

Research Article

European Union Sanctions on Russian Crude After Russia-Ukraine War: Opportunity for India's Energy Security and Oil Refinery Industry

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Abstract

European Union (EU) and the G7 Nations imposed sanctions on Russia in December 2022 and introduced a price cap and an embargo on the imports of the Russian Crude Oil. This was with aim to restrict war funding of Russia for the invasion of Ukraine. Since then a significant realignment in global energy trade and shift in Russian oil market has emerged. India has limited energy resources but with growing economy and social responsibility has very high energy demand. It cannot afford higher price of petroleum products. In case, the Russian Oil was out of market, the petroleum product cost would have gone beyond affordable means of the country. Accordingly India has made use of this opportunity and has increased its crude refining capacity to meet its own energy demand and to become EU's largest supplier of refined fuels, mainly sourced from discounted Russian Crude. In bargain India has earned much valued foreign exchange, and earned profits on imports of oil, which was unheard prior to COVID-19 period. The increase of refining capacity is in confirmation with India's 'Atma Nirbhar Bharat' and 'Make in India' initiative. India's crude refining infrastructure can cater for refining capacity of more than 257 MMPTA through its PSU refinery, joint venture refineries and Private Sector Refineries. This paper examines the strategic, economic and geopolitical dynamics for this trend, highlights the role of India's Refining capability enhancements, the problems related to regulatory loopholes in EU Sanctions and the broader aspect of Energy security for India. It also gives future prospects and recommendations for Indian Government and associated private players in the industry.

Keywords

Energy Security, Global Oil Market, Refining Infrastructure, Sanctions

1. Introduction

India is one of the largest importer of fossil fuels to meet its ever growing energy demand. India consumption of Oil is around 5.05 million barrels per day which is about 5% of the world total oil consumption. From the largest importer, India has also become one of the largest exporter of refined oil to Europe since last two years [1]. What geopolitical, economic

and market factors led to this and how India become Europe's top supplier of refined fuel is required to be analysed.

The Russia – Ukraine war reshaped the global energy landscape, with EU and G7 countries imposing sanctions on Russian oil to reduce Moscow revenues. However these sanctions inadvertently created opportunities for countries

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like China, India and Turkey which were outside the sanctioning condition. The graphs shows the realigned market of Russia Crude. [2]

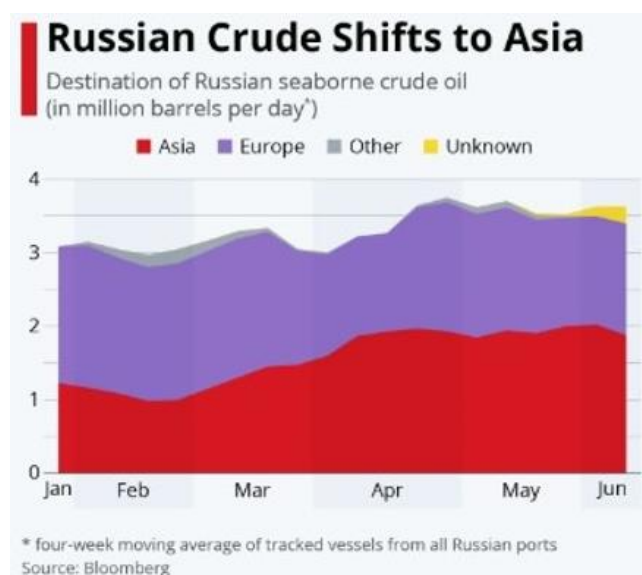


Figure 1. Detail of Russian Crude Shift to Asia.

(Source:

<https://www.statista.com/chart/27613/destination-of-russian-seaborne-crude-oil>)

India was traditionally a minor consumer of Russian Oil because of its proximity to Middle East and lack of proper transport arrangement from Russia. Today it is the second largest buyer by capitalizing on discounts and refining capacity. This paper explores India's rise as the EU's largest refined fuel suppliers, analysing the loopholes between the sanctions, market dynamics, future oil market for India due to its enhanced refining capability and geographical location, trade balance, energy security and finally strategic opportunities.

