iJRASET
International Journal For Research in Applied Science and Engineering Technology

INTERNATIONAL JOURNAL FOR RESEARCH

IN APPLIED SCIENCE & ENGINEERING TECHNOLOGY

Volume: 9 **Issue:** XI **Month of publication:** November 2021

DOI: https://doi.org/10.22214/ijraset.2021.38961

www.ijraset.com

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International Journal for Research in Applied Science & Engineering Technology (IJRASET)
ISSN: 2321-9653; IC Value: 45.98; SJ Impact Factor: 7.429
Volume 9 Issue XI Nov 2021- Available at www.ijraset.com

An analysis on the ever increasing demand of crude oil and energy in the country and its impact on the Indian economy

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Abstract: ***We require ample amount of crude oil and natural gas for a number of activities starting from industrial to mining , from the production of plastic and running of vehicles and cooking gas . India because of its minimum production and maximum dependency on import, Indian citizens have to pay more price of 1 litre of petrol or diesel in India , with 85% imports , the economy of India is at risk. The government has allowed more drilling and exploration to increase the production and reduce the imports, it has allocated billions for LNG , Natural gas production with FDI is allowed 100% . The government has announced new project for oil and natural gas production . India needs to reduce its import along with that with adopting of non renewable energy our dependences of crude oil will also reduce , with rising demand , India will be the largest consumer of crude oil by 2040 , so along with production we need to adopt sustainable living and reduce our depends on crude oil for reduce the impact of climate change , all measure have been taken to eliminate the use of crude oil for a number of products , so soon India will be able to minimize its production rate and import .***

Keywords: Crude oil, natural gas, LNG, petrol, diesel, fossil fuels, non renewable energy, consumer, production

I. INTRODUCTION

The demand of crude oil and natural gas is very high . Since the time it was first found in the Middle East it has been used for multipurpose Every country is highly dependent on crude oil , natural gas for their daily life . Crude oil serves a raw material for making of plastics , petrol, diesel , cooking gas ,kerosene , LPG, Naphtha . Over the year we have been burning fossil fuel for ultimately purpose because it is available in ample amount . China ,America and India are the largest consumer of energy , we depend on fossil fuels also for electricity . Crude oil which is available in ample amount in Middle East has over the years made the region one of the richest in the world .Today Dubai and Qatar which is the richest place in the world, have been constructed by the export of Crude oils , Today Dubai 95% of the GDP comes from tourism. We require petrol and diesel 24*7 to run vehicles , the maximum amount of vehicles run on fossil fuels , the maximum fuel is required in airlines and trains . India being the 3rd largest consumers of energy, along with the oil and gas sector is one of the core industry in India and plays a significant role in creating an impact on the decision making process of other countries . India's economic growth is highly related to its energy demand. It is also the third largest oil market , it consumers 211.6 million tonnes of oil per year . It is heavily dependent on crude oil for its development ,only 35 million tonnes of oil is produced in the country . It depends highly on imports ,85% is imported to India , mostly from Saudi Arabia , Iraq , US , UAE and Canada India gets its oil .The high cost of oil in India is affecting the income of people , oil is very expensive in India , people pay 100 rupees for a litre of petrol which is much more than other countries . India has to pay so much because of the high taxes, with rise in the cost of petrol , there is rise price for transportation , today many people in India have stopped driving their private cars because of the rising price of petrol and diesel , the cost have varied from state to state and it has gone up and down depending upon the situation , so with the cost of cooking gas has also risen .The rising demand and the increase in cost has led people to shift to non renewable source of India , cooking in oven and electricity instead of gas .We are trying to minimize our depends and consumption rate on oil and gas . Many countries have totally eliminated the use of renewable energy , however for India with rise in population , it is not possible to shift so fast into renewable energy the demand on crude oil will increase every passing year with growing population.

II. RESEARCH METHODOLOGY

For the purpose of this exploration, I have used an amalgamation of two of the archetypical social sciences research tools application –as they are authentic and brilliant method to assemble statistics from multiple appellant in an methodical and convenient way . Question were asked to the common youth , public policy Analyst , urban people ,farmers , interviews –consisting of several interrogation which were dispersed among representative of each contender group .

