of the changing world order and Russia's engagement with the Asian region as part of a grand strategy to divert its energy assertiveness towards this region and the importance of China and India in it cannot be overlooked. India certainly wants to bring the Russian hydrocarbons home and it is also looking towards all kinds of available and feasible options to do so. There are numerous factors and unlimited hurdles but several studies on India-Russia energy ties do not rule out the fact that India is looking towards ways to transport Russian hydrocarbons in the attempt to ensure its own energy security.

There have been reports on India's attempts towards attaining a proposal for a 1,240 kilometres long pipeline link from Xinjiang to India which would enable the transportation of crude oil from Russia via Atasu in Northwestern Kazakhstan to Chinese Province of Xinjiang to India. This will, however, depend largely on striking a successful joint agreement between Russia-Kazakhstan-China-India. Another proposed way is a pipeline from Russia through Xinjiang province in China at Altai towards the Tian Shan Mountains until it reaches the Kunlun Mountains in India. This proposal tends to avoid the involvement of only three states hence finding a way to avoid the complexities of engaging too much of multilateral engagements (Kundu 2012).

Another proposal is put forward by India's oil and gas giant ONGC to build a Russia-China-India Pipeline. The proposed pipeline is to touch some parts of the Central Asian region while it passes from Russia to China. The RCI Pipeline is supposed to go from Russia to Kashgar in Chinese Xinjiang via Turkmenistan, Uzbekistan and Kazakhstan. From China, it is supposed to enter India through Ladakh either passing the Siachen glaciers and the India-China Line of Control or take an alternate route via Himachal Pradesh and supply gas to Northern India. Although, the ONGC officials do understand the economic and technical complexities of the proposed route and hence these aspects have still not been decided. This project is also expected to cost approximately \$15 billion and lesser if connected to already existing pipelines in the region (Ibid, 2012).

Another route plan of ONGC to bring Russian oil and gas to India is a connectivity that includes Kazakhstan, Uzbekistan, Afghanistan and Pakistan. There are even reports that mention ONGC Videsh Limited's (OVL) plan to announce the technical details as soon as it gets political clearance. This idea came up during the Kazakh foreign minister's visit to India in March 2013 and later it was also discussed firstly on the sidelines of the 'Heart of Asia' ministerial meeting in Almaty and again during the visit of India's External Affairs Minister to Moscow in April 2013 (Sachdeva 2013).

Future plans for India's entry into the Russian energy resources domain also extends to its participation in the Caspian Sea resources with an intention to invest about \$1.5 billion in the joint Russian-Kazakh Kurmangazy oil field. The Caspian Sea resources are estimated to consist of approximately \$1 Billion tonnes of oil. And India is also looking forward to taking part in the upcoming Sakhalin IV, V and VI projects. Reports from Irkutsk administration suggest India's willingness to participate in the impending lucrative project of Kovykta gas field and invest around \$6.5 Billion (Mohanty 2010).

India's oil and gas major in the private sector, Reliance Industries Limited (RIL) was also in news in 2012 for prospective projects in India-Russia energy cooperation. Tatarstan which is one of the economically well-off regions in Russia and RIL had agreed to establish a joint working group of specialists in order to work towards developing strategic partnership in the downstream sector and petrochemicals. RIL and Tatarstan signed an agreement of cooperation during the visit of a high-profile delegation led by Rustam Minnikhanov to Gujarat (Kundu 2012).

In case the India-Russia energy corridor becomes a reality in the near future, it would be a landmark in changing the energy geopolitics of the entire region. It also has the potential to boost up other latent energy projects in the region like the TAPI Pipeline or IPI gas pipeline project (Sachdeva 2013).

3.9 CONCLUSION

Thus it can be understood how historical ties have played a defining role in Indo-Russian ties in the energy sector. India-Russia energy relations are a fine example of how political commitment played a larger role in spite of the fact that the two states do not share any border which is indeed one of the most challenging issues. The Soviet Union was the backbone of India's oil industry after its independence in 1947 and also the setting up of the large state-owned oil and gas industry in ONGC. In fact, the first forty years after India's independence saw the highest point in Indo-Soviet energy ties until the disintegration of the Soviet Union which saw a slowdown. If not for the historical affinity between the two states, they would not have been able to overcome the period of surging economic and energy ties. It was in 1998 with the efforts of the then petroleum minister V.K. Ramamurthy that some new avenues in energy ties could be seen.

With India's rising demands for energy in the recent times, its energy strategy has been observed to pass through a gradual transformation. Although a huge percentage of its oil imports come from the Middle-Eastern states, however, due to the rising political and security risks, New Delhi has sought out to devise long-term solutions to divert its import sources from the conflict-ridden region. To this effect, India Hydrocarbon Vision 2025 was initiated to articulate India's security in the hydrocarbons sector. Even in Russia's energy ambitions viewed India's as an important partner in the Asia-Pacific and India finds its mention in Russia's Energy Strategy Up to 2020. The advent of Putin was also crucial for the revival of ties with India and his first presidential foreign visit was New Delhi which saw the signing of many agreements on cooperation in various sectors like energy, defence etc. The Sakhalin projects have been one of the answers to India's growing energy demands. Because of India's success in Russia's Sakhalin-I project, New Delhi also showed its interest in the Sakhalin-III project.

Apart from that, there have been several attempts by India to join Russia in exploration of the Caspian resources and to this effect MOUs have been signed by both the states for joint exploration in the Caspian Sea. It can be understood how both the countries are trying their best to overcome its flaw of being geographically far away. A failure to build a pipeline connecting both the states has led to other alternatives such as joint investments, swap arrangements and nuclear energy cooperation. Apart from that LNG is the new highlight in which India and Russia are engaging widely now as it can be globally transported resulting in a twenty-year long agreement between GAIL and Gazprom. However, there are many challenges yet that is in the way of a more effective partnership in the hydrocarbons sector that needs to be addressed.

CHAPTER 4

RUSSIA-CHINA ENERGY COOPERATION

4.1 INTRODUCTION

This chapter focuses on Russia's energy relations with China in the backdrop of its Asia-directed energy strategy. It depicts the historical basis of Sino-Russian relations in the context of its carving of energy ties over the years. In this scenario, it mentions the various energy projects taken up by Russia and China, the favourable aspects of its energy ties, and also the hindrances in the cooperation.

Russia and China share an inconsistent relationship with an air of ever-changing political and economic ambience. It was for the first time in the 1950s that the Soviet Union and China closely cooperated. This partnership was based on three basic components-economic, military and party. The then Soviet leader Stalin and Chinese leader Mao saw a brief yet promising decade of Sino-Soviet friendship. By end of 1950, the Sino-Soviet alliance resulted in China's first Five-Year Plan being assisted by 141 Soviet projects on metallurgy, mining, oil, automobile, tractors, electricity and defence with some additional 68 East European projects. However, this collaboration was short-lived and after a decade it shattered on ideological grounds between Nikita Khrushchev and Mao Zedong leading to three decades of tension and rivalry. In his book 'The Sino-Soviet Split: Cold War in the Communist World' Lorenz M. Luthi describes the Sino-Soviet Split as,

One of the key events of the Cold War, equal in importance to the construction of the Berlin Wall, the Cuban Missile Crisis, the Second Vietnam War, and Sino-American rapprochement. The split helped to determine the framework of the Second Cold War in general and influenced the course of the Second Vietnam War in particular (Luthi 2008).

During these three decades until the normalisation period, both the countries had the least interactions characterised by mutual antagonism. Normalisation process began as early as 1985 and post-cold war period saw winds of change in the Sino-Russian relations. Declassified documents reveal notes from the February 1985 working meeting of the CC International Department Deputy heads of fraternal parties of socialist countries

regarding the assessment of the situation and coordination of relations with the People's Republic of China. In the meeting, the Soviet comrades expressed the need to coordinate the policy of socialist countries towards China. Although party and military ties were cut off with the PRC, there was no signal towards limiting or cutting off any economic, trade-related and other ties with the PRC⁷ (Polish Central Archives of Modern Records 1985).

Another declassified document of 15 May 1985 on Soviet Report of Soviet-Chinese consultations in Moscow reveals how the Soviet Union advanced proposals to improve ties with China and include the establishment of 'a military expert commission on border questions' as there were still areas of discomfort on matters of the Soviet Union's interference in Mongolia, Afghanistan, Vietnam and Cambodia that had apparently collided with Chinese interests,⁸ (Central State Archive, Prague 1985) yet it showed signs of minor but noticeable efforts by the Soviet Union. A document of 24 October 1986 shows changes in Sino-Soviet relations and political discussions that took place in Beijing from 6 to 14 October 1986 on Soviet withdrawal from Afghanistan. (CPSU Memorandum, 24 October 1986) Another document of October 1986 outlined Soviet attempts to improve relations with China and at the same time, Beijing's was also willingness in renewing ties with the Soviet Union. Yet, Soviet meddling into Asian affairs that affected Chinese dominion, prevented both the sides from taking any concrete steps (Central State Archive 1986).

⁷ * "Note from a Working Meeting of the CC International Department Deputy Heads of Fraternal Parties of Socialist Countries," February 18, 1985, History and Public Policy Program Digital Archive, Polish Central Archives of Modern Records (AAN), KC PZPR LXXVI – 710. Obtained and translated for CWHIP by Malgorzata K. Gnoinska. <http://digitalarchive.wilsoncenter.org/document/112221>

⁸ * "Czechoslovak Translation of Soviet Report on the Sixth Round of Soviet-Chinese Consultations in Moscow," May 15, 1985, History and Public Policy Program Digital Archive, Central State Archives (SÚA), Prague. Included in the document reader for the international conference "China and the Warsaw Pact in the 1970-1980s" held by CWHIP and the Parallel History Project March 2004 in Beijing. <http://digitalarchive.wilsoncenter.org/document/114811>

A Hungarian Report of December 1986 mentioned high-level efforts made in order to improve ties between the two countries that included Deputy Prime Minister-level visits on a strategic basis. Relations were to be normalised on the basis of (as the Chinese commitment lays down) three factors-

Mutual respect for the right to shape foreign and domestic policies autonomously; Development should progress at a pace that is desirable for the respective countries; and Normalization of relations with China is not aimed against relations maintained with the Soviet Union, further stating that, The policy of the allies led by the Soviet Union is not aimed against China, and China no longer regards the Soviet Union to be the 'number one enemy', thus maintaining a good relationship with the Soviet Union will not be considered in itself as an act against China (Historical Archives of the Hungarian State Security (ÁBTL) 1986).

Since then, interactions were mainly restricted to foreign minister visits like the one in 1987 when PRC foreign minister Comrade Wu Xueqian visited Poland to accelerate relations, (Polish Central Archives of Modern Records) but the improvement of mutual relations still could not see its height because of Soviet interference in Cambodia that affected China.

But the 43rd UN General Assembly Session of December 7, 1988, was a highlighting score as Mikhail Gorbachev announced in his address to the Assembly that there would be major cuts to the Soviet military presence by 500,000 persons and also lessen the volume of conventional arms in Eastern Europe and along the Chinese border. (History and Public Policy Program Digital Archive, CWIHP Archive, 1988)

Along with that, China and the Soviet Union kept its differences aside and the year 1989 hence marked for normalisation of relations. As scribbled in a diary by Georgian journalist T. Stepanov-Mamaladze on 1st February 1989,

We will [...] fly to Beijing and accomplish one little historic task—agree on the Soviet-Chinese summit. [We] will repair the thread broken off thirty years ago, and will start weaving a new one—in accordance with the laws of the time.....Moscow-Beijing, Moscow-Beijing, the people are going, going forward... [reference to a popular Soviet song of the 1950s]. My young and silly voice, shouting out this song, is within the engine noise. “Stalin and Mao are listening to us, listening to us, listening to us...”(Hoover Institutional Archives 1989).

4.2 CHINESE PETROLEUM INDUSTRY AND THE SOVIET SUPPORT

China’s huge oil fields of Karamai-Uruho in the Junnar Basin were the results of Soviet Union’s considerable assistance in the form of early geophysical surveys, test drilling programs under the supervision of Soviet engineers, use of Soviet materials supplied by the All Soviet Institute of Petroleum Engineering and advanced technological support during the exploration phase and the developments that followed thereafter. It was a big deal because, until the 1950s, the Chinese were incapable of making any concrete advancement in its potential energy sector. Beijing adopted the Soviet model of exploration, administrative structure and planning in the energy sector. As such, China developed a highly centralised planning system under various departments like Oilfields Administration Department and Exploration Supervision Department to administer different aspects of energy-related issues. Like the Soviet model, the Chinese Ministry of Geology also undertook various geological surveys within the country. The contribution of the Soviet Union was huge in the practical development of the Chinese energy industry. The Soviet assistance to China extended to geological surveys, drilling test-wells, extraction technology, handling the medium of transporting oil through pipelines, railways or roadways, building of storage capacities and handling upstream activities. The Soviets assisted in restoring other older Chinese oil fields such as Yumen fields in the Gansu Basin and Yanchang fields in the Ordos Basin. It also undertook some Chinese downstream projects by establishing a new refinery at Lanzhou, China with a refining

capacity of 2.349 mmt in the year 1959. When China's domestic consumption in the 1950s surpassed its supply capacities, the Soviet Union came handy as most of the Chinese energy demands were largely met by Soviet energy exports. Approximately 14 mmt of oil was exported to China from the Soviet Union during the early and mid-1950s. By 1959, the imports rose by 3.048 mmt. These supplies were mostly met from the productions on the Sakhalin Islands and Caucasian oil fields. One notable feature of the Sino-Soviet energy ties was that even during a low phase such as the Sino-Soviet split; the Soviet Union's imports did not come to a halt (Kambara and Howe 2007: 10-12).

4.3 RUSSIA-CHINA RELATIONS SINCE 'NORMALISATION'

Since the days of normalisation, the Sino-Russian ties have come a long way laden with pragmatic expression. The relations between Moscow and Beijing have been multi-dimensional, touching various aspects like defence, space program, security issues and energy apart from many other miscellaneous ones. Apart from bilateral engagement, China is working in close affinity in the regional cooperation in the post-Soviet space through SCO. This close cooperation explains their similar security interests in the region and a willingness to play a more affirmative role in the concerned region. Also the year 2008 was remarkable for both Russia and China as it marked the end of a forty year long border dispute. A pact was signed between the two countries to resolve the dispute in eastern part of the border with Russia returning all of Yinlong islands (Tarabarov in Russian) and half of Heixiazi Island (Bolshoi Ussuriyasky) to China (BBC Report, 21 July 2008). It sent strong signals towards the deliberate attempts to readjust bilateral ties and also amount to carving a blueprint for strengthening the strategic partnership.

The Sino-Russian strategic partnership was indoctrinated in 1996. From thereon, the relationship has come a long way and the changing geopolitical scenario of the 21st century has added impetus to the ties. The international power balances have been slowly moving towards a more multi-polar world order and the kind of foreign policy strategies adopted by these two countries in the recent times is responsible for reinforcing of such a

shift in the international order among other factors. Russia-China Strategic partnership is believed to surface as one of the biggest factors in defining global politics today. One of the primary and shared agenda of both Russia and China is their antagonism towards the US. Author Andrew Korybko in his article ‘Washington’s nightmare comes true: the Russian-Chinese Strategic Partnership goes global’, mentions Russia as the military-political ‘balancer’ in the immediate Eurasian region and the extended Asian neighbourhood and China as the ‘gateway’. Beijing is in fact, practically rising as the largest Asian economy in terms of PPP. Keeping this scenario of international politics in mind, regional cooperations like the SCO provides a prompt platform to countries like Russia, China and other Asian states to articulate their foreign policy directions. Apart from challenging the Western influence, both Russia and China have the ability to emerge as stronger nations themselves (Korybko 2014). Hence this strategic partnership has more of tangible significance in world politics; the Russo-Chinese partnership is evident to go an extra mile in the sectors which are more complementary to each other, the best example being the ‘Energy Sector’.

4.4 CHINA’S ENERGY STRATEGY

The Chinese energy scenario has seen extreme shifts from being a major oil exporting country in the East Asian region in the 1980s (exporting around 20 million tonnes of oil annually) to transforming into the largest oil importing nation of the world only second after the United States. China’s net imports of oil in 2009 reached approximately 4.3 million bbl/d (Varol 2013: 368). Further projections of the IEA suggest that China’s demand for oil will rise up to 16.5 million bbl/d and along with that its domestic production is likely to decline to a level as low as 3.4 million bbl/d hence increasing China’s import dependence to 80 percent (Downs 2010: 146-56). In the natural gas sector, China became a net natural gas importer for the first time in the year 2007. In spite of a domestic increase of production in natural gas, it is not enough to cater to Chinese consumption needs. Chinese natural gas imports will further rise to 130 bcm by 2020 (Ibid: 362).

China's Energy Policy 1997:

China's first national energy policy, initiated by Chinese Premier Li Peng in 1997, made special reference to strengthen its petroleum sector. Chinese energy policy had a special place for Russia's role in it. The strategy specifically emphasised on "two markets and two resources". The 'two markets' implied the development of its domestic production on one hand and the foreign market for energy imports in the other. The three strategic markets to look out for its energy imports were the Russian and Central Asian region, the Middle Eastern region and North-South Africa (Choo 2006: 91).

China's Tenth Five-Year Plan: The Tenth Five-Year Plan of China adopted in 2001 was a crucial document as it highlighted the importance of diversifying the sources of energy supply in order to increase oil and gas imports from Russia and the Central Asian energy producers, enhancing overseas energy investments by State oil companies, increased investments in energy infrastructure, to set up state-controlled petroleum reserves, reducing dependence on oil coal gasification and development of the nuclear sector and lastly to build a regional energy security system (Pop 2010: 197-220).

China's Twelfth Five Year Plan: Energy was again a priority in China's Twelfth Five-Year plan (2011-2015). The highlights of this document include ways to implement resource strategies to develop China's upstream projects and extend its oil and gas cooperation abroad, to grab any convenient chance for developing low-carbon economy, to hasten the optimal adjustment of the refining potential thereby increasing business integration and production base construction, to accelerate the building up of strategic oil and gas routes, enhance marketing connections and repository facilities. The energy plan further emphasised on ways to enhance the use of technology, remove impediments of resource and clean development. China's plan stressed over mutually beneficial international cooperation on the grounds of energy security (Ibid).

China's economic security agenda revolves around three main perspectives- economic growth, energy security and environmental safety. Energy security is fundamental to economic growth hence Beijing's foreign policy strictly directs the state to develop a healthy relationship with the major energy producers in the world to ensure stability in supplies from foreign producers. Therefore, Beijing had renewed ties with its neighbours as well (Varol 2013: 363)

And, luckily for China its neighbour Russia is a leading producer and exporter apart from Myanmar and Central Asia. This explains the reason why China is reconstructing its ties with its immediate neighbours and many times it seems like Beijing has an upper hand in the energy game being the sole largest energy consumer in the region and Russia and Central Asia competing for it. However, the position of Russia vis-à-vis Central Asia cannot be debilitated. Moscow is a very dominant player in the region owing to its political leadership, geographical vastness, pipeline dominance and regional authority.

Therefore, it is observed that the main instruments of China's energy strategy interpret its renewed blueprint for the country's primary focus on energy security that revolves around primarily diversifying its energy imports from traditional customers to more stable markets like Russia and others, diversifying also from the traditional type of energy mix such as coal and oil, internationally cooperate with other countries for successful upstream projects also known as the 'going abroad' plan, moving towards environmental friendly energy sources like natural gas and nuclear power, heavily promoting national oil and gas companies in their endeavors within the country and abroad, enhance the domestic energy infrastructure and basically build ties with neighbouring friendly energy producers and decrease dependence over energy import routes (sea lanes) under the surveillance of the US (Ziegler 2006: 1-23).

4.5 CONVERGENCE FACTORS OF CONVERGENCE

One of the major factors of convergence in Russia-China energy cooperation in the strategy of diversification of energy supplies of both the countries. Both China and Russia are interested in diversifying their share of dependence from one particular market to sustain their energy security. As Russia wants to pursue the emerging Asian market to protect its energy supplies; likewise, China is also interested in energy trade diversification and decrease its dependence on solely the Middle Eastern oil and gas resources. Hence, both these countries feature in each other's energy diversification strategies and thereby maintain flexibility in their energy trade. The reasons behind adopting a diversification policy is as follows—

China's diversification from the Persian Gulf:

Till the early 1990s, China mostly met its energy demands from its Southeast Asian neighbours, mostly from Indonesia. However, trends began to change. On one hand where China could not sustain over its domestic supplies alone, Asian oil producers too set to accommodate its domestic needs primarily. Hence, China had to explore other regions and thereby found the Gulf countries to be promising partners in this trade of energy. In fact, former Executive Vice President of Sinopec, Li Yizhong called the oil producing Gulf countries to be the “key sources of China's crude oil imports”. And as such energy trade with the Persian Gulf began in a full swing. Estimates state that China's oil imports from the Gulf countries rose from 40 percent to 60 percent from 1994 to 1997. (Calabrese 1998: 351-366)

China's energy trade with Gulf countries demonstrated a serious and strategic business concern as they negotiated long-term supply contracts and concluded agreements with Gulf countries directly. For instance, China's direct negotiation with Iran to increase its oil supplies from 20,000 barrels per day to 60,000 barrels per day which amounted to almost threefold rise in 1995. From the years 1997-1998, they wished to increase its oil supplies by 43 percent and expand the barrel supplies to 200,000 bpd by 2000. Similar agreements took place with Saudi Arabia also. In October 1997, Saudi Arabian American Oil Company (ARAMCO) expected China's crude oil imports from Saudi Arabia to rise to 60,000 bpd and further rise to 350,000 within a span of three years. China was

involved in many downstream projects with the Gulf companies like when Sinopec assisted in developing Al-Ahmadi oil refinery in Kuwait after the first Gulf War. Prior to that in the year 1997, CNPC also concluded agreements with Iraq to develop one of its oilfields called Al-Ahdab (Calabrese 1998: 351-366).

However, political and security factors rather than economic played a greater role in pressing China for diversifying its energy supplies from the Middle Eastern region. Chinese energy policies towards the Gulf countries have always been under the surveillance of the US. Apart from the energy-trade related concerns, Beijing's close proximity to Iran in terms of Chinese arms transfers and nuclear energy cooperation had served in attracting the US to keep a close eye on China's behaviour. Though Beijing has always preferred economics over politics yet being a permanent member of the UN Security Council, it had to take certain steps like supporting the first ten UN Security Council resolutions against Iraq in the aftermath of the 1990 Iraqi invasion of Kuwait, that led China a big setback in terms of losing assets and earnings of more than \$2 Billion. Furthermore, over China's abstention from the UN voting mandate on the use of force against Iraq, Kuwait suspended \$300 million in development loans to China. China also suffered some political risks by closely cooperating with Iran. As the Gulf region became a highly militarised zone under the strict US watch, it hampered China's smooth and guarded cooperation with Iran. Alternately, China comprehends excessive US military surveillance over the Persian Gulf region and on the international waters as 'interference' in order to control the Gulf energy assets. In this case, Russia and China share a similar opinion and therefore do not pose a threat to Beijing (Calabrese 1998: 351-366).

It is important to realise that China emphasises a lot on its drive for development. Energy is definitely the most vital source to attain this end. But in this process, Beijing would by all means not want to attract other strategic rivals like the US as it will fetch Beijing more and more unwanted competition. China's extended presence in the Middle Eastern region has the potential to flicker tension and pose a challenge for the US. Hence an alternative for Beijing is the drive for diversification to sustain the drive for development in the case. Moreover, in the present day context as well, the political and security scenario of the Middle Eastern Countries has not improved and is on the verge of becoming failing

states. In this case, the diversification of energy imports by China from the Gulf countries towards a more secure neighbour is a wise step ahead.

Security of Routes in China's Energy Strategy:

As the larger bulk of China's oil imports come from the Middle Eastern region, therefore, it passes through the Straits of Malacca, Lombok and Sunda. However, out of the three routes, the Straits of Malacca are the most preferred owing to the shortest distance, most economic Sea Lanes of Communication (SLOCs) and increased navigational assistance. According to the statistics, more than 60,000 vessels cross over this narrow waterway carrying more than one-third of world's trade (Sheldon 2011: 27-43). This makes the route a lifeline of trade for many countries including Japan, Taiwan and South Korea. Hence it is fundamental for China's economic sustenance as well. Former President of China Hu Jintao regarded the 'Malacca Dilemma' as a key to China's security. As mentioned in a China Daily, "It is no exaggeration to say that whoever controls the Strait of Malacca will also have a stranglehold on the energy route of China" (China Youth Daily, June 15, 2014).

Hence the control over the straits has the potential to influence the trade transfers also. But, maritime security has always been an issue in the high seas. The Straits are a haven for Maritime robbery, pirate attacks, terrorism and other such hostile elements which make the security of the Straits a further necessity. In order to make international navigation safer, the Malacca Straits have a presence of several naval forces including the US. However, China interprets this kind of the US surveillance as a complete attempt on controlling and spreading its scope of influence because there are other waterways such as Lombok, Sunda, Makassar etc, which remain in similar threats like in case of attacks on USS Cole from the belligerent elements but in this case the Malacca Straits have been given more importance. Hence China has apprehensions regarding the US stationed in Beijing's most crucial energy route and its access to world trade that might get affected considering the kind of uneasy relations both the nations have (Zubir and Basiron 2005: 24-26). Presently, almost 80 percent of China's crude imports pass through the Strait of Malacca and China is itself eager to limit its dependence over the Straits in order to avoid

any kind of conflict in the future being in a vulnerable situation in the US-controlled narrow strait (Yhome, 2013).

Moreover, the US objective of security and surveillance in the Malacca Straits is in no way going to lessen but it is going to strengthen more in the coming years. Leon Panetta, the Twenty-third United States Secretary of State, announced that the US is intending to deploy nearly 60 percent of US Naval assets in the Asia-Pacific Region by the year 2020. In that case, the two major areas of dispute are the South China Sea and the Straits of Malacca (Malik, 2012). Sea-lane imports hence become geographically vulnerable in relation to blockade concerns and especially in the case of imports from the Persian Gulf as these imports are critical in case of geopolitical instability and pass through major ‘chokepoints’. Also as Ji You sums it up, “The issue of oil is not one of market supply, but of strategic competition” (You 2007: 485)

Map 2: China’s oil import route and the Strait of Malacca



Source: http://www.rfa.org/english/commentaries/energy_watch/oil07182011103202.html

As can be seen from the figure, China’s traditional oil imports from the Middle East is a long route that passes through the maritime choke point i.e. the Strait of Malacca and the

South China Sea, an area where frictions also keep on spurring between Beijing's neighbours in the Sea.

Therefore, China's energy hunger has let itself adopt a kind of multi-vector policy in its energy strategy to ensure the security of its oil and gas imports. It has taken environmental concerns into consideration and working towards replacing coal from its energy mix with cleaner sources of fuel (New York Times, 16 August 2014).

China has as such looked towards all directions for meeting its natural gas demands-- like Russia, Central Asia, Myanmar, Australia, Malaysia etc. However, there are many risks related to supply security and the only feasible option for Beijing, in this case, would be Russia as comparatively, it has much less degree of supply threat. Myanmar being a neighbouring state to China although supplies almost 12 bcm capacity of gas, yet it has security threats like persistent danger from terrorist attacks. Also, Myanmar's capacity of gas import is likely to remain restricted to 12 bcm because of its expansion capacity which is limited to availability of gas in the Gulf of Martaban which again makes Myanmar only a marginal supplier. Another primary source of gas supply to the Chinese market is Central Asia after the completion of the China-Central Asia pipeline. It is even expected that in a decade or so Central Asian gas exports to China is likely to reach approximately 80 bcm. Most of it is Turkmen gas produced from the Galkynysh field and the imports are to be expanded to 65 bcm by 2016. Other Central Asian states like Uzbekistan and Kazakhstan also has plans to supply energy worth 10 bcm to China in the near future but the only problem with Central Asian gas is that it comes at a very high price at around \$13.50/mmbtu in Shanghai which is even deemed more than some LNG contracts (Henderson 2014: 8).

Apparently, China's diversification trends have begun to show. China has sought out plans to diversify its energy imports from Myanmar's coast at the Bay of Bengal to China's Southern Yunnan Region that allows Beijing to lessen its dependence on the Malacca Straits. The huge Russian hydrocarbon assets provide a crucial alternative to retaining Chinese demands. In the year 2009, a new pipeline began supplying crude oil from Siberia to China with an urge to double shipments to 620,000 bpd. There is also a

new pipeline coming up from Russia to China to supply with 38 billion cubic meters of natural gas starting from 2018 that will be discussed later (Pederson, 2013).

4.6 RUSSIA-CHINA ENERGY TIES

The volume of bilateral trade between Russia and China has been rapidly increasing over the years, largely accredited to the oil and gas sector. Due to the rapid economic growth of China apart from other factors, Moscow has been increasingly cooperating with its eastern neighbour. China is the most important destination for Russia's energy strategy towards the Asia-Pacific. The Russian side backed by the Russian Energy Ministry, Yukos and Transneft and the Chinese side backed by the Chinese State Planning Committee and CNPC had signed an agreement to construct the Angarsk-Daqing pipeline covering a distance of 2,240 km (Xuanli Liao 2006).

In the book 'The future of Russia-China Relation', Erica Downs describes energy ties between Russia and China as 'complementary energy strategy'. It is a complementary calculation because, in terms of shaping an energy partnership, it is a natural alliance.

During the 1990s as world oil prices were low, Russia had a less advantageous position in relation to China in its energy dealings. As a result, it was the Russian part that promoted its interests towards augmenting energy ties with Beijing. On the other hand, China showed reluctance in pushing for such infrastructure projects at that time and was counting more on the 'buyer's market' to derive the least possible price from Russia. However, the dramatic rise in world oil prices shifted the advantage to the energy producers. The Russia-China positions also altered and now Chinese concerns grew more and more as its economy started growing and demanding accelerated rate of energy consumption. Although China now sought to deeply integrate to Russian energy sector, the latter had qualms for cooperating closely and thereby stimulate China's growth further. It was then the global financial crisis and drop in oil prices that China extended Russia with a 'loan for oil' US\$25 billion that followed for an oil pipeline from Russia to China ensuring a 20-year oil supply contract (Downs, 2010).