2. Literature Review

The literature on interconnected global energy trade highlights the global oil price and the unintended consequences of the sanctions.

Energy Crisis, Global Oil Markets and Sanctions: Energy moves the world. Research shows that sanction are not very effective always and leads to shift in trade patterns rather than isolation of a country. Examples are many in the world starting with sanctions on India after 1998 Nuclear Blast, Sanctions on Iran for its quest for nuclear weapon and current sanctions on Russia due to Russia Ukraine war. Russian crude, heavily discounted due to G7 and EU price caps, found buyers in Asia Mainly India & China.

India's Refining Infrastructure: Studies highlight India's quest for its refining capability. Indian refineries especially

Reliance at Jamnagar including its SEZ facility, Vadinar Refinery and other PSUs refineries invested heavily. This allowed India to process Crude Oil efficiently and economically. With improvement in shipping industry, India became a destination for export of refined products to world markets including Europe.

Regulatory Loopholes in EU Sanctions: Scholars have criticised the EU Energy Sanctions for their loopholes. Some have argued that loopholes were left deliberately. The absence of restrictions on refined products allowed Russian Oil to re-enter the EU indirectly through third parties.

Economic Benefits for India: India has gained in bargain in terms of getting cheaper crude for domestic needs, enhanced refining capability which is long term advantage and energy sector profitability due to export of refined oil mainly diesel and aviation fuel. This has enhanced India's trade balance and energy security and made it a critical global supplier.

3. Methodology

There were small pieces of News Articles in News Papers and also on TV on this issue. Indian media was quoting this as shrewdness of Indian diplomacy and business houses, whereas Western Media was projecting this issue as a kind of immoral behaviour. Data on all aspects related to this was collated from Petroleum Planning and Analysis Cell, Ministry of Petroleum, Centre for Research on Energy and Clean Air (CREA), Import Export data on crude oil, refining capacity from the websites of various companies like Reliance, Nayara Energy, and ONGC etc. Based on data the paper analysis the issue as an opportunity for Indian Oil Industry to grow keeping the future growth prospects in refinery industry and the focus on 'Make in India' and 'Vikshit Bharat 2047'. Paper also suggests the steps for improvement in this capability keeping in mind the Energy Security and strategic opportunities.

4. Background: EU Sanction and the Energy Crisis

India's export of fuels like diesel and aviation fuel to the European Union jumped 58% in the first three quarters of 2024, with bulk of them likely coming from refining Russian discounted crude at Indian refineries with advanced and enhanced refining capacity. EU and G7 countries in December 2022 introduced a price cap of \$60 per barrel for crude oil, aimed to limit Russian's oil revenues which was likely to be used for war budget in Russia - Ukraine war and also keeping in mind the maintenance of global oil market stability. Some relaxation was given to Russian neighbouring countries in Europe to ease out their energy crisis at later stage.

However lack of a policy on refined oil produced from Russian Crude gave an opening to countries not imposing sanctions to import large volumes of Russia Crude, refine them into

diesel/aviation fuel and legally export them to countries in Europe and other price cap coalition countries. [3]

In addition due to other geopolitical issues, India was worried of increased oil costs in world market. In spite of pressures from West, India went in for huge import of Russian oil, initially also paying in Indian Rupee. India's import to Russian Crude surged from negligible levels of the total oil imported in the pre - Ukraine war period to almost 40% of the country's total oil purchases. This rise was mainly because of the price cap of \$60 per barrel where Russian crude was available at lower cost (discounted cost). However refined fuel exports were at full price resulting in better revenues in Refining crude and exporting finished products.

5. Regulatory Loopholes in EU Sanctions

EU and G7 countries targeted crude oil but not refined products. EU has prohibited the maritime transport of Russian Crude Oil to EU applicable from 5th December 2022 and for petroleum products applicable from 5th February 2023. It has also banned the related technical assistance, brokering service and financial assistance. The price cap for crude was fixed at \$60 a barrel. However this price cap did not apply to the crude oil which are purchased at or lower than the price cap. To put it in simple terms, because of Russia - Ukraine conflict, EU was quick to impose sanctions on Russian crude oil. Russia was Europe largest source for refined fuels, however with restrictions in place, Europe has to turn elsewhere in order to meet its jet fuel and diesel demand.