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III. OBJECTIVE OF THE RESEARCH PAPER

The main areas of exploration in this paper incorporates

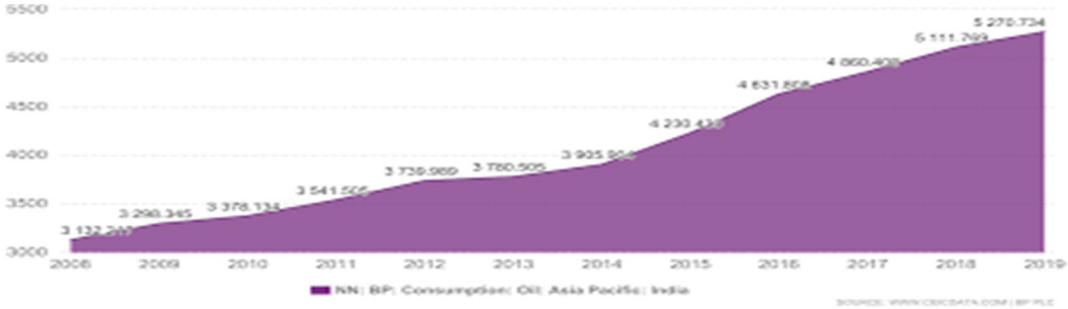
1) A study on crude oil and natural gas production in India.
2) Crude oil and imports in India and its impact on the economy.
3) What is the future of India when it comes to crude oil and natural gas production.

IV. LITERATURE REVIEW

The deposits of oil was 1st found in Digboi within the state of province in Nineteen Sixties and additionally within the state of Gujarat . The natural gained more vital with the invention of reservoir in South Basin fields by the ONGC within the Nineteen Seventies .Crude oil is found within the states of state , Arunachal Pradesh , Assam , Japanese offshore, Gujarat , Nagaland , Rajasthan , Tamil Nadu , Tripura , Western offshore and Coal Bed paraffin .India's high drilling countries square measure reliance Industries restricted that is concerned in purification which contains refined crude oil things , manufacture of basic chemical fertilizers , plastic , element compounds , artificial and many more . ONGC , geographic region company that is that the biggest producer of oil and natural gas in Republic of India , contributes to seventy fifth of Indian domestic Production .Indian oil that has thirty three,500 on top of hands and an in depth purification , distribution , advanced R&D provisions , selling infrastructure . Oil arrange a crucial role within the supplying of socio-economic development, Republic of India crude oil . Indian domestic oil production are increasing marginalized with its dependents on oil imports Oil consumption is four.4 million barrels per day in 2017 , that I five-hitter of worldwide consumption with a fast pace of three.9% . drilling in Republic of India comes primarily from three offshore Gujarat , province and Rajasthan , that amounts to ninety six of oil and additionally from urban center high field , the manner Republic of India demand is growing , the import bill is four-dimensional of India's GDP , these days sixty fifth of the oil is foreign from geographic area by strait of Hormuz . The Indian economy are exposed to risk of offer disruption .Today Indian strategic reserves storage capability is forty million barrel that cowl around ten days of the present web imports . The high imports goes to possess a forceful impact on the economy .The government I attempting to cut back the imports by 2040 . Republic of India are the last shopper of oil for successive twenty two years crossing China, With additional drilling and exploring one.9 metric tonnes of oil and gas are established , by drilling additional and additional we are able to increase the assembly , this 1.9 metric tonnes incorporate 594 metric tonnes of oil that is four.6 million and one.3 trillion cubric metres . it's calculable that Republic of India will manufacture 100tcf of gas , if Indian oil use higher techniques like Improved Oil Recovery and increased Oil Recovery this could increase the production and manufacture four billion barres of oil . By 2040 , Republic of India 's import can scale back by five hundredth . Republic of India has to scale back its oil imports , because of high imports the value of oil is extremely high in Republic of India , the increase in gas worth can have an effect on the GDP growth , as most folks won't be ready to pay such high price each second for a tiny low quantity of gas .

V. FINDINGS

India' gift purification stand at 249 MMTPA capability, that compose of twenty three refineries eighteen square measure beneath public sector, three square measure beneath non-public sector , and a pair of square measure in joint .The top 3 firms for refined is Republic of India crude oil Corporation , Reliance business that total amounts to sixty six.3% and therefore the largest domestic trained worker is Indian Oil Corporation with 70MMTPA for the FY2018 -2019 . 179000 km gas pipeline is operational and sixteen,600 km gas pipeline square measure beneath construction . Republic of India is seeing an increase within the production of crude oil product , the assembly stood at 262.94 MMT for the FY 2019 and 2020 . The oil production has been thirty two.17MT for the FY2019-20 and gas production stood at thirty one.18 BCM , seventy four hundred thousand new LPG affiliation are issued for the FY20-21 . LNG offer is increasing each on the coast with five new LNG terminals . Investment value $118 billion for 2024 , fifty eight billion dollar for E&P by 2023 and sixty billion dollar are endowed in gas.