Despite the flaws of the recent past, the geographical placement of Russia and China next to each other and the compatibility of their economic and energy interests have catalysed into stronger bilateral energy ties.

The 2000s saw a slow shift in Russia's policy towards Asia especially in terms of being market-worthy. Global circumstances and reactions in West and the Europe surely catalysed conditions where Moscow began to look towards the Asian markets but at the same time there dawned a realisation that these markets of China and rest of Asia were economically profitable and came with lesser political antagonism with the Kremlin. Such reasons wisely throw light on why it was the 2000 era that saw the signing of the Treaty of Friendship and Cooperation between Russia, the launching of Russia's Eastern Gas Programme in 2007 and establishment of the ESPO in 2009.

The rise in the Chinese economy and the subsequent rise in its oil and natural gas demands coincided with Russia's eminence as an energy exporter owning the world's sixth largest crude oil reserves and being the second largest oil exporter after Saudi Arabia (BP Statistical Review of World Energy, June 2006: 6). The fact is Russia's huge resource potential in the Far East and Eastern Siberia brings up the potential for the 'pragmatic' aspect of the Russo-Chinese relationship. Putin's visit to Beijing in March 2006 saw the signing of a number of bilateral agreements on energy cooperation that included an agreement between Rosneft and CNPC on 'Basic Principles for the Creation of Joint Ventures', a Protocol between Transneft and CNPC, a MoU signed between Gazprom and CNPC over natural gas deliveries and an Agreement between United Energy Systems and the State Grid Corporation of China in order to perform a feasibility study for a project to supply electricity to China (Bobo Lo, 2008).

In 2007-2008 Russia-China trade started to increase and as recorded by the Russian Customs Service, China had become Russia's second largest economic partner after the EU (Ministry of Economic Development of the Russian Federation, 2015). In the year 2009, China became Russia's largest trading partner. And as already mentioned, it is mostly attributed to the oil and gas dealings between the two countries.

Since then Russia-China energy trade has been showing an upward trend. Russian crude oil exports increased to a 321,000 b/d in 2006. By the year 2005, Russia accounted for almost 11 percent of its crude oil exports to China and the import percentage of China

amounted to 4-5 percent which was still less because most of the energy was still imported from the Persian Gulf that accounted for a major share of 80 percent.

China was not a primary energy consumer in the world since the early 1990s. It could very well sustain its economic needs over its domestic supplies alone until 1993. But during the years from 1997 to 2007, China's energy needs grew at an alarming rate. It accounted for about 1/3rd of world oil demands and consumed almost 7.9 million b/d in 2007 of which China's imports consumption was 4.1 million b/d and supplying more than 50 percent (BP Statistical Review of World Energy, June 2008: 24-27).

It is important to mention here that in spite of the drop in world energy prices in 2015, Russian energy exports to China that peaked in 2014 reaching \$27.75 billion (Henderson and Mitrova, 2016: 4) were an impact as Russian exports to China skyrocketed by 36 percent in 2014. According to the Wall Street Journal, this rise had negatively impacted other oil import sources like Saudi Arabia as oil imports dropped by 8 percent and Chinese oil imports from Venezuela fell 11 percent in the same year (Cunningham 2015). But it came down to \$18.9 billion in 2015 still managing the Russian energy exports to China at a stable 8 percent (Henderson and Mitrova 2016: 4).

According to IEA estimates, the energy demands of China are likely to increase at a mammoth pace and by the year 2030, China's oil demand is expected to rise to a massive 16.5 million b/d while its production will decline to 3.4 million b/d. And the net oil imports are projected to increase to 13.1 million b/d and hence Chinese dependence on imported oil will rise to 80 percent (IEA 2007).

In the natural gas sector also the demands have increased considerably. In 2007, natural gas accounted for a mere 3 percent of China's total energy demands (BP Statistical Review of World Energy, June 2008: 28, 40). According to the BP Statistical Review of World Energy June 2008 report, the natural gas production and consumption of China tripled between 1997 to 2007 whereby consumption increased from 19.5 bcm to 67.3 bcm and production increased from 22.7 bcm to 69.3 bcm (Ibid: 24, 27). According to IEA projections by the year 2030, China's natural gas demand will rise to 238 bcm resulting to a 50 percent dependence on imported natural gas (IEA, World Energy Outlook 2007).

4.6.1 Cooperation in the Oil Sector:

Prior to the phase of initiation and completion of the ESPO pipeline, several events took shape before the culmination of Russia's actual drive towards the Chinese energy market. Russia-China energy cooperation is one way to articulate the long-standing strategy of Moscow to tap the emerging Asian market (Jakobson et. al. 2011: 27). Russia's strategy to reach out to the Asia-Pacific market for its energy supplies was first defined by the now-defunct private oil company, Yukos. So, the first Russian oil exports to China was in the early 2000s by Yukos until it was sacked on grounds of tax evasion. From 2006, Rosneft and Transneft have become the seminal players in increasing its oil exports to China (Henderson and Mitrova 2016: 10). There were two routes of trial rail deliveries from Western Siberia to China via Eastern Siberia. The first route connected Russia and China from Zabajkalsk until the oil deliveries reached CNPC. The second route aimed oil deliveries to Sinopec and reached via Mongolia. This trial run initiated for a plan for an oil pipeline to be constructed from Angarsk to Daqing in China's northeast. Soon after that, in August 2003, the Energy Strategy of Russia up to 2020, was adopted as a major instrument of understanding the new directives of Russia's energy blueprint. The plan essentially stresses the importance of energy exports and the significance of production volumes, transport and routes for the same (Hsu and Soong 2014: 84). These were positive signs on shaping Russia's interest towards the Asia-pacific market.

So at the political level, although there were ongoing discussions to engage with Beijing, energy cooperation was still quite limited from a strategic point of view as the first Russian oil and gas exports to China was kicked off by the privately owned oil company, Yukos. The present day ESPO pipeline project was also the brainchild of Yukos that was to be initially connected from Yukos' oil refinery in Angarsk to Daqing (northern China) (Helmer 2005)

Following the 2003 Energy Strategy of Russia, from 2004 to 2007 there were reports and documents that affirmed Russia and China's willingness to build a pipeline in the Pacific and bring Russian gas deliveries into China. This was a good phase for both the countries as oil exports from Russia to China started showing an upward trend. It increased to a double of 16 million tonnes in 2006 from 3 million tonnes in 2002 and the exports maintained at a stable 13 million tonnes. It was a noteworthy phase because according to

estimates at a figure of 9 million tonnes annually, Russian oil exports to the Chinese market amounted to more than 60 percent of all Russian oil deliveries to China. After the Yukos affair and its downfall, an advance of the CNPC loan of US\$ 6 billion was redirected to Rosneft for oil deliveries of 48.4 million tonnes from 2005 to 2010. Rest of the loan amount for the other oil deliveries were carried on in a similar way. So in this way, Russian oil even from Western Siberia reached China and by 2008, the estimated oil exports to Beijing reached around 13 million tonnes, though the gas sector remained quite abaft (Hsu and Soong 2014: 84).

The 2004 agreement in a way opened the floodgates of Sino-Russian energy cooperation and since 2006 with the visit of Putin to China; there have been ample signing of joint projects on cooperation in the oil and gas sector. Among bilateral energy ties, some of the fundamental projects in hand were the signing of a protocol between Transneft and CNPC over the construction of an oil pipeline from Skovorodino to China and another signing of a memorandum on a gas pipeline by Gazprom and CNPC. The year 2007 saw the creation of a joint venture between Rosneft and CNPC for the development of Tianjin refinery (Henderson and Mitrova 2016: 14).

The year 2008 was an irritant for Russia and China because of the Russia-Georgia conflict as it diverted the spotlight from the 2008 Beijing Olympics towards the conflict and secondly raised some ‘separatists’ concern for China as well. But it also reflected the first indications of a sour relation with the West. Putin’s successor, Dmitry Medvedev had assumed the office of the President of the Russian Federation hence continued the attempts of Putin in advancing Moscow’s energy strategy towards Beijing in a much stronger way. Although the immediate reaction of Beijing to the Russia-Georgia war came as an irritant, but this resulted in the effective realization of a many policy documents in 2009 that focused on strategic development of Russia’s eastern part and the highly potential energy resources there that had also dedicated a special Ministry for the Development of the Far East (created in 2012) with special emphasis on targeting the Asian markets where China stood a huge chance.⁹ The year 2009 also marked the signing

⁹ These documents included "Energy Strategy of Russia until 2030", "Program for Creation in East Siberia and the Far East of a Unified System of Gas Production, Transport and Supply with Potential Gas Export to the Markets of China and other APR Countries" (Eastern Gas Program), "Strategy of Socioeconomic Development of the Far East and the Baikal region until 2025", "Strategy of Socioeconomic Development of Siberia until 2020", "Energy Development

of a significant oil export deal between Rosneft and CNPC for the delivery of 15 million tonnes per annum through the ESPO pipeline.

The trend of bilateral energy ties kept on following for the coming years as well. In 2013, the oil export contract that was signed with China's CNPC was further increased by an additional 15 million tonnes per annum for 25 years. Similarly, Russia's Rosneft had also signed a contract for massive oil supplies with Sinopec in 2014 as has been explained later on in the chapter.

- **The ESPO Pipeline:**

Prior to 2011, Russia sent crude oil exports to China by rail in the midst of troubles with the Siberian climate and terrain causing interruptions in timely delivery and limited supplies due to limited tanker wagons. Pipeline connection could be the only feasible option to overcome the issue and take a complete advantage of the factor of geographical nearness. Discussions for a direct oil pipeline from Russia to China had been going on since the mid-1990s. During a meeting between Russian President Vladimir Putin and Jiang Zemin in December 2002, the plan was to build a pipeline from Angarsk in East Siberia of Russian territory to the Chinese northeastern territory of Daqing (Downs 2010: 152).

However, the ESPO pipeline was not an easy project in terms of the time taken, the financial hurdles of building a pipeline and the security perspectives. In terms of practical implementation and actual construction, the project took a much longer time to materialise. Moscow in its Asian energy strategy had two primary choices in mind. On one hand, China wanted a pipeline that was restricted to China's north-eastern part and on the other hand, Japan lobbied for a pipeline directed towards Russia's Pacific coast. Russia was concerned at the involvement of Yukos on building a pipeline to Japan. While there was also another proposal by the state-owned Transneft to build an alternate pipeline connecting Angarsk and Russia's Pacific Coast, it was dropped later on. Russia's logic intended to consider the economic and political aspects and the pipeline route to China seemed more pragmatic both in terms of being reasonable, the market

Strategy of East Siberia and the Far East until 2030", "Program for Development of Oil Refining Capacities in East Siberia and the Far East

reliance and also from the political front. Due to steady Chinese demands, oil imports from Russia enormously multiplied from a mere 1.8 million tonnes in 2001 to 15.2 million tonnes in 2010. It was not easy for Russia to count the Asian market without China, hence, went about with the ESPO oil pipeline to Daqing, China. The first part of the ESPO pipeline began to be constructed in 2006 by Transneft from Taishet to Skovorodino. The actual construction of the ESPO pipeline began after an agreement on “Oil for loans” was reached whereby a grant of \$25 billion was made by the China Development Bank in soft loans to Russia’s Rosneft and Transneft for a deal that would transfer fifteen million tonnes of Russian oil annually for a period of twenty years starting from 2011. (Zhu, 2009) These soft loans were on one hand, favourable to Russia as they were on interest rates as low as 6 percent and eased the pressure of the drop in oil prices after the global financial crises. On the other hand, it also helped China in avoiding the financial crisis by converting US dollar foreign exchange reserves into energy assets (Jakobson et. al. 2011: 29).

The second leg of the ESPO pipeline from Skovorodino to the Pacific Port at Kozmino Bay started in January 2010. (Ibid: 30) Until recently, however, there has been a lot of concerns regarding the commercial viability of the pipeline. There have been apprehensions over the Russian capability to transfer enough oil as promised that is to sell fifteen million tonnes a year to Beijing (Ibid: 31). The resources in East Siberia and Russian Far East are not easy to explore and needs a good deal of investment both in exploration and building oil fields.

Map 3: The ESPO Pipeline: Russian inroads into Asia



Source: JBC Energy, TNK-BP traders.

The map above shows the route of ESPO Pipeline starting from Russia’s East Siberian oil deposits to China, Japan and South Korea. It pictures how Russia have effectively diverted its energy strategy towards the Asian markets.

The ESPO route strategically also gave the state-owned Russian energy companies an upper hand and wide competitive advantage over its private rivals concentrating in the Far East and a precedence in fostering Sino-Russian energy ties. The Chinese have also gained enough from the ESPO energy blend as apart from CNPC’s demand, there exists a number of other Chinese importers such as SinoChem, ChemChina and CNOOC interested in ESPO crude as it is geographically feasible and high in quality enabling them to generate high margins on sales of the refined products in the domestic market (Henderson and Mitrova 2016: 33). In fact the quality of Russian crude i.e. ESPO blend is of much higher quality with an API gravity of 34-35 degrees and much lesser sulphur content i.e. 0.5-0.6 percent (Ibid: 35) as against the Middle-Eastern standard on API

gravity of 31 degrees and 2 percent of sulphur content¹⁰ which is making it way more attractive for consumers that are looking towards refining it to lighter products such as gasoline and diesel.

In fact, Russia became the second largest exporter of oil to China in 2015 by exporting 42.43 million tonnes of oil and oil products, second to the traditional exporter Saudi Arabia that sold 50.55 million tonnes (Henderson and Mitrova 2016: 34). With such export volumes, Russia is expected to very soon replace Saudi Arabia as the number one exporter and that it is only a matter of months.

4.6.2 Cooperation in the Gas Sector:

It is no longer possible for China to meet its entire gas demand with domestic production as the consumption levels of gas are way higher. According to estimates, the gas consumption of China was at 107.2 bcm in 2010 at against a production of 94.4 bcm. The annual consumption level is further expected to rise to 300 bcm in 2020 which will push the gas import limits from 80 to 120 bcm (Jakobson et. al. 2011: 33). However, considering the leveraged position that Russia and China share in terms of demand-supply complementariness in the oil and gas sector, their bilateral cooperation is not up to the mark. They have been utterly slow in striking gas contracts.

China's consumption of natural gas surpassed its production levels in 2007 when it consumed about 69.5 bcm after producing approximately 69.2 bcm and as a result had to go for natural gas imports. Although China's natural gas demands are being met by Central Asian flows through the Central Asian Gas Pipeline (CAGP), Russia is also trying to grab the Chinese gas market and in this direction in March 2006, Moscow and Beijing signed a joint declaration that mentioned energy cooperation to be one of the most vital elements of their strategic partnership and in this regard later in 2008 both the states signed a framework agreement to construct two routes from the already existing gas pipelines of Russia--- One from Eastern Siberia to Northeast China and a second

¹⁰ Benchmark oils are used as references during oil pricing, it defines a variety of 161 different benchmark oils in terms of API gravity and sulfur content. API gravity defines the quality of oil by measuring how heavy or light the petroleum is compared to water. URL: <http://www.petroleum.co.uk/benchmarks>

from Western Siberia (Altai territory) to the Xinjiang Uyghur Autonomous Region in China. This would let Russia provide China with 68 bcm of natural gas every year (Varol 2013: 367).

Although, there have been numerous plans regarding a definite pipeline, until a long time the projects remained largely unrealized due to difficulty in price negotiations. While Russia wanted to set prices at similar rates for China like the European customers, Beijing was more inclined to pay less (on the basis of Chinese market prices) than the European markets due to geographical nearness and absence of transit states. As Pang Changwei of the China University of Petroleum quoted,

China lies close to Russia's natural gas fields, so it is reasonable to decline a price based on long-distance transfer (and transit fees to countries en route) to Europe (Jakobson et. al. 2011: 34).

Even by the end of December 2009, Gazprom Export and CNPC Petro China signed an agreement for Russian gas supplies to China and by the next year they formally made a document upholding the various terms on effectively realizing the gas transactions, but this export contract failed to materialise on the grounds of inability to decide over a final price of natural gas (Sputnik, 21 Sept 2010).

Russia-China gas export equation has been explained as an “unrealized potential for energy trade between the two states”. Many journalists have preliminary agreements concluded between China and Russia's Gazprom for gas deliveries to China to meet its ever growing demands by 2011 with volumes slowly increasing to 80 bcm every year (White 2006). However, there is a great deal of positivity in Russia-China energy relations in the gas sector basically. By end of 2013, discussions over some huge gas investment already started.

Regarding LNG exports, according to estimates of BP, in 2012, the share of Russian LNG exports was 2.5 percent of China's total imports, 9.5 percent of Japan's and approximately 6 percent of South Korea's total LNG imports. However, although Russia has good chances of keeping up with the LNG exports in the wider Asian market, but some experts also predict that Russian LNG might have to compete with new potential suppliers in the region like Australia, North America (Canada and the USA), East Africa,

Central Asia (Central Asia-China Pipeline) and Myanmar (Shadrina and Bradshaw 2013: 483).

There have been various feasibility studies that were conducted in order to realise gas pipeline projects from Russia to China. Some of them are-

- a) A pipeline from Chayanda field (Russia) to Shenyang (China)
- b) Russian Kovykta to Korean Peninsula via Heilongjiang province in China
- c) A western pipeline from Taishet in Altai Region of Russia to Xinjiang province (through China's Central Asia Pipeline)
- d) An eastern pipeline from Sakhalin to north-east of China (Jakobson et. al. 2011).

For many years, these proposed projects did not materialise as gas price negotiations were the biggest impediment. The price gap went as high as \$100 per one thousand cubic meters of gas until July 2011. During this period of delayed and dawdling negotiations, Russia in a way lost its monopoly and bargaining powers to Central Asian states. The Central Asia-China Pipeline came into the picture in 2009 making it a landmark deal for China in the case of gas imports. As a pipeline, it starts from Turkmenistan and transiting through Uzbekistan and Kazakhstan reaches the Xinjiang Province of China and is expected to supply China with 30 bcm of gas by the year 2020. (Ibid: 35) It is a more of an achievement to China because it strengthens the Chinese position in the Central Region of which Russia is very protective about.

Apart from the consequences of the coming up of this pipeline from Central Asia, Russia lost its negotiation competence due to the declining reserves of the Western Siberian region which catered mainly to the European market. Earlier there were also doubts regarding the coming up of Kovykta and Chayanda fields of Russia mostly from the Chinese side. As explained by a Chinese expert, Yang Cheng,

Without a supply deal with China, Russia's exploration of its vast natural gas resources in the Eastern region will be postponed...Russia cannot independently develop Kovytko and Chayanda into world-class gas fields without a long-term, large-scale purchase by China . . . Russia's profits will not cover its investment if it embarks on building a pipeline and only conducts small-scale exploration. And if massive exploration is undertaken, there is no guarantee that the gas output can be

wholly consumed at market prices in the Asia-Pacific region
(Jakobson et. al. 2011: 36)

- **The Altai Gas Pipeline Project:**

This is one of the recent proposed natural gas export pipeline from Russia's Western Siberia to North-Western China to be built by Gazprom. It is perceived as a diversification attempt from the European consumers after the Ukraine crisis that temporarily discontinued Russian gas exports to many European states and the latter started considering over diversification of gas imports itself. This debacle in a way made Russia find reasons to redirect its gas flows towards the Eastern side. Hence, many experts see the Altai project to be more of a political solution than an economic pursuit demonstrating Moscow's might in the larger Eurasian region (Ahn and Jones 2008: 135). In fact, Moscow's effort to intensify energy cooperation with China and rest of the Asian markets was very much evident from the Ukraine debacle (Gabuev 2015: 1-9).

The Altai gas pipeline project also offers Russia with the advantage of benefiting the Russian budget in case LNG exports through the Altai pipeline get priority over any other LNG scheme in Vladivostok as LNG export sales are free of export tax, unlike pipeline exports which are taxed at 30 percent of the sales revenue (Henderson 2014: 6). Russia's political ambition in the project works as a catalyst in increasing the probability of accomplishing at least the signing of the project. And it is only beneficial for Russia to use its unexploited West Siberian resources and supply it to the Chinese market for a good return. In this way, even if the Altai project becomes an outcome of political motivation having lesser economic benefits as argued, could, in fact, be a commercially profitable project by availing the opportunity to generate extra budget revenues after 2020 and also by getting a chance to develop a brand new infrastructure foundation in the Altai region (Ibid: 12).

Two major changes in the recent times have led Gazprom's interest to participate in the Altai project in a very promising way. Firstly, although Gazprom was largely interested in the LNG market yet since the liberalisation of LNG exports in December 2013, there is increased competition between Gazprom and other Russian companies like Rosneft and Novatek in the LNG sector threatening the monopoly of Gazprom. (Hille, 2013)

Secondly, the financial consequences of the recent Russia-Ukraine crisis in terms of the US and EU sanctions against Russia that had Rosneft and Novatek on the sanctions list let Gazprom re-surface as a more significant actor in the LNG business in the region (Ostroukh 2014). Although, there are worries for Gazprom to fully commit in the LNG business in case in future the whole of LNG technology comes under the sanctions list, hence instead of that Gazprom is more ardent than ever to concentrate largely on the Altai pipeline project with the complete backing of the Government of Russia (Henderson 2014: 7).

4.7 RUSSIA'S EASTERN GAS PROGRAM AND CHINA:

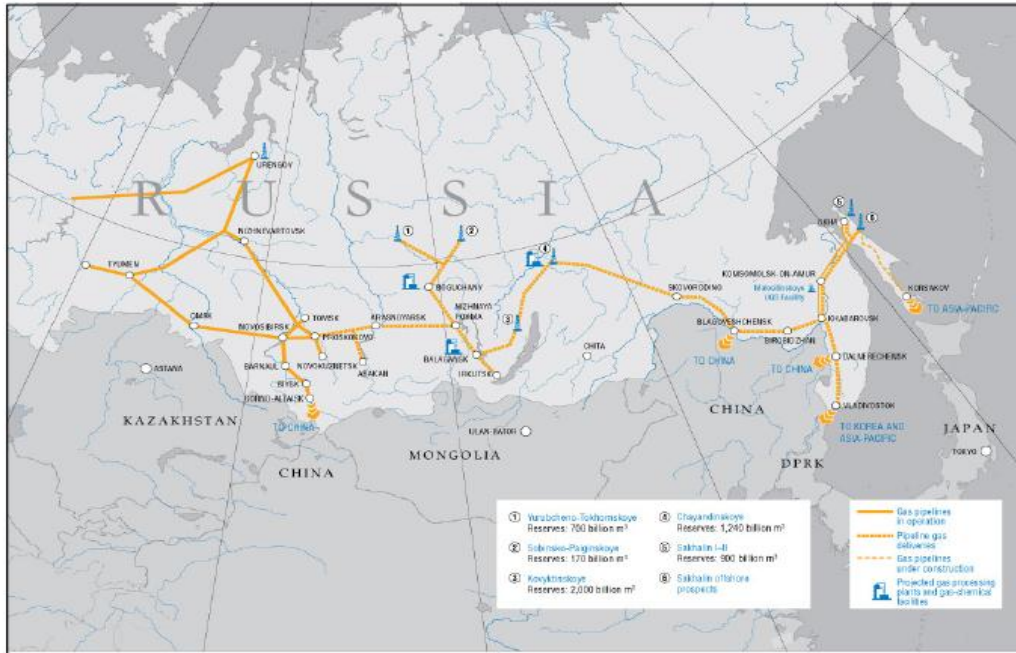
To materialise the objectives mentioned in Russia's Energy Strategy up to 2020 and 2030, in a September 2007 Order by the Russian Federation Industry and Energy Ministry approved a development program with an estimated cost of approximately \$80 billion for an integrated gas production, transportation and supply system in Eastern Siberia and the Far East aiming to enter the markets of Asia-Pacific (Gromov 2010). Gazprom has a big role to play here as this state-run company has been entrusted with the responsibility of coordinating Russia's Eastern Gas Program. Gazprom's chief Alexei Miller announced,

In the immediate future, we can create a gas export capacity [in the Far East] that rivals gas exports to Europe, perhaps even surpassing [the amount of gas Russia currently exports to its largest market] (Priddy 2012).

Gazprom's design of the program has to meet certain primary objectives:

- To fulfil the gas demands of the Asian customers and maintain sustainable gas supply throughout Russia by expanding the Unified Gas Supply System towards the Eastern direction.
- A natural gas market based on prices to be formed with the account of competition between different fuels without direct pricing regulation by the state.
- To implement an export policy that is based on a single gas exporter.

Map 4: Gazprom's Eastern Gas Programme



Source: Gazprom Official Website. <http://www.gazprom.com/production/projects/east-program/>

Map 5: Major hydrocarbon fields in Eastern Siberia and the Far East



Source: Gazprom Official Website, <http://www.gazprom.com/f/posts/89/747450/gazprom-questions-eng-2011-06.pdf>

As can be seen from the two maps mentioned above, the Russian Eastern Gas Program is based on a very strong resource base consisting of various natural gas fields like Sobinskoye field (Krasnoyarsk Krai), Chikanskoye field (Irkutsk Oblast), Chayanda field (Republic of Sakha, Yakutia), Kamchatka field (Kamchatka Oblast), Sakhalin fields (Sakhalin Oblast), Kovyktinskoye field (Irkutsk Oblast) (Bradshaw 2008). The second map gives a closer look of the various resource bases.

Sakhalin Islands:

Gazprom has paid priority importance to the Sakhalin Islands, especially for its offshore projects. The Sakhalin Island shelf is best for the production and supply of gas to customers in the Russian Far East with various blocks in Kirinsky, Vostochno-Odoptinsky, Ayashsky blocks and Kirinskoye deposits. In the Sakhalin II project, Gazprom is the primary shareholder and it built its first natural gas plant under this project to export LNG to the Asia-Pacific markets. Gazprom is again actively working on the Sakhalin III project. The company is also involved in the project of developing the Sakhalin-Khabarovsk-Vladivostok GTS to develop gas supply to the Khabarovsk territory, Sakhalin Oblast and the Primorsky Territory (Kuznichenkov 2012).

The first gas negotiation between Russia and China was in 2003 when CNPC and Sakhalin Energy signed a framework agreement on the exploration and development of an offshore oil field in Sakhalin Island. Then in 2004, negotiations had begun between CNPC and ExxonMobil for possible long-term gas deliveries from Sakhalin I. (Butrin, 2004) And, finally an agreement was signed for a gas export deal between CNPC and the partnership of Rosneft and ExxonMobil in 2006 for deliveries from Sakhalin-I through a pipeline to the northeastern part of China (The Moscow Times 24 October 2006). However, this deal was proved unsuccessful because of Gazprom's interference which subsequently managed to sell some of its own gas to China as LNG from Sakhalin II in 2010.

Yakutia Gas Production Center:

It consists of the Chayandinskoye oil and gas condensate field which is one of the largest natural gas fields of Russia located in the Lensky District of the Sakha Republic in Yakutia. The Chayanda fields are also a part of the state-run Eastern Gas program for the development of an integrated gas production, transportation and supply system of Eastern Siberia and Russian Far East to primarily cater to the Chinese market and other the Asia Pacific. It is one of the largest deposits in the Eastern part of the country with the reserves category C1+C2 reach 1.2 TCM of natural gas and 79.1 million tonnes of oil and condensate. (Kristallinskaya, 2013) The Russian Government wants to develop this field even before Kovykta. Both Chayanda and Kovykta are strategic assets of Russia. A strategic alliance was also formed between Gazprom and the Sakha Republic in 2002 to promote the Chayanda gas fields for a more rapid development. Chayanda's significance to Russia also lies in the fact that it is one major field that is not operated by different oil companies of the world (Stern 2005: 155-156). Under this project, Yakutia-Khabarovsk-Vladivostok gas transmission pipeline is being developed for helium extraction and helium storage system. The project also plans to connect a large part of the pipeline with the ESPO pipeline and linked to Sakhalin-Khabarovsk-Vladivostok GTS giving the said project an added gas export advantage apart from supplying to the southern areas of the Far-Eastern Federal district. Apart from the Chayanda fields, the Yakutia gas production centre is also involved in developing several other fields near Chayanda-Srenebotuobinskoye, Tas-Yuryahskoye, Verkhne-Vilyuchanskoye etc (Kuznichenkov 2012).

The construction cost of the project is estimated to stand at a \$20 billion, including other related investments for \$7.5 billion. This proposed gas pipeline is crucial also because it will be the connecting link for gas production centres both in the Yakutia and Irkutsk region. China is to become a prime consumer of the region as the first stage of the project will transport gas from the Chayanda fields (Yakutia) to the town of Blagoveshchensk on the Chinese border covering about 2,200 kilometres. Russian President Putin is very optimistic about China and said, "We generally take a very careful approach to the

approval of our foreign partners, but of course, for our Chinese friends there are no restrictions” (Russia Today, 1 September 2014).

The pipeline (968 kilometres) is to be completed by 2018 and start production by 2015 itself. The production capacity of the Chayanda field is expected to be 25 billion cubic meters of gas and approximately 1.5 million tonnes of oil (Russia Today, 1 September 2014). Moreover, other reports suggest Russia’s willingness to offer Beijing about 10 percent of Sakha reserves free of cost on the latter’s assistance to Moscow in developing the Chayanda fields in its early phases (Ahn Se H. and Jones, Michael T. 2008: 136).