This restriction and new market for refined oil, brought in India as a major player which was already enhancing its refining capability after COVID-19 period and was becoming a refining hub. India, thus redirected its refined products to Europe since the Russian sanctions. In bargain India's fuel export to Europe have increased crossing 360,000 barrels per day which is highest for Europe, even beating Saudi Arabia exports. As we see from the graph below, India's crude oil imports from Russia is constantly increasing since Dec 22, Russian share of Fuel import to Europe is declining and completely stopped since Mar 2023 and India share of refined fuel has increased considerably. [4]

India is getting its major share of crude oil from Russia and that too at a discounted rates. This has allowed Indian refineries to keep cost low and boost output with a better processing volumes of refined oil. This is working fine for Russia as it is finding buyer for crude, for India as it is earning foreign exchange through imports and reducing its energy bill and also for Europe as it is getting refined oil at comparable costs. This has also helped India to rise in global energy market. As per data available from CERA, since the sanctions, China has bought 47% of the Russian crude India 37%, EU 6% and Turkey 6%. [5]

India Becomes Europe's Top Fuel Supplier

Europe's reliance on Indian oil products have grown since Russian ban

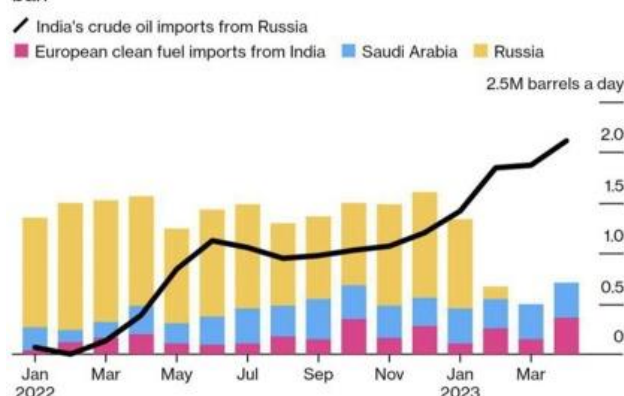


Figure 2. Europe's Top Fuel Supplier.

(Source:

https://www.reddit.com/r/economy/comments/1gerzai/india_becomes_the_top_fuel_supplier_to_europe/?rdt=61579)

6. India's Refining Infrastructure

A very broader picture first i.e. in 2023-24 fiscal year, India's domestic consumption of refined petroleum products was 233.3 MMTPA against the current refining capacity of 257 MMTPA. The graph shows a steep rise in Crude imports by India in 2023, which is not only to meet the local demand but to aim towards refining greater volumes and export.

To start with, India has been investing in refining capability over the years through PSUs, joint venture refineries and also through private players. The overall crude processing capability of India as per Ministry of Petroleum data is as under: [6, 7].

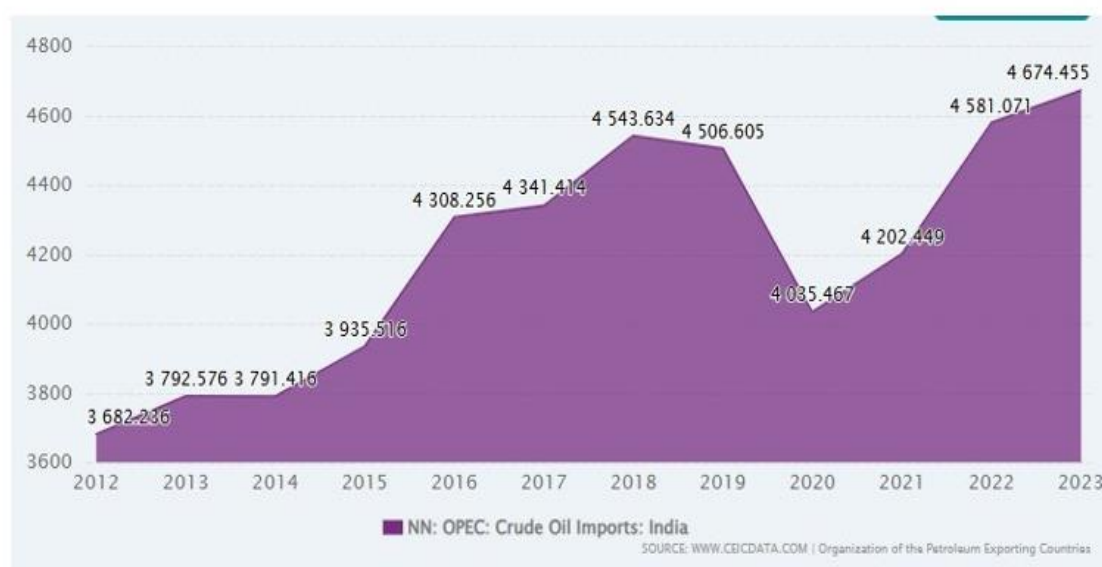
Table 1. Overall crude processing capability of India.