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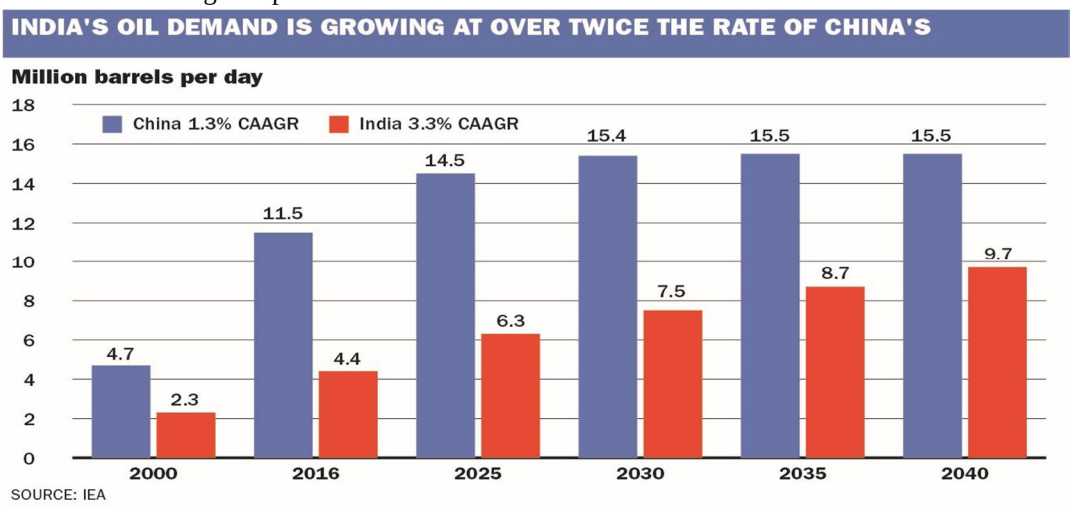
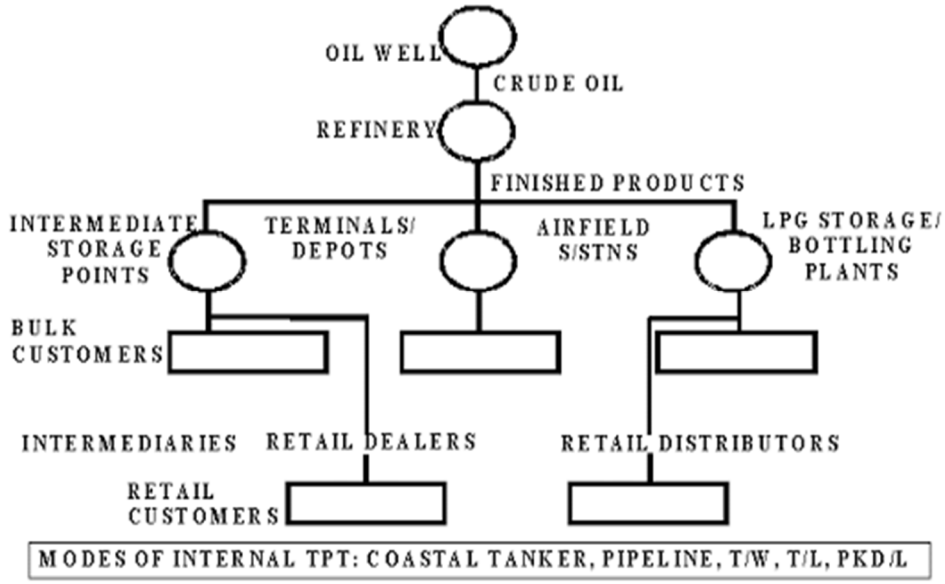
India is assumed to become one amongst the most important contributors to non-OECD .For the year 2019-2020 the import rose to USD one zero one.4 billion from USD seventy.72 Billion in 2016-2017 .In February , 2021 Petronet LNG declared its conceive to double its Dahej Terminal's capability by twenty ninth to22.5 million to fulfill the growing want . geographical area crude oil and Republic of India crude oil have declared their plans to amplify their retailers within the rural region ,also ONGC would increment its gas production .The government has launched key comes like Ramanathapuram- Thoothukudi gas pipeline followed by gas Desulphurisation unit at city crude oil Corporation restricted . In 2021 , Republic of Indian oil corporation signed a agreement with Greenstart chemical element India to open a centre of excellence for chemical element worth chain and different technologies like electric cell and chemical element etc .