- **The Power of Siberia Pipeline (Under the Irkutsk and Yakutia gas production centres):**

The Power of Siberia pipeline project also known as the ‘Sila Sibiri’ in Russian is a 4000 kilometres long natural gas pipeline project under a unified GTS that is under construction in Eastern Siberia to primarily ship gas from Yakutia to the Asian markets. Gazprom is responsible for developing this project. Upon its completion by 2019, the pipeline will become the ‘largest fuel network in the world’. This pipeline will consolidate Russia’s Eastern Gas Programme and thereby Moscow’s position as a global natural gas exporter. The pipeline is therefore strategically very crucial for Russia’s integration into the Asian energy market as the project is underway with proposals to build additional networks in different Asian countries apart from China like Japan, North Korea, South Korea and India (Doo 2015).

The construction of the Power of Siberia pipeline was started under the direction of the Vladimir Putin to the Gazprom General Manager on 29 October 2012. According to a news report published in Interfax website in March 2013 itself, a memorandum was set out with the main parameters for clearing out the way for of a \$400 billion gas contract that was later signed in 2014 between Russia and China (Interfax, 22 March 2013). The first phase of the pipeline that is expected to be operational by 2018 will connect gas production centres in Yakutia with Blagoveshchensk in the Russia-China border. The project encompasses five regions in Russia including the Irkutsk region, the Chayanda gas fields in the Republic of Sakha in the Yakutia region, the Amur region, the Jewish

Autonomous region and the Khabarovsk territory. The 4,000 kilometres long GTS system will comprise mainly of two gas trunk lines. One of a 3,200 kilometres long line from Yakutia-Khabarovsk-Vladivostok and a second gas pipeline that will connect the Kovyktinskoye gas field in the Irkutsk region with the gas production centre in Yakutia (Mitrova 2014: 37). The project seems like a rewarding step towards Russia and China's rising energy equation and a right step in the direction of Putin's idea of Russia's 'energy pivot to Asia'.

So, Russia's commitment to the completion of Power of Siberia is positive and the first gas is most likely to be delivered by mid-2020. That is also to be followed by a build up for five years to increase the contract volumes of 38 bcma by 2025 approximately. However, it cannot be denied that in the gas front, China does have a strong bargaining position especially because it is an oversupplied market with gas coming to China from its West by Central Asian and Myanmar in the south. That is the reason why again CNPC has been able to negotiate a good price for itself from Gazprom to accept sales for Power of Siberia that allowed it to make only limited return on its investments even when the oil price was over \$100 per barrel (Henderson and Mitrova 2016).

Irkutsk Region:

This project was initiated when an Agreement of Cooperation was signed between Gazprom and the Irkutsk Oblast Government in October 2010 and the Accord on Gasification in December 2009. Prior to that, the General Scheme for gas supply and gasification of the Irkutsk Oblast was approved by the Directive of the Irkutsk Oblast Government in 2005 (updated in 2009). Gazprom's geological exploration in the Yuzhno-Kovyktinskaya area led to the discovery of the Chikanskoye gas and condensate field. In both the Irkutsk and Krasnoyarsk regions Gazprom is engaged in exploration over twenty-three prospects and about 2.7 billion Rubles have been already invested during the six months of 2008. The General Scheme of Gas Supply and Gasification in Irkutsk Oblast is under construction presently (Gazprom Official Website). The Irkutsk pipeline project aims to access the Korean markets. The route of the pipeline originates

from the Russian Irkutsk region and will pass through the north-eastern part territory of China before reaching the Western coast of South Korea. A preliminary letter was also signed for gas transactions between China, Russia and South Korea (Interfax, 18 November 2003).

- **The Kovykta Pipeline: No more a pipe dream?**

During the 1990s for the first time proposals were forwarded for closer energy cooperation between Russia and China under the auspices of the Strategic Partnership that commenced in the year 1996. A gas pipeline was constructed from the Kovykta field to South Korea through the Yellow Sea bypassing Mongolia and North Korea. The Kovykta field was to play a big role and was, in fact, the first most progressive proposals for delivering Russian gas to China (Rozman 2010: 26).

The Kovykta gas fields also known as ‘Kovyktinskoye’ was discovered in 1987 with an estimated 2 tcm of natural gas and condensate. Due to its absolute size, location and the timely emergence of the energy-starved Asian nations, it provided a unique chance to Moscow in reconnecting with its Asian neighbours in the energy front and an added advantage to spur government revenues, accelerate economic development in general and in the undeveloped regions of the Far East and Siberia and open a lot of opportunities (Ahn Se H. and Jones, Michael T. 2008: 109).

In 2003, it was planned that the Kovykta gas field (with an annual volume of 2.13 trillion); would deliver 20 bcm and 10 bcm to China and South Korea respectively. The consortium of TNK-BP, a Russian and British joint venture with majority shares (62.9 percent) of Russian Petroleum had the license to develop these fields but did not possess the right to export gas due to the monopoly of Gazprom (Rozman 2010: 26). It, therefore, made the consortium a handicap in the hands of Gazprom. However, after a long ten years battle between Gazprom and TNK-BP, the former won in the Kovykta bidding and bought the biggest undeveloped gas field for \$776 million. Gazprom’s success in ejecting TNK-BP in June 2007 out of the consortium in Kovykta in the Irkutsk region of Russia was a landmark towards providing energy security to the Asian region. It has been

estimated that by 2020, the Kovykta fields will have the potential to produce a massive 130 bcm of natural gas which tantamounts to Russia's current gas exports to Europe. This was interpreted as a remarkable step and a very crucial one for Beijing as gas supplies from this field is intended largely towards the Chinese market (Mason 2011).

Moreover, Gazprom's annexation meant that now even the export potential is boosted, a right that was not in the hands of TNK-BP. However, a lucrative export market is fundamental to Kovykta's development and sustenance. In 2007, the amount of domestic consumption of gas supplied in the regions of Angarsk, Sayansk, Irkutsk and Ussolye-Sibirsk from Kovykta was as low as only 2 bcm. The point is these areas are sparsely populated and is not expected to consume more than the estimated amount. Hence, the Asian markets are the only resort to the Kovykta project (Lotspeich 2010: 109).

One of the serious problems with the determination of the route of the Kovykta pipeline throughout its various stages are the complexities involved with the inability to find equilibrium between the economic feasibility and regional and international political ambitions of the pipeline. The proposed route that bypasses North Korea is one such example, as it is not commercially viable and with that run an additional risk for Russian LNG supplies by letting in access to other external players like the Middle East and Australia seeking a consumer market in the Asian region. Similar is the case with Mongolia when in the year 1997 it figured in the proposed pipeline route providing a much economic way out to transfer gas from Kovykta to China, the latter had problems with Mongolia being a transit state in the project and thereby considered a re-routing plan without Mongolia in the scene (Ibid: 123).

There are also apprehensions regarding the Chinese entry into Russia's upstream gas market being too risky and restrictive. Oil and gas as the major national security assets of the Russian government are under tight control of the Government and therefore an upstream market is tricky for any foreign investor. There have been many instances where millions of dollars have been spent on various upstream projects with no concrete results like in case of a joint venture between China's Sinopec and Rosneft in 2005 that involved in an exploration project in an undeveloped Sakhalin bloc (Jakobson, Holtom et. al. 2011: 37).

However, China's energy needs are immense and constantly shooting up with every passing hour. It is impossible for China to ignore Russia. Moreover, looking from the environmental viewpoint, Beijing has to divert its reliance on coal (70 percent approximately) to other forms like natural gas for a cleaner consumption. It was estimated that China's domestic gas production has increased to 17 percent from 2005 to 2006 but does not suffice to sustain its economic growth. Most of the Chinese pipelines and gas consumption are in the northeastern part of China which lie in closer vicinity of Russia, making the Russian gas fields compatible to Chinese accessibility and need making Kovykta is an absolute potential (Lotspeich 2010: 113).

Other energy experts like K. Paik is of the view that if environmental concerns are considered then the 2020 estimates for natural gas consumption of China stands at 500 bcm annually rather than 300 bcm/year and in this case, again Russia has to play a key role in it (Jakobson, Holtom et. al. 2011: 38).

Krasnoyarsk Territory:

The Krasnoyarsk territory was brought under Russia's Eastern Gas Program by the Agreement of Cooperation between Gazprom and the Government of Krasnoyarsk territory signed in 2012 and the Accord of Gasification in 2007 (Gazprom Official Website). Exploration activities have been carried out in about eighteen blocks of the Krasnoyarsk territory, including the Sobinskoye oil field. Also, negotiations are being carried out for the development of gas processing and gas chemical complexes in the field. Another Abakanskoye field was also discovered in the year 2010 (Kuznichenkov 2012).

Yamal LNG:

Despite the fact that Gazprom had systematised a way for developing Russia's Eastern gas program, it was the rigidity of price negotiations by Gazprom that had been a reason for the delays. This kind of indecisiveness and inflexibility led the Russian government to positively respond to other players in the region such as Rosneft and Novatek that came

up plans of developing LNG projects separately, one in Yamal LNG in West Siberia and the Far East LNG on Sakhalin Island. But these projects could not be viable on getting export rights which Gazprom had exclusive rights to in the Russian gas sector. So in this way, Yamal LNG and Far East LNG came about as a competition to Gazprom when in December 2013 exports rights were granted to Novatek and Rosneft enabling these companies to work independently of Gazprom. The law in 2013 partially reversed the 2006 law of giving Gazprom monopoly in gas exports. Yamal LNG output is earmarked for the Asian markets as a long term gas strategy to counter the declines of the European market.

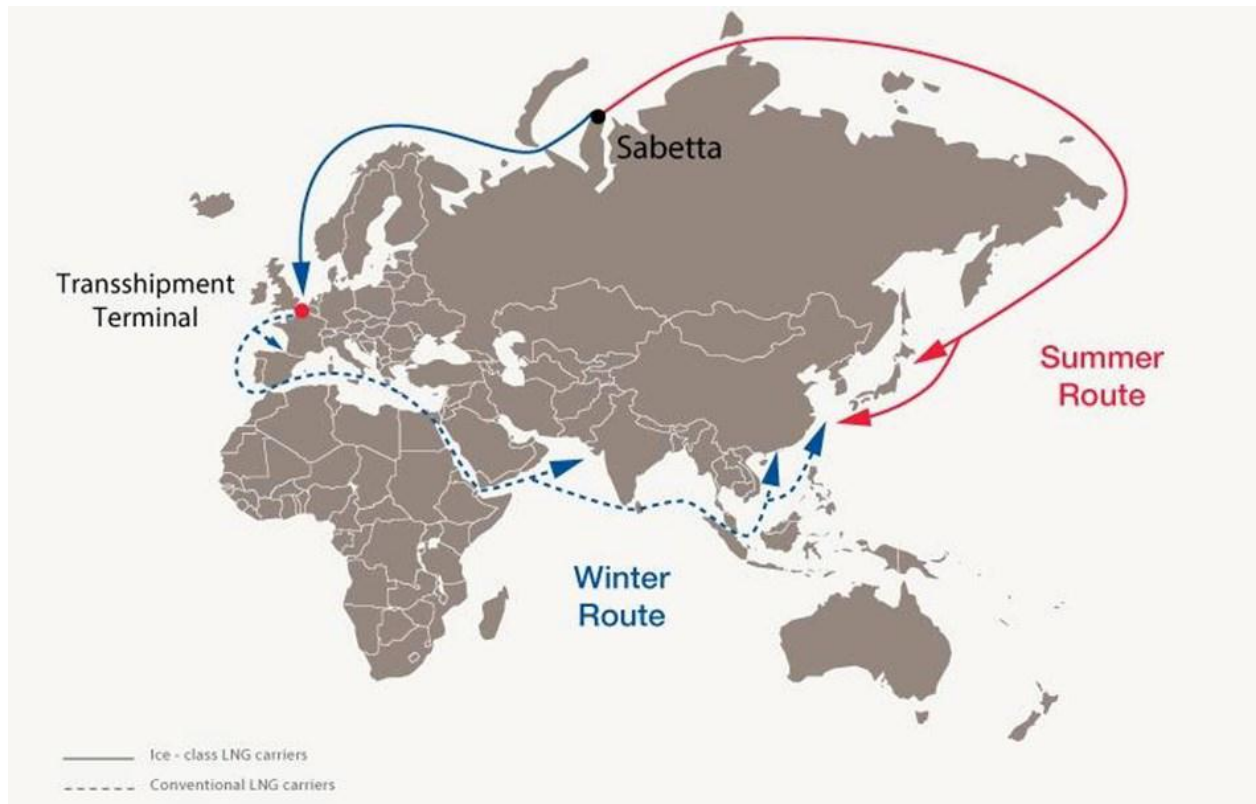
Yamal LNG which was initially a joint project of Total (France) with 20 percent stake and Novatek (Russia) with 80 percent stake, by April 2011 bought 12.0869 percent of Novatek's share. However, as a consequence of the Russia-Ukraine crisis, China's CNPC signed a memorandum to join the consortium and agreed to finally purchase 20 percent of equity share from Novatek. It was a huge development in Chinese penetration into Russia's LNG sector as it got both access to Russian LNG and a deal was finalized by the Russian company for a 15 year supply for at least 3 mmt of LNG from Yamal to China. It is also significant as LNG is the future of energy resources (Bros and Mitrova 2016).

There also lies an inherent economic and political rationale behind Russian government to support the Yamal LNG project. LNG exports have remained a priority for Russia for benefits such as technical feasibility for easy export mobility for large volumes, wider market accessibility, asserting the strategic importance of the Northern Sea route, promoting the development of the Far East and Arctic and modernization of related industries like shipbuilding and last but not the least to reduce dependence on European markets to strengthen Russia's geopolitical influence in the Asian region. Yamal LNG certainly provides for the fulfillment of some of the Russian objectives to increase its range of market accessibility through the Northern Sea route to reach both European and Asian markets during winter (November to June) and the summer route for rest of the year. Yamal LNG is a definitely a priority for the Russian government and in this regard it has been heavily providing financial support from the National Wealth Fund and other state banks and other additional assistance like construction of port facilities for LNG

tankers, all out of government expenses (Reuters, 17 Dec 2015). The figure below explains the dual shipping routes for Yamal LNG.

After the Ukraine crisis and subsequent Western sanctions, delayed negotiations from European banks for guarantying line of credit, likelihood of future transactions to be made in Yuan etc, the situation for French company, Total has become quite sketchy as the new configuration with China in the scene reduces the influence of Total in Yamal. Hence, naturally the marketing choices are turning towards the Asian market. So the sanctions on Russia are indirectly creating alternative regions for Yamal to divert. A higher debt from Russian and Chinese banks is largely dominating the pool of lenders with Sino-Russian management limiting the influence of European financial institutions on major Russian energy projects. So, in terms with Russia's Asia policy as well, the Yamal project has come down to be a very significant one, hence more than just an economic project. It is also evident from the fact that the project has tried to work out even with amendments to Gazprom's export monopoly status and other rivalries among domestic energy companies (Bros and Mitrova 2016). Novatek got a better deal with China in Yamal as it wasted little time in negotiations. This had most likely sent signals to Gazprom of a rising competition in the Russian LNG export sector so there was subsequently even Gazprom's long negotiated major gas contract concluding with CNPC in the same year in 2014, additionally of course with the deteriorating ties with the West coming hard against Russia's economy. This in return did give Beijing an advantage in seeking out for diversifying energy import strategy from its Russian neighbour as also a desperation measure for the latter. And, this has indeed started to work in a progressive way for both the countries (Henderson and Mitrova 2016: 57).

Map 6: Yamal LNG Shipping options



Source: TOTAL S.A. website (Bros and Mitrova 2016: 7)

The map above aptly explains the shipping options of Yamal LNG. Yamal LNG is targeted to reach both the European customers and Asian markets and opened up vast gas resources of the Russian Arctic. The project is devised in dual routes- the summer route and the winter route enabling year-round supplies of LNG. The summer route is devised to deliver LNG to Northeast Asia through the Northern Sea route between July and December. During winters it takes the westward route with trans-shipment through one of the European re-gasification terminals. Further, as can be seen on the map, the project also includes the development of sizable infrastructure, including the Sabetta seaport in the Kara Sea and Sabetta International Airport owned by Novatek, a wastewater treatment plant, roads, fuel storage and construction and operation of an ice-breaking fleet and LNG tanker fleet.

4.8 THE RUSSIA-CHINA GAS DEAL

In fact, one of the steps taken by both Russia and China in the energy sector in recent times could be counted as a huge leap forward. The years 2013-14 was a tough period for Russia in terms of the political disturbances that it went through in the latest Ukraine crisis. On the economic front, Moscow was subjected to heavy sanctions from the West and international economic experts saw this as a huge defeat of the Russian economy that was thought to be fast slipping into recession. The IMF also claimed Russia to be undergoing the phase of recession. About \$50 billion capital had gone out of the country in the form of bonds and stocks. The impact was expected to affect all the other East European states, as well because many of them are largely dependent on Russia. The European Bank for Reconstruction and Development discovered that; due to the sanctions, Europe was also keen for looking towards alternative sources of energy replacing Russia and the political situation actually came about to be an immediate trigger for Moscow in re-strengthening ties with new trading partners in the East. So this was what Moscow exactly does and a massive gas deal of \$400 billion was signed between Russia and China to supply about 38 bcm for a period of thirty years. However, this gas deal cannot just be seen as a response to the Ukraine crisis alone. Russia and China have been negotiating it for a decade now and it was just the right time to strike such a deal. The Russia-China gas deal apart from being an economic boost provides a political push in Russia's national security interest. China is the best option for Russia during a time like this one owing to Beijing's impressive economic growth within a few years.

The remarkable gas deal is significant for both the countries not only in the sector of energy, it is very critical as along with the gas deal a line of projects would be developed. Secondly, Russia is set to build massive gas transmission infrastructure and for that, it has been looking at all possible petrochemical terminals that could be constructed as a result of this deal. This possibility makes the gas deal a 'win-win' situation for both the states. This is the economic part of the deal; however, there is also another more strategic aspect of it. Analysts all around the world talk about an increasing degree of strategic gains that this \$400 billion gas deal is expected to bring basically because of the price of the deal. It has been estimated that the gas deal is more of a political than an economic one. The

price of the deal is no doubt huge but in comparison to the amount of energy business Russia does with its European customers, the Russia-China gas deal is still in its infant stage. The \$400 Billion gas to supply gas to China accounts for the supply of around 38 Billion cubic meters for over thirty years which rounds it off at only \$13 Billion a year. That accounts roughly for about 2.2 percent of Russia's total exports of \$600 Billion. While in the year 2013, Russian gas exports to Europe alone amounted to an approximate of 200 billion cubic meters. Therefore, although this deal might not sound as promising in comparison, it certainly has economic and political resonance as a pioneering deal in today's time for creating a lot of other business opportunities and a huge strategic step in directing a greater Russian role in the Asian continent. (Al Jazeera English: 24 May 2014)

K. Dmitriev, the CEO of Russian Direct Investment Fund in an interview on the Russia-China Gas Deal described how Russia still secures its pragmatic attitude in the long run. Although Moscow has found a reliable ally in Beijing during this time of crisis and thereby apart from this one huge deal, Russia and China have left open various other options in the investment sector, logistics, agriculture, healthcare and tourism as well and with that several deals were also signed in Shanghai for the creation of a Russia-China Investment Fund; he ensures that what Russia needs now is a lot of investors from all over the world. Therefore, for Moscow, Asia doesn't only mean China but it is East Asia, South Asia and West Asia. And for that matter, Dmitriv also pointed out the fact that even several European investors aren't particularly happy about the economic sanctions against Russia. Moreover, as observed by the European Bank for Reconstruction and Development (EBRD), the sanctions over Russia are likely to affect several countries of Eastern Europe, Caucasus and Central Asia as it is impossible to see Russia in isolation with the nearby regions, the former being the largest trading partner for most of them. (Ibid)

In another interview with Marin Katusa, the Chief Energy Investment Strategist for Casey Research with Cambridge House on Russia-China gas deal, Katusa emphasises on the timing of the signing of the deal that makes it very crucial along with the quantity of supply in question. It is a brilliant sense of business as only for a starting it would be around 1.3 Tcf of gas for \$10 Billion. Katusa talks in terms of how the deal is going to

shape the future of Russian gas vastly. The main pipeline is being built and soon enough there would be attempts to win it which will increase the amount of gas supply to 2 and a half Tcf gas and additional capillary pipelines will go to several parts in Asia. So although at the moment China consumes about 25 percent of Russian gas, its consumption has high chances to multiply owing to its rapid economic growth which might put European consumers at a greater risk. Unlike other studies that show Russia as an unstable energy supply, Katusa believes that Europe would get affected if Russia diversifies as Moscow is a very stable supplier and if it wasn't then European consumers would not have increased the volume of Russian gas imports every year since last twenty years. China sees Russia as a stable supplier and therefore the Chinese President on the day of the signing of the deal said, "China must rethink its strategy....for security this includes a new Union including Russia and Iran and not including the US and EU" (Katusa 2014).

4.9 FACTORS OF DIVERGENCE

Failure in price negotiations between Russia and China gas deals amidst other concerns could be understood under the light of several connate factors that are not new but historically established. For a fact, there has been an attitude of reluctance from both the parties at different points in time for a positive cooperation at the energy stratum. While, during the very first phase of Russia-China gas cooperation, Moscow wanted the Chinese to engage effectively in the gas sector, the latter showed complete hesitance. Similarly, Russia did not welcome China with open arms to cooperate in terms of providing equity in pipeline projects or other energy projects thereby restricting China's domination in the value chain. Moreover, according to Beijing, Russia claimed exceptionally high prices that was not suiting China. On China's part, it had other options in the neighbourhood like Myanmar or the Central Asian states other than Russia to be completely relying on the latter. All of it and including the dearth of the trust factor and apprehensions of both the sides for a potential condition of over-dependence are examples that could be summarised as a source of all the underlying impediments in taking the Russia-China energy relations to the next level (Paik 2013).

The dynamic shifts in world oil prices:

A very significant factor of divergence and rather uncertainty in the Russia-China energy ties that has been observed is the aspect of the ever-changing nature of world oil prices. The Russia-China energy equations could be credited to a large extent on the variations in the global oil prices. In fact, if analysed historically, during the 1990s the Russian energy companies were not in a predominant position than during Putin's first presidential term and thereafter. During that time the Russian energy companies were deprived of the necessary capital and were more inclined towards closely cooperating with its Chinese neighbour. In the year 1994, as specified by Chinese officials, Russia was more eager in selling its energy assets to Beijing and in fact proposed the building of a pipeline connecting the two countries. However, things changed by the end of the decade and a substantial hike in the world energy prices completely turned the tables in favour of Russia. The average annual price of oil increased from a mere \$14 per barrel in 1998 to \$72 per barrel in 2007. This change threatened China's energy security, forcing Beijing to contemplate on ways to secure its supplies in general and negotiate with Moscow at the ground level. (BP Statistical Review of World Energy, June 2008) The ups and downs in the energy relations imply to ponder whether the energy ties between Russia and China can move beyond the fluctuations of world energy prices or is this factor highly inclusive and hence a strong determinant in sustaining stable energy ties between the two.

Investment Issues and Russia's Upstream:

Another perplexing issue between Russia-China energy cooperation is the different obstacles that come in the way for a successful investment in Russia's upstream energy projects. Chinese equity investments in the Russian energy assets are still limited to just 2.5 percent compared to the total Chinese overseas production. This neatly explains Moscow's reluctance and cautious nature to share assets with its Chinese neighbour (Henderson and Mitrova 2016: 40) CNPC also by the end of 2016 had offered a proposal to Gazprom concerning the Altai Pipeline for an integrated contract for joint investments

in gas production, pipeline construction and operation and gas export and sales. But Gazprom's CEO Alexei Miller was reluctant to give China so much of room in its upstream projects and thereby called off the contract offer claiming it as 'unacceptable' and that the pipeline would be built in accordance with the 2015 terms of the contract (Ibid: 57).

There has been some limited degree of cooperation in Russia's upstream market since the year 2006. Among big projects, Vostok is a joint undertaking between Rosneft and CNPC in the field of exploration and drilling in 2010. However, there is an argument that Chinese access into Russia's upstream is far more limited than Russia's participation in China's downstream energy market. Russia's oil giant Rosneft holds about 49 percent of stake in a refinery of CNPC in Tianjin to be completed by 2014 (Jakobson, Holtom et. al. 2011: 32).

Issues over Pricing:

Russia-China negotiations over pricing have been one of the most indelible problems in the aspect of energy cooperation. Some of the major points of hindrance are the adverse structure of trade between the two countries, the uncompromising stand over the energy contracts by both the parties on pricing issues, especially over gas prices and likewise for a long time; Moscow was reluctant to compromise and lower its gas prices for the Chinese market for reasons better suited to Russia. When Germany, which is one of the largest importers of Russian gas in the European Union, decided to discard nuclear energy for other sources of energy, it was a clear indication of Moscow's significance as the leading natural gas exporter. Moreover, even within Russia's diversification plans towards the Asian market, Moscow wanted to keep its options open with South Korea and North Korea, Japan and India. Apart from disputes in gas pricing, there were also concerns regarding the oil pricing with China's CNPC. It was reported that Chinese major CNPC was paying a lesser amount for Russian petroleum since the year 2011 than the amount mentioned in the twenty-year contract between Moscow and Beijing. This was probably one of the biggest hurdles for the delay of the construction of the ESPO pipeline (Peng 2012).

Over the ESPO context, there were tensions between the Russian side and China on price issues. Apparently, by the details of an agreement concluded in 2009, laid down that Beijing would purchase oil at the ESPO Blend price set at Kozmino, but in March 2011 after a period of two months from the start of the operations, China was attacked for non-compliance with the deal and independently cutting the oil prices. In this connection, instruments like ‘Oil for Loans’ deals which are concluded much prior to the actual operation of pipeline oil have the potential to become sources of conflict for instance; if ESPO Blend prices escalate considerably putting China in the downside of the deal, that might lead to various ugly consequences from backing out to insecurity of supplies etc. As Yang Cheng compared Russia’s energy disputes with Ukraine and Turkmenistan with the Russia-China angle and pointed out,

The construction and operation of the oil pipeline only marks a new phase of China–Russia energy cooperation. It is likely to generate new conflicts. We cannot exclude the possibility that Russia will adopt the same approach as it did to Ukraine and Turkmenistan at crucial junctures (Jakobson, Holtom et. al. 2011: 31).

Russian apprehensions:

Russia and China have not been natural allies and has had a history of border disputes. In spite of the fact that the border disputes were successfully settled between the two countries in 2004, there still lingers some doubt about the intentions of this neighbour of Russia. The trust factor is not very high and according to a poll conducted in Russia in 2009, 44 percent of Russians consider China as a threat to Moscow (Peng 2012).

Also, concerns of the Russian government also prevail somewhere in its energy diversification plans and opening up of the Russian Far East for an increasing Chinese migration. The development of the East Siberian region that is the future of Moscow’s energy strategy is a difficult terrain and it is a challenging task for both the governments and the major oil companies to penetrate into the remote regions with tough weather conditions and no infrastructure. China is a primary actor in Russia’s eastern diversification policy and is to play a big role in it. In economic ties between Russia and

China, the latter is comfortable with Russia playing the role of a raw materials supplier. This induces a fear in Moscow to remain as a secondary partner in the trade ties. Similarly, Moscow's oscillating behaviour towards routing of the ESPO pipeline was evident of the fear that it brewed to remain as an 'energy appendage' of China. Moreover, there are also apprehensions on the part of Russia that a more developed Russian Far East as would lead to a growing influx of Chinese immigrants (Ryan 2010: 192).

Intricacies of Investments in the Gas Sector:

Apart from all other points of divergence, one of the most fundamental problems associated with investing in the gas sector or cooperation in the gas sector lay in the complexities involved in it. A gas deal requires a significantly larger degree of commitment by both the parties. It is much more troublesome than that of cooperation in oil. A gas deal is long-term, requires massive financial investments for building pipelines and terminals, a strong and enduring commitment and confidence from both the governments and investors and largely inflexible. Unlike oil trade, where in a case of any dispute between the parties, oil shipments could be reverted or in situations where security in the oil trade routes gets breached due to war or actions of non-traditional actors, shipments could be redirected; such an option is limited in the case of gas trade. Gas pipelines for a start need substantial reserves for the producing state to ensure a long term supply and an extensive demand market for a congruent business to follow. Secondly, for the construction of the pipelines huge financial resources are a must. Thirdly, as pipelines are immovable modes of transporting gas, the parties are tied together for a long time mostly under harsh "take or pay" clauses (Ahn and Jones, 2008: 125). Thus, it makes it difficult for the involved parties to back out in the case of differences and disputes. Moreover, as these are usually long-term projects the investments are by and large done in a 'prepaid' manner and the quantities of supplies are also decided beforehand, therefore there exist all possibilities for associated risks that are likely to come along.

4.10 CONCLUSION

Therefore, it can be understood that, contrary to Indo-Russian ties, the ties between Russia and China has gone through tremendous ups and downs since the Soviet times. There were many areas of discomfort earlier contrary to how today China views Russia's 'Pivot to Asia' strategy. Earlier Soviet Union's meddling in the Asian affairs brought discomfort to China as a challenge to its dominant position in Asia. Today Sino-Russian ties are mostly characterised by pragmatic and economic concerns rather than ideological positions. Defence, energy, space program and security have been the main areas of cooperation between the two states. China's growing energy demands, economic muscle and its geographical proximity to Russia brings out the compatible angle. In fact, Russia in its Asia-Pacific strategy is heavily counting on Beijing and it is important to note here that the increase in Russia and China's bilateral trade volume is accredited to the increasing oil and gas dealings between the two states. For China, its top security priority is to divert its import shipping from the Malacca straits and Russian resources are the best resort as such. Moreover, on the grounds of secure and stable supplies, Russia has proved to be a very good option for China as even during the period of 'Sino-Soviet split' the Soviet energy exports to China were never halted.

Russia-China cooperation has seen a lot of highs in the recent times as already explained in the chapter; ESPO pipeline being one of the highlights. Apart from that, the 2006 Beijing-Moscow Declaration mentioned energy cooperation as the most vital element of their strategic partnership. The Altai Pipeline project, the Russian Eastern Gas program initiated in 2007, construction of the 'Power of Siberia' pipeline commence in 2012 with gas production centres to be located on the Russo-Chinese border are some of the important projects.