PSU Refineries	—	145 MMTPA
Joint Venture Refineries	—	20 MMTPA
Private State Refineries	—	92 MMTPA
Total	—	257 MMTPA

(MoPNG data from website)

The higher demand for refined petroleum products led to three major refineries of India to boost their refining capacity. These are RIL Jamnagar Gujarat, NEL Vadinar Gujarat of Nayara Energy which is in partnership with Russian firm Roosevelt and MRPL Mangalore, Karnataka.

If we see their last seven months figures as per table below, they are at best of efficiency and refining capability [8, 9].

Crude Oil: Imports from 2012 to 2023 in the chart:

<https://www.ceicdata.com/en/indicator/india/crude-oil-imports>

Figure 3. Crude Oil: Imports from 2012 to 2023.**Table 2.** Refining capability of major Indian Refineries in 2024.

Crude Processing	April 2024	May 2024	June 2024	July 2024	August 2024	September 2024	October 2024
RIL Jamnagar	5401	5590	5459	5496	5400	5634	5430
NEL Vadinar	1699	1727	1598	1764	1753	1677	1746
MRPL Mangalore	1312	1593	1474	1478	1497	1464	1486

(MoPNG data from website)

The refining infrastructure of India has got a major boost in last few years due to geopolitical and geographic advantage of India and also access to international shipping routes. Jamnagar Reliance Refinery has the current installed capacity 1.4 million barrels per day. It is today the biggest refinery in the world in an area which is 10 times the size of London city. [10]

Many new oil field in the world, mainly in Africa and Asia are extracting of crude and selling crude to Indian refineries. They find this a much better option than going in for the infra of constructing oil refineries. Russia cheap crude has helped in the export of refined produce in legal way and has also helped in improving the infrastructure. In November 2024, India has sanctioned two other refineries in Gujarat Coast and Andhra Pradesh, each with an Annual Capacity of 10-15 million tonnes along with petrochemicals facilities. Both these refineries are in collaboration with Saudi Arabia. MEA efforts over the years and visit of India PM to countries like Brunei and same African countries has ensured better and regular supply of crude from these countries.