The rise of the prices of crude oil today has emerged as a major crisis in India , however when the prices go high , all goods price also increases and it provides measure benefit to the corporate and adds to their profit , the cost of transportation also becomes very high with the rise in crude oil prices , importing of oil takes a huge amount so in order to tackle this the government has brought in new strategies and plans to reduce the import of oil crude as the demand in India is amplifying with each passing day in future with rising population the demand also goes up .



The government plans to invest 75 trillion rupees on oil and gas infrastructure for the coming five years, in the union budget 2021, the government provided 12,480 crore for LPG direct transfer, and 1078 crore for feedstock subsidy to BCPL . The Ministry of Petroleum and Natural Gas has launched a new LNG policy that will increment LNG re-Gasification capacity to 100mtpa by 2040. It has also planned to set up compressed biogas plants by 2023, around 5000 . The government is investing 2.86 billion dollar in the upstream oil and gas production to increment natural gas production to 60BCM and drill more than 120 exploration wells by 2022.



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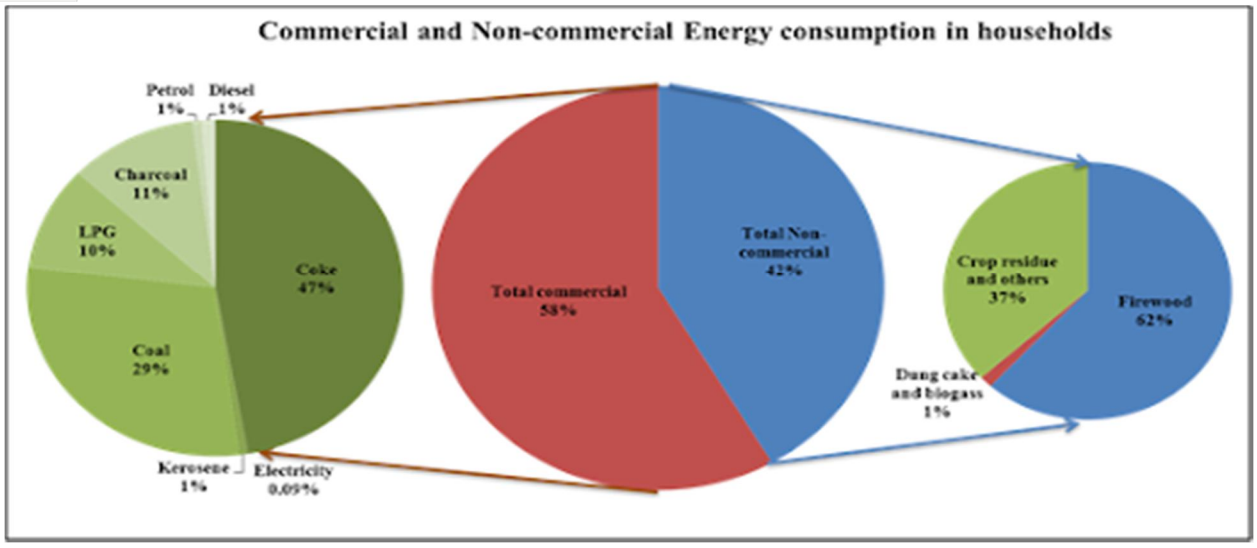
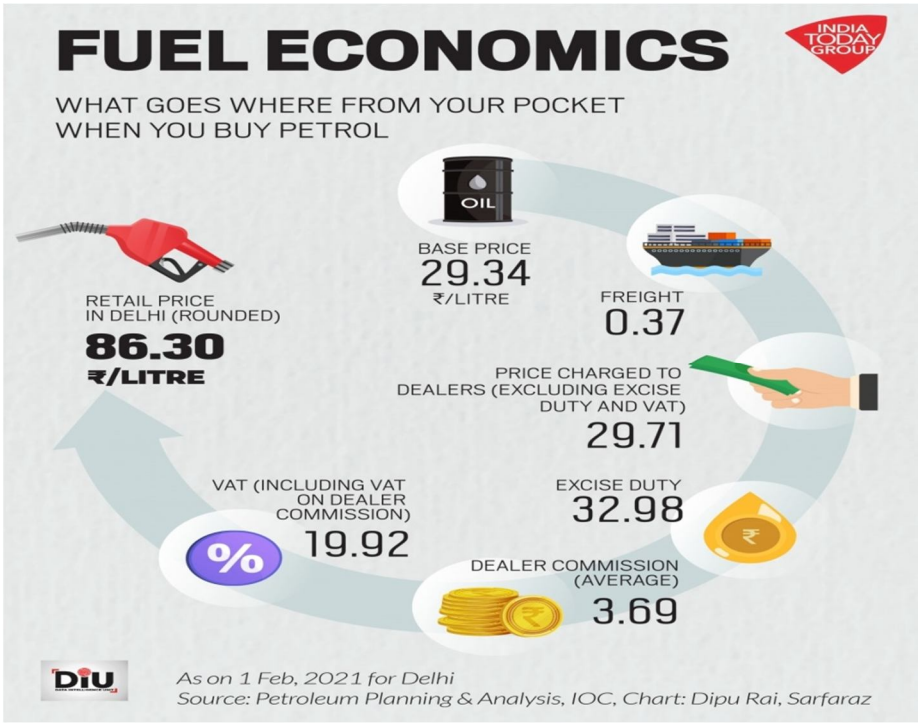