But there are still many loopholes in the Russia-China energy relations like price negotiations being a pressing issue, 'oil for loans' concept, limited Chinese access into Russia's upstream, Russian apprehensions towards incessant Chinese migration into Russian territory, investment problems in gas pipelines in case of gas disputes etc. These problem areas cannot be neglected and have therefore acted as hindrances for both the states to cooperate to reach its potential best.

CHAPTER 5

RUSSIA AS A COMMON FACTOR IN THE TRILATERAL ENGAGEMENT

5.1 INTRODUCTION

Chapter five analyses the energy relations of Russia in a comparative framework between India and China and its act of balancing the two Asian states. It also analyses Russian energy as a strategic asset concerning the geopolitics of the region. The study aims to understand this trilateral engagement not only within a demand-supply premise but through the prism of a larger strategic and geopolitical dimension and what role Russia plays in balancing India and China in the context of the forces of convergences and divergences shaping their energy relations.

The chapter, therefore, examines the second part of the first hypothesis and the third hypothesis. It is quite evident now that with the various plans, strategies and documents available, Russia is indeed trying to effectively divert large parts of its energy sources towards the Asian markets. But the question still remains as to how this diversification strategy serves Russia; towards its larger interest in making a striking comeback as an energy superpower and a powerful player in the arena of international politics? Are India and China really going to be the two wingmen of Russia in this game? The third hypothesis will try to understand the strategic nature of Russia's role in the Asian continent with a much enhanced economic presence in its markets and at the same time dodging any type of conflicts between the two largest Asian giants, India and China and secure the mutually best benefits out of it.

Understanding the concept of energy security in summation and its multilateral dimensions as mentioned in the previous chapters; it is quite indicative of the fact that for Russia the idea of being an energy superpower transcends beyond just the economic aspect of it. Becoming a superior global energy trader would give Russia multiple advantages. The concept of 'energy superpower' is therefore like a foundation stone for exercising influence over various multilateral dimensions of power like economic, political, military, technology, cultural and even normative (Lo 2008: 132).

The aspect of energy has undoubtedly given Russia a greater impetus in the global platform apart from recovering Moscow's economic slowdown. Without the energy assets, Russia certainly would not have been able to exercise its influence like it did as a crucial G8 member attracting the attention of all the other leading economies of the world from the US to the European Union and Asian powers such as China and India. As already discussed in the previous chapters, Russian president Vladimir Putin is definitely the 'one-man army' behind Russia's pursuit of energy as the primary agenda in its foreign policy. Putin's special interest and matchless understanding in the energy business and the role of Gazprom is indeed what marks Russia as a rising energy superpower. Moscow's increasing role in the energy market since the coming of Putin reveals the dawning of its larger geopolitical influence which not only changed the attitude of Russia since the phase of disintegration but was also a wake-up call for other regional and global powers.

Now, this is beyond debate that Russia always wanted to fully utilise its geopolitical potential and engage in the Asia-pacific space through its energy strategy directions. In fact, just after the end of the cold war, Russia's disposition towards the Asia-Pacific region was quite evident through its larger economic agenda 'Pivot to Asia' with the presence of huge amounts of hydrocarbon reserves in the Siberian region and the Far East. Putin believed that its geopolitical position in Asia would enhance once it played the pivotal role of a reliable energy supplier in the region with the compatible phenomenon of rising prices for hydrocarbons (Ahn and Jones 2013: 107-108).

It is also important to mention here that Russian oil and gas resources and its remarkable production levels and supplies during 2003 contributed largely to the international market and is one reason why the energy demands of the newly emerging economies of Asia could be accommodated during that time. It also influenced the position of Russia in 2006 and led to its chairmanship in the G8. Russia, in fact, acquired a strong diplomatic muscle in international politics due to its significant amounts of energy assets.

Even in the regional context, Moscow has emerged as an important player in the European region and though there have been continuous attempts by the European consumers to find alternatives from the Russian resources, it has not been able to substitute anyhow. However, for a sustainable 'energy superpower' model to develop,

Moscow seeks intensely for other highly promising markets and thereby has found China and India as impressive destinations. China is definitely at a much-alleviated position than India on the grounds of geographical proximity and pipeline connectivity but it would be unjustified to disregard India's position on Russia's list of energy priorities. Apart from the many ways that the Former Soviet Union had cooperated with India to build the latter's industrial backbone in oil and gas, even after the disintegration of the USSR, India has been assisted by the Russian Federation in several ways in promoting its energy infrastructure and energy security. Since the advent of Putin as mentioned earlier, a lot of agreements on energy cooperation has been concluded between the two countries. Although geographical remoteness has indeed affected energy ties between Russia and India, they have devised cooperation in diverse ways and diverse sector of energy be it in the hydrocarbons sector or nuclear energy. Therefore, the desired groundwork for the expansion of Russian energy into the Indian markets has been successfully built through its relationship of 'Special Strategic Partnership' all these years.

5.2 ASSESSMENT OF THE FACTOR OF GEOGRAPHICAL PROXIMITY

Geographical proximity is often viewed as a prerequisite for successful energy partnerships, mostly in terms of accessibility and lying of trans-border pipelines.

Iwashita Akihiro emphasised on the importance of geographical borders and most importantly the resolution of border disputes as one of the top determinants of building a strategic partnership. Even during the cold war era in 1969, after the border clash between the Soviet Union and China, the former relied on India to deter China and Beijing found its friend in Pakistan (Akihiro 2007: 165-194). And there have also been times when Soviet's leaning was more apparent towards China like during Gorbachev era just after the withdrawal of the Soviet army from Afghanistan that he paid a historic visit to China. India's place seemed sidelined which also affected its bilateral trade with Russia dipped to an extreme low at a meagre \$3 billion mark only. By the year 1995, the bilateral trade did not exceed beyond \$2 billion which consequently led India to explore its economic relations with the US (Grare 2004: 58).

The case of 'geographical proximity' and resolution of border disputes as advocated by Iwashita Akihiro, it is important that both Russia-China axis and China-India axis is strong enough. Moreover, as Russia and India do not share a border it needs some special element to balance its equation with China. Considering border politics is an influential factor, it is urgent for India and China to improve their relations and resolve border conflicts for their own interests (Akihiro 2007: 165-194).

Discussions for a transnational pipeline from Russia to India like the IRC pipeline project have been contemplated but the implementation part has been difficult. The proposed path of the pipeline becomes geographically convoluted making it a very expensive and tricky on security grounds. Ponderings for energy supplies from Russia to India via a pipeline for the first time were tabled in a higher official level in October 2013 during a meeting between Russian President Putin and then Indian Prime Minister Manmohan Singh leading to the establishment of Russian-Indian Joint Working Group to commence a feasibility study for construction of the much anticipated hydrocarbon pipeline connecting Moscow and New Delhi. As Manish Vaid from ORF remarked,

A few strategies for transporting natural gas to India are being studied, including the route through the Chinese Xinjiang Uyghur Autonomous Region, swapping gas supplies to Iran, as well as joining the TAPI project.... (Sanzhiev 2015)

Although the economic aspect of the construction of such a pipeline is a big determinant in such a difficult terrain like the Himalayas, it has to be borne in mind that there are still existing pipelines in tough geographical territories like the Trans-Alaska Pipeline which covers a distance of 1,200 kilometres. So sometimes it is more about the political will of a state to strike a deal than any other pressing issue. In fact, the successful Vankor deal according to the Russian newspaper Rossiyskaya Gazeta lays the roadmap for construction of pipelines. It said-

.....Indian companies create their own resource base in Russia, the question will arise as to the best method of delivery of energy resources to the Indian subcontinent. In this case, a pipeline may be the most convenient and cheapest way to go (Sanzhiev 2015).

Hence the groundwork for the building of such a pipeline has already been under consideration which will not only enhance the economic perspectives of it but also boost the political significance of this trilateral engagement (Sanzhiev 2015).

During the 14th India-Russia Annual Summit, the two sides expressed satisfaction on the record level of bilateral trade that reached US\$ 11 billion in 2012. To this effect, both the sides acknowledged the significant potential for cooperation the oil and gas sector apart from other sectors like infrastructure and mining etc. Some of the statements made during the 14th Annual Summit on the importance of energy cooperation are as follows-

The sides noted the importance of cooperation in order to organize long-term supplies of hydrocarbons to India from Russia, conducive to strengthening India's energy security and diversification of energy exports from Russia through LNG supplies to India. The sides expressed satisfaction with the dynamic development of cooperation between JSC Gazprom and Indian companies to organize long term supplies of LNG to India from the Gazprom Group portfolio.

Both sides also agreed to explore the possibilities of direct transportation of hydrocarbons from Russia to India through the land route. The sides agreed to set up a Joint Study Group in this regard.

The Indian side expressed OVL's interest in participating along with Russian companies in exploration for hydrocarbons in the Arctic region (Joint Statement on 14th India-Russia Annual Summit, Ministry of External Affairs, Government of India 2013)

However, a Russian analyst, Yushkov found the option of India being a strong destination for energy exports to be at par with China as problematic and unrealistic. Basically in terms of laying a gas or oil pipeline is not a solution for reasons like huge distance or enormous transportation costs but the existence of consistent hassles of transit states. With India, Russia again runs the risk of negotiating with various transit countries even if it finds out a convenient route. For instance, if a route is ascertained through Central Asia with whom India has good ties, the security of a pipeline will depend on Kazakhstan, Uzbekistan and Turkmenistan. Turkmenistan will certainly have problems with Russia to lay a Russian pipeline over its territory as the former is also a competitor

in this field and looks forward to supplying Turkmen gas in the future to India from projects like TAPI (Yushkov 2016).

However, Sudhir Vasudeva, the Chairman and Managing Director India's ONGC in 2013 had a more positive response to India-Russia energy ties on grounds of geographical remoteness. In his words-

Energy security doesn't mean you have to physically bring in oil and gas. You can sell your share and get money or you can swap this oil and get something nearby. But, at least you have the resources (Chakraborty and Sundria 2016).

Apart from the developments made by Indian state-run oil and gas companies, the scene in the private sector of oil and gas has also evidently tried to keep up with engaging fiercely with Russian energy companies. As discussed in the previous chapters, agreements signed between Rosneft and India's Essar Oil Limited for the commencement of crude oil shipments will be supplying approximately 10 million tonnes a year to Essar Oil Limited's Vadinar refinery located in Western India. Such effective designs have also opened avenues for ONGC to make long-term oil supply agreements with Russia's Rosneft as an emailed statement released by the Indian company suggests. India has also firmed its foothold in the supply of Russian Sokol crude produced in the Sakhalin region in the open market via tenders. These positive developments has to a considerable extent defeated the idea of geographical proximity being the best factor in realising successful energy ties between two states. As N.K. Verma, the managing director of ONGC rightly puts,

Freight is the only difference because of the longer travel....But Indian companies are bringing crude from Venezuela, Mexico and Colombia, and Russia is equally distant. It's all economics. The crude composition will depend on refinery compatibility (Chakraborty and Sundria 2016).

Moreover, Annual Summits and Joint Statements are crucial attempts undertaken by both the countries to overcome certain challenges and facilitate smoother bilateral relations. The Joint Statement between the Russian Federation and the Republic of India of

December 2015 emphasised on the importance of huge and ambitious investment proposals to encourage the oil and gas sector. In this context, emphasis was put on the use of the International North-South Transport Corridor (INSTC) for the easy movement of goods (Joint Statement, Ministry of External Affairs, Government of India, 2015). This corridor is an instance of finding effective solutions for overcoming the barriers of distance through political commitments.

Another argument is that evidently India's economic and trade relations with the European Union or the US has been impressive and India's geographical distance with Russia has in no way been an impediment to the outstanding defence ties that both the states share. However, surely does not mean that friendly borders are not important as in a regional context a good neighbourhood is crucial for trans-border trade. India's geographical proximity with Pakistan would have been a lot more fruitful in the absence of conflicts and Pakistan would have been a good transit means for all the possible pipeline projects that are on the card.

5.3 RUSSIA AS A POTENTIAL 'ENERGY SUPERPOWER': AN ASSESSMENT

A problem in understanding 'energy' as a sole determinant for attaining of a superpower status by a state is it's pitting off against the element of 'military'. This binary structure brings out more concerns than simplifying whether energy alone would suffice for a state in its run towards being a superpower. If so, then energy-rich countries like Saudi Arabia which is a top producer of oil would very well be in the league. However, the case is not so. So the question arises as to what is it then that specifies Russia's quest for being a superpower. The question is whether Russia's emergence as an 'energy superpower' limit its capabilities only in the field of energy security or whether it is accommodating enough to let energy be used as an effective tool for other security and foreign policy related interests. As far as the concept of a global 'superpower' is concerned the understanding of the usage of the term is imperative. During the bipolar world order, 'military might' or escalation of weapons and arsenal was one factor apart from the ideological vehemence that decided the credibility of the US and the USSR to ensure a superpower status. Now,

the ideological element has faded away and the element of military strength has gradually been replaced by energy power as it is ardent for each and every state to be secured energy wise for it is the basis of agriculture, industrialisation, security, domestic needs, transportation, communication and what not. Hence the pitting of military might versus energy might not sound logical in various cases. For one reason while military might could be compartmentalised in isolation, the effect of energy has become much broader and extensive in today's world. There is certainly an argument in favour of any energy exporting state where energy could very well be used as an instrument of national interest. Like, for some analysts, Moscow has exceptional potential to be a 'superpower' with massive energy reserves and its stock of military arsenal which even after the dissolution of Soviet Union is a largely convincing asset. A comparative analysis could be made for the same reason as to why any Middle Eastern energy power could even after the 1973 oil embargo did not have the necessary penchant for claiming a superpower status although it did prove to the world how significant is its position in a world with dire energy needs. This was because countries like Kuwait or Saudi Arabia in spite of being affluent energy producers and exporters depends on a large extent on other states for ensuring their military security; a case not identical to Russia. The credibility of Russia as a rising energy superpower, therefore, lies also in its huge military capability as an expert in military and nuclear know-how and its extensive presence in the international market as a premier arms seller (Rutland 2008: 203-210).

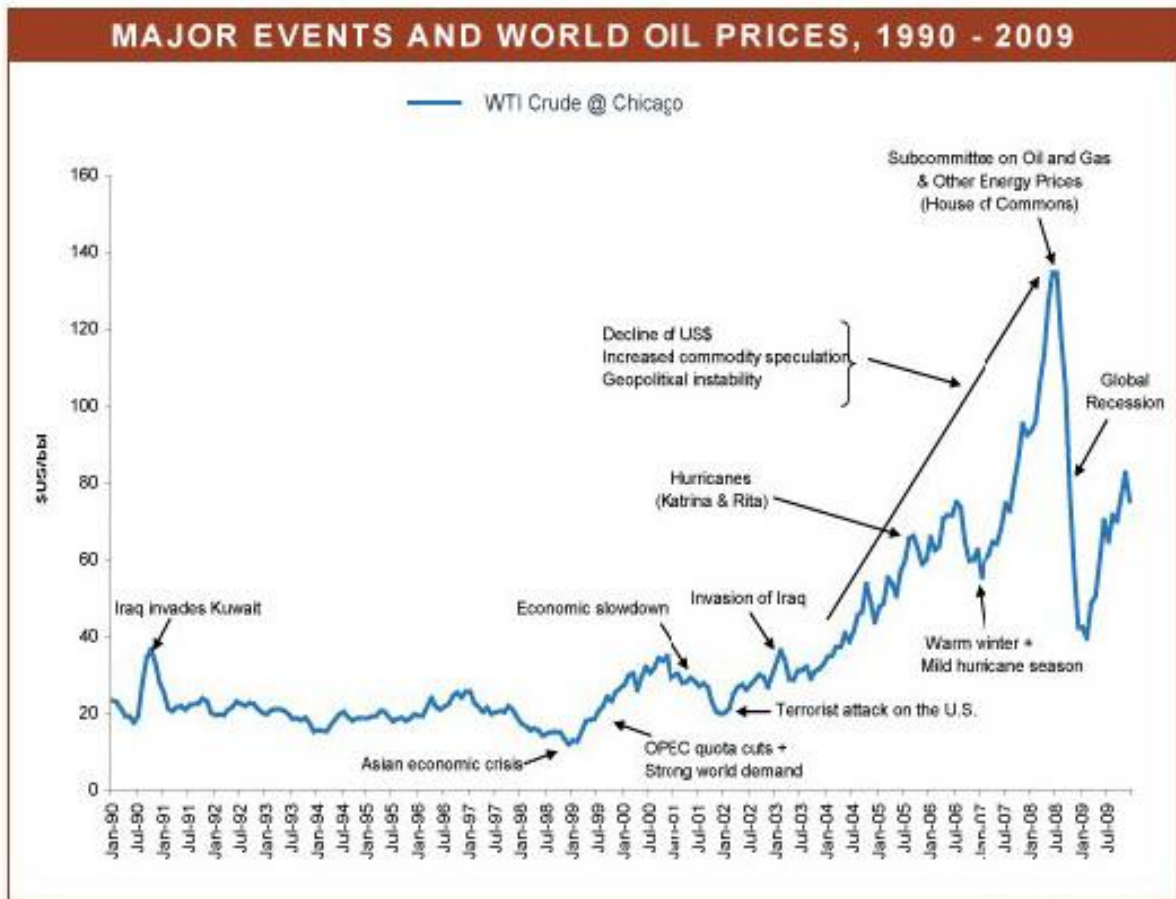
So in terms of finding a country that has all the prerequisites to become a superpower or energy superpower in today's time, Russia seems to be the only one at the moment to rationally match the required statistics. Another very striking feature is that Russia is one of the permanent members of the United Nations Security Council which in every way enhances Moscow's voice on the international stage. And in this relation, the other aspects of Russia's roadmap towards playing a greater role in the Asian continent follows in the form of various security and economic forums that have augmented Russia's relations with the rising Asian markets apart from one-to-one or bilateral engagements.

Bob Hormats, the Vice Chair of Goldman Sachs International in an interview on 'Russia's Future: From Military Superpower' speaks volume on the pattern of Soviet-style economics and how there always existed a 'great Russian nationalistic feeling'

which was the key force behind the exertion of an approach that integrated a network of neighbouring states into the Soviet Socialist Republic. This gave Russia a sense of greatness which it has constantly tried to retain by expressing its presence in the larger post-Soviet space through concepts such as ‘sphere of influence’, or collective security organizations like the CSTO, economic organizations like the EEU, EEC etc. Not only that, Russia has moved closer to Asian states also and although the ‘Pivot to Asia’ strategy is a new one in terms of institutional configuration yet Moscow’s presence in the Asian continent has been a fact much before that. Many argue that Russia is a one-crop economy; energy being that key crop and energy has, in fact, led Russia to revive its economy in a great way. But, it is also evident that due to the presence of a considerable amount of well-educated people, during the financial crisis when the Russian currency got devalued, a lot of non-energy domestic companies grew and encouraged new ways of investments and entrepreneurial opportunities. This also led to the coming in of huge investment prospects as well that played a role in bringing the Russian economy right on track (Future in Review 2007). Igor Yushkov of National Security Energy Fund states positively about the contribution of non-energy sectors in the Russian budget. According to him although nearly 50 percent of the Russian budget is dependent on energy, Russia has been one of the biggest exporters of agricultural products such as corn. Another prominent sector where Russia is affluent is arms and weapons, heavy machinery and engines for rockets etc (Yushkov 2016).

But another argument states that while the element of arms escalation as a factor for attaining superpower status is simple, the element of energy is too complex. The fluctuations in global energy prices do not depend solely on one energy producing country as the global energy market is quite patchy and highly competitive. The accumulation of huge amounts of energy resources alone does not justify the assertive role of a state in global affairs.

Graph 7. Fluctuations in World Oil Prices from 1990 to 2009:



Source: Kent Marketing Services, Quoted in (Varol 2013: 73)

The graph above shows the fluctuations in world oil prices in connection with major events in the world. Some of the major events that has influenced world oil prices up or down the ladder include Iraq invasion of Kuwait in 1990 after which there was a sharp decline in the world oil prices which went on roughly for a few years until further fall due to the Asian economic crisis in 1997 and higher OPEC production after which in mid 1998, OPEC curtailed its output level leading to a recovery of oil prices by the beginning of 1999. However in 2001 due to the economic slowdown and 9/11 attacks, the oil prices further plummeted. This led OPEC to go for production cuts in early 2002 with a hope of surging oil prices which did reach the range of US\$ 25 per barrel. So until 2003, the world oil prices had been rising with partial fluctuations and yet again dropped post US

invasion of Iraq in 2003. However, post-war the low oil prices only remained for a short period and it gained momentum for factors like rising world oil demands and the Hurricanes Katrina and Rita. By 2006, the world oil price reached US\$79 per barrel which was an all time high. 2008 was another significant point when due to US recession; there was a fall in petroleum demand yet again leading to a drop in oil prices to the range of US\$ 40 per barrel. Further production costs cut down by OPEC in the beginning of 2009 and the rising Asian demands for oil raised the oil prices steadily.

This essentially depicts how oil prices are not determined by one or two factors but depend on myriad influences by global events making the oil producers and exporters vulnerable and susceptible to uncontrollable external factors like the ones mentioned above and also problems like international sanctions. Due to this reason, it becomes difficult to predict the oil price sustainability as it keeps on fluctuating.

Moreover, it has to be borne in mind that the rise of the US as a superpower wasn't alone on the basis of ideology and military but it's manufacturing sector that contributed immensely in securing its economic position.

Another factor that affects Russia in the race to be an energy superpower as explained by Bob Hormats is that enough exploitation of the 'greenfields' as opposed to 'brownfields' or the 'legacy fields' have not been done. This factor challenges Russia capability and limits its potential in the full utilisation of its energy sector in the future. Moscow still exerts a lot of attention in tapping more oil and gas from the brown fields and has put very little monetary investments in developing them as these are more capital-intensive. These green fields are indeed the future of Russia's energy industry but are difficult to drill in as these are located in prima-frost or offshore and Russia has limited capability at the moment to exploit these fields on their own. For one thing, the Russians need advanced foreign technology and a lot of foreign capital. Another concern is that as Russia is increasingly nationalistic about its energy sector hence even if the involvement of foreign companies is witnessed, it tries to make a very tough negotiation with minor profit shares (Future in Review 2007).

However, this is the point where foreign companies are coming in because of the abundance of oil and gas resources which cannot be overlooked and Moscow's

diversification of energy strategy towards the Asian continent is well evident of it. China is definitely at an absolute receiving end and as discussed above Russia's nationalistic sensitivity for its energy assets calls for a keen balancing act that would let Moscow have a bargaining position vis-à-vis China. That summons for any other Asian power that could give Beijing an effective competition over Russian energy resources.

Meanwhile, Moscow has displayed its smartness in the case of the ESPO pipeline that connects Siberia and the Far East to China and Japan. In this way, Russia avoided the monopoly of China as the sole buyer for its Eastern energy resources and as such also reserved an amount of leverage and flexibility for itself. The situation globally also seems to be in favour of Russia as the oil productions of Iran is slipping down and Middle Eastern exporters are both undergoing political and security disturbances and also not very savory trading partners which get affected as with energy comes trade putting the European and non-European consumers in a dilemma, China has shown willingness to buy Russian oil and gas owing its geographical nearness.

However, among Russian analysts, the idea of Russia as a potential energy superpower is like a fantasy. Senior analyst Igor Yushkov in an interview completely dismissed the point and said that the idea of Russia as an energy superpower was initiated as a 'PR stunt' and nothing more than that (Yushkov 2016).

Another very interesting argument was given by Vladimir Yakunin, a prominent Russian public figure and former president of Russian Railways when I interviewed him in Russia. According to Yakunin, "the term 'superpower' is controversial and not democratic...." Like he said, he was fully in favour of Russia using its energy resources as a "positive factor to develop a proper international policy of the Russian Federation" but the term 'superpower' inherently meant that it is superior to the rest which was not right (Yakunin 2016). It does not make sense as Russia today advocates for a multi-polar world order and does not support the US's supremacy over the world.

5.4 RUSSIA, CHINA, INDIA AND THE ROLE OF REGIONAL ORGANISATIONS

Shanghai Cooperation Organization (SCO):

Regional cooperations are good bases for boosting cooperation among member states and for Russia, India and China; the Shanghai Cooperation Organization (SCO) is an appropriate attempt for realising many security and economic goals. The SCO is largely dominated by Russia and China and India's zeal to becoming a full member of the organisation realised in 2017. The role of SCO is vital in the energy sphere as it comprises of all the important energy producers of the Eurasian region including Russia, Kazakhstan and Turkmenistan. China has already been benefiting from SCO and accessing the Central Asian hydrocarbons resources for a long time now.

The presence of SCO facilitates security and economic cooperation at regional level. The SCO is, in fact, the one and only platform through which both Russia and China can promote their interests in the region. Apart from dealing with regional security issues, the SCO has also committed to serving as a mechanism for economic-related concerns with special relevance to the 'energy' feature. In this direction, the idea of SCO 'Energy club' is initiated to play a role like OPEC by Putin who understands that energy as a very significant element that defines the region. During a summit meeting in Beijing, 2009, he said,

Energy traditionally holds a key position on the global agenda, which prompts me to remind you of Russia's proposal to set up a permanent mechanism for dialogue on the issue, a SCO Energy Club or Forum (Varol 2013: 374).

This platform is a great opportunity for new acceding members like India and Pakistan for a greater access to the energy resources of Russia and Central Asia. India has profound chances of re-strengthening its options to extract hydrocarbon resources from the region and penetrate deeper into the Russian and Central Asian markets like never before. As already mentioned in the previous chapters the SCO Energy Club is an important dais to create a unified energy market and encourage the interaction of major oil and gas companies of the member states. According to government sources, India not

being a SCO member was the missing thrust towards the materialisation of a Russia-India proposed gas pipeline. (The Economic Times, 21 September 2014). While Russian support for the full membership of India in the SCO was always commonplace but China's approval that actually backed the move was a good sign again in the framework of this trilateral partnership.

The SCO is also a good option for Russia on falling back to the Asian economies in the backdrop of its disputes with the West and the subsequent situation of the infliction of economic sanctions on Moscow. The situation has developed an effective environment of brewing ties with the other side of the world i.e. China and India, more strongly than before. The inclusion of India and Pakistan sets out to provide a perfect ground for Moscow's involvement with the emerging South Asian markets at a time when it is more than ever appealing for Russia to engage largely with the Asian side of its Eurasian identity. The very inclusion of India into SCO has to be seen as a political move by Russia as well like China had been pushing for the inclusion of Pakistan. This also directs one's attention to a situation that with India becoming a full member of the SCO, it will come with certain preconditions with it. India's membership also accounts to see if the geographical proximity (if is one of the vital factors in cooperation between two states or regions) of Central Asia and South Asia amounts to attain all the basic security and economic goals of SCO as in the past it was perceived as Indian interests being unsuited to the interests of Eurasia.

Russian energy expert Igor Yushkov in an interview did not believe SCO to be a great platform for Russia as it is basically China's project and it will be hard for Russia or any other member for that matter to rival Beijing and that the latter will continue to pursue its economic goals in the region through this organization. He was more in support of Russia to establish relations bilaterally, sign bilateral agreements with other states which are extremely important for Moscow rather than going through an organisation which is led by Beijing (Yushkov 2016).

Therefore, it is also urgent for India to understand that the SCO works under the steering of Beijing apart from Moscow, so how far will it serve the interests of India in an organisation of this sort without making New Delhi the second fiddle.

However, India's insistence on becoming a full member of the grouping transcends the lesser significant issues and calls for the goals of potential political stability in the region especially after the exit of the US troops from Afghanistan, which will also benefit in realising India's economic and energy-related ambitions to a large extent. Many energy pipeline projects such as CASA pipeline, TAPI, IPI etc are in line to materialise ones India's involvement in the SCO strengthens. India's huge investments in building up of the Chahabar port in Iran validate its interests to establish an energy corridor with the Eurasian region from a long time. The admission of India into the organisation have also been seen as an attempt by the Russian Federation to rebalance its strategic interests in Asia and more so now that it has entangled itself ones again in a direct confrontation with the US and the West over the Ukraine crisis (Stobdan 2014).

BRICS:

BRICS is another very significant multilateral platform for the states of Brazil, Russia, India, China and South Africa. The uniqueness of this grouping lies in that it is not just a regular regional grouping but covers the transcontinental essence of the emerging powers of different regions like Europe, Asia, Africa and Latin America. BRICS as a dialogue platform has also granted an alternative voice to its member states. BRICS is also very important as it accounts for-

30 percent of global land, 43 percent of global population, and 21percent of the world's GDP, 17.3 percent of global merchandise trade, 12.7 percent of global commercial services and 45 percent of world's agriculture production (BRICS Preamble).

Apart from aspects like security, promotion of peace and development and the dawn of a multi-polar world order, energy is a decisive factor in attaining the full potential of the grouping. The utility, essentiality and sustainability of energy in today's world is fundamental and if economic advancement is the core in playing a crucial role in international and geopolitics, then energy security is the only solution. As far as a multilateral dais like BRICS is considered it is interesting to note how within the grouping there exist both large energy producers like Russia and South Africa and big energy consumers like China and India. In fact, in the first BRIC summit in Yekaterinburg (June 2009), all the member states strongly supported the-

Policy of energy that diversification also included renewable energy, the security of energy transit routes, building up of new energy investments and infrastructure and also international cooperation in energy efficiency (President of Russia, Official Web Portal).