7. Economic and Strategic Implications for India

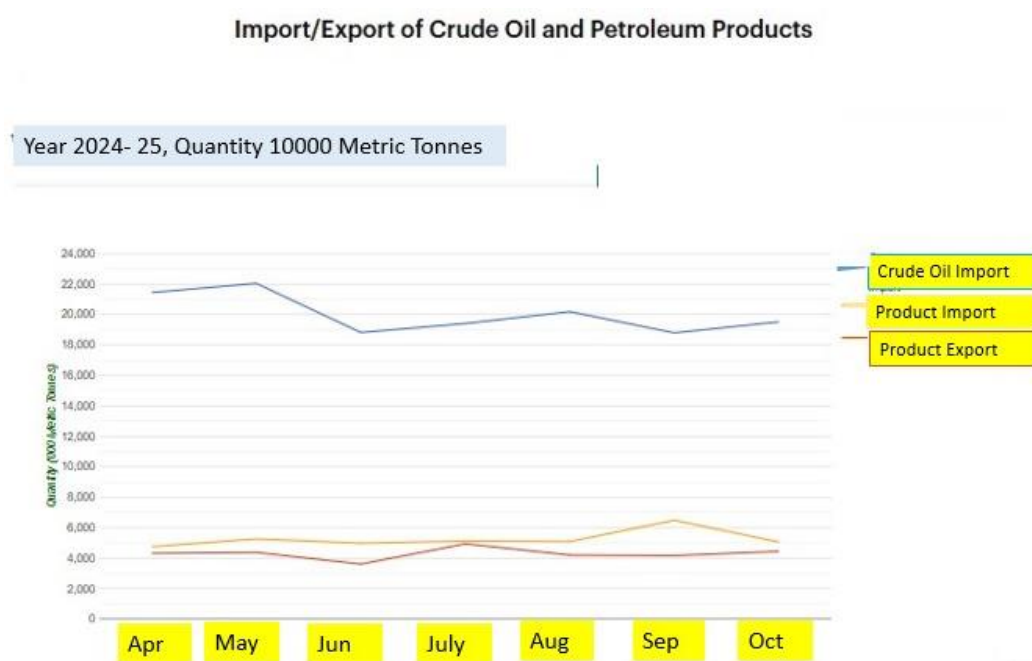
During a TV interview one of the anchors asked Mr. Hardeep Singh Puri, Union Minister for Petroleum and Gas about Russian crude being bought by India at a cheaper rate. His reply was very candid. He said India is obliged to ensure cheaper fuel to its public and for its economy thus there is a requirement to ensure crude at best price and have a reliable supply to meet India's ever growing energy needs. He said when the sanctions were imposed by Europe, Russia was producing 13 million barrels a day. In case this crude would have gone out of global oil market, the cost of the crude would have become much higher and unaffordable. Due to sanctions, Russia was forced to supply crude at less than \$60 per barrel which was a good bargain for India. Internally India could reduce the price of petroleum product in domestic market and pass on the benefits to the consumers. During this period total price of petrol and diesel have come down by approx. Rs.10

per litter. He emphasised that there is nothing unethical and illegal in buying Russian crude at cheaper cost. In case the world wants to put future sanctions and wants India to follow, India is ready to follow.

Europe was a big importer of diesel and jet fuel from India even before the Russia - Ukraine war started. Europe on the average imported 1,54,000 barrels per day (bpd) before the sanctions but this amount has doubled after the sanctions which is helping India to earn much required foreign exchange. Finland based centre for Energy & Clean Air (CERA) has given in its report that, since December 2022, over one third of India's export to sanctioning countries was derived from Russian crude approximately amounting to EUR 6.16 billion. But the point to note out here is that, two third of the refined products are from other sources thus showing the

India's advantage in refining and logistics of refined petroleum products.

The refined fuel trade has strengthened India's geopolitical leverage, positioning it as a major player in the world energy market. India is more than 85% dependent on imports to meet its crude oil domestic needs. With the refining capacity and secured sea lanes advantage, if it is able to export oil, then it is better for both energy security and its economy. The western ports of India are geographically and geo strategically very well suited to improve refining infra and help India become a global energy player. If we see the graph below, Crude oil Imports have remained very high but the good point is that finished fuel export and import is almost similar. It is a good source to earn Foreign exchange.



(Source: <https://ppac.gov.in/import-export> Graphical Representation)

Figure 4. Import and Export of Crude Oil and Petroleum Products.

8. Challenges and Controversies

One of the first challenges are related to Ethics. Ethics is very important when we are living in society and while doing business. We can safely say that world orders is a kind of society thus ethics have to be followed. However for national interest and economy, while following ethics, looking at own interest are important. Following the international rules, opportunities have to be exploited.