Energy demand is rising in India at a rapid pace which will reach to 10 billion barrel by 2030 , Diesel demand will double to 163 million tonnes by 2029-2030 .India has planned to increase its natural gas grid to 345000 Km . The oil and gas clusters in India are in Hyderabad , Mangalore , Jamnagar , NCR , Pune , Haldia and Chennai . India is the largest exporter of petroleum products in Asia , it has the second largest refiner in Asia and third largest energy consumer in the world , apart from that the government has allowed 100% FDI in exploration activities of oil and natural gases fields.

Another way by which India is reducing its import of crude oil , is adopting renewable energy , today in many parts of India , renewable energy is being used to product electricity .India is also the largest producer of solar energy and we are adopting electric vehicles and urban mobility to reduce our dependent on crude oil . The Ministry of New and Renewable energy and the Ministry of Petroleum and Natural gas to replace the cooking gas and kerosene subsidy towards a solar photovolataic cooking , 25000 crore per year is provided , moving towards an electricity driven cooking which will reduce our depends on oil .

The growing price of crude oil in the country has led to many problems which has effected the overall business in the country including trade and commerce . There is a long way for India to move towards 100 % renewable energy and electric vehicles , more than 6000 items requires the utility of petrol in their making . The whole process of import



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VI. WAY FORWARD

We need to reduce our import to reduce economy risk and adopt renewable energy to tackle climate change . We need to use scientific gadgets for better human lifestyle without using bio fuel . We also need to develop cost efficient technology which will increase storage capability, high efficiency to long resistance mechanism . Biomass fuel is universal available , efficient, clean burning and minimal environmental impact but it will help to generate employment opportunity in rural sector by establishing bio mass centre , we can create deep impact on waste management , employment , cost-efficient and reduce electricity consumption. We need to drill and explore more to increase our production so that we can limit the imports .We need to manufacture more electric cars , and electric trains , India is the first country who has electrified 90% of its railways , we need to connect all the cities with metro so that people adopt to urban mobility . We can replace cooking gas with electricity items connected with solar panels for cooking . The demand is growing high as the population is arising . We require crude oil every day in our life . The excess amount of drill and burning of fossil fuels have resulted in environmental hazard and climate change , Instead of investing more into producing crude oil and natural gas we need to find an alternative . We need to bring in green technology and smart techniques to reduce our dependency on Crude oil and natural gases. Energy is very for the economic growth .It provides us most of our daily necessity items, but everything has its own pros and cons and has it is non renewable , it might end at one point .