Rich and Wilson Rowe in assessing the energy aspect of BRICS tried to compare it with a possible prototype of EU which originated as the European Coal and Steel Community (ECSC) and has today outrun every other structured amalgamation of states. And for BRICS, the very structure of formation having both significant energy exporters and importers within gives a huge impetus to its potential growth. One positive indicator for BRICS is that in the case of Asia, its intra-regional trade has expanded faster than within the Asian region and BRICS is a matchless bloc as such (Melchior 2012). There have also been initiatives by the Russian President Putin for a BRICS Energy Association. In a speech in 2014, Putin said,

We propose the establishment of the BRICS Energy Association. We could create a Fuel Reserve Bank and a BRICS Energy Policy Institute under its roof.....these steps would allow us to strengthen our nations' energy security and prepare us for the creation of new instruments and new institutes to trade energy resources (Energy Live News, 16 July 2014).

A Russian presidential aide, Yuri Ushakov further revealed that Russia intended to push for advanced energy security for the BRICS member states through this proposed energy association. Ushakov suggested that for ensuring energy security with the BRICS bloc

integrated research and analysis of global hydrocarbon markets will be conducted (Russia Today 10 July 2014).

5.5 RUSSIA'S ACT OF BALANCING: ENERGY COOPERATION AND LARGER GEOPOLITICAL INTERESTS:

India's equation with Russia had been exceptionally friendly, making it a perfect element for Russia's exercise of balancing India vis-à-vis China. Russia's policy of balancing India and China and forming a strategic triangle defines Moscow's equation within the region with the two Asian states from time to time. The idea of Russia performing a role of balancing or rebalancing India and China could find its inspirational roots from the much talked about strategic triangle between the three states as a post-Cold War idea which was also discussed much widely by former Russian Premier Yevgeny Primakov (Bhattacharya 2004: 358-361). This idea was much appreciated by many because of its appeal to the rising Asian powers in a unipolar world order dominated by the US. The second rationale was the economic appeal that these three countries can launch together in a regional and international level; already showing glimpses of it to the world. The prime concern of Russia, India and China in the phases just after the cold war was largely on economic reformation than political order. Moreover, sharing distinct geographical and geopolitical space, the perceived triangle enhanced new meaning to it. However, there are a lot of inter-related factors that set up the ground for such a triangle which will be discussed in a later section of the chapter.

It is also important to understand that the energy deals between Russia and India cannot be studied in isolation but it is interesting to note as to how it has just paved a more comfortable way for larger defence ties as well. India's strategic presence in the Indian Ocean region is too substantial to overlook. So Russia's attempts in rebalancing China and India are not a mere economic game but have larger geopolitical overtones as well. Aiding India's defence regime is as important for Moscow's strategic interests in Asia as it is for New Delhi. And as trade relations between India and Russia hasn't still caught up with the pace that Russia has with China; the special strategic partnership between Russia and India does demand of consolidation on areas where the two countries have been

already working on, that is, defence and energy. And certainly, a lot of developments in forms of both agreements and real projects can be seen in hydrocarbons and nuclear energy sectors. And the deals, announcements and overseas stakes are an answer to the question of geographical remoteness.

Additional to economic factors, the demographic aspect of India is also contributing to becoming a more affluent market than China. India's population as against the ageing Chinese population is younger. One of the significant differences in the growing economies of China and India is the very nature of it. As Chinese market is thoroughly driven towards manufacturing, which is an energy driven economy, Indian markets have traditionally been service industries with a much smaller manufacturing base. But there have been active attempts in growing a larger hub as a manufacturing base through 'Make in India' initiative.

Attempts in re-balancing China and India:

The tactic of 'balancing' in foreign policy has been used by Russia a lot which is evident from the changing foreign policy orientations from time to time from 'Atlanticist' position to 'Eurasianism' to 'Pragmatism'. The Eurasianist perspective was the one that advanced its connections with the Asian countries more vividly. It was also an attempt by Moscow to encourage its Eurasian neighbours to not rely on the West. This policy of balancing by Russia between the West and Asia became seemingly evident earlier in 1996 when Boris Yeltsin on the suggestions of Primakov initiated the 'Russo-Chinese Strategic Partnership'. This was a big counterbalance measure against the US as later on, there followed a string of joint statements on advocating of a 'multi-polar' world order as the need of the hour.

Actually, in the Russia-China-India triangle, the factor of complicated relations between India and China brings forth a nuanced understanding of the entire strategic triangle. The difficult relations between India and China allow Moscow to play the role of balancing in terms of keeping the energy stakes higher and competitive. This is evident from the competition Chinese and Indian oil and gas companies have been engaged all around the world including the Russian resources (Lo 2008b: 133) if it is over-dependent on the Chinese market. Therefore, India on the table means Russia can sustain its Asia policy

without depending on just the Chinese market. This also explains the pattern in which Russia exerts its energy security plans by summoning, “state and private entities to exert pressure on regional states to ease Russia’s access to international markets and facilitate the realization of the export potential of Russian energy” (Stulberg 2007: 98).

- **Balancing through ‘Strategic Partnerships’:** China’s acceptance of Moscow’s proposal of ‘strategic partnership’ was not immediate as Beijing was much undecided about the meaning of ‘strategic ‘partnership’ and it did not want to get into any ‘alliance’. Hence after getting into a strategic partnership with Russia, China quickly declared strategic partnership with the US in 1997. So, when the new President, Vladimir Putin came to power, he chose to visit India as his first official foreign visit in October 2000 and additionally Moscow declared strategic partnership with India. India and Russia also came a lot closer and constantly kept on revising its strategic partnership to special levels. A reaction to this came from Beijing when it displayed its desire for its energy demands to be fulfilled by close cooperation with Russia and consequently during a meeting between Mikhail Kasiianov, the then Prime Minister of Russia and Zhu Rongji, the then Premier of China in 2001 set grounds for a treaty for facilitating a full cooperation for the construction of a pipeline through Siberia and the Far East. Hence the balancing act of Russia had worked in its favour in the context of energy ties.

The major breakthrough in relations between Russia and China, however, came about after the coming of the Chinese President, Hu Jintao in 2003. This time around the Chinese President made his first official foreign visit to Moscow that clearly echoed a friendly change in its attitude towards Moscow. The credit also goes to a variety of internal and external factors like presence of US army in Central Asia, the US occupation of Iraq among others. Therefore the situation with China changed tremendously and one could see Russia and China participating in joint military exercises by 2005. The Russo-Chinese partnership grew leaps and bounds. On the economic front, the trade volume between Russia and China reached \$25.2 billion in 2005. This eventually put forward the specific idea of building up of the strategic triangle between Russia, China and India

advanced in the 1990s. It seemed like Primakov's concept of Russia-India-China (RIC) strategic triangle was coming to life (Akihiro 2007b: 165-194).

- **Balancing through deals:** Firstly, Chinese presence in the Yamal LNG is evident and discussed in the previous chapter. The interesting thing to note is that Russia had also offered to India in 2013 a 9 percent stake in Phase I of Yamal LNG project worth \$27 billion. The Indian consortium included Petronet LNG, IOC and ONGC Videsh Ltd. And, further, the 9 percent stake was much smaller than the one offered to CNPC i.e. 20 percent. The Indian consortium was hoping for some 15 percent. So the Indian consortium found it as a less attractive offer and backed off then. However, insistence to bringing in Indian players along with the Chinese has brought news for India again for the Phase II of the Yamal LNG project. The company has offered stakes to Indian companies for the second phase. The hitch also lies between Indian companies OVL and Petronet as OVL was interested in getting a part of the upstream part of the project and Petronet was keen on offtake LNG. Russia hopes Petronet to buy at least 5 million tonnes of LNG from the project (The Economic Times, 10 July 2016).

Secondly, The Vankorneft deal that India got confirmation of is a big evidence of Russia trying to make a strong footing into the Asian subcontinent. In spite of the growing affinity between Russia and China in the backdrop of several international and economic pressures on Moscow, it is also true that Moscow has inherent issues with Beijing and the Vankor and Taas Yuriakh assets are the leading examples to explain this. India and China's competition for overseas energy assets have been a major story on the energy front. Chinese energy firms started having problems with Rosneft in 2013 on issues of debts and pricing. China's leading energy firm CNPC and some other firms had lent Rosneft with tens of billions after the acquisition of TNK-B. Rosneft had offered China stakes in both Vankor (Russia's second largest field accounting for 4, 21,000 bpd) and Taas-Yuriakh (to account for 100,000 bpd by 2017). While CNPC and other Chinese negotiators caught up in an obstinate position on pricing, evaluating more risks than benefits and failed to reach an agreement in time; Indian energy major

ONGC which was also competing for the same assets caught up and succeeded in acquiring 15 percent stakes in Vankor from Rosneft. Additionally, another 11 percent of Vankor was sold to ONGC and a consortium of Oil India Limited, Indian Oil Corporation and Bharat PetroResources Ltd. acquired around 23.9 percent. This is a huge success for Indian companies to penetrate into the rich Russian energy blocks as now it has a massive 49.9 percent share in the Vankor project for an amount of \$4.1 billion. Similarly, in the Taas-Yuriakh project, the same three consortia of Oil India Limited, Indian Oil Corporation and Bharat PetroResources bought a 29.9 percent stake for \$1.3 billion (Trickett 2016).

The 17th Indo-Russia Annual Summit held on October 2016 drew a benchmark for energy cooperation between Russia and India as it constituted the metaphorical 'Energy Bridge'. In this context, the leaders of India and Russia congratulated each other on the progress made by them since the previous summit. Indian oil companies' successful acquisition of 'Vankorneft' and 'Taas-Yuryakh Neftegazodobycha' was duly appreciated. And the Russian side expressed its interest to welcome more and more Indian companies and investments for other joint projects like offshore-Arctic fields (Joint Statement of the 17th Indo-Russia Annual Summit, Ministry of External Affairs, Government of India, 2016).

Thirdly, similar developments have also been seen in the gas sector. The CEO of Gazprom, Alexei Miller and Managing Director of Engineers India Ltd, Sanjay Gupta had signed a MOU that echoes the interests of both the countries interests to jointly study the feasibility of setting up a pipeline for gas deliveries from Russia to India. This pipeline would apparently be the most costly pipeline and have been estimated to stand at a cost of US\$ 25 billion and cover about 4500 to 6000 kilometres depending on the selection of the route. The MOU that was signed in the presence of both the heads of the governments of Russia and India on the sidelines of the 8th BRICS Summit also called in for considering the role of OVL and GAIL India Ltd and Petronet LNG Ltd for the feasibility study (Mohanty 2016). The first meeting of a Joint Study Group for studying the

possibility of hydrocarbon pipeline system connecting both the countries was held on 6 November 2015 in Moscow. This Joint Study Group was a part of the larger Programme on Enhanced Cooperation in the Oil and Gas sphere that was inked the year before on December 2014 (Joint Statement, Ministry of External Affairs, Government of India, 2015). And certainly as already discussed in the previous chapters, India is eager to include natural gas in its energy consumption mix as a part of its climate change plans. Hence in its data of hydrocarbons consumption, India has set the target to double the share of gas from 7 percent to 15 percent (Prasad 2016).

Fourthly, one of the main uses of oil for India is the growing consumption of motor fuel. With the escalating population and mainly the shift of people from villages to towns and cities, the consumption of motor vehicles has increased tremendously. As estimated by the International Energy Agency data, India will become the largest market for motor fuel consumption and by 2040 the consumption levels are estimated to reach 10 million barrels per day. Short term estimates reveal the increase in consumption of petrol by 12 percent by 2017 itself (Vokresenskaya 2016). This situation demands more filling stations across the country. India's motor fuel demand finds an answer in the deal closed in 2015 between Russia's Rosneft, Dutch oil firm Trafigura and Russian fund United Capital Partners (UCP) worth \$12.9 billion with India's Essar Oil for a combined 98 percent stake in its Vadinar refinery, oil terminal and a number of filling stations. The refinery capacity is also huge with 4, 05,000 barrels per day. This step ahead cements Russia-India energy partnership further and Moscow has surely shown signs of balancing its Asia policy between two of the largest consumers (Trickett 2016).

Fifthly, Russia's inter-governmental agreement with China in 1992 that facilitated the construction of the first two blocks of the Tianwan nuclear power station was a perfect instance of the readiness that Moscow showed in terms of the potential and preparedness to assist China in building its energy infrastructure (Henderson and Mitrova 2016). Another joint venture in China wants to implement an oil

refining and marketing project based in Tianjin of which CNPC holds 51 percent of controlling stakes (Rodova 2010). The interesting part to note here is the way Russia is playing a neat balance game with China and bringing in India to maintain the equilibrium. Like the case of Vankorneft that has been discussed in the chapter, where Chinese procrastination led the deal to be swept off by Indian companies from China; similarly, Rosneft has made a reciprocal purchase of 49 percent stake in India's Essar Oil Company which is a deal similar to its commitment to the Tianjin refinery in China (Interfax 16 March 2016).

Sixthly, an important feature of the Indo-Russia energy cooperation are ongoing talks regarding joint studies, feasibility studies for oil and gas pipelines, other ways of LNG imports from Russia, scrutiny of the existing investment projects of India in Russia in the oil and gas sector and possible projects in the exploration and production field are still ongoing. Might be at its own pace, but for Russia's energy security plans in terms of effective supplies to India, it is not that New Delhi is out of Russia's agenda. This is evident on how the Indian companies are drawn into buying assets of the ESPO pipeline asserting New Delhi's willingness to ensure energy security by buying assets abroad.

Hence such deals and President Putin's highly successful visits to India and signing of important energy agreements and improved defence deals with New Delhi is a clear indication to Beijing that it sure has a privileged position in Russia's 'Pivot to Asia' but not necessarily the only player. India is also garnering a special role in a slow but steady way (Reuters 25 Dec 2015). If geographical proximity alone meant a successful partnership in the domain of energy, then Moscow seems to have lost on grounds of both oil and gas for a lucrative neighbour like China. Russia during its heydays with European customers failed to cater to Chinese energy demands and lost to Kazakhstan in the oil pipeline and Turkmenistan in the gas pipeline. Such evidences are not only significant in terms of India's growing presence in Russia's energy sector but also indicate towards two specific trends. Firstly, as mostly identified by Western scholars, it has often been perceived that Kremlin is rather conservative in letting its strategic oil and gas upstream open for foreign companies, but the ever increasing Indian and Chinese presence proves

the story otherwise. In fact, one of the highlights of the 17th Indo-Russia Annual Summit was the importance of the presence of Indian companies in Russia's upstream oil and gas projects. JSC Zarubezhneft showed special interest to cooperate with Indian companies (Joint Statement, Ministry of External Affairs, Government of India, 2015).

Secondly, India's active participation in these projects explains how even Moscow plays hardball with Beijing when the need be. It is important for the sustenance of Russian interests in the wider Asian market that it also doesn't go solo in its Pivot to Asia policy purely attending to just Chinese demands.

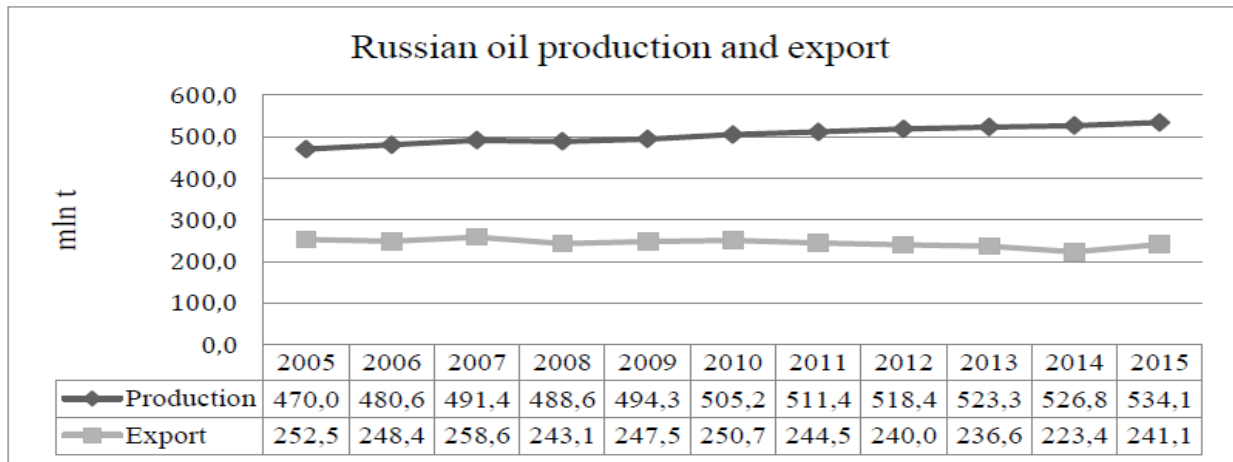
5.6 WESTERN SANCTIONS ON RUSSIA'S ENERGY SECTOR: IMPLICATIONS AND RESPONSES

An anticipated project of India with Russia was the Vladivostok LNG project but it got postponed on the account of the project being frozen for the moment. It was reported in 2012 that GAIL India Ltd. was interested in buying stakes worth about 10 million tonnes in Russia's Vladivostok LNG plant on the Pacific Coast. GAIL was also attempting towards importing natural gas from the plant that was to commence from 2017. To this effect, long term contracts were also signed to sell LNG between Gazprom's Marketing and Trading Singapore in 2011. The LNG sales were expected to be as much as 7.5 million tonnes per year of Petronet LNG, GAIL and Gujarat State Petroleum Corp. (Natural Gas Asia, 2012) Chief Executive confirms the Vladivostok project to be not one in its priority list at present. Russia's Asia agenda is to expand sales in Asia but it seems Moscow is eager to consolidate its position with its priority consumer in the Asian side i.e. China (Radnedge, 2015).

The figure in the next page indicates Russian oil production and export before and after the Western sanctions on the Russian oil sector. The sanctions had not affected the production levels in the existing oil fields; in fact it has increased since the sanctions. In order to maintain their market share, the Russian companies increased their production and exports level. As can be seen in the graph, the Russian oil production in 2015 is around 10 percent more than 2014 levels and similar trends sustained in 2016 as well.

(Mäe, 2016) So even if the production growth levels are still very modest but the fact remains that it is still showing growth, mostly due to the productions in smaller and medium-sized oil fields and smaller oil companies.

Graph 8: Russian oil production and export during sanctions.



Source: Impact of sanctions on the Russian oil sector, K ulalisautor: *Andres M ae*, page: 4

Table 8: Russian Oil and Condensate Production by Company

	2015	2016	% change
Rosneft	3800	3799	0%
LUKOIL	1721	1662	-3%
SurgutNG	1237	1239	0%
Gazprom Neft	689	757	10%
Tatneft	547	575	5%
Slavneft	311	300	-3%
Bashneft	400	428	7%
Russneft	148	140	-5%
Gazprom	341	348	2%
Novatek	95	161	70%
Other	1435	1556	8%
Russia Total	10725	10965	2%

Source: CDU TEK, Interfax

The figure above shows the trend in oil production during the sanctions phase, i.e.2015 and 2016. It can be understood that while larger energy players like Lukoil and Rosneft

etc have shown a decline of oil output, bigger growths were delivered mostly by smaller players such as GazpromNeft, Bashneft etc. or the subsidiaries of the bigger companies.

The problem however with the sanctions on Russian economy is mainly due to technological sanctions as it severely limited the access of Russian oil companies to western technology, import of equipment and foreign loans. This has resulted in challenges for the exploration of deep sea and Arctic oil deposits as most of the Western companies like ExxonMobil and Total had to suspend its activities. However, subsidiaries of Western companies in Russia like Schlumberger and Baker Hughes are still continuing to work as these do not come under the sanctions regime. Similarly, companies like GazpromNeft and Lukoil have been independently carrying on with its activities as it holds tremendous expertise in horizontal drilling and shale fractioning. This scenario of sanctions has increased Russia's inclination towards China and India. Some of the equipment and spare parts were imported from Beijing and companies like Novatek also applied for Chinese loans. Further Rosneft was also looking for Chinese and Indian investors in its greenfield projects (Mäe 2016: 1-4). As already discussed before, this also resulted in India's acquisition of stakes in Vankor and Taas-Yuriakh.

5.7 RUSSIA-INDIA-CHINA STRATEGIC TRIANGLE (RIC):

The significance of Russia-India-China Trilateral (RIC) lies in its convergence of geography, foreign policy outlook, economic interdependence and a commitment to the idea of a multi-polar world order and multilateralism. The idea of RIC was conceived just after the end of cold war and as such could be understood as a pioneer for organisations such as BRICS or SCO. The RIC strategic triangle has been probably one of the most underrated discourses in the changing dimensions of international politics. The finest instance of the merit of this strategic triangle lies also in that despite the economic slowdown during 2008, these were the countries that were least affected and still continued having decent economic growth rates with only marginal slowdown. Primakov who actually initiated this idea of a strategic triangle between Russia, China and India observed how these three states have more similarities than differences in terms of

potentialities and aspirations and providing an alternative to general discourse of world politics which was US-centric. The RIC works in various other sub-forums like RIC Trilateral Experts Meeting on Disaster Management, Trilateral Academic Scholars' Dialogue and Trilateral Business Forum (Mahapatra 2013).

In fact, India and China have been having a consistent relation with Russia and it has been observed that there is a 'reliability element' prevalent to fall back on each other at a time of any economic or political crossroads. There have been remarkable series of significant bilateral agreements and summits between Russia, India and China in 2014 following the long disturbances with Ukraine, the US and the West and hence there has been a fundamental continuity of dialogue and cooperation whether in a 'one to one' platform or through multilateral forums among these three states in spite of various economic, political or geographical challenges. The latest agreements on energy cooperation between Russia and China reflects the former's bent towards its Eastern neighbours, improvement of ties with its Asian powers and a realization of its dream of 'Pivot to Asia' to start with. Many see these developments as a 'win-win' strategy. The type of energy deals that came through between Russia and China in 2014 has already been discussed. However, it is important to observe the strategic significance of such developments and how it has set a stage for drastic policy changes.

Such positive developments work in a chain reaction and several other probable projects like Silk Road Economic Belt through Eurasia and the 21st Century Maritime Silk Road have come about as such. China's interest in investing in Asian infrastructural sector leading to the creation of a complex network of high-speed railways, ports and pipelines, optical fibre cables linking Chinese cities to its immediate neighbourhood. Russia's Pivot to Asia with increasing cooperation with China and other Asian powers in various sectors including defence, trade, energy etc can be seen as the realisation of its long-term strategy to deliberately engage with the emerging Asian side leaving aside its sole dependence on Europe on one hand and also to challenge the US' attempts play a defining role in the Asia-Pacific. However, from the Chinese perspective, of course, there are many intertwining strings in this game of counterbalancing the US. From the economic viewpoint, it would not be that transparent for China to inflict direct tension with the US on the grounds of the economic interdependence that China shares with Washington.

Post-cold war phase is different with the absence of ideological confrontation and bloc politics and is much complex and Beijing's relation with the US is valued because of such inter-related and geopolitical tensions that are engulfing the continent like the future of Afghanistan after the withdrawal of the US troops, Islamic terrorism, Iran's nuclear issue and the agreements on global warming etc (Zanitti 2015).

However, China's commitment to a multi-polar world order and the idea of 'Asia Rising' is apparent as against the stance of a unipolar one as preferred by the US. China apparently rejects the concept of G2.¹¹ The Chinese Prime Minister Wen Jiabao at a Sino-European Union summit in Prague in 2009 called it off expressing it as, "it is totally ungrounded and wrong to talk about the dominance of two countries in international affairs" (Junbo, Asia Times Online, 29 May 2009).

It is true that the claims of 'historical bonding' between Russia and India have been sometimes over-emphasised as the level of economic trade is very minimal. It is still doubtful that whether optimal levels of cooperation have yet been reached or not. Moreover, though Russia has been traditionally the largest defence partner for India, the latter's signs of looking out for other defence partners to have the potential to disturb the Indo-Russia equation in the defence sector. India's place in Russia's Pivot to Asia has its significance in its long-term partnership and historical bonding as already been explained. However, defence and energy are two sectors where Russia and India have been significantly engaging and will be continuing to do so. Natural gas is one sector where much focus has been entrusted upon in recent years considering India's need to diversify from other conventional sources like coal and Russia's need to find profitable markets in the Asian continent. However, unlike China, India has a lot to improve especially in the infrastructural domain.

Also, unlike how the Western sanctions on Russia accelerated its economic and energy engagements with Beijing; there is a chance that the situation for the Indian companies like ONGC, GAIL and Bharat Petroleum (BP) becomes slightly counterproductive. For instance, ONGC's shale oil drilling in Bazhenov, Siberia could be delayed as sanctions

¹¹ G2 is a concept given by the American academic circles in 2006 and again introduced by Zbigniew Brzezinski (international relations specialist and advisor to former US President Jimmy Carter), G2 stands for the group of the US and China that would put both the states in the forefront of international politics.

against Moscow will make it difficult for Indian companies to ‘retrieve the hard-to-reach commodity in Russia’ without the assistance of Denver-based Liberty Resources to drill four wells, as observed by the Managing Director of OVL. The sanctions banned the US firms in supporting exploration and production activities in deep water Arctic offshore and shale projects in Russia. However, OVL’s Managing Director also claimed that since the project started long before the sanctions hit therefore Liberty Resources are likely to get a clearance by US authorities to resume with the shale project (Verma, Reuters, 4 November 2014).

Other negative signs of the partnership are India’s closeness with the US in the recent times and Russia’s proximity to China and Pakistan. Russia and India have been perceived as ‘time-tested’ friends and although there have been slight transformations in the ‘global political landscape’ in the recent times, Ranjan Mathai, former Foreign Secretary of India still sees India’s relationship with Moscow as ‘the most vital, most decisive’. This is evident from the response of India in the UNSC when it abstained itself from voting against Russia over the row of the 2014 Ukraine crisis. India opposed to the Western sanctions imposed on Russia over the Crimea issue. An act like this ensures how in spite of changing relations in the dynamics of world politics today, there is still something that brings India and Russia in the same boat. Under the larger contour of geopolitical interests, Russia’s ways of re-balancing India with China is quite evident in more ways than one. Russia had supported the full membership of India in the Shanghai Cooperation Organization (SCO) in the regional front. Another big gesture by Moscow is its full support for India into becoming a permanent member of the United Nations Security Council (Talukdar 2014: 1).

Also, India’s engagements with the US in the energy sector have also been growing which could be an irritant in its relationship with Russia. Recently, India’s largest state-owned gas company GAIL had signed several agreements with a couple of US companies including the US-based WGL for the purchase of 2.5 million tonnes of gas for a period of twenty years. The deal has come up in a time when there were discussions between Gazprom and GAIL for the deliveries of Russian LNG. Post-sanctions, in fact, the position of India has been two-fold. While on one hand, New Delhi has outright disapproved of the Western sanctions on Russia, its position on Crimean being a part of

Russia is not clear although it has not openly called off Moscow's stance. However, the antagonistic relation between the US and Russia has been age-old and economic sanctions are only a means for the US to exercise its political tool against the Russian economy which majorly thrives through its energy sector. As far as India is concerned, Russia has a special place in its foreign policy priorities and its business with Moscow has been a tradition, the reason why both the countries participated in the 15th Indo-Russian bilateral summit in the midst of the chaos and signed twenty agreements in the sectors of energy, technology and trade. Russia has been the backbone of India's nuclear energy domain and the agreements as such also include the construction of twelve more power plants in India with the help of Russian assistance. Along with that Russia state-owned Rosneft has agreed to send ten tonnes of oil every year to India (Zanitti 2015).

Hence, at least in the energy sector, the US can never outrun Russia at many levels- for one the US is itself one of the largest energy consumers in the world which means it has huge demands within the country itself to rather go and meet energy demands of any other country. Secondly, if geographical distance is an obstacle for Indo-Russia energy ties, it will have the same problem with the US which is located comparatively farther away. Any step by the US to pursue India, therefore, has to be purely political and suiting its own national interest.

However, it has to be understood that Russia does not want to count on India leaving China aside. Russia's plans for India in the hydrocarbon energy sector today by and large count the factor of geographical context of China by default. As already mentioned in the previous chapter about a direct hydrocarbon pipeline connecting Russia and India in the near future, this pipeline is projected to pass through the Altai Region, the Xinjiang province to the Himalayas till the northern part of India. There are two points of apprehension on the Indian side regarding the pipeline. One is the factor of high construction cost of the pipeline because it has to be set up in a highly mountainous region and secondly the China factor. India's trepidation with China is well-known and New Delhi wouldn't want to give a higher edge to Beijing in this connection. Of course, Moscow has the best chances of playing the role of a fine balance here to hang on with the Indian market by guarantying a free and uninterrupted flow to India through China as a transit station. And for the management of the construction costs of the pipeline a

trilateral joint venture has to be carved out. However, it is imperative for China to make higher degree of investments than the other two. Russia, India and China's close engagement in the regional co-operations like SCO, BRICS are crucial. Another probable and in fact largely feasible oil pipeline connection from Russia to supply to India is from Kozmino Bay through the ESPO Pipeline that supplies to China, if New Delhi and Beijing is able to work out an effective price (Talukdar 2014).

Russia's inclination towards China than India seems more evident in the present times at least on the energy front and as any analyst would see it is quite reciprocal of how China has been a success in making deep inroads into the Russian and the Caspian region for long-term oil and gas supply benefits. No doubt China has some special advantages like common border with Russia, its superior financial weight and dire energy demands and even in the context of regional forums where India could fight for its share of energy demands for Russian energy resources. Although India and China have been competing for the same resources all over the world be it in Africa or Russia, there exists a stark contrast in the approaches by both China and India which has made India suffer defeat a couple of times in the hands of Beijing. Chinese claims for energy resources come along with attractive 'pre-payment' clauses and other financial and infrastructural benefits which Indian companies lack big time. In March 2013, the CDB made an agreement to lend about US\$ 2 Billion to Russia's Rosneft. Such kind of huge financial assistance makes China an attractive market for energy exporters like Russia.