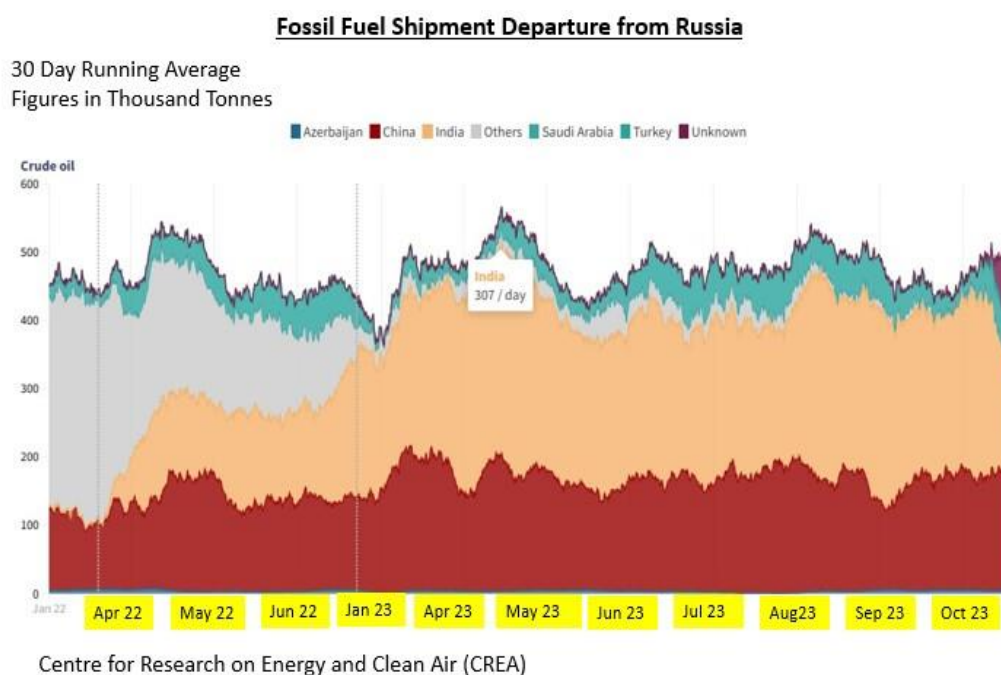
Refuting the western critics on India's purchase of Russian oil, External Affairs Minister Mr. S Jaishanker has said during an interview with Italian newspaper "This part of the world has to understand that every part of the world has its interests.

The priorities of Europe will naturally differ from one's of countries in Asia. If everything is a matter of such deep principle, then Europe itself should have cut off all its business from Russia, but it doesn't do that. It has been very selective and paced its disengagement very carefully. So to say that this region (Europe) will worry about its people, and others should not worry about what the impact will be on them is not reasonable." He further added that "Why should India pay higher prices for crude to make Europe happy."

India is doing all its business as related to Russian crude in fair and transparent manner as per the international rules. Europe is also very happy to buy refined diesel and aviation fuel, fully aware that what the source is. The data below shows the Fossil Fuel i.e. Crude shipment departure from

Russia which is taken from website of Centre for Research on Energy and Clean Air (CREA) which is an open source data. Europe and other nations are very much aware about where

the Russian Crude is being sold. India in April 2024 imported 307 thousand tonnes of crude from Russia per day on an average.



(Source: Centre for Research on Energy Clean Air)

Figure 5. Fossil Fuel Shipment Departure from Russia.

With respect to war funds for Russia - Ukraine war, India on its end is trying to stop the war and negotiate for peace. Mr. Modi, Indian Prime Minister, made a statement on July 2024 during his visit to Russia and meeting Mr. Putin “I believe there is no peace on the battlefield and the solutions to the war can be found only through dialogue”. It also gets confirmed with Mr. Modi visit to Ukraine and meeting Mr. Zelensky on 29th August and negotiating for peace.

However, in spite of sanctions, the fact can't be denied that crude from Russia was not transported to other countries through 'Shadow Tankers'. As per CERA report 34% of Russian seaborne crude oil was transported with the oil cap, but 66% got shipped through 'Shadow Tankers'. However, India is not involved in any illegal practices.

Second important issue is all weather alliance with Russia. India can never forget Soviet Union support during sanctions after Pokhran I and also help of Soviet Union during 1971 war. Russia has supported India in all its difficult times and India ought to return the favour back if required by Russia.

9. Future Prospects and Recommendations

The topic has been analysed in details in the previous paras. It emerges that India exploited the opportunity arising out of

EU & G7 countries sanctions to Russia due to Russia - Ukraine war, price cap on crude oil, diesel and aviation fuel market in Europe and refining infra including safe sea lanes of communications in India. India has been very diplomatic and ethical in all its dealings keeping the National Interest & Energy Security in mind. Some of the future prospects and recommendations can be summarised as under.