VII. CONCLUSION

India has the third largest market for crude oil and natural gas after China and US, India largely depends on imports from Middle East countries and US , which has brought in economy risk for India . India has been over the years investing in crude oil production, it is expected that by 2040, India will be the largest consumer of crude oil and natural gas , it is also the largest producer of petroleum items in Asia , India in order to reduce its imports, has allowed more drilling and exploration which requires more burning of fossil fuels which are non renewable in nature and are affecting the climate. Today the world is adopting renewable energy and so in India, India being the biggest producer of solar energy, which will limit our imports and dependency on non-renewable energy and led to economy development .

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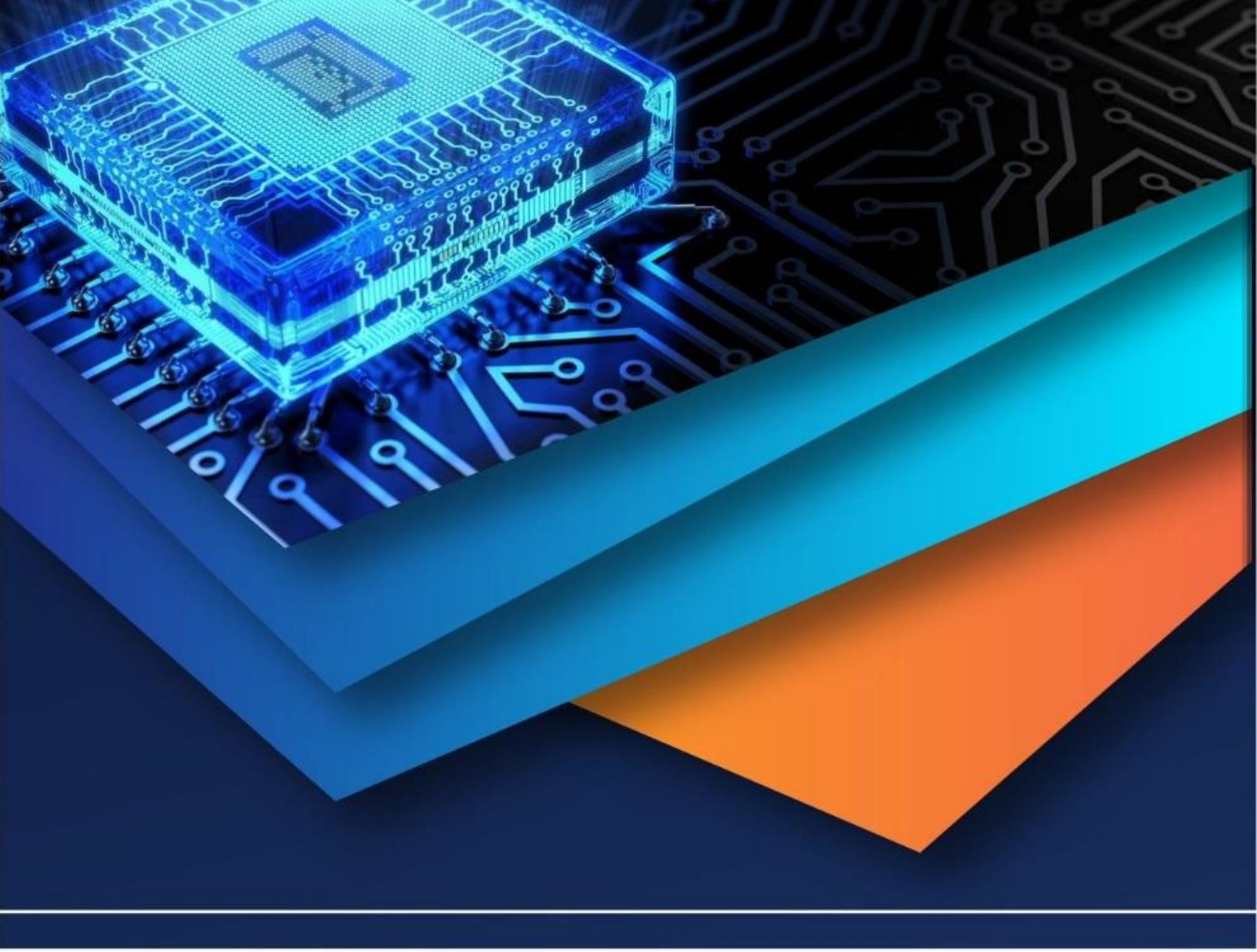

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