In case of India, leaving pre-payment agreements aside, even buying overseas assets have been quite limited and stood at US\$ 13.6 Billion in 2013 against Chinese overseas investment of US\$ 107 Billion in the same year (Bloomberg Report, October 2013). In every front be it in imports of hydrocarbons, energy consumption etc, the Chinese are beating India. According to estimates of The Economist Intelligence Unit, the oil and gas consumption in China in the year 2013 was two and a half times more than the consumptions made by India. The imports of hydrocarbons by China was also recorded higher than India in the same year and the consumption forecasts also suggest a similar pattern and estimates a rise in Chinese consumption by nearly 90 percent from 2011 to 2020 while in India the consumptions will rise nearly 50 percent only making China a much more attractive destination for energy exporters (The Economist, 6 February 2014).

5.8 CONCLUSION

Hence it can be seen how Russia's energy sector helped in reviving Russia of its economic slowdown and also re-emerge as an influential player. The role of Putin was exceptional in this and it was visionary of him to enhance the potential of the Russian energy market and spread its reach to the Asian market in the backdrop of its new operational challenges in the European market. Russia had to devise two kinds of balance strategies to ensure the full utilisation of its energy sector. The Asian market was a resort for Moscow's energy plans not only because of its economic concerns but it was also a strategic move to balance the presence of external factors such as the US in its backyard and its traditional European markets. And in Asia, Russia could not solely count over Beijing, so it also maintained its strategic relations with the other emerging Asian power, India. China in no doubt is definitely better placed than India because of various strengths, yet Russia continues its energy cooperation with India as much as it suits the mutual needs of both the states and in diverse ways. Russia's energy strategy in the Asia-Pacific also enhances its potential to become an energy superpower but many experts feel that although Moscow is only the best option for becoming an energy superpower, there are many bumps in the way. While other experts have mixed reviews on Russia's potential as an energy superpower and say that idea is too overrated. However, it has been well understood that the optimum utilisation of its energy sector in terms of developing the new greenfields is vital to reach its full exploration capacity.

On the balancing act that Moscow is trying to make between China and India; there have been various attempts by Russia to engage with both the Asian states in different energy projects. On one hand where Putin's first official presidential visit abroad was to India with a declaration of its type of partnership as 'strategic'; soon after that, Beijing showed its desire to closely cooperate with Russia in the energy sector resulting in the development of a pipeline connecting both the states. And since 2003, with the coming of Chinese President Hu Jintao, the Russia-China relations saw new heights. On the other hand, Russia had supported India in its nuclear tests in Pokhran when it was criticised by the West further inflicting sanctions over India, but Moscow not only kept on supporting New Delhi but also assisted India in its nuclear energy plans. Conversely, it was observed

how both India and China had lent full support to Russia at several times and recently during Russia's Ukraine crisis in 2013-14. In fact, several economic and security cooperation pacts were signed between Russia and India in December 2014. In the same year, Russia and China concluded one of the most significant gas deals in several years amounting to \$400 Billion. The gas deal seems to have both economic and strategic influence both because firstly it is long-term deal and the signing of the deal was finely timed. As far as India is concerned, the kind of energy cooperation they have has already been discussed in the previous chapter, but in spite of the spatial drawback, it is important to highlight the fact that discussions for a transnational pipeline between Russia-China-India have been on the table for a long time. And recently the feasibility of this proposed pipeline was again discussed in October 2013. This shows how Russia and India has the political will to find solutions and implement the same. Another attempt of Russia to balance its two Asian powers India and China in the energy sector is the Vankor fields where earlier Beijing had purchased stakes, now even Indian company Indian Oil Limited has managed to buy a 15 percent stake from Russia's Rosneft. Also, private company of India, Essar Oil Limited has signed an agreement for crude oil shipments from Russia. GAIL and Gazprom have also signed a 20-year agreement for LNG transfers, LNG being the new area of attraction.

Apart from one-to-one agreements, Russia, India and China has found multilateral platforms such as SCO and BRICS to closely cooperate. As China is the founding member of SCO, it already has ample advantage to explore the Central Asian resources. Russia, therefore, wanted to stabilise the Chinese position by pushing for India's full membership in the organisation. India's entry into the SCO will hopefully allow New Delhi to have greater access to the hydrocarbons resources of Russia and the Caspian Sea. This is a crucial step for India as there are also discussions for the creation of an SCO Energy Club. The position of Russia supporting India is a fine example of a strategic balance to China's predominant position. BRICS is another such attempt to bring all these states closer to each other.

CHAPTER 6

CONCLUSION

Understanding energy strategy of a country rests on a varied factors ranging from economic to political, geographic, historic and environmental. Therefore, attempting to study the trends of Russian energy strategy is interesting provided its immense reserves of oil and gas, its unique geographical location and geostrategic position and the latest developments in the ever changing and dynamic world affairs inclusive of increasing conflicts, chaos and economic slowdowns. So the larger relations among states could be understood in view of the political announcements and decision making of states about their energy plans and projects that demands of larger strategic interests.

On trying to assess Russia's position in a geographic sense, it is fascinating simply because of the colossal size of the Russian landmass- spreading through Europe and Asia and extending through eleven time zones. Moreover, with the Soviet legacy that it carries, it makes the country one of the most interesting regions to study. This is particularly what makes it interesting to see the way Russia conducts itself with the East and the West at the same time.

Russia has sought to redirect its attention towards its Asian neighbours and India and China prominently emerging as fast growing economies with huge energy demands have provided Russia with a potential energy exports destination. In this context, the bilateral energy relations between Russia and India on the basis of its historical affinity and Russia and China in geographical proximity is playing a leading role in strengthening Russia's role in the Asian continent in a more articulate way. However, Russia's role in Asia is not a new thing and it's 'pivot to Asia' policy emphasizes the importance of that role. Moscow is seen playing a considerable role in lieu of its policy of diversification from European markets as well. But, at the same time it's role goes beyond that of just an energy supplier.

Moscow's attempt in diversifying its energy exports towards the Asian market is not a delusion as many Western thinkers say. It is also an undeniable reality that the European

markets were and are still the largest consumers of Russian energy resources. But a blend of both fortunate and unfortunate factors in global affairs led Moscow in devising a full-fledged energy policy towards its Eastern neighbours, which has accelerated the natural partnership in terms of fulfilling the need for energy consumption and need of the hour. Because of constraints with the European market, problems with transit countries and limited options for emerging as a strong energy player, it has time and again faced problems of bargaining with a single large economic player like China.

With the kind of affiliation the Former Soviet Union had with the Asian region, it will probably not be incorrect to evaluate how the engagement of Russia with both China and India could have been much ahead of its times. Russia's engagement with India has been rock solid since the Soviet times and apart from the aspect of defence, it is the energy sector where Russia has left remarkable footprints. There was a pause in the energy relations just after the disintegration of the Soviet Union but in the later phase it brought a strong impulse to further the energy relations and play a significant role in ensuring India's energy security. With the Soviet dissolution and the coming of Boris Yeltsin as the first President of Russia, being fundamentally inclined to the 'Westernism' believed that the destiny of Russia depend solely with the West and at the same time pursued internal economic policies such as rapid privatization and market economy model. And the foreign policy priorities also placed European states as the main partners also because the industrial hubs of Russia like Moscow and St. Petersburg lay in the Western parts of the country and the oil and gas fields of the Soviet era geographically lie in the Western Siberian region and hence transporting of Russian gas seemed much feasible to reach the European markets via pipelines. The Russian Energy Strategy doctrine adopted during that time also reflected the significance of European and the CIS markets in the priority list and Asian region did not catch up much attention. Therefore on grounds of Russia's energy security aspirations, geographical proximity of Soviet gas fields to the European market has naturally served Russia's immediate inclination towards the West in the energy export aspect. And, even before 1991, the Urengoy-Pomary-Uzhgorod or West-Siberian Pipeline became Russia's major natural gas export pipelines to Europe that is partially owned and operated by Ukraine.

But there was another school of thought- the Eurasian approach that emerged as a diversion from the pro-Western inclination; this school advocated towards redirecting Russia's foreign policy prerogative to the Asian region as geographically a massive part of Russia falls in the Asian continent. It was in 1993 during the Yeltsin administration that for the first time India featured in Russia's foreign policy by the signing of the Treaty of Friendship and Cooperation and triggered some defence deals but energy strategy of Russia was still largely focused towards the European and the CIS markets. Yamal-Europe pipeline was a result of this commitment and the planning for the pipeline started in 1992 with the effect of intergovernmental agreements between Russia, Belarus, and Poland and finally commissioned in 1997 to reach Russian gas to Germany via the Belarus-Polish corridor.

However, in the domestic front, Yeltsin administration found itself gripped in structural adjustments of the Russian energy sector including changes in the taxation policies and the controversial 'loans for share' that eventually led the precious energy assets of the state to go into the hands of Russian oligarchs. The Russian oligarchs were in a position to even manipulate the state's foreign policy and as their pro-West stance made it apparent that the Chechnya issue was a spark of the Western influence.

Also, Russia's 'Near abroad' policy reflecting Moscow's willingness to have a prepotency over the Central Asian and Caucasian region led to its energy interests more focused to the West and the post-Soviet region. In fact, this fervor for Russian presence in the extended region was accomplished through energy mechanisms only that are through Russian control of energy routes and pipelines. The Central Asian states were also not repulsive to Russia's presence as the latter, though newly independent as the Central Asian states, was still much stronger security wise and capable of assisting the states to overcome the initial glitch that comes with every newly independent country. But in spite of the attempts made by Yeltsin even in devising of the 'Sphere of Influence' policy, the structural damages made to the energy industry restricted Russia to reach the full potential of its energy strategy and the role of an energy exporter. Several factors such as subsidized energy consumption of the post-Soviet states, declining production, under-investments etc limited Russia's reach.

The presence of EU has served Russia's energy security interests in a great way and still does but a couple of irritants in the form of problems with transit states, the US influence, EU's policy of diversification, economic stagnation and decreasing energy demands etc had led to Russia's difficulty in concentrating on this region.

The Ukraine factor in Russia's energy strategy sparked off within a few years after the disintegration of Soviet Union. Russia had to for the first time suspend supplies for a couple of times between the years 1992-1994, on issues of non-payment by Ukraine. There were several attempts in the form of agreements and pre-payment penalty clauses to settle the debts but there was never a proper closure to the problem. So the problem cropped up some years later repeatedly during Putin's regime as well.

The advent of Putin marked some remarkable U-turns in Russia's energy security and strategy from the experimental years of Yeltsin. Putin's well-thought out move to secure the centrality of hydrocarbon resources was instrumental in shaping the foreign policy of the country and widen the strategic outreach to realise Russia's resurgence in world politics. Hence, the chapter of the dismissal of Mikhail Khodorkovsky and Yukos was a turning point in implementing what he advocated in his doctoral thesis about the key role to be played by the state in developing the vast oil and gas assets and bringing the lucrative energy sector under state control for strategic reasons. This was also indispensable to recover Russia's vanished economic and political status in the international platform.

However, Putin's policy of state-handling of the energy sector known as 'resource nationalism' was a reactionary attempt to repair the damages incurred by the Russian state during the phase of 1990 to 1999 when GDP dropped to 45 percent and inflation rose to an average of 85 percent in 1998 resulting out of the rapid and sudden shift to neo-liberal and open market reforms. It was unique because although it diffused a blend of elements of statism, the state-control of energy resources and routes; and at the same time finding markets for Russian energy exports. Putin's reconstruction of the Russian energy industry did bring a lot of ups for the Russian economy. For one thing, the Soviet debts were paid off and secondly, the economy was stabilized. This was a time when most of the oil deliveries of Russia were majorly focused to the European customers.

However, there was an awareness about the resource depletion scenario of the West Siberian blocks and the importance of redirecting an 'Asian vector' proposition for the same.

However, it was only during the time of Putin that this Asian energy strategy was fairly highlighted and development of the 'greenfields' recognised. Thereby, Moscow called in for investments from foreign companies that opened gates for Asian players like China, Japan, India etc. For the same reason, the role of Gazprom's 'Eastern Gas Program' was initiated to bring about a structured plan to penetrate into the Asian market. So, Russia's changing energy strategy that was formulated through two important doctrines of Russia's energy strategy up to 2020 and Russia's energy strategy up to 2030 was designed to make way for heavy investments for the country's huge resource base, infrastructural and market development in the remote areas, decrease transit risks, augment economic development in the resource rich regions of Russian Far East and East Siberia, an outreach to the Asian markets as an attempt to reduce overdependence on the European market.

The three fold objectives of Russia's energy strategy for Asia was therefore the development of its own resource rich regions like the Sakhalin projects of oil and gas, the East Siberian oil fields, reaching out physically through pipelines like the ESPO and tax reliefs and reduction to promote the oil fields of East Siberia. There were two kinds of fast growing economies for Russia to look out in the Asian region- China and India and both of these had come with its own challenges.

With India the challenge was more of physical geography. The geographical distance or absence of a common border had never materialized the laying of a pipeline between Russia and India. However, historical ties between India and the Soviet Union did play a major role in the articulation of energy relations in the later years and a wide range of energy projects were taken up including OVL's share in Sakhalin I, OVL's acquisition of Imperial energy, gas supply agreements between Gazprom and GAIL, imports from Sakhalin II, Vankor and Taas-Yuriakh projects among many others. Apart from that Russia-India is also closely cooperating in the nuclear energy sector and Moscow has become the biggest contributor to India's nuclear energy development agenda. Thus, the

energy relations demonstrate a strong political will to find alternative ways to engage with the growing Indian market largely than ever. However, there are several loopholes in the partnership that gives way for other stronger players like China to barge in through the loopholes giving a hard time to India in asserting its bargaining power.

China's huge economic success and enormous growth in the last decade has been the most appealing factor for Russia's 'Pivot to Asia' policy, the very reason why most analyst prefer to call it a China-centric policy. Though historically these two countries had unsteady relations yet economic complementarities of one being the largest energy producer and another being the largest consumer in a close geographic proximity has served Russia and China well. Hence, Sino-Russian energy cooperation has grown leaps and bounds over the years, construction of the ESPO Pipeline, the \$400 billion gas deal, 'Power of Siberia' pipeline project to name a few. But there are certain pressing issues in this energy cooperation as well like the factor of trust deficit that limits China's complete access to Russia's upstream, issues regarding gas price negotiations and over-dependence of Russia over the single Chinese market.

Therefore, energy has become a definitive aspect in carving Russia's renewed ties with the Asian economies of China and India as much as it had successfully carved a niche for itself in reviving Russia's economy. The energy diversification policy of Russia is becoming a reality even if efforts might be gradual. Russia's assertive positions in Asian affairs have been a consequence of its energy strategies towards the Asian region and it has revised itself as a dominant voice and also a voice that advocates a multi polar world vision. But it is important to understand that 'energy power' although extremely relevant cannot be understood in a simpler binary calculation like that of 'military prowess'. An energy-export driven economy like Russia always runs the risk of the slightest fluctuations in world energy prices; as energy prices are affected by the ever changing dynamics of international relations, regime change, international sanctions, technological innovations, new discoveries and energy explorations, issue of security by non-state actors, market reforms, change and diversion in energy consumption mix of consumer countries among many others.

Even if the concept of ‘energy superpower’ as a potential laurel may suit Russia, it cannot be a very sustainable idea as it largely depends on retaining higher global energy prices. In fact the energy diversification policy towards Asia adopted by Moscow was an attempt to widen its outreach and sustain its energy supplier’s market potential in the backdrop of depleting brownfields¹² and dipping demands from the EU. Hence, what Moscow needs is modernizing its energy sector, infrastructural development, development of the greenfields, foreign investments and for that a sustainable relation with the rising economies of Asia. And in this regard, Moscow has effectively tried to engage both China and India apart from some other Asian economies to participate in the infrastructural projects of the Russian Far East. Influx of Chinese immigrants were already evident and to balance that Russia has revised its visa policies for the resource rich Far East and enabled visa-free entry into the Russian Far East for a few countries including India. As China’s economic muscle and geographical nearness has enabled Moscow to make physical supplies of energy resources along with certain exploration projects, similarly, Moscow has tried to engage in alternative ways with India’s oil and gas sector as well. The trade relation between Russia-China and Russia-India is surely lopsided at the moment, but that is the nature identical to a comparison between any two economies. It is largely to do with what a certain economy have to offer, so China being the ‘workshop of the world’ or the ‘manufacturing hub’ has indeed cracked the jackpot in trade ties but at the same time that does not mean that there is no sign of balancing with India. Russia essentially knows the importance of newer players in the game. As after the western sanctions, Russia’s Asia policy has accelerated, it has also been revealed that over-dependence on Beijing makes the energy market essentially buyers-centric, which curtails Moscow’s bargaining power. Hence the Indian market becomes all the more fundamental which uncovers in the form of various new energy deals and projects with New Delhi and some nuclear energy projects under India’s larger domain of becoming a manufacturing economy called ‘Make in India’.

¹²According to Schlumberger’s definition of brownfields, it is “an oil and gas accumulation that has matured to a production plateau or even progressed to a stage of declining production. Operating companies seek to extend the economic producing life of the field using cost-effective, low-risk technologies.” (Schlumberger Oilfield Glossary, 2017, website: <http://www.glossary.oilfield.slb.com/Terms/b/brownfield.aspx>)

Therefore, Russia's energy strategy has found increasing prominence in the Asian region both in terms of finding profitable markets and interested investors. The study has amply shown the significance and need for the exploitation of greenfields. So, the role of both China and India and any other Asian country is eminent for Russia's energy strategy central to the development of the energy resources in its Far East and East Siberia. The exploitation of greenfields need the technology, huge investments and future consumers and these resources will only sustain Russia's economy which is heavily depended on energy. Moscow's energy diversification strategy is substantial to not only in expanding its customer base but also in playing a greater role in geopolitics of the region. One of the problems that Moscow was facing with its European markets was 'overdependence' on a single market. Hence, although in its Asia-Policy, China is a huge determinant but it has become both important and urgent for Russia to use the strategy of rebalancing and engage more and more with other players such as India to sustain its bargaining capability.

REFERENCES

(* indicates primary source)

Aalto, Pami (2012), "Introduction: A New Approach to Russia's Energy Policy" in Pami Aalto (ed) *Russia's Energy Policies: National, Interregional and Global levels*, UK: Edward Elgar Publishing Limited.

*Address by Mikhail Gorbachev at the UN General Assembly Session (Excerpts) ," December 07, 1988, History and Public Policy Program Digital Archive, CWIHP Archive. <http://digitalarchive.wilsoncenter.org/document/116224>

Adomaitis, N. (2016), "Norway to surpass Russia as Lithuania's top gas supplier in 2016", *Reuters*, 8 February 2016, [Online: web] Accessed 19 July 2016, URL: <http://www.reuters.com/article/lithuania-gas-idUSL8N15N1UF>

Aiyar, Swaminathan SA. (2009), "Russia first, France second, US last in nuclear race", [Online: web] Accessed 14 September 2015, URL: <http://swaminomics.org/russia-first-france-second-us-last-in-nuclear-race/>

Akihiro, I (2007b), "Primakov Redux? Russia and the Strategic Triangles in Asia", in Iwashita Akihiro (ed) *Eager Eyes Fixed on Eurasia*, Sapporo: Slavic Eurasian Studies.

Al Jazeera English Youtube video (2014), *Counting the cost- Russia-China: Strategic Allies?*, video, Al Jazeera English news, viewed 25 May 2015, < <https://www.youtube.com/watch?v=MA8n4It2QKw&t=3s>>

Alhajii, AF. (2007), "What is energy security? Definitions and concepts (Part 3/5)", *Middle East Economic Survey*, 50 (45). Quoted in Cherp, A and Jewell, J. (2011), "The three perspectives on energy security: intellectual history, disciplinary roots and the potential for integration", *Current Opinion in Environmental Sustainability*, 3 (4): 202-212.

*Analytical Centre of the Government of the Russian Federation (2014), *Global and Russian Energy Outlook to 2040*, The Energy Research Institute of the Russian Academy of Sciences, Moscow. [Online: web] Accessed 24 April 2015, URL: <http://ac.gov.ru/files/publication/a/2772.pdf>

Barmin, Yury (2014), "Does Putin's visit to India complete Russia's energy pivot to Asia?", *Russia Direct* dated 16 December 2014, [Online: web] Accessed on 28 April 2016, URL: <http://www.russia-direct.org/does-putins-visit-india-complete-russiapercentE2percent80percent99s-energy-pivot-asia>

BBC Report (2008), "China and Russia sign border deal", BBC News Report dated 21 July 2008, Online [web], Accessed 30.5.2013, Url: <http://news.bbc.co.uk/2/hi/7517380.stm>

Bhattacharya, Abanti (2004), "The fallacy in the Russia-India-China triangle", *Strategic Analysis*, April-June 2004, 28 (2): 358-361.

Blank, S. (1995), "Russian Policy and Central Asian Energy, Economics and Security", *Demokratizatsiya*, 3 (2): 187-208.

Blank, Stephan (2013), "Moscow Talks Business, Beijing Answers with Geo-strategy", *China Brief*, XIII (22): 12-14.

Bocharev, D. (2006), *Russian Energy Policy during President Putin's Tenure: Trends and Strategies*, London: GMB Publishing Ltd.

Bozhilova, D. and Hashimoto T. (2010), "EU-Russia Energy Negotiations: a choice between rational self-interest and collective action", *European Security*, 19 (4): 627-642.

*BP Statistical Review of World Energy, June 2008: 24-27, [Online: web] Accessed 8 October 2014, URL: http://large.stanford.edu/publications/coal/references/docs/statistical_review_of_world_energy_full_review_2008.pdf

*_____, June 2013, [Online: web], Accessed 9 March 2015, URL: <http://www.rrojasdatabank.info/bpworld2013.pdf>

Bradshaw, M. (2008/09), "Russia's Eastern Gas Strategy", Presentation in the Dept of Geology: Global Energy Dilemmas, University of Leicester. [Online: web] Accessed 13 October 2013, URL: <http://www.biee.org/wpcms/wp-content/uploads/Russias-Eastern-Gas-Strategy-2010-Compatibility-Mode.pdf>

*BRIC Spotlight Report (2010), "Oligarchs: The first Russian Capitalists", Chicago: Thomas White International Ltd. [Online: web] Accessed 30 May 2013, URL: <https://www.thomaswhite.com/pdf/bric-spotlight-report-russia-oligarchs-may-10.pdf>

Bros, A. and Mitrova, T.A. (2016), "Yamal LNG: an economic project under political pressure", *Note de la FRS n°17/2016*, 4 August 2016, [Online: web] Accessed 4 December 2016, URL: <https://www.frstrategie.org/publications/notes/yamal-lng-an-economic-project-under-political-pressure-17-2016>

Bugajski, J. (2004), *Cold Peace: Russia's New Imperialism*, Westport: Greenwood Publishing Group, Inc.

Business Insider (2014), "The Thirsty Dragon is beating the Sleeping Elephant", *The Economist*, 6 Feb 2014, [Online: web] Accessed 19 August 2015, URL: <http://www.businessinsider.in/The-Thirsty-Dragon-Is-Beating-The-Sleeping-Elephant/articleshow/29960893.cms>

Butrin, Dmitry (2004), "China joins the battle for Sakhalin", *Kommersant Daily* dated 3 November 2004, [Online: web] Accessed 25 January 2015, URL: <http://neftegaz.ru/en/press/view/987>

Buzan, B. and Wæver, O. (2003), *Regions and Powers: The Structure of International Security*, Cambridge: Cambridge University Press.

Buzan, B. et al. (1998), *Security: A new framework for analysis*, Colorado: Lynne Rienner Publishers.

Calabrese, John (1998), "China and the Persian Gulf: Energy and Security", in *Middle East Journal* 52(3):351-366.

Cambridge House Youtube video (2014), *Best video on Russia-China gas deal you'll ever see- Marin Katusa interview*, video, Cambridge House, 2 June 2014, viewed 16 February 2015, <<https://www.youtube.com/watch?v=18TCykZNgzM>>

*Central State Archive (SUA) (1986), *Czechoslovak Translation of the Soviet Report on the Ninth Round of Soviet-Chinese Consultations in Moscow*, November 06, 1986, History and Public Policy Program Digital Archive, Prague. Included in the document reader for the international conference "China and the Warsaw Pact in the 1970-1980s" held by CWHIP and the Parallel History Project March 2004 in Beijing. [Online: web] Accessed 25 March 2015, URL: <http://digitalarchive.wilsoncenter.org/document/114813>

*_____ (SÚA) (1985), *Czechoslovak Translation of Soviet Report on the Sixth Round of Soviet-Chinese Consultations in Moscow*, May 15, 1985, History and Public Policy Program Digital Archive, Prague. Included in the document reader for the international conference "China and the Warsaw Pact in the 1970-1980s" held by CWHIP and the Parallel History Project March 2004 in Beijing. [Online: web] Accessed 25 March 2015, URL: <http://digitalarchive.wilsoncenter.org/document/114811>

Chakraborty, D. and Sundria, S. (2016), "Russia deals deepen India hold in China oil-buying backyard", *Bloomberg*, 22 March 2016, [Online: web] Accessed 27 May 2016, URL: <https://www.bloomberg.com/news/articles/2016-03-22/russian-deals-send-india-deeper-into-china-s-oil-buying-backyard>

Chaudhury, Nilova R. (2016), "India has different nuclear power equation with Russia", *Russia & India Report*, 15 November 2016, New Delhi. [Online: web] Accessed 15 January 2017, URL:

https://in.rbth.com/economics/cooperation/2016/11/15/india-has-different-nuclear-power-equation-with-russia_647857

Chenoy, A.M. (2012), "India and Russia in the Changing International Setting", *International Studies*, 47 (2-4): 435-447

Cherp, A and Jewell, J. (2011), "The three perspectives on energy security: intellectual history, disciplinary roots and the potential for integration", *Current Opinion in Environmental Sustainability*, 3 (4): 202-212.

Chester, L. (2010), "Conceptualising energy security and making explicit its polysemic nature", *Energy Policy*, 38: 887-895. Quoted in Cherp, A and Jewell, J. (2011), "The three perspectives on energy security: intellectual history, disciplinary roots and the potential for integration", *Current Opinion in Environmental Sustainability*, 3 (4): 202-212.

*China: Country Analysis Brief (2010) p.11

Choo, Jaewoo. (2006), "Energy Cooperation Problems in Northeast Asia: Unfolding the Reality", *East Asia*, 23 (3): 96, 91-106.

Chopra, VD. (2008), *Significance of Indo-Russian Relations in the 21st Century*, New Delhi: Kalpaz Publications

Chowdhury, J. (2014), "When energy starved India meets oil rich Russia", in Op-Ed RT dated 14th May 2014, Online Accessed on 21st March 2015, URL: <https://www.rt.com/op-edge/158880-energy-starved-india-russia-oil/>

*CPSU Memorandum," October 24, 1986, History and Public Policy Program Digital Archive, Stiftung Archiv der Parteien- und Massenorganisationen im Bundesarchiv, Berlin, DY30/2383, p.122 Obtained and translated by David Wolff <http://digitalarchive.wilsoncenter.org/document/117270>, Accessed 7/4/2015, CSO, Energy Statistics 2012, page 9-10

Cunningham, Nick (2015), "The Battle for China's Oil Market", *OilPrice.com*, 15 July 2015, [Online: web] Accessed 14 September 2016, URL: <http://oilprice.com/Energy/Crude-Oil/The-Battle-For-Chinas-Oil-Market.html>

*Czechoslovak Translation of Soviet Report on the Sixth Round of Soviet-Chinese Consultations in Moscow , " May 15, 1985, History and Public Policy Program Digital Archive, Central State Archives (SÚA), Prague. Included in the document reader for the international conference "China and the Warsaw Pact in the 1970-1980s" held by CWHIP and the Parallel History Project March 2004 in Beijing. <http://digitalarchive.wilsoncenter.org/document/114811>, Accessed 7/4/2015

Dadwal R Srebonti and Sinha Kr Uttam (2005), "Equity Oil and India's energy security" in *Strategic Analysis* 29 (3): 521-529

Doo, Sam (2015), "Is Power of Siberia a pipeline of the future?", *Global Risks Insights* dated 29 July 2015, [Online: web] Accessed 18 Sept 2015, URL: <http://globalriskinsights.com/2015/07/is-power-of-siberia-a-pipeline-of-the-future/>

Downs, Erica S. (2010), "Sino-Russian Energy Relations: An Uncertain Courtship", in James Bellacqua (ed) *The Future of China-Russia Relations*, Kentucky: The University Press of Kentucky.

Dunne, Tim (2007), "Liberalism", in John Baylis, Steve Smith and Patricia Owens (eds.) *The Globalization of World Politics: An Introduction to International Relations*, USA: Oxford University Press.

Dyomkin, Denis (2015), "Russia and India cement ties with energy and defence deals", *Reuters*, Moscow, 25 December 2015. [Online: web] Accessed 29 December 2015, URL: <http://in.reuters.com/article/russia-india-nuclear-putin-modi-idINKBN0U719M20151224>

Ellis, Vicky (2014), "Putin proposes an energy club for BRICS nations", *Energy Live News*, 16 July 2016, [Online: web] Accessed 24 October 2016, URL: <http://www.energylivenews.com/2014/07/16/putin-proposes-an-energy-club-for-brics-nations/>

*Energy Information Administration (2008), [Online: web] Accessed 19 May 2014, URL: www.eia.doe.gov

*ERT (2006), *Seizing the opportunity: Taking the EU-Russia relationship to the next level, An ERT view on the potential of the Common Economic Space*, European Roundtable of Industrialists, Brussels, [Online Web], Accessed on 30 April 2012, URL: https://www.ert.eu/sites/ert/files/generated/files/document/2006__seizing_the_opportunity_-_taking_the_eu_russia_relationship_to_the_next_level_0.pdf

Ferdinand, P. (2007), "Sunset, Sunrise: China and Russia Construct a New Relationship", *International Affairs*, 83 (5): 841-867.

*FICCI (2011), *India's Energy Security: Key issues impacting the Indian oil and gas sector*, Kolkata: Ernst & Young Pvt. Ltd. [Online: web] Accessed 14 September 2015.