Oil Refinery Infrastructure. India has crude processing capacity of approx. 250 Million Metric Tonnes per Annum (MMTPA) by Public sector refineries, JV refinery and two private sector refineries of Vadinar [11] and Jamnagar. RIL Jamnagar is the most modern and biggest oil refinery in the world to include its Exclusive Economic Zone facility in the same location. India, because of its geographical location on sea lane of communication, strong Navy thus safe sea, and large land mass, very modern in technology and comparatively cheaper labor and land is the ideal destination for refineries. 'Atma Nirbhar Bharat' and 'Make in India' initiative added to above factors, make India ideal for opening new refineries in collaboration with oil producing countries in the world. [12]

Safe Sea Lanes of Communication: Import/Export of oil requires safe and reliable sea lanes of communications. India's modern and high technology, Blue water Navy ensures lanes of communication are safe. India must invest in Navy further for dominance in global oil market and also for Stra-

tegic Reasons.

Exploring Newer Source of Crude: Apart from Middle East, US and Russia, these are many other crude producing nations who have limited refining capability. India must explore to import more crude from them, refine it and export to countries which need refined fuel and other petroleum products. In this regard, visit of Prime Minister to Brazil, Nigeria, Guyana in November 2024 and Brunei & Singapore in September 2024 are very important. In addition, with refining of crude, petrochemical products are important byproducts and has a very good demand and market. This is an added advantage. [13, 14]

Focused on High-Value Products. Technology is in demand and if due to location of the refineries and competitive pricing, India can focus on high valued products like aviation fuel and special chemicals which give higher margins in global market, it would be very profitable business for private sector as well as PSU Refineries.

Diversify Energy Exports. Every country needs energy of petroleum. India can explore energy deficient regions in Africa, South America and South East Asia for oil exports. India being an influential country in global south would be able to find good market. [15]

Enhance Logistics. India should think of building export oriented infrastructure. SEZ of RIL Jamnagar is good example to follow. It should have dedicated pipelines, state of art ports and storage facilities to exploit the export opportunity of refined petroleum.

Explore new Connectivity. India has taken Chabahar port for lease from Iran. It should exploit its good relations with Iran, to take the port at next level. The port facilities can become a major link to import Central Asian oil and Gas and can connect Eastern Europe and Russia through Rail to export refined petroleum. A lot of work is expected in this regard from Government in next few years.

Invest in Green & Alternative Fuel. Keeping the climate change issues in mind, India has to shift to Green and alternative fuels of energy. More the green energy, lesser would be the demand for coal and petroleum and thus more crude to be refined and exported. It will help in reducing CO₂ emissions and give boost to our economy.

10. Conclusion

India's emergence as global energy player and one of the biggest suppliers of Diesel and Aviation fuel to Europe has come after the EU sanctions on Russian crude due to Russia – Ukraine war. By leveraging discounted Russian crude and its refining capability, India has achieved significant strategic and economic gains. [16] However, this development cannot be only attributed to EU sanctions on Russia oil but can be seen as a vision of India in the field of oil Refinery. [17] India has to take this opportunity in correct stride and develop its refining infrastructure to the best in the world. Suggestions given above may be helpful to private players like RIL and

also Petroleum Ministry of India for Vikshit Bharat 2047.

Abbreviations

BPD	Barrels per Day
CERA	Centre for Research on Energy and Clean Air
EU	European Union
MEA	Ministry of External Affairs
MMTPA	Million Metric Tonnes per Annum
MoPNG	Ministry of Petroleum & Natural Gas
NEL	Nayara Energy Limited
ONGC	Oil & Natural Gas Corporation
PSU	Public Sector Undertaking
RIL	Reliance Industries Limited
SEZ	Special Economic Zone

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Author Contributions

The author has published various research articles i.e. Making of Indian Foreign Policy an Analysis from 1947-2024, and LNG in India's Energy Transition; Balancing Geopolitics, Sustainability and Economic Growth. In addition he has regularly writing a newspaper on various current affairs, energy, and environmental issues.

Conflicts of Interest

The author declares no conflicts of interest.

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