Financial Times, 22 Nov 2013, "Russia paves way for limited liberalisation of LNG exports Indirect in The Commercial and Political logic of the Altai pipeline (Dec 2014), James Henderson, Oxford Energy Comment: 7

Fredholm, M. (2005), "The Russian Energy Strategy and Energy Policy: Pipeline Diplomacy or Mutual Dependence?" *Russian Series*, September 2005, 5 (41), Online Web, Accessed 21 March 2009, URL: <http://ippeki.com/en/pdf/R41.pdf>

Future in Review (2007), *Russia's Future: From Military Superpower to Energy Superpower*, video, Future in Review, Published on 30 November 2015, viewed 27 May 2016, <<https://www.youtube.com/watch?v=5GfwxOJ52b8>>

*G8 Summit (2006), *Global Energy Security*, G8 Summit Documents, St. Petersburg (16 July 2006) Online [web], Accessed 14 Dec 2014, URL: <http://www.g8.utoronto.ca/summit/2006stpetersburg/energy.html>

Gabuev, A. (2015), "A Soft Alliance? Russia-China relations after the Ukraine crisis", *European Council on Foreign Relations*, 126 (10): 1-9

Galpin, R., 'Struggle for Central Asian energy riches', BBC News, 2 June 2010, <http://www.bbc.co.uk/news/10131641>

*Gazprom Marketing and Trading (2012), "Gazprom to supply GAIL 2.5 million tonnes of LNG per annum for 20 years", *Gazprom Marketing and Trading*, [Online: web] Accessed 26 March 2014, URL: <http://www.gazprom-mt.com/WhatWeSay/News/Pages/Gazprom-Marketing-and-Trading-Singapore-and-Gail-sign-20-year-LNG-supply-deal.aspx>

*Gazprom news (2011), "Alexei Miller and Ajay Malhotra discuss LNG supplies to India", *Gazprom news* dated 16 November 2011, [Online: web] Accessed 2 September 2014, URL: <http://www.gazprom.com/press/news/2011/november/article123475/>

*Gazprom Official Website (2017), "Over 1,100 kilometers of Power of Siberia Gas Pipeline to be completed by late 2017", Gazprom, 8 June 2017, [Online: web] Accessed 29 June 2017, URL: <http://www.gazprom.com/press/news/2017/june/article335985/?from=mail>

*Gazprom Press Release (2007), "On working meeting between Alexander Ananikov and Sri. M.S. Srinivasan", Gazprom Official Website, 27 November 2007, [Online: web] Accessed 14 March 2014, URL: <http://www.gazprom.com/press/news/2007/november/article64001/>

*Gazprom Ukraine Facts (2014), "Infographic: Gazprom and Ukraine Gas Transit and Supply issues", dated 5 June 2014, [Online: web] Accessed 16 March 2015, URL: <http://www.gazpromukrainefacts.com/ukraine-natural-gas-facts/infographic-gazprom-and-ukraine-gas-transit-and-supply-issues>

*General Energy Council (2005), *Energised Foreign Policy: security of energy supply as a new key objective*, Advisory Council on International Affairs (December 2005), Hague.

*Global Energy Security, G8 Summit dated 16 July 2006, Information by the University of Toronto Library and the G8 Research Group at the University of Toronto (2014), Accessed on 24 Feb 2015, URL: <http://www.g8.utoronto.ca/summit/2006stpetersburg/energy.html>

Goldman, Marshall I. (2008). "5". *Petrostate: Putin, Power and the New Russia*, Oxford: Oxford University Press.

*Government of India (2000), *India Hydrocarbon Vision 2025*, Planning Commission, New Delhi.

*_____ (2010), *Annual Report 2009-2010*, Ministry of External Affairs, New Delhi. [Online: web] Accessed 6 Jan 2015, URL: www.mea.gov.in

*_____ (2011), "Indo-Russian Nuclear Cooperation in Atomic Energy", Department of Atomic Energy, New Delhi. [Online: web] Accessed 6 September 2015, URL: http://dae.nic.in/writereaddata/rsus1090_011211.pdf

*_____ (2012), *Energy Statistics 2012*, 19th Issue, Central Statistics Office, Ministry of Statistics and Programme Implementation, New Delhi.

*_____ (2013), "Joint Statement on the 14th India-Russia Annual Summit: Deepening the Strategic Partnership for Global Peace and Stability", *Ministry of External Affairs*, [Online: web] Accessed 11 September 2015, URL: <http://www.mea.gov.in/bilateral-documents.htm?dtl/22361/Joint+Statement+on+the+14th+IndiaRussia+Annual+Summit+Deepening+the+Strategic+Partnership+for+Global+Peace+and+Stability>

*_____ (2015), "Joint Statement between the Russian Federation and the Republic of India: Shared Trust New Horizons", *Ministry of External Affairs*, [Online: web] Accessed 23 April 2016, URL: http://mea.gov.in/bilateral-documents.htm?dtl/26243/Joint_Statement_between_the_Russian_Federation_and_the_Republic_of_India_Shared_Trust_New_Horizons_December_24_2015

*_____ (2016), "India-Russia Joint Statement during the Visit of President of Russia to India: Partnership for Global Peace and Stability", *Ministry of External Affairs*, [Online: web] Accessed 12 February 2017, URL: <http://www.mea.gov.in/bilateral-documents.htm?dtl/27482/IndiaRussia+Joint+Statement+during+the+Visit+of+President+of+the+Russia+to+India+Partnership+for+Global+Peace+and+Stability>

*Government of the Russian Federation (2003), *Energy Strategy of Russia up to 2020*, (approved by Government Resolution No. 1234), August 28, 2003.

*_____ (2010), *Energy Strategy for Russia: For the period up to 2030*, Ministry of Energy of the Russian Federation, Moscow

*_____ (2015), “Analytical review of the Russian-Chinese trade cooperation in 2015”, *Ministry of Economic Development of the Russian Federation*, [Online: web] Accessed 5 April 2016, URL: http://www.ved.gov.ru/exportcountries/cn/cn_ru_relations/cn_ru_trade/

Grare, Frederic (2004), “India, China, Russia and the Quest for Global Power Status: Strategic Partnership or Strategic Competition”, in Gilles Boquerat and Frederic

Gustafson, T. (2012), *Wheel of Fortune: The Battle of oil and power in Russia*. USA: Harvard University Press. Quoted in Hedlund, Stefan (2014), “Putin’s Energy Agenda: The Contradictions of Russia’s Resource Wealth”, London: Lynne Rienner Publishers, Inc. , page- 93

Helmer, John (2005), “China beats Japan in Russian pipeline race”, *Asia Times Online* dated 29 April 2005, [Online: web] Accessed 16 March 2015, URL: http://www.atimes.com/atimes/Central_Asia/GD29Ag01.html

Henderson J. (2014), “The commercial and the political logic of the Altai Pipeline”, in Oxford Energy Comment, December 2014, [Online: web] Accessed 31 March 2015 find url: <https://www.oxfordenergy.org/wpcms/wp-content/uploads/2014/12/The-Commercial-and-Political-Logic-for-the-Altai-Pipeline-GPC-4.pdf>

Henderson, J. and Mitrova T. (2016), *Energy Relations between Russia and China: Playing Chess with the Dragon*, Oxford: Oxford Institute for Energy Studies.

Henderson, J. and Pirani, S. (2104) “The Russian Gas Matrix: How Markets are Driving Change” Oxford Institute for Energy Studies, Chapter 14, in Henderson J. (2014), “The commercial and the political logic of the Altai Pipeline”, in Oxford Energy Comment, December 2014, page 8, [Online: web] Accessed 31 March 2015, URL:<https://www.oxfordenergy.org/wpcms/wp-content/uploads/2014/12/The-Commercial-and-Political-Logic-for-the-Altai-Pipeline-GPC-4.pdf>

Hille, Kathrin (2013), “Russia paves way for limited liberalization of LNG exports”, *Financial Times*, Moscow, 23 November 2013.

*Hoover Institutional Archive (1989), "Diary of Teimuraz Stepanov-Mamaladze, 1 February 1989," March, 1989, History and Public Policy Program Digital Archive, Hoover Institution Archive, Teimuraz Stepanov-Mamaladze Papers, Diary No. 8. Translated by Sergey Radchenko. [Online: web] Accessed 7 April 2015, URL: <http://digitalarchive.wilsoncenter.org/document/116508>

Hsu Jing-Yun and Soong Jenn-Jaw (2014), "Development of China-Russia relations 1949-2011", in *The Chinese Economy*, 47 (3), May-June 2014: 70-87

Hughes, J. (2006), "EU relations with Russia: Partnership or asymmetric interdependency?", Online[Web], London: LSE Research Online, Accessed 4.2.2015, URL- eprints.lse.ac.uk/651/

Interfax (2003), "Irkutsk pipeline to supply gas to China over 30-year period", Alexander's Gas and Oil Connections, [Online: web] Accessed 27 March 2015, URL: <http://www.gasandoil.com/news/russia/7ac05583d6ebf9df38986fc5a7be4150>

_____ (2013), "Gazprom, CNPC sign memorandum on eastern gas supplies to China (Part 2)", dated 22 March 2013, [Online: web] Accessed 14 March 2015, URL: <http://www.interfax.com/newsinf.asp?id=404502>

_____ (2016), "Rosneft sells 29.9percent of Taas Yuryakh to consortium of Indian cos.", *Interfax*, 16 March 2016, [Online: web], Accessed 25 March 2016, URL: <http://www.interfax.com/newsinf.asp?y=2009&m=12&d=16&id=658413>

*International Energy Agency (2002), *Russia Energy Survey 2002*, OECD/IEA, France. [Online: web] Accessed 13 July 2014, URL: http://www.iea.org/publications/freepublications/publication/russia_energy_survey.pdf

*_____ (2004), *World Energy Outlook 2004*, France, [Online: web], Accessed 17 February 2013, URL: <http://www.worldenergyoutlook.org/media/weoweb/2008-1994/WEO2004.pdf>

*_____ (2010), *World Energy Demand and Economic Outlook 2010*, [Online: web] Accessed 15 Feb 2013, URL: <http://www.ieo.org/>

*_____ (2007), *World Energy Outlook 2007: China and India Insights*, France: OECD/IEA. [Online: web] Accessed 14 June 2013, URL: http://www.worldenergyoutlook.org/media/weoweb/2008-1994/WEO_2007.pdf

*_____ (2006), *World Energy Outlook 2006*, France: OECD/IEA. [Online: web] Accessed 14 June 2013, URL: www.worldenergyoutlook.org/media/weoweb/2008-1994/WEO2006.pdf

*_____ (2009), *World Energy Outlook 2009*, France: OECD/IEA. [Online: web], Accessed 17 February 2014, URL: <http://large.stanford.edu/courses/2013/ph241/roberts2/docs/WEO2009.pdf>

Itoh, S. (2008), "Russia's energy diplomacy towards the Asia-Pacific: Is Moscow's Ambition Dashed?",[Online:web]Accessed 5 Aug. 2013 URL:www.srchokudaiac.jp/coe/21/publish/no19_ses/2_ito.pdf

_____ (2011), *Russia Looks East: Energy Markets and Geopolitics in Northeast Asia*, Washington DC: Centre for Strategic and International Studies.

*Jakobson, L., Holtom, Paul et al. (2011), "China's Energy and Security Relations with Russia: Hopes, Frustrations and Uncertainties", *SIPRI Policy Paper 29*, Sweden: Stockholm International Peace Research Institute.

Jha, Sameer K. (2007), *Russia India Nuclear Cooperation 1991-2006*, Ph.D Thesis, New Delhi: Jawaharlal Nerhu University.

JJ, Paust and Blaustein, AP. (1974), "Arab oil weapon- a threat to international peace", *The American Journal of International Law*, 68 (3): 410-439. Quoted in Cherp, A and Jewell, J. (2011), "The three perspectives on energy security: intellectual history, disciplinary roots and the potential for integration", *Current Opinion in Environmental Sustainability*, 3 (4): 202-212.

Junbo, J. (2009), "China says No Thanks to G2", *Asia Times Online*, 29 May 2009, [Online: web] Accessed 18 October 2014, URL: <http://www.atimes.com/atimes/China/KE29Ad01.html>

Kambara, T. and Howe, C. (2007), *China and the global energy crisis: Developments and Prospects for China's oil and natural gas*, USA: Edward Elger.

Kaoru Y. and Keii Cho (2003), "Natural Gas in China," *Institute of Energy Economics Japan (IEEJ)*, August 2003: 1-10.

Kepler, Jan H. (2007), "International relations and security of energy supply: Risks to continuity and geopolitical risks", *Directorate General External Policies of the Union, European Parliament*, Brussels. [Online web], Accessed 17 Feb 2013, URL: [http://www.europarl.europa.eu/RegData/etudes/etudes/join/2007/348615/EXPO-AFET_ET\(2007\)348615_EN.pdf](http://www.europarl.europa.eu/RegData/etudes/etudes/join/2007/348615/EXPO-AFET_ET(2007)348615_EN.pdf)

Klare, Michael T. (2008), *Rising powers, shrinking planet: the new geopolitics of energy*, New York: Metropolitan Books. Quoted in Cherp, A and Jewell, J. (2011), "The three perspectives on energy security: intellectual history, disciplinary roots and the potential for integration", *Current Opinion in Environmental Sustainability*, 3 (4): 202-212.

Klinghoffer, A.J. (1976), "Sino-Soviet Relations and the Politics of Oil", *Asian Survey*, 16 (6): 540-552

Konoplyanik A. (2004), "Russian Oil Taxation System Development: a continuous debate between supporters of fiscal oriented and investment oriented approaches", *15th International Petroleum Tax Conference*, 11-12 November 2004, Norway, Online [Accessed] dated 17/9/2015, url: <http://www.konoplyanik.ru/speeches/16-E-Oslo-11-12.11..pdf>

Korybko, A (2014), "Washington's nightmare comes true: the Russian-Chinese Strategic Partnership goes global", *Oriental Review.org*, Online [web] Accessed-5.4.2015, url: <http://orientalreview.org/2014/08/22/washingtons-nightmare-comes-true-the-russian-chinese-strategic-partnership-goes-global-ii/>

Kristallinskaya, Svetlana (2013), "Gazprom gives Chayanda the Go!", *Oil and Gas Eurasia press* dated 28 march 2013, [Online: web] Accessed 29 May 2015, URL: https://www.oilandgaseurasia.com/en/tech_trend/gazprom-gives-chayanda-go

Kruyt B. et al. (2009), "Indicators for energy security", *Energy Policy*, 37 (6): 2053-2464.

Kumar, Rajeev (2010), *Energy as a strategic factor in Russian foreign policy under Putin's presidency*, Ph.D. Thesis, New Delhi: Jawaharlal Nehru University.

Kumar, Rama S. (2008), "Indo-Russian Relations: Economic Opportunities or Continued Stagnation?", in P.L. Dash and Andrei M. Nazarkin (eds.) *Indo-Russian Diplomatic Relations: Sixty Years of Enduring Legacy*, New Delhi: Academic Excellence.

Kundu, N (2012), "Energy Cooperation between India and Russia: Policy and Approach" *Russia & India Report*, 11th October 2012, [Online: web] Accessed 5/5/13: URL:http://in.rbth.com/articles/2012/10/11/energy_cooperation_between_india_and_russia_policy_and_approach_18291

Kuprianov, S. (2009), "Times of Crisis, Present Challenges and Opportunities, for a Fair and Free Global Energy Market", *Gazprom Export*, 2 (1): 2, [Online: web] Accessed 16/3/2015, URL: <http://www.gazpromexport.ru/en/presscenter/publications/>

Kurth, Natasha (2013), "The Russian Far East in Russia's Asia Policy: Dual Integration or Double Periphery?", in Natasha Kurth (ed) *Russia and the World: The Internal-External Nexus*, Oxon: Routledge.

_____ (2012), "The Russian Far East in Russia's Asia Policy: Dual Integration or Double Periphery?", *Europe-Asia Studies*, 64 (3): 471-493.

Kuznichenkov, Y. (2012), "Gazprom's strategy in the East of Russia", *Neolant*, [Online: web] Accessed 29 September 2015, URL: http://www.neolant.com/press-room/index.php?ELEMENT_ID=1395

Lai, Hongyi H. (2007), "China's Oil Diplomacy: is it a global security threat", *Third World Quarterly*, 28 (3): 519-537.

Legault, A. (2008), *Oil Gas & other Energies*, France: Editions Technip.

Leonty, Andrews-Speed, and Korzhubaev, (2009) Quoted in Hsu Jing-Yun and Soong Jenn-Jaw (2014), "Development of China-Russia relations 1949-2011", in *The Chinese Economy*, 47 (3), May-June 2014: 70-87

Leung, GCK. (2010), "China's Energy Security: Perception and Reality", *Energy Policy*, 39 (3): 1330-1337. Quoted in Cherp, A and Jewell, J. (2011), "The three perspectives on energy security: intellectual history, disciplinary roots and the potential for integration", *Current Opinion in Environmental Sustainability*, 3 (4): 202-212.

Linde, Coby VD. (2005), *Energy in a changing world/ Energie in een veranderende wereld*, Inaugural lecture, Clingendael: CIEP Publications.

Linklater, A. (1995), "Neo-realism in theory and practice", in Ken Booth and Steve Smith (eds.) *International Relations Theory Today*, Cambridge: Polity Press.

LNG World News Staff (2016), "Lithuania receives LNG cargo from Norway's Statoil", *LNG World News*, 24 March 2016, [Online: web] Accessed 19 July 2016, URL: <http://www.lngworldnews.com/lithuania-receives-lng-cargo-from-norways-statoil/>

Lo, Bobo (2008), *Axis of Convenience: Moscow, Beijing and the New Geopolitics*, London: Chatham House.

Lotspeich, Richard (2010), "Economic Integration of China and Russia in the Post-Soviet Era", in James Bellacqua (ed) *The Future of China-Russia Relations*, Kentucky: The University Press of Kentucky.

Luthi, Lorenz M. (2008), *The Sino Soviet split: Cold war in the Communist World*, United Kingdom: Princeton University Press.

Mäe, Andres (2016), "Impacts of sanctions on the Russian oil sector", Estonian Foreign Policy Institute , Paper no. 29, March 2016, [Online: web] Accessed 17 March 2017, URL:http://www.evi.ee/wp-content/uploads/2016/02/EVI_mottepaber29_mpercentC3percentA4rts16.pdf

Mahapatra, Debidatta A. (2008), "Indo-Russian Relations: Prospects of Economic Cooperation" in P.L. Dash and Andrei M. Nazarkin (eds.) *Indo-Russian Diplomatic Relations: Sixty Years of Enduring Legacy*, New Delhi: Academic Excellence.

_____ (2013), "Prospects for the Russia-India-China strategic triangle", *Russia & India Report*, 11 February 2013, [Online: web] Accessed 15 November 2015, URL: https://in.rbth.com/opinion/2013/02/11/prospects_for_the_russia-india-china_strategic_triangle_22193

(2008), “Indo-Russian Energy Cooperation: Positing Prospects For 21st Century”, in V.D.Chopra (ed) *Significance of Indo-Russian Relations In 21st Century*, Delhi: Kalpaz Publications.

Malik, Imran (2012), “USA manages China’s Rise”, in Pravda.ru dated 11.9.2012, Url: http://english.pravda.ru/world/asia/11-09-2012/122124-usa_china_rise-0/

Mason, Rowena (2011), “Gazprom wins long Kovykta battle over TNK-BP gas”, *The Telegraph*, 2 March 2011, [Online: web] Accessed 14 April 2015, URL: <http://www.telegraph.co.uk/finance/newsbysector/energy/oilandgas/8355472/Gazprom-wins-long-Kovykta-battle-over-TNK-BP-gas.html>

Medetsky, Anatoly (2011), “Gazprom opens pipeline to Sakhalin”, *The Moscow Times*, dated 8 September 2011, [Online: web] Accessed 9 August 2014, URL: <https://themoscowtimes.com/articles/gazprom-opens-pipeline-to-sakhalin-9439>

Medvedev, A. (2012), “Gazprom’s Strategy in Asia”, *Blue Fuel: Gazprom Export Global Newsletter*, 5 (3): 5-7.

Melchior, A. (2012), “Introduction and Overview”, in Stein Sundstøl Eriksen, Sverre Lodgaard, Arne Melchior, Karl Rich, Elana Wilson Rowe and Ole Jacob Sending (eds.) *BRICS, Energy and the New World Order*, Oslo: Norwegian Institute of International Affairs.

Meredith, Robyn (2007), *The Elephant and the Dragon: The Rise of India and China and What It Means For All of Us*, USA: W.W. Norton & Co.

Miller, Jeanne (2007), “Sakhalin 1 Project Production Goal Achieved: A significant component in addressing global energy needs”, *Business Wire* dated 14 February 2007, [Online: web] Accessed 27 April 2013, URL: <http://www.businesswire.com/news/home/20070214005789/en/Sakhalin-1-Project-Production-Goal-Achieved>

Milov, V. (2005), “Global energy agenda”, *Russia in global affairs*, 3 (4): 60-66.

*Ministry of External Affairs (2017), *India-Russia Relations*, [Online: web] Accessed 5 May 2017, URL: www.mea.gov.in/Portal/ForeignRelation/India_Russia_May.pdf

*Ministry of Petroleum and Natural Gas (1988), *Freedom Forty- Saga of Oil: The growth of India’s Petroleum Industry 1947-87*, Govt. document, Ministry of Petroleum and Natural Gas, New Delhi.

Mitchell, J. et al. (1996), *The New Geopolitics Of Energy*, Great Britain: Royal Institute of International Affairs.

Mitrova, T (2008), “Gazprom’s perspectives on International market”, *Russian Analytical Digest*, 41:2-17

_____ (2014), *The Geopolitics of Russian natural gas*, Houston: Rice University's Baker Institute Center for Energy Studies.

Mohanty A. (2016), "Goa Summit strengthens Indo-Russian Special and Privileged Strategic Partnership", *Eurasian Report*, 10 (4): 61-72

_____ (2008), "Indo-Russian Trade and Economic Cooperation", *Himalayan and Central Asian Studies*, 12 (2): 51-65.

_____ (2010), "The Indo-Russian Trade and Economic Cooperation: The Way Ahead", in P. Stobdan (ed) *India-Russia Strategic Partnership: Common Perspectives*, New Delhi: IDSA Publication.

_____ (2011), "Energy: Russia eyes Asia-Pacific, India Markets", *Russia & India Report*, [Online: web], Accessed 8 Oct 2013, URL: http://indrus.in/articles/2011/10/07/energy_russia_eyes_asiapacific_india_markets_13093.html

_____ (2013), "Russia in India's Energy Security Strategy", *World Focus*, XXXIV (3): 32-38.

*Moscow, *Obozrevatel-Observer*, Special Supplement 1993, 14 December 1993 ; "Russian National Security Concept for 1994," *FBIS SOV*, 25 February 1994, 40. http://www.gwu.edu/~ieresgwu/assets/docs/demokratizatsiyapercent20archive/03-2_Blank.PDF

Moser, N. and Oppenheimer, P. (2001), "The Oil Industry: Structural Transformation and Corporate Governance" in B. Granville and P. Oppenheimer (eds). *Russia's Post-Communist Economy*, UK: Oxford University Press

*Narayanasamy, V (2011), "Indo-Russian Nuclear cooperation in Atomic energy", Government of India, Department of Atomic Energy, dated 01.02.2011, Accessed 6/9/2015, URL: http://dae.nic.in/writereaddata/rsus1090_011211.pdf

Natural Gas Asia (2012), "GAIL interested in Vladivostok LNG stake", *Natural Gas Asia*, 15 August 2012, [Online: web] Accessed 20 July 2016, URL: <http://www.naturalgasasia.com/gail-interested-in-vladivostok-lng-stake>

Naughten, B. (2007), "The Impact of the new Asia-Pacific Energy Competition on Russia and the Central Asian States", in Michael Wesley (ed) *Energy Security in Asia*, New York: Routledge.

Newman, Nicholas (2016), "Problem Solved", *Petroleum Review*, June 2016: 22-23, [Online: web] Accessed 15 July 2016, URL: <http://www.nicnewmanoxford.com/problem-solved/>

Oil and Gas Journal, URL: <http://www.ogj.com/index.html>

Orban, A. (2008), *Power, energy and the new Russian imperialism*, Westport: Praeger Security International.

Ostroukh, Andrey (2014), “Rosneft, Novatek could receive state aid, Russian minister says”, *The Wall Street Journal*, 13 September 2014, [Online: web] Accessed 10 July 2016, URL: <https://www.wsj.com/articles/rosneft-novatek-could-receive-state-aid-russian-minister-says-1410611229>

Paik, K (2013), “Sino-Russian Gas Cooperation: The reality and implications”, *East Asia Forum*, Online Web, Accessed 7th May 2014, URL: <http://www.easiaforum.org/2013/01/19/sino-russian-gas-cooperation-the-reality-and-implications/>

Panda, S. (2006), “Global Energy and Alliances: Challenges for India”, *India Quarterly*, 62 (4): 92-123.

Pant, G. (2008), *India: The Emerging Energy Player*, New Delhi: Dorling Kindersly India Pvt. Ltd.

Pant, Harsh V. (2012), “China in South Asia: A Tightening Embrace”, in Harsh V. Pant (ed) *The Rise of China: Implications for India*, New Delhi: Cambridge University Press India Pvt. Ltd.

Patnaik, A. (2008), “Central Asia in indo-Russian Strategic Calculations”, in P.L. Dash and Andrei M. Nazarkin (eds.) *Indo-Russian Diplomatic Relations: Sixty Years of Enduring Legacy*, New Delhi: Academic Excellence.

Pedersen, Jacob (2013), “China leads peers in resolving Malacca energy shipping dilemma”, in *The Wall Street Journal* dated April 16, 2013, Url: <http://blogs.wsj.com/indonesiarealtime/2013/05/13/china-leads-peers-in-resolving-malacca-energy-shipping-dilemma/>

Peng, Bin-Win (2012), “The challenges and opportunities of China’s energy cooperation with Russia”, *Russian School Publication* 10th Edition, January 2012: 49-64 [Online: web] Accessed 5 May 2014, URL: https://www.google.co.in/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&cad=rja&uact=8&ved=0ahUKEwi2sv-O5v3TAhWEvI8KHdBzAv8QFggrMAA&url=http%3Apercent2Fpercent2Frustrudy.nccu.edu.twpercent2Fdownload.phppercent3Ffilenamepercent3D32_ab8c2787.pdpercent26dirpercent3Darchivepercent26titlepercent3DThepercent2BChallengespercent2Bandpercent2Bopportunitiespercent2Bofpercent2BChinapercent25E2percent2580percent2599spercent2BEnergypercent2BCooperationpercent2Bwithpercent2BRussia&usg=AFQjCNEEq8xq1cRX02GYdEUiJg1m7RNgzW&sig2=L3hUKuJu7nE7Wok_kkCpw

Perovic, J. (2009), “Introduction: Russian Energy Power, Domestic and International Dimensions”, in Jeronim Perovic, Robert W. Orttung and Andreas Wenger (eds.) *Russian Energy Power and Foreign Relations*, Oxon and New York: Routledge.

Petroleum.co.uk (2015), “Benchmark oils”, *Petroleum.co.uk*, [Online: web] Accessed 7 March 2016, URL: <http://www.petroleum.co.uk/benchmarks>

*Petronet LNG, Official Website, [Online: web] Accessed 19 October 2015, URL: <https://www.petronetlng.com/>

Pirani, S., Stern, JP. And Yafimava, K. (2009), *The Russo-Ukrainian gas dispute of January 2009: A comprehensive assessment*, Oxford: Oxford Institute for Energy Studies.

*Polish Central Archives of Modern Records (AAN) (1985), *Note from a Working Meeting of the CC International Department Deputy Heads of Fraternal Parties of Socialist Countries*, February 18, 1985, History and Public Policy Program Digital Archive, KC PZPR LXXVI – 710. Obtained and translated for CWIHP by Malgorzata K. Gnoinska. [Online: web] Accessed 25 March 2015, URL: <http://digitalarchive.wilsoncenter.org/document/112221>

Pop, Irina I. (2010), “China’s Energy Strategy in Central Asia: Interactions with Russia, India and Japan”, *UNISCI Discussion Papers*, No.24, October, p.201, 197-220.

Poussenkova, N. (2007), “The Wild, Wild East: East Siberia and the Far East: A New Petroleum Frontier?”, *Carnegie Moscow Centre Working Paper# 4*, Moscow: Carnegie Moscow Center. [Online: web] Accessed 7th April 2012, URL: ii.umich.edu/UMICH/ceseuc/.../Thepercent20Wild,percent20Wildpercent20East.pdf

Prasad, Gireesh C. (2016), “Engineers India, Gazprom to prepare India-Russia gas pipeline blueprint”, *Live Mint*, 15 October 2016, [Online: web] Accessed 26/12/16, URL: <http://www.livemint.com/Industry/LP7GEsIhLi3zxcOkh21ooJ/Engineers-India-Gazprom-to-prepare-IndiaRussia-gas-pipelin.html>

*President of Russia (2009), “Joint Statement of the BRICS countries’ leaders”, Yekaterinburg, 16 June 2009. Quoted in Lodgaard, S. (2012), “BRICS, Security Policy and Energy” in Stein Sundstøl Eriksen, Sverre Lodgaard, Arne Melchior, Karl Rich, Elana Wilson Rowe and Ole Jacob Sending (eds.) *BRICS, Energy and the New World Order*, Oslo: Norwegian Institute of International Affairs.

*President of Russia Official Website for various official statements, URL: <http://eng.kremlin.ru/>

*Press release of GAIL India Ltd, London and New Delhi dated 1st Oct 2012, Online Accessed 5th Dec 2013 , URL: http://www.gailonline.com/final_site/pressrelease-oct01.html

Priddy, Ben (2012), “Russia’s Eastern Gas Program”, *Oil and Gas Eurasia*, 29 November 2012, [Online: web] Accessed 10 July 2016, URL: <https://www.oilandgaseurasia.com/en/news/russiapercentE2percent80percent99s-eastern-gas-program/page/0/2>

Radnedge, S. (2015), “Gazprom is postponing construction of the Vladivostok LNG plant on the country’s Pacific Coast”, *Gasworld*, 29/6/2015, Accessed 19 July 2016, URL: <http://www.gasworld.com/vladivostok-lng-plant-construction-shelved/2007743.article>

Radyuhin, V. (2007), “Lessons for India as Russia ups ante”, in *The Hindu* dated 2nd January 2007, Accessed 19th November 2009, URL: <http://www.thehindu.com/todays-paper/tp-opinion/lessons-for-india-as-russia-ups-ante/article1776824.ece>

_____ (2009), “India, China Compete for Russian Oil Resources”, *The Hindu*, Moscow, 13 September 2009.

Rajan D.S. (2012), “China’s Resource Diplomacy: India struggles to catch up”, in Harsh V. Pant (ed) *The Rise of China: Implications for India*, New Delhi: Cambridge University Press India Pvt. Ltd.

Reddaway, P. and Glinski D, (2001), *The Tragedy of Russian Reforms: Market Bolshevism Against Democracy*, Washington D. C., United States Institute of Peace Press.

Renfeng, Zhao (2002), “Sino-Russian Oil Link Proposed,” *China Daily*, 30 December 2002

*Report of General Energy Council, Advisory Council on International Affairs “Energised foreign policy”, Dec 2005: 22-23, Online web, Accessed 17 July 2013, URL: aiv-advies.nl/download/a32c80b3-85d3-48f3-9f7a-5caa7d480fa8.pdf

*Report on India-Russia Joint Study Group (2007), Moscow-New Delhi, [Online: web] Accessed on 16/11/15, URL: http://www.commerce.gov.in/writereaddata/uploadedfile/MOC_635567636562814678_Report_India_Russia_Joint_Study_Group_10_9_2007.pdf

Reuters (2007), “Russia seeks Indian investment in Sakhalin 3 Tass”, *Reuters* dated 22 January 2007, [Online: web] Accessed on 23 November 2015, URL: <http://uk.reuters.com/article/india-russia-energy-sakhalin-idUKL2283317220070122>

Reuters (2015), “Russia’s Putin pledges further support for Yamal LNG”, 17 Dec 2015, [Online: web] Accessed 5 December 2016, URL: <http://www.reuters.com/article/russia-putin-yamal-idUSR4N14600B20151217>

RIA Novosti (2010), "Price for Russian Gas Deliveries to China to be Set by July 2011-Sechin", 21 September (Accessed on 25 February 2011), URL: <http://en.rian.ru/world/20100921/160662039.html>

Rodova, Nadia (2010), "Rosneft, China's CNPC to look at new upstream projects in Russia", *Platts*, 23 November 2010, Moscow, [Online: web] Accessed 29 October 2016, URL: <https://www.platts.com/latest-news/oil/moscow/rosneft-chinas-cnpc-to-look-at-new-upstream-projects-7598302>

Rozman, Gilbert (2010), "Sino-Russian Energy Relations: An Uncertain Courtship", in James Bellacqua (ed) *The Future of China-Russia Relations*, Kentucky: The University Press of Kentucky.

Russia Today (2014), "Putin breaks ground on Russia-China gas pipeline, world's biggest", *Russia Today (RT)* dated 1 September 2014, [Online: web] Accessed 31 March 2015, URL: <https://www.rt.com/business/184176-russia-china-gas-siberian-power/>

_____ (2014), "Russia pushes for BRICS energy association", *Russia Today (RT)*, 10 July 2014, [Online: web] Accessed 11 January 2016, URL: <https://www.rt.com/business/171768-russia-brics-energy-association/>

Rutland, P. (2008), "Russia as an energy superpower", *New Political Economy*, 13 (2): 203-210.

Ryan, Kevin (2010), "Russo-Chinese Defense Relations: the view from Moscow", in James Bellacqua (ed) *The Future of China-Russia Relations*, Kentucky: The University Press of Kentucky.

Sachdeva, G. (2013), "India's ONGC plans to bring Russian hydrocarbons to South Asia", in the Central Asia-Caucasus Analyst dated 15/5/2013, Accessed on 30/4/2014, URL: <http://www.cacianalyst.org/publications/analytical-articles/item/12731-indias-ongc-plans-to-bring-russian-hydrocarbons-to-south-asia.html>

_____ (2010), "Indo-Russian Economic Linkages: A Critical Assessment", in Nivedita Das Kundu (ed) *India-Russia Strategic Partnership: Challenges And Prospects*, New Delhi: IWCA.

Sanzhiev, Artem (2015), "Gas pipeline to India being considered", *Russia & India Report*, 21 December 2015, [Online: web] Accessed 18 June 2016, URL: https://in.rbth.com/economics/cooperation/2015/12/21/gas-pipeline-to-india-being-considered_553397

*Secret Telegram from Jász, 'On the Relations between China and the Socialist Countries in 1986', December 15, 1986, History and Public Policy Program Digital Archive, Historical Archives of the Hungarian State Security (ÁBTL). Obtained by

Peter Vamos and translated by Katalin Varga.
<http://digitalarchive.wilsoncenter.org/document/119350>, Accessed 7.4.2015

Shadrina E. and Bradshaw M. (2013), "Russia's energy governance transitions and implications for enhanced cooperation with China, Japan and South Korea", in *Post-Soviet Affairs*, 29 (6): 461-499

Sharma, Devika (2010), "India-Russia Energy Cooperation", in Nivedita Das Kundu (ed) *India-Russia Strategic Partnership: Challenges And Prospects*, New Delhi: IWCA.

*Shell Global Official Website www.shell.com

*_____ (2014), *Sakhalin 2- An Overview*, [Online: web] Accessed 23 March 2014, URL: <http://www.shell.com/about-us/major-projects/sakhalin/sakhalin-an-overview.html>

Sikdar, B.K. and A. Sikdar (2009), *India and China: Strategic Energy Management and Security*, New Delhi: Manas Publications.

Simon, Sheldon W, "Safety and Security in the Malacca Strait: The limits of Collaboration. Rep 24th ed, Maritime Security In South Asia: US, Japanese, Regional, Industry Strategies, The National Bureau of Asian Research.

Simonia Nodari A. (2006), "Russia in the Asia-Pacific: The Beginning of a new era?", *Asia Pacific Review*, 13 (1): 16-31

Singh, Bhupendra K. (2010), "Energy Security and India-China Cooperation", [Online: web] Accessed 15 Sept. 2013 URL: http://www.google.co.in/url?sa=t&rct=j&q=&esrc=s&source=web&cd=4&ved=0CE0QFjAD&url=http%3Apercent2Fwww.iaee.orgpercent2Fenpercent2Fpublicationspercent2Fnewsletterdl.aspxpercent3Fidpercent3D92&ei=vvCOUpmmBI XtrQeajoC4Bg&usq=AFQjCNHh4mQMs0ZSQ1IQD3wMblTdIE7vnA&sig2=IpZ_phIpwmpkCIPv7ZSvhQ

_____ (2010), *India's Energy Security: The Changing Dynamics*, New Delhi: Pentagon Energy Press.

Singh, Rama S. (1989), *Indo-Soviet Cooperation and India's Economic Development*, Delhi: Deep & Deep Publications.

Singh, S. (2009), "Limitations of India-China Economic Engagement", *China Report*, 45 (4): 285-299.

Sovacool, Benjamin K. and Brown, Marilyn A. (2010), "Competing dimensions of energy security: An international perspective", *Annual Review of Environment and Resources*, 35: 77-108.

Sputnik (2010), "The price for Russian gas deliveries to China will be fixed in the first half of 2011, Russia's top energy official Igor Sechin said on Tuesday", *Sputnik*, 21 September 2010, [Online: web] Accessed 9 August 2014, URL: <https://sputniknews.com/world/20100921160662039/>

_____ (2016), "Russia still India's main partner in nuclear energy despite French, US interest", *Sputnik*, New Delhi. [Online: web] Accessed 15 January 2017, URL: <https://sputniknews.com/business/201611171047552712-russia-india-nuclear-energy/>

Sterling, A. (2011), "From sustainability through diversity to transformation: towards more reflexive governance of technological vulnerability", in Hommels, Mesman, Biker (eds.) *Vulnerability in technological cultures: New directions in research and governance*, Cambridge: MIT Press.

Stern, J. (2006), "The Russian-Ukrainian gas crisis of January 2006", *Oxford Institute for Energy Studies*, [Online: web], Accessed 21 April 2017, URL: <https://www.oxfordenergy.org/wpcms/wp-content/uploads/2011/01/Jan2006-RussiaUkraineGasCrisis-JonathanStern.pdf>

_____ (2005), *The Future of Russian Gas and Gazprom*, Oxford: Oxford Institute for Energy Studies.

Stirling A (2011), "From sustainability, through diversity to transformation: towards more reflexive governance of technological vulnerability" in Hommels, Mesman and Bijker (eds) *Vulnerability in Technological Cultures: New Directions in Research and Governance*, Cambridge: MA: MIT Press

Stobdan, P. (2014), "Shanghai Cooperation Organization and India", *IDSIA Policy Brief*, 14 July 2014, [Online: web] Accessed 29 April 2015, URL: http://www.idsa.in/policybrief/ShanghaiCooperationOrganizationandIndia_pstobdan_140714

Stulberg, Adam N. (2007), *Well-oiled diplomacy: Strategic manipulation and Russia's energy statecraft in Eurasia*, Albany: State University of New York Press.

Subramanian, K. (2005), "Agony of the Asian Oil Premium", *The Hindu Business*, [Online: web] Accessed 30 April 2013, URL: <http://www.thehindubusinessline.in/2005/03/30/stories/2005033000220900.htm>

Subramaniam, TS (2000), "Koodankulam Calling", in *Frontline*, 17 (21) dated Oct 14-27, 2000, accessed 8th Sept 2015, Url: <http://www.frontline.in/static/html/fl1721/17210200.htm>

_____ (2003), “The Global Player”, *Frontline* 20 (2): January 18-31, 2003. Quoted in Dadwal Srebonti R. and Sinha Uttam (2005), “Equity Oil and India’s Energy Security”, *Strategic Analysis*, 29 (3): 521-529.

Tabata S. and Liu X. (2012), “Russia’s Energy Policy in the Far East and East Siberia”, in Pami Aalto (ed) *Russia’s Energy Policies: National, Interregional and Global Levels*, USA: Elward Elgar.

Talukdar, I. (2014), “India’s Strategic Partnership with Russia: Continuity or a Shift?”, *ICWA Policy Brief*, 28 October 2014: 1-8.

Tekir, Gökhan (2012), “Return to the Empire”, *Atlantic Community*, [Online: web] Accessed 7th March 2013, URL: <http://www.atlanticcommunity.org/app/webroot/files/articlepdf/russianpercent20energy.pdf>

*The American Presidency Project (1980), *Carter Doctrine*, The State of the Union Address delivered before a Joint session of the Congress, January 23, 1980. Quoted in Cherp, A and Jewell, J. (2011), “The three perspectives on energy security: intellectual history, disciplinary roots and the potential for integration”, *Current Opinion in Environmental Sustainability*, 3 (4): 202-212.

The Economic Times (2011), “Cabinet okays merger of ONGC’s Russia assets with Sistema firms”, *The Economic Times* dated 20 June 2011, [Online: web] Accessed 21 November 2015, URL: <https://www.ibef.org/news/29091>

_____ (2014), “SCO membership to help India get foothold in energy-rich Central Asia”, dated 21 September 2014, [Online: web] Accessed 20 May 2015, URL: <http://economictimes.indiatimes.com/news/economy/foreign-trade/sco-membership-to-help-india-get-foothold-in-energy-rich-central-asia/articleshow/43083152.cms?intenttarget=no>

_____ (2016), “Russia offers Indian firms stake in Yamal LNG project”, *The Economic Times*, 10 July 2016, [Online: web] Accessed 14 November 2016, URL: <http://economictimes.indiatimes.com/industry/energy/oil-gas/russia-offers-indian-firms-stake-in-yamal-lng-project/articleshow/53139330.cms>

The German Marshall Fund of United States (2007), *Energy Dragons Rising: Global Energy Governance and the Rise of India and China*, Conference Report, Global public Policy Institute: Berlin.

The Hindu (2011), “India seeks stakes in Sakhalin 3”, *The Hindu*, New Delhi, 8 December 2011.

_____ (2017), “Iran retaliates against India’s decision to cut oil imports”, *Business Line*, 7 April 2017, [Online: web] Accessed 17 June 2017, URL: <http://www.thehindubusinessline.com/economy/iran-retaliates-against-indias-decision-to-cut-oil-imports/article9621871.ece>

The Moscow Times (2006), “Exxon’s Sakhalin-1 signs Sakhalin deal”, dated 24 November 2016, [Online: web], Accessed 23 May 2016 URL: <http://old.themoscowtimes.com/sitemap/free/2006/10/article/exxons-sakhalin-1-signs-china-deal/201451.html>

_____ (2014), “Poland plans gas hub to kill reliance on Russian energy”, *The Moscow Times*, 18 September 2014, [Online: web] Accessed 5 May 2015, URL: <http://www.themoscowtimes.com/articles/poland-plans-gas-hub-to-kill-reliance-on-russian-energy-39541>

Thomas, Sini K. (2011), *Russia’s energy diplomacy in the Asia-Pacific region, 2000-2010*, M.Phil Dissertation, New Delhi: Jawaharlal Nehru University.

Times of India (2005), “GAIL begins drilling in Bay of Bengal offshore”, *Times of India* dated 30 December 2005, [Online: web] Accessed 19 June 2013, URL: <http://timesofindia.indiatimes.com/india/Gail-begins-drilling-in-Bay-of-Bengal-offshore/articleshow/1351760.cms>

Titov, Valerie P. (2008), “Russia, China and India in the Changing Global Context”, P.L. Dash and Andrei M. Nazarkin (eds.) *Indo-Russian Diplomatic Relations: Sixty Years of Enduring Legacy*, New Delhi: Academic Excellence.

Trenin, D. (2002), *The End of Eurasia: Russia on the border between geopolitics and globalization*, Washington DC: Carnegie Endowment for International Peace.

_____ (2013), “Energy Alliance for Better Future”, [Online: web] Accessed 1 Nov, 2013, URL: <Http://carnegie.ru/2013/10/25/energy-alliance-for-better-future/grbq>

Trickett, Nicholas (2016), “Russia strengthens energy ties with India”, *Global Risks Insights* dated 28 October 2016, [Online: web] Accessed on 27 April 2017, URL: <http://oilprice.com/Energy/General/Russia-Strengthens-Energy-Ties-With-India.html>

Tsygankov, A. (2006), *Russia’s Foreign Policy: Change and Continuity in National Identity*, Oxford: Rowman and Littlefield. Quoted in Natasha Kurth (2012), “The Russian Far East in Russia’s Asia Policy: Dual Integration or Double Periphery?”, *Europe-Asia Studies*, 64 (3): 471-493.

*US Department of Energy (2008), *US Energy Information Administration*, [Online: web] Accessed 15 February 2013, URL: www.eia.doe.gov

*_____ (2010), *International Energy Outlook 2010*, US Energy Information Administration, July 2010, Washington DC, [Online: web], Accessed 15 February 2013, URL: [https://www.eia.gov/outlooks/archive/ieo10/pdf/0484\(2010\).pdf](https://www.eia.gov/outlooks/archive/ieo10/pdf/0484(2010).pdf)

*US Energy Information Administration, Eastern Block Research, IHS EDIN, [Online: web] Accessed 23 Sept 2015, URL: <https://www.eia.gov/todayinenergy/detail.php?id=18051>

Varol, Tugce (2013), *The Russian Energy Foreign Policy*, Kocani: EGALITE (Department: European Scientific Institute).

Verma, N. (2014), "India's ONGC Videsh says sanctions could hit its Russia shale plans", *Reuters*, 4 Nov 2014, [Online: web] Accessed 5 March 2015, Url: <http://www.reuters.com/article/us-commodities-summit-ongcvidesh-idUSKBN0IO0K120141104>

Victor, NM. (2008), "Gazprom: Gas Giant Under Strain", Working Paper# 71 dated January 2008, Online Web, Accessed 11th September 2011, URL: http://pesd.fsi.stanford.edu/sites/default/files/WP71,_Nadja_Victor,_Gazprom,_13Jan08.pdf

Vokresenskaya, Olga (2016), "Siberian oil is coming to India", *Russia & India Report*, 19 August 2016, [Online: web] Accessed 30 October 2016, URL: https://in.rbth.com/economics/2016/08/19/siberian-oil-is-coming-to-india_622365

Von, Hippel D. et al (2009), "Energy security and sustainability in Northeast Asia", *Energy Policy*, 1-12. Quoted in Cherp, A and Jewell, J. (2011), "The three perspectives on energy security: intellectual history, disciplinary roots and the potential for integration", *Current Opinion in Environmental Sustainability*, 3 (4): 202-212.

Waltz, K. (1988) "The Origins of Neorealist Theory." *The Journal of Interdisciplinary History*, 18 (4):616

White, Gregory L. (2006), "Exxon, China reach tentative deal on Russian gas", *The Wall Street Journal*, 24 October 2006, [Online: web] Accessed 6 May 2013, URL: <https://www.wsj.com/articles/SB116161307862800814>

Wilson, D. and Purushothaman, R. (2003), "Dreaming with BRICs: The path to 2050", *Global Economics Paper No. 99*, Goldman Sachs, [Online web], Accessed 27 March 2013, URL: <http://www.goldmansachs.com/our-thinking/archive/archive-pdfs/brics-dream.pdf>

Wishnick, E. (2001), "Russia and China", *Asian Survey*, 41 (5): 797-821.

Wolosky, Lee. S. (2000), "Putin's Plutocrat Problem, *Foreign Affairs*, VOL.79, No2:21-23

*World Energy Outlook (2006), *World Energy Outlook Report 2006*, International Energy Agency: Paris.

World Oil (2010), "Large new oil field discovered in East Siberia", *World Oil* news report dated 2 April 2010, [Online: web] Accessed 14 September 2015, URL: <http://www.worldoil.com/news/2010/2/4/large-new-oil-field-discovered-in-east-siberia>

Wu, Kang and Fesharaki, F. (1995) cited by Oil and Gas Journal 95, no. 35, 28 August 1995 cited in Calabrese John (1998), "China and the Persian Gulf: Energy and Security", in *Middle East Journal* 52(3):351-366.

Xu Yihe, "South Korea May Lose Out on Russia Gas," Dow Jones Newswire, March 7, 2001. Indirect source in Ahn S Hyun and Jones M. T (2008), "Northeast Asia's Kovykta Conundrum: A Decade of Promise and Peril", in *Asia Policy* Number 5, 105-140, page 136

Yagova, O. (2017), "Russia boosts Urals flow to India as OPEC cuts output: traders", Reuters, 10 May 2017, [Online: web] Accessed 28 June 2017, URL: <http://www.reuters.com/article/us-russia-india-oil-idUSKBN1861B1>

*Yakunin, Vladimir I. (2016), personal interview, Moscow State University, 25 May 2016.

Yergin, D (2006), "Ensuring Energy Security", *Foreign Affairs*, 85 (2): 69-82.

_____ (1991), *The prize: the epic quest for oil, money and power*, New York: Simon & Schuster.

Yew, Cheang C. (2013), "Sino-Indian Rivalry Intensifies over Petroleum Resources Overseas", [Online: web] Accessed 25 Oct 2013, URL: http://www.rigzone.com/news/oil_gas/a/129683/SinoIndian_Rivalry_Intensifies_over_Petroleum_Resources_Overseas/?all=HG2#sthash.a7LnsFFA.dpuf

Yhome K. (2013), "The Geopolitics of China's New Energy Route", in *The East Asia Forum*, Accessed 3.4.2015, Url: <http://www.eastasiaforum.org/2013/06/19/the-geopolitics-of-chinas-new-energy-route/>

Ying, R (2010), "Russia-India-China Economic Cooperation", in Nivedita Das Kundu (ed) *Russia-India-China: Evolution of Geopolitical Strategic Trends*, New Delhi: Academic Foundation.

Yishan, X. (2000), "China-Russia Energy Cooperation: Impetuses, Prospects and Impacts", [Online: web] Accessed on 25 March 2013, URL: https://www.google.co.in/search?q=Xia+Yishan&ie=utf-8&oe=utf-8&rls=org.mozilla:enUS:official&client=firefox-a&gws_rd=cr&ei=NICPUu3MIceVrgeH2oDoDQ#q=Xia+Yishan+2000+article+on+china+russia+energy+cooperationpercent2C+citation&rls=org.mozilla:en-USpercent3Aofficial

You, Ji (2007), "Dealing with the Malacca Dilemma: China's efforts to protect its energy supply", *Strategic Analysis*, 31 (3): 467-489.

*Yushkov, Igor (2016), personal interview, Moscow State University, 20 May 2016.

Zanitti, Francesco B. (2015), "Russian approach towards China and India, vector for a multipolar world order", *International Affairs*, 11 January 2015, [Online: web] Accessed 21 March 2016, URL: <http://en.interaffairs.ru/events/581-russian-approach-towards-china-and-india-vector-for-a-multipolar-world-order.html>

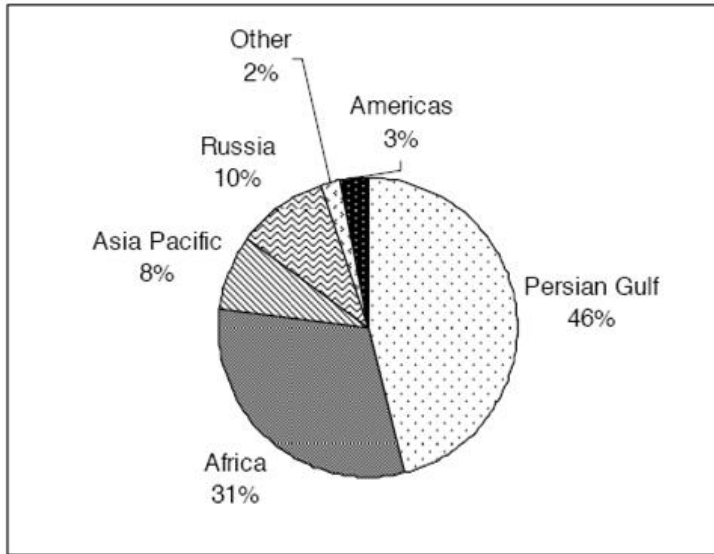
Zhu, C. (2009), "China, Russia Ink Oil Link", *Caijing*, 18 February 2009, [Online: web] Accessed 23 January 2014, URL: <http://english.caijing.com.cn/2009-02-18/110070270.html>

Ziegler, Charles E. (2006) "The Energy Factor in China's Foreign Policy", *Journal of Chinese Political Science*, 11 (1): Spring, p.5, 1-23.

Zubir M. and Basiron N Mohd (2005), "The Straits of Malacca: the Rise of China, America's Intentions and the dilemma of Littoral States", *Maritime Studies*, 141: 24-26.

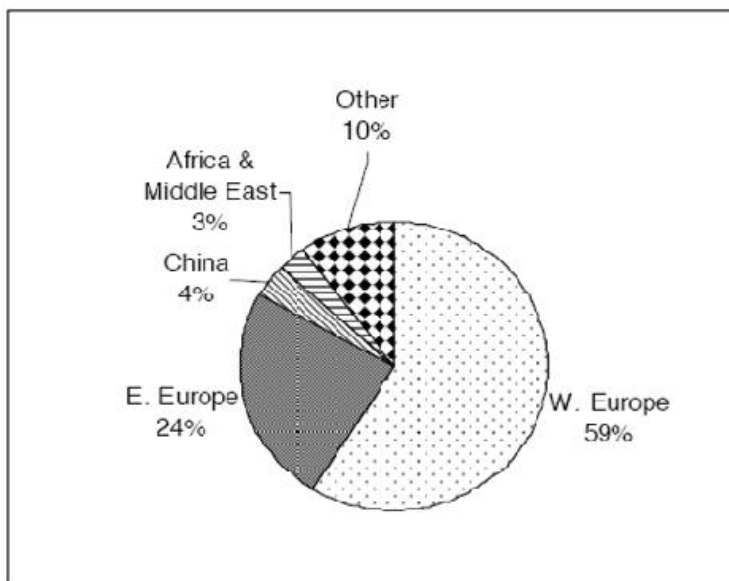
APPENDICES

APPENDIX 1: Crude oil Imports by China in 2005:



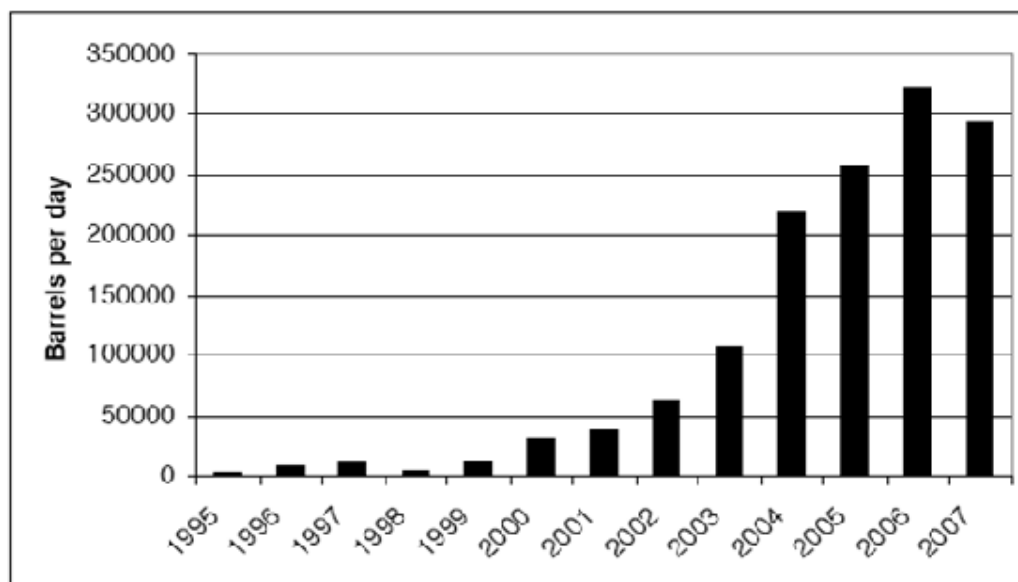
Source: Tian Chunrong, "Analysis of China's Oil Imports and Exports in 2005" (2005 nian zhongguo shiyou jinchukou zhuangkuang fenxi), *International Petroleum Economics (guoji shiyou jingji)*, no. 3 (2006):4.

APPENDIX 2: Crude Oil Exports by Russia in 2005:



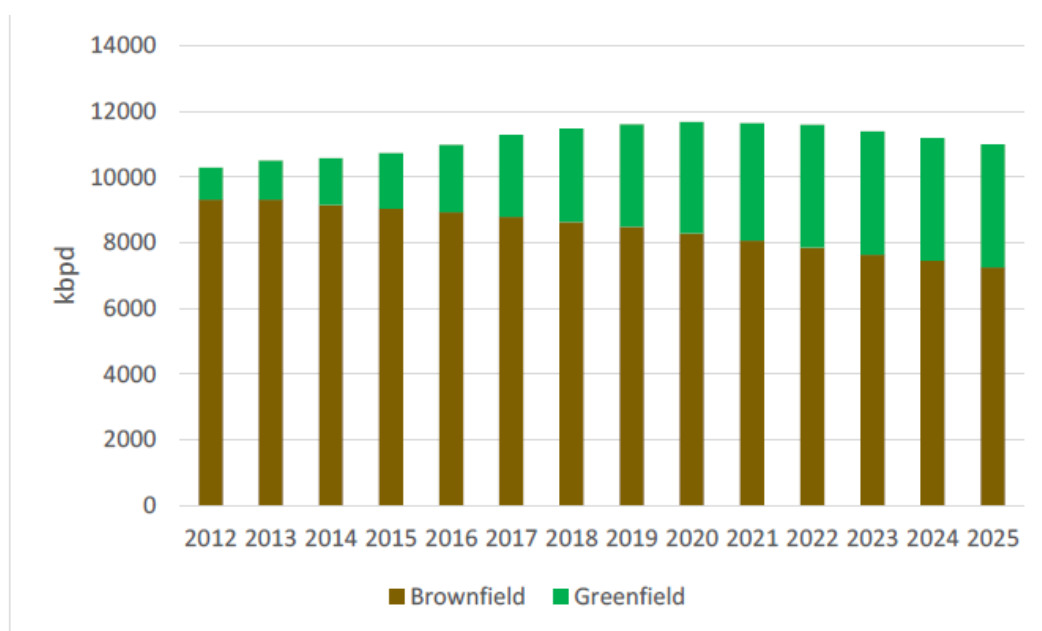
Source: Almanac of Russian and Caspian Petroleum 2006 (New York: Energy Intelligence Group, 2007).

APPENDIX 3: China's crude oil imports from Russia over some years:



Source: Data from the General Administration of Customs, People's Republic of China, cited in *International Petroleum Economics (guoji shiyou jingji)*, various issues, and provided by EIA CSS Information Service Center, HongKong

APPENDIX 4: Estimated Russian Oil Production to 2025



Source: Henderson and Grushevenko, February 2017: 15

The above figure gives a graphical representation of estimated Russian oil production up to 2025 and the changing nature of production in the brown and green fields. The production levels of brownfields as shown in the figure are at a declining rate from 2012 to 2025. The share of core areas in Western Siberia and the Volga-Urals are estimated to fall from 80 percent to 70 percent. On the other hand, the share of greenfields that essentially covers the share of production in East Siberia and the Far East show a rising trend to 10 percent of the total. The analysis that could be drawn from the graph above is that there exists tremendous potential for Russia's oil reserve base. Around 125 billion barrels still remains to be recovered and with production rates of greenfields slowly rising and production of brownfields slowly diminishing, the scope of overall Russian oil production (counting the plateau, fields in decline and greenfields) is increasing.